HIGH COMMISSION OF INDIA
MAPUTO (MOZAMBIQUE)

***

REQUEST FOR PROPOSAL

FOR

SUPPLY AND INSTALLATION OF TWO (02)
CONTAINERISED SHOOTING RANGE
(10 METRE LENGTH – 2/3 LANE CONFIGURATION)

FOR DONATION TO THE MINISTRY OF NATIONAL DEFENCE
OF THE REPUBLIC OF MOZAMBIQUE

REQUEST FOR PROPOSAL (RFP)

1. General.

1.1 The High Commission of India, Maputo invites Technical and Financial Bids for supply and installation of two (02) units of Containerised Shooting Range (10 metre length – 2/3 lane configuration) in Mozambique. The above configuration implies that both ranges will have an effective firing length of 10 m. However, the first range will have 02 lanes and the second range will have 03 lanes.

1.2 The procurement will follow a single-stage two-bid system. The Technical and Financial Bids will be submitted physically or online by the Bidder before 1600 hrs 09 January 2026 in two separate sealed envelopes (physical mode) or password protected folders (online mode) clearly superscribed as "TECHNICAL BID FOR SUPPLY AND INSTALLATION OF TWO (02) CONTAINERISED SHOOTING RANGE" and "FINANCIAL BID FOR SUPPLY AND INSTALLATION OF TWO (02) CONTAINERISED SHOOTING RANGE" respectively. The two envelopes/folders should be further enclosed in a larger sealed envelope/ password protected folder superscribed with the words "BID FOR SUPPLY AND INSTALLATION OF TWO (02) CONTAINERISED SHOOTING RANGE" alongwith all required documents to "Head of Chancery, High Commission of India, 167, Avenida Kenneth Kaunda, Maputo, Mozambique" or email ID **hoc.maputo@mea.gov.in**

2. Critical Information Summary.

Aspect	Information
Item/Product	Containerised Shooting Range (10 metre length – 2/3 lane configuration)
Quantity	Two (02)
Buyer	High Commission of India
Buyer Address	167, Avenida Kenneth Kaunda, Maputo, Mozambique
Country of Manufacture	India (min 80% Indigenous Content)
EMD	2% of the total tender value
Performance Security	5% of the total contract amount
Delivery Location	Maputo

3. Critical Dates.

Aspect	Date & Time
Tender Publishing Date	18 December 2025
Online Clarification Period	18 December 2025 to 05 January 2026
Pre-Bid Meeting (dual mode)	06 January 2026
Bid Submission Deadline	1600 hrs on 09 January 2026
Technical Bid Opening Date	1100 hrs on 12 January 2026
Commercial Bid Opening Date	1100 hrs on 13 January 2026
Delivery Time including Installation and Training	Within 240 days from the date of award of contract

4. Scope of Work.

4.1 Supply of two (02) units of Containerised Shooting Range (including all accessories and literature), hereafter called EQUIPMENT, as per specifications laid down in this RFP. Delivery to be done at Maputo/Nampula in Mozambique.

4.2 Installation of EQUIPMENT.

4.3 Training of Mozambican military personnel on the EQUIPMENT.

4.4 Two (02) years Full Warranty followed by three (03) years AMC.

5. Terms & Conditions Related to Bidding Process.

5.1 **Preparation and Submission of Bids**.

5.1.1 Bids should be prepared on the original memo / letter pad of the Bidder furnishing, inter alia, details like VAT number, copy of government licence letter, bank details and complete postal & e-mail address of the Bidder. Bids will be sealed/password protected as explained at Para 1.2 earlier. In case of online bids, passwords will be shared by the bidder only at the time of bid opening.

5.1.2 Bids to be delivered at the following postal address or email ID by the due date and time:-

Head of Chancery
High Commission of India
167, Avenida Kenneth Kaunda, Maputo, Mozambique
hoc.maputo@mea.gov.in.
+258 21493668

5.1.3 The following documents shall form part of the bid:-

5.1.3.1 RFP (this document) and any Addenda if issued.

5.1.3.2 Technical Bid alongwith Compliance Matrix (refer Para 5.13 below).

5.1.3.3 Commercial Bid.

5.2 **Bid Submission Deadline**. The bid should be submitted by 1600 hrs on 09 January 2026. Bids received after the deadline will not be considered. No responsibility will be taken by the Buyer for delay or non-delivery of bid documents.

5.3 **Earnest Money Deposit (EMD)**. An EMD equal to 2% of the tender value shall be submitted by each Bidder. Exemption from submitting EMD as well as its forfeiture in case of default will apply as per GFR. EMD could be in the form of Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee. The EMD must remain valid for a period of 45 days beyond the final bid validity period. It will be released, without interest, after the contract is awarded to the successful Bidder.

5.4 **Clarification Regarding Contents of the RFP**. Bidders may obtain clarification regarding the contents of the RFP by sending their queries on **hoc.maputo@mea.gov.in**. Online clarification period will extend from 18 December 2025 to 05 January 2026. Queries received after the above deadline will not be replied to. A pre-bid meeting will also be held at 1100 hrs on 06 January 2026 to address queries from the Bidders.

5.5 **Number of Bids per Make/Model**. Each Bidder shall submit only one bid for a particular make/model of EQUIPMENT. A Bidder who submits more than one bid for the same make/model shall be disqualified.

5.6 **Modification and Withdrawal of Bids**. A Bidder may modify or withdraw his bid prior to the submission deadline. This may be done by providing a written notice (email or hard copy) to the Buyer and after obtaining latter's acknowledgment on the same.

5.7 **Clarifications Regarding Contents of Bids**. During evaluation and comparison of bids, the Buyer may ask the Bidder for clarification of his bid. The request for clarification will be given in writing and no change in prices or substance of the bid will be sought, offered or permitted. No post-bid clarification on the initiative of the Bidder will be entertained.

5.8 **Rejection of Bids**. Any unethical practice such as canvassing by the Bidder in any form, unsolicited letter and post-tender correction may invoke rejection of bid. Conditional bids will be rejected.

