

**Requirements and standards for the technical assessment of
the proposals submitted under the Specific action no. BMVI/2023-2024/SA/1.2.2**

A) General mandatory requirements:

<u>Targets</u>	<u>Requirements</u>
<p><u>Affordability</u></p> <p>A through-life management approach to costs should be adopted to ensure affordability of the equipment over time.</p>	<p>For the applicant:</p> <ul style="list-style-type: none"> • to perform a thorough cost-effectiveness analysis for such equipment, during the early stages of the project, when assessing options and defining the scope and requirements. This analysis will be done in line with existing best practices, such as the European Commission’s Economic Appraisal Vademecum 2021-2027, which provides the rationale for opting for cost-effectiveness analysis, as opposed to cost-benefit analysis; • to calculate and update regularly the lifecycle costs during the course of the project, by adhering to international standards, such as ISO 15288, NATO TR-SAS-054 or equivalent; to provide a methodology on the overall spreading of costs during the lifetime duration of the equipment, to prove the maturity of the proposal
<p><u>Project management</u></p> <p>The necessary measures should be taken to ensure the sound management of the projects needed to purchase the equipment and the subsequent through-life management.</p>	<p>For the applicant:</p> <ul style="list-style-type: none"> • to apply established international project management standards during the acquisition phase, i.e. the European Commission’s PM² or the internationally established PMBOK or PRINCE2; • to submit to the European Commission a simple Project Management Plan - as part of the documentation required in response to the call - to enable the assessment of the credibility and feasibility of the proposal. It shall include at least: <ul style="list-style-type: none"> ○ Purpose, Operational Concept and Scope; ○ Organisation; ○ Milestones and Deliverables; ○ Timeline; ○ Budget; ○ Risks. • to require an ISO 9001 certification for all contracted suppliers.

<p><u>Adequacy</u></p> <p>General</p> <p>Environmental Conditions</p> <p>Interoperability</p>	<p>For the equipment:</p> <ul style="list-style-type: none"> to comply with the relevant latest edition of the Agency’s Technical Standards¹ in force when launching the purchase procedure (notably on the date of publication of the procurement procedure). to adequately sustain operation with induced environmental conditions taking into account e.g. shock and vibration, as given by DEF-STAN 00-35 and electro-magnetic environmental effects (during transit and while in operation), in line with MIL-STD 464 or equivalent etc. <p>For the applicant and the equipment:</p> <ul style="list-style-type: none"> to further strengthen the interoperability at the strategic, operational, tactical and technical levels, in addition to complying with the Agency’s standards, to strive using other relevant international standards, with regard to e.g. policies, protocol, information management, safety, security, physical interfaces, electromagnetic compatibility etc.
<p><u>Adaptability</u></p> <p>The equipment should be able to be adapted to emerging needs throughout the lifecycle within a reasonable set of change requirement.</p>	<p>For the equipment:</p> <ul style="list-style-type: none"> to employ a modular approach for the design of the equipment, in order to enable upgrades, including through refurbishments and retrofits, throughout the lifecycle; to adhere to relevant international technical standards for the interfaces of the equipment.
<p><u>Sustainability and Strategic Autonomy</u></p> <p>The principles of sustainability should be employed to increase operational effectiveness and mitigate adverse effects to collateral during all phases of the</p>	<p>For the applicant:</p> <ul style="list-style-type: none"> to take measures to comply with EU policies and legislation on Sustainability and Strategic Autonomy: <ul style="list-style-type: none"> In general, in relation to the EU’s Sustainability Goals as reflected in areas such as the EU Global Strategy, in the policies and relevant directives associated with Strategic Autonomy, Green Public Procurement, Energy Efficiency and Climate Change, as well as in the Technical and Operational European Integrated Border Management Strategy etc.; Specifically on: <ul style="list-style-type: none"> Materials and energy consumed, pollutants emitted, and climate and ecology impaired throughout the lifecycle, from manufacturing through operation when in service to decommissioning and disposal; Moral and ethical aspects taking into account both the supply chain and in-service use of the equipment

¹ TS-2021-001, TS-2021-002 and TS-2021-003 were adopted by the Management Board on 21 September 2021 through Management Board Decision 51/2021.

