

NAVY TECH

Enabling a 'system of systems' approach

Scandic Marina Congress Centre, Helsinki, Finland
11 February - 13 February 2025

CONFERENCE PRODUCER'S INTRODUCTION

It is with great pleasure and anticipation that I welcome you to the 2nd iteration of Navy Leaders' Navy Tech conference.

In a world undergoing rapid transformations driven by technology and heightened geopolitical tensions, the challenges facing naval forces globally are more complex than ever. Our near-peer adversaries have not remained idle, rather they have keenly observed our strategies, armaments and tactics to develop their own formidable capabilities. As a result, naval forces find themselves confronting an array of advanced threats that demand innovative and dynamic solutions.

Navy Tech serves as a platform where an authoritative speaker faculty comprising leading industry experts, program managers, capability and requirements teams, front-line commanders and scientists, converge to address common problems, engage in networking, and devise solutions to the challenges faced by naval forces. With a strong European focus, this conference aims to facilitate the exchange of insights and experiences crucial for navigating the complexities of modern naval warfare.

Key topics in the naval domain such as developments in Artificial Intelligence, autonomy, uncrewed systems and the improved efficiency and accuracy of ship systems take centre stage. Collaborative programmes within the naval domain are also a focal point, emphasising the necessity of combined efforts in the face of evolving threats.

Naval forces are increasingly required to integrate to operate across domains, collaborating with allies and partners to contribute effectively to large-scale combat operations. Future naval equipment is designed to be more lethal, expeditionary and integrated, centred around digital capabilities. The Baltic Sea, a region characterised by congested and contested waters, further underscores the importance of fostering collaboration and innovative problem-solving.

As we embark on this conference, utilise the collective wisdom and expertise present in this room. Together we can forge a path toward a more secure and resilient naval future. I extend my sincere gratitude to all participants, speakers and sponsors for your invaluable contributions to Navy Tech 2025.

Thank you, and I wish us all a productive and insightful conference ahead.



Nick Stanig, Conference Producer, Navy Leaders
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Monday 10th February 2025, PRE-EVENT Function Sponsors

1400 - 1700: **ABB factory visit - scan the QR code to register your participation**

- Have a full tour of the Helsinki Azipod® Factory
- Gain insights into the numerous benefits of Azipod® propulsion
- Learn about the unique ship handling advantages in our Bridge Simulator

Hosted by **ABB (Transport to and from Scandic Grand Marina Hotel, Helsinki, Finland)**



PRE-EVENT PASS COLLECTION

Monday 10 February 2025, Scandic Grand Marina Hotel, Helsinki, Finland

1800 – 2000: **Staff will be on hand assisting in the exhibition setup at the venue**

- Meet the Defence Leaders team and other conference delegates
- Collect your badges, conference guides and any other information required
- A relaxed and casual evening that will save you time at registration on Tuesday morning

Hosted by **Shield AI**



EXCLUSIVE PRIVATE BRIEFINGS

Invitation only (for information please contact the Navy Leaders Team)

Following the success of a series of private briefings run concurrently with the programme, Navy Leaders are delighted to be able to offer bespoke, confidential meetings to a select group of attendees.

TUESDAY 11 FEBRUARY 2025

0715 - 0845		AWAITING BRIEFING DETAILS
0900 - 1030		SPONSORSHIP AVAILABLE
1045 - 1215		SPONSORSHIP AVAILABLE
1230 - 1400		AWAITING BRIEFING DETAILS
1415 - 1545		AWAITING BRIEFING DETAILS
1600 - 1730		AWAITING BRIEFING DETAILS

WEDNESDAY 12 FEBRUARY 2025

0715 - 0845	CELLULA  ROBOTICS	<i>AWAITING BRIEFING DETAILS</i>
0900 - 1030	AV AeroVironment™	<i>AWAITING BRIEFING DETAILS</i>
1045 - 1215	RAFAEL  <small>ADVANCED DEFENSE SYSTEMS LTD.</small>	<i>AWAITING BRIEFING DETAILS</i>
1230 - 1400	 planet.	<i>AWAITING BRIEFING DETAILS</i>
1415 - 1545	 LEONARDO	<i>AWAITING BRIEFING DETAILS</i>
1600 - 1730	 armelson	<i>AWAITING BRIEFING DETAILS</i>

