

Tender for Procurement, Implementation and Five-Year AMC of an
AI-enabled/Intelligent Digital Tool Tracking System
(Supporting RFID/QR/Barcode Identification)
for AIESL Tool Stores across Six Centres

(Through Government e-Marketplace - GeM)

Issued by:
AI Engineering Services Limited (AIESL), HQrs.
New Delhi - 110003

CAUTION

While due care has been taken to ensure that the contents of this Tender are accurate and up to date as on the date of issue, bidders are advised to independently verify the provisions of applicable laws, rules, regulations, Government guidelines, and instructions, including those relating to procurement through the Government e-Marketplace (GeM).

In the event of any conflict between the provisions of this Tender and the provisions of applicable laws, rules, regulations, including the General Financial Rules (GFR), Government of India procurement policies, or GeM guidelines in force, the provisions of such applicable laws, rules, regulations, and Government instructions shall prevail.

DISCLAIMER

This Tender Document has been prepared in good faith and is intended solely to provide prospective bidders with information to assist them in preparing their bids. AI Engineering Services Limited (AIESL) makes no representation or warranty, express or implied, as to the accuracy, completeness, or adequacy of the information contained herein.

This Tender is not an offer, agreement, or commitment on the part of AIESL, but only an invitation to submit bids. No contractual obligation shall arise unless and until a formal contract is executed in writing by duly authorised officers of AIESL and the successful bidder.

AIESL and its employees shall not be liable under any law, statute, regulation, tort, or otherwise for any loss, cost, or damage arising out of or in connection with the use of this Tender Document or reliance placed on any information contained herein.

Bidders are expected to examine all instructions, forms, terms, specifications, and other information contained in this Tender and to carry out their own due diligence regarding the scope, site conditions, and operational requirements before submission of their bids.

Any information or documents provided as part of this Tender or during the bidding process, disclosure of which may be prejudicial to the interests of AIESL or may affect the tender process, shall be treated as confidential and shall not be disclosed by bidders except where disclosure is required under applicable law.

The terms and conditions governing the bidding process and the proposed contractual relationship shall be as set out in this Tender Document and the contract executed in accordance therewith.

NOTICE INVITING TENDER (NIT)

AI Engineering Services Limited (hereinafter referred to as "AIESL"), a company incorporated under the Companies Act, 1956 and having its registered office at 2nd Floor, CRA Building, Safdarjung Airport Complex, New Delhi - 110003, India, invites online bids from eligible bidders meeting the technical and eligibility requirements specified in this Tender.

Bids are invited under a Single Stage - Two Bid System comprising:

Part I: Technical Bid

Part II: Price Bid

for Procurement, Implementation, and Five-Year Annual Maintenance Contract (AMC) of an AI-enabled/Intelligent Digital Tool Tracking System (supporting RFID/QR Code/Barcode identification technologies) for AIESL Tool Stores across six designated AIESL locations.

The technical specifications contained in this Tender have been framed based on operational requirements and general industry capabilities and do not refer to any specific vendor, brand, OEM, or proprietary solution.

This Tender is being issued through the Government e-Marketplace (GeM) under the Custom Bid category, as the required solution is not available as a standard catalogue item on the GeM platform.

Interested bidders are requested to carefully review the complete Tender Document, including eligibility criteria, technical specifications, and contractual conditions, before submitting their bids.

PURPOSE OF THE TENDER

AIESL, a Public Sector Undertaking and a DGCA-approved Maintenance, Repair and Overhaul (MRO) organisation, provides comprehensive aircraft engineering and maintenance services across multiple locations in India, including Delhi, Mumbai, Hyderabad, Thiruvananthapuram, Kolkata, and Nagpur.

AIESL manages a large inventory of aircraft maintenance tools distributed across multiple tool stores at its operational centres. Effective tool control, traceability, calibration management, and audit readiness are critical to ensuring airworthiness, operational efficiency, and regulatory compliance. The aircraft maintenance tools managed by AIESL include tools of varying sizes, materials, and configurations, including metallic tools, tool kits, and specialised maintenance equipment.

Bidders are required to design and implement a suitable identification methodology using RFID and/or alternative identification technologies such as QR Code or barcode, wherever necessary, to ensure reliable identification and traceability of tools within the operational environment of AIESL tool stores.

No additional cost shall be admissible on account of challenges relating to tool material, geometry, or environmental conditions affecting tagging feasibility.

The purpose of this Tender is to procure, install, commission, and maintain an AI-enabled/Intelligent Digital Tool Tracking System (supporting RFID/QR Code/Barcode identification technologies) together with a comprehensive five-year Annual Maintenance Contract (AMC) for AIESL Tool Stores across six designated centres.

The proposed system is intended to enable end-to-end lifecycle management of aircraft maintenance tools, provide real-time visibility of tool movement and status, enhance operational accountability, and ensure digital traceability in support of internal control, quality assurance, and audit verification.

This procurement is aligned with DGCA requirements relating to tool control, traceability, and airworthiness oversight, and is consistent with the guidance provided under DGCA Airworthiness Advisory Circular (AAC) No. 03 of 2025, encouraging adoption of digital tool tracking systems for improved monitoring of tool usage, calibration status, and maintenance history.

The selected bidder shall be responsible for end-to-end implementation and support of the Tool Tracking System, including but not limited to:

- (i) Supply and deployment of the software platform
- (ii) Supply, installation, and commissioning of RFID hardware and identification tags
- (iii) RFID tagging, encoding, and mapping of tools and tool kits
- (iv) Configuration of workflows for tool issuance, return, calibration, repair, transfer, and scrap
- (v) Training of AIESL personnel for system operation and administration
- (vi) Post-implementation support and maintenance during the AMC period

Note:

The selected bidder shall be solely responsible for providing the complete Tool Tracking System and associated services in accordance with the Scope of Work, technical specifications, and other terms and conditions of this Tender.

TERMINOLOGY

For this Tender Document, the following terms shall be used contextually:

<u>Bidder:</u>	An entity participating in the tendering and evaluation process.
<u>Selected Bidder:</u>	A bidder declared successful after completion of the evaluation process and issuance of the Letter of Award (LoA), but before execution of the formal Contract.
<u>Successful Bidder/Service Provider:</u>	The Selected Bidder after execution of the formal Contract and commencement of contractual obligations.

SUMMARY OF BIDDING INFORMATION

TENDER SCHEDULE

Date of Release	:
Last Date for Submission of Bids	:
Opening of Technical Bids	:
Opening of Price Bids	: To be notified on the GeM portal after completion of Technical Evaluation
Contact for Clarification	: Mr. Ketan Singh

The critical dates and timelines for this Tender, including the date of release, the last date for bid submission, and the dates of opening of Technical and Price Bids, shall be as notified on the Government e-Marketplace (GeM) portal.

In case of any discrepancy between the dates mentioned in this Tender Document and those displayed on the GeM portal, the dates notified on the GeM portal shall prevail.

BID DATA SHEET (BDS)

Bid Validity	: 120 days from the date of opening of the Technical Bid
Bid Security (EMD)	: ₹2,00,000 (Rupees Two Lakh only)
	MSEs registered under Udyam and DPIIT-recognised Startups are exempted from submission of EMD, subject to submission of valid documentary proof, in accordance with applicable Government of India guidelines.
Performance Security	: 5% (Five per cent) of the total Contract Value, to be submitted by the successful bidder in accordance with the provisions of this Tender.
Submission Mode	: Online submission through the GeM portal.

SECTION A: INSTRUCTIONS TO BIDDERS

A1: DEFINITIONS AND ABBREVIATIONS

A1.1: Definitions

The following words and expressions, when used in this Tender Document, shall have the meanings assigned to them below, unless the context otherwise requires:

- 1) "AIESL" means AI Engineering Services Limited, a company incorporated under the Companies Act, 1956.
- 2) "Bidder" means any entity that submits a bid for this Tender through the GeM portal through its duly authorised signatory.
- 3) "Selected Bidder" means the bidder declared successful after completion of the bid evaluation process and issuance of the Letter of Award (LoA), but prior to execution of the formal Contract.
- 4) "Successful Bidder" means the Selected Bidder with whom AIESL executes the Contract.
- 5) "Service Provider" means the Successful Bidder after execution of the Contract and commencement of contractual obligations.
- 6) "Contract" means the written agreement executed between AIESL and the Successful Bidder, together with all documents forming part thereof, including the Tender Document and the Letter of Award/Letter of Acceptance, as applicable.
- 7) "Contract Value" means the total value of the Contract as accepted by AIESL, excluding applicable taxes and duties, unless otherwise specified.
- 8) "Contract Period" means the total duration of the Contract comprising the Implementation Phase, the Warranty Period, and the Annual Maintenance Contract (AMC) Period, including any extension granted by AIESL in accordance with the Contract.
- 9) "Services" means all activities, obligations, and deliverables to be performed by the Service Provider under this Tender and the Contract, including supply, installation, commissioning, operation, support, and maintenance, as applicable.
- 10) "Days" means calendar days, unless expressly stated otherwise.
- 11) "L-1" means the technically qualified bidder quoting the lowest evaluated price.
- 12) "L-2" means the technically qualified bidder quoting the second lowest evaluated price.
- 13) "User Department" means the department(s) of AIESL responsible for operational coordination, monitoring, and acceptance of services and deliverables under the Contract.

- 14) "Authorised Officer" means an officer of AIESL nominated in writing by the Competent Authority for verification, certification, monitoring, and acceptance of deliverables, milestones, pilot completion, Go-Live, SLA compliance, and other contractual obligations under this Tender and the Contract.
- 15) "Scope of Work" means the detailed description of services, activities, deliverables, timelines, and obligations of the Service Provider as specified in Section B of this Tender Document and any amendments thereto.
- 16) "Implementation Phase" means the period commencing from the date of issuance of the Letter of Award and ending upon successful completion of rollout, Full Go-Live, and final written acceptance of the system by AIESL.
- 17) "Pilot Go-Live" means the stage at which the Tool Tracking System becomes operational at the Pilot Location, i.e. AIESL Nagpur, after completion of installation, tagging, configuration, and successful User Acceptance Testing.
- 18) "Full Go-Live" means the stage at which the system becomes operational across all designated AIESL locations after completion of rollout and written acceptance by AIESL.
- 19) "Pilot" or "Pilot Implementation" means the initial limited deployment of the system at AIESL Nagpur for validation, testing, and stabilisation prior to full-scale rollout.
- 20) "Service Level Agreement (SLA)" means the performance standards, uptime requirements, response timelines, resolution timelines, and penalties as defined in this Tender and the Contract.
- 21) "Uptime" means the percentage of time during which the system is fully operational and available for use, measured in accordance with the methodology specified in the SLA provisions of this Tender.
- 22) "System" means the complete AI-enabled/Intelligent Digital Tool Tracking System comprising software, hardware, RFID tags, readers, databases, interfaces, and associated infrastructure and services supplied under the Contract.
- 23) "Data" means all master data, transactional data, audit logs, calibration records, reports, documents, and any other information generated, collected, processed, or stored under the Contract, including backups and archival records.
- 24) "Annual Maintenance Contract (AMC)" means the post-warranty support and maintenance services for a period of five (05) years, commencing from the date immediately following expiry of the warranty period and continuing thereafter in accordance with the terms of the Contract.
- 25) "Liquidated Damages (LD)" means the damages payable by the Service Provider for delay or non-performance, as specified in this Tender and the Contract.
- 26) "Force Majeure" means events beyond the reasonable control of the parties, as defined in the General Conditions of Contract forming part of this Tender.

- 27) "Competent Authority" means the authority of AIESL authorised to approve decisions under this Tender and the Contract in accordance with the applicable Delegation of Powers.
- 28) "Letter of Award (LoA)" means the formal communication issued by AIESL to the Selected Bidder conveying acceptance of the bid and intention to enter into the Contract.
- 29) "Warranty Period" means the period of twelve (12) months commencing from the date of successful Full Go-Live and final written acceptance of the system by AIESL, during which the Service Provider shall provide warranty support for hardware and related components supplied under the Contract.

A1.2: Abbreviations/Acronyms

SN	Abbreviation	Expanded Form
1	AIESL	AI Engineering Services Limited
2	AMC	Annual Maintenance Contract
3	API	Application Programming Interface
4	BDS	Bid Data Sheet
5	BG	Bank Guarantee
6	BSD	Bid Security Declaration
7	BoQ	Bill of Quantities
8	CAG	Comptroller and Auditor General of India
9	CBA	Cost-Benefit Analysis
10	CPSE	Central Public Sector Enterprise
11	DGCA	Directorate General of Civil Aviation
12	DPIIT	Department for Promotion of Industry and Internal Trade
13	EMD	Earnest Money Deposit
14	ERP	Enterprise Resource Planning
15	ETSI	European Telecommunications Standards Institute
16	FOD	Foreign Object Damage
17	FRS	Functional Requirement Specification
18	GFR	General Financial Rules
19	GST	Goods and Services Tax
20	HQ/HQrs	Headquarters
21	IPR	Intellectual Property Rights
22	LD	Liquidated Damages
23	LoA	Letter of Award
24	L-1/L-2	Lowest/Second Lowest Evaluated Bidder
25	MIS	Management Information System
26	MRO	Maintenance, Repair and Overhaul
27	MSE	Micro and Small Enterprise
28	NDA	Non-Disclosure Agreement
29	NIT	Notice Inviting Tender
30	OEM	Original Equipment Manufacturer
31	PAN	Permanent Account Number
32	PBG	Performance Bank Guarantee
33	PPMM	Production Planning and Materials Management
34	PSU	Public Sector Undertaking
35	QA	Quality Assurance
36	RFID	Radio Frequency Identification
37	SAP	Systems, Applications and Products
38	SLA	Service Level Agreement
39	SRS	System Requirement Specification
40	TEC	Total Evaluated Cost
41	UAT	User Acceptance Test
42	UHF	Ultra-High Frequency
43	Udyam	Udyam Registration
44	Uptime	System Availability Percentage

A2: SUBMISSION OF BIDS

A2.1: Submission of Bids

- (i) Bidders shall submit their bids online only through the GeM portal under the Single Stage - Two Bid System, comprising:
 - Part I: Technical Bid
 - Part II: Price Bid
- (ii) The Technical Bid shall contain all information and documents required to establish the bidder's eligibility, technical capability, and compliance with the Tender requirements. No price-related information shall be indicated in the Technical Bid. Submission of any price information in the Technical Bid shall render the bid liable for rejection.
- (iii) The Price Bid shall be submitted strictly in the prescribed format on the GeM portal and shall comprise the Bill of Quantities (BoQ) and price details in Indian Rupees (INR) only.
- (iv) Bids received through any mode other than the GeM portal, or after the Bid Due Date and Time, shall not be considered. If the Bid Due Date/Time or the date of opening of bids is declared a holiday, the same shall stand extended to the corresponding date and time of the next working day.
- (v) Bidders shall quote strictly in accordance with the terms and conditions of this Tender. Conditional bids, deviations, or qualifications to the Tender terms shall not be accepted and may render the bid liable for rejection.
- (vi) All prices shall remain firm and fixed for the entire Contract Period, unless otherwise expressly provided in this Tender. No advance or pre-delivery payment shall be admissible.
- (vii) The Price Bid shall be complete in all respects. No claim for inclusion of any additional cost element shall be entertained after opening of the Price Bid.
- (viii) Only the Price Bids of those bidders who are found technically qualified shall be opened. The date and time of opening of the Price Bids shall be intimated through the GeM portal.
- (ix) AIESL reserves the right to seek detailed justification from the L-1 bidder where the quoted price appears abnormally low or unworkable. If the justification furnished is not found satisfactory, AIESL reserves the right to reject such bid in accordance with applicable GeM Rules.
- (x) AIESL reserves the right to accept or reject any bid, in whole or in part, or to annul the tender process at any stage, in accordance with applicable Government procurement rules.
- (xi) Bidders shall bear all costs associated with the preparation and submission of their bids. AIESL shall not be liable for any such costs, regardless of the outcome of the tender process.

- (xii) Submission of a bid shall be deemed to constitute unconditional acceptance of all terms and conditions of this Tender Document.
- (xiii) The Technical Bid shall be submitted strictly in accordance with the formats prescribed in the Annexures to this Tender Document. The Annexures forming part of the Technical Bid include:
 - Annexure-T1: Technical Bid Format
 - Annexure-T2: Bill of Materials and Hardware Sizing Declaration
 - Annexure-T3: RFID Tag Technical Specification and Performance Declaration
- (xiv) These Annexures are provided at the end of this Tender Document and shall be duly completed, signed, and submitted as part of the Technical Bid.

A2.2: Price Bid Structure

- (i) Prices shall be inclusive of all costs required for the successful implementation of the project.
- (ii) The Price Bid shall be submitted on the GeM portal strictly in accordance with the prescribed BoQ structure.
- (iii) The BoQ shall include, at a minimum, the following components:

SN	Component	Description
1	Software Platform	Tool Tracking System software, including licensing
2	RFID Tags and Identification Labels	RFID tags, QR code labels, and barcode labels for tool identification
3	RFID Handheld Readers	Industrial handheld RFID readers for inventory and issuance
4	RFID Desktop/Kiosk Readers	Fixed RFID readers installed at tool issue counters
5	RFID Antennas, Cables, Mounting Accessories and Related Hardware	Antennas, accessories, cables, and related hardware
5A	RFID Encoding Stations	RFID tag encoding and commissioning stations
6	Implementation Services	Tool audit, tagging, data migration, system configuration
7	Training	User training and documentation
8	Integration Services	ERP/SAP integration
9	Five-Year AMC	Maintenance of hardware and software

- (iv) The quantities of RFID hardware and identification components required for successful system deployment shall be determined by the bidder based on the estimated tool population and site conditions and shall be deemed included in the quoted price.

- (v) For the purpose of price estimation and bid comparison, bidders shall consider the following minimum hardware quantities:

RFID Handheld Readers: 50 Units

RFID Desktop/Kiosk Readers: 25 Units

RFID Encoding Stations: 06 Units

- (vi) The above quantities shall be treated as the minimum baseline quantities for bid pricing and comparison. The Service Provider shall deploy any additional hardware required for complete system functionality and operational performance without any additional cost to AIESL.
- (vii) No additional payment shall be admissible for deployment of hardware beyond the above quantities where such deployment is required to achieve the performance specified in this Tender.
- (viii) For evaluation purposes, bidders shall consider the indicative tool population of 1,00,000 tools across all locations.
- (ix) Unit rates for tagging and system onboarding shall remain applicable for variation within $\pm 25\%$ quantity.
- (x) Bidders shall quote prices against each BoQ component.
- (xi) No additional payment shall be admissible for any component not explicitly included in the BoQ but required for successful completion of the scope.
- (xii) The Contract shall be evaluated based on the Total Evaluated Cost (TEC) derived from the Price Bid.
- (xiii) All prices shall be quoted in Indian Rupees (INR) only.

A2.3: Technical Compliance Statement

- (i) Bidders shall submit a duly completed Technical Compliance Matrix in the prescribed format.
- (ii) The matrix shall clearly indicate compliance with each requirement of the Scope of Work and Technical Specifications.
- (iii) Wherever required, bidders shall provide brief remarks or references to supporting documents.
- (iv) Failure to submit the Technical Compliance Matrix in the prescribed format may render the bid liable for rejection as incomplete.

A2.4: Opening of Bids

- (i) On the date and time notified through the GeM portal, only the Technical Bids shall be opened.

- (ii) The Price Bids of only those bidders who are found technically qualified after evaluation of the Technical Bids shall be opened.
- (iii) Intimation regarding the opening of the Price Bids shall be provided through the GeM portal to only the technically qualified bidders.

