NATO/UKRAINE UNCLASSIFIED

14 February 2025

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NOTICE
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NATO-UKRAINE COUNCIL
INNOVATION AND HYBRID COMMITTEE

NATO Innovation Hackathon
- March 2025

Note by the Acting Chair

1.   Please find at Enclosure 1 for your information an invitation for a NATO Innovation Hackathon that will take place virtually on 11 and 18 March 2025. The Hackathon is co-organized by the NATO IHC Division and the DIANA Executive.

2.   This Hackathon contributes to the delivery of the NATO-Ukraine Innovation Cooperation Roadmap[1] and opens up opportunities for Allied innovators, including by offering matchmaking opportunities and helping activate support to Ukraine from Allied innovation ecosystems. The Hackathon theme has been informed by lessons learned from Ukraine and Ukrainian demand signals.

(Signed) James Appathurai

Enclosure   1:   Invitation to NATO Innovation Hackathon - March 2025

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Concurred by: Nikolaos Loutas, Director Innovation, IHC
Original: English

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1 Enclosure

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[1] NUC(COUNCIL)D(2024)0005

NATO INNOVATION HACKATHON – MARCH 2025

INVITATION TO VIRTUAL INNOVATION HACKATHON ADDRESSING ARTIFICIAL INTELLIGENCE FOR SENSOR FUSION, RECONNAISSANCE AND COMMAND AND CONTROL (C2)

Registration deadline: 21 February 2025
Virtual event dates: 11 March 2025 and 18 March 2025 (attendees must attend both days)
Format: International virtual event with breakout sessions
Number of participants: 50-80 teams
Winners: up to 10 teams
Outcome: up to 20 000 euros per winning team

Background

Through NATO innovation, collaboration, and its research bodies, scenarios have been identified from current conflict zones where real-world defence operational problems could be solved by novel innovations in artificial intelligence and machine learning (AI/ML), imaging and sensor fusion.

DIANA hereby invites teams of **Innovators within the NATO Alliance** and **Technical Mentors and Experts from DIANA's Ecosystem** to come together, in coordination with the NATO Innovation Unit, for a 2 day - separated by one week – virtual event to develop **solutions** to pressing real-world defence challenges and to foster collaboration and communication between innovators in this space. At the end of the event, experts from across the DIANA network may select participating teams to receive funding to support continued development of their solution and invite these teams to further NATO innovation events to deepen their integration into the defence innovation community.

Hackathon Theme

Informed by lessons learned from Ukraine, defence experts and NATO partners have identified a need to develop solutions related to the **exploitation of AI/ML and other advanced data processing techniques** to support **decision making, reconnaissance and sensor data analysis**, in situations where visibility may be poor, electronic warfare systems may be deployed and valuable assets camouflaged and difficult to detect, and where available high quality data may be limited.

We open this hackathon to teams of innovators with software, AI and processing solutions that assist **in intelligence gathering and awareness of military assets such as UAVS (drones) in degraded visual environments** with emphasis on the following themes:

1. Enhanced video intelligence and Asset detection in poor visibility/night-time. Using thermal and night vision cameras and/or Low Probability of Intercept (LPI) Radar to identify assets such as UAVs (drones) from UAV or ground based systems, where real-world annotated data for these assets is often limited, especially in night-time/poor visibility scenarios.
   - Processing of data from reconnaissance operations for the accurate identification of visual/thermal signatures of unique assets.
   - Creation of synthetic data, potentially by adapting daylight data to night-time/thermal data to enable more robust identification of military assets.
   - Usage of novel AI/ML solutions for detecting, identifying, and labelling assets from data collected in poor visibility/low light scenarios.

2. Situational awareness and management based on AI/ML using the electromagnetic spectrum to detect electronic warfare (EW) systems and UAVs, ensuring the operational control of friendly EW systems, creating favourable conditions for the operation of friendly UAVs, and implementing "friend-or-foe" recognition.

