



OFFSHORE PATROL VESSELS

OPV

INTERNATIONAL

DIGITAL EVENT PROGRAMME
30 September – 2 October 2020



ABOUT OPV INTERNATIONAL

OPV International has become the world's leading conference on the subject of patrol vessels, multi-role craft and their wider significance within the fleets of Navies, Coast Guards and related maritime organisations. Hosting leading experts from military, Government, academia and industry, it has become a vehicle by which meaningful consensus can be reached and progress can be made on the shared challenges which define a rapidly changing time for stakeholders in the maritime domain. It is the only event that is focused on what is the largest growing segment of the global Naval market and truly offers a global platform for all attendees to benefit from debate, discussion and improving your network of contacts.

More specifically, it looks at these vessels through the lens of their life cycle. From design, architecture and construction through to deployment, operations and eventually sustainment. In doing so it provides a platform for the international maritime community and industry from all areas of the supply chain to share the floor, exchange expertise and contribute to enhanced cooperation. It also discusses these challenges and opportunities from ongoing and planned programmes through to the advent of the digital age, giving attendees a unique opportunity in 2020.

WHAT IS NEW FOR 2020

As the relationship between industry and its military and Government partners develops, OPV International 2020 will also look towards the digital age in which efficiencies in shipbuilding, upgrades and sustainment can be enhanced dramatically through the integration of new technologies. 3D printing, increased cyber security aboard vessels and the growing influence of unmanned systems represent just some of the opportunities which industry now offer to increase the effectiveness of these vessels. OPV International will investigate the key challenges facing practitioners today within design, deployment, upgrades and sustainment before looking into the future and the opportunities of the digital age.

It will also recognise the increasingly blurred distinction between multi-role vessels. The typical definition of an OPV now needs to be discussed alongside that of a corvette or light frigate, in order to better understand the needs of the end user and to ensure that it is as effective as possible at performing its variety of roles. It will also bring Coast Guards and Maritime Police into the conversations in a way that we have not done before, examining threats and solutions through a wider lens of expertise and across a wider spectrum of challenges.

Finally, in 2020 OPV International will be moving online to provide the same world-class forum for Naval experts amid ongoing uncertainty over international travel. As well as being able to take part in the same high level discussions as always at OPV International, attendees will also be given extended opportunities for networking as well as a host of other virtual benefits that would not be possible to deliver in the current climate. By doing this we will continue our commitment to the global maritime community and help to build and strengthen the connections between its experts as we've done for the last fifteen years.

THE 2020 AGENDA AT A GLANCE**DAY ONE – UNDERSTANDING THE THREAT, DEFINING THE REQUIREMENT**

In recent times the term OPV has taken on more than one meaning. For some it represents a vessel of a certain size and complexity, for others it has become representative of a specific role and therefore dependent on the organisation it serves. One thing that remains is that these multi-role vessels are able to effectively perform a range of tasks and, in order for their effectiveness to be maximised, an effective working relationship between end user and industry is essential. The first day at OPV International 2020 will discuss how to define threats and requirements across military, Coast Guards and related maritime organisations and then collaborate with industry to develop effective long-term solutions. It will also investigate ongoing requirements and acquisition programmes across the world.

DAY TWO – DEPLOY, SUSTAIN, UPGRADE

Maintaining a fleet of OPVs or indeed any multi-role vessel presents numerous challenges. From ensuring that high levels of readiness for deployments are guaranteed to their through-life support and meeting the threats of tomorrow, a holistic approach must be taken in order to ensure that platforms are capable and available. The second day will discuss ongoing operations, ensuring platform availability and supporting the near-continuous operation necessary for a patrol-orientated platform. Finally it will look into modularity, the critical components for a high baseline capability and upgrades to maintain the relevance of the platform and meet the threats of tomorrow.

DAY THREE – MULTI-ROLE VESSELS IN THE DIGITAL AGE

The future presents us with challenges and opportunities in equal measure when it comes to multi-role vessels. Both the future threat context, as well as the way in which industry and end user and work to meet it, are rapidly changing. The introduction of automation, unmanned systems, increasing needs for cyber security and on-board additive manufacturing for MRO are some of the opportunities that could dramatically change the way in which multi-role vessels operate. Industry is also building towards its concept of introducing 4.0 technologies to provide innovative solutions to current and future challenges.