A2.5 Modification/Withdrawal of Bids

- (i) Bidders may modify or withdraw their bids online through the GeM portal at any time after submission but before the Bid Due Date and Time.
- (ii) The last bid submitted by the bidder before the Bid Due Date and Time shall be treated as the final bid.
- (iii) No bidder shall be permitted to modify or withdraw its bid after the Bid Due Date and Time and during the period of bid validity.
- (iv) In the event a bidder withdraws or modifies its bid after the Bid Due Date and Time, but during the bid validity period, action shall be taken in accordance with applicable Government of India rules and GeM guidelines, including forfeiture of EMD, where applicable, or debarment in case of Bid Security Declaration.

A3: BID SECURITY AND VALIDITY

A3.1: Earnest Money Deposit (EMD)

- (i) The Bidder shall submit EMD of ₹2,00,000 through Electronic Bank transfer to the AIESL Account Number and Bank Particulars, link given at AIESL website, www.aiesl.in. The acknowledgement of the payment shall be attached along with the Bid on the GeM portal.
- (ii) The EMD shall be interest-free.
- (iii) No EMD shall be accepted in any mode other than that prescribed in point (i)
- (iv) Exemption from submission of EMD shall be available to eligible MSEs registered under Udyam and Startups recognised by DPIIT, subject to submission of valid documentary proof.
- (v) EMD of the unsuccessful Bidders will be refunded within 45 days after completion of the Tender process and award of the Contract in favour of the Successful Bidder.
- (vi) The EMD of the successful bidder shall be released upon submission and acceptance of the Performance Security, unless otherwise adjusted in accordance with GeM provisions.
- (vii) The EMD shall be liable to forfeiture, or appropriate action shall be taken in case of Bid Security Declaration, in the following events:
 - a) if the bidder withdraws or modifies its bid during the bid validity period;

- b) if the Selected Bidder fails to accept the Letter of Award or execute the Contract; or
 - c) if the Successful Bidder fails to furnish the Performance Security within the stipulated period.
- (viii) AIESL reserves the right to reject any bid not accompanied by the required EMD or valid proof of exemption.

A3.2: Tender Fee

There is no Tender Fee payable for participation in this Tender.

A3.3: Validity of Bid and Prices

- (i) The bid shall remain valid for 120 days from the date of opening of the Technical Bid, unless otherwise notified on the GeM portal.
- (ii) AIESL may request an extension of bid validity. Such requests and the responses thereto shall be made through the GeM portal. A bidder may refuse such a request without forfeiting its EMD.
- (iii) The quantities indicated in this Tender are indicative and based on the current assessed requirements of AIESL.
- (iv) AIESL reserves the right to increase or decrease the quantities of items or services under the Contract by up to $\pm 25\%$ of the originally contracted quantities, within the overall approved Contract Value and in accordance with applicable Government procurement rules.
- (v) No enhancement of scope or quantities beyond the above limit shall be permitted without prior approval of the Competent Authority.
- (vi) The Service Provider shall execute the work strictly in accordance with the scope, quantities, and rates approved under the Contract.
- (vii) The accepted unit rates for tagging, onboarding, and other variable-quantity components shall remain valid for variation within the aforesaid limits.
- (viii) The prices quoted and accepted shall remain firm and fixed for the entire Contract Period unless otherwise expressly provided in this Tender.
- (ix) Any reduction in statutory taxes, duties, or levies applicable to the scope of this Contract during the Contract Period shall be passed on to AIESL.
- (x) In the event the Service Provider reduces the price for the same or similar goods or services supplied under this Contract to any other customer during the Contract Period, the benefit of such reduction shall be extended to AIESL.

A4: EVALUATION AND AWARD

A4.1: Eligibility and Evaluation Criteria

- (i) The eligibility criteria, technical qualification requirements, and documentary evidence to be submitted by bidders shall be strictly as specified in Section D of this Tender Document.
- (ii) Compliance with the eligibility criteria prescribed in Section D is mandatory and shall be evaluated on a Pass/Fail basis.

A4.2: Verification of Bidder Credentials

- (i) AIESL reserves the right to independently verify the credentials, experience, and technical claims submitted by bidders.
- (ii) If any information submitted by a bidder is found to be false, misleading, unverifiable, or materially incorrect, the bid shall be rejected, and appropriate action may be taken.

A4.3: Technical Demonstration/Proof of Capability

- (i) AIESL reserves the right to require technically qualified bidders to demonstrate the proposed solution through live demonstration, proof of concept, or presentation of an existing deployed system.
- (ii) Such demonstration may include validation of functional capabilities, hardware performance, software workflows, and operational suitability.
- (iii) Failure of a bidder to participate in the demonstration when requested by AIESL, or inability to demonstrate compliance with functional requirements, may result in rejection of the bid.
- (iv) Demonstration shall be used only for verification of compliance and shall not introduce any new evaluation criteria.

A4.4: Exemption/Preference to MSEs and Startups

- (i) Eligible MSEs registered under Udyam and Startups recognised by DPIIT shall be entitled to exemptions and preferences strictly in accordance with applicable Government of India policies.
- (ii) If the bidder is a Micro or Small Enterprise as per the latest definitions under MSE rules, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria" (i.e 50% in turnover and 1 year in experience). In case any bidder is seeking exemption from Turnover/Experience Criteria, the supporting documents to prove their eligibility for exemption must be uploaded for evaluation by the buyer.
- (iii) Valid documentary proof shall be submitted along with the Technical Bid, failing which no exemption or preference shall be available.

- (iv) Implementation of Purchase Preference to MSEs:
- a) If the L1 bidder is not an MSE, eligible MSE bidders quoting within a price band of L1 + 15% shall be allowed to match the L1 price.
 - b) If such an eligible MSE bidder agrees to match the L1 price, the contract shall be awarded to the MSE bidder, subject to meeting all technical, performance, scalability, and capacity requirements specified in the Tender.
 - c) In case more than one eligible MSE bidder falls within the L1 + 15% band, the opportunity to match the L1 price shall be given in order of their ranking (L2, L3, etc.), and the first MSE bidder agreeing to match the L1 price shall be considered for award, subject to meeting all requirements.
 - d) If no eligible MSE bidder agrees to match the L1 price, the contract shall be awarded to the L1 bidder.
 - e) Since this is a non-divisible, turnkey and system-based contract involving integrated supply, implementation, and long-term maintenance, splitting of the scope is not feasible due to operational, technical, and system integration considerations. Accordingly, no splitting of the contract shall be undertaken.
 - f) The above mechanism shall be applied only after the determination of L1 based on Total Evaluated Cost (TEC).
- (v) The above provisions are aligned with the Public Procurement Policy for MSEs, as amended from time to time.
- (vi) The MSE registration certificate shall be valid as on the closing date of the Tender.
- (vii) The Successful Bidder, whether MSE or non-MSE, shall furnish the Performance Security as stipulated in this Tender.
- (viii) Turnover/Financial Capacity:

If the bidder is a Startup, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria". (i.e 50% in turnover and 1 year in experience). In case any bidder is seeking exemption from Turnover/Experience Criteria, the supporting documents (valid DPIIT Certificate) to prove their eligibility for exemption must be uploaded for evaluation by the buyer.

Such relaxation is granted in line with applicable Government of India policies to promote innovation and participation of Startups in public procurement.

However, the following conditions shall mandatorily apply:

- a) The bidder shall demonstrate adequate financial capability to execute the contract through alternative documentary evidence such as net worth, funding support, balance sheet strength, or bank solvency.

- b) The relaxation shall not dilute technical capability, prior experience (where mandated), system performance requirements, SLA obligations, cybersecurity requirements, or pilot acceptance criteria specified in the Tender.
- c) The relaxation shall be applied uniformly to all eligible Startups and shall not be granted on a case-by-case or post-bid basis.
- d) This relaxation shall not apply to non-Startup bidders, including MSEs not recognised as Startups under DPIIT.

The above provision is adopted to balance the promotion of Startups with the need to ensure the successful execution of a high-value, technology-intensive, and SLA-driven contract.

A4.5: Make in India (MII) Compliance Clause (Mandatory)

Compliance with the Public Procurement (Preference to Make in India) Order, 2017 (as amended from time to time) issued by the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry, Government of India, shall be mandatory for this tender.

a) Eligibility under MII

Bidders shall specify whether they qualify as:

- (i) Class-I Local Supplier
- (ii) Class-II Local Supplier
- (iii) Non-Local Supplier

as defined under the above Order.

b) Local Content Declaration

- (i) The bidder shall submit a self-certification of local content percentage on company letterhead, duly signed by an authorised signatory.
- (ii) Wherever required, certification from a statutory auditor/cost auditor/practising cost accountant shall be submitted as per MII Order provisions.

c) Supporting Documents

- (i) Details of manufacturing location.
- (ii) Bill of material/value addition details, if applicable.
- (iii) OEM authorisation and manufacturing declaration.
- (iv) Any other documentary evidence supporting the local content claim.

d) Preference and Purchase Eligibility

- (i) Purchase preference shall be applicable as per the provisions of the MII Order and subsequent amendments.
- (ii) If minimum local content is specified in the tender, bidders not meeting the requirement shall be treated as non-responsive.

e) False Declaration

In case of false declaration regarding local content, the bidder shall be liable for:

- (i) Disqualification from the tender,
- (ii) Debarment as per Government guidelines,
- (iii) Any other action as per applicable rules.

f) Mandatory Condition

- (i) Compliance with Make in India provisions shall be treated as an essential eligibility requirement.
- (ii) Non-submission or non-compliance shall lead to rejection of the bid at the technical evaluation stage.

A4.6 Price Negotiation

- (i) As a general principle, price negotiations shall not be conducted by AIESL.
- (ii) However, in exceptional circumstances and where considered necessary in the interest of AIESL, price negotiations may be conducted only with the L-1 bidder through the GeM portal.

A4.7: Award of Contract

- (i) Award of the Contract shall be subject to fulfilment of the eligibility criteria and all other requirements stipulated in this Tender.
- (ii) Upon completion of the evaluation process, AIESL shall issue a Letter of Award to the Selected Bidder.
- (iii) The Selected Bidder shall, within seven days of receipt of the Letter of Award, accept and acknowledge the same and furnish the required details and documents.
- (iv) The Selected Bidder shall execute the formal Contract Agreement within fifteen days from the date of issuance of the Letter of Award, or within such extended period as may be permitted by AIESL.
- (v) Upon execution of the Contract Agreement, the Selected Bidder shall be deemed to be the Successful Bidder/Service Provider.

- (vi) The Successful Bidder shall commence performance of contractual obligations in accordance with the Contract and Scope of Work.
- (vii) All costs and expenses related to the preparation, execution, and stamping of the Contract Agreement shall be borne by the Successful Bidder.
- (viii) Failure to comply with the above requirements within the stipulated time shall render the award liable for cancellation.
- (ix) The Selected Bidder shall submit the Performance Security within the period stipulated in this Tender, failing which the Letter of Award shall be liable for cancellation.
- (x) Such failure shall also attract action in accordance with Clause A3.1(vii), as applicable.

A4.8: Abnormally Low Bids

- (i) If a bid appears to be abnormally low in comparison with the estimated cost of procurement, the scope of work, or other bids received, AIESL may seek written clarification from the concerned bidder.
- (ii) The bidder shall provide detailed justification for the quoted price, including cost break-up and implementation methodology.
- (iii) If the explanation is not found satisfactory, AIESL reserves the right to reject such bid in accordance with applicable Government procurement rules.

A4.9: Cost Break-up Verification for L-1 Bidder

- (i) Since this Tender involves the supply of hardware, software platform, tagging services, implementation, and long-term maintenance under a turnkey model, bidders shall ensure that their quoted prices are realistic and workable.
- (ii) If the price quoted by the L-1 bidder is found to be abnormally low, AIESL may require a detailed cost break-up, including:
 - (a) hardware components
 - (b) RFID tags and identification labels
 - (c) handheld readers and kiosk readers
 - (d) software licensing and platform cost
 - (e) tagging manpower and deployment
 - (f) implementation and integration
 - (g) training and documentation
 - (h) AMC cost

- (iii) If the explanation furnished is not found satisfactory, AIESL reserves the right to reject such bid.
- (iv) Submission of a bid shall be deemed to confirm that the bidder has considered all costs required for successful execution of the project, and no additional claim on account of underestimation of cost shall be entertained.

A4.10: Basis of Award

The Contract shall be awarded to the technically qualified bidder quoting the Lowest Evaluated Price (L-1) based on the Total Evaluated Cost (TEC) derived from the Price Bid, subject to compliance with all requirements of this Tender.

The award shall be subject to the provisions of purchase preference to MSEs as specified in Clause A4.4.

A5: COMMERCIAL CONDITIONS

A5.1: Period of Contract

- (i) The Contract shall comprise the following phases:
 - (a) Implementation Phase: up to six (06) months from the date of acceptance of the Letter of Award, covering supply, installation, configuration, tagging, testing, commissioning, pilot acceptance, rollout, and Go-Live of the system;
 - (b) Warranty Period: a period of twelve (12) months commencing from the date of successful Full Go-Live and written acceptance of the system by AIESL, during which the Service Provider shall provide warranty support for all hardware and related components supplied under the Contract; and
 - (c) Annual Maintenance Contract (AMC) Period: a period of five (05) years commencing immediately after completion of the Warranty Period.
- (ii) Accordingly, the total Contract Period shall comprise the Implementation Phase, the Warranty Period, and the AMC Period.
- (iii) During the Warranty Period, the Service Provider shall repair or replace defective hardware, rectify defects, and provide all necessary support services covered under warranty, without additional cost to AIESL.
- (iv) The AMC Period shall commence only after expiry of the Warranty Period and shall cover post-warranty maintenance and support services in accordance with the terms of the Contract.
- (v) AIESL may, at its sole discretion, consider extension of the AMC Period beyond the initial five (05) years on mutually agreed terms and conditions. No such extension shall be construed as a matter of right of the Service Provider.
- (vi) Any extension, if granted, shall be governed by the same terms and conditions unless expressly modified in writing.

A5.2: Liquidated Damages/Penalties

- (i) In the event of a delay in achievement of any milestone or delivery of services, solely attributable to the Successful Bidder, LD shall be levied at the rate of 0.5% of the value of the delayed portion of work per week or part thereof, subject to a maximum of 10%.
- (ii) Levy of LD shall not absolve the Successful Bidder of its obligation to complete the work.
- (iii) Extension of time, if any, shall be granted only where the delay is not attributable to the Successful Bidder and is approved by the Competent Authority.
- (iv) Liquidated Damages under this clause and SLA penalties under the Contract shall operate independently for distinct defaults and shall not be levied twice for the same default or event.

A5.3: Claims for Damage

- (i) AIESL shall notify the Successful Bidder in writing of any claim, deficiency, loss, or damage attributable to acts or omissions of the Successful Bidder.
- (ii) Upon such notice, the Successful Bidder shall take remedial action within the period specified by AIESL at its own cost.
- (iii) In case of failure to do so, AIESL may undertake remedial action at the risk and cost of the Successful Bidder and recover the associated costs, invoke Performance Security, or terminate the Contract.

A6: COMPLIANCE AND DISCIPLINE

A6.1: Zero Deviation

- (i) This is a Zero-Deviation Tender. Bidders shall submit bids strictly in accordance with the terms and conditions of this Tender and shall not stipulate deviations, conditions, or qualifications to material terms.
- (ii) Any deviation from material terms shall render the bid liable for rejection.
- (iii) Clarifications issued through GeM shall not be treated as deviations.

A6.2: Rejection of Bids

A bid shall be liable for rejection, inter alia, in the following cases:

- (i) The Bid shall stand rejected if the Bidder submits an incomplete Bid, i.e. where only the Technical Bid or only the Price Bid is received.
- (ii) The Technical Bid should not contain any indication of the price related to the Price Bid. In case an indication of such price quoted is included in the Technical Bid, the Bid will be rejected without any reference to the Bidder. No correspondence will be entertained in this regard.

- (iii) The Bids received after the Due Date/Time shall not be considered.
- (iv) The Bids are liable to be rejected forthwith, i.e. without being evaluated, on the following grounds:
 - a) If only the Technical Bid has been received and the Price Bid has not been received, and vice versa.
 - b) If the Bids/Tender has not been signed by the Authorised Signatory of the Bidder. (Signed by any key managerial personnel or an officer of the company duly authorised by the Director/Partner/Proprietor on his/her behalf).
 - c) If the Technical Bid has been received without EMD/Bid Security Declaration, as the case may be, and the EMD has been submitted in a mode other than as specified in the Tender document.
 - d) If the information given in response to the Tender is incomplete, ambiguous, without requisite supporting documents, unverified, unattested, and/or submission of illegible copies or unexplained materials and/or Bids not received as per the desired formats & Bidding instructions.
 - e) If the Price Bid indication has been provided in the Technical Bid response.
 - f) If the Bid response is not presented neatly and corrections, if any, are not duly authenticated with full authorised signatures of the person who has signed the Bid document. (Signed by any key managerial personnel or an officer of the company duly authorised by the Director/Partner/Proprietor in this behalf).
 - g) If the Bid has been received without the undertaking of acceptance of all terms & conditions.
 - h) If the Bid (Technical Bid/Price Bid) is incomplete.
 - i) The above list is only illustrative, and there can be other relevant grounds of rejection of Bids.
- (v) In case of any variation in the documents/data submitted by the Bidder in support of the Technical Bid and in comparison with the original documents during technical evaluation, the Bids of such Bidder would be outrightly rejected/disqualified during technical evaluation and its EMD would be forfeited.

A6.3: Errant Bidders

If, after opening of the Price Bid and during the bid validity period, the L-1 bidder withdraws, refuses to accept the Letter of Award, or fails to execute the Contract or furnish the Performance Security, AIESL shall be entitled to take action in accordance with applicable rules, including forfeiture of EMD or debarment proceedings, after due process where required.

A6.4: Misrepresentation, Fraud, and Blacklisting

- (i) If at any stage it is determined that a bidder has indulged in misrepresentation, concealment of facts, corrupt, fraudulent, collusive, or coercive practices, AIESL reserves the right to reject the bid, terminate the Contract, and/or initiate debarment/blacklisting proceedings in accordance with applicable Government guidelines.
- (ii) Such action may also extend to other ongoing Contracts/Purchase Orders of the bidder with AIESL, as deemed appropriate.

A6.5: Integrity and Anti-Corruption Undertaking

- (i) The Bidder shall certify that it has not engaged in any corrupt, fraudulent, collusive, or coercive practice in connection with this Tender.
- (ii) Any such practice shall render the bid liable for rejection and may lead to debarment.

A7: ADMINISTRATIVE PROVISIONS

A7.1: Amendments/Corrigenda

- (i) Any amendments, corrigenda, clarifications, or extensions to this Tender shall be notified through the GeM portal. Such information may also be hosted on the official website of AIESL for reference.
- (ii) In case of any amendment or modification to the Tender before the Bid Due Date and Time, AIESL may extend the Bid Due Date and Time.
- (iii) Bidders who have already submitted their bids may revise and resubmit them within the extended period, if so notified.
- (iv) The last bid submitted on the GeM portal before the Bid Due Date and Time shall be treated as the final bid.
- (v) AIESL reserves the right, at its discretion, to amend, supplement, modify, suspend, or cancel the Tender or the bidding process, seek clarifications, verify information, and accept or reject any bid in accordance with applicable Government procurement rules.
- (vi) By submitting a bid, the bidder acknowledges that AIESL shall not be liable for any costs or losses incurred in connection with participation in the bidding process.