DAY ONE: TUESDAY 11 FEBRUARY - PLENARY DAY

NEAR PEER THREATS INFLUENCING NAVAL PROCUREMENT

It is no secret that the requirements for technology are increasing and the first day will address the platforms used to deliver effect. We need to be able to do more, with less people, for longer distances, with minimal maintenance and in a cost effective manner. Due to peer developments in electronic warfare, air, underwater ordnance and drone swarms, now is the time for us to dissect the technology we use and establish how we intend to integrate, launch, use, recover and maintain it.

0800 - Badge collection and registration
SPONSORSHIP AVAILABLE

Welcome coffee
Hosted by **BAE Systems**

BAE SYSTEMS

0850 - Chairman's introduction

Vice Admiral Kari Takanen (Ret'd), Former Chief of Defence Command, **Finnish MoD**



STRENGTHENING NAVAL ALLIANCES AND STRATEGIC POSITIONING IN THE BALTIC SEA

Navies are witnessing the pivotal advancements and strategic realignments across defence and as the geopolitical landscape in the Baltic region evolves, with Finland's recent integration into NATO brings significance for regional security and collaborative defence strategies. Now is the time for us to leverage the technology out there in order to address the unique challenges of operating in the Baltics, Mediterranean and also the Arctic.

0900 – **Welcome address: Joining the alliance**

- Points TBC

Rear Admiral Tuomas Tiilikainen, Commander of the Navy, **Finnish Navy**



0925 – *Delivered by* **BAE Systems**

- Points TBC

BAE SYSTEMS

0950 – **Unmanned systems being the future**

- Small Navy challenges with both warfighting/constabulary tasks: future fleet design and the balance between manned and unmanned platforms
- MUMT in confined shallow littorals throughout the conflict spectrum: risks and opportunities
- Expectation management regarding unmanned systems: wishful thinking vs reality

Commodore Ivo Värk, Commander of the Navy, **Estonian Navy**



1015 – Morning coffee and networking

Hosted by **NVL**

N·V·L

UNDERSTANDING THE PROCUREMENT OPPORTUNITIES FOR EMERGING TECHNOLOGIES

The Baltic Sea region has numerous maritime choke points and complicated stretches of contested waters. This presents unique security challenges that demand rapid and adaptable technological responses. Agile technologies such as autonomous systems, open system architecture, advanced sensors and AI analytical tools to aid in rapid decision making are essential for enhancing maritime domain awareness and situational readiness. By enabling an approach for effective procurement of these technologies, we will be allowing naval forces to stay ahead of potential threats, ensuring robust defence capabilities and seamless coordination with allied forces.

1100 – The shift to prototype warfare: Leveraging lessons learned from the Ukraine war

- The shift from traditional defence procurement towards prototype warfare
- Lessons learned recent conflicts
- Opportunities for collaboration among NATO and Allies over the next year in the UxS domain

James Gavin, Head of Future Capability Group, **Defence Equipment and Support (DE&S)**



1125 – Collaborative course: Agile MBSE and unified efforts in early naval vessel design

- Challenges and NVL agile MBSE approach
- Results from case studies in early cross-company collaboration
- Opportunities for exchange and joint improvement

Paul Dahlke, Head of Technology Management, **Jens Rummler**, Head of Sales Germany, **NVL**

N·V·L

1150 – Northern Naval Capability Cooperation Update

Rear Admiral Paul Flos, Programme Director International Naval Materiel Cooperation, **Netherlands Ministry of Defence**, **COMMIT**



1215 - Lunch and networking

Hosted by **Teledyne Marine**



THE INTEGRATION OF UxVs TO SUPPORT MULTI-MISSION OPERATIONS

Uncrewed assets encompassing aerial, surface or underwater abilities offer transformative capabilities in surveillance, reconnaissance, mine countermeasures and anti-submarine warfare. We have seen as part of recent exercises that by integrating uncrewed/autonomous systems we can enhance the interoperability and collaborative efforts among NATO allies. This approach with the inclusion of allies and UxVs provides nations with the ability to conduct multi-mission and multi-domain operations allowing for more flexible, efficient and cost-effective operations.