5.9 **Validity of Bids**. The bid should remain valid for 180 days from the last date of submission.

5.10 **Cost of Bidding**. The Bidder shall bear all costs associated with preparation and submission of bid. Buyer shall have no liability in this regard.

5.11 **Language**. All documents relating to the bid shall be in English language. Where the original document is in another language, a translated version shall accompany.

5.12 **Eligibility/ Pre-Qualification Criteria**. Eligibility/ Pre-Qualification Criteria for Bidders is given at **Appendix A**.

5.13 **Technical Specifications**. In addition to compliance to the above conditions, the EQUIPMENT being offered must meet the technical specifications stated at **Appendix B**. The Bidder will show proof of compliance by submitting all Lab Test Reports specified at **Appendix C.** Compliance Matrix will be submitted as per **Appendix D**.

5.14 **Amendment of Tender Document**. The Buyer may amend the tender document (RFP) by issuing Addenda before the deadline for submission of bids, albeit with due consideration to the response time needed by the Bidders.

5.15 **Price Bid Format**. The price shall be quoted as per the following format in US Dollars.

Ser No	Description of Items	Quantity	Price per unit in USD (figures & words)	Total Price in USD (figures and words)
5.15.1	Basic Cost of EQUIPMENT including two years warranty	02		
5.15.2	Delivery, Installation & Training	NA		
5.15.3	AMC (02 Years)	NA		
5.15.4	Taxes, if any	NA		
5.15.5	Custom Duty, if any	NA		
5.15.6	Additional costs, if any	NA		
Total				

Note. This being a donation from the Government of India to the Government of Mozambique, endeavour will be made by the High Commission of India to facilitate exemption of custom duty and other government levies. The final payment will be done after factoring-in such exemptions, if granted.

5.16 **Opening and Evaluation of Bids**.

5.16.1 Opening and Evaluation of bids will be done by the Procurement Committee constituted by the High Commission of India, Maputo.

5.16.2 Technical Bids will be opened at 1100 hrs on 12 January 2026 at the High Commission of India, Maputo. Authorised representatives of Bidders may attend the event in Online or Physical mode. Bids that are not compliant with all the eligibility and qualifying requirements of the RFP will be discarded.

5.16.3 Financial Bids of technically compliant Bidders will be opened at 1100 hrs on 13 January 2026 at the High Commission of India, Maputo. Authorised representatives of Bidders may attend the event in Online or Physical mode.

5.16.4 The successful Bidder will be decided on the basis of the lowest total price quoted, as per the Price Bid Format specified earlier.

6. Terms & Conditions Applicable After the Selection of Supplier

6.1 **Signing of Agreement**. The award of contract (placement of supply order) to the successful Bidder will be formalised by signing of an Agreement between the Buyer and Supplier. The contract will be aligned with the terms and conditions of this RFP. Any aspect not specifically covered in this RFP will be guided by GFR.

6.2 **Delivery Period**. The Supplier shall be required to complete delivery, installation and training on the EQUIPMENT, in all respects, within 240 days from the date of award of contract. Request for extension of delivery period will not normally be considered. Even if considered under exceptional circumstances, it will be at the sole discretion of the Buyer.

6.3 **Delayed Delivery Charges (Liquidated Damages)**. In case of delay in delivery of EQUIPMENT beyond the stipulated date, the Supplier shall be liable to pay delayed delivery charges @ 01% (one percent) of the value of supply order for each week of delay, subject to maximum of 10% (ten percent). Waiver to this clause will be considered under exceptional circumstances only.

6.4 **Year of Production**. The EQUIPMENT supplied under the contract should be of latest manufacture (not more than 1 year old) with unused components/assemblies/sub-assemblies, conforming to the current production standard and should have 100% of the defined life at the time of delivery. Deviations, if any, should be clearly brought out by the Bidder in the Technical Proposal.

6.5 **In Service Life and Shelf Life**. The EQUIPMENT supplied under the contract should have service/shelf Life of minimum ten (10) years. The Bidder is required to give details of reliability model, reliability prediction and its validation by designer/manufacturer to ensure reliability of stores throughout service/shelf life.

6.6 **Pre-despatch Inspection**. The Supplier shall conduct pre-despatch inspection of the Equipment at his premises in coordination with the Buyer on a mutually convenient date. Buyer may depute a representative to attend the same. Observations of the Buyer, if any, shall be rectified before despatch of the EQUIPMENT. The Supplier shall submit Pre-Inspection Report reflecting full operational readiness of the EQUIPMENT prior to final despatch.

6.7 **Post-installation Inspection**. The Buyer and Supplier will undertake joint physical and functional inspection of the EQUIPMENT after completion of installation. Observations of the Buyer, if any, shall be rectified before handing over of the EQUIPMENT to the end user.

6.8 **Warranty Clause**. The Supplier shall provide full on-site warranty (including software updates) of the EQUIPMENT for a period of two years. During the warranty period, whenever a defect is reported by the Buyer, the Supplier will undertake site visit within a period of 14 days and complete in-situ repair/replacement of the required component within a period of 60 days from the date of reporting of defect. Every week of delay in the above service will invite forfeiture of 0.1% of Performance Guarantee as well as commensurate extension of the warranty period. The Buyer will also undertake all preventive and periodical maintenance services during the warranty period. Services, repairs and replacements provided by the Supplier during the warranty period will incur no additional expenditure on the Buyer. Warranty Certificate is at **Appendix E.**

6.9 **Annual Maintenance Contract (AMC)**. Post completion of warranty period, the Supplier shall provide full on-site maintenance support in the form of AMC of the EQUIPMENT for a period of three years. Each Bidder will furnish the details of service support being offered as part of AMC. During the AMC period, whenever a defect is reported by the Buyer, the Supplier will undertake site visit within a period of 14 days and complete in-situ repair/replacement of the required component within a period of 60 days from the date of reporting of defect. Every week of delay in the above service will invite forfeiture of 0.1% of Performance Guarantee as well as commensurate extension of the AMC period. The Buyer will also undertake all preventive and periodical maintenance service during the AMC period. Services, repairs and replacements provided by the Supplier during the AMC period will incur no additional expenditure on the Buyer. Details at **Appendix F**.

