

REQUEST FOR QUOTATIONS
Procurement of Goods under RFO/Shopping Procedures (DC)
Procurement Notice

No. NAHEP/RFQ/VTOL/02/631/of 2023
Office of PI, NAHEP-IDP DBSKKV,
Dapoli
Date: 07/02/2023

To,

Sub: Invitation for quotation for Supply, installation and commissioning of VTOL for agriculture and fisheries.

Dear Sir,

The NAHEP-IDP, DBSKKV, Dapoli invited you to submit your most competitive quotation for the following specified goods by Direct Selection method for which the proprietary/ patenting certificate and sole supplier of the item is necessary.

Purchaser: PI, NAHEP-IDP
DBSKKV, Dapoli-415712
Dist. Ratnagiri (MS) India
Email- piidpdskkv@gmail.com

Contract title: Supply, installation and commissioning of VTOL for agriculture and fisheries.

RFQ No: 249982 (DS)

Date: _____

Applicable Procurement Regulations Date: World Bank Guidelines January 2011, Revised July 2014

1. The Government of India has received financing from the World Bank in various currencies towards the cost of the NAHEP Project and intends to apply part of the proceeds towards eligible payments under the contract for which this request for quotations is issued. The NAHEP-IDP, DBSKKV, Dapoli invites quotation from eligible bidder for the following goods :-
2. Note: Type Certificate , patent , proprietor certificate is necessary .

Sl. No.	Brief Description of the Goods	Specifications*	Quantity (in set)	Delivery Period	Place of Delivery	Installation Requirement if any
1	Hexacopter	A) Hexacopter <ul style="list-style-type: none">• Frame configuration :Hexacopter• Maximum Take-off weight :up to 25 kg• Min. Payload Capacity :11 kg	1	Delivery within 30 days from date of Contract	As per para 4	Yes, with installation and required software's alongside the live demonstration and training.

		<ul style="list-style-type: none"> • Range of Operation :Min. 1 km in visual line of sight • Endurance in working: 20-25 min • Material of chassis and propeller: Carbon fiber or equivalent • (Material test report should be included): • Maximum launch altitude :2000 m from MSL • Tolerable wind speed :up to 25 knots • Water and dust resistance rating : as per DGCA guidelines • Flight modes :Way point Navigation, Operation, Stabilize, Manual, • Altitude hold, Return to launch, (RTL), Autonomousand guided • Payload : Customizable up to 11 kg • RGB camera with live transmission with screen for video display and telemetry for transmission. Real time Data acquisition and analysis system (hardware and software): Travel speed, area covered in operation,overlapping percentage, application rate etc. • Battery : 1 set of 20000mah battery or more with charging Hub Included with the drone itself. <p>B . Attachment:</p> <ul style="list-style-type: none"> • Spraying tank • capacity : 10 liter • Seeding attachment as per OEM and others application available (Please provide complete details) • Seed Broadcaster with mount attachment • Hyper Spectral , 4k , Lidar sensor Camera with Compatible Attachment. <p>C. Nozzles with Spraying Lance</p> <ul style="list-style-type: none"> • Adjustable spraying boom with nozzles (4 Numbers) producing uniform droplets Spray width upto 4 m • Droplet size: Maximum 100 µm • Flow meter :Measurement Range: 0.4-5 lpm, Accuracy: 1 ml • Compact frame design :Foldable 		<p>& after delivery, 30 days for installation and demonstration.</p>		
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		<ul style="list-style-type: none"> arms Failsafe features: Return to home in case of: Low battery, Loss of communication Manual RTL Wind fail safe, Empty tank <p>D. Control Unit</p> <ul style="list-style-type: none"> Suitable flight controller CPU: Intel Core i5 v Pro processor Storage: Min. 500 GB Memory: Min. 4GB RAM Display: 14 inch or larger more with touch screen. Battery: Min.12 hours backup Interfaces: USB, HDMI/VGA, Ethernet etc. Should conform IP 65 norms 				
	Accessories	Spare Battery set	1			
		Propellers and landing with carry case	1			
		Battery Charger	1			
		Provision for Pilot License and training	1			
2	Fixed Winged VTOL	<p>A. VTOL</p> <ul style="list-style-type: none"> Wingspan - 3 Meters , Payload – Minimum of 5 Kg Flight time – 3 - 4 hours of operation on full charge with payload Battery – Lithium Ion or Lithium Polymer. Quantity as per required flight time included. Altitude – Max take-off altitude 2500 Meters above sea level. Max flight altitude 4000 Meters above sea level. Range – Should be operational with radio control for a range of 5 Sq Kms from launch position. Should operate for a range of 10 Sq Kms from launch position. Radio –TxRx system, operational range of 5 Sq. Kms with an antenna - radio. On Board Computing –On board computer for AI tasks. <p>B. Ground Control Unit :</p> <ul style="list-style-type: none"> Suitable flight controller CPU: Intel Core i5 v Pro processor Storage: Min. 500 GB Memory: Min. 4GB RAM Display: 14 inch or larger with touch screen. Battery: Min.12 hours backup Interfaces: USB, HDMI/VGA, Ethernet etc. Should follow IP 65 Rugged unit Preflight self-checks On-screen display of flight parameters 	1	Delivery within 30 days from date of Contract & after delivery, 30 days for installation and demonstration.	As per para 4	Yes, with installation and required software's alongside the live demonstration and training.

