# Arctic Patrol and Reconnaissance

## Market Insight and Requirements Report

2016



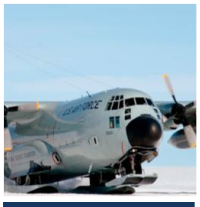

Arctic Patrol & Reconnaissance

Defence iQ

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# Introduction

As the Arctic becomes an increasingly important strategic and political region, governments across the region are making their interests and priorities in the region known. As these strategies are published, military and civilian stakeholders are beginning to turn their attention to delivering on these policy objectives.

Up to 25% of the world's undiscovered oil reserves are believed to lie in the Arctic. Territorial disputes between the US, Canada, Russia, Denmark and Norway are increasing, with Russia, in particular, laying claim to several areas of arctic shelf and being prepared to defend those claims at the UN.

As part of Russia's upgrade of its Arctic infrastructure programme, airfields and ports on the Franz Josef Land Archipelago and the New Siberian Islands, as well as the continental part of the Arctic Circle, are being re-opened. Reconnaissance aircraft from Russia's Northern Fleet will be deployed to these airfields to increase patrol missions over the Arctic.

Militaries are increasing their presence in the region as it continues to grow in statue as an important political outpost. In November 2013, the US Department of Defence (DoD) released its first Arctic Strategy, which plans for the evolution of the country's military infrastructure and capabilities in this region. The following month, Canada announced that its extended continental shelf claim could reach as far as the North Pole. Canada, Denmark, and Russia are all planning to extend their continental shelves under the UN Convention on the Law of the Sea.

The Earth's geometry also hinders Arctic operations, as the orbits of some satellites degrade services at high latitudes. Also, significant magnetic and solar interference degrades high data rate communications, thus limiting domain awareness.

The High North remains a complex operating environment and both technical shortfalls and equipment shortages mean that operators continue to face substantial information gaps. The following report provides a select overview of the Arctic patrol and reconnaissance market for the coming years, including details of the latest known programmes and requirements for equipment relevant to operations in the Arctic.

# Capability analysis by country

## Canada

Joint Task Force North (JTFN) is currently the only permanent Canadian military presence in the Arctic. The task force includes the 1st Canadian Ranger Patrol Group with 1,750 Rangers in 60 patrols and a patrol and reconnaissance role, with very little combat capability. JTFN also includes a reserve infantry company and four Twin Otter utility aircraft, which are capable of landing on snow.

Additional land, air, and naval forces are often deployed for Arctic sovereignty operations, in order to supplement this small permanent presence. The RCAF has four forward operating locations in the Arctic.

The Royal Canadian Navy (RCN) has no ice breakers, its surface combatants are not ice-strengthened, and the Victoria Class Submarines do not have an under-ice capability.

The RCN's presence in the Arctic is also limited by infrastructure as there are no refuelling facilities north of St. John's in Newfoundland, and RCN vessels cannot easily operate while in the Arctic or remain on station for very long.

However, the Canadian Forces are enhancing their ability to project and sustain presence north of 60 degrees. Four Arctic Response Company Groups, drawn from reserve forces, are being trained, with other units also receiving more regular training in the north. In addition, an Arctic training centre was opened at Resolute Bay in August 2013.

A key effort to improve the Canadian Forces' capabilities in the Arctic is the planned purchase of up to eight Arctic/Offshore Patrol Ships (AOPs), with the first scheduled to be delivered in 2018. However, the ship is still in the design phase and the programme has come under considerable criticism, with its final capabilities still unclear.

## Denmark

The Royal Danish Navy (RDN) is well-suited for operations in the Arctic. The four Thetis-class frigates are ice-strengthened, as are the two Arctic Patrol Vessels, HDMS Knud Rasmussen and HDMS Ejnar Mikkelsen, which were commissioned in 2008 and 2009 respectively. A third Knud Rasmussen-class ship is expected to be completed in 2017.

These are replacing the Agdlek-class cutters on a one-for-one basis, only one of the old cutters thus remaining in service.

Denmark's Arctic land forces are much less effective. The Sirius Sledge Patrol serves the farthest North and is tasked with enforcing Danish sovereignty in the Arctic and patrolling the Northeast Greenland National Park. However, this unit comprises only six two-man teams, albeit of elite troops.