6.10 **Technical Documents**. The Supplier shall provide standard documents with the EQUIPMENT such as Detailed User Manual, Warranty Certificate, etc in Portuguese/English language. Details are at **Appendix G**.

6.11 **Reliance on Sub-vendors/Partners**. The Bidder will clearly specify components and services for which he would be reliant on sub-vendors, with all relevant details. All undertakings and assurances given by the Bidder shall be deemed to apply to components and services of the sub-vendors/partners also.

6.12 **Product Support**. The Bidder would be bound by a condition in the contract that he is in a position to provide product support (on payment) in terms of maintenance, materials and spares for a minimum period of ten (10) years. Even after the said mandatory period, the Bidder would be bound to give at least two years notice to the High Commission of India, Maputo, Mozambique prior to closing the production line so as to enable a Lifetime Buy of all spares before closure of the said production line. This, however, shall not restrict the Buyer from directly sourcing sub-equipment/sub-assembly and spares from their respective sub-vendors on completion of warranty. In case the sub-equipment/sub-assembly/parts require tuning/calibration/integration by the Bidder prior replacement, the same is to be undertaken by the Bidder at fair and reasonable cost, on mutually agreed basis.

6.13 **Obsolescence Management Plan**. An actionable obsolescence management plan is to be proposed by the Bidder along with the mechanism for intimation of notification of obsolescence. The mutually agreed mechanism for intimation would form an integral part of the contract. All upgrades and modifications carried out on the equipment during the next Ten (10) years must be intimated to the High Commission of India, Maputo, Mozambique as per the agreed mechanism.

6.14 **Malicious Code Certificate**. The Bidder is required to submit a 'Malicious Code Certificate' *(only for Electronic items and Software)* along with the Technical Proposal. The format is placed at **Appendix H** to this RFP.

6.15 **Patent Rights**. The Bidder should confirm that there are no infringements of any Patent Rights in accordance with the Indian laws.

6.16 **Training**. One-week training package for training of operators will be conducted by the Supplier in English language. Portuguese translator will be arranged by the High Commission of India, Maputo. The Supplier will finalise the contents of training in consultation with the Buyer prior to commencement of training. All training requirements such as training aids, projection system, complete equipment with accessories / optional, technical literature, spares, test equipment / test set up, charts, training handouts, power point presentations, Computer Based Training (CBT), Documentation, Simulators etc will be catered by the Bidder. No aspect of training will incur an additional expenditure on the Buyer.

6.17 **Payment Terms**. Payment plan will be as under:-

6.17.1 **On Despatch from Indian Port**. 60% (Sixty percent) of total contract amount.

6.17.2 **On Completion of Installation & Training in Mozambique**. Balance amount.

6.18 **Performance Security**. The successful Bidder will submit, within 30 days from receipt of supply order, a Performance Security equal to 5% (five percent) of the order value. This could be in the form of Bank Guarantee, Online Payment, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee. It should remain valid till the completion of AMC period.

6.19 **Packaging of Deliverables**. The Bidder shall pack the deliverables to ensure that each deliverable is transported in a safe and serviceable condition.

6.20 **Consignee**. High Commission of India, 167, Avenida Kenneth Kaunda, Maputo, Mozambique. Consignee location would be Maputo/Nampula.

6.21 **End User**. Mozambique Armed Forces (FADM)/Ministry of National Defence, Republic of Mozambique.

Appendix A
(Refers to Para 5.12 of RFP)

VENDOR ELIGIBILITY/PRE-QUALIFICATION CRITERIA

1. The following eligibility/ pre-qualification criteria will apply:-

Ser No	Parameter	Criteria
General		
1.1	**Experience**	The Bidder should have sufficient experience in supplying the same/similar EQUIPMENT that is being offered by him in response to this RFP. The bidder must provide copies of atleast three (03) supply orders of the same/similar equipment within the last five years.
1.2	**In-Service Claim**	The EQUIPMENT being offered or its earlier variants should be in service in the Indian Armed Forces.
1.3	**Legitimacy/ Authorisation**	The Bidder or his partner/subsidiary/sub-vendor should not have been suspended or banned by any Government Department in India or Mozambique. They should also not be under any investigation. Any restriction imposed on the Bidder to execute any part of the contract must be informed alongwith the bid.
1.4	**Licence**	The Bidder should hold a Defence Industrial Licence for manufacture of EQUIPMENT issued by DPIIT (Department for Promotion of Industry and Internal Trade)
1.5		The Bidder should should possess requisite export licences and permissions to export the EQUIPMENT to Mozambique.
1.6	**Patent Rights**	The Bidder should confirm that there are no infringements of any Patent Rights in accordance with the laws prevailing in their respective countries.
Financial		
1.7	**Average Annual Turn Over**	Min Avg Annual Turnover for last 03 financial years should not be less than Rs 50 Cr.
1.8	**Net Worth**	Net worth of entities, ending 31st march of the previous financial year, should not be less than Rs 50 Cr.
1.9	**Insolvency**	The entity should not be under insolvency resolution as per Bankruptcy Code (BC) at the time of applying.
Technical		
1.10	**Nature of Business**	Vendor shall be a manufacturing entity or System Integrator of the EQUIPMENT and not merely a trading company, except in cases where the OEM participates only through its authorised Vendors.
1.11	**IC Content**	Minimum 80%

Appendix B
(Refers to Para 5.13 of RFP)

