



# Industry Day for the Next Generation Rotorcraft Capability (NGRC)

20-21 September 2021

**NATO UNCLASSIFIED**

6 May 2021

**SUBJECT : NSPA Industry Day for the Next Generation Rotorcraft Capability (NGRC) – Further Details**

## 1. **BACKGROUND**

France, Germany, Greece, Italy and United Kingdom signed a Letter of Intent in October 2020 regarding cooperation on development and fielding of a Next Generation Rotorcraft Capability (NGRC). Spain and USA, are also considering joining.

In order to prepare successfully the early stages of this initiative, starting at the concept stage, NSPA will organize on behalf of the participating nations an NGRC Industry day on 20 and 21 September 2021. It is planned to be a physical event at NSPA site in Capellen, Luxembourg, COVID permitting.

The Industry Day will be an opportunity for Industry to get first-hand information about the future programme based on the preliminary set of requirements.

NSPA emphasizes that the Industry Day is an information event and that it is neither a pre-qualification nor a solicitation conference so non-participation will not preclude further involvement in the initiative.

## 2. **WHY NGRC?**

The participating Nations recognize:

- that many assets in their rotary wing medium lift inventories are approaching the end of their life-cycle in the next 15-25 years;
- the requirement for continued rotary wing medium lift capabilities in line with NATO Defence Planning Process (NDPP) targets for many Allies;
- that the associated capability areas of Maritime Engagement, Land Engagement, and Land Intelligence, Surveillance, Target Acquisition and Reconnaissance including their application relevant to the air domain constitute complementary and important NATO priorities; and
- that multinational cooperation in the area of rotary wing medium lift capabilities could enable a fulfilment of NATO capability obligations more efficiently.

The participants' objectives are:

- To define, develop and field NGRC platforms and capabilities more efficiently and effectively;
- To enhance their capabilities with a view to fulfill their NATO capability obligations; and
- To profit from increased interoperability, cost savings, and operational benefits.

Multinational cooperation on the development and fielding of NGRC capabilities may cover a broad spectrum of different cooperation work strands across the full Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, Interoperability (DOTMLPFI) spectrum and will occur in several stages.

### 3. **PROCESS TO ATTEND THE INDUSTRY DAY**

Companies that have capabilities in – but not limited to - the following rotary wing medium lift areas are invited to apply to attend the Industry Day:

- Integrator & Manufacturer;
- Manufacturer of airframe;
- Manufacturer of dynamic components;
- Manufacturer of Avionics;
- Manufacturer of Flight Control Systems;
- Manufacturer of Mission and self-protection equipment;
- Manufacturer of engine;
- Manufacturer of sensor fusion and system integration software; - Manufacturer of electrical and electrical wiring interconnection systems; - Manufacturer of Simulator and training systems.

The schedule applicable to participants is as follows:

- 30<sup>th</sup> April: NSPA advertised the invitation for a NGRC Industry Day amongst the Future Business Opportunities on its e-Portal website;
- Before 12<sup>th</sup> May: Companies advise their desire to attend (via email using the response form at Annex A to [cyril.heckel@nspa.nato.int](mailto:cyril.heckel@nspa.nato.int));
- 20<sup>th</sup> May: NSPA to provide Invitations to attend and send participants an NGRCrelated questionnaire;
- Before 15<sup>th</sup> June: Companies invited to attend the Industry Day provide NSPA with their answer to the NGRC questionnaire; - 20-21 September: Industry Day.

Company responses will not be shared with other firms and will only be used to focus the Industry Day on key issues to better inform participating nations of the potential way ahead.

**ATTRIBUTES**

This section briefly describes a number of key expectations for the system. It gives a short description of the system key characteristics and other information of interest.