		C. Camera's <ul style="list-style-type: none"> • Hyperspectral Camera • Multispectral Camera • Lidar Sensor • Mica Sense Sensor Overall System components include <ul style="list-style-type: none"> • Hyper-spectral imaging camera and triggering mechanism • System control computer • System control software • SSD data storage • GPS/IMU Geo-rectification software • Multiple calibration options • Flexible mounting options • Hardware for data processing • Data analysis software • Gimbals for sensors as per requirement • Battery set with charging hub and adapter 	1			
	Accessories	• Tool kit (Including all type of tools with battery operated wrench)	1			
		• Spare Battery	1			
		• Propellers and landing gears	1			
		• Rugged carry case	1			
		• Battery Charger	1			
		• Pilot License and training	2			
	Warranty	<ul style="list-style-type: none"> • 36 months • System should conform IP 65 norms • Supplier should provide UAV with UIN All DGCA Guidelines must be fulfilled.	1			
3	Submarine Drone	1. Weight: 4.5kg ,Size: 380*267*165mm ,Max Depth: 100m, Max Speed: 1.5m/s Battery: 97.68Wh, Top speed 1.5m / s (3 knots), Operating time 2-4 hours , Operating temperature - 10C to 45C ,Charging power 2.9A / 25.2V, Charging time 2 hours Charging Port and Charger Included. 2. Sensor: IMU: 3 axis gyro/accelerometer/compass ,Depth Sensor: $\leq \pm 0.25m$,Temperature Sensor: $\leq \pm 2^{\circ}C$ 3. Camera: CMOS: 1/2.3-inch ,Lens's/1.8 ,Focus:1m, ISO Range: 100-6400, FOV:152° Max Resolution: 12Mep pixel ,Format: JPEG/DNG ,Slow Motion: 720p: 8x(240fps) , 1080p: 4x(120fps) ,Time laspe: 4K/1080P, Video Bitrates: 60M	1 1	Delivery within 30 days from date of Contract & after delivery, 30 days for installation and demonstration	As per para 4	Yes, with installation and required software's alongside the live Demonstration and training.