TECHNICAL SPECIFICATIONS

Ser No	Aspect	Details of Specification
1.	**Structure**	1.1 The structure of Containerised Shooting range should meet the following requirement:- 1.1.1 **Overall Size**. 15-18 m (length) x 3-4 m (width) x 3-4 m (height) with minimum effective range of 10 m. It should cater for simultaneous firing by 2/3 firers. 1.1.2 The structure should be one single integrated module comprising of range, control room and automated bullet trap system. 1.1.3 The structure shall be constructed with pre-fabricated steel modules of AR 500 grade steel. 1.1.4 The floor shall have anti ricochet coating. 1.1.5 The ceiling shall have suspended armoured baffle plate at varying distances as per design specifications to deflect bullet incidence. 1.1.6 Software controlled dimmable lighting with night firing simulation shall be provided in the firing range technical area. 1.2 **Fire Suppression**. Adequate fire extinguishers for fire suppression. 1.3 **Safety Signs**. Complying with applicable international standards. 1.4 **Status Lighting**. Range status lighting at all ingress and egress points.
2.	**Control Room**	2.1 Real time controlling of all targets being installed in the range in the manner indicated in the 'Target Specification'. 2.2 Touch screen Master control panel for the ventilation system with variable control for exhaust and inlet of fresh air. 2.3 Communications system for one to one interface with individual firer and with the group which should also serve as central announcement system (The speakers being installed in the firing stall area should be of appropriate wattage). 2.4 Master computer for control of all electronic target systems giving feedback for each target, along with a heavy-duty printer. In addition, CCTV with two minimum 40 inch LED monitors for instructor to watch all firers and target simultaneously.

Ser No	Aspect	Details of Specification
3.	**Target**	The target specifications are outlined in the succeeding paragraphs
		Virtual Target System (02/03 Lanes) 3.1 **General System Requirements.** 3.1.1 All computer and display hardware to be standard off the shelf components. 3.1.2 System allows 1920x1080 HD, 1280x720 HD and multi-screen spanning. 3.1.3 System should have immersive edge bleeding self-sealing target screen. 3.1.4 System allows for multiple shooter configurations. 3.1.5 All courseware is operational in all display setup. 3.1.6 System allows for multi-system communication with the following capabilities. 3.1.7 Allow full control and setup of all Courseware for all clients. 3.1.8 Allow full camera calibration/ testing for all cameras for all clients. 3.1.9 Allow full control from centralised operator computer. 3.1.10 Allow full control from wireless tablet PC. 3.1.11 Self sealing Rubber target projection screen 3.2 **Weapons and Training Devices.** 3.2.1 System allows for laser and live fire shot detection using in-service weapons, especially AK-47. 3.2.2 Laser and live weapons can be used at the same time. 3.2.3 Live fire hit detection with an accuracy of 6 mm (or better) from hit location. 3.2.4 All laser training weapons to have realistic look and weight to the real weapon. 3.2.5 All laser training weapons to be eye-safe, class 3, IR laser.

Ser No	Aspect	Details of Specification
		3.3 **General Requirements**. 3.3.1 Software to allow command/control of all system aspects from one station. 3.3.2 Software has the ability to enable disable all external training devices. 3.3.3 Software has an internal operator/user database with training history. 3.3.4 Software should work from an operator desktop or wireless tablet PC. 3.3.5 Software to have user friendly icon based graphical user interface (GUI). 3.3.6 Software to have internal target database with target editor. 3.3.7 Software to have internal weapons database. 3.3.8 Software should include the following training modules or programs. 3.3.8.1 Outdoor, known-distance range upto 300 meters. 3.3.8.2 Indoor, Lane-based qualification with editor. 3.3.8.3 Running/moving targets with lead indicator. 3.3.8.4 HD judgmental video scenario with editor. 3.3.8.5 Assortment of marksmanship training drills. 3.3.8.6 Dueling and hostage training drills. 3.3.9 Software to have a closed quarter battle (CQB) training program. 3.3.10 Software should allow the operator to perform the following actions for all courseware. 3.3.10.1 Select/modify the lane/user configuration type. 3.3.10.2 Select/modify all shooters from the user database. 3.3.10.3 Select/modify all courseware specific options. 3.3.10.4 Assign registered training weapons to any shooter. 3.3.10.5 Perform weapon zeroing function for any shooter. 3.3.11 Software to allow display of shots and target shot placement. 3.3.12 Software to allow display of shooter screen on operator display, in real-time.

Ser No	Aspect	Details of Specification
		3.4 **Operator/User Database**. 3.4.1 Software should be able to store upto 10,000 firing records. 3.4.2 Database to allow customized creation of firer's records. 3.4.3 Database to allow customized printing of AAR and any training record. 3.4.4 Database to allow exporting of student record to USB drive. 3.5 **Target Database**. 3.5.1 Software should allow importing of target image in all common formats. 3.5.2 Software to allow setting and modification of the following information: 3.5.2.1 Real-world target width. 3.5.2.2 Real-world target height. 3.5.2.3 Target shoot/No shoot. 3.5.2.4 Target name /Type. 3.5.3 Software to allow adding or editing of scoring zones. 3.6 **After-Action Review (AAR)**. 3.6.1 Software to have full after-action review. 3.6.2 Software to allow review playback of every shot taken for all courseware. 3.6.3 After-action review provides the following functionality for all courseware. 3.6.3.1 Previous /Next shot. 3.6.3.2 Show all shots. 3.6.3.3 Time of shot. 3.6.3.4 Shot split time. 3.6.3.5 Shot grouping, (specific courseware). 3.6.3.6 Shot score (where applicable). 3.7 **Lane-based Qualification Range**. 3.7.1 Software to allow creation of courses with built-in editor.

Ser No	Aspect	Details of Specification
		3.7.2 Software to have realistic shooting range visuals. 3.7.3 Software to have selectable range backgrounds. 3.7.4 Software to have adjustable lighting within editor or real-time. 3.7.5 Software to have a “manual mode” allowing target control in real time. 3.7.6 Software to allow the display of shot groupings with group size in AAR. 3.8 **Outdoor Known-Distance Range.** 3.8.1 Software to allow creation of courses with built in editor. 3.8.2 Software to allow target distance up to 300 m. 3.8.3 Software to provide hyper realistic weather effects including: 3.8.3.1 Multiple snow levels (off, light, Moderate, Heavy). 3.8.3.2 Multiple rain levels (off, light, moderate, heavy). 3.8.3.3 Fog (off, light, moderate, heavy) 3.8.4 Software to provide adjustable wind speed and direction. 3.8.5 Software to provide adjustable season and time of day. 3.8.6 Software to have integrated ballistics based on weapon assignment. 3.9 **Moving Target Trainer.** 3.9.1 Software to allow the selection of various human targets. 3.9.2 Software to allow training with paper targets included in database. 3.9.3 Software to have selectable target running/ moving direction and angle. 3.9.4 Software to have selectable target running/ moving speed. 3.9.5 Software to have selectable target distances. 3.9.6 Software to allow for the display of visual target lead indicator. 3.9.7 Software to have integrated Ballistics based on weapon assignment.