1345 – Simplifying challenges around research into autonomous, UxS and their naval applications

- Points TBC

Deputy Research Director Martin Hagström, Programme Manager, **Swedish Defence Research Agency**



1410 – Delivered by Teledyne Marine

- Points TBC



1435 – **Adopting uncrewed technologies and the implementation into the Lithuanian Navy vision 2030+**

- Takeaways from Ukraine and the Baltic Sea operational environments
- Lithuanian navy fleet development concept
- Key roles for uncrewed autonomous systems

Captain Tadas Jablonskis, Flotilla Commander, Lithuanian Navy



1500 - **Lessons learnt from REPMUS 2024**

Captain Nuno Palmeiro Ribeiro, Centro de Experimentação Operacional da Marinha, Portuguese Navy



1525 - Afternoon coffee and networking

Hosted by **ABB**



DEVELOPING THE WAYS IN WHICH OPERATIONAL CONDITIONS INFLUENCE REQUIREMENTS

This iteration of the Navy Tech conference doesn't only focus on the Baltic Sea but also the North Sea, the Atlantic Ocean and the Mediterranean Sea. These waters are known for their varying depths and sometimes harsh weather conditions and with the increasing military activity and strategic interest in these regions, understanding how these factors influence requirements is essential for developing effective naval strategy and the implementation of the most 'fit-for-purpose' technologies.

1610 – **The Joint Expeditionary Force partnership – Increasing relevance in a more unstable world**

- A short introduction to the JEF (JEF 101) & JEF(M)
- JEF development over the last 10 years & maritime domain opportunities
- Coherence with and complementarity to NATO, including MARCOM and DEUMARFOR

Lieutenant Colonel Philip O'Callaghan, Acting Assistant Chief of Staff Joint Expeditionary Force, Standing Joint Force Headquarters UK



1635 – **Enabling polar operations with Azipod® propulsion**

- 30 years of proven experience in propulsion
- Systems integration and its value for global navies

Sampo Viheriälehto, Sales Manager Global Marine Propulsion, ABB OY, Alejandro Zorzo, Spain Country Marine Market Manager, ABB AS



1700 – **Expeditionary warfare in the Baltic sea: integration of forces in the high north**

- Expanded Joint, Allied, and Partner Naval Contributions
- Naval Forces Support to All Domain Operations
- Expeditionary Warfare Capabilities Critical to Littoral Operations

Brigadier General Robert Brodie, Director of Expeditionary Warfare, OPNAV N95



1725 - Chairman's summary of day 1

Vice Admiral Kari Takanen (Ret'd), Former Chief of Defence Command, Finnish MoD



1730 - Evening networking and drinks reception

Hosted by **BAE Systems**



1930 - Close of drinks reception

DAY TWO: WEDNESDAY 12 FEBRUARY - STREAMED DAY

0800 - Badge collection and registration
SPONSORSHIP AVAILABLE

0800 -Welcome coffee
Hosted by Babcock
babcock™

STREAM A

In association with Kongsberg



STREAM B

In association with Rohde & Schwarz



STREAM C

In association with DRASS



SURFACE TECHNOLOGY

COMMUNICATIONS, DATA AND NETWORKS

UNDERWATER TECHNOLOGY



0850 - Chairman's introduction
Vice Admiral (Ret'd) Manuel Martinez Ruiz, Former Director Naval Engineering and Construction, **Spanish Navy**



0850 - Chairman's introduction
Sean Trevethan, Senior Maritime Capability Manager, **NATO**



0850 - Chairman's introduction
Commander (Ret'd) Mikko Saarinen, Consultant and Senior Mentor, **Finnish National Defence University**

THE FUTURE IS AUTONOMOUS AND UNCREWED

The need for advanced solutions to enhance maritime security and operational efficiency means considering autonomous and uncrewed systems. These technologies offer significant advantages and allow us to maintain a strategic edge, ensure interoperability among nations and strengthen collective defence efforts in line with NATO.

