Thursday 26th May 2022
NATO MUSI Session 1
Conference B: Uncrewed systems
Location: Pioneer 1
Viability in defence

Over the past year the NATO has continued to work with partners to address the most significant maritime challenges and explore potential solutions utilizing uncrewed technology. These solutions need to integrate into conventional Navies with a focus on interoperability and interchangeability between Allies.

This first session will focus on the underwater domain and look at how unmanned systems and enablers can provide potential solutions to the difficult problems of achieving warfighting dominance in that space.

0855 – *Chairman's opening remarks*

Commodore (Retd) David Burton, Director, **NATO ASW Barrier Programme**

0900 – **Autonomous Distributed Networks**

- Developments in networks for autonomous systems.
- Command and Control of networked autonomous systems
- Applying autonomous networks to warfighting applications
Dr Catherine Warner, Director, **NATO Centre for Maritime Research and Experimentation**

0930 – **The Digital Ocean**

- "Internet of things for the Ocean"
- Benefits to NATO and alignment with NATO 2030: Common control framework and digital backbone
- Political and strategic convergence and the way ahead
Julie Angus, CEO, Open Ocean Robotics and **Sean Trevethan** Director **NATO MUSIC^2**

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1000 – **Persistent undersea surveillance and connectivity**

- Which technologies are shrinking the ocean with persistent UW ISR
- Overcoming the challenges of persistence at range
- Experimentation and analysis

Thomas Altshuler, Ph.D., Senior Vice President, Defense Strategy and Business Development, **Teledyne Marine**

Enabling C2 via robotics

The morning so far has outlined some of the technological challenges. This second session will focus on the challenge of integrating MUS, whilst ensuring C2, into the fighting force.

1115 – **Integrating unmanned systems into the maritime task force**

- Benefits of Unmanned Systems in warfighting disciplines
- Integrating C2 – creating a common picture and overcoming challenges
- Operational Experimentation and analysis – where we are

John Haworth, Senior Programme Manager Future Systems**, QinetiQ**

1145 – **Integrated solutions for MUS in mine countermeasures**

- Stand-off – uncrewed MCM – solution
- MCM modernization
- From conventional MCM to ECA Group's stand-off solution: case studies

Antony Penn, Commercial & Business Development Director, **ECA Group**

1215 – **MUS Force Integration**

- Cross domain integration of MUS in the maritime task force
- Ensuring allied interoperability and interchangeability
- Extended and enhanced ISR operations with MUS whilst countering counter MUS

James Graves, MarLabs Senior Technologist, **BAe Systems**

1245 – *Chairman's closing remarks*

Commander Ian Danbury, Chairman, **NATO MUSIC^2**