



BRIEF OF THE CASE

Case Reference: CF.No/ AIR HQ/S 59101/36/ACQT(MAKE) BM-I

1. **Service:** Indian Air Force
2. **Nodal Directorate:** Directorate of Ops (Space)
at SHQ
3. **Name of the Case:** Innovative Space Applications for Fourth / Final Stage of Launch Vehicles
4. **Case Brief.** It is proposed to seek an **Innovative solution for Space Applications for Fourth / Final Stage of Launch Vehicles**
5. **Proposal.** IAF intends to partner with indigenous defence production industry to undertake design, development and manufacture of **Innovative Space Applications for Fourth / Final Stage of Launch Vehicles** under the **Make – I (Government Funded)** procedure as per Chapter III of DAP 2020.
6. **Broad Technical Requirement.** Broad Technical Requirements of the equipment are
 - (a) Last stages of rocket engine after separation of spacecraft will be loitering in the outer space for considerable time. It is understood that during such launches adversary's space based and ground based sensors will be monitoring the launch activities. Thus, it provides an opportunity to map the active RF sources which are monitoring the launch activity.
 - (b) Having an ISR payload integrated with the final stages of rocket will help in effectively utilizing its considerable loitering time for detecting and finger printing active RF sources of the adversary. The ISR payload could be either EO/ IR/ELINT or a combination of multiple sensors. These ISR payloads could be looking both upward and downward to detect the sensors which are monitoring the launch activity from space and ground respectively.
 - (c) Controlling and extracting the information from the payload will be a crucial activity for which the necessary controlling as well as data extraction mechanism should be in place. Data could be accumulated till the time the payload is available for relaying the information and processed thereafter to extract the requisite intelligence.
 - (d) Location of payload, power supply for payload, protection of payload during the ignition of rocket motors are the key challenges which are to be factored in while integration with last stages of rocket.



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 related equipment **(desirable)**.

(d) Familiarity with QA processes of DGAQA and certification requirement of the equipment **(desirable)**.

(e) Experience in design, development, manufacture and integration in space based technologies **(Desirable)**.

1. Interested **Indian** vendors may send their proposals by **31 Jan 22**

It is requested that, answers to questionnaire 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

Directorate of Ops (Space)
Room No. 592/B, Air HQ (VB)
Rafi Marg, New Delhi – 110 106
Email – dspace574@iaf.nic.in
Tele – (011) 23014729

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

Email: aero.design@gov.in and makeind.af@gov.in

Disclaimer

This project brief is neither an agreement nor an offer by the MoD to the prospective bidders or any other person. The purpose of this brief is to provide interested vendors with information that could be useful to them in preparation and submission of their proposals related to this project. The questionnaire has been prepared to obtain initial information for screening of the vendors. Detailed questionnaire will be sent or further interactions will be held, to seek additional information for the feasibility study to assess the status of enabling technologies and capabilities of the Indian industry. The responding vendors will bear all costs associated with or relating to preparation and submission of their proposal related to this case. MoD reserves the right to amend, supplement or delete the information in this brief or questionnaire, as suited to the case. The MoD reserves the right to withdraw this project brief without assigning any reasons thereof. The issuance of this project brief and the questionnaire, or a response to the same, does not bound the MoD to shortlist/select the responding vendor for the project. The MoD reserves the right to disqualify any responding vendor, at any stage, on grounds of national security.



**QUESTIONNAIRE RELATED TO
INNOVATIVE SPACE APPLICATIONS FOR FOURTH / FINAL STAGE OF LAUNCH
VEHICLES**

1. Whether the company/Association of Persons (AoP) is eligible as per provisions of DAP 2020? (Eligibility of Participation: Indian vendors only).
2. Please provide a brief account of vendor assessment of its capability (Financial and Technical) to undertake the project? Please state, list of documentation can be provided for verification?
3. Please provide summary of essential financials (annual turn-over, net worth, credit rating).
4. Please provide details of available manufacturing infrastructure.
5. Please provide details of major contracts undertaken in past?
 - (a) Also indicate special achievements to demonstrate in-house design capability, production capability or project management.
6. Please provide details of resources/capability of the firm to undertake indigenous design, development and testing.
7. Whether 50% Indigenous Composition (IC) can be ensured? What will be the achievable Indigenous Content.
8. Provide details of following: -
 - (a) Cost of design and development of **Innovative Space Applications for Fourth / Final Stage of Launch Vehicles**.
 - (b) Cost of Procurement of one complete system.
 - (c) Estimated Time period required for design and development of the equipment.
9. Enabling Technologies for realising the equipment within the country.
10. Details of which components will be manufactured in-house and which will be outsourced (through domestic vendors as well as foreign vendors – indicate separately).