2020 SPEAKER FACULTY

Admiral Adnan Özbal, Commander, **Turkish Naval Forces**

Vice Admiral Manuel Martinez, Director for Engineering and Naval Shipbuilding, **Spanish Navy**

Vice Admiral Silvio Alva Villamón, General Director of Marine Material, **Peruvian Navy**

Rear Admiral Mike Utley OBE, Commander Strike Force and Rear Admiral Surface Ships, **Royal Navy**

Rear Admiral Oumar Wade, Chief of Naval Staff, **Senegal Navy**

Rear Admiral Arūnas Mockus, Commander, **Lithuanian Navy**

Flotilla Admiral Georgi Penev, Deputy Commander, **Bulgarian Navy**

Rear Admiral Lee Goddard, Commander, **Australian Maritime Border Command**

Rear Admiral Oscar Darío Tascón Muñoz, PhD, CEO, **COTECMAR**

Rear Admiral José Lago Ochoa, Commander, Canary Islands Command, **Spanish Navy**

Rear Admiral André Novis Montenegro, Deputy Chief of Strategy, **Brazilian Navy**

Rear Admiral (Ret'd) Nils Wang, Director, **Naval Team Denmark**

Brigadier Dan Cheesman MBE, Chief Technology Officer, **Royal Navy**

Commodore Richard Feltham, Commander Atlantic Fleet, **Royal Canadian Navy**

Captain Adrian Fryer, Patrol, Underwater exploitation and Diving, **Royal Navy**

Captain Gabriele Catapano, Head of Surface Ships Design Office, **Italian Navy General Staff**

Captain Francesco Iavazzo, Chief, Strategy and Operations Office, **Italian Navy General Staff**

Captain Mike Davanzo, Chief, Office of Cutter Forces, **US Coast Guard**

Professor Catriona Savage, Professor of Naval Architecture, **University College London**





Commander Ghislain Deleplanque, Incoming Head of Protection & Safeguarding Office, Future Naval Programs, **French Navy**

Commander Volkrad Kaphengst, Senior Systems Engineer, Integrated Project Teams, **German Navy**




Holger Mühlstein, Commander, Warnemünde District, **German Federal Police**








Dr. Sidharth Kaushal, Research Fellow, Sea Power- Military Sciences, **RUSI**


CONFERENCE DAY ONE 30 SEPTEMBER 2020 UNDERSTANDING THE THREAT, DEFINING THE REQUIREMENT	
1150 GMT+1	<p>CHAIRMAN'S OPENING REMARKS:</p> <p>Captain (Ret'd) Ned Lundquist, U.S. Navy, Communications Committee Chair, Surface Navy Association</p>
1200 	<p>MARITIME STRATEGY FOR THE UK</p> <ul style="list-style-type: none"> Addressing national resilience and readiness for operations in the digital Assessing the future operating environment and technological trends shaping naval requirements Future fleet structure: evaluating versatility, persistent visibility, and distributed operations <p>Rear Admiral Mike Utley OBE, Commander Strike Force and Rear Admiral Surface Ships, Royal Navy</p>
1220	Q&A SESSION
1230 	<p>KEYNOTE PRESENTATION: PROJECTING SEA POWER WITH MULTI ROLE VESSELS: THE TURKISH APPROACH</p> <ul style="list-style-type: none"> The structure of the Turkish fleet and the patrol vessel contribution to strategy Current operational challenges and how this relates to perception of future threats Future requirements and working closely with Industry in generating them <p>Admiral Adnan Özbal, Commander, Turkish Naval Forces</p>
1250	Q&A SESSION
1300	<p>HAVELSAN'S ADVANCED COMBAT MANAGEMENT SYSTEM SOLUTIONS FOR NEW MISSIONS</p> <ul style="list-style-type: none"> Naval Programmes Proven Combat Management System Solutions Advanced Combat Management System Solutions Tailored For New Missions <p>Mr. Deniz Remzi Dumlu, Director, C4ISR R&D and Platform Integration, Havelsan</p> 
1320	Q&A SESSION
1330 	<p>ASSESSING MULTI-ROLE MODULARITY FOR THE FUTURE OPV</p> <ul style="list-style-type: none"> Building interoperability between Allies and partners into the design process Modularity and ensuring that the platform his capable of meeting future challenges Assessing the benefits and limits of OPV lethality <p>Flotilla Admiral Georgi Penev, Deputy Commander, Bulgarian Navy</p>
1350	Q&A SESSION
1400	COFFEE & NETWORKING BREAK ON BRELLA
1430 	<p>CONSIDERATIONS IN SHIP DESIGN FOR A BALANCED MULTI-ROLE VESSEL</p> <ul style="list-style-type: none"> Ascertaining the desirable degree of size and complexity for meeting requirements Endurance as a priority: are OPVs getting pushed further away from the shore and so do they require higher levels of endurance? The Spanish Navy BAM OPVs and the added dimension it adds to the fleet <p>Vice Admiral Manuel Martinez, Director for Engineering and Naval Shipbuilding, Spanish Navy</p>
1450	Q&A SESSION
1500	<p>NAVANTIA'S APPROACH TO SMART SUSTAINMENT</p> <p>Jorge Garcia-Monedero, Services Director, Navantia</p> 
1520	Q&A SESSION
1530	<p>HOW INDUSTRY TOGETHER WITH NAVIES CAN DEVELOP THE OPVS OF TOMORROW - A NAVAL TEAM DENMARK PERSPECTIVE</p> <ul style="list-style-type: none"> Naval Team Denmark as a Navy-Industry development- and marketing platform Started with the development of the STANFLEX-300 modular platform This "role-changing" flexible concept holds some of the characteristics, required for future OPV A reasonable Unit Cost and sufficient quality can only go hand in and if you build in series – 5 and above

