

REQUEST FOR INFORMATION FOR
PROCUREMENT OF MEDIUM ALTITUDE LONG ENDURANCE (MALE)
UNMANNED AERIAL VEHICLES (UAVs) FOR IA, IN AND IAF

1. The Ministry of Defence, Government of India, is considering procurement of Medium Altitude Long Endurance (MALE) Unmanned Aerial Vehicle for use by three defence services. This will be under the “Make in India” initiative from Indian Companies. The UAVs are proposed to be developed and manufactured by the Indian industry under an appropriate category of the DPP like Buy & Make (Indian) etc. The project would be based on proven or matured technologies where fundamental research is not required. The development and manufacture of the equipment could also be undertaken by Indian Industry / Consortia.
2. This Request for Information (RFI) consists of two parts as indicated below:-
 - (a) **Part I.** The first part of the RFI incorporates broad operational requirements and features that should be met by the equipment. Few important technical parameters of the proposed equipment are also mentioned.
 - (b) **Part II.** The second part of the RFI states the methodology of seeking responses from Indian vendors (only). Submission of incomplete response format will render the vendor liable for rejection.

PART-I

3. **Intended Use of Equipment (Operational Requirements).** The MALE UAV will be used for surveillance and reconnaissance over large area for sustained duration.
4. **Important Technical Parameters.** Broad operational requirements for MALE UAV are placed at Annexure-I to this RFI.
5. Vendors are requested to indicate the indigenous content of the product, plan for indigenisation, production capacity along with envisaged timelines for local production. Vendors are to complete the Information Proforma placed at Annexure-II to this RFI.

PART-II

6. **Procedure for Response.**
 - (a) Vendors must forward response inclusive of details about company, details about the exact product meeting generic technical specifications and forward additional literature on the product.
 - (b) **Rough Order of Magnitude Cost.** The vendors are to provide the Rough Order of Magnitude (ROM) Cost of UAVs, Ground Control Stations (GCS), Payloads and associated equipment manufactured in India as follows:-

- (i) Cost of 100UAVs / 50 GCS / 100 Payloads
- (ii) Cost of 125 UAVs / 60 GCS / 125 Payloads
- (iii) Cost of 150 UAVs / 75 GCS / 150 Payloads

(c) The filled form should be dispatched at under mentioned address:-
DASR (Room No 445)
Air HQ(VayuBhavan)
Rafi Marg
New Delhi-110106
Fax:011 23011836

(d) Last date of submission of filled form should not be later than 3 months from date of issuance of RFI.

7. The anticipated timelines will be as stipulated at Annexure I to Appendix C to Chapter 2 of DPP-2016.

8. The Government of India invites responses to this request only from Indian Vendors. The vendors are to include their capability to indigenously design, develop absorb the technology sought and provide life time support.

9. This information is being issued with no financial commitment and the Ministry of Defence reserves the right to change or vary any part thereof at any stage. The Government of India also reserves the right to withdraw it should it be so necessary at any stage. The acquisition process would be carried out under the provisions of DPP-2016.

Date: 15 Jun 16

(S Ghuratia)
GpCapt
DASR (Wpns)

Annexure: As stated

Annexure I

(Refers to Para 4 of RFI)

BROAD OPERATIONAL REQUIREMENTS FOR MALE UAVs AND ITS ALLIED SYSTEMS

Sl. No.	Requirements	Vendor to Specify and provide maximum details possible
1. General Specifications		
(a)	The UAV and its payloads should be able to undertake the task of search and reconnaissance of area as well as moving target, Artillery Adjustment, Urban Security, Combat SAR, Coastal and Maritime Patrol, Disaster Control and Protection of Facilities.	--
(b)	The UAV and the payloads should be modular in nature and should be easy to repair in field conditions.	--
(c)	The UAV should have low radar and acoustics signature.	--
(d)	UAV along with its payloads should be capable of being operated from a single ground control station.	--
(e)	UAV and all its subsystems should be completely inter operable amongst all the users.	--
(f)	UAV and all its sub systems should be a capable of operating between – 40° C and +55° C.	--
(g)	UAV and its associated systems should have adequate growth potential.	--
(h)	Number of operators should be minimum.	--
2. Operational Requirements/ Specifications of UAV		
(a)	Altitude ceiling should be around 30000ftor above	--
(b)	Endurance should be more than 25 hrs with SAR and EO/IR payloads	--
(c)	The maximum range is more than 250kms in LOS mode and max possible with SATCOM link.	--

(d)	Datalink should be digital and encrypted and should have adequate redundancy. Uplink should not be jammable.	--
(e)	UAV should be capable of operating in winds at least upto 70 knots	--
(f)	UAV should be capable of operating with 15mm / hr rain.	--
(g)	UAV should have inbuilt Radio Relay to facilitate V/UHF voice relay. The relay should be compatible with communications systems in use by services.	--
(h)	UAV should have suitable Identification of Friend or Foe (IFF), Traffic Collision Avoidance System (TCAS) and Electronic Warfare Suite.	--
(j)	The UAV should have satellite based nav system including India's Regional Navigation Satellite System (IRNSS). The architecture to cater for dual channel redundancy complying to relevant standards.	--
(k)	The UAV should have an engine with low thermal signature.	--
(l)	UAV should be transportable in the shelter which complies to relevant prevalent MIL-STD.	--
(m)	UAV should have ATOL (Automatic and Takeoff Landing) capability and also capability to land in absence of a ground control station.	--
(n)	UAV should have Automatic Identification System (AIS) to provide information about merchant ships along with its cargo and kinematics inputs.	--
(o)	UAV should have appropriate lighting protection system complying to relevant prevalent lighting protection MIL-STD.	--
(p)	UAV should be capable of deploying dinghy/ raft if necessary.	--
3. Operational Requirements/ Specifications of GCS		
(a)	Ground Control Shelter should be modular in design installed in shelter complying to MIL-STD 810-D.	--
(b)	GCS should have friendly interface complying to the respective international standards.	--
(c)	GCS should have open coded software for exploitations of data from all payloads.	--
(d)	GCS should be ergonomically designed for long stress free operations.	--
(e)	Naval version of GCS should be capable for installation in ship compartments.	--
(f)	GCS should have the capability of transferring the data on near real time basis to remote locations.	--
(g)	GCS should have automatic take-off landing and capability with necessary redundancies catering to all type of failures.	--
(h)	GCS should preferably have capability to display two	--