ENABLING MULTI-DOMAIN OPERATION AT SEA

MDO is crucial for addressing sophisticated threats. This approach ensures seamless collaboration among NATO allies, boosts situational awareness, and improves response capabilities against hybrid warfare. Emphasising this fosters innovation, interoperability and interchangeability and resilience, strengthening Europe's collective maritime defence and security posture.

INTEGRATING NEXT-GENERATION UNDERWATER CAPABILITIES

Our neighbouring waters face heightened geopolitical tensions so underwater technology such as AUVs, improved sonar systems and enhanced submarine capabilities are vital for maintaining maritime security and maximising operational effectiveness. These technologies ensure the protection of critical maritime infrastructure and sea lines of communication.

0900 – Domain connection with UxS

- Intro into NAVAIR Organization
 - MUX MALE portfolio
 - Connecting UxS and future developments
- Captain Dennis Monagle**, Program Manager, **US Navy**



0900 – Sensors and signature management in the Baltic sea

- Impact on EM propagation and sensor/ signature management in the Baltic Sea with
 - Icy conditions and humidity
 - Effects for EO/IR and radar sensors in low observability
- Christina Grönwall PhD**, Deputy Research Director, **Swedish Defence Research Agency**



0900 – NATO's Submarine Force: enhancing collective security in the undersea environment

- Points TBC
- Rear Admiral Bret Grabbe**, Commander Submarines, **NATO MARCOM**



0925 – *Delivered by Kongsberg*

- Points TBC



0950 – **Unmanned platforms - activities in the Black Sea**

- Maritime powers (RUS) vs Navy without fleet (UKR) case study
- Overview of unmanned combat assets: countermeasures and tactics development
- Importance of unmanned platforms at a tactical/operational/strategic level: Black sea experience and the future of fleets

Commander Rafal Mietkiewicz, Assistant Professor, **Polish Naval Academy**



0925 – **One side - one source of truth - How we as Europeans should defend the Baltic Sea, together:**

- situational awareness as the key to protecting the sea
- creating a network of gathering and analyzing intelligence throughout European Borders
- combining multi platforms and multi sensors along the whole signal chain

Andrey Obolensky, Head of Business Development, **Rohde & Schwarz**



0950 – **Optical and quantum SatCom – ESA's plan for today and vision for tomorrow**

- Presentation will provide an overview on ESA's scope
- Introduction to the Directorate of Connectivity and Secure Communication
- Current optical and quantum satcom projects and a brief outlook on the way forward

Dr. Harald Hauschildt, Manager of the Strategic Programme Line on Optical and Quantum Communication - ScyLight, **European Space Agency**



0925 – **Technological trajectories for compact underwater vehicles: Innovations and future scenarios**

- Advancing swimmer delivery vehicles towards 2030
- Synergizing manned and unmanned platforms
- Integrating emerging technologies into compact submarine design

Awaiting speaker details



0950 – **US Navy expeditionary combat MCM and clearance operations**

- System of systems approach
- Remote autonomous systems teaming
- Interoperability with partners and allies

Captain Cameron Chen, Expeditionary Combat Branch Head, **US Navy**



1015 – Morning coffee and networking
Hosted by Abeking



ADOPTING AN OPEN SYSTEM ARCHITECTURE

Open system architecture allows for seamless integration of diverse technologies and systems accelerating technological upgrades and reducing costs. This approach is vital for maintaining a technological edge, ensuring resilient and adaptable naval capabilities.

