HQ Supreme Allied Commander Transformation

RFIP-ACT-SACT-25-104

Headquarters Supreme Allied Commander Transformation Norfolk Virginia

REQUEST FOR INNOVATIVE PARTICIPATION (RFIP) RFIP-ACT-SACT-25-104

Innovation Challenge 2025/December: Medical Care in a Transparent and Contested Battlespace

This document contains a Request for Innovative Participation (RFIP) Call for collaboration regarding the Innovation Challenge 2025/December (IC-25/December) calling for solutions (applications, systems, tools, concepts etc.) that can support solution development for NATO. Participants wishing to respond to this RFIP should read this document carefully and follow the guidance for responding.

General Information	
RFIP No.	RFIP-ACT-SACT 25-104
Project Title	Innovation Challenge 2025/December: Medical Care in a Transparent and Contested Battlespace
Deadline for submission	**17 November 2025, 9AM Eastern Time (Norfolk, VA, USA)**
Contracting Office Address	NATO, HQ Supreme Allied Commander Transformation (HQ SACT) Purchasing & Contracting Suite 100 7857 Blandy Rd, Norfolk, VA, 23511-2490
Contracting Points of Contact	hqsact.contracting@nato.int
Technical Point of Contact	Innovation-Challenges@innovationhub-act.org

SECTION I - INTRODUCTION

1.1 **Summary**. HQ SACT is issuing this Request for Innovative Participation (RFIP) announcement in order to facilitate collaboration between the NATO HQ SACT JATEC (Joint Analysis, Training and Education Centre) and participants regarding solutions[1]. The purpose of this RFIP is to request participants to submit solutions (either existing and/or under development) to the scenario presented within **Annex I** to participate in the NATO Innovation Challenge 2025/December (IC-25/December). All submissions must conform to this RFIP.

A Selection Committee composed of representatives from NATO HQ SACT, advisors from the IC-25/December Partners and other relevant experts invited by NATO HQ SACT will select up to **10** solutions amongst the responses submitted. The selected solutions will participate in the IC-25/December *Pitch Day* projected to be December 4, 2025. Participation in the *Pitch Day* will be either on- site, in LONDON (UNITED-KINGDOM), and/or online. An Advisory Panel composed of representatives from NATO HQ SACT, the IC-25/ December partners and other relevant experts invited by NATO HQ SACT will assess which solution(s) best responds the scenario presented in **Annex I**. The final selection of the IC-25/December winners will be done by a board of representatives from HQ SACT, advisors out the IC-25/December Partners and other relevant experts invited by NATO HQ SACT.

1.2 **Dates.** The event and timelines of IC-25/December is described in Section III. It will take place between 07 October and 04 December 2025, with the IC-25/December *Pitch Day* taking place online and on-site on 04 December 2025. Details will be posted on the Innovation Challenge website (https://innovationhub-act.org/innovation-challenges/).

1.3 **Disclaimer**. This is a Request for Innovative Participation (RFIP) **ONLY**. This RFIP does not constitute a current Request for Proposal (RFP) nor a commitment to issue a future RFP. The release of this RFIP shall not be construed as a commitment, nor an authorization to incur cost for which reimbursement will be required or sought after. Further, respondents are advised that HQ SACT will not pay for any information or administrative costs incurred in *responding* to this RFIP. HQ SACT will not pay any costs associated with participating in the IC-25/December. The costs for responding to this RFIP and participating in the IC25/December shall be borne solely by the responding party. Not responding to this RFIP does not preclude participation in any subsequent RFP if issued in the future.

SECTION II BACKGROUND

Since 2017 HQ SACT has conducted Innovation Challenges; these are informative and exploratory events focused mainly on the application of new technologies. The collaborative interaction sought for the IC-25/December is focused on participants RFIP responses and willingness to share knowledge, expertise, and products/solutions with NATO and national representatives participating (see scenarios at Annex I).

1 In this RFIP, the term “solutions” refers to applications, tools, systems concepts or devices.

2 Center of Excellence (COEs), experts JATEC and experts from Ukraine.

SECTION III - DESCRIPTION OF THE IC25/December

3.1 **Background.**

The HQ SACT is the main organizer of the IC-25/December.