	videos simultaneously from the same UAV.	
(j)	GCS should have embedded training mode.	--
4. Operational Requirements/ Specifications of Payloads		
(a)	Electro- Optics (EO/IR) and Laser Designator	--
	(i) Composite stabilized payload comprising of CCD (Colour), FLIR and laser designator in a single assembly.	--
	(ii) EO to have Wide Field of View.	--
	(iii) CCD and IR Cameras should have continuous zoom facility. Method of zoom should be stated.	--
	(iv) CCD camera video should be of High definition.	--
	(v) Payload should have the capability to downlink both the videos simultaneously.	--
	(v) The laser designator should be compatible with LGBs available with services.	--
(b)	Payload with SWIR and MW IR capability	--
(c)	SAR/ MPR and GMTI Radar	--
	(i) It should operate over wide range of frequencies.	--
	(ii) The radar should be all weather with range ≥ 60 kms.	--
	(iii) It should have foliage penetration capability.	--
	(iv) SAR should be capable to run in Spot, Strip, Circular and GMTI mode.	--
	(v) Naval version to have MPR.	--
(d)	Details of ESM Payload with their parameters should be provided.	--
(e)	Payload having COMMINT with wide range and capability of mobile tracking.	--
(f)	(i) Accuracy better than 2° RMS for all azimuth and polarization.	--
(g)	Payload having wide range communication jamming capability	--
(h)	Payload for day and night wide area persistent surveillance with high accuracy and high resolution.	--
(j)	The footprint of surveillance area should > 6 Kmin diameter.	--

5. Maintenance		
(a)	Should have minimal maintenance requirements.	-“-
(b)	Maintenance schedules should be such that it does not hinder the long and continuous operations of UAV.	-“-
(c)	The UAV, its sub-systems and other support systems should be easily palletized and air transportable.	-“-
(d)	Payloads should be light weight and the change time should be less than 1 hour.	-“-
(e)	LRUs should be easily accessible.	-“-
(f)	Minimum engine change time	-“-
(g)	Provision of continuous product support for total technical life by way of system modifications and upgrades.	-“-

Annexure-II
(Refers to Para 5 of RFI)

INFORMATION PROFORMA (INDIAN VENDORS)

1. **Name of the Vendor/Company/Firm.**

(Company profile, in brief, to be attached)

2. **Type(Tick the relevant category).**

Original Equipment Manufacturer (OEM)	Yes/No
Authorized Vendor of foreign Firm	Yes/No(attach details, if yes)
Others (give specific details)	

3. **Contact Details.**

Postal Address:

City: _____ State: _____

Pin Code: _____ Tele: _____

Fax: _____ URL / Web Site _____

4. **Local Branch/Liaison Office in Delhi (if any).**

Name &Address: _____

Pin code: _____ Tel: _____ Fax: _____

5. **Financial Details.**

(a) Category of Industry (Large/medium/small Scale): _____

(b) Annual turnover: _____(in INR)

(c) Number of employees in firm: _____

(d) Details of manufacturing infrastructure: _____

(e) Earlier contracts with Indian Ministry of Defence/Government agencies:

Contract Number	Equipment	Quantity	Cost

6. **Certification by Quality Assurance Organisation.**

Name of Agency	Certification	Applicable from (Date &Year)	Valid till (Date &Year)

7. **Details of Registration.**

Agency	Registration No.	Validity(Date)	Equipment
DGS&D			
DGQA/DGAQA/DGNAI			
OFB			
DRDO			
Any other Government Agency			

8. **Membership of FICCI /ASSOCHAM /CII or other Industrial Associations.**

Name of Organisation

Membership Number

9. **Equipment/Product Profile (to be submitted for each product separately)**

(a) Name of Product: _____

(IDDM Capability be indicated against the product)

(Should be given category wise for e.g. all products under night vision devices to be mentioned together)

(b) Description (attach technical literature): _____

(c) Whether OEM or Integrator: _____

(d) Name and address of foreign collaborator (if any): _____

(e) Industrial Licence Number: _____

(f) Indigenous component of the product (in percentage):

(g) Status (in service /design & development stage):

(h) Production capacity per annum:

(j) Countries/agencies where equipment supplied earlier (give details of quantity supplied):

(k) Estimated price of the equipment

10. Alternatives for meeting the objectives of the equipment set forth in the RFI.

11. Any other relevant information: _____

12. **Declaration**. It is certified that the above information is true and any change will be intimated at the earliest.

(Para 44 and Appendix F to Chapter II may be referred)

(AuthorisedSignatory)