The RDAF's 721 Squadron has a detachment at Kangerlussuaq, Greenland, with one Challenger 604 surveillance aircraft and Denmark also deploys Lockheed Martin C-130J-30 transports and F-16 fighters to Greenland as required. An Arctic Response Force is also planned.

## Norway 

Two F-16 fighter squadrons of the Royal Norwegian Air Force (RNoAF) are based at Bodø Air Base, above the Arctic Circle, but this base is planned to close once the Lockheed Martin F-35 Joint Strike Fighter replaces the F-16s. However, a new QRA base for the F-35s is to be established at Evenes, which is even further north than Bodø

The Royal Norwegian Air Force is being severely stretched as it maintains a high tempo of operations. The Norwegian government has declined participation in supporting American-led strikes against ISIL.

The Norwegian Army is re-equipping an existing motorised infantry unit, the 2nd Battalion at Skjold, for improved operational capability in the Arctic and an armoured battalion stationed at Setermoenis also deploys to the Arctic.

The Royal Norwegian Navy (RNoN) has replaced its Oslo-class frigates with the much larger and more capable Fridtjof Nansen class. Also, the Norwegian Coast Guard, which is part of the RNoN, operates the KV Svalbard Offshore Patrol Vessel (OPV), which is the country's most capable Arctic vessel.

The RNoN has also procured a new research and surveillance vessel. This will replace the F/S Marjata, for monitoring Russia's Northern Fleet.

## Russia 

Some commentators believe that Moscow's real focus is not eastern Europe, or Syria, but the High Arctic. Russian oil production is forecast to decline after 2020; up to 25% of the world's remaining oil and gas reserves are thought to be under the Arctic region.

The Russians have reopened, modernised and hugely expanded a large Sig Int (Signals Intelligence) base next to northern Finland. At Tiksi, on the Russian mainland, another abandoned air base is also being reopened. These airfields are positioned where Russia can project its claims over the High Arctic while also monitoring the increasing international shipping sailing through formerly ice-bound seaways in the area.

A new air base is being created on Wrangle Island in the East Siberian Sea. It will allow Russia to watch over the eastern end of the Lomonosov Ridge and monitor US military operations in the Barents Sea. The Russians are also planning to open more air bases on Franz Joseph Island, the western edge of their claimed part of the High Arctic.

Russian military forces already have a numerical advantage in the Arctic, compared to other national forces. The Northern Fleet is the largest of Russia's five naval fleets, with Russia's only aircraft carrier, Admiral Kuznetsov, a nuclear powered cruiser, five destroyers, two frigates, plus more than twenty-four patrol ships. These vessels are supported by icebreakers.

A new class of Arctic patrol vessels is also planned, but whether funds will be available for this is unknown at present. The Northern Fleet also includes most of Russia's ballistic missile submarines, including the new Borey-class boats, as well as 22 attack submarines, although some of these are probably non-operational. The Northern Fleet also

operates naval aircraft in the high Arctic, including TupolevTu-142 long-range anti-submarine warfare (ASW) and IL-38 medium range ASW aircraft operating from airbases in the Murmansk and Vologda regions.

Russia is also establishing two Arctic infantry brigades. The 200th Independent Motorised Infantry Brigade, based in Pechenga, had a planned Full Operational Capability (FOC) of 2011, since delayed, mainly due to discipline problems. The second unit's FOC is uncertain at present. However, an Arctic Group of Forces (Army Group) was formed in 2014 and will use pre-positioned equipment, operating in cadre form.

Some Mi-8 "Hip" utility helicopters are also to be upgraded with more powerful engines, auxiliary electric generators, ice protection systems, and ski landing gear. It was announced in December 2015 that an S-300-equipped air defence missile regiment had been deployed on the Novaya Zemlya island group. This follows the deployment of S-400 systems in 2014 on the Kola Peninsula and the building of large military bases at Severny Klever on Alexander Island in Franz Josef Land and on Kotelny Island.

## United States 

No current USN surface combatants are ice-strengthened and operations in the Arctic are limited by both pack and marginal zone ice. The US Arctic Strategy depends on sub-surface units and aircraft to make up for this lack in surface capabilities and provide assured access in the ice latitudes. However, the USN's Los Angeles class submarines do include Arctic-specific design features.

The U.S. Navy's Arctic Roadmap was updated in 2014 and in it, Chief of Naval Operations Admiral Jonathan Greenert stated: "The U.S. Navy recognises that the opening of the Arctic Ocean has important national security implications as well as significant impacts on the US Navy's required future capabilities."