A7.2: Pre-Bid Clarifications

- (i) Bidders may seek clarifications on the provisions of this Tender through the GeM portal within the period specified in the Tender Schedule.
- (ii) All clarification requests shall be submitted only through the GeM portal.
- (iii) Responses to bidder queries and any consequential amendments shall be issued through the GeM portal in the form of clarifications or corrigenda.

- (iv) Such clarifications and corrigenda shall form an integral part of this Tender.

A7.3: Order of Precedence

In the event of inconsistency between the Contract Agreement, this Tender Document, and GeM terms, the following order of precedence shall apply:

- (i) Contract Agreement
- (ii) Tender Document
- (iii) GeM General Terms and Conditions

A7.4: Interpretation

- (i) In the event of ambiguity or difference in interpretation of this Tender or the Contract, the interpretation issued by AIESL shall prevail for the purpose of tender evaluation and contract administration.
- (ii) Such interpretation shall remain subject to the dispute resolution provisions of the Contract and applicable law.

A7.5: Arithmetical Errors

- (i) Arithmetical errors in the Price Bid, if any, shall be corrected by AIESL on the following basis:
 - (a) where there is a discrepancy between figures and words, the amount in words shall prevail, unless the words clearly reflect an arithmetic error;
 - (b) where there is a discrepancy between the unit rate and total price, the unit rate shall prevail, and the total price shall be corrected accordingly.
- (ii) The bidder shall be required to accept such corrections.
- (iii) Failure or refusal to accept the corrected price shall result in rejection of the bid and such further action as may be permissible under applicable Government rules.

A8: CONTRACT MANAGEMENT

- (i) The overall administration and management of the Contract shall be the responsibility of the Production Planning and Materials Management (PPMM) Department or such other department as may be designated by AIESL.
- (ii) The nodal department shall be responsible for coordination with the Service Provider, monitoring of contract performance, compliance with contractual obligations, and implementation of the Scope of Work.

A9: CONTRACT SURVIVABILITY

- (i) If the Successful Bidder undergoes any change in control, including merger, amalgamation, acquisition, or restructuring, the rights and obligations under

this Tender and the Contract shall continue to remain binding on the successor entity.

- (ii) The Successful Bidder shall ensure that such successor entity expressly assumes all contractual obligations towards AIESL.
- (iii) Notwithstanding the above, AIESL may terminate the Contract if such change in control is considered prejudicial to its interests.

A10: MISCELLANEOUS

A10.1: Eligibility and Submission

- (i) Issue or submission of the Tender Document does not automatically confer any right upon the bidder to be considered eligible for award of the Contract.
- (ii) Bidders shall submit their bids strictly in accordance with the terms and conditions of this Tender without deviations or qualifications.

A10.2: Bid Submission Timeline

- (i) The Tender shall close on the Due Date and Time specified in the Tender Document.
- (ii) Bidders are advised to submit their bids well in advance to avoid last-minute technical issues.
- (iii) AIESL may, at its discretion, extend the Due Date/Time before closure of the Tender.

A10.3: Right to Reject/Annul Tender

- (i) AIESL reserves the right to accept or reject any or all bids, or to annul the tender process at any stage prior to award of the Contract, in accordance with applicable Government procurement rules.
- (ii) Such decisions shall be based on recorded reasons in the tender file.

A10.4: Litigation History

- (i) AIESL reserves the right to reject the bid of any bidder who has been blacklisted or debarred by any Government Department, PSU, or statutory authority, or who has been involved in litigation/arbitration with AIESL resulting in adverse findings or material performance risk. Any such decision shall be based on recorded reasons.
- (ii) Suppression or misrepresentation of such information shall render the bid liable for rejection.

A10.5: Clarifications

- (i) Any clarification sought by AIESL from a bidder shall be treated as an integral part of the bid.

- (ii) Such clarification shall not permit modification of price or material terms of the bid.

A10.6: Cost of Bidding

All costs associated with the preparation and submission of the bid shall be borne by the bidder. AIESL shall not be liable for any such costs.

A10.7: Confidentiality

- (i) The parties shall maintain confidentiality of all information, data, documents, and records accessed or generated in connection with this Tender and the Contract.
- (ii) Such information shall not be disclosed to any third party without prior written consent of AIESL, except where disclosure is required by law, regulatory authority, court order, or to professional advisers on a need-to-know basis subject to confidentiality obligations.
- (iii) All such information and data shall remain the property of AIESL.
- (iv) These obligations shall survive expiry or termination of the Contract.

A10.8: Communication Details

The bidder shall furnish its official postal address, email address, and contact numbers for correspondence. Any change therein shall be promptly intimated to AIESL.

A10.9: Modification of Tender Conditions

- (i) AIESL reserves the right to add, delete, or modify any term or condition of this Tender by issuing corrigenda in accordance with applicable procedure.
- (ii) Modification of Tender conditions shall be effected only through duly issued corrigenda.

A10.10: Conflict Due to Near Relatives

- (i) Bidders shall ensure that no Near Relative of any AIESL employee involved in the Tendering, evaluation, or Contract administration process is associated with the bidder in a manner that may influence the Tender outcome.
- (ii) For this clause, Near Relative shall include members of a Hindu Undivided Family, husband or wife, parents, children and their spouses, brothers and sisters and their spouses.
- (iii) The bidder shall submit a self-certification to this effect along with the Technical Bid.

A10.11: Conflict of Interest

- (i) The bidder shall disclose any actual or potential conflict of interest arising from relationships, financial interests, or other associations with employees, consultants, advisors, or representatives of AIESL involved in the tendering, evaluation, or contract administration process.
- (ii) Failure to disclose such conflict shall render the bid liable for rejection and may result in debarment proceedings in accordance with applicable Government guidelines.
- (iii) Any bidder found to have concealed such conflict of interest or attempted to influence the tender process through improper means shall be liable for rejection of the bid and such further action as may be permissible under applicable law.

SECTION B - SCOPE OF WORK (REVISED & CONSOLIDATED)

B0: OVERVIEW OF SCOPE

The scope of work under this Tender includes the design, supply, installation, configuration, implementation, commissioning, and operational support of an AI-enabled/Intelligent Digital Tool Tracking System (Supporting RFID/QR Code/Barcode Identification Technologies) for AIESL tool stores across designated locations.

RFID shall be used as the primary identification technology, while QR code or barcode identification shall be used where RFID tagging is not operationally feasible.

The Service Provider shall execute the project on a turnkey basis, including:

- (i) tool audit and master data preparation
- (ii) RFID/QR/barcode tagging
- (iii) hardware supply and deployment
- (iv) software configuration and integration
- (v) workflow implementation
- (vi) training of AIESL personnel
- (vii) pilot deployment at Nagpur
- (viii) phased rollout across all AIESL locations
- (ix) post-implementation support, warranty support, and thereafter a five-year comprehensive AMC.

B1: TECHNOLOGY AND VENDOR NEUTRALITY

- (i) All specifications in this Tender are functional and performance-based.
- (ii) No specific brand, OEM, chipset, proprietary protocol, patented technology, or country of origin is intended or implied.
- (iii) Any solution meeting or exceeding the functional and operational requirements specified in this Tender shall be acceptable.

B2: OVERALL PROJECT SCOPE

B2.1: Objective

AIESL intends to deploy an AI-enabled/Intelligent Digital Tool Tracking System to ensure:

- (i) digital traceability of tools
- (ii) operational accountability
- (iii) calibration monitoring

- (iv) inventory visibility
- (v) FOD prevention support
- (vi) audit-ready traceability of tool movement

The system shall support aircraft maintenance operations across AIESL centres and align with DGCA requirements relating to tool control.

B2.2: Coverage and Tool Population

The system shall support tracking of approximately 1,00,000 aircraft maintenance tools and tool boxes across the following locations:

Location	Estimated Tool Population
Nagpur	20,000
Delhi	25,000
Mumbai	25,000
Hyderabad	10,000
Thiruvananthapuram	15,000
Kolkata	5,000

These quantities are indicative only and may vary within $\pm 25\%$, in accordance with Clause A3.3 of this Tender.

B2.3: Tool Categories

Tools covered under this Tender may broadly fall under the following categories:

Category	Description
Category A: Small Tools	Screwdrivers, spanners, pliers, cutters, sockets
Category B: Medium Tools	Torque wrenches, pneumatic tools, measuring instruments
Category C: Heavy Tools	Jigs, fixtures, aircraft maintenance equipment
Category D: Tool Kits/Tool Boxes	Containers holding multiple tools

The Service Provider shall conduct a physical tool audit during implementation and finalise the tagging methodology.

B2.4: Identification Technology Mix

For bid estimation purposes, bidders may assume the following indicative mix:

- (i) RFID tagging: 70-80% of tools
- (ii) QR/Barcode identification: 20-30% of tools

The Service Provider shall ensure 100% identification coverage through an appropriate combination of these technologies.

B2.5: System Scalability

The system architecture shall support:

- (i) at least 2,00,000 tools
 - (ii) additional AIESL locations
 - (iii) increased transaction volumes
- without major redesign.

B3: TOOL AUDIT AND MASTER DATA PREPARATION

The Service Provider shall perform a comprehensive physical audit of tools and create a digital master database, including:

- (i) tool identification details
- (ii) part number and serial number
- (iii) category and description
- (iv) tool kit hierarchy mapping
- (v) location and custodianship
- (vi) calibration applicability

The system shall also capture the physical storage hierarchy, including:

- a) tool store
- b) rack
- c) bin
- d) zone mapping

B3.1: Validation of Tool Audit

The tool audit and master database prepared by the Service Provider shall be verified and validated by the Authorised Officer nominated by AIESL before commencement of large-scale tagging and system onboarding.

Any discrepancies identified during validation shall be rectified by the Service Provider without additional cost to AIESL.

B4: TOOL IMAGE REPOSITORY

The system shall support capture and storage of tool images to enable:

- (i) visual identification
- (ii) audit verification
- (iii) inspection support.

B5: DGCA/AS9110C MONITORING & MEASURING EQUIPMENT REGISTER

The system shall support the creation of a digital Master Register of monitoring and measuring equipment in compliance with AS9110C requirements.

The register shall capture:

- (i) equipment type
- (ii) unique identification
- (iii) location
- (iv) calibration method
- (v) calibration frequency
- (vi) acceptance criteria.

B6: RFID/QR/BARCODE TAGGING

The Service Provider shall be responsible for:

- (i) supply of identification tags and labels
- (ii) physical attachment of tags
- (iii) encoding and commissioning of tags
- (iv) mapping tags to the tool master database
- (v) validation of tag readability

All manpower, materials, and consumables required for tagging shall be provided by the Service Provider.

The quoted price shall include tagging within $\pm 25\%$ variation of the estimated quantity.

B6.1: Tagging Feasibility Responsibility

The bidder shall be deemed to have assessed the feasibility of tagging tools of varying size, geometry, and material composition prior to submission of the bid. No additional payment shall be admissible on account of:

- (i) tool size or geometry
- (ii) metallic interference
- (iii) environmental conditions
- (iv) requirement of specialised tags or labels

All such requirements shall be deemed included in the quoted contract value.

The Service Provider shall ensure 100% identification coverage of all tools under the project scope through an appropriate combination of RFID, QR code, and barcode technologies.

B7: RFID HARDWARE COMPONENTS

The solution shall include:

- (a) RFID Tags and Labels: Industrial-grade tags suitable for aviation environments.
- (b) RFID Handheld Readers: Industrial handheld devices for inventory scanning and tool search.
- (c) RFID Desktop/Kiosk Readers: Readers installed at tool issue counters.
- (d) Antennas and Accessories: Cables, mounting brackets, and supporting infrastructure.
- (e) Ownership of Hardware: All RFID hardware, including but not limited to RFID readers, antennas, encoding stations, tags, accessories, and associated infrastructure supplied and installed under this Contract shall become the absolute property of AIESL upon installation and commissioning, irrespective of the warranty or AMC period. The Service Provider shall have no ownership claim over the supplied hardware after installation.

B7.1: Reader Performance Requirement

Handheld RFID readers supplied under this Contract shall be capable of scanning at least 200 RFID tags per minute under normal tool store conditions.

B8: HARDWARE SIZING RESPONSIBILITY

The bidder shall be responsible for complete hardware sizing, system configuration, and deployment required for the successful operation of the proposed solution.

For the purpose of bid estimation, the following minimum quantities may be considered:

Hardware	Minimum Quantity
RFID Desktop Readers	25
RFID Handheld Readers	50
RFID Encoding Stations	6

B8.1: Baseline Quantity Clarification

- (i) The quantities of RFID handheld readers, desktop readers, and encoding stations indicated in this Tender are minimum baseline quantities intended solely for the purpose of bid estimation and price comparison.
- (ii) The Service Provider shall be responsible for deploying any additional hardware, antennas, infrastructure, or supporting components required for achieving the functional and performance requirements specified in this Tender, without any additional cost to AIESL.
- (iii) No additional payment shall be admissible after award of contract on account of:
 - a) inadequate hardware sizing
 - b) additional reader requirement
 - c) additional infrastructure requirement
 - d) system performance optimisation.
- (iv) All such additional requirements shall be deemed included in the quoted Contract Value, and no post-award claim on this account shall be admissible.

B9: TOOL ISSUANCE AND RETURN MANAGEMENT

The system shall support:

- (i) approval-based issuance and return of tools
- (ii) technician identification through employee ID
- (iii) batch issuance and batch return
- (iv) automated transaction logging

Tool status shall include:

- a) Available
- b) Issued
- c) Under Calibration
- d) Under Repair
- e) Scrapped.

B9.1: Workflow Control

The system shall support tool issuance and return against:

- (i) Employee/Technician ID; and
- (ii) Job Card/Work Order, wherever applicable.

B9.2: Transaction Recording

The system shall support:

- (i) single tool issue and return;
- (ii) batch issue and batch return;
- (iii) capture of tool condition, remarks, and transaction timestamps; and
- (iv) automatic real-time update of tool status.

B9.3: High-Volume Operations

The system shall support rapid multi-tool scanning for issue and return transactions in high-volume tool store environments.

B10: INTER-LOCATION TOOL TRANSFER

The system shall support controlled and auditable transfer of tools between AIESL locations and tool stores.

The system shall support:

- (i) configurable approval workflows for inter-location transfer;
- (ii) real-time update of tool custody, ownership, and physical location;
- (iii) complete historical movement logs and audit trails for each tool; and
- (iv) time-stamped transfer accountability for every transfer event.

B11: CALIBRATION, REPAIR AND SCRAP MANAGEMENT

The system shall support:

- (i) tracking of time-based and usage-based calibration thresholds;
- (ii) automated alerts for tools due or overdue for calibration or repair;
- (iii) upload, storage, and retrieval of calibration certificates;
- (iv) automatic blocking of overdue or unserviceable tools from issuance; and
- (v) approval-based scrap management.
- (vi) Scrap management shall be auditable. Tools identified as unserviceable or beyond economic repair shall be marked as "Scrapped" in the system only after approval by the competent authority designated by AIESL.

The system shall maintain permanent scrap records, including:

- a) tool identification;
- b) date of scrap;
- c) reason for scrap;
- d) approving authority; and
- e) reference documents.

Scrapped tools shall be automatically removed from active inventory and blocked from further issuance.

B12: INVENTORY AUDIT AND FOD SUPPORT

The system shall enable:

- (i) RFID-based rapid inventory audits;
- (ii) identification of missing, excess, misplaced, or unauthorised tools;
- (iii) location-wise and store-wise reconciliation reports; and
- (iv) proximity-based tool search to support FOD prevention.

The system shall support full store inventory verification through handheld RFID readers with the capability to scan multiple tools simultaneously.

Inventory audit reports shall be automatically generated for reconciliation.

B12.1: Exception Monitoring and Alerts

The system shall provide configurable exception alerts for:

- (i) tools not returned at shift closure;
- (ii) overdue tool return;
- (iii) missing tools during reconciliation; and
- (iv) attempted issuance of blocked or unserviceable tools.

B13: SOFTWARE PLATFORM

The system shall include:

- (i) web-based administration portal
- (ii) Android mobile application
- (iii) role-based access control
- (iv) audit logs and MIS dashboards
- (v) ERP/SAP integration capability through secure APIs.

B13.1: Software Licensing

Software platform supplied under this Contract shall include enterprise-level licensing sufficient to support all users and locations covered under the scope of this Tender.

No additional license fee shall be payable by AIESL for:

- (i) addition of users within AIESL
- (ii) addition of tool stores covered under the project
- (iii) deployment across the designated AIESL locations
- (iv) system scalability up to the limits specified in this Tender.

All licensing costs shall be deemed included in the quoted Contract Value.

B13.2: Hosting Infrastructure

The application shall be deployable either on AIESL's on-premise infrastructure or on the Government of India approved cloud infrastructure empanelled by MeitY, as decided by AIESL.

The hosting architecture shall comply with applicable Government of India data security and IT infrastructure guidelines.

Data Residency

All application data, system databases, backups, and associated records generated under this Contract shall be stored and processed only within data centres located in India.

Where cloud infrastructure is used, the cloud service provider shall be empanelled under MeitY guidelines or otherwise approved by the Government of India.

The Service Provider shall ensure compliance with applicable Government data protection and cybersecurity requirements.

B13.3: System Architecture Submission

The Service Provider shall prepare and submit a detailed System Architecture Document for approval by AIESL prior to commencement of large-scale tagging and rollout.

The architecture document shall include, at a minimum:

- (i) overall system architecture;
- (ii) hardware architecture and server configuration;
- (iii) network topology and communication flow;
- (iv) database architecture and storage design;
- (v) RFID reader deployment plan;
- (vi) system security architecture; and
- (vii) data flow and integration interfaces.

Implementation of the large-scale rollout shall commence only after approval of the architecture by AIESL.

B14: DATA BACKUP AND RECOVERY

The system shall provide:

B14.1: Data Backup

- (i) daily incremental backups
- (ii) weekly full backups
- (iii) secure storage of backup copies

B14.2: Disaster Recovery

System restoration capability within 4 hours.

B14.3: Offline Operation

Handheld devices shall support offline transactions with automatic synchronisation.

B14.4: System Exit and Transition Support

Upon expiry, termination, or completion of the Contract, the Service Provider shall provide necessary system transition support to ensure continuity of operations. This shall include, at a minimum:

- (i) export of the complete system database in standard format
- (ii) database schema and configuration details
- (iii) system architecture documentation

- (iv) administrative access credentials
- (v) technical documentation required for system continuation.

No additional charges shall be payable by AIESL for such transition support.

B14.5: IT Security, Data Protection and Cybersecurity Compliance

The AI-enabled/Intelligent Digital Tool Tracking System proposed under this Tender shall comply with applicable Government of India cybersecurity guidelines and accepted industry practices to ensure confidentiality, integrity, and availability of data and systems.

The Service Provider shall implement appropriate security controls across the application, database, infrastructure, and network layers.

B14.5.1: CERT-In Compliance

The proposed system shall comply with applicable CERT-In guidelines, advisories, and incident reporting requirements.

The Service Provider shall ensure that:

- (i) the system architecture and software components do not contain known critical vulnerabilities;
- (ii) security patches and updates are applied promptly during implementation, warranty, and AMC periods; and
- (iii) any cybersecurity incident or suspected compromise affecting the system or associated infrastructure is reported to AIESL immediately.

B14.5.2: Data Ownership and Rights

All data generated, collected, processed, or stored under this Contract shall remain the exclusive property of AIESL.

The Service Provider shall not claim any ownership, lien, or rights over such data.