3.2 **Planned activities**. The IC-25/December will consist of:

a. Initial Selection Phase: The selection will be announced 21 November 2025. Finalists will be contacted directly via email by the project coordinator in charge of the challenge, and the announcement will be made on the IC-25/December Webpage (https://innovationhub-act.org/innovation-challenges/). The selected submissions will be invited to be presented in person or online on the *Pitch Day*. Any cost associated with presenting online remains the sole responsibility of the participants providing the submission. If limited participation is received for the IC-25 submissions by **17 November 2025, 9AM Eastern Time (Norfolk, VA)** (the deadline for submission), HQ SACT reserves the right to cancel the Innovation Challenge.

b. Final selection phase: On the *Pitch Day*, the winners of the IC-25/December will be selected by a Board of HQ SACT representatives and other relevant experts invited by NATO HQ SACT and announced as part of the *Pitch Day* program. Any cost associated with presenting online or in person remains the sole responsibility of the participants providing the presentation.

All information provided in response to this RFIP (abstracts, supporting materials, and, if selected for *Pitch Day*, in the presentations) will be releasable to the public. By submitting a response to this RFIP, the candidate hereby acknowledges and agrees for the release of such documentations and presentations to the public domain and sharing of information within NATO Alliance.

3.3 **Expected input from participants.** See below in Section IV.

3.4 **Expected benefits.** Through this collaboration, HQ SACT offers participants an opportunity to gain awareness about the particularities of NATO's innovation challenges. It will be an opportunity to engage with HQ SACT JATEC and other participants within a framework of a community of interest focused on the development of innovative solutions based on new technologies in support of the NATO Innovation Process.

3.5 **Monetary Awards**

3.5.1. HQ SACT intends to present three levels of monetary awards for the top three winners of the IC-25/December:

a. 1st place: 5,000 USD
b. 2nd place: 2,500 USD
c. 3rd place: 1,000 USD

3.5.2. The monetary award is presented in the form of 1st/2nd/3rd place recipients of the HQ SACT Innovation Challenge 2025/December. The presentation of the award does not alter the relationship between HQ SACT and the participants. The monetary award is presented to eligible entries, who have complied with the terms and conditions defined for the challenge. The recipient is responsible for the proper recording and reporting of the monetary award to the appropriate tax authorities and the payment of any associated taxes.

3.5.3. Monetary awards will be paid to the recipient in the form of Electronic Funds Transfer in US dollars.

SECTION IV - REQUESTED INFORMATION

4.1. **Intent**. The intent of this RFIP is to call for formal collaboration in order to present solutions based on new technologies that can support the improvement of the NATO Innovation process. These solutions should be applicable in a federated information environment and should be interoperable by design. Additionally, they should be intuitive, requiring none or very limited training at the end-user level. Solutions are sought at different levels of development, from the "advanced concept development stage" through "customizable applications" available on commercial off-the-shelf. Solutions should address the challenges described in the scenario presented in Annex I, in particular one or more of the following ***areas of interest***:

a. Immediate Care at POI (Point of Injury)
b. Concealed Casualty Collection Point (CCP)
c. Protected Extraction:
d. Medical C2 in a Contested Electromagnetic Environment

The inherent discovery nature of the IC-25/December allows for novel approaches to these challenges.
For solutions of a potential or conceptual nature, time is a constraint.

4.2. **Responses to the RFIP**.
In response to the RFIP, please submit an abstract (**4500 characters maximum**) describing the solution idea and answering the criteria. Based on this submission and the eventual file attached, an IC-25/December Selection Committee will select up to **10** abstracts to be presented at the Innovation Challenge *Pitch Day*. In the event that the scores result in a tie (between the 10th and 11th place), the 11th finalist will be permitted to participate in the pitch day before the final jury. The response to this RFIP should be submitted through the webform https://innovationhub-act.org/innovation-challenges/ with the following information:

a. The name of the participant
b. The name of the proposed solution and which area(s) of interest it addresses
c. Name(s) of participant's representative(s) (new representatives cannot be appointed after pre-selection)

The abstract can include:
a. Limited to 4500 characters max text document.
b. Max 5 graphics, pictures or slides.
c. Eventual file attached to the submission

NOTE: all information provided in response to this RFIP has to be releasable to the public.

4.3. **Evaluation of Solutions and Selection Process**. A Selection Committee will be convened to analyse and evaluate the responses to the RFIP and select which submissions will be presented/demonstrated at IC-25/December. The Selection Committee will assess each response according to the following criteria:

4.3.1 *Eligibility:*
This RFIP is open to: Individuals with citizenship in a NATO nation or the Ukraine; or any organization officially registered with relevant government authority(ies), headquartered, in a NATO nation or the Ukraine, and whose beneficial owner is also from a NATO nation or the Ukraine.