Understanding the Arctic "Battlespace" is a USN priority. The Office of Naval Research (ONR) and the Naval Research Laboratory (NRL) are both undertaking research and developing models that better predict sea ice movement, to allow for the safer operation of surface ships in the region.

The U.S. Air Force plans to place two military satellites into orbit as part of an Enhanced Polar System to provide secure communications above 65 degrees North. Lockheed Martin has also demonstrated that its Mobile User Objective System (MUOS), with two satellites already in orbit, can extend communications into the High Arctic, up to just 30 miles from the North Pole.

# OPV fleets, plans and requirements

| COUNTRY | CURRENT OPV HOLDINGS | FUTURE PLANS |
|---|---|---|
| CANADA | 1 SIR WILFRED GREWFELL (COAST GUARD)<br><br>1 LEONARD J COWLEY CLASS (COAST GUARD)<br><br>2 CAPE ROGER CLASS (COAST GUARD)<br><br>1 TANU CLASS (COAST GUARD) | Up to 8 Polar 5 AOP Class planned for delivery from 2018-23 |
| CHINA | 1 HAIXUN 21 CLASS (MARITIME SAFETY ADMINISTRATION)<br><br>1 HAIXUN 31 CLASS (MARITIME SAFETY ADMINISTRATION)<br><br>1 HAIXUN 01 CLASS (MARITIME SAFETY ADMINISTRATION)<br><br>1 HAIXUN 11 CLASS (MARITIME SAFETY ADMINISTRATION)<br><br>1 HAIXUN 051 CLASS (MARITIME SAFETY ADMINISTRATION)<br><br>1 HAIXUN 022 CLASS (MARITIME SAFETY ADMINISTRATION)<br><br>1 TYPE 718 (COAST GUARD)<br><br>2 JIANGHU CLASS (COAST GUARD)<br><br>49 OFFSHORE PATROL SHIPS<br><br>(COAST GUARD) | |
| DENMARK | 2 + 1 KNUD RASMUSSEN CLASS (ARCTIC PATROL SHIPS) | Third ship approved for service entry in 2016. |
| FAROE ISLANDS | 2 PATROL SHIPS (COASTGUARD) | |
| FINLAND | 1 IMPROVED TURSAS CLASS (BORDER GUARD)<br>2 TURSAS CLASS (BORDER GUARD)<br>1 UVL 10 CLASS (BORDER GUARD) | |

| COUNTRY | CURRENT OPV HOLDINGS | FUTURE PLANS |
|---|---|---|
| FRANCE | 1 L'ADROIT CLASS (GOWIND)<br>1 LAPEROUSE CLASS<br>4 P400 CLASS<br>8 D'ESTIENNE D'ORVES CLASS<br>1 TRAWLER TYPE<br>1 LE MALIN CLASS<br>3 FLAMANT CLASS<br>0 + 3 (1) PATROL SHIPS | Service life 2020<br>1st Life expired 2015 - last in 2021<br>For service entry from 2015 |
| GERMANY | 3 BAD BRAMSTEDT CLASS (COAST GUARD)<br>1 BREDSTEDT CLASS (COAST GUARD)<br>2 SASSNITZ CLASS (COAST GUARD) | |
| ICELAND | 2 AEGIR CLASS (COAST GUARD)<br>1 THOR (ULSTEIN UT 512L) CLASS<br>(COAST GUARD) | |
| INDIA | 3 + 1 SARYU CLASS<br>6 SUKANYA CLASS<br>10 CAR NICOBAR CLASS<br>6 SDB MK.5 CLASS<br>2 + 6 SANKALP CLASS (COAST GUARD)<br>4 SAMAR CLASS (COAST GUARD)<br>5 VIKRAM CLASS (COAST GUARD)<br>3 VISHWAST CLASS (COAST GUARD)<br>2 + 3 RANI ABBAKKA CLASS (COAST GUARD)<br>7 PRIYADARSHINI CLASS (COAST GUARD)<br>4 TARA BAI CLASS (COAST GUARD)<br>7 SAROJINI NAIDU CLASS (COAST GUARD)<br>0 + 8 OPV (COAST GUARD)<br>8 RAJSHREE CLASS (COAST GUARD)<br>2 + 1 SAMUDRA CLASS (COAST GUARD)<br>3 + 17 AADESH CLASS (COAST GUARD) | Delivery through 2017 |

