

TENDER DOSSIER

Supply of Equipment and Provision of Services

ARtificial intelligence platform to prevent Climate change natural hazArds (ARCA)

INTERREG VI-B Interreg IPA Adriatic Ionian Programme (IPA-ADRION)

Contracting authority: UBT Albania

Procurement procedure: Request for quotations

Submission deadline: 10.05.2026

Place of submission: online

Contact e-mail: info@ubt-uni.net

1. Invitation to Tender

UBT Albania invites interested economic operators to submit offers for the supply of equipment and/or provision of services required for the implementation of the ARCA project. The tender is divided into the lots listed below. Bidders may submit an offer for one or more lots, unless otherwise specified in the procurement instructions issued by UBT Albania.

2. Lots

Lot	Title
Lot 1	Supply of one (1) video camera
Lot 2	Supply of one (1) unmanned aerial system (UAV/drone) with integrated thermal camera and related accessories
Lot 3	Provision of drone flight and support services

3. Submission Requirements

- The technical offer must include a completed compliance table for the lot(s) for which the bidder applies.
- Where numerical data are required, the bidder must use the same units and expression method as the specifications and provide a documentation reference.

Deadline for submission: _____

- The bidder must attach technical brochures, datasheets, certificates, authorizations and other relevant evidence proving compliance.
- All minimum requirements indicated as YES are mandatory. Failure to respond clearly to all points may lead to rejection of the offer.
- The offered equipment must be new and accompanied by warranties, where required below.

4. Compliance Tables

The following tables must be completed by the bidder and submitted as part of the technical offer. The columns “Bidder response” and “Documentation reference” are intentionally left blank for completion by the bidder.

Lot 1 - Supply of one (1) video camera

No.	Requirement	Minimum requirement	Bidder response	Documentation reference
General requirements				
1	The video camera shall be a professional high-definition camera (HD or higher).	YES		
2	The video camera must be suitable for permanent installation in outdoor areas.	YES		
Video quality				
3	Minimum video resolution: Full HD. Higher resolutions are preferred (e.g. multi-sensor 4 x 4K or equivalent) to ensure full 360° panoramic coverage.	YES		
4	The video camera must provide 360° imaging.	YES		
5	Minimum frame rate: 30 fps.	YES		
6	Support for thermal imaging for night monitoring is considered highly desirable.	YES		
Video output and integration				
7	The video camera must support redirection of video output via HTTP protocol using the built-in recording card (minimum 1 TB), including: HTTP(S) video streaming; snapshot capture (JPEG/PNG) via HTTP; REST API access for frame retrieval.	YES		
8	Support for standard streaming protocols such as RTSP/HTTP and compliance with ONVIF (Profile S/G/T or equivalent).	YES		

Deadline for submission: _____

UBT Albania - ARCA Project - Tender
Technical Specifications

No.	Requirement	Minimum requirement	Bidder response	Documentation reference
9	Ability to export individual frames through HTTP calls or API.	YES		
Edge computing / API support				
10	The video camera must support development APIs that allow applications to run directly on the device (edge computing), equivalent to the manufacturer's native SDK.	YES		
11	Required capabilities must include: programmatic access to video streams via API; on-device video analytics (e.g. motion detection, object detection when available); installation of manufacturer-approved or custom applications, including our smoke detection algorithm.	YES		
12	All above equipment must be new and accompanied by a warranty of proper operation.	YES		

Lot 2 - Supply of one (1) UAV/drone system with integrated thermal camera

No.	Requirement	Minimum requirement	Bidder response	Documentation reference
General characteristics of flight platform				
1	The drone shall be a quadcopter and shall have four (4) electric motors.	YES		
2	Maximum ascent speed at least 7 m/s.	YES		
3	Horizontal speed at least 15 m/s.	YES		
4	Wind resistance at least 10 m/s.	YES		
5	Flight time at least 40 minutes without battery replacement.	YES		
Power supply system				
6	Supplied with eight (8) rechargeable batteries.	YES		
7	Supplied with one (1) charging hub capable of charging at least three (3) batteries simultaneously.	YES		