	<ul style="list-style-type: none"> • Ambition should be to create an OPV platform versatile enough to cover tasks, ranging from Coast Guard oil-spill response to Naval War Fighting (will use an actual Danish case to illustrate) <p>Rear Admiral (Ret'd) Nils Wang, Director, Naval Team Denmark</p>
<p>1550</p>	<p>Q&A SESSION</p>
	<p>FRANCE'S FUTURE CAPABILITY TO MEET THE OBJECTIVES OF THE MARITIME SECURITY STRATEGY</p> <ul style="list-style-type: none"> • Overview of operational challenges at sea in this domain • OPV Procurement plan for domestic and overseas fleets • Design elements and key capabilities <p>Commander Ghislain Deleplanque, Incoming Head of Protection & Safeguarding Office, Future Naval Programs, French Navy</p>
<p>1620</p>	<p>Q&A SESSION</p>
<p>1600</p>	<p>COFFEE & NETWORKING BREAK ON BRELLA</p>
<p>1630</p>	<p>PANEL DISCUSSION: KEEPING NAVAL ARCHITECTURE AND SHIP CONSTRUCTION IN LINE WITH FUTURE NAVAL STRATEGY</p> <p>Surface platforms are the essential vehicle by which a nation can achieve its goals at sea and, therefore, represent the physical embodiment of wider naval strategy. The obvious consequence for shipbuilding is to maintain a symbiotic relationship with developments in naval strategy in order to produce long term solutions to gaps in capability. Concepts of future operations and doctrine will all influence the role and design of OPVs in the coming years and will form the basis for this panel discussion led by experts from both the end user and vendor perspective.</p> <p>This panel discussion will cover:</p> <p>What will be the key changes to naval strategy in the next 10 years that will have the greatest impact to OPV shipbuilding? In what ways can the efficiency of the design process be improved by both end users and industry? How will concepts of the future maritime operating environment manifest in patrol vessel designs by 2030?</p> <p>Moderator: Captain (Ret'd) Ned Lundquist, U.S. Navy, Communications Committee Chair, Surface Navy Association</p> <p>Panelists: Vice Admiral Manuel Martinez, Director for Engineering and Naval Shipbuilding, Spanish Navy Professor Catriona Savage, Professor of Naval Architecture, University College London Confirmed representative, Royal Malaysian Navy</p>  
<p>1715</p>	<p>CHAIRMAN'S CLOSING REMARKS:</p> <p>Captain (Ret'd) Ned Lundquist, U.S. Navy, Communications Committee Chair, Surface Navy Association</p>
<p>1730-1800</p>	<p>ENHANCED NETWORKING ON BRELLA</p>