		<p>Video Format: MP4 , SD Card: 64G ,Video , UHD: 3840*2160(4K) 30fps FHD: 1920*1080(1080P) 30/60/120fps ,FHD: 1920*1080 120fps ,FHD: 3840*2160(4K) 30fps</p> <p>4. LED: Brightness: 2x2000 Lumens, Color Temperature: 5000K-5500K , CRI:85 Dimming: Three gears ,LED Dimmable YES</p> <p>Attachments</p> <ol style="list-style-type: none"> 1. Battery with charging Hub and adapters included. 2. IP68 water resistant Camera <p>Ground Control Unit</p> <ul style="list-style-type: none"> • Suitable flight controller • CPU: Intel Core i5 v Pro processor Storage: Min. 500 GB • Memory: Min. 4GB RAM • Display: 14 inch or larger with touch screen. Battery: Min.12 hours backup • Interfaces: USB, HDMI/VGA, Ethernet etc. Should follow IP 65 • Rugged unit Preflight self-checks <p>On-screen display of flight parameters</p>				
	Accessories	<ul style="list-style-type: none"> • Tool kit (Including all type of tools with battery operated wrench) • Spare Battery • Propellers and landing gears - 1 set each Rugged carry case • Battery Charger • Provision for Pilot License and Training 	1			
	Warranty	<ul style="list-style-type: none"> • 36 months • System should conform IP 65 norms • Supplier should provide UAV with UIN <p>All DGCA Guidelines must be fulfilled.</p>	1			
4	FPV Drone	<ul style="list-style-type: none"> • Aircraft Ascent and descent speed 8 m/s and 6 m/s; wind resistance: 12 m/s; max altitude above sea level: 6000 m; return to home function; max. temperature 40 °C; range 8 km; radio frequencies 2.4 and 5.8 GHz • Camera 20 MP sensor; 4/3 CMOS; video resolution 5.1K; light sensitivity 100-6400; focal length 24 mm; 	1	Delivery within 30 days from date of Contract & after delivery, 30 days for installation and demonstration.	As per para 4	Yes, with installation and required software's alongside the live Demonstration and training.

	<p>digital zoom 3x; shutter speed 8-1/8000 s; field of view 84°; equivalent focal length 24 mm; aperture f/2.8 to f/11; focus 1 m to ∞</p> <ul style="list-style-type: none"> • Storage 8 GB, expandable via microSD card • Connectivity Micro USB, GPS • Features Night mode, omnidirectional dual vision system, infrared sensor, motorized 3-axis stabilization, RC-N1 remote controller • Battery LiPo 4S (15.4 V / 77 Wh), 5,000 mAh, 46 minutes flight time • Dimensions 283 x 347.5 x 107.7mm • Weight 895 grams • Battery with Charging Hub and adapter Included. <p>Ground Control Unit</p> <ul style="list-style-type: none"> • Suitable flight controller • CPU: Intel Core i5 v Pro processor Storage: Min. 500 GB • Memory: Min. 4GB RAM • Display: 14 inch or larger with touch screen. Battery: Min.12 hours backup • Interfaces: USB, HDMI/VGA, Ethernet etc. Should follow IP 65 • Rugged unit Preflight self-checks <p>On-screen display of flight parameters</p>	1			
Accessories	<ul style="list-style-type: none"> • Tool kit (Including all type of tools with battery operated wrench) 	1			
	<ul style="list-style-type: none"> • Spare Battery 	1			
	<ul style="list-style-type: none"> • Propellers and landing gears - 1 set each Rugged carry case 	1			
	<ul style="list-style-type: none"> • Battery Charger. 	1			
	<ul style="list-style-type: none"> • Provision for Pilot license and training 	2			
Warranty	<ul style="list-style-type: none"> • 36 months • System should conform IP 65 norms • Supplier should provide UAV with UIN <p>All DGCA Guidelines must be fulfilled.</p>	1			

[* Where ISI certification marked goods are available in market, purchaser should generally limit the procurement to goods with those or equivalent marking only.

- I. Manufacturers operating manual, maintenance guideline should be provided with system.
- II. Manufacturer's certificate of compliance for NPNT]

3. The Bidders may submit Quotations for all items.

4. This Procurement notice includes the terms and conditions applicable to submission of quotations; criteria for qualification, evaluation, and for award of supply order(s); and relevant forms to be filled by the bidders. Implementing Agency has not issued a separate RFQ document for this purchase. The Procurement notice including the terms and conditions etc. can be downloaded free of cost from the website www.nahep.icar.org.in. In such cases the bidder would be responsible for ensuring that any addenda available in website is also downloaded and incorporated.
5. Quotations shall be submitted to the address mentioned below on or before 14:30 hrs. **(Indian Standard Time)** on **21/02/2023** on all working days, duly written on the cover of envelop as **“RFQ Ref. No. 249982, Quotation for the supply of VTOL for agriculture and fisheries. and Last date & Time of Bid submission: _____”**.