Ser No	Aspect	Details of Specification
		3.10 **Wireless Overhead Target (3)**. The wireless target carrier, designed to operate reliably in a shooting range environment. It is powered via lithium battery, which charges automatically while docking at home position. The system should have the following characteristics:- 3.10.1 Target carrier to be controlled by a local control screen and the master control screen in control room. 3.10.2 Target carrier to have positioning accuracy of 1 inch or more and shall travel up to 6 feet per second. 3.10.3 The software to have basic qualification firing courses and advanced reactive and decision-making shooting exercises. 3.10.4 Projectile deflector plate/mechanism inside the target carrier to prevent damage to the internal components. 3.10.5 Target carrier to have integrated lighting module to illuminate the target in the target clamp. Lighting routine to be programmable via the software for various training exercises. 3.10.6 The lighting assembly to be controllable from the master control screen or the local control screen. 3.10.7 The lighting module to provide preset levels of white target illumination and multiple strobe/flashing patterns. 3.10.8 The target track should be modular, designed to direct all rounds towards bullet trap and lend itself to easy assembly and maintenance. 3.10.9 In addition the following features are required: - 3.10.9.1 Target rotation of 360-degree for advanced reflex firing. 3.10.9.2 The retriever system should connect to central control range control system. 3.10.9.3 Central control software to include a lane management tool. 3.10.9.4 Central Control software to provide a retriever control for controlling one or multiple lanes. 3.10.9.5 Central Control should allow cease fire to be called on any one firing lane / bay. 3.10.9.6 Central Control should be accessible through a LCD/LED display in the control room and a handheld tablet from anywhere on the range (Apple/Android).

Ser No	Aspect	Details of Specification
		3.10.9.7 Central Control should offer full functionality of all retrievers, including lighting, face /edge, timer, program execution, time drills (setup and execution), distance selection, and target presentation behaviour. 3.10.9.8 Carrier should be self-propelled and automatically return home when batteries are low or when left idle. It should auto charge in home position. 3.10.9.9 System has a local control screen. 3.10.9.10 Screen may be dimmed for low-light training scenarios. 3.10.9.11 Pre-programmed advanced training scenarios shall be available.
4.	**Firing Bays/ Stalls**	4.1 The inter firer partition panels will be rugged, see through panels made of bullet-proof glass with provisions for the following:- 4.1.1 Pull up/pull down /side hinged/fixed suitable supports for lying, unsupported and lying supported fire and facilitating left shoulder or right shoulder fire. 4.1.2 Provide for firing from standing, kneeling, lying and CQB mode. 4.1.3 Individual firer display monitors provided for hit and score indication with zoom in facility. 4.1.4 Suitable assembly/fitment for communication system for each lane as voice interface between the firer and the instructor. This would include the stall panel mounted microphone.
5.	**Bullet Trap System at Target End**	5.1 The bullet trap system shall be a self-supporting, self-contained bullet backstop and containment unit of steel plate construction for heavy use. 5.2 The trap plate layout shall employ a vertical funnel design with impact plates constructed minimum AR500 steel. 5.3 The bullet trap and containment system shall be fully modular such that it may be assembled on-site or disassembled for maintenance and routine inspections. 5.4 No impact plate or lead collection chamber may be constructed of permeable or flammable materials such as rubber, wood, plastics, etc. 5.5 Vertical joints that connect modular components shall not be located at or near the front edge of the trap. 5.6 Joints shall have no exposed bolt heads. 5.7 The material of the deceleration chamber impact places shall be AR500 steel. 5.8 The chamber shall be sealed with high-grade, or high flexibility gasket in order to maintain negative pressure.

Ser No	Aspect	Details of Specification
		5.9 Chambers may easily be disassembled for periodic inspection and/or replacement of individual components to maintain range integrity during shelf life. 5.10 Deceleration chamber shall surface should decelerate and break down the bullet. It should not be smooth finish and permit bullet to circulate endlessly
6.	**Ballistic Covering for Side Walls, Flooring, target systems etc.**	6.1 The complete floor, sidewalls ceiling and baffles and near the bullet trap will be provided with non-ricochet solution/tiles/ arrangement. The solution may be in terms of tiles or baffles. 6.2 All appropriate places such as the interior walls, side flanking walls, firing point, target systems protection wall, ceilings, must be covered with specialized anti ricochet covering. 6.3 The wall system is finished with a front covering of minimum 30mm thick ballistic rubber panel. The flooring will be covered with minimum 20mm thick ballistic rubber panel. 6.4 Each panel must have acoustic abatement ribs on the exposed surface, and encapsulates up to 2500 rounds per panel of 5.56mm ammunition.
7.	**Ceiling Baffles**	7.1 Baffles shall be put in place to protect structural and mechanical equipment from being impacted from errant rounds and contain rounds inside the shooting range. Errant rounds that strike baffle surfaces shall either be directed downrange or encapsulated and stay within the baffle itself. The baffles should also have sound attenuating treatment on the top most surface facing the range. 7.2 Sheltered area shall extend from sidewall-to-sidewall with no gap. 7.3 Baffles pre-fabricated in units that can be bolted together on all sides. The baffles shall be built with overlapping seams to prevent round or fragments from escaping. Panels furnished complete with all suspension hardware to form dimensionally stable ballistic panels.
8.	**Acoustic**	8.1 Noise abetment will be carried out by providing acoustic panels on baffles, side walls and ceiling systems. The finish should be smooth, joint free and withstand frequent clearing and wet scrubbing with agents to remove and neutralize lead-dust and unburnt propellent. 8.2 Acoustic treatment panels should have a minimum 0.75 Noise Reduction Coefficient (NRC) rating to reduce noise in range. Applied to surfaces in the range, the channelled finish of acoustic panels disrupts and dissipates sound wave patterns, minimizing gunfire noise. Noise abatement will be carried out by providing acoustic panels on baffles, side-walls and ceiling systems. The finish should be smooth, joint free and withstand frequent cleaning and wet scrubbing with agents to remove and neutralize lead-dust and unburnt propellant. The peak impulse sound should not be greater than 140 Decibels (dB). Further, on an eight-hour time weighted average noise level in the range should not be greater than 85db.