The Service Provider shall ensure that:

- (i) all operational data, audit logs, system configuration data, and reports remain fully accessible to AIESL;
- (ii) data shall not be used, shared, transmitted, or disclosed to any third party without prior written approval of AIESL, except where required under applicable law; and
- (iii) upon expiry or termination of the Contract, complete data, backups, and system documentation are handed over to AIESL in a usable and industry-standard format.

B14.5.3: Data Encryption and Secure Communication

The system shall implement appropriate encryption mechanisms to ensure secure communication and protection of sensitive data.

The Service Provider shall ensure that:

- (i) all communication between client devices, handheld readers, mobile applications, and servers is secured using HTTPS/TLS encryption;
- (ii) sensitive data stored in databases is protected through appropriate encryption and/or secure access controls;
- (iii) authentication credentials are not stored or transmitted in plain text; and
- (iv) the system implements password policies and secure authentication mechanisms to prevent unauthorised access.

B14.5.4: Security Logging and Monitoring

The system shall maintain secure and tamper-proof logs for:

- (i) user login and authentication;
- (ii) tool issuance and return transactions;
- (iii) configuration changes;
- (iv) administrative activities; and
- (v) system access events.

Such logs shall be retained and made available to AIESL for audit, monitoring, investigation, and forensic review.

B14.5.5: Vulnerability Assessment and Rectification

The system shall support vulnerability assessment and security testing, if required by AIESL. The Service Provider shall rectify critical security vulnerabilities identified during implementation, warranty, or AMC period without additional cost to AIESL.

If required by AIESL, the Service Provider shall cooperate with cybersecurity reviews or audits conducted by AIESL or by authorised agencies nominated by AIESL.

B14.5.6: Compliance Responsibility

The Service Provider shall remain responsible throughout the implementation, warranty, and AMC period for maintaining security controls, applying necessary updates, and ensuring continued compliance with applicable cybersecurity requirements.

Failure to maintain required security standards shall be treated as a service deficiency under the Contract.

B15: MINIMUM FUNCTIONAL REQUIREMENTS (FRS)

Bidders shall confirm compliance with the following functional requirements:

SN	Functional Area	Requirement
1	Tool Identification	RFID/QR/barcode identification
2	Tool Master Database	Centralised tool master records
3	RFID Tag Management	Encoding, association, reassociation, and replacement
4	Tool Registration	Registration through readers or web
5	Tool Issue & Return	Automated transaction capture
6	Technician Identification	Employee ID, login credentials, or equivalent identification
7	Tool Status Tracking	Real-time tool status
8	Inventory Scanning	Rapid RFID scanning
9	Missing Tool Detection	Automatic alerts
10	Calibration Tracking	Calibration monitoring
11	Calibration Records	Certificate storage
12	Inventory Reconciliation	Audit reports
13	Tool Search	Proximity-based search
14	Exception Alerts	Overdue and missing alerts
15	Audit Logs	Tamper-proof logs
16	Role-Based Access	User role management
17	Reporting	MIS dashboards
18	Dashboards	
19	Data Export	Excel/CSV/PDF reports Graphical dashboard displaying key system statistics, including total tools, issued tools, overdue tools, calibration due tools, and missing tools
20	ERP Integration	API-based SAP/ERP integration
21	Mobile Support	Android handheld compatibility
22	Offline Capability	Offline transactions supported
23	Backup & Recovery	Data protection mechanisms
24	Web-Based Access	Access through standard web browsers within the authorised network
25	System Security	Secure login, authentication, and encrypted communication
26	Tool Image Support	Attachment and storage of tool images
27	Multi-Location Support	Unified management across multiple AIESL locations
28	Search & Traceability	Search and full usage/movement history
29	System Uptime	Minimum 99% uptime

Bidders shall submit a compliance statement against the above Functional Requirement Matrix in their Technical Bid.

B15.1: Standard MIS Reports

The system shall provide configurable reports, including but not limited to:

- (i) tool utilisation reports;
- (ii) calibration due reports;
- (iii) missing tools reports;
- (iv) shift closure reports;
- (v) tool issue per technician; and
- (vi) FOD incident reports.

B16: TRAINING AND IMPLEMENTATION

The Service Provider shall provide:

- (i) user training for tool store staff
- (ii) training for engineers and QA
- (iii) training for auditors
- (iv) SOP documentation and user manuals.

B16.1: Knowledge Transfer and Documentation

The Service Provider shall provide structured knowledge transfer to AIESL personnel covering:

- (i) system administration
- (ii) operational workflows
- (iii) hardware usage and troubleshooting
- (iv) reporting and analytics.

The Service Provider shall also provide:

- a) user manuals
- b) operational SOPs
- c) administrative guides
- d) troubleshooting documentation.

Such documentation shall be provided in both soft copy and editable format.

B16.2: Minimum Project Team Requirement

The Service Provider shall deploy a competent project team for execution of the project, including at a minimum:

- (i) one Project Manager;
- (ii) RFID Implementation Engineers;
- (iii) Tagging Technicians/Field Staff; and
- (iv) Software Support Engineers.

The Service Provider shall ensure adequate manpower deployment to complete tagging and system deployment within the timelines specified in the Tender.

B17: PILOT IMPLEMENTATION

Pilot deployment shall be conducted at AIESL Nagpur.

The pilot shall validate:

- (i) system functionality
- (ii) RFID performance
- (iii) operational workflows
- (iv) audit compliance.

The pilot shall operate for a minimum of 30 days of stabilisation before acceptance.

B17.1: Pilot Acceptance Authority

Successful completion of the Pilot implementation shall be subject to certification by the Authorised Officer nominated by AIESL.

Pilot acceptance shall be based on verification of system functionality, performance parameters, and completion of User Acceptance Testing (UAT).

Failure of the system to meet the functional or performance parameters during pilot stabilisation shall require the Service Provider to rectify deficiencies and repeat pilot validation without additional cost to AIESL.

Pilot acceptance shall be a precondition for the commencement of the phase-wise rollout under Clause B18.

In the event the Pilot implementation does not meet the acceptance criteria specified under this Tender, the Service Provider shall rectify the deficiencies within a mutually agreed corrective period.

If the system continues to fail the acceptance criteria after such corrective period, AIESL shall be liable only for the portion of the work duly completed, installed, and certified by the Authorised Officer.

B18: PHASE-WISE ROLLOUT

After successful pilot acceptance, rollout shall occur across:

- (i) Delhi
- (ii) Mumbai
- (iii) Hyderabad
- (iv) Thiruvananthapuram
- (v) Kolkata.

B19: ACCEPTANCE CRITERIA

Parameter	Requirement
Tagging Coverage	≥98%
RFID Read Accuracy	≥97%
Inventory Reconciliation Accuracy	≥98%
System Uptime	≥99%

User Acceptance Testing (UAT) shall be completed before acceptance.

Failure to achieve the acceptance parameters specified above may result in extension of the stabilisation period or corrective actions by the Service Provider without additional cost to AIESL.

Functional Validation: All major workflows, including issuance, return, calibration tracking, and inventory scan, shall be demonstrated successfully.

System Performance: The system shall be capable of supporting concurrent users and tool transactions without operational degradation.

B19.1: SLA Compliance

The Service Provider shall comply with the Service Level Agreement (SLA) parameters specified under this Tender.

Failure to meet SLA parameters, including system uptime, response time, and support timelines, shall attract penalties as per the SLA provisions of the Contract.

Repeated failure to meet SLA parameters may result in:

- (i) levy of penalties
- (ii) invocation of Performance Security
- (iii) termination of the Contract in accordance with contract provisions.

B20: PAYMENT MILESTONES

Payments under this Contract shall be milestone-based and linked to successful completion of implementation stages and acceptance of deliverables, as certified by the Authorised Officer of AIESL.

Milestone	Payment
Pilot Completion	20% of Implementation Cost
Rollout Completion	72.5% of Implementation Cost
Final Stabilisation, Documentation and Acceptance	7.5% of Implementation Cost
AMC	Annual instalments of AMC Cost

AMC payments shall be released annually upon satisfactory SLA compliance and certification by the Authorised Officer of AIESL.

AMC shall commence only after completion of the warranty period specified in Clause B21.

B21: WARRANTY AND AMC

Hardware warranty: 12 months from the date of Full Go-Live and final written acceptance by AIESL after completion of rollout.

The warranty period shall cover repair or replacement of defective hardware, readers, tags, and associated components without additional cost to AIESL.

The Annual Maintenance Contract (AMC) shall commence only after completion of the warranty period.

AMC period: 05 years from the expiry of the warranty period.

During the AMC period, the Service Provider shall provide:

- (i) preventive maintenance
- (ii) corrective maintenance
- (iii) replacement of defective RFID tags and hardware
- (iv) technical support as per SLA.

All replacement components supplied during AMC shall be of equivalent or higher specification.

Replacement obligations during AMC also cover defects arising during normal operational wear

Replacement obligations shall not extend to loss, theft, wilful damage, gross misuse, or unauthorised modification, as established by AIESL.

Replacement during the AMC period shall include defective RFID tags, handheld readers, desktop/kiosk readers, and associated hardware where such defects arise due to manufacturing defect, material failure, or normal operational wear under intended usage conditions.

The Service Provider shall maintain adequate spare inventory to ensure continuity of operations.

Replacement of defective RFID tags shall be completed within five (05) working days from reporting.

B22: NATURE OF CONTRACT

This Tender is for the procurement of a technology solution and associated implementation services.

It shall not be construed as a manpower supply contract.

B22.1: Completeness of Solution and No Additional Cost

The Service Provider shall be responsible for providing a complete and fully functional AI-enabled/Intelligent Digital Tool Tracking System in accordance with the requirements of this Tender.

The quoted price shall be deemed to include all hardware, software, tags, readers, accessories, cabling, mounting fixtures, configuration, tagging effort, integration effort, training, documentation, and any other components or services required for the successful implementation and operation of the system.

No additional payment shall be admissible on account of:

- (i) additional software modules required for system functionality;
- (ii) additional effort required for tagging, data migration, integration, or configuration;
- (iii) environmental or operational constraints at AIESL locations; or
- (iv) any component or service required for successful system operation but not explicitly listed in the BoQ.

B22.2: Bidder Site Visit

Bidders are strongly encouraged to undertake a site visit to one or more representative AIESL tool stores prior to submission of their bids in order to familiarise themselves with the operational environment, tool storage layout, and scope of work.

Failure to undertake a site visit shall not be accepted as a ground for any additional cost, claim, extension of time, or modification of contractual obligations during execution of the Contract.

The bidder may submit a site visit declaration if you want stronger evidentiary value.

B22.3: Bidder's Responsibility to Examine Tender and Site Conditions

The bidder shall be deemed to have carefully examined and fully understood all instructions, conditions, specifications, schedules, and other information contained in this Tender Document.

Submission of a bid shall be deemed to constitute unconditional acceptance of all terms and conditions of this Tender.

Any failure by the bidder to acquaint itself with applicable conditions, scope of work, site conditions, or operational requirements shall not relieve it from responsibility for successful performance of the Contract.

SECTION C -

PART 1: TECHNICAL REQUIREMENTS/SPECIFICATIONS

The Bidder shall provide a proven, production-grade AI-enabled/Intelligent Digital Tool Tracking System supporting RFID, QR Code, and Barcode identification technologies, suitable for continuous operation in aircraft maintenance hangars, tool stores, and associated operational environments.

The proposed solution shall support deployment for approximately 1,00,000 tools across multiple AIESL locations and tool stores, with scalability for future expansion, concurrent users, and transaction volumes typical of large aircraft maintenance tool stores.

The technical solution shall comprise software, RFID hardware, tags, handheld devices, desktop/kiosk readers, and supporting infrastructure, fully integrated to enable digital tool traceability, operational control, and audit-ready reporting in compliance with AIESL and applicable regulatory requirements.

All RFID tags, readers, and associated hardware supplied and installed under the Contract shall become the property of AIESL upon installation and acceptance, in accordance with the terms of the Contract.

C1: SYSTEM ARCHITECTURE

- (i) The solution shall include, at a minimum, the following components:
 - a) Web-based enterprise application for administrators, supervisors, QA, and auditors
 - b) Android-based mobile application for tool stores and shop-floor operations
 - c) Centralised, scalable application and database server architecture
 - d) RFID desktop kiosk readers and industrial-grade handheld RFID readers (Specifications mentioned are indicative and performance-based. Any equivalent or superior technology meeting the functional and operational requirements shall be acceptable. No specific OEM, chipset, or proprietary technology is mandated.)
 - e) Industrial-grade, mount-on-metal RFID tags suitable for aviation maintenance environments.
 - f) Secure communication between edge devices and backend systems
- (ii) The system shall support multi-location deployment with centralised visibility, while enabling location-wise segregation of data and access control.
- (iii) The architecture shall be scalable to support future expansion to support:
 - a) at least 2,00,000 tools,
 - b) transaction volumes typical of large aircraft maintenance tool stores, and
 - c) concurrent access by multiple users without degradation of performance.

- (iv) The system architecture shall support real-time synchronisation between handheld devices and the central system, with offline data capture capability during network unavailability.

C2: SOFTWARE PLATFORM

The software platform shall:

- (i) Support end-to-end lifecycle management of aircraft maintenance tools
- (ii) Be accessible through standard web browsers without proprietary plugins
- (iii) Provide a dedicated Android mobile application for handheld RFID operations
- (iv) Support role-based access control (Admin, Store Operator, Engineer, QA, Auditor)
- (v) Maintain secure, tamper-resistant, time-stamped audit logs for all transactions
- (vi) Allow configuration of workflows, rules, and thresholds without source-code changes
- (vii) Support offline operations on handheld devices with automatic synchronisation upon network availability
- (viii) Be capable of handling high-volume RFID reads and batch transactions typical of large tool inventories
- (ix) The system shall provide configurable dashboard views for supervisors and management to monitor tool availability, pending returns, and exception conditions.

Note:

For the purpose of this Tender, AI-enabled/Intelligent functionality refers to intelligent analytics, predictive alerts, anomaly detection, exception monitoring, or intelligent search functions applied to tool tracking data. Advanced machine learning models are not mandatory unless proposed by the bidder.

C2.1: System Hosting

- (i) The proposed system shall be deployable either on AIESL's on-premise infrastructure or on Government of India-approved cloud infrastructure empanelled by MeitY, as decided by AIESL.
- (ii) The hosting infrastructure shall comply with the data residency and security requirements specified in this Tender.
- (iii) All software licensing, database licensing, hosting, and system infrastructure required for operation of the system during the Contract Period shall be deemed included in the quoted price.
- (iv) No separate payment shall be admissible for hosting, software licensing, or database licensing during the Contract Period.

C3: FUNCTIONAL CAPABILITIES

The system shall provide, at a minimum, the following functionalities:

a) Tool Identification & Mapping

- (i) Unique digital identity for each tool through RFID tag, QR code, or barcode as applicable.
- (ii) Mapping of individual tools to parent tool kits/boxes
- (iii) Logical association for non-taggable tools or special items where physical RFID tagging is not operationally feasible.
- (iv) Support for bulk tool onboarding and master updates

b) Issuance & Return

- (i) RFID-based issuance and return of tools
- (ii) Configurable approval workflows
- (iii) Capture of job card/work order/employee ID/purpose
- (iv) Support for batch issuance and batch returns of multiple tools
- (v) The system shall provide visual and audible confirmation of successful tool scans to minimise operational errors.

c) Calibration & Maintenance

- (i) Tracking of time-based and usage-based calibration thresholds
- (ii) Automated alerts for tools due or overdue for calibration/repair
- (iii) Automatic blocking of overdue or unserviceable tools from issuance
- (iv) Storage and retrieval of calibration and maintenance certificates

d) Inventory & Audit

- (i) Location-wise and store-wise inventory reconciliation
- (ii) Identification of missing, excess, misplaced, or unauthorised tools
- (iii) High-speed inventory scanning using handheld readers
- (iv) Proximity-based tool finder to support Foreign Object Damage (FOD) prevention without mandating real-time location tracking infrastructure and without requiring RTLS or active tracking systems
- (v) All audit-relevant information relating to monitoring and measuring equipment shall be retrievable through system-generated reports.

- (vi) The system and the Master Register shall support DGCA surveillance, regulatory audits, and AS/EN 9110C compliance verification, including Clause 7.1.5.2, without reliance on external spreadsheets, manual registers, or offline records.

C3.1: AS9110C-Compliant Master Register & Reporting

The proposed system shall support the creation and maintenance of a controlled Master Register of monitoring and measuring equipment, compliant with AS/EN 9110C Clause 7.1.5.2.

The system shall:

- (i) Maintain structured fields for equipment type, unique ID, location, calibration method, frequency, and acceptance criteria
- (ii) Enforce linkage between the equipment master and calibration records
- (iii) Prevent issuance of tools where calibration status or acceptance criteria are not met
- (iv) Generate system-based Master Register reports for DGCA/quality audits

The Master Register shall be retrievable at any point in time through system reports, eliminating the need for manual compilation.

C4: INTEGRATION & DATA MANAGEMENT

- (i) The system shall be ERP/SAP integration-ready through secure APIs
- (ii) All operational, transactional, and audit data shall be exportable in standard formats (Excel/CSV/PDF)

C5: RFID TAG REQUIREMENTS

- (i) The RFID tagging solution proposed under this Tender shall support different categories of tools based on their size, operational environment, and mounting requirements.
- (ii) For the purpose of system design and tagging methodology, the following indicative RFID tag categories shall be considered:

Tool Category	RFID Tag Type	Typical Application
Small Tools	Micro On-Metal RFID Tag	Screwdrivers, Allen keys, small spanners, pliers
Medium Tools	Standard On-Metal RFID Tag	Torque wrenches, measuring devices, pneumatic tools
Heavy Tools	Rugged Industrial RFID Tag	Fixtures, jigs, special aircraft maintenance tools
Tool Boxes/Tool Kits	Hard RFID Tag	Tool boxes and kit containers

- (iii) The above categorisation is indicative and provided to assist bidders in designing a suitable tagging strategy.

- (iv) The bidder shall determine the most appropriate RFID tag type for each tool category to ensure reliable performance in aircraft maintenance environments characterised by dense metal surfaces, vibration, oil contamination, and industrial handling.
- (v) All RFID tags supplied under this contract shall:
 - a) comply with EPC Class 1 Gen 2/ISO 18000-63 standards,
 - b) operate in the ETSI UHF band (865–868 MHz),
 - c) be suitable for metal surface mounting, and
 - d) provide durable performance under industrial MRO operating conditions.
- (vi) Where RFID tagging is not feasible due to tool size or operational constraints, the system shall support identification using QR code or barcode technology while maintaining full digital traceability.

C5.1: RFID TAG GENERAL REQUIREMENTS

RFID tags supplied under this Contract shall comply with the classification and performance requirements specified in **Annexure-F**, which forms an integral part of the Technical Requirements.

All RFID tags shall:

- (i) be UHF RFID EPC Class 1 Gen 2 compliant
- (ii) be suitable for metal tool application (mount-on-metal or equivalent proven solution)
- (iii) be resistant to oil, grease, vibration, moisture, and workshop contaminants
- (iv) be suitable for long-term industrial use
- (v) not be easily removable without visible damage
- (vi) support long-term data retention and multiple rewrite cycles

Paper-based, disposable, or retail-grade RFID labels shall not be accepted.

C5.2: RFID Tag Operational Life

RFID tags supplied under the project shall have a minimum operational life of five (5) years under normal aviation maintenance environment conditions.