1100 – Developments of multidimensional UxV motherships for the Portuguese Navy

- Points TBC
- Rear Admiral Antonio Mateus, Director of Ships, Portuguese Navy



1125 – Autonomous and unmanned mine laying

- Points TBC



1150 – FREMM Evolution: the new technicals of the FREMM programme

- Current CTF59 Priorities and Efforts
- CTF59 top achievements
- Leveraging commercial technologies to get after operational problems at the tactical level

Captain Luigi Durante, Head of Horizon - FREMM Programme, OCCAR



ENHANCING SITUATIONAL AWARENESS FOR THE MARITIME DOMAIN

As geopolitical tensions and advanced adversarial technologies evolve, maintaining a comprehensive understanding of the maritime environment is vital. This capability is fundamental and provides informed decision-making and coordinated naval operations.

1100 – NATO’s Digital Ocean:

- Digital Ocean initiative: transforming Allied maritime domain awareness via coordination between national and Allied capabilities
- Developing and coordinating persistent, agile and adaptive capabilities
- Exploiting data from above and below surface with new and emerging technologies

Sean Trevethan, Senior Maritime Capability Manager, NATO



1125 – Delivered by Ocean Power Technologies

- Points TBC



1150 – Underwater maritime situational awareness using civilian offshore infrastructure

- Enhancing MSA with new Sonar multi static concepts
- Data fusion & anomaly detection using Transponders and Opto DAS
- Challenge: International law and order

Dr Ivor Nissen, Branch Head Underwater Communication, WTD71, Bundeswehr Technical Centre for Ships and Naval Weapons, Maritime Technology and Research



MAXIMISING EFFICIENCY IN MINE-HUNTING OPERATIONS

Efficient mine-hunting reduces risks to naval vessels, ensures safe passage for trade, and enhances regional security. Advanced technologies in mine detection and neutralisation are essential, making this a pertinent topic for European naval forces.

1100 - Exercise update: Analysing and clearing mines in The Baltic Sea

- Points TBC
- Commander Jānis Auce, Commander of the Mine Warfare Squadron, Latvian Navy



1125 – Efficiency and effectiveness: the true benefit of SAS in an MCM environment

- Transition from FLS to RAS to SAS and reported MLO’s
- Results from case study on REPMUS24 reports
- Potential time savings during MH operations

Martijn Wilbrink, Business Development Manager Europe Defence, Kraken Robotics



1150 – Belgian Navy MCM vessel program: evolution and future challenges

- Quick reminder of the BENL MCM program
- Evolution, situation at the moment and future of the program
- Challenges and lessons already identified

Commander Nicolas Doyen, Commanding Officer BNS Ostend, Belgian Navy



1215 – Lunch and networking

Hosted by ANDURIL



DEVELOPING AND DETERRING ASYMMETRIC NAVAL THREATS

Lessons need to be identified and learned from the use of UxVs in the Black Sea. This is crucial for the development of technology and tactics both to utilise UxVs and deter these asymmetric threats if used by our adversaries.

1330 – From the Black sea to the Baltic sea – USV tactics adaptation

- Points TBC

Lieutenant Commander Justinas Žukauskas, Senior Specialist, Sea and Air Combat platforms Division Defence Materiel Agency, **Lithuanian MoD**



1355 – UxV solutions for naval warfare

- Development of improved systems and strategies
- Design architecture, mission payloads and use of AI
- Building naval warfare concepts through the design process

Captain (Ret'd) Barış Bilgili, Senior Systems Engineer, **Aselsan**

aselsan

COLLABORATIVE APPROACHES IN AUTONOMY

By integrating autonomous systems, navies can conduct more complex missions with greater precision and reduced risk to personnel. Collaboration ensures seamless coordination among allied forces and by sharing R&D we can reduce costs and accelerate innovation, to be ahead of evolving threats.

1330 – REPMUS-24 – The outcome for autonomous mine warfare

- Command and Control of numerous different unmanned systems
- Integration of a data fusion cell into a mine warfare staff
- Examining the challenges, solutions and future approaches

Commander Andreas Montag, Head of Maritime Unmanned Systems 3rd (DEU) Minesweeping Squadron, **German Navy**



1355 – Maritime strategies for autonomy and the future of special forces deployment

- Autonomous USVs ASW equipped for early warning Norwegian sea and NSR
- Enhanced situational awareness of the Baltic sea through ISR USVs and UUVs
- Special forces deployment systems

Dom Mee, JD Marine International Ltd



COMBATTING THE CHALLENGES OF LITTORAL, UNDERWATER OPERATIONS

These complex environments require advanced capabilities for effective surveillance, mine countermeasures and anti-submarine warfare. As geopolitical tensions rise, securing these areas against threats like UW drones and stealth submarines is vital.