| COUNTRY | CURRENT OPV HOLDINGS | FUTURE PLANS |
|---|---|---|
| JAPAN | 2 SHIKISHIMA CLASS (COAST GUARD)<br>10 SOYA CLASS (COAST GUARD)<br>1 IZU CLASS (COAST GUARD)<br>1 MIURA CLASS (COAST GUARD)<br>1 KOJIMA CLASS (COAST GUARD)<br>1 NOJIMA CLASS (COAST GUARD)<br>7 OJIKA CLASS (COAST GUARD)<br>10 SHIRETOKO CLASS (COAST GUARD)<br>3 HIDA CLASS (COAST GUARD)<br>3 ASO CLASS (COAST GUARD)<br>9 HATERUMA CLASS (COAST GUARD)<br>14 TESHIO CLASS (COAST GUARD)<br>2 TAKATORI CLASS (COAST GUARD)<br>4 AMAMI CLASS (COAST GUARD)<br>20 + 2 TOKARA CLASS (COAST GUARD)<br>2 + 4 IWAMI CLASS (COAST GUARD)<br>2 MIZUHO CLASS (COAST GUARD)<br>2 + 4 (6) KUNIGAMI CLASS (COAST GUARD) | |
| KOREA (SOUTH) | 3 MAZINGER CLASS (COAST GUARD)<br><br>6 430 TON CLASS (COAST GUARD)<br>1 SAMBONGHO CLASS (COAST GUARD)<br>4 BUKHANSAN CLASS (COAST GUARD)<br>1 DAEWOO TYPE (COAST GUARD) | 6 new OPVs to be acquired by Maritime Police |
| LATVIA | 1 VALPAS CLASS (COAST GUARD) | |
| LITHUANIA | 3 FLYVEFISKEN CLASS | |
| NETHERLANDS | 4 HOLLAND CLASS | |
| NORWAY | 1 ARCTIC CLASS (COAST GUARD)<br>3 NORDKAPP CLASS (COAST GUARD)<br>5 NORNEN CLASS (COAST GUARD)<br>1 PATROL VESSEL (COAST GUARD) | |

| COUNTRY | CURRENT OPV HOLDINGS | FUTURE PLANS |
|---|---|---|
| RUSSIA | 4 KOMANDOR CLASS (BORDER GUARD)<br>9 ALPINIST CLASS (BORDER GUARD)<br>18 SORUM CLASS (BORDER GUARD)<br>1 SPRUT CLASS (BORDER GUARD)<br>17 TYPE 1496/1496M CLASS (BORDER GUARD)<br>3 + 4 (18) RUBIN CLASS (BORDER GUARD)<br>0 + 1 (5) PROJECT 22160 PATROL SHIPS (BORDER GUARD)<br>2 MODIFIED OKEAN CLASS (BORDER GUARD)<br>0 + 1 PROJECT 22100 PATROL SHIP (BORDER GUARD)<br>2 PROJECT 22100 PATROL SHIPS (BORDER GUARD) | Total of 25 planned by 2020 |
| SWEDEN | 3 KBV 001 CLASS (COAST GUARD)<br>1 KBV 181 CLASS (COAST GUARD)<br>2 KBV 201 CLASS (COAST GUARD)<br>3 KBV 288 CLASS (COAST GUARD) | |
| UK | 3 RIVER CLASS<br>1 MODIFIED RIVER CLASS<br>2 JURA CLASS (SFPA)<br>1 MINNA CLASS (SFPA) | 3 multi-mission OPVs planned – first enters service in 2017 |
| US | 3 + 4 (1) LEGEND CLASS (COAST GUARD)<br>8 HAMILTON AND HERO CLASSES (COAST GUARD)<br>13 FAMOUS CUTTER CLASS (COAST GUARD)<br>14 RELIANCE CLASS (COAST GUARD)<br>8 + 16 (10) SENTINEL CLASS (COAST GUARD)<br><br>1 EDENTON CLASS (COAST GUARD) | To replace Hamilton Class<br><br>For replacement by OPC – 25 required<br><br>Fast Response Cutter – current requirement for 24 |