C5.3: Tagging Suitability & Durability

- A) RFID tags shall be suitable for deployment on:
 - (i) small tools
 - (ii) medium tools
 - (iii) heavy/critical tools
 - (iv) tool boxes and large equipment
- B) Tags shall withstand:
 - (i) industrial vibration and handling
 - (ii) exposure to oils, grease, and solvents
 - (iii) impact during normal maintenance operations
 - (iv) temperature variations typical of indoor hangar and workshop environments

C6: HARDWARE PERFORMANCE REQUIREMENTS

- (i) Equipment supplied shall be new, unused, and of current production models supported by the OEM.
- (ii) Industrial-grade equipment shall mean equipment designed for continuous use in industrial or workshop environments.
- (iii) The hardware components proposed under this Contract shall be industrial-grade and suitable for continuous operation in aircraft maintenance hangars, tool stores, and workshop environments.
- (iv) Specifications provided herein are performance-based and indicative. Equivalent or superior configurations that meet the functional and operational requirements shall be acceptable. No specific OEM, chipset, proprietary technology, or country of origin is mandated.
- (v) RFID shall be the primary identification technology for automated tool tracking. However, the system shall also support QR code and barcode identification for tools where RFID tagging is not technically feasible.
- (vi) Detailed minimum technical specifications for RFID tags are provided in Annexure-F, which shall be read together with Clause C5.

C6.1: RFID Fixed Desktop/Kiosk Readers

The system shall support future expansion, including additional readers or zones without major hardware replacement.

C6.1.1: Standards & Compatibility

The RFID reader solution shall:

- (i) operate in ETSI-compliant UHF RFID frequency band (865–868 MHz)
- (ii) support EPC Class 1 Gen 2/ISO 18000-63 compliant tags
- (iii) support multi-tag reading with anti-collision capability

C6.1.2: Operational Capability

The readers shall:

- (i) support tool issuance and return operations at tool counters
- (ii) support rapid batch reading of multiple tools
- (iii) provide configurable read zones to prevent unintended reads
- (iv) provide reliable performance in dense metal environments

C6.1.3: Connectivity & Security

The readers shall:

- (i) support Ethernet and/or secure wireless connectivity
- (ii) support secure communication using industry-standard encryption protocols with backend systems

C6.1.4: Power & Installation

The readers shall support:

- (i) standard power supply and/or Power over Ethernet (PoE)
- (ii) installation suitable for tool crib/counter operations

C6.2: RFID HANDHELD READERS

C6.2.1: Functional Capability

Handheld RFID devices shall:

- (i) support UHF RFID reading compliant with EPC Gen2 standards
- (ii) support barcode and/or QR code scanning capability
- (iii) support tool issuance, return, and inventory audit operations
- (iv) support high-speed inventory scanning
- (v) operate on an Android-based platform compatible with the proposed application

C6.2.2: Performance Requirements

The handheld readers shall:

- (i) provide reliable read performance in dense metal environments
- (ii) support rapid multi-tag scanning for inventory audits
- (iii) provide visual and/or audible scan confirmation
- (iv) support offline operation with automatic data synchronisation
- (v) battery shall support a minimum of one full operational shift under normal usage.
- (vi) handheld readers shall be capable of scanning at least 200 RFID tags per minute under normal tool store conditions.

C6.2.3: Ruggedness & Ergonomics

The handheld device shall:

- (i) be ergonomically suitable for prolonged one-hand operation
- (ii) withstand drops during normal industrial use
- (iii) be suitable for dusty and workshop environments
- (iv) be rugged for daily operational handling

C6.2.4: RFID Reader Performance Requirement

RFID readers shall support anti-collision reading capability and shall be capable of reading multiple tagged tools simultaneously during inventory scanning operations.

C6.2.5: Minimum System Accuracy Requirement

- (i) The RFID tool tracking system shall demonstrate a minimum operational accuracy of 95% during tool issuance, return transactions, and inventory scanning operations under normal operational conditions.
- (ii) Operational accuracy shall be assessed during Pilot implementation and subsequent rollout through joint verification by AIESL and the Service Provider.
- (iii) If the system fails to meet the minimum accuracy requirement, the Service Provider shall undertake corrective measures, including additional hardware deployment, system tuning, or tag replacement, without any additional cost to AIESL.

C6.3: Minimum Hardware Deployment Baseline

For bid comparison and minimum technical compliance, the proposed solution shall provide at least the following hardware baseline:

Hardware	Minimum Requirement
RFID Handheld Readers	50 Units
RFID Desktop/Kiosk Readers	25 Units
RFID Encoding Stations	06 Units

The above baseline shall not relieve the Bidder of responsibility for deploying any additional hardware required for successful system performance.

The above baseline quantities shall be treated as minimum quantities for technical compliance and bid comparison.

C6.4: Performance Validation

Final acceptance of RFID hardware and tags shall be subject to successful pilot demonstration, including:

- (i) read reliability under tool store operating conditions
- (ii) performance in dense metal environments
- (iii) tag durability under operational handling
- (iv) accuracy during batch scanning and inventory audits

C6.5: Compliance Documentation

Bidders shall submit:

- (i) OEM datasheets for proposed hardware and RFID tags
- (ii) confirmation of EPC Gen2 compliance
- (iii) environmental and durability specifications
- (iv) tag mounting methodology

AIESL reserves the right to seek physical samples and/or conduct performance verification during technical evaluation and pilot implementation.

C7: SECURITY, COMPLIANCE, AND DATA RESIDENCY

- (i) Secure user authentication mechanisms
- (ii) Role-based permissions and access segregation
- (iii) Compliance with DGCA audit, safety, and traceability requirements
- (iv) Secure storage of operational data, audit logs, and documents

- (v) Protection against unauthorised access, data tampering, and misuse
- (vi) All primary application servers, databases, and backups hosting AIESL operational data under this Contract shall be located within the territory of India.
- (vii) No AIESL data shall be stored, processed, or mirrored outside India without prior written approval of AIESL.
- (viii) Backup and disaster recovery locations shall also be located within India.
- (ix) The Service Provider shall ensure that the security controls remain effective throughout the implementation, warranty, and AMC period.

C7.1: Data Retention

- (i) The Service Provider shall retain all system data, including master data, transactional data, audit logs, calibration records, and system backups, for the entire Contract Period and for a minimum period of one (01) year thereafter, unless otherwise directed in writing by AIESL.
- (ii) Upon expiry or termination of the Contract, the Service Provider shall ensure complete handover of all retained data to AIESL in usable electronic formats, in accordance with the Exit Management provisions of this Tender.

C8: PERFORMANCE BENCHMARKS

The system shall be capable of completing bulk RFID inventory scans of a standard tool store containing approximately 5,000 tools within a reasonable operational time compatible with routine tool store activities, and such capability shall be demonstrated during pilot validation.

C9: WARRANTY AND SPARE HARDWARE REQUIREMENT

C9.1: Warranty

- (i) All hardware components supplied under this Contract, including RFID readers, handheld devices, RFID tags, and associated equipment, shall carry a minimum warranty period of twelve (12) months from the date of Full Go-Live and final written acceptance by AIESL after completion of rollout.
- (ii) During the warranty period, the Service Provider shall repair or replace defective components at no additional cost to AIESL.

C9.2: Spare Hardware Requirement

- (i) The Service Provider shall supply adequate spare hardware to ensure uninterrupted system operation during the implementation and AMC period.
- (ii) The minimum spare hardware shall include spare RFID tags, handheld readers, and critical components required for replacement in case of operational failure.
- (iii) The quantity of such spare hardware shall be sufficient to support operational continuity and shall be included in the quoted price.

- (iv) Spare hardware and RFID tags required for continuity of operations during implementation, warranty, and AMC period shall be deemed included in the quoted Contract Value.

C10: INTELLECTUAL PROPERTY, LICENSING, DATA RIGHTS, EXIT MANAGEMENT, AND BUSINESS CONTINUITY

C10.1: Software Licensing and Usage Rights

- (i) The software platform supplied under this contract shall grant AIESL a non-exclusive, irrevocable licence for continued internal use of the deployed system, subject to the terms of this Tender and Contract.
- (ii) All software components required for operation of the system, including database licences, middleware, and application modules, shall be included within the quoted contract price.
- (iii) The Service Provider shall not impose any additional licence fee, subscription charge, or usage restriction during the contract period.

In the event of expiry or termination of the contract, AIESL shall retain full access to the system data and shall be able to export all data without restriction.

C10.2: Data Ownership and Access Rights

- (i) Ownership of the proprietary software, firmware, and underlying intellectual property shall remain with the OEM/Service Provider.
- (ii) Notwithstanding the above, AIESL shall have a perpetual, irrevocable, royalty-free, non-exclusive right to use the deployed system, configurations, workflows, dashboards, reports, and all data generated therefrom, for its internal operations.
- (iii) All data, including master data, transactional data, audit logs, calibration records, and reports generated under this Contract shall be the exclusive property of AIESL.
- (iv) The Service Provider shall not assert any lien, restriction, or vendor lock-in over AIESL data, and shall provide unrestricted data access and export in standard formats at all times.
- (v) In the event the Service Provider discontinues support for the deployed system, ceases operations, or is otherwise unable to provide contractual services, the Service Provider shall ensure reasonable cooperation, documentation, and technical assistance to enable AIESL to continue uninterrupted use of the system or migrate to an alternate solution, without additional cost.
- (vi) The Service Provider shall ensure that all software licences required for operation of the system during the Contract Period are valid and included in the Contract Value. AIESL shall not be required to procure any additional licences for normal system operation.

C10.3: Data Portability and Exit Management

- (i) All data generated, stored, or processed through the AI-enabled/Intelligent Digital Tool Tracking System shall remain the exclusive property of AIESL.
- (ii) Upon expiry or termination of the contract, the Service Provider shall provide complete export of all system data, configurations, and tool-tracking records in a standard interoperable format (such as CSV, XML, or equivalent) without any additional cost to AIESL.
- (iii) The Service Provider shall extend reasonable technical support to facilitate migration of the system data to any future system deployed by AIESL.

No proprietary restrictions shall prevent AIESL from accessing, exporting, or migrating its data.

C10.4: Business Continuity and System Continuity Protection

- (i) The Service Provider shall ensure ongoing support, maintenance, and operability of the deployed system throughout the entire Contract Period, including the Five-Year AMC period and any approved extensions.
- (ii) In the event that the Service Provider ceases business operations, discontinues support for the deployed system, becomes insolvent, or is otherwise unable to fulfil its contractual obligations, the Service Provider shall provide all reasonable cooperation and assistance necessary to enable AIESL to continue operating the system independently or through an alternate support agency.
- (iii) Such cooperation shall include, without limitation, transfer or handover of all relevant system documentation, configuration manuals, workflow configurations, API specifications, database schema, installation procedures, administrative access credentials, and such other technical details as may be reasonably required for uninterrupted operation, maintenance, or migration of the system.
- (iv) Where the deployed solution is based on proprietary software, the Service Provider shall ensure appropriate escrow, continuity, or equivalent protective arrangements sufficient to safeguard AIESL's continued operational use of the system during the Contract Period and in the contingencies specified above.
- (v) The obligations under this clause shall be fulfilled without any additional financial liability to AIESL.
- (vi) Nothing in this clause shall affect AIESL's ownership rights over data, records, reports, configurations specifically developed for AIESL operations, or its right to access, export, and use such data in accordance with this Tender and the Contract.

C11: REGULATORY AUDIT & COMPLIANCE EVIDENCE

The proposed system shall demonstrably support regulatory audit requirements, including DGCA audits. As part of technical evaluation and/or pilot acceptance, the Bidder shall provide:

- (i) Sample reports demonstrating historical tool issuance, return, and movement traceability
- (ii) Evidence of automatic blocking of overdue or unserviceable tools
- (iii) Calibration due/overdue reports with audit trail
- (iv) Ability to retrieve records for a specified historical period

Successful pilot acceptance shall include validation of the above capabilities by AIESL.

The above evidence shall be demonstrable through system-generated reports and records.

C12: CYBERSECURITY INCIDENT REPORTING

Any cybersecurity incident or suspected compromise affecting the availability, integrity, or confidentiality of AIESL data shall be reported to AIESL IT within six (06) hours and a detailed incident report within forty-eight (48) hours of detection, along with corrective and preventive action details.

C13: SYSTEM INTEGRATION AND INTEROPERABILITY

- (i) The RFID-based Digital Tool Tracking System shall be capable of integration with external enterprise systems such as ERP, MRO, inventory management, or other enterprise applications used by AIESL.
- (ii) The Service Provider shall ensure that the system provides open, well-documented Application Programming Interfaces (APIs) or industry-standard integration mechanisms to enable such integration.
- (iii) The Service Provider shall provide all necessary API documentation, data schema definitions, and integration support required for interface development.
- (iv) No additional licensing restriction or proprietary lock-in shall prevent AIESL from integrating the system with other enterprise systems during the Contract Period.

SECTION D - ELIGIBILITY CRITERIA

The Bidder must meet all the following eligibility criteria. These criteria are mandatory and shall be evaluated on a Pass/Fail basis. Failure to meet any one criterion shall render the bid technically non-responsive.

The Bidder shall be a legal entity registered and incorporated in India, such as a Company, LLP, Partnership Firm, or Proprietorship, legally authorised to conduct business in India. Documentary proof of legal constitution and registration shall be submitted with the Technical Bid.

D1: JOINT VENTURES/CONSORTIUM

- (i) Joint Venture (JV)/Consortium bids shall not be permitted for this Tender.
- (ii) The Bidder shall be solely responsible for execution of the entire scope of work, compliance with Tender conditions, and performance of contractual obligations.

D2: EXPERIENCE CRITERIA

D2.1: Definition of Similar Work

- (i) For this Tender, "Similar Work" shall mean implementation of AI-enabled/Intelligent Digital Tool Tracking Systems (Supporting RFID/QR/Barcode Identification Technologies) involving deployment of a software platform along with associated RFID hardware (including readers and tags), asset/tool tagging, configuration of operational workflows, and post-implementation support and maintenance, in a live operational environment involving a minimum of 10,000 (Ten Thousand) tagged assets/tools.
- (ii) Projects executed in aviation, engineering, manufacturing, logistics, defence, or other safety-critical environments shall be considered as similar works.

D2.2: Minimum Experience Requirement

The bidder (in case of non-MSE/non-Startup entities) shall have a minimum of three (03) years of experience in the design, supply, implementation, and support of RFID-based or digital asset-tracking systems.

The Bidder shall have satisfactorily executed at least one (01) AI-enabled/Intelligent digital tool-tracking project (Supporting RFID/QR/Barcode Identification Technologies) in a live operational environment involving a minimum of 10,000 (Ten Thousand) tagged assets/tools before the bid submission date.

D2.3: Similar Work Value Criteria

- (i) In addition to Clause D2.2 above, the Bidder shall have executed similar works satisfying any one of the following value-based criteria:
 - a) Three (03) similar completed works, each having a contract value of not less than ₹0.80 Crore; OR
 - b) Two (02) similar completed works, each having a contract value of not less than ₹1.00 Crore; OR

- c) One (01) similar completed work having a contract value of not less than ₹1.60 Crore.
- (ii) The contract value referred to above shall be exclusive of applicable taxes and duties.

Note:

Notwithstanding the above, relaxation in turnover requirements for DPIIT-recognised Startups shall be applicable strictly in accordance with Clause A4.4 of this Tender Document.

Evaluation of such bidders shall be carried out accordingly, subject to submission of valid documentary proof and compliance with all other requirements of the Tender.

D2.4: Documentary Evidence

- (i) The Bidder shall submit self-attested documentary evidence in support of experience claimed under Clauses D2.2 and D2.3 above, such as:
 - a) Copy of Work Order/Contract Agreement;
 - b) Completion Certificate/Go-Live Certificate issued by the client;
 - c) In case of ongoing projects, a client-issued certificate confirming satisfactory performance and operational status.
- (ii) Failure to submit complete, verifiable, and authentic documentary evidence shall render the bid technically non-responsive.

D2.5: Applicability to MSEs/Startups

Exemption, if any, to eligible Micro and Small Enterprises (MSEs) and DPIIT-recognised Startups from turnover and prior experience requirements shall be governed strictly by Clause A4 of this Tender and applicable Government of India guidelines, and shall not dilute the requirements relating to technical capability and operational scale.

D2.6: Verification of Bidder Credentials

- (i) AIESL reserves the right to independently verify the experience, credentials, and technical claims made by the bidder in support of eligibility and technical qualification.
- (ii) For this purpose, AIESL may contact the client organisations where the bidder has executed similar projects, seek additional documentation, or request a demonstration of the proposed solution.
- (iii) If any information submitted by the bidder is found to be false, misleading, or unverifiable, the bid shall be rejected, and appropriate action may be taken in accordance with the provisions of this Tender and applicable Government of India procurement guidelines.

D3: TECHNICAL CAPABILITY

- (i) The proposed AI-enabled/Intelligent Digital Tool Tracking System (supporting RFID/QR/Barcode Identification Technologies) shall be a proven, production-grade solution already deployed in live operational environments and shall not be a prototype, pilot, or beta version.
- (ii) The system may be configured or customised to meet AIESL's operational requirements, provided that the underlying platform is a proven, deployed solution.
- (iii) The Bidder shall demonstrate the capability to supply, install, configure, integrate, and support the complete solution, including:
 - a) RFID hardware (desktop kiosk readers, handheld readers, RFID tags)
 - b) Web-based enterprise software platform
 - c) Mobile application for shop-floor and tool store operations
- (iv) The proposed solution shall be demonstrably capable of supporting large-scale operations, including:
 - a) Multiple locations operating concurrently
 - b) Large tool populations (up to and beyond 1,00,000 tools)
 - c) Transaction volumes comparable to those of large aircraft maintenance tool stores
 - d) Multiple concurrent users are typical of tool store and maintenance operations

D4: FINANCIAL ELIGIBILITY

- (i) The bidder shall have an average annual turnover of not less than ₹1 Crore during the last three financial years ending 31 March 2025.
- (ii) The bidder shall have a positive net worth in the last three financial years.
- (iii) Self-attested copies of audited financial statements (Balance Sheet, P&L, Auditor's Report) for the last three financial years shall be submitted.
- (iv) This criterion shall be relaxed to eligible Micro and Small Enterprises (MSEs) and DPIIT-recognised Startups claiming exemption under Clause A4 of this Tender, subject to compliance with applicable Government of India procurement guidelines.

D5: STATUTORY & LEGAL COMPLIANCE

- (i) The Bidder shall be registered in India and shall possess:
 - a) Permanent Account Number (PAN)
 - b) Goods and Services Tax (GST) registration
- (ii) The Bidder shall submit a self-declaration/undertaking confirming that it has not been blacklisted, debarred, or banned from business dealings by any Central Government, State Government, PSU, or statutory authority as on the bid submission date.
- (iii) In case the Bidder is an authorised system integrator, a valid OEM authorisation letter specific to this Tender shall be submitted.

D6: MANPOWER STRENGTH

- (i) The Bidder shall have adequate qualified technical, implementation, and support personnel to execute the scope of work.
- (ii) For non-MSE/non-Startup bidders, the Bidder shall have adequate technical, implementation, and support manpower commensurate with the scope of work.
- (iii) For eligible MSEs and DPIIT-recognised Startups claiming exemption, AIESL shall assess the adequacy of manpower based on the deployment plan, key personnel CVs, and proposed support structure.
- (iv) A self-certification, duly signed by the authorised signatory/Head of HR, shall be submitted.

D7: RFID TAG COMPLIANCE DOCUMENTATION

- (i) Bidders shall submit manufacturer/OEM datasheets for each RFID tag category proposed, clearly demonstrating compliance with Section C and Annexure-F of this Tender.
- (ii) Read range shall be evaluated for operational suitability during pilot validation and not solely on catalogue values.
- (iii) AIESL reserves the right to seek physical samples of RFID tags for verification and/or conduct field validation during the technical evaluation of the bids.