1330 – Torpedo Development in Sweden

- Capability and development
- Technical platforms
- Integration of torpedo weapon systems

Anders Svensson, Product Manager Torpedo Systems, **Swedish Defence Material Organisation**



1355 – A systems-of-systems perspective: Unlocking tactical diving vehicle potential for European underwater operations

- How does a systems of systems approach maximise the potential of TDVs for diverse mission sets?
- What role can TDVs platform provide in enabling European nations to overcome underwater capability gaps?
- How can TDVs complement existing submarine and surface platforms in a holistic naval strategy?

Matt Harman, JFD Head of Tactical Diving Vehicles, **Thomas Ljungqvist**, General Manager JFD Sweden/Nordics, **JFD**



1420 – Türkiye’s autonomous and unmanned naval projects

- MCM Operations and AUV Development projects
- Surface unmanned autonomous systems: network centric capabilities
- EW capabilities in countering asymmetric threats

Dr Bilkutay Yilmaz, Head of Naval Platforms Projects Department, **Türkiye Secretariat of Defence Industries (SSB)**



1420 - Operational ASW - UxS technologies

- Points TBC

Commander Thomas Reitan, Department head Operational ASW, **Royal Norwegian Navy**



1420 – Exploring the challenges of MCM operations in very shallow waters and in the surf zone

- VSW zone - Operating in a sea minefield closest to the possible enemy
- Manual or robotic approach - capabilities and limitations?
- Way ahead - How can industry fill in the gaps?

Lieutenant Commander Miroslav Jug, Chief of N-4 branch in Slovenian Navy Command, **Slovenian Navy**



1445 – Afternoon coffee and networking

Hosted by **DSG**



DISCUSSING SHIP DIGITALISATION: PLATFORM SURVIVABILITY IN CONTESTED WATERS

Digitalisation enhances real-time data sharing, decision-making and operational efficiency. Alongside survivability, platforms can better withstand sophisticated attacks. Focusing on this prepares navies to counteract advanced threats and maintain stability in a strategically significant and volatile domain.

1530 – *Delivered by TNO*

- Points TBC



EXPLORING THE ‘OVER THE HORIZON’ CONCEPT

Navies need to enhance their ability to detect, track, and engage threats beyond the line of sight, allowing them to be more agile, resilient and effective. As new airborne technologies emerge in the naval domain, we can review how navy forces are integrating airborne assets into the operational picture.

1530 – **Maritime UAS in ISR role**

- Operating from a large NATO class 1 UAV from RNLN vessels
- Over the horizon compilation
- Operating with the Command Information Centre; suitability of UAV class and payloads

Lieutenant Commander Joep Van Kieboom, SME Unmanned and Autonomous Systems, Netherlands Navy



PROTECTING UNDERWATER INFRASTRUCTURE

Subsea cables and pipelines are lifelines for communication, energy supply and data transfer. Disruptions or attacks on this infrastructure can cripple economies, disrupt military communications and compromise critical services. The vulnerability of these underwater assets increases, necessitating robust surveillance and defence measures.

1530 – **Developments in rapid large scale monitoring of underwater activities**

- Current detection and classification possibilities in the Baltic Sea using seismic network data
- Integration of emerging fiber-optic technologies in existing automatic seismic systems.
- Importance of data and information sharing around the Baltic Sea.