The response to this RFIP should reflect a solution that addresses at least one of the areas of interest presented at paragraph 4.1.

Submissions will specifically be scored against:

- Operational Effectiveness
- Technical Feasibility & Technology Readiness Level (TRL)
- Cost Efficiency & Sustainability
- Scalability

4.3.2 *Priority*:
The Selection Committee retains the right to prioritize the answers to RFIP based on the relevance and diversity of the solutions, on the proposed *demonstration* method, and the complexity of the challenges addressed. Additionally, ensuring a balanced representation across sectors will be part of the prioritization process.

4.4 **Terms applicable to this RFIP:** The participants agree IC-25/December may without any limitation or further compensation use the participant's name as well as voice and/or likeness of its representative(s) in any and all media for the purpose of advertising and promoting the HQ SACT Innovation Challenge, and any associated programs. Furthermore, the participant(s) grants HQ SACT and the IC-25/December the right to take photographs and videos of the submission in connection with the challenge and grants the right to HQ SACT Innovation Challenge to use and publish the photographs and videos with or without the participant's name for any lawful purpose including but not limited to publicity, illustration, advertising, and internet/social media content. Additionally, the participant(s) agree that the IC- 25/December and thus HQ SACT may demonstrate the operation and functionality of the submission (but may not modify or publicize the source code) in connection with advertising and promoting the IC- 25/December and subsequent events organized by HQ SACT.

a. Representation and Warranties: The participants represents and warrants that:
   (i) the participant(s) is the original author of the submitted contributions;
   (ii) the participant(s) acknowledges, the submission will not infringe on any third party's copyright, patent, trademark, trade secret, right of publicity or property or any other right;
   (iii) the submission is not the subject of any actual or threatened litigation or claim;

(iv) the submission will not be obscene, offensive, libelous, pornographic, threatening, abusive, or otherwise objectionable; and

(v) the submission will not contain any content that is illegal, would constitute or encourage a criminal offense, or would otherwise give rise to liability or violate any law.

c. The participants agree to grant IC- 25/December (and thus HQ SACT), a non-exclusive, use of the submission as necessary to conduct the IC-25/December and for internal evaluation purposes by HQ SACT:

(i) in any Intellectual Property incorporated into the submission;

(ii) in Intellectual Property that is needed to operate or use the submission;

(iii) in Intellectual Property covering other materials or inventions that are incorporated into the submission, and/or

(iv) in Intellectual Property that is needed to operate or use the submission.

d. Furthermore, participants acknowledge and agree that the submission is submitted in a non-confidential basis. The IC- 25/December (and thus HQ SACT) shall have no obligation to prevent the disclosure or otherwise treat as confidential such submission. Also, to the extent that the submission includes publication of information or content https://innovationhub-act.org/innovation-challenges/ .

e. By responding to this RFIP and participating in the IC- 25/December it is constituted participants acknowledge and agree that the IC- 25/December will receive many entries and submissions in connection with this RFIP. As such other participants' entries and submissions may be similar or identical in theme, idea, format, or other respects to the submission. By responding to this RFIP the participants waive any and all past, present or future claims against HQ SACT and the IC- 25/December relating to such similarities or asserting that any compensation is due in connection with the submission.

f. Limitation of Liability: In no event shall the HQ SACT or the IC- 25/December be liable for incidental, exemplary or punitive damages arising out of or in connection with the IC- 25/December, participation, or the submission. If a participant has a dispute with any participant in the IC- 25/December or any other third party, the participants release HQ SACT and the IC- 25/December from any and all claims, demands and damages, (actual and consequential) of every kind and nature arising out of or in any way connected with such disputes.

g. Release and Indemnification: By responding to this RFIP and participating in the IC- 25/December, participants agree, on behalf of that participant and the heirs, executors and administrators, to release and hold harmless the IC- 25/December (and thus HQ SACT) from any claim, liability, damage, litigation, illness, injury or death that may occur, directly or indirectly, whether caused by negligence or not, from participating in the IC- 25/December. This includes any entry (submission) submitted by the participants.

4.5 **Communication and Follow-on**. The answers to RFIP should be submitted through the event webform https://innovationhub-act.org/innovation-challenges/. Post-submission, RFIP respondents may be contacted to provide additional information on their proposals/response.