Dr. P. S. Bodake,
Principal Investigator,
National Agricultural Higher Education Project,
Dr. B. S. Konkan Krishi Vidyapeeth, Dapoli
Dist. Ratnagiri (MS) 415-712.
Email: piidpdsbkv@gmail.com

The Quotations will be opened (at the same address of quotation submission) on 21.02.2023 at 15:00 hrs. Late submission of Quotations will not be considered and treated as rejected.

6. If the Purchaser's office happens to be closed on the date of opening of the Quotations as specified, the Quotations will be opened on the next working day at the same time and venue.
7. Other details can be seen in the RFQ document. The Purchaser shall not be held liable for any delays due to postal or any other reasons whatsoever. A Bidder requiring any clarification of the RFQ Document may visit the office of the Purchaser at the address mentioned at para 4 above or by email.

Purchaser



Dr.P.S.Bodke
Principal Investigator,
National Agricultural Higher Education Project,
Dr. B. S. Konkan Krishi Vidyapeeth, Dapoli

RFQ No: 249982

Date: 07. 2.2023

Terms and Conditions

1. **Eligibility:** A Bidder (a) shall not participate in more than one Quotation; (b) shall not have conflict of interest as defined in the Bank's Procurement Regulations; and (c) should not have been (i) temporarily suspended or debarred by the World Bank Group in compliance with the Bank's Anti-Corruption Guidelines and its Sanctions Framework
 - (a) Unmanned Aerial Vehicle System with Hyper-spectral and NIR Sensor should be provided as full and complete with sensors (hyperspectral and NIR) integrally mounted on it, along with all the software (required for complete image analysis, mapping, drone deploying for flight planning) installed on laptop, mobile and other appropriate devices. System should be able to map vegetation and land forms to generate output data, which necessarily further analyzed by the software provided with this system.
 - (b) The necessary accessories for sensors and software should be provided for data processing and analysis.
 - (c) Training must be provided for 7 participants for 7 working days of IDP Dapoli (training to trainers) on the supplied integrated UAV-sensor system and drone.

2. **Clarifications & Amendments:** If the Purchaser receives any request for clarification of this RFQ Document, it will upload its response together with any amendment to this document, on the www.tenders.tn.gov.in portal for information of all Bidders. Bidders should check on the portal, for any amendments to the terms and conditions.

3. **The Quotation shall comprise the following:**
 - (a) Letter of Quotation;
 - (b) Delivery Period Offered: List of Goods & Related Services indicating Bidder's offered delivery period in the prescribed Form;
 - (c) Technical Specifications: confirmation that the offered Goods and Related Services conform to the required specifications.
 - (d) Evidence in accordance with Clause 6 establishing Bidder's qualifications to perform the contract if its quotation is accepted.
 - (e) Performance Statement¹ of supplies of similar goods made during the last 3 years, in the prescribed Format.
 - (f) Complete address and contact details of the Bidder having the following information:
 - Name of Firm
 - Address for communication
 - Telephone No(s): Office
 - Mobile No.
 - Facsimile (FAX) No.
 - Electronic Mail Identification (E-mail ID)
 - (g) Price Schedule (using the Schedule with the RFQ document)

4. **Quotation Prices**
 - (a) The contract shall be for the full quantity for all items or for full quantity of each item, as specified in the Price Quotation Form.
 - (b) All duties, taxes and other levies payable on the raw materials and components shall be included in the total price.
 - (c) GST and any other taxes, which will be payable on the goods at the time of invoicing

in connection with the sale, shall be shown separately. If these are only stated to be extra, such quotations a reliable to be rejected. Wherever these taxes are not shown, these will be assumed to have been included in the quoted price.

- (d) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- (e) The Prices shall be quoted in Indian Rupees only.

¹ Purchaser may delete this requirement in case of simple and regular off the shelf items.