Björn Lund, Director, Swedish National Seismic Network



1555 – **Utilising smart digital backbones**

- The utilisation of onboard sensing, connectivity, edge computing & cloud (supporting DT)
- ISS as an enabler
- Internal battle benefits (Onboard situational awareness: safety, mission,...)
- The Spanish approach, SSI/ISS

Rear Admiral Francisco Anton Brage, Deputy Director for Engineering, Spanish Navy



1555 – **Strength in numbers: The multi-mission multi-sensor single operator dilemma**

- Reluctant birth; naval aviation ISR platforms
- Today's airborne ISR; from aircraft carrier to coast line protection
- Future: space and AI - the final ISR frontiers

George J.DeCock, Director of SCAR-pods & ISR Sensors, Airborne Technologies



1555 – **From ASW to SBW with ALSEAMAR**

- The Seaexplorer's role in critical undersea infrastructure protection
- Passive acoustics for underwater threat detection
- Use case: our capabilities in Northern Europe

Hugo De Lattre, Business Developer Europe, ALSEAMAR



1620 – Bridging ship design and ship operations

- Synergy between ship design and operations for better onboard performance, easier lifecycle management, future retrofits
- Keeping data secure within a closed organisation ecosystem
- Advanced ship stability and damage control to enhance mission: Current challenges and tech gaps

Markus Tompuri, Account Director – Navy & Safety Solutions, **NAPA**



1620 – The icing barrier – challenges and solutions for in-flight icing on UAVs

- Inflight-icing is a severe hazard for UAVs operating in cold climate environments
- Developing Ice detection systems to detect hazardous ice conditions
- Exploring path finding tools with icing capabilities

Dr Richard Hann, Director of NTNU Icing Lab and Senior Researcher, **Norwegian University of Science and Technology**



1620 – Finland’s maritime defence and considerations on protection of critical undersea infrastructure

- Maritime defence concept
- Current capabilities and future development
- Considerations on protection of CUI

Captain Mikko Laakkonen, Navy Chief of Plans, **Finnish Navy**



1645 – Chairman’s summary of day 2 - programme continues in Stream C

Vice Admiral (Ret’d) Manuel Martinez Ruiz, Former Director Naval Engineering and Construction, **Spanish Navy**



1645 - Chairman’s summary and introduction to the day 2 closing panel

Sean Trevethan, Senior Maritime Capability Manager, **NATO**



1645 – Chairman’s summary of day 2- programme continues in Stream C

Commander (Ret’d) Mikko Saarinen, Consultant and Senior Mentor, **Finnish National Defence University**



1655 – ‘Future Leadership Panel’: Discussing what is of most importance, now and in the future

Location: Stream C

- What are the most serious of threats and how are we preparing against them?
- When we look at the use of UxVs, how can we ensure interoperability between nations?
- Outlining the ‘what to expect’. What programmes and exercises do we see taking place over the next year?

Lieutenant Commander Florin Constantinoiu, Oceanography Staff Officer, **NATO Maritime GEOMETOC Centre of Excellence**

Lieutenant Commander Vytautas Drejeris, LNS Kursis (M54) Commanding Officer, **Lithuanian Navy**

Lieutenant Artem Sherbinin, Chief Technology Officer Task Force Hopper, **US Navy**

Sine Ozkarasahin, Member of Maritime Domain Unit (MDU), **European Defence Agency**



1730 – Evening networking and drinks reception

Hosted by NVL

N·V·L

1930 - Close of drinks reception

DAY THREE: THURSDAY 13 FEBRUARY - PLENARY DAY

DIGITAL INNOVATION AND DEVELOPMENTS IMPACTING OPERATIONS

Advanced technologies such as AI, cybersecurity and autonomous systems enable navies to effectively monitor and secure vast maritime domains, respond swiftly to emerging threats and maintain a strategic edge over adversaries. Additionally, digital advancements facilitate seamless communication and coordination among allied forces, crucial for joint operations in contested regions like the Baltic Sea. Embracing these innovations ensures European navies remain agile, resilient, and capable of safeguarding their maritime interests in an increasingly complex and dynamic security environment.