SECTION E - DELIVERABLES & MILESTONES

E1: PHASE-WISE DELIVERABLES

Phase I - Requirement Study & Planning

- (i) Detailed study of existing tool management processes at identified AIESL locations, including multiple tool stores and large tool volumes (approximately 1,00,000 tools).
- (ii) Finalisation of System Requirement Specification (SRS).
- (iii) Finalisation of Functional Requirement Specification (FRS).
- (iv) Finalisation of a phase-wise implementation and rollout plan clearly indicating location-wise deployment, tagging methodology, hardware placement, manpower deployment, and timelines.

Deliverable: Approved SRS, FRS, and Implementation & Rollout Plan.

Phase II - Tool Audit & Master Data Preparation

- (i) Physical audit of tools, tool kits, and tool boxes across identified AIESL locations.
- (ii) Data entry, cleansing, and validation of tools data, including tool-to-kit mapping.
- (iii) Finalisation of RFID tagging strategy (tool-wise/box-wise/logical association, as applicable).
- (iv) Data upload, validation, and reconciliation in the system.

Deliverable: Verified and approved Tools Data for all identified locations.

Phase III - Hardware Supply & RFID Tagging

- (i) Supply, installation, and commissioning of RFID desktop kiosk readers and handheld readers as per the approved implementation plan.
- (ii) RFID tagging of tools and tool boxes, including high-volume tagging operations.
- (iii) Tag encoding, mapping, and system validation.
- (iv) Verification of tag readability and accuracy in actual operational environments (tool stores, hangars, etc.).

Deliverable: Location-wise Hardware Installation and RFID Tagging Completion Report.

Phase IV - Software Configuration & Training

- (i) Configuration of workflows for issuance, return, transfer, calibration, repair, and scrap.
- (ii) User role creation and role-based access control.
- (iii) Deployment of web-based platform and mobile application.
- (iv) User training for tool store staff, engineering personnel, QA personnel, auditors, and administrators.
- (v) Generation of AS9110C-compliant Monitoring & Measuring Equipment Master Register.

Deliverable: Configured System, Master Register Validation Report, and Training Completion Certificate.

AS9110C - Compliant Monitoring & Measuring Equipment Master Register:

- (i) The Service Provider shall submit a system-generated Master Register report covering all calibrated tools, demonstrating compliance with AS/EN 9110C Clause 7.1.5.2.
- (ii) The report shall include all mandatory attributes and shall be reviewed and accepted by AIESL Quality/Audit representatives.
- (iii) Successful acceptance of this deliverable shall be a mandatory prerequisite for Pilot Go-Live approval.

Phase V - Pilot Implementation & Go-Live (Nagpur)

The pilot implementation shall be treated as an integral part of the Contract and shall be executed within the quoted Contract Price.

No separate or additional payment shall be admissible for pilot deployment, stabilisation, optimisation, proof-of-concept, or demonstration activities.

- (i) Pilot implementation at AIESL Nagpur, covering approximately 20,000 tools (about 20% of the total project scope).
- (ii) Resolution of defects and optimisation based on pilot observations.
- (iii) Operational validation and Pilot Go-Live at Nagpur.

Successful completion of the Pilot shall be certified in writing by the Authorised Officer nominated by AIESL.

Successful completion of the Pilot shall be a mandatory precondition for rollout across the remaining AIESL locations.

Deliverable: Pilot Go-Live and User Acceptance Certificate (UAT).

Phase VI - Rollout & Post Go-Live Support

- (i) Rollout of the system across the remaining AIESL locations.
- (ii) Stabilisation support post rollout.
- (iii) Comprehensive software and hardware support.
- (iv) SLA-based support during the Five-Year Comprehensive AMC period.

Deliverable: AMC Commencement Certificate.

The Pilot implementation shall not be treated as a separate commercial phase and shall form part of the overall contract value.

E2: MILESTONE TIMELINE

Milestone	Timeline from Date of Acceptance of LoA
Phase I Completion	Within 04 weeks
Phase II Completion	Within 08 weeks
Phase III Completion	Within 16 weeks
Phase IV Completion	Within 20 weeks
Phase V – Pilot Go-Live (Nagpur)	Within 24 weeks

- (i) The above timelines represent the maximum implementation timelines. Detailed implementation scheduling may be refined during Phase I, subject to approval by AIESL, without exceeding the overall pilot Go-Live timeline of 24 weeks.
- (ii) However, the overall Pilot Go-Live timeline shall not exceed 24 weeks, unless extended by AIESL in writing.

E3: ACCEPTANCE CERTIFICATION

- (i) Completion of each milestone shall be subject to verification and certification by the Authorised Officer nominated by AIESL.
- (ii) Service Provider shall submit a Milestone Completion Report along with supporting evidence of deliverables and operational validation.
- (iii) After verification of deliverables and operational functionality, AIESL shall issue a Milestone Acceptance Certificate confirming satisfactory completion.
- (iv) Release of payment against any milestone shall be subject to the issuance of the Milestone Acceptance Certificate.

- (v) Submission of invoices or supply documentation alone shall not constitute proof of milestone completion.
- (vi) Final Project Completion shall be recognised only upon issuance of a Go-Live and Project Completion Certificate by the Authorised Officer of AIESL.

E4: ACCEPTANCE CRITERIA

- (i) Each phase shall be deemed complete only upon written acceptance by the Authorised Officer of AIESL.
- (ii) Any deficiencies, gaps, or non-conformities identified within the predefined scope of work shall be rectified by the Service Provider at no additional cost.
- (iii) Delay in achievement of milestones attributable to the Service Provider may attract Liquidated Damages as per tender terms.
- (iv) Partial completion of any phase shall not be treated as milestone completion unless expressly accepted by AIESL.

E5: Minimum Operational Coverage Requirement

- (i) For milestone completion and payment eligibility, the Service Provider shall ensure that a minimum of ninety-five per cent (95%) of the total tools identified for digitisation at the respective location are successfully RFID tagged and operationally readable through the system.
- (ii) A tool shall be considered successfully digitised only when:
 - a) The RFID tag is physically affixed and securely mounted.
 - b) The RFID tag is encoded and mapped to the correct tool record.
 - c) The tool is visible in the system inventory database.
 - d) The RFID tag is readable through RFID readers during verification scans.
 - e) Tool participates in operational workflows (issuance, return, audit).
- (iii) Milestone completion shall be confirmed through joint verification by AIESL and the Service Provider.
- (iv) If operational coverage falls below 95%, the milestone shall be treated as incomplete, and payment shall remain withheld until compliance is achieved. Remaining tools shall be tagged and integrated within the implementation period as approved by AIESL.
- (v) Tools that cannot be RFID tagged due to operational constraints may be managed through logical association in the system, subject to written approval by AIESL.

E6: LOCATION-WISE IMPLEMENTATION ROLLOUT

- (i) Implementation shall follow a phased rollout beginning with Pilot implementation at AIESL Nagpur. Upon successful Pilot acceptance, deployment shall proceed to the remaining locations.

Indicative rollout sequence (subject to operational readiness of locations):

- a) Nagpur (Pilot)
 - b) Delhi
 - c) Mumbai
 - d) Hyderabad
 - e) Thiruvananthapuram
 - f) Kolkata
- (ii) The detailed rollout schedule shall be finalised during Phase I.
 - (iii) Any delay attributable to the Service Provider shall attract Liquidated Damages.

E7: PRICE FIRMNESS FOR ENTIRE PROJECT SCOPE

- (i) The Pilot implementation at Nagpur is intended solely for the validation of operational suitability.
- (ii) The prices quoted in the Price Bid shall remain firm and binding for the entire scope of work covering all AIESL locations.
- (iii) Successful completion of the Pilot shall not entitle the Service Provider to seek any revision in quoted prices, quantities, or commercial terms.
- (iv) The rollout across all locations shall be executed strictly at the quoted contract rates, without any escalation arising from pilot observations.
- (v) No Additional Cost After Pilot Validation
 - a) Any optimisation, adjustment, or enhancement required after Pilot implementation to achieve the performance, coverage, and functional requirements specified in this Tender, including additional RFID tags, readers, hardware tuning, software configuration, workflow modifications, or tagging methodology changes, shall be carried out by the Service Provider without any additional financial implication to AIESL.
 - b) Such corrective actions shall be deemed part of the Service Provider's obligations under the quoted Contract Price.

E7A: Pre-Deployment RFID Tag Validation

- (i) Prior to the commencement of large-scale RFID tagging, the Service Provider shall submit representative samples of the proposed RFID tags for validation and approval by AIESL.
- (ii) The submitted tags shall be tested under actual operational conditions, including mounting on metal tools, exposure to oils, grease, vibration, and routine tool handling environments.
- (iii) Large-scale tagging activities shall commence only after written approval of the RFID tag samples by AIESL.
- (iv) If the approved RFID tags fail to meet the required performance standards during pilot implementation or operational usage, the Service Provider shall replace the tags with suitable alternatives at no additional cost to AIESL.
- (v) Approval of RFID tag samples by AIESL shall not relieve the Service Provider of its responsibility to ensure compliance with all performance requirements specified in the Tender.

E8: RFID TAG ACCEPTANCE & VALIDATION

- (i) All RFID tags shall be tested during pilot implementation for read performance and durability under actual tool store and hangar conditions.
- (ii) Tags failing to meet performance requirements shall be replaced at no additional cost to AIESL.
- (iii) Final acceptance of RFID tagging shall be subject to successful validation during Pilot implementation and subsequent Go-Live verification.
- (iv) Replacement of RFID tags, hardware, or system components during the AMC period shall be carried out at no additional cost, except in cases of wilful damage or misuse established through joint inspection.
- (v) Minimum Read Performance Requirement
 - a) The RFID tagging solution deployed under this Contract shall demonstrate reliable operational performance during Pilot implementation and subsequent rollout.
 - b) During verification and inventory scanning operations, the system shall demonstrate a minimum read success rate of ninety-five per cent (95%) or higher under normal tool store operating conditions, including tool storage racks, tool kits, and metallic environments typical of aircraft maintenance facilities.
 - c) If the read performance falls below the minimum acceptable threshold during Pilot validation or operational testing, the Service Provider shall undertake necessary corrective actions, including replacement of RFID tags, repositioning of tags, tuning of readers, or deployment of additional hardware, without any additional cost to AIESL.
 - d) Pilot acceptance and rollout approval shall be subject to satisfactory achievement of the required operational readiness performance.

E9: RFID TAG DURABILITY & FAILURE LIABILITY

- (i) All RFID tags supplied and installed under this Contract shall be industrial-grade, mount-on-metal compatible, and suitable for long-term deployment in aircraft maintenance environments, including tool stores, hangars, and workshops.
- (ii) The Service Provider shall ensure that RFID tags remain securely affixed, readable, and operational throughout the Contract Period, including the Five-Year Comprehensive AMC period, under normal operational conditions.
- (iii) If any RFID tag becomes:
 - a) unreadable,
 - b) detached,
 - c) damaged, or
 - d) otherwise non-functionalduring normal operational use, the Service Provider shall replace the tag at no additional cost to AIESL, including the cost of the replacement tag, re-tagging, re-encoding, and database re-mapping.
- (iv) For the purpose of this clause, normal operational use shall include exposure to typical aviation maintenance environments such as:
 - a) tool handling and movement
 - b) oils, grease, and workshop contaminants
 - c) vibration and routine operational handling
 - d) normal temperature variations in indoor maintenance environments
- (v) Replacement obligations shall not apply in cases of wilful damage, theft, or misuse, duly established through joint inspection and recorded in writing by AIESL.
- (vi) The Service Provider shall maintain sufficient stock of replacement RFID tags to ensure that tag replacement and system restoration is completed within the SLA response timelines specified in this Tender.
- (vii) Failure to maintain operational RFID tagging coverage as required under Clause E5 (Minimum Operational Coverage Requirement) due to defective or failed tags shall be treated as a service deficiency under the SLA framework.

SECTION F - SERVICE LEVEL AGREEMENT (SLA)

F1: SYSTEM AVAILABILITY

- (i) The AI-enabled/Intelligent Digital Tool Tracking System (Supporting RFID/QR/Barcode Identification Technologies) shall maintain a minimum system uptime of 99.5% per calendar month, excluding scheduled maintenance.
- (ii) System uptime shall be measured at the application and database layer, covering core operational functionalities including issuance, return, audit, and reporting.
- (iii) Scheduled maintenance, if any, shall be carried out only during non-operational hours, with prior written intimation of at least 48 hours to AIESL.
- (iv) Unscheduled downtime attributable to the Service Provider shall be considered for SLA computation.
- (v) System uptime and SLA compliance shall be measured based on system logs and reports generated by the deployed application, as validated by AIESL.

F1A: SLA Uptime Measurement Methodology

- (i) System uptime shall be measured on a monthly basis and calculated as the percentage of total operational hours during which the system is fully functional and accessible to authorised users.
- (ii) For the purpose of uptime calculation:
 - a) Scheduled maintenance activities, notified in advance and approved by AIESL, shall not be treated as system downtime.
 - b) Downtime attributable to failures of the Service Provider's application software, servers, RFID readers, handheld devices, or other components supplied under the Contract shall be counted as downtime.
 - c) Downtime caused by failure of AIESL internal network infrastructure, power supply interruptions, or external connectivity issues beyond the control of the Service Provider shall not be counted as downtime.
 - d) The Service Provider shall maintain system-generated logs of downtime events, which shall be jointly reviewed with AIESL for SLA compliance verification.
 - e) Uptime percentage shall be calculated as:

$$\text{Uptime (\%)} = [(\text{Total hours in the calendar month} - \text{Downtime hours}) / \text{Total hours in the calendar month}] \times 100$$

F1B: SLA Exclusions

The following events shall not be considered as system downtime for the purpose of SLA computation:

- (i) Force majeure events as defined under the Contract;
- (ii) Failures of AIESL internal network infrastructure, power supply interruptions, or site access restrictions;
- (iii) Failures of third-party communication networks or internet connectivity beyond the control of the Service Provider;
- (iv) Scheduled maintenance approved by AIESL in advance.

The Service Provider shall, however, take all reasonable steps to restore system functionality at the earliest possible time.

F2: INCIDENT CLASSIFICATION & RESPONSE/RESOLUTION TIME

Severity Level	Description	Response Time	Resolution Time
Critical	Complete system outage or non-availability affecting operations across locations	≤ 2 hours	≤ 8 hours
High	Major functionality impacted (issuance/return/calibration blocked at one or more locations)	≤ 4 hours	≤ 24 hours
Medium	Partial functionality is impacted, with a workaround available	≤ 1 working day	≤ 3 working days
Low	Minor issue/cosmetic/reporting	≤ 2 working days	As mutually agreed

- (i) Response time shall mean the time to acknowledge and initiate corrective action.
- (ii) Resolution time refers to the restoration of normal system operations, which may include a temporary workaround followed by a permanent fix.
- (iii) All incidents shall be logged, tracked, and closed through a formal ticketing mechanism.
- (iv) All incidents shall be logged through a ticketing or helpdesk system provided by the Service Provider, which shall record the date and time of ticket creation, acknowledgement, resolution, and closure.

- (v) SLA response and resolution timelines shall be measured from the time of ticket creation in the system.

F3: SUPPORT COVERAGE

- (i) Remote support shall be provided during normal business hours on all working days. On-site support shall be provided on a call basis, as and when required by AIESL, especially during critical operational issues.
- (ii) Support shall cover software, RFID hardware (desktop kiosk readers, handheld readers), RFID tags, and associated infrastructure.
- (iii) The Service Provider shall provide a defined escalation matrix, including contact details up to the senior management level.
- (iv) Normal business hours shall be 09:00 to 18:00 hrs on working days.
- (v) Tags shall be mountable using industrial fastening methods appropriate to the tool material and operational use.
- (vi) Removal or tampering shall result in visible damage or traceable evidence.
- (vii) The Service Provider shall maintain adequate spare inventory of critical hardware components, including RFID readers, handheld devices, and RFID tags to ensure compliance with the response and resolution timelines specified in this SLA.

F4: PREVENTIVE MAINTENANCE & UPDATES

- (i) Periodic system health checks shall be conducted as per an agreed schedule.
- (ii) Preventive maintenance of RFID hardware shall be carried out to ensure uninterrupted operations.
- (iii) Software updates, bug fixes, performance optimisations, and security patches shall be provided during the AMC period, at no additional cost.
- (iv) Updates shall not adversely impact system performance or data integrity.

F5: DATA SECURITY & OWNERSHIP

- (i) All data generated, processed, or stored under the system, including tool records, audit logs, transaction history, and inventory information, shall remain the exclusive property of AIESL.
- (ii) The Service Provider shall ensure confidentiality, integrity, and controlled access to all data.
- (iii) The Service Provider shall not use, disclose, or process such data for any purpose other than execution of this Contract.
- (iv) Data shall be exportable at any time in standard formats (Excel/CSV/PDF) without vendor dependency or restriction.

F6: SLA NON-COMPLIANCE & PENALTIES

- (i) Failure to meet SLA parameters, including uptime, response time, or resolution time, attributable to the Service Provider, shall attract penalties/Liquidated Damages, as specified in the Tender and Contract.
- (ii) Repeated or persistent SLA violations shall constitute a material breach of the Contract and may result in corrective actions, including service credits, escalation, or termination, as per Contract terms.
- (iii) SLA performance shall be reviewed periodically by AIESL.
- (iv) Repeated SLA violations attributable to the Service Provider in three (03) consecutive months or five (05) instances in a Contract Year shall constitute a material breach and may lead to corrective actions, including invocation of Performance Security or termination, after due process.
- (v) The total SLA-linked penalties in any Contract Year shall be capped at 10% (ten per cent) of the annual AMC value for that year.
- (vi) Monthly SLA performance reports shall be submitted by the Service Provider to AIESL, indicating uptime statistics, incident logs, response times, resolution timelines, and preventive maintenance activities.

F7: EXIT MANAGEMENT AND KNOWLEDGE TRANSFER

- (i) Upon expiry or termination of the Contract, the Service Provider shall, without additional cost:
 - a) Hand over complete data, databases, and backups in usable electronic formats
 - b) Provide system documentation, configuration details, and user manuals
 - c) Provide reasonable knowledge transfer and transition support to AIESL or its nominated agency
- (ii) Exit obligations shall survive termination and shall be completed within the timelines specified by AIESL to ensure continuity of operations.

F7A: Open Architecture and Vendor Lock-In Prevention

- (i) The software platform supplied under this Contract shall be based on open architecture and shall not impose proprietary restrictions that prevent future maintenance, enhancement, integration, or migration by AIESL or its nominated agency.
- (ii) The Service Provider shall ensure that all application interfaces, APIs, database structures, and configuration documentation necessary for system administration and integration are made available to AIESL.
- (iii) The system shall not rely on proprietary encryption, licensing controls, or hardware locking mechanisms that restrict AIESL from accessing or using its own system data.

- (iv) Upon expiry or termination of the Contract, AIESL shall have the unrestricted right to continue using the deployed software platform and associated databases, either directly or through another service provider.
- (v) The Service Provider shall provide necessary technical documentation, database schema, interface specifications, and configuration details required to enable future maintenance, integration, or migration of the system.