4.6 **Questions**. All questions of a technical nature about this RFIP announcement shall be submitted solely to the points of contact listed on page 2. Accordingly, questions shall not contain proprietary and/or classified information

4.7 **Deadline for responding to this RFIP. 17 November 2025, 9AM Eastern Time (Norfolk, VA)**

4.8 **Summary**. This is a RFIP only. The purpose of this RFIP is to request participants to present and demonstrate solutions (either existing and/or under development) based on new technologies that may support the improvement of NATO Innovation Process. HQ SACT release of this RFIP shall not be construed as such a commitment, nor as authorization to incur cost for which reimbursement will be required or sought after.

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ANNEX 1

a. BACKGROUND

Since mid-2024, the Russian Federation has increased the deliberate targeting of Ukrainian casualty collection points (CCPs) and medical evacuation routes with loitering munitions, first-person view (FPV) drones and artillery cued by ISR uncrewed aerial systems (UAS). The FPV drones have created the battlefield virtually transparent, making it exceptionally challenging to provide medical care without being identified by enemy forces. Casualty evacuation (CASEVAC) within the first 60 minutes after a traumatic injury (i.e. "golden-hour") is now the exception rather than the rule. Every minute lost on the battlefield costs lives. In Ukraine, the "golden-hour" has become the golden day, with evacuations delayed for hours under constant drone threat. The average time from point-of-injury (POI) to Role 2 care[1] exceeding 3 hours and up to over 24 hours. This reality requires both medical and non-medical personnel to deliver medical care for longer and in high-risk conditions.

In July 2025, JATEC and the NATO Military Medicine Centre of Excellence (MILMED COE) hosted a workshop on identifying lessons and current challenges relating to CASEVAC. JATEC in this case is uniquely positioned to bridge operational lessons from Ukraine with NATO's innovation ecosystem, ensuring solutions are both battlefield-ready and interoperable. Based on the challenges discussed, workshop participants also identified innovation requirements for autonomous evacuation platforms, real-time clinical decision support tools, electronic patient records, and artificial intelligence-enabled triage systems. The full description of innovation requirements is outlined on page 6, and the final workshop report will be finalized in September 2025.

Additionally, JATEC participated in ACT's 16th Innovation Challenge, which aimed to find innovative solutions to countering FPV drones. As part of the Challenge, participants were tasked with identifying solutions for drone detection and neutralization. One of the greatest threats to CASEVAC is that FPV drones and loitering munitions make marked medical vehicles high-priority targets. As such, there is a pressing requirement for drone detection to allow medics and relevant personnel to act and evacuate accordingly.

Ukraine is currently using various solutions on the battlefield, but gaps remain. The MoD has deployed uncrewed ground vehicles to conduct CASEVAC, with a demonstrated need to increase the quantity2 and resistance to jamming. High mobility vehicles (buggy, quads, all-terrain, etc) are also used to speed up evacuations. Such

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1 Role 2 military healthcare encompasses a set of military health care capabilities which enhances the resuscitative spectrum of the role 1 by capabilities essential to preserve life, limb, and function and stabilize the patients' condition for further transport and treatment (Allied Joint Doctrine for Medical Support: AJP-4.10, September 2019).

2 As of July 2025, the Ukrainian Ministry of Defence approved for operational use nearly thirty new UGVs and remotely-controlled weapon stations manufactured in Ukraine.

vehicles are being equipped with radars and jammers to detect and withstand enemy drones. Drones are used to observe the battlefield, evacuation site and routes as well as counter enemy drones or troops.

The July 2025 CASEVAC workshop participants outlined the following techniques that Ukrainian forces have been implementing to address challenges in the absence of sufficient technologies:

- Conducting evacuations during the night and employing decoys and smoke screens to conceal vehicle movements.
- Coordinating between drone operators and medical personnel to monitor evacuation routes and disrupt enemy intelligence, surveillance, and reconnaissance (ISR) capabilities.
- Establishing underground medical posts to provide casualty stabilization prior to evacuation.
- Equipping tactical vehicles with modular casualty packs to enable improvised MEDEVAC capabilities during CASEVAC missions.

