BRIEF OF THE CASE

Case Reference: CF.No/ AIRHQ/S 59101/27/ACQT (MAKE) BM-I

1. **Service**: **Indian Air Force**

2. **Nodal Directorate at SHQ**: Directorate of Projects (Su – 30 MKI)

3. **Name of the Case**: Design and Development of an **Airborne Electro Optical Pod with Ground Based System** through private defence production industry.

4. **Case Brief.** An Airborne Electro Optical Pod is a reconnaissance pods carried on aircraft for airborne surveillance and monitoring. Reconnaissance system consists of airborne pod and a ground based system, connected through suitable encrypted data link. Air borne pods interact with ground based system for transferring real time images. As a part of spiral development, subsequently the pods are planned to be equipped with other sensors such as Infrared and Synthetic Aperture Radar (SAR).

5. **Proposal**. IAF intends to partner with indigenous defence production industry to undertake design, development and manufacture of **Airborne Electro Optical Pod with Ground Based System** under the **Make – I (Government Funded)** procedure as per Chapter III of DAP 2020.

6. **Broad Technical Parameters** of the equipment is **attached as Appendix A**. These are preliminary parameters. Detailed project specifications will be developed after industry interactions and feasibility study.

7. **Indigenous Content (IC)/ Categorisation**. Successful development under **Make – I** category would result in acquisition from successful Development Agency (DA) through the **Buy Indian (IDDM)** category with indigenous design and development and a **minimum IC of 50%**.

8. **Industry Attributes:**

(a) Should be an Indian entity (as per provisions of Para 20, Chapter I of DAP 2020, including additional conditions at sub paragraphs (a) and (b)). (**Essential**)

Note: A copy of DAP 2020 is available on website of Ministry of Defence.

(b) The Indian entity could be an AOP (Association of Persons) as per guidance in DAP 2020.

(c) Experience in manufacturing, maintenance, MRO (Maintenance, Repair & Overhaul) of aviation related equipment (**desirable**).

(d) Familiarity with QA processes of DGAQA and certification processes of CEMILAC (Centre for Military Airworthiness Certification) (**desirable**).

(e) Experience in design, development, manufacture and integration in electronics (including embedded sensors) industry (**Desirable**).

1. Interested **Indian** vendors may send their proposals by ~~30 June 2022~~. (**Based on Industry request the date has been extended to 30 Jul 22**)

It is requested that, answers to questions at **Appendix B** may also be dovetailed by the industry in their response.

Interested respondents are also urged to read the provisions of "Make–I" procedure at Chapter III of DAP 2020 as the project will be progressed as per these provisions.

2. **Contact Details.** Any queries/further details of the case may be obtained from the Nodal Dte at Air Headquarters (Vayu Bhavan). Interested Indian vendors may forward their responses through letter/fax/email to the Nodal Directorate as follows:-

Nodal Directorate

Dte of Projects (Su — 30)
Room No. 402, Air HQ (VB)
Rafi Marg, New Delhi – 110 106
Email: flanker.lgs@gov.in

A copy of all communication should also be addressed to:-

Make PMU (AF); Room No 413; Air HQ (VB);
Telefax: 011-23013225
Email: makeind.af@gov.in

Appendix A
(Refers to Para 6 of Brief)

BROAD TECHNICAL PARAMETERS OF RECONNAISSANCE PODS AND GROUND BASED SYSTEM

1. Board parameters of EO/IR Sensor Pod with Ground Based System is as follows:-

Reconnaissance pod

(a) Dual band focal plane in visible and IR.

(b) High accuracy of image stabilization.

(c) On board recording > 1hr

(d) Data link

(e) Facility for preflight loading of mission profile

(f) Ops Alt up to 50,000 feet

(g) Standoff ground range of **more than 100 km** by day

(h) Common cockpit control and display for EO/IR and SAR

(i) Built-in INS/GPS system

(j) System should be capable of cued mode of operation with existing ESM systems.

(k) Resolution of 50 cm per pixel or better.

(l) Should be scalable to accommodate SAR sensors.

Ground Based System (Ground Exploitation System)

(a) Ground Exploitation system (GES) is to be a single-point solution for efficient extraction and generation of intelligence based on information received from hard and soft copy images from various imagery viz IR, EO etc. Identification and classification of targets of interests with features of plotting over various type of imagery.

(b) Should be mobile.

(c) GES should provide for generation and dissemination of reports, imagery aids and products to distant locations for immediate use. The system should have the following features:-

(i) Reception of new imagery into the system i.e. supporting both hardcopy & softcopy imagery from different sources viz IR and EO from recce system via data link.

(ii) GES should support the data-link with a range of at least **350 Km**, with multiplexing of image & annotation data in real time.

(iii) Exploitation tasks management employing high rates soft copy image interpretation using multi-functional workstation with efficient production of imagery information.

(iv) Identification and management of “Intelligence Findings” (including identification of targets, accurate position measurement in geographical co-ordinates) using a wide set of tools in the exploitation workstations.

(v) Generation of exploitation reports and other imagery products, with printing of full resolution photos in near real time

(vi) Dissemination of exploitation reports and their imagery products

(vii) Intelligence archiving of images, Targets, Finding, Report, Products, etc.

(viii) Reception and use of reference imagery & raster data (digitized maps, satellite imagery, ortho-photos etc.)

(ix) Built in optimization, load balancing and auto-administration capabilities.

(x) Should have AI capability for image optimization and transfer of relevant information.