CONFERENCE DAY TWO 1 OCTOBER 2020 DEPLOY, SUSTAIN, UPGRADE	
1150 GMT +1	<p>CHAIRMAN'S OPENING REMARKS:</p> <p>Captain (Ret'd) Ned Lundquist, U.S. Navy, Communications Committee Chair, Surface Navy Association</p>
1200 	<p>THE SPANISH NAVY'S OPERATIONAL USE OF AND PLANS FOR OPVS</p> <ul style="list-style-type: none"> • Current operational use of OPVs around the globe • Designing patrol vessels that can be the 'Swiss Army knife' of the Spanish Fleet • Vision of the Spanish Navy for the future and how industry ties in with realising this vision <p>Rear Admiral José Lago Ochoa, Commander, Canary Islands Command, Spanish Navy</p>
1220	Q&A SESSION
1230 	<p>ITALIAN NAVAL PRIORITIES FOR PATROL VESSELS AND HOW ARCHITECTURE REFLECTS STRATEGY</p> <ul style="list-style-type: none"> • Recent operational history of the Italian Navy and lessons learned • Analysing potential challenges in order to develop more effective designs for future platforms • Ensuring that relationship with industry remains as efficient as possible in the delivery of designs to fit with wider Italian Naval strategy <p>Captain Gabriele Catapano, Head of Surface Ships Design Office, Italian Navy General Staff Captain Francesco Iavazzo, Chief, Strategy and Operations Office, Italian Navy General Staff</p>
1250	Q&A SESSION
1300	<p>CATERPILLAR INSIGHT</p> 
1330 	<p>FLEET MODERNISATION AND THE OFFSET STRATEGY</p> <ul style="list-style-type: none"> • Replacing AGUIRRE Class frigates and ANGAMOS Class submarines in line with the strategy to build a flexible navy for the full spectrum of operations • Outlining requirements for the new fleet of frigates: the need for state-of-the-art, proven sensor and weapons systems compatible with Varayoc CMS capable to embark mission-specific modules • Addressing naval aviation and the anticipated acquisition of helicopters and drones to extend ISR capability and situational awareness • Modernising the existing surface fleet to be interoperable with the regional partners and the anticipated fleet of new frigates • Assessing the Offset Strategy and cooperation with international industry to boost indigenous shipbuilding capacity <p>Vice Admiral Silvio Alva Villamón, General Director of Marine Material, Peruvian Navy</p>
1350	Q&A SESSION
1400	COFFEE & NETWORKING BREAK ON BRELLA
1430 	<p>FUTURE PROCUREMENT OF THE COLOMBIAN NAVY</p> <ul style="list-style-type: none"> • Outlining plans to procure 8 frigates and replace the Almirante Pa-Dilla class frigates built in the 1980s • Overview of specific requirements for the new fleet of frigates and OPVs • Ensuring multi-mission modularity and fleet versatility for the wide array of naval operations in national waters • Enhancing situational awareness, threat detection, and sensor-shooter pairing to produce the needed effect at speed • Assessing the expansion of the OPV programme to counter asymmetric threats. Overview of platform requirements for naval operations of the future <p>Rear Admiral Oscar Darío Tascón Muñoz, President, COTECMAR</p>
1450	Q&A SESSION
1500	<p>INMARSAT INSIGHT</p> 
1530	<p>FUTURE USE OF PATROL VESSELS BY THE BRAZILIAN NAVY</p> <ul style="list-style-type: none"> • Combatting transnational threats and ensuring security in the Brazilian EEZ and inland waterways • New frigate acquisition for enhancing Atlantic patrol capability and why it was selected • Priorities and potential challenges for meeting future threats