5. **Conformity of Goods:** Bidder shall furnish, documentary evidence that the Goods conform to the technical specifications and standards, as relevant for example catalogue, warranty/ guarantee etc. of the manufacturer

- i. **Submit authorized document for proprietary of items and patent certificate thereof.**
- ii. **Declaration/Certificate to be confirm regarding sole supplier of the item mentioned above.**

6. **Qualification of the Bidder:**

- (a) Bidder should have supplied goods of similar type (& capacity) up to at least 100% quantity in any one of last 3 years. Details of supplies made during the last 3 years shall be submitted in the specified Proforma. At least 40 % of the quantity in case of equipment offered for supply should have been in successful operation for at least one year as on date of quotation opening.
- (b) Supplies for any particular item in each quotation should be from one manufacturer only. Quotations offering supplies from different manufacturers for the same item in the quotation will be treated as non-responsive.

7. **Validity of Quotation:** Quotation shall remain valid for a period not less than 30 days after the deadline date specified for submission.

8. **Signing of Quotations:** The name and position held by each person signing the quotation and related documents must be typed or printed below the signature.

9. **Quotation Submission:** The complete Quotation as mentioned in para 3 above, shall be filled, signed and submitted along with the Price Schedules that shall be furnished using the Forms available in this document.

10. **Opening and Evaluation of Quotations:** The Quotations will be opened and Brief of quotation opened will be uploaded on www.nahep.icar.org.in. The evaluation of the quotation are

- (a) The Purchaser shall examine the quotation to determine whether the quotation, a) has been properly signed (Clause 8); b) meets the eligibility criteria (Clause 1); (c) conforms to all terms, conditions, technical specifications, warranty/guarantee etc.; and (d) the bidder has accepted the delivery schedule (Purchaser's Requirement Form 1).
- (b) Only Quotations that are substantially responsive to the RFQ document and meet all Qualification Criteria shall qualify.
- (c) The evaluation shall be based on the total price of Goods and Related services at

project site including GST and any other taxes, which will be payable on the finished goods at the time of invoicing.

11. **Award of contract:** The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.
- (a) Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.
 - (b) The bidder whose quotation is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the supply order (sample form attached).
 - (c) 100% Payment shall be made within 60 days after delivery, installation and commissioning of the goods and acceptance certificate issued by the purchaser. Payment of GST and other taxes payable for the goods at the time of invoicing, although already included in the total cost, will be at actuals or the rate/amount of these taxes specified in the supply order, whichever is lower.
 - (d) Warranty/Guarantee: 01 (one) year from the date of commissioning shall be applicable to the supplied goods.

Purchaser



Dr.P.S.Bodke
Principal Investigator,
National Agricultural Higher Education Project,
Dr. B. S. Konkan Krishi Vidyapeeth, Dapoli

Quotation Forms

Letter of Quotation

The Bidder must prepare the Letter of Quotation on stationery with its letterhead clearly showing the Bidder's complete name and address. The italicized text is for Bidder's guidance in preparing these forms and shall be deleted from the final products.

RFQ No.: 249982

Our Reference: No..... Dated.....

To:

.....
(Purchaser's name and address)

Subject: Supply of.....

Sir,

1. We, the undersigned, hereby submit our Quotation. In submitting our Quotation, we make the following declarations:

- (a) **No reservations:** We have examined and have no reservations to the RFQ Document;
- (b) **Conformity:** We offer to supply in conformity with the RFQ Document and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services *[insert a brief description of the Goods and Related Services]*;
- (c) The total price of our Quotation, including any unconditional discounts offered is:
Total price of the Quotation **[insert the total price of the quotation including GST and any other taxes, which will be payable on the finished goods, in words and figures]**;
- (d) **Commissions, gratuities and fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the Bidding process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity. If none has been paid or is to be paid, indicate "none."]*
- (e) **Quotation Validity Period:** Our Quotation shall be valid for the period of 30 days, from the deadline fixed for the Quotation submission;
- (f) **Eligibility:** We meet the eligibility requirements and have no conflict of interest, we are not participating in more than one quotation in this bidding process, and we have not been temporarily suspended or debarred by the World Bank.
- (e) **Fraud and Corruption:** We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of corrupt, fraudulent, collusive, coercive, or obstructive practices.