F8: ABNORMALLY LOW BID (ALB)

- (i) If the price quoted by the lowest evaluated bidder is found to be significantly lower than the estimated project cost or the prevailing market benchmarks for similar systems, AIESL may seek detailed price justification from the bidder.
- (ii) The bidder shall submit a detailed cost break-up explaining the commercial viability of the quoted price, including the cost of hardware, software, RFID tags, implementation services, and AMC support.
- (iii) If the bidder fails to satisfactorily justify the quoted price, AIESL reserves the right to reject the bid in accordance with applicable procurement guidelines.

F9: AMC PRICE STABILITY AND SCOPE

- (i) The price quoted by the bidder for the Five-Year Comprehensive Annual Maintenance Contract (AMC) shall be firm and fixed for the entire AMC period and shall include all costs associated with maintenance and support of the deployed system.
- (ii) The AMC price shall include, but not be limited to:
 - a) software support and updates,
 - b) hardware maintenance,
 - c) replacement of defective components,
 - d) technical support and troubleshooting,
 - e) bug fixes and security patches,
 - f) system upgrades, updates, and compatibility modifications required for the continued operation of the deployed system during the AMC period.
- (iii) No additional charges shall be payable by AIESL during the AMC period for maintenance of the system, except where a formal change in scope is approved in writing by AIESL.

F10: ESCALATION MATRIX

- (i) The Service Provider shall provide a clearly defined escalation matrix for operational issues, including Level-1 support, Level-2 technical support, and senior management escalation.

- (ii) Contact details of the responsible personnel shall be provided and updated periodically during the Contract Period.
- (iii) The escalation matrix shall be submitted within 15 days of the award of the contract and shall be kept updated.

F11: TECHNOLOGY NEUTRALITY AND NON-RESTRICTIVE SPECIFICATIONS

- (i) The specifications and functional requirements provided in this Tender are intended to describe the minimum performance and operational requirements of the system.
- (ii) The Tender does not intend to favour any specific manufacturer, OEM, proprietary technology, chipset, protocol, or country of origin.
- (iii) Any solution that meets or exceeds the functional, technical, and operational requirements specified in this Tender shall be considered acceptable, subject to compliance with the Tender conditions.
- (iv) References to any particular technology, configuration, or architecture shall be interpreted as indicative only and shall not be construed as restrictive to competition.

F12: TECHNICAL CLARIFICATION AND DEMONSTRATION

- (i) During technical evaluation, AIESL reserves the right to seek clarifications, additional documentation, or technical presentations from bidders regarding the proposed solution.
- (ii) AIESL may require bidders to demonstrate the functionality of the proposed system, including RFID hardware performance, software capabilities, and operational workflows.
- (iii) Such demonstrations or clarifications shall not alter the commercial terms of the bid and shall be used solely for the purpose of technical evaluation.
- (iv) Failure of a bidder to provide the required clarification or demonstration within the stipulated time may result in the bid being treated as technically non-responsive.

SECTION G: PRICE BID - DESCRIPTION OF COMPONENTS

G1: SCOPE OF PRICE BID

The Price Bid shall be comprehensive and inclusive, covering the entire scope of work as specified in the Tender, including all costs necessary for successful implementation, commissioning, and operation of the AI-enabled/Intelligent Digital Tool Tracking System (Supporting RFID/QR/Barcode Identification Technologies) for approximately 1,00,000 (One Lakh) tools across AIESL locations.

All costs necessary for the successful implementation, deployment, integration, operation, and support of the system during the Contract Period shall be deemed included in the quoted price, unless expressly excluded in the Tender.

The Price Bid shall include, but not be limited to, the following components:

a) Software Components

- (i) Web-based AI Tool Tracking Application
- (ii) Android-based mobile application for handheld RFID operations
- (iii) User management and role-based access control
- (iv) Reporting, dashboard, audit logs, and analytics modules
- (v) API readiness for ERP/SAP integration
- (vi) Database licences (if applicable)
- (vii) All configuration, customisation, and deployment costs

Note:

The quoted price shall include enterprise-level licences valid for the entire Contract Period, including the AMC period, without any user-based or transaction-based restriction unless explicitly permitted under this Tender.

b) Hardware Components

- (i) RFID desktop kiosk readers with antennas, mounts, power supply, and accessories
- (ii) RFID handheld readers suitable for hangar and tool store environments

- (iii) RFID tags (mount-on-metal) for approximately 1,00,000 (1 Lakh) individual tools and tool boxes, including spares as required
- (iv) Any additional accessories, cables, connectors, or infrastructure required for full system functionality.
- (v) Wi-Fi infrastructure that is required at the tool stores and the MRO repair areas shall be provided by AIESL.
- (vi) All hardware supplied under the Contract shall be new, unused, and of current production models.

Note: Cost of RFID tags shall include encoding, mapping, and validation.

c) Implementation & Professional Services

- (i) Requirement study and system design
- (ii) Physical tool audit and master data preparation
- (iii) Data migration and validation
- (iv) RFID tagging, encoding, mapping, and verification
- (v) Workflow configuration (issuance, return, calibration, transfer, scrap)
- (vi) Pilot implementation and stabilisation
- (vii) Full roll-out across designated AIESL locations

d) Training

- (i) On-site and/or virtual training for tool store staff, engineering, QA, and administrators
- (ii) Training materials, user manuals, and standard operating procedures
- (iii) Knowledge transfer documentation

e) Annual Maintenance Contract (AMC)

- (i) Software support, bug fixes, security patches, and upgrades
- (ii) Hardware maintenance and replacement (as applicable)
- (iii) SLA-based support as specified in Section F (SLA)
- (iv) Preventive maintenance and system health checks

Note:

AMC cost shall be quoted separately and clearly for each year of the AMC period.

G2: RFID TAG PRICING - MANDATORY CATEGORY-WISE QUOTATION

- (i) The Price Bid shall include category-wise unit pricing for RFID tags strictly in accordance with the categories defined under Clause C5.1 of this Tender.
- (ii) Bidders shall mandatorily quote RFID tag prices using the following standardised price matrix. Failure to quote for all categories shall render the Price Bid non-responsive.

G3: RFID TAG PRICE MATRIX (TO BE FILLED BY BIDDER)

Bidders shall quote category-wise unit prices for RFID tags strictly in accordance with the categories defined in Clause C5.1.

Failure to quote prices for all categories shall render the Price Bid non-responsive.

Category	Estimated Quantity	Unit Price (₹)	Total Price (₹)
Category A: Small Tool Tag	40,000		
Category B: Medium Tool Tag	50,000		
Category C: Heavy Tool Tag	5,000		
Category D: Tool Box /Large Equipment	5,000		
Total RFID Tag Cost	1,00,000		

- (i) The above price matrix shall form an integral part of the Price Bid submitted by the bidder.
- (ii) The above quantities are indicative and used solely for price evaluation.
- (iii) For the purpose of financial evaluation, the above quantities shall be treated as fixed.
- (iv) Actual deployment quantities may vary within the overall $\pm 25\%$ variation limit specified in this Tender.
- (v) AIESL does not guarantee procurement of the full indicative quantity.
- (vi) Prices quoted shall be exclusive of GST.
- (vii) Quoted unit prices shall be realistic and commercially workable.
- (viii) Extremely low or token pricing intended to distort price evaluation may be treated as unbalanced pricing.
- (ix) The quoted prices for implementation and the Annual Maintenance Contract (AMC) shall be commercially reasonable and proportionate to the overall project scope.
- (x) Bids exhibiting disproportionate pricing, including extremely low implementation cost combined with unusually high AMC cost or vice versa, may be treated as unbalanced bids.
- (xi) AIESL reserves the right to seek detailed justification from the bidder for such pricing and may reject the bid if the explanation is found unsatisfactory.

G4: PRICE EVALUATION METHODOLOGY

- (i) Price evaluation shall be carried out based on Total Evaluated Cost (TEC).
- (ii) L-1 determination shall be based on the aggregate evaluated price and not on the lowest unit price of any individual component or RFID tag category.
- (iii) TEC shall include:
 - a) One-time implementation cost
 - b) Hardware cost
 - c) Software cost
 - d) RFID tagging cost
 - e) Training cost
 - f) Five-year comprehensive AMC cost
- (iv) The bidder quoting the lowest Total Evaluated Cost (L1) among technically qualified bidders shall be considered for award of the Contract.
- (v) If the price quoted for any component, including RFID tags, software, hardware, implementation services, or AMC, is found to be abnormally low, front-loaded, or commercially unworkable in comparison with other components or prevailing market benchmarks, AIESL reserves the right to seek detailed justification from the bidder.
- (vi) Bids exhibiting unbalanced or disproportionate pricing may be treated as commercially unworkable and may be rejected in accordance with GFR 2017 and GeM procurement guidelines if the explanation provided by the bidder is found unsatisfactory.

G5: TAXES & DUTIES

- (i) Taxes and duties shall be indicated separately in the Price Bid as applicable.
- (ii) Statutory variations, if any, shall be governed by applicable Government rules and Tender conditions.
- (iii) Prices quoted shall be exclusive of GST, unless otherwise specified.

G6: NO DEVIATION

- (i) Conditional pricing, assumptions, exclusions, or deviations in the Price Bid shall not be permitted.
- (ii) Any conditional financial offer may render the bid liable to rejection.

G7: FALL IN PRICE

- (i) During the currency of the Contract, if the Successful Bidder reduces the price of identical goods or services of the same specifications and scope to any Central Government, State Government, PSU, Autonomous Body, or Statutory Authority, the prices applicable to AIESL shall automatically stand reduced.
- (ii) The Successful Bidder shall promptly inform AIESL and provide documentary evidence.
- (iii) This clause shall apply only to actual reductions in selling price.

G8: VARIATION IN QUANTITY

- (i) The quantities indicated in this Tender are indicative.
- (ii) AIESL reserves the right to increase or decrease quantities up to $\pm 25\%$ during the Contract Period at the same unit rates and terms.
- (iii) No claim for revision of rates shall be admissible solely on account of such variation.

G9: NO MINIMUM BUSINESS GUARANTEE

The quantities indicated are indicative only, and AIESL does not guarantee procurement of any minimum quantity under this Contract.

G10: PRICE COMPARISON AND ARITHMETIC CORRECTIONS

- (i) Price comparison among technically qualified bidders shall be carried out based on the Total Evaluated Cost (TEC) as defined in this Section.
- (ii) In case of any discrepancy between the unit price and the total price indicated in the Price Bid, the unit price shall prevail, and the total price shall be corrected accordingly.
- (iii) In case of any discrepancy between the figures and words, the amount stated in words shall prevail.
- (iv) The corrected price shall be considered for the purpose of financial evaluation and determination of the lowest evaluated bidder (L1).

SECTION H - GENERAL CONDITIONS OF CONTRACT

H1: PERFORMANCE SECURITY/PERFORMANCE BANK GUARANTEE

- (i) The Successful Bidder shall furnish a Performance Security equivalent to 5% (Five per cent) of the total Contract Value, excluding applicable taxes, within fourteen (14) days from the date of issue of the Letter of Award (LoA), or such extended period as may be permitted by AIESL.
- (ii) The Performance Security shall be submitted only through the GeM portal in the form of a Performance Bank Guarantee (PBG) issued by a scheduled commercial bank, in favour of "AI Engineering Services Limited", payable at New Delhi, in the prescribed format as provided in the Tender Document.
- (iii) The Performance Bank Guarantee shall be interest-free.
- (iv) The validity of the Performance Bank Guarantee shall remain effective for the entire Contract Period, including the implementation phase and the AMC period, and shall be valid for a further sixty (60) days beyond the completion of all contractual obligations.
- (v) In case of eligible MSE bidders, submission of Performance Security may be permitted on an annual basis, renewable each year, in accordance with applicable Government of India guidelines and GeM provisions, subject to AIESL's approval.
- (vi) Failure of the Successful Bidder to submit the Performance Security within the stipulated period shall render the award of the Contract liable for cancellation, and AIESL may proceed in accordance with the Tender conditions, including forfeiture of EMD, where applicable, or initiation of debarment action in case of Bid Security Declaration (BSD), as per applicable rules and GeM guidelines and award of the Contract to the next eligible bidder.
- (vii) Invocation of Performance Security:

AIESL reserves the right to invoke the Performance Security in case of:

- a) failure to achieve project milestones;
- b) failure to maintain SLA obligations; or
- c) breach, abandonment, or non-performance of contractual obligations by the Successful Bidder.

Invocation of the Performance Security shall not prejudice any other rights or remedies available to AIESL under the Contract or applicable law.

H2: PERFORMANCE SECURITY - RELEASE/REFUND/ADJUSTMENT

H2.1: Release of Performance Security

The Performance Security shall be released by AIESL, without interest, within sixty (60) days from the date of successful completion of the entire Contract, including the implementation phase and the AMC period, and fulfilment of all contractual obligations by the Successful Bidder, subject to certification by the competent authority of AIESL.

H2.2: Adjustment of Dues

AIESL shall be entitled to adjust or appropriate, either in whole or in part, the Performance Security towards recovery of any outstanding dues, damages, penalties, Liquidated Damages, or other amounts payable by the Successful Bidder under the Contract, prior to its release.

H2.3: Partial Invocation

Invocation of the Performance Security, whether in part or in full, shall not absolve the Successful Bidder of its obligation to complete the Contract or remedy deficiencies, nor shall it prejudice any other rights or remedies available to AIESL under the Contract or applicable law.

H2.4: Renewal/Extension

The Successful Bidder shall ensure that the Performance Security remains valid and enforceable for the entire Contract Period, including any extensions thereof. In case of extension of the Contract or AMC period, the validity of the Performance Security shall be suitably extended by the Successful Bidder, failing which AIESL shall be entitled to invoke the existing Performance Security.

H2.5: Non-Substitution

The Performance Security shall not be substituted, withdrawn, or modified during the Contract Period without the prior written approval of AIESL.

H2.6: Survival of Rights

The rights of AIESL under this clause shall survive the expiry or termination of the Contract, to the extent required for the enforcement of claims arising during the Contract Period.

H3: PAYMENT TERMS

H3.1: Milestone-Linked Payments (Implementation Phase)

No payment shall be released for rollout to other locations unless the Pilot implementation at Nagpur has been successfully completed and formally accepted by AIESL.

Payments during the Implementation Phase shall be released strictly against achievement of milestones and written acceptance by the authorised officer of AIESL, as per the following:

Nagpur Pilot Dependency:

The system shall initially be implemented as a Pilot at AIESL Nagpur, covering approximately 20% of the total tools.

Rollout to other locations shall commence only after successful pilot acceptance by AIESL.

Payments relating to rollout milestones shall become payable only after written pilot acceptance.

Implementation Payment (100% of Implementation Value)

Stage	Phase	Deliverable/Milestone	Payment %
Stage 1	Tool Audit & Master Data (Nagpur)	Completion of tool audit, digital master creation and validation for Nagpur (~20,000 tools)	5%
Stage 2	Hardware Supply & RFID Tagging (Nagpur)	Supply of hardware, tagging and commissioning of tools at Nagpur	5%
Stage 3	Software Deployment & Training (Nagpur)	Configuration of workflows, user training, and readiness for pilot operations at Nagpur	5%
Stage 4	Pilot Go-Live: Nagpur	Successful pilot Go-Live at Nagpur and written acceptance by AIESL	10%
Subtotal - Nagpur Pilot		Total payment linked to Nagpur pilot (~20% scope)	20%
Stage 5	Rollout – Remaining Locations	RFID tagging, system deployment and operationalisation across Delhi, Mumbai, Hyderabad, Thiruvananthapuram and Kolkata (~80,000 tools)	72.5%
Stage 6	Final System Stabilisation	Completion of rollout, system stabilisation, final documentation and acceptance	7.5%

Total Implementation Payment: 100%

The payment percentages are milestone-linked and do not necessarily correspond to the exact physical quantity share of each location.

Submission of invoices for hardware supply shall not constitute milestone completion unless tagging, system configuration, and operational functionality are demonstrated.

AMC Payment Structure

No payment shall be released for partial or incomplete milestones unless expressly accepted in writing by AIESL.

Phase	Deliverable	Payment
AMC Year 1 – 5	Comprehensive maintenance, including hardware support, software support, tag replacement and SLA compliance	Payable annually in equal instalments

- (i) Release of payments shall be subject to certification of milestone completion by the Authorised Officer nominated by AIESL.
- (ii) Release of payments against location-wise milestones shall be subject to compliance with Clause E5 (Minimum Operational Coverage Requirement) of this Tender.

H3.2: AMC Payments

- (i) Payments towards the Five-Year Comprehensive Annual Maintenance Contract (AMC) shall be released quarterly in arrears, subject to satisfactory SLA compliance and certification by AIESL.
- (ii) Payments shall be subject to adjustment of applicable SLA penalties, if any.
- (iii) Mere supply or delivery of RFID hardware, tags, readers, software components, or any other equipment shall not constitute completion of the corresponding milestone for payment purposes.
- (iv) Payment against any milestone shall become due only after successful installation, configuration, tagging, integration with the system, and operational verification of the respective components at the designated location.
- (v) The following conditions shall be satisfied before the release of payment:
 - a) Hardware installation and commissioning completed.
 - b) RFID tags successfully encoded, mapped, and linked with the system database.
 - c) Tools successfully digitised and visible in the system inventory.
 - d) Operational workflows for tool issuance, return, and tracking are functioning as intended.
 - e) Functional verification conducted and certified by the Authorised Officer nominated by AIESL.
- (vi) Delivery challans, invoices, or proof of hardware supply alone shall not be considered as proof of milestone completion.

- (vii) If the supplied equipment is not successfully operationalised within the prescribed timeline, the same shall be treated as an incomplete deliverable, and payment against the corresponding milestone shall remain withheld until successful operationalisation.

H3.3: No Advance Payment

No advance payment shall be admissible under this Contract, unless otherwise permitted under applicable Government rules and expressly approved by AIESL.

H3.4: Invoice Submission & Supporting Documents

Invoices shall be submitted through the GeM portal, supported by:

- (i) Milestone Completion Certificate/UAT/Acceptance Certificate
- (ii) SLA compliance report (for AMC invoices)
- (iii) Any other document as prescribed by AIESL/GeM

Invoices not supported by requisite documents shall not be processed.

H3.5: Statutory Deductions

All applicable statutory deductions, including TDS, shall be deducted at source as per applicable law.

H4: INDEMNIFICATION

- (i) The Successful Bidder shall indemnify, defend, and hold harmless AIESL, its officers, employees, and agents from and against any claims, demands, actions, losses, damages, penalties, costs, and expenses actually suffered or incurred by AIESL, arising out of or in connection with:
 - a) any injury to or death of any person, including personnel of the Successful Bidder or third parties;
 - b) any loss of or damage to property, including but not limited to aircraft, tools, equipment, or other assets of AIESL; or
 - c) any act, omission, negligence, wilful misconduct, or breach of contractual obligations by the Successful Bidder, its employees, agents, or subcontractors, during the performance of obligations under this Contract.
- (ii) If any such amount is required to be paid by AIESL and is not reimbursed by the Successful Bidder on demand, AIESL shall be entitled to recover the same by deduction from the Performance Security, pending bills, or any other amounts payable to the Successful Bidder, without prejudice to any other rights or remedies available to AIESL under the Contract or applicable law.
- (iii) The provisions of this clause shall survive the expiry or termination of the Contract.

H5: INSURANCE

- (i) The Successful Bidder shall, at its own cost, obtain and maintain throughout the Contract Period, including AMC, adequate insurance coverage from a reputed insurer, including but not limited to:
 - a) Workmen's Compensation/Employee Compensation Insurance
 - b) Third Party Liability Insurance
 - c) Professional Indemnity Insurance (where applicable)
 - d) Insurance for loss or damage to equipment, tools, and RFID hardware during installation and operation
- (ii) Copies of valid insurance policies shall be submitted to AIESL before commencement of on-site activities and upon renewal.
- (iii) Failure to maintain valid insurance shall be treated as a material breach of the Contract.