<p>lifecycle.</p>	<p>throughout lifecycle;</p> <ul style="list-style-type: none"> ▪ Risks associated with the supply chain including sourcing outside the EU (in particular single sourcing), intellectual property and third country export restrictions ▪ Dependencies on Economic Actors with a high degree of Foreign Direct Investments or basing outside the EU, which may pose a security risk when the equipment is operational. ▪ Fostering the growth and innovation potential of Economic Actors based in the EU. <ul style="list-style-type: none"> • to adhere to the relevant international standards in relation to Sustainability, e.g. ISO 14001, ISO 14090, ISO 26000, ISO 50001 etc.
<p><u>Safety, Security and Health</u></p> <p>All necessary measures should be taken to mitigate risks to safety, security and health.</p>	<p>For the applicant:</p> <ul style="list-style-type: none"> • to apply established System Safety Management standards, e.g. MIL STD 882, H SystSäk or equivalent, to mitigate safety risks associated with the design the equipment and inherent systems across the whole lifecycle, e.g. adversely affecting both the equipment – hardware, software and personnel – and collateral; • to take measures to ensure that the equipment can be deployed securely, i.e. the risks to breach of integrity of the equipment – in terms of hardware, software and information -are mitigated; • to use ISO 45000 when operating the equipment.
<p><u>Availability</u></p> <p>Strategic Availability</p> <p>Operational and Tactical Availability</p>	<p>For the applicant:</p> <ul style="list-style-type: none"> • to share with the Agency the maintenance plans for all capabilities, on an annual basis, following the registration in the Technical Equipment Pool, in order to facilitate planning on the Agency’s side. • to provide the equipment with the necessary Integrated Logistic Support, to ensure the operational availability when deployed.

B. Minimum mandatory and desirable requirements per type of equipment

<u>Targets</u>	<u>Requirements</u>	<u>Mandatory/Desirable</u>
<u>Maritime means of transport and surveillance capacities</u> <u>(Coastal Patrol Vessels (CPV), Offshore Patrol Vessels (OPV) or Multipurpose Vessels (MPV))</u>		
<p><u>Adequacy</u></p> <p>General</p> <p>Each equipment should sustain compatibility with the Technical Standards throughout the lifecycle.</p> <p>Configuration</p> <p>Environmental Conditions</p>	<ul style="list-style-type: none"> • to be built in accordance with established Classification Society Rules, within the framework of the International Association of Classification Societies (IACS). • to request the support of a Classification Society affiliated with IACS for the acquisition of the seaborne equipment. • to design each CPV, OPV or MPV platform in such a way that they accommodate adequate conditions for safety, security, manoeuvrability and habitability. • The respective OPV platform should in addition come payload, including the necessary launch, recover and secure communication systems, comprising one or more of the following, fully integrated with the Command and Control system of the OPV: <ul style="list-style-type: none"> • Remotely Piloted Aircraft Systems (RPAS), independent or tethered, equipped with e.g. optical, electro-optical and electromagnetic sensor systems, while compliant where relevant with EU Regulations 2019/947 and 2019/945, ISO 17717 and ISO 21384-3; • Unmanned Surface Vehicles (USV) or Unmanned Underwater Vehicles (UUVs) equipped with e.g. acoustic and magnetic sensor systems; • Manned vessels for high-speed interception such as Rigid Hull Inflatable Boats (RHIBs). <p>To be designed for use in the natural environmental conditions of Marine Intermediate (M2) and Marine Cold (M3), equivalent to those described in DEF-</p>	<p>Desirable</p> <p>Desirable</p> <p>Mandatory</p> <p>Desirable</p> <p>Mandatory</p>

**Aerial means of transport and surveillance capacities
(Fixed Wing Aircrafts, Vertical Take-Off and Landing (VTOLs) Remotely Piloted
Aircraft Systems (RPAS) (hybrid), VTOL RPAS (40 – 50 kg), Counter Unmanned
Aerial Systems (UAS), Tethered Surveillance Systems)**

Adequacy

General

- The airborne equipment² shall comply with other relevant legislation and international standards, specifically in relation to materials, safety and operation, such as EU Regulations 2019/947 and 2019/945, ISO 17717 and ISO 21384-3.

Mandatory

Configuration

- All airborne equipment shall include the necessary enabling systems on the ground.

Mandatory

- The **Counter UAS** shall be configured to include Deployable or Mobile Elevated Platform consisting of mast or equivalent, equipped with:

Mandatory

- Electro-optical systems for day and night vision;
- Electromagnetic sensor systems;
- Acoustic sensor systems
- Jamming systems using high-gain radio antennas or equivalent

- The **Tethered Surveillance System** shall be configured to include:

Mandatory

- An Elevated Payload Platform that –
 - Can be elevated by through the use of buoyant gas in e.g. an airship or balloon, or an RPAS platform;
 - Has a flight height of at least the range 100 m to 1500 m with a persistent endurance of 7 days;
 - Enables data acquisition from:
 - Electro-optical sensor systems for day and night vision;
 - Electromagnetic sensor systems;
 - Comes with a tracking

² TS-2021-002 was adopted by the Management Board on 21 September 2021 through Management Board Decision 51/2021.