Ser No	Aspect	Details of Specification
9.	**Range Ventilation System for Lead Filtration** (Compliant with NIOSH, 2009 guidelines).	9.1 Clear airflow, continuous inflow from behind the firer, out flow from firer towards the target and thereafter exit from target end will be planned. 9.1.1 **Lead**. The Lead-in-Air Assessment should be less than the Permissible Exposure Limit i.e. 50 microgram (Mg) of Lead per meter cube of air (50 Mg/M3) based on an eight-hour Time Weighted Average (TWA)- in accordance with NIOSH (US National Institute of Occupational Health and Safety, April 2009) Guidelines. 9.1.2 **Air Flow**. The system should provide 100% outside air. The air flow of the range will be based on a laminar pattern with exhausted air to exceed inlet air by at least a factor of 10% (as per US NIOSH, 1975). The air flow at the firing line should be at least 50 feet per minute (0.254 meters per second) and air flow down range should be maintained at a minimum of 30 feet per minute. (as per US NIOSH, April 2009) over the cross-sectional area at the firing line. The exhaust discharge must be separate from the supply air intake. Filtration of the exhaust air will be done by High Efficiency Particulate Filters (HEPA). A suitable mechanism or meter will be provided to indicate when filter change is required. 9.1.3 Specific requirements for Range Ventilation System will be as under:- 9.1.3.1 Supply air: Recirculates 75 percent of total range supply air with 25 percent outside air. 9.1.3.2 Supply air distribution utilizes radial diffuser plenum. 9.1.3.3 Serves range and bullet containment trap areas within the range envelope. 9.1.3.4 Provide laminar air flow across the shooter's breathing zone. 9.1.3.5 Distribution System: Per NIOSH requirements. 9.1.3.6 Exhaust Air: Flow shall be 10 percent higher than supply air flow. 9.1.3.7 Distributed across width of range located above bullet trap area. 9.1.3.8 Includes two-stage filter bank, minimum, meeting recommendations of NIOSH 76-130 and EPA 40 CFR 50.12. 9.1.3.9 Filters: 99.97 percent high-efficiency particulate arrestor (HEPA) filters. 9.1.3.10 Cooling: Air Cooling/Fresh air supply. 9.1.3.11 The control room, weapon room, instructors room, and instructors room shall have air conditioning at 25°C (± 3) with split air conditioners. The outdoor units may be placed on ground on paved area for easy inspection and maintenance. The AC units will be minimum 3 star energy efficient rating.

Ser No	Aspect	Details of Specification
10.	**Smart Range Lighting System**	10.1 Uniform light levels over the entire range area and adjoining areas installed in a symmetrical arrangement (Minimum 400 LUX). 10.2 Shooters lighting in each firing booth (Minimum 400 LUX). 10.3 Night Firing Simulation System with dimmable software based light control (Tablet controlled lighting – windows/android based). 10.4 General Service and Maintenance Lighting. 10.5 Provide for safe loading and handling of weapons under all circumstances. 10.6 Dedicated Target Spot Lights (Minimum 1000 LUX). 10.7 All lights and electrical accessories to be of reputed company.
11.	**Range Communication System**	11.1 The system should feature a central control room console with a dedicated indicator for each firing booth/firer. It should have minimum 2 extensions. 11.2 System should clearly given an audio-visual indicator to range operator in case of an incoming call from a firing booth. 11.3 Operator should be able to answer the call by picking up the handset or via the speakerphone. 11.4 Each substation should be surface mounted in each firing booth. It should permit easy one touch hand free communication with the control room. 11.5 System should have the provision for tracing call history via the central computer with data on number of calls from each firing booth and response time for each call from the control room.
12.	**Training Weapons** **(Non-Lethal)**	12.1 **AK 47 Training Replica Weapon (03 Nos)** 12.1.1 The weapon system shall also feature an off-centre firing pin to allow for the requirements of making sure a live round is not accidently fired. 12.1.2 The training weapon must be homologated to prove the safety of design. 12.2 7.62mm x 39mm Cartridge Specification to be used with Training AK47 Weapon (3000 Nos). 12.2.1 The Marking Cartridge shall be a 7.62mm x 39mm non-lethal round to be fired from a AK-47 style weapon, converted for use with Marking Cartridges. The Marking Cartridge shall be comprised of a multiple piece cartridge case that expands to cycle the weapon.

Ser No	Aspect	Details of Specification
		12.2.2 The cartridge case may be made of aluminium, steel and/or plastic. It shall be made up of a 2 or dual primer/power load system. 12.3 **<u>9 mm Browning Pistol Conversion Kit (3 Nos)</u>**. Conversion system to be used with Glock or Browning 9mm pistol consisting of a kit to convert a service weapon into a non-lethal weapon which can fire training cartridge. 12.4 9 mm Cartridge to be used with 9 mm Browning Pistol with Conversion kit (Total 3000 Nos). The Marking Cartridge shall be a 9mm non-lethal round to be fired from an operational Weapon with the respective Weapon Conversion Kit installed. The cartridge case may be made of aluminium, steel and/or plastic or combination thereof. The Marking Cartridge shall be made up of a 2 or dual primer/power load system
13.	**Warranty**	2 years.
14.	**Miscellaneous**	14.1 The software being supplied should be latest 'Windows' based. 14.2 The IT hardware including peripherals and monitors should be from a reputed company readily available in India like HP, HCL, Lenovo, LG etc. 14.3 All monitors should be 'TFT'. The monitors should be upto 40 inches. 14.4 Suitable computer chairs (06) for the control room.