	<p>Rear Admiral André Novis Montenegro, Deputy Chief of Strategy, Brazilian Navy</p>
<p>1550</p>	<p>Q&A SESSION</p>
<p>1600</p>	<p>LEONARDO'S SMALL CALIBRE GUN SYSTEMS AND THEIR MULTI-PURPOSE ROLE</p> <ul style="list-style-type: none"> Operational scenarios are moving from blue waters to strategic coastal sites (such as off-shore oil & gas platforms, civil and military harbours) Enemy threats through small and fast means, can be grouped into two main categories: ASuW threats: Go-fast boats, FIACs, USVs, UAVs ASW threats: midget, SDVs, UUVs How to combat these threats with ready-to-install weapon systems that are combat management system agnostic The Lionfish Family of multi-role small calibre naval gun systems and MARLIN 30/40 mm and the benefits of operating in remote-controlled and stand-alone modes The new Black Scorpion mini-torpedo provides the capability of neutralizing increasingly common threats inside the EEZ <p>Marco Fani, Head of Naval and Underwater Defence Systems Business Development, Leonardo </p>
<p>1620</p>	<p>Q&A SESSION</p>
<p>1630</p> 	<p>EXPLORING THE LIMITS OF PATROL VESSEL MODULARITY</p> <ul style="list-style-type: none"> The ongoing challenge of finding the highest possible baseline capability for multi-role vessels Delivering a robust multi-role platform which can detect, deter and respond to threats Asserting the point at which baseline capability is degraded by modularity <p>Commander Volkrad Kaphengst, Senior Systems Engineer, Integrated Project Teams, German Navy</p>
<p>1650</p>	<p>Q&A SESSION</p>
<p>1700</p>	<p>COFFEE & NETWORKING BREAK ON BRELLA</p>
<p>1730</p>	<p>PANEL DISCUSSION: PLANNING FOR UPGRADES TO MULTI-ROLE VESSELS</p> <p>For many nations, acquiring new multi-role vessels is a commitment that can span decades. Although they are purchased to fill a requirement there must be considerations of future threats and long-term strategy that are factored into the original acquisition. This panel discussion focuses on how to factor both planned and unplanned upgrades into the initial acquisition process in order to ensure that it can make a valuable contribution to fleets of the future.</p> <p>Panelists will discuss:</p> <ul style="list-style-type: none"> What future upgrades will likely be the most desirable for OPVs in the 2025-2030 period? What are the potential risks of allowing too many potential upgrades to be integrated into the vessel? Where can industry help to lead the way in improving OPV modular upgrades? <p>Moderator: Captain (Ret'd) Ned Lundquist, U.S. Navy, Communications Committee Chair, Surface Navy Association</p> <p>Panelists: Rear Admiral Oumar Wade, Chief of Naval Staff, Senegal Navy Rear Admiral Arūnas Mockus, Commander, Lithuanian Navy Holger Mühelstein, Commander, Warnemünde District, German Federal Police</p>
<p>1815</p>	<p>CHAIRMAN'S CLOSING REMARKS:</p> <p>Captain (Ret'd) Ned Lundquist, U.S. Navy, Communications Committee Chair, Surface Navy Association</p>
<p>1815-1830</p>	<p>ENHANCED NETWORKING ON BRELLA</p>