# ISR, maritime patrol aircraft & UAV assets

| COUNTRY | CURRENT ISR / MPA / UAV HOLDINGS | FUTURE PLANS |
|---|---|---|
| CANADA | 2 King Air 300 (Recce)<br>18 CP-140 Aurora (MPA)<br>3 Heron (UAV)<br>Sperwer; Skylark I & II; Scan Eagle (UAVs) | Requirement to replace CP-140s |
| CHINA | 2 B737 MPA<br>5 Challenger 870 + 2 ON ORDER<br>3 Y-8 (MPA)<br>1 Vulture (UAV) | Navy<br>Navy<br>Navy<br>Many indigenous UAV designs operated and under development |
| DENMARK | 3 Challenger 604 (MPA)<br>Raven-B (UAV)<br>Sperwer (UAV) | Aerovironment UAVs on order |
| FRANCE | 22 Atlantique Mk.2 (MPA)<br>5 Falcon 50M (MPA)<br>5 Falcon 200 (MPA)<br>Heron TP (UAV)<br>16 MQ-9A Reaper (UAV)<br>30 Sperwer II + 5 on order (UAV)<br>Skylark I (UAV) | Navy - 15 to be upgraded for delivery 2018-2023<br>Navy - for delivery 2013-2015<br>Navy - Total of 12 Falcons planned for MPA<br>Delivery through 2016 |
| GERMANY | 1 Dornier 228/NG (MPA/Recce)<br>8 P-3C (MPA)<br>3 Heron (UAV)<br>K20 (UAV)<br>Luna (UAV)<br>Aladin (UAV)<br>Camcopter UAV) | Navy<br>Navy<br>On lease - to be replaced by Heron TPs from 2018<br>Requirement for MALE UAVs<br>Navy |
| INDIA | 5 B707 (Recce)<br>2 1125 G100 Astra (Recce)<br>1 Global 5000 (Recce)<br>8 BN-2 (MPA)<br>26 DO-228 (MPA)<br>5 IL-38 (MPA)<br>8+12 P-8I Neptune (MPA)<br>50 Heron (UAV)<br>100+ Searcher II (UAV) | Navy<br>Navy - total of 36 believed on order<br>Navy<br>Navy<br>More operated by Navy |

| COUNTRY | CURRENT ISR / MPA / UAV HOLDINGS | FUTURE PLANS |
|---|---|---|
| JAPAN | 7 + 5 P-1 (MPA)<br>4 Lear Jet 36<br>82 P/OP-3C (MPA) | Navy - 60 more required?<br>Navy<br>Navy |
| KOREA (SOUTH) | 8 Hawker 800 (Recce)<br>0+4 Falcon 2000S (ISR)<br>16 P-3C/K (MPA)<br>18 S-3B (MPA) on order<br>Searcher (UAV)<br>Skylark II (UAV) | 4 RQ-4 Global Hawk (UAVs) on order |
| NORWAY | 6 P-3C/N (MPA)<br>Aladin (UAV) | |
| POLAND | 9 AN-28 (MPA)<br>Scan Eagle (UAV)<br>12 Orbiter (UAV)<br>2 Heron (on loan) (UAV)<br>Skylarl I (UAV) | Navy |
| RUSSIA | 15 IL-38 (MPA)<br>13 AN-30<br>30 IL-20/22<br>1 TU-134<br>Searcher (UAV)<br>I-View (UAV)<br>Bird Eye 400 (UAV) | Navy |
| SINGAPORE | 5 F50 (MPA)<br>2 Heron (UAV)<br>Hermes 450 (UAV)<br>Searcher (UAV)<br>Aerostar (UAV)<br>Scaneagle (UAV) | |
| SWEDEN | Sperwer (UAV)<br>2 (Systems) Shadow 200 (UAV)<br>12 (+ 18 option) Puma AE/Wasp (UAV) | Army |
| UK (ROYAL AIR FORCE) | 3 BN-2 (Recce)<br>9 P-8 Poseidon on onrder<br>5 Sentinel R.1 (Recce)<br>5 Shadow R.1 (Recce)<br>5+5 MQ-9A Reaper (UAV) | OOSD - 2030 - 3 more to procure?<br>To be replaced by 20+ Protectors |
| UK (BRITISH ARMY) | 11 BN-2 (Recce) + 1 on order<br>3 BN-2 (Recce)<br>54 Watchkeeper (UAV)<br>10 Hermes 450 (UAV)<br>18 T-Hawk (UAV)<br>222 Desert Hawk III (UAV)<br>Raven B (UAV)<br>324 Black Hornet (Micro UAV) | Army<br>RAF<br><br>On Loan |