Deadline for submission: _____

UBT Albania - ARCA Project - Tender
Technical Specifications

No.	Requirement	Minimum requirement	Bidder response	Documentation reference
Navigation and positioning system				
8	Integrated GNSS receiver supporting GPS, GLONASS and Galileo.	YES		
9	High-Precision RTK capability with: horizontal accuracy 1 cm + 1 ppm (RMS); vertical accuracy 1.5 cm + 1 ppm (RMS).	YES		
10	Minimizes the use of ground control points.	YES		
Flight safety and obstacle avoidance				
11	At least five (5) sensors for obstacle detection and avoidance.	YES		
12	Safety beacon.	YES		
Stabilization system				
13	Integrated three-axis gimbal.	YES		
Integrated thermal camera				
14	Basic resolution: 640 x 512.	YES		
15	Super-Resolution: 1280 x 1024.	YES		
16	Operating spectrum: 8 μ m – 14 μ m.	YES		
17	Thermal sensitivity: $\leq$ 50 mK @ F1.0.	YES		
18	Temperature range: -20 °C to +150 °C (High Gain); 0 °C to +550 °C (Low Gain).	YES		
19	Measurement accuracy: $\pm$ 2 °C or $\pm$ 2% (High Gain); $\pm$ 5 °C or $\pm$ 3% (Low Gain).	YES		
20	Digital zoom up to 28x.	YES		
Integrated RGB camera				

Deadline for submission: _____

UBT Albania - ARCA Project - Tender
Technical Specifications

No.	Requirement	Minimum requirement	Bidder response	Documentation reference
21	Wide-angle camera with resolution of at least 20 MP.	YES		
22	Sensor size 4/3".	YES		
23	Ability to record and store 4K video.	YES		
Control system and software				
24	Controller with integrated flight-control software.	YES		
25	Software must provide: automatic Return to Home; low-battery alarm activation.	YES		
Accessory - Speaker				
26	Detachable speaker that: fits on the drone without affecting flight operation; produces sound intensity >100 dB at 1 m; has useful range over 200 m; supports live transmission of messages.	YES		
Accessory - Searchlight				
27	Searchlight that fits on the drone without affecting flight operation and provides lighting of 4.3 ±0.2 lux at 50 m and 17 ±0.2 lux at 20 m.	YES		
28	Useful illumination field: 23° (at 10% relative brightness).	YES		
29	Useful illumination area: ≥ 1,000 m² at 100 m (normal mode); ≥ 2,000 m² at 100 m (extended mode).	YES		
30	Continuous lighting and strobe operation.	YES		
Accessory - Oblique photogrammetry camera: general characteristics				
31	Five-camera oblique system (1 x vertical nadir + 4 x oblique views).	YES		
32	Suitable for photogrammetry, 3D modelling, topography and mapping of urban areas.	YES		

Deadline for submission: _____

UBT Albania - ARCA Project - Tender
Technical Specifications

No.	Requirement	Minimum requirement	Bidder response	Documentation reference
33	Supports creation of 3D mesh of cities and buildings through appropriate oblique shooting angles.	YES		
Oblique camera imaging characteristics				
34	Total system resolution: ≥ 130 Megapixel.	YES		
35	Sensor resolution: ≥ 26 MP each (6252 x 4168 px).	YES		
36	Sensor type: CMOS APS-C format (23.5 x 15.6 mm).	YES		
37	Focal length: 25 mm for vertical (nadir) capture; 35 mm for oblique captures.	YES		
38	GSD performance ≤ 1.5 cm/pixel at flight height of 100 m AGL.	YES		
Oblique camera capture operating characteristics				
39	Minimum trigger interval: ≤ 0.8 s.	YES		
40	Support for simultaneous time-sync with accuracy ≥ 50 μ s.	YES		
41	Live view image output at least 1080p / 30 fps.	YES		
42	Fully automatic activation and capture by UAV autopilot.	YES		
43	Mission feedback and real-time indication for capture quality control.	YES		
Oblique camera storage and performance				
44	Integrated high-speed storage ≥ 640 GB.	YES		
Oblique camera physical characteristics				
45	Total system weight (full-operation payload): ≤ 900 g.	YES		