<p>Environmental Conditions</p>	<p>systems drawing on –</p> <ul style="list-style-type: none"> - Automatic tracking based on sensor data; - Vessel tracking based on the Automatic Identification System; <ul style="list-style-type: none"> ○ Adequate anchoring in the ground ensuring that the Elevated Payload Platform is adequately secured in the ground in order to ensure safe operation; <ul style="list-style-type: none"> ● The Counter UAS and Tethered Surveillance Systems shall both include a Deployable or Mobile Ground Operating System, which includes: <ul style="list-style-type: none"> ○ Systems for Command and Control as well as data fusion (from both on board sensors and from other sources), discrimination processing and display; ○ Adequate ergonomic conditions for the operators to perform their tasks employing established standards such as ISO 6385:2016 and DEF-STAN 00-25 where relevant; ○ Adequate electrical power supply and inherent quality to operate autonomously in remote areas without access to the electric grid; ○ Adequate lighting in accordance with EN 12464-1:2021; ○ Secure communication systems (including for Satellite Communication), with capacity for live streaming; ○ Adequate weather protection and heating, ventilation and air conditioning systems (HVAC) to ensure good working conditions. ● To be designed for use in the following natural environmental conditions equivalent to those described in DEF-STAN 00-35: <ul style="list-style-type: none"> ● A2: Hot Dry ● A3: Intermediate; ● C0: Mild Cold ● C1 Intermediate Cold ● C2: Cold. 	<p>Mandatory</p> <p>Mandatory</p>

**Land-based means of transport and surveillance capacities
(Patrol Vehicles and Canine Team Vehicles)**

<u>Adequacy</u>		
Configuration	<p>The Patrol Vehicles shall:</p> <ul style="list-style-type: none"> • Comply with relevant national road safety regulations; • Be able to patrol and engage in pursuits including in high-speed on tarmac roads; • Be able to perform patrols in off-road terrain: <ul style="list-style-type: none"> ○ Where there is sufficient horizontal clearance to enable transit of a vehicle with conventional off-the-shelf dimensions; ○ Designed with adequate vertical ground clearance; ○ Able to manage moderate hill climbs and descents; • Be fully equipped with: <ul style="list-style-type: none"> ○ Sirens and blue lights; ○ The necessary tactical equipment, beyond the personal equipment, needed for performing patrols related tasks ○ Portable or handheld surveillance equipment; ○ Communications equipment; 	Mandatory
	<p>The Canine Team Vehicles shall in addition to the requirements for the Patrol Vehicles also come with the necessary inserted equipment to be able to accommodate the transportation of a dog safely.</p>	Mandatory
Environmental Conditions	<ul style="list-style-type: none"> • To be designed for use in the following natural environmental conditions equivalent to those described in DEF-STAN 00-35 <ul style="list-style-type: none"> • A2: Hot Dry • A3: Intermediate; • C0: Mild Cold • C1 Intermediate Cold • C2: Cold. 	Mandatory

C. The applicable minimum technical standards per each category of equipment:

An **overview** of the Technical Standards in force, as adopted by the Management Board (Management Board Decision 51/2021), can be found below.

- **Technical Standards for Maritime means of transport and surveillance capacities**
TS-2021-001; TT-05-21-248-EN-N; ISBN 978-92-9467-034-2; doi: 10.2819/54958
 - Offshore Patrol Vessels
- **Technical Standards for Aerial means of transport and surveillance capacities**
TS-2021-002; TT-09-21-346-EN-N; ISBN 978-92-9467-033-5; doi: 10.2819/966225
 - Fixed Wing Aircraft
- **Technical Standards for Land-based means of transport and surveillance capacities**
TS-2021-003; TT-09-21-143-EN-N; ISBN 978-92-9467-010-6; doi: 10.2819/125642
 - **Land Border Surveillance Equipment**
 - Sensors
 - Day, Night and Thermal Vision Electro-Optic Imagers: Monocular, Binocular and Night Vision Goggles, Handheld Cameras
 - Cameras
 - Radars
 - Motion Sensors
 - Platforms
 - Aerial Systems
 - Aerostat
 - Small Fixed Wing and Rotary Wing Remotely Piloted Aircraft System
 - Vehicles Used for Land Border Surveillance
 - Mobile Surveillance Systems
 - Deployable Assets
 - Trailers – Movable Technical Surveillance Posts
 - **Border Crossing Point Equipment**
 - Carbon Dioxide Detector
 - Heartbeat Detector
 - Videoscope
 - Raman Detector