**3.1. Required attributes**

1.	Ability to act as an optionally unmanned/remotely piloted vehicle.
2.	Modular Open Systems Approach (MOSA) inclusive of the digital backbone and AI AIDED multi-sensor fusion, allowing cost effective and simple integration of upgrades and spiral development (including nationally sensitive/proprietary equipment).
3.	Manoeuvrability & Agility: Level 1 (the pilot is able to achieve all missions including Deck landings, Low Level (NOE) NVD, Formation, within safety and performance standards).
4.	Availability of >75% on operational/forward fleet for an enduring period (i.e. at least 3 of 4 routinely available every day). A technical-logistic support system based on in-flight data exchange between aircraft and ship or ground station.
5.	Internal cabin dimensions of at least 2m x 1.6m x 5m facilitating transport of 1216 troops in Combat Equipment Marching Order (CEMO) (160kg) or being usable for installation of mission equipment such as ASW.
6.	Affordability: Fly-away cost of no greater than €35M and cost per flight hour optimally €5,000 but no greater than €10,000 (based on 2021 values).
7.	Load Lifting capacity of >4,000kg (Combined external and internal) and at least 2,500kg of internal cabin payload with Max Fuel/ 80% Max Fuel.
8.	Range: Must have an unrefuelled range > 900nm (1650km).
9.	ROA > 400nm with 30 minute loiter time.
10.	Cruise airspeed in mission configuration: optimally 220 Kts or more but not less than 180 Kts.
11.	Ability for rapid reconfiguration of aircraft in accordance with operator's individual requirements (Special ops, ASuW/ ASW / EW, SAR, PR, MEDEVAC, other).
12.	Endurance: >5 hrs with crew and payload of >1,000 Kgs. (Target 8 hours endurance with range tanks).
13.	Maximum mission take-off gross target weight (MAUM) of 10,000kg –
	17,000kg.

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14.	Able to be deployed for medium-long periods (6-9 months) and fully operate from Frigate (FF)/Destroyer (DD) class of vessel, i.e. not larger than the footprint or dimension of either NH-90 (NFH), or AW-101, including the optional capability of folding main rotor/tail to be moved onto ship's elevator/hangar for maritime operations.
15.	Common airframe to land/air and maritime variants (fully "wet-assembled"), which has to address all land/air and maritime requirements. In case they cannot be addressed, development of separate land/air and maritime variants should be considered.

3.2. Desired attributes

1.	Performance: HOGE 4000ft @(ISA+25° Celsius (95 °F) at MAUM.
2.	Multiplex fly by light/fly by wire.
3.	Responsiveness: 2 min automated rapid start, full systems at 8 min.
4.	Mission Equipment incl. Rescue Hoist, cargo sling, Fast Rope, LTES, RTES, FMV Downlink capability, deck lock, surface radar, early warning radar, sonar, tactical data link, deck lock, ballistic protections, Electro-Optical sensor.
5.	Novel/Hybrid Powerplant (3000 SHP+).
6.	Advanced Teaming of organic and 3 <sup>rd</sup> party assets (included Teaming & Interoperability with unmanned vehicle (MUMT): <ul style="list-style-type: none"> <li>• capability to manage swarm drone;</li> <li>• capability to launch small (mini-micro) drone (expendable and attritable);</li> <li>□ capability to recover small (mini-micro) drone (recoverable)).</li> </ul>
7.	Air Transportable in a single A400M (or C-17) without the disassembly of major systems.
8.	Air to Air refuelling capability (as a receiver and optionally a donor).
9.	Capable of full range of scalable, lethal, and non-lethal effects, including the available hard points and mountings such that msn equipment, ALE, launch tubes/rails and ISTAR hardware can be physically integrated.
10.	Armaments. Improved Crew Served Weapons. Options for rockets, missiles, Air Launched Effects (ALE), and Tactical Off Board Sensors (TOBS).



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ANNEX A

## NEXT GENERATION ROTORCRAFT CAPABILITY RESPONSE FORM

I, Mrs, Mr \_\_\_\_\_ representative of company \_\_\_\_\_

and acting as (role) \_\_\_\_\_ in the company, inform NSPA:

- Our company intends to participate in this Industry Day    Yes                       No

- The Company's Point of Contact is:

<b>Name, Surname</b>	
<b>Position</b>	
<b>Email</b>	
<b>Telephone</b>	

(location / Date / signature) \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

PS: This form is to be sent to [cyril.heckel@nspa.nato.int](mailto:cyril.heckel@nspa.nato.int) by 12 May 2021.