Private sector companies and government institutions across the Alliance and in Ukraine have developed and are developing technologies to address issues with providing PFC/PCC and conducting CASEVAC. Examples of relevant technologies recently developed or in development across the Alliance include:

- Uncrewed systems to resupply blood, which have been recently validated in NATO exercise “Swift Response 2025” and flown over 3 kilometres to deliver the blood.
- Battlefield Assisted Trauma Distributed Observation Kit and Operational Medicine Care Delivery Platform (BATDOK and OpMed CDP): this kit captures information about patient care and can operate without internet connectivity while connecting to treatment facilities.
- Spectrum Dominance 2.0, created by Silvus Technologies, has created a suite of capabilities—Low Probability of Intercept / Low Probability of Detection (LPI/LPD), Anti-Jamming EW resiliency, and Advanced Threat Protection capabilities—providing secure and protected communications

b. PURPOSE

Innovation Challenge Problem Statement:

Unlike generic innovation calls, this challenge is focused on the most urgent battlefield reality: delivering medical care inside a drone kill-box. Challenge participants should propose solutions to aid front-line medics and non-medical personnel in Prolonged Field Care (PFC)/Prolonged Casualty Care (PCC)[3] and CASEVAC in the current operational environment. Proposed solutions should
withstand and bypass threats beyond the first 120 minutes from point of injury (POI), in order to stabilise, conceal and move casualties while operating inside an 8 km “drone kill-box” that can be struck within 90 seconds of detection. Proposed solutions should also address circumstances where evacuation is delayed or infeasible due to operational constraints. For this innovation challenge, the solutions may address one or several of the technical requirements outlined below.

[3] PFC refers to field medical care applied beyond “doctrinal planning timelines” in order to decrease patient mortality and morbidity. PFC utilizes limited resources and is sustained until the patient arrives at the next appropriate level of care.

Technical Requirements and Operational Parameters:

a. **Immediate Care at POI:** Ultra-rapid haemorrhage control and pain relief, keeping personnel exposed for less than 6 minutes.

Stabilisation time at POI:

Threshold: ≤ 10 minutes stabilisation time at POI

Objective: ≤ 6 minutes stabilisation time at POI

Expectation: Low-signature (hard to detect) stabilisation kits (e.g. vacuum splints, mini-warmers, low-noise painkiller injectors)

b **Concealed Casualty Collection Point (CCP):** Deployable decoys or shelters that reduce electro-optical, IR and radio-frequency (RF) signatures by at least 80 percent for a minimum of 30 minutes.

(iv) System signature reduction:

Threshold: 1 km

Objective: 5 km

(v) Expectation: Solutions must address covert placement and/or medical care (PFC/ PCC) for an extended period (at least 8 hours) Solutions can include pop-up CCP shelters / decoys with multispectral camouflage and have hard or soft-kill counter-UAS options. Solutions can also include AI-based threat-alert applications on harsh environment-resistant hardware which can detect acoustic, electro-optical, and RF cues.

c. **Protected Extraction**: Autonomous or tele-operated litters, pods or vehicles to carry casualties and can withstand splinters of most common calibres and FPV drone strikes.

Extraction range:

Threshold: 1 km

Objective: 5 km

Casualty pod/vehicle weight:

Threshold: ≤ 350 kg

Objective: ≤ 200 kg

Expectation: Tracked, wheeled, uncrewed ground vehicles, protected to V_{50} ≥ 600 m/s

- **Medical C2 in a Contested Electromagnetic Environment:** A secure, resilient digital mesh network for medics with low-probability-of-intercept (LPI)/low-probability-of-exploitation (LPE) to provide digital triage, vital-sign telemetry and asset tasking even under GNSS denial.

a. Expectation: Telemedicine solutions be secure, portable, and should enable remote consultation with emergency physicians, anaesthesiologists or surgeons while providing PFC/PCC in proximity to the front line.

Additional Requirements:

- Solutions must remain operational in adverse weather (rain, fog) and extreme temperatures (–20 °C to +40 °C).
- Solutions must conform to NATO STANAG 2546 (AJMedP-2: Allied Joint Medical Doctrine for Medical Evacuation).
- Technology Readiness Level (TRL) at finals should be between 5-7.[4] The solution should be deployable ≤ 12 months after finals

Submission requirements for participants:

A Concept Paper: Detailed explanation of the proposed solution, including any prior testing results, and a description of training requirements for frontline personnel. Participants must describe how their solution would be used in a realistic NATO/Ukraine CASEVAC scenario (e.g., inside an 8 km drone kill-box).

Technical Data Sheet: Core specifications, performance parameters, and compliance with NATO standards. Basic outline of how the solution will be maintained and supported in the field.