Yours faithfully,

Authorized Signature

Name & Title of Signatory _____

In the capacity of *[insert legal capacity of person signing the Letter of Quotation]*

Name of Bidder _____

Address _____

Dated on _____ day of _____, _____ *[insert date of signing]*

FORMAT OF QUOTATION

Sl. No.	Description of Goods	Specifications	Qty.	Unit	Quoted Unit Rate ² at destination in Rs.	³ GST and similar other taxes applicable on finished Goods/ Services	*Total Price per line item at Destination - inclusive of discounts, all taxes and duties	
							In Figures	In Words
1	Hexacopter	<p>Hexacopter</p> <ul style="list-style-type: none"> • Frame configuration :Hexacopter • Maximum Take-off weight :up to 25 kg • Min. Payload Capacity :11 kg • Range of Operation :Min. 1 km in visual line of sight • Endurance in working: 20-25 min • Material of chassis and propeller: Carbon fiber or equivalent • (Material test report should be included): • Maximum launch altitude :2000 m from MSL • Tolerable wind speed :up to 25 knots • Water and dust resistance rating : as per DGCA guidelines • Flight modes :Way point Navigation, Operation, Stabilize, Manual, • Altitude hold, Return to launch, (RTL), Autonomousand guided • Payload : Customizable up to 11 kg • RGB camera with live transmission with screen for video display and telemetry for transmission. Real time Data acquisition and analysis system (hardware and software): Travel speed, area covered in operation, overlapping percentage, 	1	Set				

		<p>application rate etc.</p> <ul style="list-style-type: none"> • Battery : 1 set of 20000mah battery or more with charging Hub Included with the drone itself. <p>B . Attachment:</p> <ul style="list-style-type: none"> • Spraying tank capacity : 10 liter • Seeding attachment as per OEM and others applicationavailable (Please provide complete details) • Seed Broadcaster with mount attachment • Hyper Spectral , 4k , Lidar sensor Camera with Compatible Attachment. <p>C. Nozzles with Spraying Lance</p> <ul style="list-style-type: none"> • Adjustable spraying boom with nozzles (4 Numbers) producing uniform droplets Spray width upto 4 m • Droplet size: Maximum 100 µm • Flow meter :Measurement Range: 0.4-5 lpm, Accuracy: 1 ml • Compact frame design :Foldable arms • Failsafe features: Return to home in case of: Low battery, Loss of communication Manual RTL • Wind fail safe,Empty tank <p>D. Control Unit</p> <ul style="list-style-type: none"> • Suitable flight controller • CPU: Intel Core i5 v Pro processor Storage: Min. 500 GB • Memory: Min. 4GB RAM • Display: 14 inch or larger more with touch screen. Battery: Min.12 hours backup • Interfaces: USB,HDMI/VGA, Ethernet etc. • Should conform IP 65 norms <p>E. Accessories</p> <ul style="list-style-type: none"> • Spare Battery 2 sets • Propellers and landing gear one set each Rugged carry case • Battery Charger 					
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		Pilot License and training.						
2	Fixed Winged VTOL	<p>C. VTOL</p> <ul style="list-style-type: none"> • Wingspan - 3 Meters , • Payload – Minimum of 5 Kg • Flight time – 3 - 4 hours of operation on full charge with payload • Battery – Lithium Ion or Lithium Polymer. Quantity as per required flight time included. • Altitude – Max take-off altitude 2500 Meters above sea level. Max flight altitude 4000 Meters above sea level. • Range – Should be operational with radio control for a range of 5 Sq Kms from launch position. Should operate for a range of 10 Sq Kms from launch position. • Radio –TxRx system, operational range of 5 Sq. Kms with an antenna - radio. • On Board Computing –On board computer for AI tasks. <p>D. Ground Control Unit :</p> <ul style="list-style-type: none"> • Suitable flight controller • CPU: Intel Core i5 v Pro processor Storage: Min. 500 GB • Memory: Min. 4GB RAM • Display: 14 inch or larger with touch screen. Battery: Min.12 hours backup • Interfaces: USB, HDMI/VGA, Ethernet etc. Should follow IP 65 • Rugged unit Preflight self-checks • On-screen display of flight parameters <p>C. Camera's</p> <ul style="list-style-type: none"> • Hyperspectral Camera • Multispectral Camera • Lidar Sensor • Mica Sense Sensor <p>Overall System components include</p> <ul style="list-style-type: none"> • Hyper-spectral imaging camera and triggering mechanism • System control computer • System control software 	1	Set				