Appendix C
(Refers to Para 5.13 of RFP)

LAB TEST REPORTS REQUIRED

Ser No	Name System/ Sub-System	Certificates/ Standards
1.	**Range Design & Construction**	1.1 Certificate from Accredited NABL approved national/international lab for AR 500 Steel. 1.2 Test report from NABL accredited lab for Salt spray test as per Mil Std 810G.
2.	**Firing Booth Ballistic Glass**	2.1 Certificate from the accredited lab regarding material and bullet proof nature of panel that the ballistic glass conforms to NIJ level III or any equivalent standards will be provided by OEM and should not be older than 03 years from date of publishing of tender. 2.2 Steel Frame is S275 compliant for EN 10025-2004 (E) S275JR or IS:1608 (Part I), 2018, IS:1599, IS:8811:1988.
3.	**Bullet Trap**	3.1 Certificate from accredited lab that bullet trap has been tested to stop/absorb bullets of muzzle velocity up to 1000m/sec. 3.2 Certificate from accredited lab regarding compliance with SP6 paint specification. 3.3 Certificate of AR 500/AR 550 Steel BHN should be 470-530 as per IS 1500 (P1)-2019 or EN ISO 6506.
4.	**Side Walls, Ceiling Baffles and Floor**	4.1 Certificates from accredited lab with respect to side walls that the tiles used should be of tensile strength 01N/mm2 as per ASTM D412-2016 or DIN 53571 or EN ISO 1798 2008-4. 4.2 Certificates from accredited lab with respect that the wall tiles must conform to at least Flame Spread Rating as per ASTM E84 (Class 1) or DIN 4102 (Class B2) or BS 476 (Class 3 : Part 7, 1997). 4.3 The BHN of the Baffle steel plate 10 mm, where used, should be 470-530 tested as per IS 1500 (P1)-2019 or EN ISO 6506-1 2014 and a certificate from credited Lab be provided. 4.4 The BHN of the 6 mm steel, where used, should be 470-530 tested as per IS 1500 (P1)-2019 or EN ISO 6506-1 2014 and a certificate from credited Lab be provided. 4.5 Ballistic Evaluation report of Side Wall Anti ricochet composite panel with 6 mm steel plate from Govt of India Lab be provided. 4.6 Ballistic Evaluation Report of Floor Panel from Govt of India Lab be provided. 4.7 Ballistic Evaluation Report of Ceiling Baffle panel with 10 mm steel plate from Govt of India Lab be provided.

Ser No	Name System/ Sub-System	Certificates/ Standards
5.	**Acoustic Treatment**	5.1 Certificate from the accredited national/international NABL approved lab will be provided for the following tests: - 5.1.1 Noise Reduction Coefficient (NRC) should be at least 0.75 checked in accordance with ASTM C423-09. Certification from an accredited national/international lab regarding compliance with NRC. 5.1.2 Flame Spread Rating as per ASTME 84 (Class 1) or DIN 4102 (Class B2) or BS 476 (Class 3 : Part 7, 1997) – Certification from an accredited national/international lab. 5.1.3 Smoke Spread level as per ASTME 84 (Class 1) or DIN 4102 (Class B2) or BS 476 (Class 3: Part 7, 1997) – Certification from NABL accredited national/international lab. 5.1.4 Should satisfy UL-1715 standard – Certificate must be provided from accredited national/international lab for UL-1715 Fire Test of Acoustic Panel-an evaluation of the flame spread and smoke emission properties of acoustic panels under large-scale room fire conditions. 5.1.5 Certificate from national/international NABL accredited lab for tests of acoustic panel which are Resistant to :- 5.1.5.1 Microbial Growth. Should pass UL 181 Section 11 (resistance to synthetic polymers to fungi) – Certification from an accredited national/international lab. 5.1.5.2 Fungal growth. (Rating No 0) as per ASTM G21 – Certification from an accredited national / international lab regarding compliance of the product to the rating specified under ASTM G21 will be checked. 5.2 OEM Certificate for sound level reduction to <85 dB be provided.
6.	**Ventilation System**	6.1 Certificate from accredited lab regarding the offered ventilation system model being tested to meet Compliance with NIOSH (2009) or OSHA guidelines at an existing functional shooting range. 6.2 Lead in air assessment should be less than the permissible limit ie <50 microgram (Mg) per meter cube based on an eight-hour time weighted average in accordance with NIOSH guidelines. Certificate from accredited lab will be obtained by the OEM/ Firm. 6.3 Air flow as per NIOSH 1975 – Apr 2009. The system should provide 100% outside air. The air flow of the range will be based on a laminar pattern with exhausted air to exceed inlet air by at least a factor of 10% (as per US NIOSH, 1975).

Appendix D
(Refers to Para 5.13 of RFP)

COMPLIANCE MATRIX

Ser No	RFP Para/ Sub-para	Compliance/ Non Compliance/ Partial Compliance	Remarks
General Compliance to All Terms & Conditions of RFP (Para 1 to 6 including all sub-paragraphs) *(Bidder to submit acceptance/compliance to each Para/Sub-Para of RFP)* *(Write NA where compliance is not implied)*			
Compliance to Eligibility/Pre-qualification Criteria as per Appendix A *(Bidder to submit acceptance/compliance to each Sub Para from 1.1 to 1.11 and furnish Certificates/Undertakings as applicable)*			
Compliance to Technical Specifications as per Appendix B *(Bidder to submit compliance to each aspect individually from Para 1 to 14 (each Sub Para separately) and indicate Technical Specification of his equipment in the Remarks column)*			
Confirmation of Lab Test Reports as per Appendix C *(Bidder to submit confirmation on each test alongwith a copy of the report. Confirmation to be stated in the Compliance column)*			

****

Appendix E

(Refers to Para 6.8 of RFP)

WARRANTY CLAUSE

(In addition to conditions state at Para 6.8, the undermentioned will apply)

1. The Supplier warrants that the goods/services supplied under this contract conform to technical specifications prescribed and shall perform according to the said Technical Specifications.