Deadline for submission: _____

UBT Albania - ARCA Project - Tender
Technical Specifications

No.	Requirement	Minimum requirement	Bidder response	Documentation reference
46	Dimensions: approximately 105 x 105 x 87 mm.	YES		
47	Quick-Lock Payload design for fast tool-free installation.	YES		
Oblique camera compatibility and flight				
48	Achieves flight time ≥ 60 minutes when used on UAV Trinity F90+ or another flight platform indicated by the contracting authority.	YES		
49	Delivered with suitable mounting base for the flight platform indicated by the contracting authority.	YES		
50	Full compatibility with the flight platform indicated by the contracting authority.	YES		
Oblique camera support software				
51	Support for oblique-data processing software (SkyScanner or equivalent).	YES		
52	Support for mission-planning software (AeroMap Pro or equivalent).	YES		
53	Production of data compatible with processing software: Pix4D; Agisoft Metashape; ContextCapture; or equivalent.	YES		
Oblique camera certification and supply				
54	Camera must be supplied by an official distributor or authorized partner.	YES		
55	Accompanied by one-year warranty of proper operation.	YES		
Transport and protection				
56	A hard safety transport case must be provided for the drone and all accessories.	YES		
Permanent reference station network				

Deadline for submission: _____

UBT Albania - ARCA Project - Tender
Technical Specifications

No.	Requirement	Minimum requirement	Bidder response	Documentation reference
57	Supplied with a subscription of at least one (1) year to a permanent reference station network.	YES		
58	Subscription must support at least 240 hours FULL GNSS NRTK use per year.	YES		
59	The network must be fully compatible with modern national/global/European geodetic systems (e.g. ITRF2020 or equivalent).	YES		
60	Mobile application supported for subscription management.	YES		
61	The network must have certification by an independent body, renewed annually, for at least the last five (5) years.	YES		
62	All equipment related to the drone system must be new and accompanied by a warranty of proper operation.	YES		

Lot 3 - Provision of drone flight and support services

The contractor's flight team shall have at least three members and the contractor's deliverables implementation team shall have at least two members, meeting at minimum the qualifications below.

Specialty / role	Minimum qualifications	Bidder response	Documentation reference
Drone flight team			
First UAV operator	At least five (5) years of drone operation experience; holder of Open Category A1/A3 and A2 certificates. Experience operating multiple types of UAVs and experience training other operators will be positively assessed. Relevant degree and experience in natural environment management, especially forest fires, will be positively assessed.		
Second UAV operator	Holder of Open Category A1/A3 and A2 certificates. Relevant degree in natural environment management will be positively assessed.		
One (1) substitute UAV operator	Holder of Open Category A1/A3 and A2 certificates. Relevant degree in natural environment management will be positively assessed.		
Deliverables implementation team			
At least one (1) Geotechnical Scientist (Forester, Geologist or related specialty), Consultant/Expert	Master's or PhD degree related to Natural Resource Management, Environmental Information or related fields and consultant/study qualification equivalent to environmental studies category.		

Deadline for submission: _____

UBT Albania - ARCA Project - Tender
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Specialty / role	Minimum qualifications	Bidder response	Documentation reference
At least one (1) Geotechnical Scientist (Forester, Geologist or related specialty), Consultant/Expert	Master's or PhD degree related to Geomatics, Geodesy, Topography or related fields and consultant/study qualification equivalent to environmental studies category.		
Additionally, one of the above two experts	Proven experience in Geographic Information Systems (GIS) of at least five (5) years.		

The bidder must also complete the following staff table:

No.	Name of staff member	Specialty	Degree / certificates / qualifications	Years and type of experience	Supporting evidence	Role in implementation

5. Notes for UBT Albania

- The submission deadline is intentionally left blank and should be completed by UBT Albania before publication.
- Administrative eligibility, financial offer format, delivery address, evaluation method and contract clauses should be added according to UBT Albania internal procurement rules and IPA ADRION requirements.
- If any technical specification needs localization to Albanian national systems or local legal requirements, UBT Albania should confirm the final wording before publication.

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