DIANA is seeking Innovators and Experts who can come together over two days to offer proposed solutions to address these capability needs.

Hackathon Registration

Eligibility: must represent a registered company in a NATO member state, and have technology at **Technical readiness level (TRL) 6 – i.e., a minimum viable product—** or above that meets one of the problem statements of the theme. Companies may register a team of up to 4 participants to attend the virtual event. Companies must be "a 'start-up' of less than 5 years of age and with less than EUR 50M in annual revenue, and must not have previously received funds from NATO DIANA.

Innovators with awareness of or active experience with problem sets related to Ukraine will be prioritised for participation.

Registration: Teams interested in participating should register their interest to participate in the hackathon as a team of up to four persons at [Form] by the 21st of February. For questions, please contact NATO DIANA at Activities@diana.nato.int . Information collected in the individual registration portal will support screening and there will be an identity verification for access to the event.

Dates: The Hackathon will take place **virtually** over two days: **11 and 18 March 2025.** Optionally, teams can also book a short session with technical experts for questions and validation on **14th of March**, in order to prepare for the final hackathon date. A more detailed overview of the event is provided below.

Hackathon Details

Deliverable: Innovators will be briefed and invited to collaborate with other Innovators on the first day of the event. After one week they must pitch their proposed solutions to a panel of evaluators, referencing any additional testing, expertise, and data needs they would require to deliver this solution.

Merit-Based Evaluations: DIANA will apply the same merit-based principles of assessing proposals from Innovators that it does for selection of Innovators to its Challenge Programmes, with the addition that additional credit may be given to innovators who collaborate with other at the event to propose joint solutions.

Funding Support: Up to 10 winning teams will be awarded up to EUR 20 000 funding based on proposed and validated needs.

Assistance with Expertise, Mentoring, Testing and Evaluation Planning: involvement of DIANA's network of mentors, experts, and 180+ Test Centres will help de-risk technological solutions – by leveraging unique expertise.

Mentorship Opportunities: Connecting start-ups to the DIANA mentor network, including from Test Centres, Accelerator Sites, and beyond, in line, to facilitate long term supportive relationships.

Further Engagement with DIANA: Winning teams may be invited to actively engage in further activities with DIANA.

Structure of events (all virtual; exact timings to be confirmed at a later date)

Day 1 (11 March 2025)
Presentations, Ideation & Collaboration

09:00 – 11:00 Kick-off session
- Keynote talks from DIANA, including introductions to Defence and dual use regulations
- Keynote talk from the NATO Innovation, Hybrid and Cyber Division on NATO-Ukraine Innovation Cooperation
- Introduction to the Hackathon Agenda and house rules
- Introduction and overview of scenarios, provided by defence end-user community to be solved by the proposals.

11:00 – 13:00

- Breakout sessions with technical experts from NATO's innovation experts and defence end users.
- Collaboration marketplace – innovators are encouraged to form break out-sessions with other innovators

13:00 – 16:00
- Dedicated work time, meanwhile technical experts, end-users remain to be available for consulting

16:00 – 17:00
- Check-in and feedback/validation with experts

The Teams will then have a week to work on their proposal, collaborate with others and to consider how their solution meets with the identified scenarios.

There will be a morning between day 1 and day 2 (14 March) where teams can book short session with technical experts for questions and validation.

Day 2
Pitching (18 March 2025)

09:00 – 10:30
- Kick-off and morning check in
- Teams to have final check in session with technical experts and end users

10:30 – 12:30
- Dedicated work time
- Proposals submitted by 12:30

13:00 – 17:30 – pitch event
- Teams to have access to pitch trainers
- Overview of agenda presentation, and introduction to Jury
- Teams to pitch in breakout rooms (10 companies per room)

17:45 – announcement of winners
- Winners announced at the end of the session after selections by judges

(Signed) James Appathurai   (Signed) Deeph Chana
DASG for Innovation, Hybrid and Cyber   DIANA Managing Director