2. The Supplier warrants an onsite warranty for a period of Twenty Four (24) Months for Procurement of quantity two (02) Containerised Shooting Range (CSR) with Accessories from the date of installation and commissioning, that the goods/stores/services supplied under this contract and each component used in the manufacture thereof should be free from all types of defects/failures.

3. If within the period of warranty, the goods/stores are reported by the Buyer to have failed to perform as per the specifications, the Supplier shall either replace or rectify the same free of charge, maximum within 60 days of notification of such defect by the Buyer provided that the goods are used and maintained by the Buyer as per instructions contained in the Operating Manual. Warranty repair will be carried out in-situ. Warranty of the equipment would be extended by such duration of downtime if not repaired within the stipulated time of 60 days. Record of the down time would be maintained by User in log book. Spares and all consumables required for warranty repairs shall be provided free of cost by Supplier.

4. The Supplier also undertakes to repair/replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the Buyer and the Supplier. The Supplier shall intimate the assignable cause of the failures.

5. Supplier hereby warrants that necessary cost towards service and repair backup including consumables, spares, labour and oils/lubricants/ greases required for the periodic/ scheduled/ un- scheduled maintenance of the equipment during the warranty period, including routine maintenance beyond Unit Level, shall be borne by the Supplier.

6. The terms and conditions of warranty and OEM/ Seller Contact Details including phone number and email should be mentioned in the User Hand Book (UHB). The date from which warranty is applicable (duly endorsed by representative of both Buyer & Seller) should be mentioned in respective log book and User Hand Book of the main equipment and accessories

****

Appendix F

(Refers to Para 6.9 of RFP)

ANNUAL MAINTENANCE CONTRACT

(In addition to conditions state at Para 6.9, the undermentioned will apply)

1. **Maintenance Philosophy**. Post Warranty period of Twenty-Four Months the equipment will be maintained by the Seller for the period of Three (03) Years through AMC and would commence on completion of warranty period.

2. **Annual Maintenance Contracts (AMC)**. The scope of AMC, in addition to services of the Specialists as mentioned for AMC, include provisioning of spares, tools and equipment as required for Maintenance and Repair of the equipment. In this arrangement, the OEM will ensure that the down time of the equipment does not exceed the minimum period stipulated in the AMC. AMC will include all corrective and preventive maintenance of the systems, equipment and machinery in satisfactory working order and Planned Preventive Maintenance" (PPM), repairs, servicing, calibration, replacement of defective parts, sub- assemblies, equipment, preservation /de-preservation as applicable. AMC will ensure performance of the equipment in the range and accuracies as set in equipment Technical Manual. An equipment repair Logbook will be maintained to keep a record of the equipment down time during defect rectification. The scope of work would also involve the following: -

2.1 **Preventive Maintenance.** The equipment will be maintained as per the OEM specified maintenance schedules and equipment manuals.

2.2 **Breakdown Maintenance.** In case of a break down/ fault in any component of the range, the vendor may convey the process of rectification through a call/ VC. Minor rectification procedure will be covered during the training. In case of major break down or the complete failure of the system it will be intimated to the Bidder by telephone/ mail. The Bidder will depute a team for undertaking required repairs of the equipment within thirty working days from the reporting of the defect, to make the equipment operational.

2.3 **Spares.** Required spares for functioning of the range will be provided along with the system as per OEM supplied MRLS.

2.4 **Software.** The Bidder will provide support for maintenance of the software(s) during the period of AMC and would include the following: -

2.4.1 Upgrades, patches, fixes to the OS and the Application software.

2.4.2 Back-up and restoration of software, as and when required.

2.4.3 No malware certificate.

2.4.4 Version of the software and IV & V (Independent verification and validation) certificate as per the applicable CMM Level, depending on the criticality of the equipment.

2.4.5 Method of checking the health of the software and debugging methods.

Appendix G

(Refers to Para 6.10 of RFP)

TECHNICAL LITERATURE

Ser No	Technical Literature	Unit Cost	Scale For Equipment User	Remarks
1.	User Handbook/operators Manual		02	
2.	Design Specifications		01	
3.	3.1 Technical Manual. 3.1.1 **Part I**. Tech description, specifications, functioning of various Systems. 3.1.2 **Part II**. Inspection/ Maintenance tasks, Repair procedures, materials used, fault diagnosis and use of Special Maintenance Tools (SMTs)/Special Test Equipment (STEs). 3.1.3 **Part III**. Procedure assembly/ disassembly, repair up to component level, safety precautions. 3.1.4 **Part IV**. 3.1.4.1 Part list with drawing reference. 3.1.4.2 List of SMTs/STEs with Test Bench.		01	
4.	Manufacturer's Recommended List of Spares (MRLS)		01	
5.	Illustrated Spare Part list (ISPL)		-	
6.	Technical Manual on STE with drawing reference.		-	
7.	Soft Copy of above Tech literature		01	
8.	Any other (specify)		-	

Total Cost:

Note: *(i) In case any additional equipment is used their tech literature will be included.*

(ii) If certain technical literature is being provided free of cost it should be indicated in the remarks column.

Appendix H

(Refers to Para 6.14 of RFP)

CERTIFICATE: MALICIOUS CODE

(To be rendered on the Company Letter head)

1. This is to certify that the Hardware and the Software being offered, as part of the Contract, does not contain embedded malicious code that would activate procedures to:-

1.1 Inhibit the desired and designed function of the equipment.

1.2 Cause physical damage to the user or equipment during the exploitation.

1.3 Tap information resident or transient in the equipment/ networks.

2. The firm will be considered to be in breach of the procurement contract, in case physical damage, loss of information or infringements related to copyright and Intellectual Property Rights (IPRs) are caused due to activation of any such malicious code in embedded software.

(Signed)

Designation/Name/Address of firm

Date:

Place