		<ul style="list-style-type: none"> • SSD data storage • GPS/IMU Geo-rectification software • Multiple calibration options • Flexible mounting options • Hardware for data processing • Data analysis software • Gimbals for sensors as per requirement • Battery set with charging hub and adapter • Tool kit (Including all type of tools with battery operated wrench) • Spare Battery - 2 sets • Propellers and landing gears - 1 set each Rugged carry case • Battery Charger. • 36 months • System should conform IP 65 norms • Supplier should provide UAV with UIN <p>All DGCA Guidelines must be fulfilled.</p>						
3	Submarine Drone	<ul style="list-style-type: none"> • Weight: 4.5kg ,Size: 380*267*165mm ,Max Depth: 100m, Max Speed: 1.5m/s • Battery: 97.68Wh, Top speed 1.5m / s (3 knots), Operating time 2-4 hours , Operating temperature -10C to 45C ,Charging power 2.9A / 25.2V, Charging time 2 hours • Charging Port and Charger Included. • Sensor: • IMU: 3 axis gyro/accelerometer/compass ,Depth Sensor: $\leq \pm 0.25\text{m}$,Temperature Sensor: $\leq \pm 2^\circ\text{C}$ • Camera: • CMOS: 1/2.3-inch ,Lens's/1.8 ,Focus: 1m, ISO Range: 100-6400, FOV:152° • Max Resolution: 12Mep pixel ,Format: JPEG/DNG ,Slow Motion: 720p: 8x(240fps) , 1080p: 4x(120fps) ,Time laspe: 4K/1080P, Video Bitrates: 60M 	1	Set				

		<ul style="list-style-type: none"> • Video Format: MP4 , SD Card: 64G ,Video , UHD: 3840*2160(4K) 30fps • FHD: 1920*1080(1080P) 30/60/120fps ,FHD: 1920*1080 120fps ,FHD: 3840*2160(4K) 30fps • LED: • Brightness: 2x2000 Lumens, Color Temperature: 5000K-5500K , CRI:85 • Dimming: Three gears ,LED Dimmable YES • Battery with charging Hub and adapters included. • IP68 water resistant Camera • Suitable flight controller • CPU: Intel Core i5 v Pro processor Storage: Min. 500 GB • Memory: Min. 4GB RAM • Display: 14 inch or larger with touch screen. Battery: Min.12 hours backup • Interfaces: USB, HDMI/VGA, Ethernet etc. Should follow IP 65 • Rugged unit Preflight self-checks <ul style="list-style-type: none"> ○ On-screen display of flight parameters • Tool kit (Including all type of tools with battery operated wrench) • Spare Battery - 2 sets • Propellers and landing gears - 1 set each Rugged carry case • Battery Charger. • 36 months • System should conform IP 65 norms • Supplier should provide UAV with UIN • All DGCA Guidelines must be fulfilled. 					
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4	FPV Drone	<ul style="list-style-type: none"> • Aircraft Ascent and descent speed 8 m/s and 6 m/s; wind resistance: 12 m/s; max altitude above sea level: 6000 m; return to home function; max. temperature 40 °C; range 8 km; radio frequencies 2.4 and 5.8 GHz • Camera 20 MP sensor; 4/3 CMOS; video resolution 5.1K; light sensitivity 100-6400; focal length 24 mm; digital zoom 3x; shutter speed 8-1/8000 s; field of view 84°; equivalent focal length 24 mm; aperture f/2.8 to f/11; focus 1 m to ∞ • Storage 8 GB, expandable via microSD card • Connectivity Micro USB, GPS • Features Night mode, omnidirectional dual vision system, infrared sensor, motorized 3-axis stabilization, RC-N1 remote controller • Battery LiPo 4S (15.4 V / 77 Wh), 5,000 mAh, 46 minutes flight time • Dimensions 283 x 347.5 x 107.7mm • Weight 895 grams • Battery with Charging Hub and adapter Included. • Suitable flight controller • CPU: Intel Core i5 v Pro processor Storage: Min. 500 GB • Memory: Min. 4GB RAM • Display: 14 inch or larger with touch screen. Battery: Min.12 hours backup • Interfaces: USB, HDMI/VGA, Ethernet etc. Should follow IP 65 • Rugged unit Preflight self-checks <p>On-screen display of flight parameters</p> <ul style="list-style-type: none"> • Tool kit (Including all type of tools with battery operated wrench) • Spare Battery - 2 sets 	1	Set			
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		<ul style="list-style-type: none"> • Propellers and landing gears - 1 set each Rugged carry case Battery Charger. <ul style="list-style-type: none"> • 36 months • System should conform IP 65 norms • Supplier should provide UAV with UIN All DGCA Guidelines must be fulfilled.						
TOTAL including all taxes and duties								

