**Pj COOKSON - Industry Day Proposal**

The UK MOD will be holding a Project COOKSON Challenge Session on Wednesday 22nd of January 2025 in London, UK. Industry partners from NATO, Ukraine and Five-Eyes countries are invited to attend. If you have expertise in vessels, vessel launcher systems, surface-surface effectors, counter air effectors, marinized GNSS hardened navigation, sensors, integrators, autonomous systems, or beyond line of sight communications, this session might be of interest to you.

**COOKSON CONOPS:**

*A COOKSON system consists of a small, fast, vessel with low observability, with >2 one-way effectors mounted onto it, including relevant launch system and support equipment. A COOKSON system should be able to travel to Ukraine via Ground Lines of Communication (GLOC). The COOKSON system must fit onto a 40-foot flatbed, ideally a 20-foot flatbed. If necessary, the vessel (including launch system) and effectors can be transported on separate flatbeds. The ability to move by Strategic Air Transport is desirable, but not essential [MOD can provide support to achieve this]. The COOKSON vessel is envisioned to be re-used in multiple missions, i.e. it is not a One-Way Attack Vessel.*

*Once in Ukraine, the COOKSON system will be placed into a body of water, most likely a sea. At this stage, the one-way effectors (if not already done so) will be loaded onto the COOKSON vessel and the vessel prepared for departure. This location offers some basic services e.g. fuel, cranes, ability to rearm the vessel etc…*

*The COOKSON system, loaded with >2 effectors, will then travel under its own power to the desired launch location. The COOKSON vessel will receive the target (including location) information remotely. Target acquisition, identification and mission planning could be conducted by third parties, but we also welcome contributions from industry.*

*The COOKSON operator(s) then prepare to launch effectors, potentially remotely, including verifying the functionality of the system e.g. through a Built-In-Test. Once the operator(s) are satisfied that the system is functioning correctly, the COOKSON effectors are launched. It is expected that each COOKSON system will fire all (>2) effectors onto a single target, to enable successful prosecution.*

*The COOKSON system has a requirement for some hard-kill air defence capability, to deter/defeat low level air threats such as rotary wing aircraft and some ISR-type UAS aircraft.*

*The COOKSON system then returns to a friendly coastline, for inspection, maintenance, repair, re-arming etc. Ideally, it will be brought out of the water and this activity done on land.*

**Desired characteristics:**

* Vessel:
  + Small: able to fit onto a 40-foot flat bed, ideally a 20-foot flat bed.
  + Fast: Minimum top speed of 40knts.
  + Low-observability.
  + BLOS Comms.
  + Navigation in a GNSS degraded/denied environment.
  + Range: 800nm fully laden.
  + Endurance: Minimum 72 hours.
  + Able to hold and fire multiple (>2) effectors.
  + Able to fire in at least Sea State 3 conditions.
  + Attritable: Minimum of 2-3 a month to be produced, from within 6 months of an order, with a low unit cost.
  + Ability to have a modular-style payload (easily swapped-out)
* Effector:
  + Suitably marinised
  + Approx. 80kg HE warhead (UK MOD is open to providing as GFx)
  + Range: 30km – 100km
  + Pre-programmed route with end-stage guidance.
  + Target set: Primarily non-hardened land target, secondarily another surface vessel.
  + The COOKSON system will be able to strike a target whilst the vessel and the effector are in a GNSS denied or degraded environment.
  + High volume: Minimum of 20 effectors a month to be produced, within 6 months of an order, with a low unit cost.
  + The Authority acknowledges that the size and weight of the effector will inform/impact the potential platform options.

**Purpose of the Challenge session:**

Project COOKSON is a proposed UK contribution to the Maritime Capability Coalition, which the UK co-leads with Norway. UK MOD wishes to understand from Industry the feasibility and key drivers to meet the proposed COOKSON concept. We are keen to understand feedback on (but not limited to) the following aspects:

* The impacts of the COOKSON vessel being crewed versus uncrewed on its feasibility, time, cost, performance.
* How many effectors is reasonable to fit onto a vessel which meets the above description.
* Likely top speed of the vessel fully laden – is >40kts feasible in Sea State 3?
* What hard kill air defence capability could be integrated onto a vessel described above, such as 0.50 calibre, a MANPAD, or a more integrated air defence system. The cost of the air defence capability should be disregarded.
  + Alternatively, what Air Defence capabilities could a sister vessel (with the same characteristics, but without the primary one-way effectors) could provide.
* The capability growth plan/ development plan for future capability iterations should be included in any summary as an annex.

The secondary purpose of the Challenge Session is to enable industry-to-industry networking, ahead of next steps.

Whilst we are primarily interested in engaging with vessel providers and one-way effector providers, we encourage wider industry participation, particularly within the categories of:

1. Air defence capabilities
2. Ability to scale.
3. Launcher system for the vessel.
4. Launcher system for the effector.
5. Sensors, primarily for situational awareness but also targeting.
6. Integrators.
7. Autonomous System providers.
8. Marinised Alt Nav.
9. BLOS Comms.

At the event, MOD will provide the following types of expertise:

1. Sponsor (Taskforce KINDRED)
2. Procurement
3. Government Scientists (Dstl)
4. User community
5. Manufacturing and Development

**Subsequent Steps (post Challenge session)**

*The following is subject to Government decision making, as well as subject to contract:*

This Session and its outputs will directly inform the next steps of the COOKSON project. It is currently anticipated that in Q1 2025, the MOD plans to launch a procurement activity for an initial 10 COOKSON systems, plus a suitable number (likely hundreds) of effectors. It is likely that it will then order 2-3 systems per month for the next 6 months. It is anticipated that the procurement activity will be a competitive process, the scope of which (including firm requirements) will be informed by this Session.

The process will invite industry to submit proposals to meet the firm requirements. MOD encourages companies to work together to address the COOKSON requirement. A small number of proposals (2-5), subject to contract will be provided funding to demonstrate the entire COOKSON capability (including the vessel, effector etc) in late 2025 or early 2026.

Please fill out the following form in order to register for the event: <https://forms.office.com/e/FWNBCBxGGj>. Registration will close on 16th January 2025. Due to capacity limitations, this industry day is limited to 1 person from each company. Completion of the form is registration of your interest not confirmation of attendance which will be sent as a separate invite. If the event is over subscribed MOD will use the information given in the form to identify the companies with the largest potential contribution.