0800 - Badge collection and registration
SPONSORSHIP AVAILABLE

0800 -Welcome coffee
SPONSORSHIP AVAILABLE

0850 - Chairman's introduction

Vice Admiral Kari Takanen (Ret'd), Former Chief of Defence Command, **Finnish MoD**



COLLABORATIVE EFFORTS TO DEVELOP DISRUPTIVE TECHNOLOGIES IN THE MARITIME DOMAIN

By working together, European navies can pool resources, share intelligence and innovate more efficiently, ensuring they stay ahead of potential adversaries. Disruptive technologies such as AI, autonomous systems, quantum technology and advanced cyber capabilities enhance operational effectiveness, improve strategic decision-making, and bolster defence mechanisms. This cooperation not only strengthens individual national defences but also reinforces collective security, ensuring stability and peace across Europe's vital maritime regions.

0900 – **Panel discussion: Developing a disruptive capability and the multi-domain integration process**

- Points TBC

Michael Stewart, Director Disruptive Capabilities Office, **US Navy**

Dr Joseph Cotter, Senior Research Fellow, **Imperial College London**

Captain Luigi Durante, Head of Horizon - FREMM Programme, **OCCAR**

Captain Nuno Palmeiro Ribeiro, Centro de Experimentação Operacional da Marinha, **Portuguese Navy**



0950 – **Strategic ISR and mission autonomy in EW contested environments**

- V-BAT; strategic effects with a tactical footprint
- Operational lessons from Ukraine
- Deliverable mission Autonomy

Haydn Gaukroger, Director Strategic Engagement, **Shield AI**



1015 – Morning coffee and networking

Hosted by **TELESPAZIO**



EVOLVING THE WAYS WE OPERATE IN THE UNDERWATER BATTLESPACE

This discussion is crucial for European navies due to the increasing sophistication of underwater threats and the strategic importance of maritime security. Advanced submarines, UUVs and stealthy mine technologies pose significant risks to naval operations and commercial shipping. Enhancing underwater capabilities ensures better detection, deterrence and neutralisation of these threats.

1045 – **Utilising the NATO ASW Spearhead for operational gain**

- Points TBC

Commodore (Ret'd) David Burton, Director ASW Spearhead, **NATO ASW Barrier Initiative**



1110 – *Delivered by* **RTsys**

- Points TBC



1135 – **Protection of CUI - threats, challenges, and solutions for enhancing its protection**

- Intentional or unintentional damaging
- Legal, technical, and operational challenges
- Redundancy and a network of sensors. Cooperation and Coordination

Commander Rutger van der Werff, Branch Head Concept Development and Experimentation, **NATO Mine Warfare Centre of Excellence**



1200 – **Seabed warfare – new generation smart seamines: disruptive technology for area denial operations**

- Seabed warfare
- New generation smart sea mine
- Anti-access and area denial operations

Cdr (Retd) Ilja Hakanpää, Chief Customer Officer, **FORCIT Defence**



1225 - Lunch and networking

Hosted by **SAILDRONE INC**



DEVELOPING MULTI-DOMAIN INTEGRATION AND OPERABILITY AT SEA

Several countries are turning to joint programmes to achieve the ultimate goal of multi-domain integration between space and the seabed. There are currently multiple efforts underway to successfully deliver a way that navies can communicate with both their own military and its partners. This session will explore current advancements but also the requirements around the world.

1335 - **Delivering disruptive capabilities in the maritime domain**

- Points TBC

Michael Stewart, Director Disruptive Capabilities Office, **US Navy**



1400 – *Delivered by* **Thinklogical**

- Points TBC



1425 – **MDO Panel: Exploring the collaborative opportunities between space and the seabed**

- Points TBC

Captain Andy Berner, Commanding Officer Office of Naval Research - Global, **US Navy**

Dr. Harald Hauschildt, Manager of the Strategic Programme Line on Optical and Quantum Communication - ScyLight, **European Space Agency**

Stefano Cioni, Project Officer Maritime Capabilities Support, **European Defence Agency**



1515 - Chairman's summary

Vice Admiral Kari Takanen (Ret'd), Former Chief of Defence Command, **Finnish MoD**



1530 - Close of conference