² Any unconditional discounts if offered, shall be specified in this column along with the unit rates.

³ Indicate each applicable tax separately.

Note: Evaluation shall be done for all items together

**Payment of GST and other taxes payable for the goods at the time of invoicing, although already included in the total cost, will be at actuals or the rate/amount of these taxes specified in the supply order, whichever is lower.*

We agree to supply the above goods in accordance with the technical specifications for a total contract price (including all taxes and duties) of Rs.(Amount in figures) (Rs... amount in words) within the period specified in the Request for Quotations.

We also confirm that the normal commercial warranty/guarantee of months shall apply to the offered goods.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf has engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices (as defined in the prevailing World Bank’s sanctions procedures) in competing for or in performing the Contract.

Signature of Bidder

PROFORMA FOR PERFORMANCE STATEMENT*

Proforma for Performance Statement (for a period of last 3 years)

RFQ No. _____ Date of opening _____ Time _____ Hours

Name of the Bidder _____

<u>Order placed by (full address of Purchaser)</u>	<u>Order No. and date</u>	<u>Description and quantity of ordered Goods/ equipment</u>	<u>Value of order</u>	<u>Date of completion of delivery</u>		<u>In case of Equipment, state if the equipment been satisfactorily functioning? (Attach a certificate from the Purchaser/Consignee)</u>
				As per contract	Actual	
1	2	3	4	5	6	8

*This proforma shall be deleted if requirement of Performance Statement is deleted in Clause 3.

Signature and seal of the Bidder

Purchaser's Requirement

LIST OF GOODS & RELATED SERVICES AND DELIVERY PERIOD

Line Item No.	Description of Goods and Related Services	Quantity	Physical unit	Final Destination (Project site)	Desired Delivery Period for completion of supply from the date of the Contract	Bidder's offered Delivery Period [to be provided by the Bidder]
1	2	3	4	5	6	7
1	Hexacopter	1	Set	NAHEP-IDP project DBSKKV, Dapoli	Delivery within 30 days from date of Contract & after delivery, 30 days for installation and commission	
2	Fixed Winged VTOL	1	Set	NAHEP-IDP project DBSKKV, Dapoli	Delivery within 30 days from date of Contract & after delivery, 30 days for installation and commission	
3	Submarine Drone	1	Set	NAHEP-IDP project DBSKKV, Dapoli	Delivery within 30 days from date of Contract & after delivery, 30 days for installation and commission	
4	FPV Drone	1	Set	NAHEP-IDP project DBSKKV, Dapoli	Delivery within 30 days from date of Contract & after delivery, 30 days for installation and commission	

Signature and seal of the Bidder

Note:

1. All details should be filled in by Purchaser except for Colum 7.
2. Delivery Period offered by the Bidder should be filled in Column 7 by the Bidder.

TECHNICAL SPECIFICATIONS

For VTOL for agriculture and fisheries

Detailed Technical Specifications and Standards [whenever necessary] and scope of services

[Insert detailed description of TS and scope of services each item or for each group of similar items]

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