BRIEF AND QUESTIONNAIRE ON MAKE PROJECT
80 MM ROCKETS

Brief Outline

1. 80 mm rockets are intended to be fired from rocket pods of IAF aircraft. These Rockets are intended for use against variety of targets like tanks, armoured carriers, missile launcher vehicles, parked aircraft and enemy personnel.

2. It is proposed to indigenously manufacture 80 mm (Live & Practice) rockets for IAF aircraft under the Make procedure of DAP 2020.

3. Indian vendors (term to include, public limited company, private limited company, partnership firms, limited liability partnership, one person company, sole proprietorship registered as per applicable Indian laws) desirous of undertaking the design/development/manufacture may submit their response, as per format placed at Appendix B, through letter, fax or email to:-

Make PMU (IAF)
Room No 490 (E),
Air HQ (Vayu Bhavan)
New Delhi – 110106
Telefax: (011) 23013225
Email: makeind.iaf@gov.in

4. Estimated time lines are as follows:-

(a)	Time period for response from industry	**Six weeks** (may extend)
(b)	Interaction with vendors and feasibility study	Eight weeks
(c)	If project found feasible, internal approvals and issue of EoI	Eight weeks (may extend)

5. **Technical Aspects.** Technical data related to item at para 2 above is attached as Appendix A.

6. **Questionnaire.** A generic format for examination of the project and response by the vendors is placed at Appendix B.

Appendix A
(Refer Para 5 of
Brief 80 mm Rockets)

TECHNICAL ASPECTS

1. The basic technical details of 80 mm Rockets are tabulated below:

Sl. No.	Technical Parameters	Values
(a)	Caliber, mm	80
(b)	Length of Rocket, mm	1528-1542
(c)	Shooting Range, m	1300 - 4000
(d)	Mass of rocket, Kg	$11.3^{+0.4}_{-0.5}$
(e)	Warhead type	Antitank and Anti personnel
(f)	Armour Penetration, mm	Minimum 400 mm
(g)	Allowable temperature range of the Rocket operation, ^{0}C	+60 to -60
(h)	Position of centre of mass of complete rocket (from nose tip), mm	810
(j)	Average circular dispersion in plane of projection when fired from launcher, m rad.	8 Maximum

2. Lifing Characteristics of the rocket are:-

(a) Shelf Life (In standard packaging when stored in unheated warehouses) : 15 years

(b) Exposed Life : Not less than 01 year

3. Desired Fuze Characteristics:

(a) Piezogenerator
(b) Safety Actuating Device
(c) Minimum acceleration required to activate the fuze, m/s^2 : 250
(d) Safety during handling
(e) Lower arming distance not less than 300±1 m

Appendix B
(Refer Para 6 of
Brief 80 mm Rockets)

GENERAL ASPECTS

4. Whether the company/Association of Persons (AoP) is eligible as per provisions of DAP 2020 (Eligibility of Participation: Indian vendors only).

5. Whether the vendor can provide an assessment of its capability (Financial and Technical)? If so provide the necessary documentation for verification.

6. Whether 50% or higher (specify) Indigenous Content (IC) that can be ensured?

7. Does the vendor envisage the feasibility of achieving future exports?

8. Whether the vendor's proposal would be eligible for Make-II or Make-III subcategory of Chapter III of DAP 2020?

9. Whether R&D or ToT through foreign collaboration is proposed by the vendor? (Provide indicative information)

10. Estimated cost of development in case indigenous R&D is proposed.

11. Estimated tentative time period of completion of R&D or ToT..

12. Rough Order of Magnitude (ROM) Cost of rockets manufactured in India as follows:-

(a) Cost of 5000 rockets.
(b) Cost of 15000 rockets.
(c) Cost of 50,000 rockets and so on.
(d) Any other quantity restrictions.

13. Please indicate plan/status of airworthiness certification of the system/components. Ab-initio indigenous designs will need to be certified through Centre for Military Airworthiness Certification (CEMILAC).

14. Please provide relevant and applicable technical details. Indicative of information on weight, safety, parts etc.