CONFERENCE DAY THREE 2 OCTOBER 2020 MULTI-ROLE VESSELS IN THE DIGITAL AGE	
0950 GMT+1	<p>CHAIRMAN'S OPENING REMARKS:</p> <p>Captain (Ret'd) Ned Lundquist, U.S. Navy, Communications Committee Chair, Surface Navy Association</p>
1000 	<p>DETERRING, PREVENTING, DETECTING AND RESPONDING TO CIVIL MARITIME SECURITY THREATS</p> <ul style="list-style-type: none"> MBC as a multi-agency task focusing on an intelligence-led, risk-based approach to maritime security Blending surveillance and identification systems with surface and air assets How this is affecting requirement generation in order to meet future threats <p>Rear Admiral Lee Goddard, Commander, Australian Maritime Border Command</p>
1020	Q&A SESSION
1030	<p>VERTICAL LIFT OPTIONS FOR OPVS IN THE DIGITAL AGE</p> <ul style="list-style-type: none"> Benefits of integrating helicopters with OPV operations Enhancing OPV operational capability with digital Rotary Wing platforms Contribution of Manned – Unmanned Teaming to OPV capability <p>Louis Wilson-Chalon, Leonardo</p> 
1050	Q&A SESSION
1100 	<p>DIGITAL TECHNOLOGIES IN UNCLEAR OPERATING ENVIRONMENTS</p> <ul style="list-style-type: none"> Degraded and congested future operating environments: will these technologies be resilient enough? Reducing the digital signature of vessels for deception and safety Discussing how much digital technologies will dominate engagements in future operating environments <p>Brigadier Dan Cheesman MBE, Chief Technology Officer, Royal Navy</p>
1120	Q&A SESSION
1130	<p>TERMA INSIGHT</p> 
1200	COFFEE & NETWORKING BREAK ON BRELLA
1230 	<p>SURFACE FLEET TRANSFORMATION AND PATROL VESSELS IN THE ROYAL NAVY</p> <ul style="list-style-type: none"> The changing nature of future threats and how it has affected Royal Navy Surface Fleet transformation in recent years The Overseas Patrol Squadron: its new role and contribution to wider Naval strategy Update on delivery of River Class OPVs and planned through-life upgrades <p>Captain Adrian Fryer, Patrol, Underwater exploitation and Diving, Royal Navy</p>
1250	Q&A SESSION
1300 	<p>ROYAL CANADIAN NAVY'S PERSPECTIVE ON ARTIFICIAL INTELLIGENCE</p> <ul style="list-style-type: none"> Assessing the role of AI in accelerating decision-making Outlining the roadmap for development: reducing the cognitive load on the Warfighter Integrating disruptive technologies to retain the competitive edge in complex operating environment <p>Commodore Richard Feltham, Commander Atlantic Fleet, Royal Canadian Navy</p>
1320	Q&A SESSION
1330 	<p>ENHANCING ECONOMIC, NATIONAL, AND BORDER SECURITY OF THE UNITED STATES</p> <ul style="list-style-type: none"> Increasing agility and responsiveness to effectively address the Nation's increasingly complex maritime challenge Evaluating plans for the acquisition of 8 National Security Cutters, 25 Offshore Patrol Cutters and 58 Fast Response Cutters (FRCs) Replacing 90 aging Coast Guard high-endurance cutters, medium-endurance cutters, and patrol craft <p>Commander Jeff Rasnake, Deputy, Chief of Cutter Forces, US Coast Guard</p>
1350	Q&A SESSION
1400	OPVS AND THE MARITIME COMPONENT OF NATIONAL RESILIENCE

	<ul style="list-style-type: none"> • Addressing the importance of national resilience in the post-COVID era • The UK Integrated Defence Review: evaluating the future roadmap of OPV development • Assessing multi-mission modularity and versatility • Outlining the role of OPVs in the future surface fleet <p>Dr Sidarth Khoshal, Research Fellow, Sea Power, Royal United Services Institute</p>
<p>1420</p>	<p>Q&A SESSION</p>
<p>1430</p>	<p>COFFEE & NETWORKING BREAK ON BRELLA</p>
<p>1500</p>	<p>PANEL DISCUSSION: PRIORITISING NEW TECHNOLOGIES FOR NAVAL ACQUISITION</p> <p>As the Digital Age ushers in a wave of new technologies that can provide great strides forward in overall capability, it also brings a degree of pressure to adopt the right technologies and do so as rapidly as possible so as to remain competitive. Disruptive Technologies have the potential to transform the nature of operations but require a change in culture in some cases in order to integrate them most effectively. This panel discussion will discuss how the world of multi-role vessels will approach these opportunities and challenges..</p> <p>Panelists will discuss:</p> <ul style="list-style-type: none"> • What role will unmanned platforms play in providing real-time data to enhance ISR capabilities and overall situational awareness? • How can we more effectively secure data and ensure that networks are resilient enough in a time where information security is rapidly growing in importance? • Maritime operations will require an ever increasing ability to collect and act on sensor data to build the tactical picture for operations; how can navies enhance threat detection and accelerate decision-making? <p>Moderator: Captain (Ret'd) Ned Lundquist, U.S. Navy, Communications Committee Chair, Surface Navy Association</p> <p>Panelists: Brigadier Dan Cheesman MBE, Chief Technology Officer, Royal Navy Rear Admiral (ret.) Nils Wang, Director, Naval Team Denmark Dr Sidarth Khoshal, Research Fellow, Sea Power, Royal United Services Institute</p>
<p>1545</p>	<p>CHAIRMAN'S CLOSING REMARKS:</p> <p>Captain (Ret'd) Ned Lundquist, U.S. Navy, Communications Committee Chair, Surface Navy Association</p>
<p>1545-1600</p>	<p>ENHANCED NETWORKING ON BRELLA</p>