| COUNTRY | CURRENT ISR / MPA / UAV HOLDINGS | FUTURE PLANS |
|---|---|---|
| UK (ROYAL NAVY) | Scan Eagle (UAV) | |
| U.S. (AIR FORCE) | 1 B.707 (Recce)<br>4 Dash 8/E-9 (Recce)<br>16 E-8C JSTARS (Recce)<br>2 Falcon 20/200 (Recce)<br>3 Gulfstream III (Recce)<br>41 King Air 350 (MC-12W) (Recce)<br>11 Metro 23 (RC-26) (Recce)<br>2 OC-135 (Recce)<br>16 PC-12 (U-28) (Recce)<br>26 U-2S (Recce)<br>10 WC-130J (Weather Recce)<br>66 RQ-4 A/B Global Hawk (UAV - 27 Active)<br>Up to 268 MQ-1B Predator (UAV)<br>108 RQ-11B Raven (UAV)<br>442 Wasp (UAV)<br>Scan Eagle (UAV)<br>RQ-170 Sentinel (UAV)<br>319 MQ-9B Reaper (UAV) | Being Upgraded<br><br>To remain in service until 2019 |
| U.S. (ARMY) | 7 Dash 8 (Recce)<br>2 DHC-7<br>82 King Air 200/300/350 (RC-12) (Recce) + 6 on order<br>131+ MQ-1C Gray Eagle (UAV)<br>1,272 RQ-11 Raven (UAV)<br>I-Gnat ER (UAV)<br>RQ-7B Shadow (UAV)<br>RQ-16 (UAV)<br>RQ-20 Puma (UAV)<br>Wasp (UAV) | 22,000 Requirement |
| U.S. (NAVY) | 1 DHC-6 (Recce)<br>1 Metro 23 (Recce)<br>115 P-3C (MPA)<br>24+83 P-8A Poseidon (MPA)<br>2 S-3B (Recce)<br>0+70 MQ-4C Triton (UAV)<br>2 Heron (UAV)<br>168 MQ-8B Fire Scout (UAV)<br>30 MQ-8C Fire Scout (UAV)<br>372 RQ-16 T-Hawk (UAV)<br>Scan Eagle (UAV) | IOC 2016 |

| COUNTRY | CURRENT ISR / MPA / UAV HOLDINGS | FUTURE PLANS |
|---|---|---|
| U.S. MARINE CORPS | RQ-11B Raven (UAV)<br>RQ-7B Shadow (UAV)<br>Wasp III (UAV)<br>Scan Eagle (UAV) | |
| U.S. SPECIAL OPERATIONS COMMAND (SOCOM) | Camcopter (UAV)<br>6 Viking 400 (UAV)<br>RQ-21 Integrator (UAV)<br>Puma (UAV) | |

# Arctic Patrol & Reconnaissance

**7-8 June 2016 – Copenhagen, Denmark**

Arctic Patrol & Reconnaissance 2016 will bring strategic military decision makers together with leading solution providers to consider the balance of space assets, maritime reconnaissance and patrol solutions and the unmanned capability required to deliver complete situational awareness in the Arctic.

The 4th summit will return to Copenhagen as the community reflects on the Danish priorities which are due for release in early May through a major White Paper on the Arctic. Building the new Danish perspectives into the wider regional discussions, the conference promises to advance the themes of cooperation, interoperability, communications and domain awareness.

As human activity grows maritime governance and economic sovereignty becomes an ever greater concern for arctic nations, the Arctic Patrol & Reconnaissance 2016 summit will continue to play a crucial role in advancing efforts to provide situational awareness and security in the region.

**Attend Arctic Patrol & Reconnaissance 2016 to:**

- Understand the requirements of stakeholders looking to deliver situational awareness in the Arctic and contribute to their evolving strategies for delivering surveillance, reconnaissance and patrol
- Be the first to hear lessons learned from recent Arctic exercises and what this means for future of capability development
- Highlight your solutions in response to specific operational requirements and demonstrate their benefits to key customers and end-users
- Develop a clear understanding of the civil-military interplay in Arctic affairs and how best to engage with the right decision makers to further your organisation's profile as a solution provider
- Engage with stakeholders from across the Arctic community- including senior operational, procurement and policy officials- to shape your product strategy for approaching the regions biggest procurement programmes




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