Cost & Production plan: Unit cost estimate, funding options, scalability within 12 months, and mass-production feasibility. Participants should provide a roadmap from current TRL to TRL 6/7, including expected testing milestones and time to deployment (≤ 12 months). Participants should indicate potential industrial/academic partners, especially if local Ukrainian production or assembly is feasible.

Prototype Demonstration: If applicable, participants should provide a video demonstration of the prototype in relevant operational conditions.

Initial Evaluation Criteria

30% Operational Effectiveness:
- POI-to-Role 2-time reduction;
- Projected survival uplift (SIMMED or equivalent).
- Fit for battlefield conditions (drone-saturated, transparent environment).

25% Technical Feasibility & TRL:
- Prototype TRL level, robustness, and resilience in EW-contested environment.
- Integration with current NATO/Ukraine vehicles, drones, or medical workflows.

20% Cost Efficiency & Sustainability:
- Unit cost vs. Estimated thresholds (e.g. €25k–).
- Field maintainability (≤48h repair).
- Supply chain resilience

10% Scalability:
- Ease of scaling to battalion/brigade level.
- Mass production feasibility

10% Innovation & Modularity:
- Novelty of concept or approach.
- Modularity, plug-and-play and multi-purpose use for different scenarios.
- Dual-use potential (civil/humanitarian applications).
- Usability by medics and non-medical personnel/soldiers (CLS-level).

5% Interoperability
- NATO STANAG and doctrinal compliance.
- Open APIs and digital interoperability.

TRL 5: Technology validated in a relevant environment
TRL 6: Technology demonstrated in relevant environment
TRL 7: System prototype demonstration in operational environment

Challenge Timeline

- Scenario Publication/Request for Innovation Proposal Release: 10 or 11 October 2025
- Submission Deadline: 17 November 2025
- Pitch Day: 04 December 2025

Innovation Requirements Identified During the CASEVAC Workshop (July 2025)

In July 2025, JATEC and the NATO Military Medicine Centre of Excellence hosted a workshop on lessons and challenges in casualty evacuation from the war in Ukraine. Several core innovation requirements were identified during the workshop, forming the foundation for future development and incorporation into this Innovation Challenge Proposal. The innovation requirements are outlined below across four capability areas:

1. CASEVAC Platforms – Requirements
    i. Speed and Survivability: CASEVAC vehicles must be faster and more survivable in contested zones, including protection against drones, fires, and electronic warfare disruption.
    ii. Low Workforce Dependency: Platforms should be operable with minimal personnel, allowing for rapid action without highly trained crews.
    iii. Adaptive Capacity: Vehicles must accommodate both seated and supine casualties to meet varying injury needs.
    iv. Modular and Convertible: Existing logistics platforms (e.g., pickups) should be easily converted into CASEVAC assets with modular kits.
    v. Interoperability and Maintenance: CASEVAC platforms must align with logistics systems (standard parts, repair processes), and be simple to maintain, ideally using 3D-printed components.
    vi. Rapid Fielding: Solutions must be deployable within days or weeks - not years—to match the tempo of modern operations.
    vii. Portfolio Approach: No single platform can meet all needs. A diverse range of vehicles should be developed to adapt to different terrains, casualty types, and mission profiles.

2. Medical Technology – Requirements
    i. Telemedicine and AI: Support for remote triage and in-the-moment medical coaching (e.g., via drones or handheld devices) is essential.
    ii. Simplified Medical Tools: Devices must be intuitive and usable by minimally trained personnel (e.g., CLS-level operators), including auto-injectors and rapid-use kits.
    iii. Forward-Compatible Equipment: Compact and stress-resistant medical gear (blood warmers, oxygen concentrators, IV/oral medication systems) must be suitable for frontline use and durable under battlefield conditions.

3. Data and Situational Awareness – Requirements Decentralized Tracking: Casualty tracking systems must operate independently from centralized servers, with localized, resilient architecture.
    i. Interoperable Systems: Must integrate seamlessly with NATO and civilian infrastructures to support continuity of care.

ii. Secure Communications: Data integrity and encryption are critical in EW-contested environments to protect casualty data and coordination.

4. Strategic and Regulatory Needs – Requirements
   i. Streamlined Innovation Processes: Bureaucratic bottlenecks must be bypassed to enable rapid experimentation, approval, and deployment during wartime.
   ii. Controlled Risk Tolerance: Controlled zones and clear frameworks must allow for deployment of untested but urgently needed solutions.
   iii. Cross-Sector Collaboration: Sustainable innovation requires alignment between military, academia, industry, and humanitarian organizations.