H6: CONFIDENTIALITY AND NDA

- (i) The Parties, namely AIESL and the Bidder/Successful Bidder, shall at all times maintain strict confidentiality of all information, data, documents, records, and materials, whether in written, electronic, or any other form, that are disclosed or made available in connection with the bidding process and/or execution of the Contract.
- (ii) Such confidential information shall not be disclosed to any third party without the prior written consent of AIESL, except where disclosure is:
 - a) required under applicable law; or
 - b) required by any regulatory or statutory authority; or
 - c) made to the bidder's professional advisers on a need-to-know basis, solely for performance of their professional services, subject to similar confidentiality obligations.
- (iii) The Successful Bidder shall, before commencement of the Contract, execute a Non-Disclosure Agreement (NDA), if required by AIESL, and shall comply with AIESL's confidentiality, information security, and data protection requirements as specified from time to time.
- (iv) All information, data, documents, and materials accessed, generated, or obtained during the course of the engagement shall remain the exclusive property of AIESL and shall not be used by the Successful Bidder for any purpose other than performance of obligations under the Contract.
- (v) The obligations under this clause shall survive the expiry or termination of the Contract.

H7: CONFLICT OF INTEREST

- (i) The Bidder shall ensure that no actual or potential conflict of interest exists that may affect fair competition, impartial evaluation, or execution of the Contract.
- (ii) The Bidder shall submit a self-certification confirming that neither the Bidder nor its directors, partners, or key personnel have any direct or indirect relationship with AIESL employees associated with the Tender evaluation or Contract administration.
- (iii) Detection of any conflict of interest at any stage shall render the bid liable for rejection or the Contract liable for termination, after following due process in accordance with applicable rules.

H8: FRAUDULENT AND CORRUPT PRACTICES

- (i) AIESL requires bidders to observe the highest standards of ethics during the bidding process and during execution of the Contract.
- (ii) For the purposes of this Tender, the following terms are defined as follows:
 - a) "Corrupt Practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of a public official in the procurement process or in contract execution.
 - b) "Fraudulent Practice" means any act or omission, including misrepresentation of facts, intended to influence the procurement process or the execution of a contract to the detriment of AIESL, and includes collusive practices among bidders (before or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive AIESL of the benefits of free and open competition.
- (iii) AIESL shall have the right to take one or more of the following actions, in accordance with applicable laws and after due examination:
 - a) Reject a bid for award if it is determined that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the Contract;
 - b) Declare a bidder ineligible and debar/blacklist such bidder, either indefinitely or for a specified period, if at any time it is determined that the bidder has engaged in corrupt or fraudulent practices in competing for, or in executing, the Contract;
 - c) Terminate/rescind the Contract forthwith, without prejudice to any other rights of AIESL, if the Successful Bidder is found to have engaged in corrupt or fraudulent practices during the currency of the Contract; and
 - d) Forfeit the Earnest Money Deposit (EMD)/Bid Security Declaration or invoke the Performance Security, as applicable, in addition to any other remedies available to AIESL under the Tender or Contract.
- (iv) The above actions shall be without prejudice to any other rights or remedies available to AIESL under applicable laws.

H9: EXIT/TERMINATION OF CONTRACT

H9.1: Termination for Default

- (i) In the event of unsatisfactory performance or breach of any material terms of the Contract by the Successful Bidder, AIESL shall issue a written notice specifying the nature of the breach and granting a cure period of thirty (30) days to remedy the same.
- (ii) If the Successful Bidder fails to remedy the breach within the stipulated cure period, AIESL shall be entitled to terminate the Contract, in whole or in part, by giving a further thirty (30) days' written notice, without prejudice to any other rights or remedies available to AIESL under the Contract or applicable law.
- (iii) In such an event, the Successful Bidder shall not be entitled to any compensation for costs incurred or losses suffered on account of such termination.

H9.2: Termination for Breach of Confidentiality

Notwithstanding anything contained herein, AIESL shall have the right to terminate the Contract in the event of a material breach of confidentiality or data protection obligations, by providing thirty (30) days' written notice to the Successful Bidder.

H9.3: Termination for Convenience

- (i) AIESL reserves the right to terminate the Contract for convenience, by providing Sixty (60) days' prior written notice to the Successful Bidder with valid reasons.
- (ii) In such a case, AIESL shall be liable to pay only for goods supplied and services actually rendered and accepted up to the effective date of termination.
- (iii) No compensation for loss of profit, anticipated earnings, or unexecuted work shall be payable.

H9.4: Termination by the Successful Bidder

The Successful Bidder may terminate the Contract by providing ninety (90) days' prior written notice to AIESL, provided that such termination is not during a critical implementation or operational phase, as determined by AIESL, acting reasonably and in writing.

H9.5: Obligations upon Termination

Upon issuance of a termination notice, both parties shall continue to perform their respective obligations during the notice period. Upon termination, the Successful Bidder shall:

- (i) hand over all AIESL data, documents, and materials;
- (ii) provide reasonable transition support, as required; and
- (iii) discharge all obligations accrued up to the effective date of termination.

H9.6: Exit Management

Upon completion or termination of the Contract, the Service Provider shall ensure orderly transfer of the system to AIESL, including:

- (i) transfer of database and system records
- (ii) transfer of administrator access credentials
- (iii) transfer of system documentation and manuals
- (iv) knowledge transfer to AIESL personnel

H9.7: Consequences of Bidder-Initiated Termination

In case the Contract is terminated by the Successful Bidder without a valid justification and solely attributable to the Bidder, AIESL reserves the right to take appropriate action, including debarment from participation in future AIESL tenders for a specified period, after following due process and in accordance with applicable Government guidelines.

H10: FORCE MAJEURE

- (i) Neither the Bidder nor AIESL (collectively "Parties" and individually "Party") shall be in breach of any obligation under the Contract if it is unable to perform that obligation in whole or in part because of the occurrence of a Force Majeure Event.
- (ii) Force Majeure Event means extraordinary events or circumstances beyond human control, such as an event described as an act of God (like a natural calamity, or events such as a war, strike, or riots).
- (iii) The affected Party shall give immediate notice in writing of the occurrence of a Force Majeure Event as soon as it occurs (in any case not later than 5 days of information about the occurrence of such an event becoming known to such Party) and shall thereafter keep the other Party informed of the continuation or termination of such event as soon as possible (and in any event within three (03) days of the continuation or termination of such event).
- (iv) Notwithstanding the occurrence of a Force Majeure Event, the affected Party shall use its best reasonable efforts and due diligence to mitigate the economic and other effects of the event of Force Majeure and shall reasonably allocate its available resources, giving priority to its obligations under the Contract.
- (v) The Party so affected shall take all reasonable steps to remedy the failure and reasonably allocate its available resources, giving priority to performing its obligations under the Contract and keeping the other Party informed of the steps being taken to mitigate the effects of an event of force majeure.
- (vi) If the performance in whole or in part or any obligation under the Contract is prevented or delayed by any reason of subsistence of a Force Majeure Event for a period exceeding 90 (Ninety) days, either Party may at its option terminate the Contract without any financial repercussion on either side.
- (vii) Notwithstanding the punitive provisions contained in the Contract for delay or breach of Contract, the Bidder would not be liable for imposition of any such damages so long as the delay and/or failure of the Bidder in fulfilling its obligations under the Contract is solely attributable to the occurrence of a Force Majeure Event.

- (viii) Consequences of delay shall be governed by the Liquidated Damages provisions of this Tender and Contract.

H11: RESOLUTION OF DISPUTES AND ARBITRATION

- (i) Any dispute arising out of or in connection with this Contract shall first be resolved through mutual consultations between authorised representatives of the Parties.
- (ii) If the dispute remains unresolved within thirty (30) days, the same shall be referred to arbitration before a sole arbitrator, in accordance with the Arbitration and Conciliation Act, 1996, as amended from time to time.
- (iii) If the dispute remains unresolved within thirty (30) days, the same shall be referred to arbitration in accordance with the Arbitration and Conciliation Act, 1996, as amended from time to time.
- (iv) The seat and venue of arbitration shall be New Delhi.
- (v) The Contract shall be governed by and construed in accordance with the laws of India.
- (vi) The arbitration proceedings shall be conducted in the English language.

H12: JURISDICTION

Subject to the Dispute Resolution and Arbitration clause contained herein, this Tender and the Contract executed pursuant thereto shall be subject to the exclusive jurisdiction of the competent courts at New Delhi only.

H13: GOVERNING LAW

This Tender and the Contract executed pursuant thereto shall be governed by and construed in accordance with the laws of India.

H14: AMENDMENT AND INTERPRETATION

No amendment, modification, variation, or waiver of any provision of the Contract shall be valid or binding unless the same is made in writing and signed by duly authorised representatives of both Parties.

H15: EXAMINATION OF PRICE REASONABLENESS

AIESL reserves the right to examine the reasonableness and workability of the quoted prices in accordance with the price evaluation provisions specified in Section G of this Tender.

H16: NO SUB-CONTRACTING WITHOUT APPROVAL

- (i) The Successful Bidder shall not subcontract the whole or any substantial part of the scope of work without prior written approval of AIESL. However, specialised activities such as RFID tagging or hardware installation may be subcontracted with AIESL's consent, with full responsibility remaining with the Successful Bidder.
- (ii) The Successful Bidder shall remain fully responsible for performance of the Contract irrespective of any approved subcontracting.

H17: LIMITATION OF LIABILITY

Except in cases of fraud, wilful misconduct, breach of confidentiality, or infringement of intellectual property rights, the total liability of the Successful Bidder under this Contract shall not exceed the total Contract Value.

This limitation shall not apply to indemnity obligations or statutory liabilities.

TECHNICAL BID FORMS & ANNEXURES

ANNEXURE - T1 (TECHNICAL BID FORMAT)

(To be filled and submitted by the Bidder as part of the Technical Bid)

1. Bidder Information

SN	Particulars	Bidder Response
1	Name of the Bidder	
2	Registered Address	
3	Corporate Office Address	
4	Contact Person	
5	Contact Number	
6	Email Address	
7	Year of Incorporation	
8	Legal Status	
9	GST Number	
10	PAN Number	
11	Udyam Registration (if applicable)	
12	DPIIT Startup Recognition (if applicable)	

2. Declaration of Project Understanding

Requirement	Compliance (Yes/No)
Coverage of approximately 1,00,000 tools	
Deployment across 6 AIESL locations	
Operation across approximately 25 tool stores	
Hybrid identification (RFID + QR + Barcode)	
Pilot implementation at Nagpur	
Rollout across remaining locations	
Integration capability with ERP/SAP	
Compliance with DGCA tool control requirements	
Provision of 5-year AMC support	

3. Hardware Sizing Declaration

Parameter	Bidder Response
Total tools considered for system sizing	
Number of tool stores considered	
RFID tagging percentage assumed	
QR/Barcode tagging percentage assumed	
RFID handheld readers proposed	
RFID desktop/kiosk readers proposed	
RFID encoding stations proposed	
Number of RFID antennas proposed	
Network infrastructure required	
Server configuration proposed	
Estimated storage requirement	
Maximum system scalability	

4. RFID Tag Technical Specifications

Parameter	Requirement	Bidder Specification
Tag Type	Industrial Mount-on-Metal	
Operating Frequency	UHF EPC Gen2	
Read Range	Minimum 3–5 meters	
Memory	EPC + User Memory	
Operating Temperature	–20°C to +70°C	
Chemical Resistance	Aviation oils/solvents	
Mounting Type	Adhesive/Screw Mount	
Protection Rating	Minimum IP67	
Expected Operational Life	Minimum 5 years	

5. Identification Technology Mix

Technology	Estimated Quantity	Bidder Proposal
RFID Tags		
QR Code Labels		
Barcode Labels		

6. RFID Hardware Details

Component	Make	Model	Quantity Proposed	Compliance
RFID Handheld Readers				
RFID Desktop/Kiosk Readers				
RFID Gate Readers (if applicable)				
RFID Antennas				
RFID Tag Encoders				
Charging/Docking Stations				

7. Software Platform Details

Feature	Compliance
Web-based administration platform	
Android mobile application	
RFID transaction engine	
Tool issue workflow	
Calibration management	
Tool repair management	
Scrap management	
MIS/Dashboard reporting	
API/ERP integration	
Offline transaction capability	

8. System Architecture

Parameter	Bidder Response
Deployment Model	
Cloud Platform (if applicable)	
Database Technology	
Backup Strategy	
Disaster Recovery	
Data Security	

9. Infrastructure Declaration

Infrastructure Component	Quantity	Location
Application Servers		
Database Servers		
Backup Servers		
Storage Systems		
Network Infrastructure		

10. Implementation Methodology

Activity	Timeline
Project Kick-off	
Tool Audit	
Master Data Creation	
RFID Tagging	
Hardware Installation	
Pilot Go-Live (Nagpur)	
Full Rollout	

11. Manpower Deployment

Role	Qualification	Personnel
Project Manager		
RFID Specialist		
Software Engineers		
Field Deployment Engineers		
Tagging Technicians		
Training Engineers		
AMC Support Engineers		

12. Training Plan

Training Type	Duration	Target Audience
Administrator Training		
Tool Store Staff Training		
Engineering Staff Training		
QA/Audit Training		

13. AMC Support

Parameter	Bidder Response
Helpdesk Availability	
Response Time	
Resolution Time	
Preventive Maintenance	
Spare Parts Availability	

Bidder Certification

We certify that the proposed solution, hardware sizing, tagging methodology, infrastructure, and support arrangements are adequate for the successful deployment of the AI-enabled/Intelligent Digital Tool Tracking System covering approximately 1,00,000 tools across AIESL locations.

The quoted price includes all components required for successful implementation, and no additional payment shall be claimed for omitted or underestimated components.

For and on behalf of the Bidder

Name of the Firm : _____

Name of Authorised Signatory : _____

Designation : _____

Signature : _____

Date : _____

Seal of the Bidder : _____

ANNEXURE - T2
MANDATORY BILL OF MATERIALS (BOM) DECLARATION
 (To be submitted with the Technical Bid)

1. RFID Tag Components

SN	Item	Specification	Quantity
1	RFID Mount-on-Metal Tags	Industrial Grade	
2	Rugged RFID Tags	Heavy Tools	
3	QR Code Labels	Industrial Grade	
4	Barcode Labels	Industrial Grade	

2. RFID Reader Infrastructure

SN	Item	Minimum Quantity	Bidder Quantity	Make	Model
1	RFID Handheld Readers	50			
2	RFID Desktop/Kiosk Readers	25			
3	RFID Gate Readers (if proposed)				
4	RFID Antennas				
5	Charging/Docking Stations				
6	RFID Encoding Stations	Minimum 6			

3. Network & Hardware Infrastructure

SN	Item	Quantity	Specification
1	Application Server		
2	Database Server		
3	Backup Server		
4	Storage System		
5	Network Switches		
6	Network Access Points		

4. Software Components

SN	Component	Quantity	Remarks
1	Tool Tracking Software Platform		
2	Mobile Application		
3	Web Administration Portal		
4	Reporting Dashboard		
5	API Integration Module		
6	Security Module		

5. Implementation Components

SN	Activity	Unit
1	Tool Audit	Lot
2	Master Data Preparation	Lot
3	RFID Tagging	Per Tool

4	Data Migration	Lot
5	System Configuration	Lot
6	Hardware Installation	Lot
7	Pilot Implementation	Lot
8	Full Rollout	Lot

6. Training Components

SN	Item
1	User Training
2	Administrator Training
3	Documentation
4	SOP Preparation

7. AMC Components

SN	Item
1	Software Maintenance
2	Hardware Maintenance
3	RFID Reader Maintenance
4	RFID Tag Replacement
5	System Upgrades
6	Technical Support

Bidder Certification

We confirm that the above Bill of Materials represents the complete solution architecture required for the successful deployment of the proposed system.

The quoted price includes all components listed above, and no additional payment shall be claimed later.

For and on behalf of the Bidder

Name of the Firm : _____

Name of Authorised Signatory : _____

Designation : _____

Signature : _____

Date : _____

Seal of the Bidder : _____

ANNEXURE - T3
RFID TAG PERFORMANCE VALIDATION & FIELD-TESTING REQUIREMENT

1. Purpose

This Annexure establishes the performance validation requirements for RFID tags and readers proposed under this tender.

Aircraft maintenance environments contain dense metallic tools, tool cabinets, trays, and hangar structures, which may affect RFID performance.

2. Sample RFID Tag Submission

Tool Category	Samples Required
Small Tool Tags	10
Medium Tool Tags	10
Heavy Tool Tags	10
Tool Kit Tags	05

3. RFID Tag Specifications

Parameter	Requirement	Bidder Specification
Tag Type	Industrial Mount-on-Metal	
Frequency	UHF EPC Gen2	
Operating Frequency	865-867 MHz	
Read Range	Minimum 3–5 meters	
Memory	EPC + User Memory	
Operating Temperature	–20°C to +70°C	
Chemical Resistance	Aviation oils	
IP Rating	Minimum IP67	
Expected Life	≥5 years	

4. RFID Field Performance Test

Test Parameter	Acceptance Criteria
Tag Readability	≥95%
Multi-Tag Scan Accuracy	≥95%
Scan Speed	≥200 tags/min
Dense Metal Readability	≥90%

5. Inventory Audit Test

Parameter	Requirement
Inventory Scan Speed	≥500 tools/min
Inventory Reconciliation Accuracy	≥95%
Missing Tool Detection	Mandatory

6. Pilot Acceptance Criteria

Parameter	Requirement
Tagging Coverage	≥95%
RFID Read Accuracy	≥95%
System Stability	Acceptable
Transaction Reliability	Acceptable

Bidder Certification

We confirm that the RFID tags and readers proposed meet the requirements specified in this Annexure and are suitable for aviation maintenance environments.

For and on behalf of the Bidder

Name of the Firm : _____

Name of Authorised Signatory : _____

Designation : _____

Signature : _____

Date : _____

Seal of the Bidder : _____

FINANCIAL BID
ANNEXURE - F1 (FINANCIAL BID FORMAT)

(To be submitted separately as Price Bid)

PART A - RFID Hardware

SN	Item	Unit	Qty	Unit Price	Total
1	RFID Mount-on-Metal Tags	Nos	1,00,000		
2	QR Code Labels	Nos			
3	Barcode Labels	Nos			
4	RFID Handheld Readers	Nos	50		
5	RFID Desktop Readers	Nos	25		
6	RFID Antennas	Nos			
7	RFID Encoding Stations	Nos	6		
8	Charging Stations	Nos			
9	Mounting Accessories	Lot	1		

PART B - Software

SN	Item	Unit	Qty	Unit Price	Total
1	Tool Tracking Software Platform	Lot	1		
2	Mobile Application	Lot	1		
3	Dashboard System	Lot	1		
4	API Integration	Lot	1		
5	Security Module	Lot	1		

PART C - Implementation

SN	Activity	Unit	Unit Price	Total
1	Tool Audit	Lot		
2	Master Data Preparation	Lot		
3	RFID Tagging	Per Tool		
4	Data Migration	Lot		
5	Hardware Installation	Lot		
6	Software Configuration	Lot		
7	System Testing	Lot		
8	Pilot Implementation	Lot		
9	Full Rollout	Lot		

PART D - Training

SN	Item	Unit Price	Total
1	User Training		
2	Administrator Training		
3	Documentation		
4	SOP Preparation		

PART E - Infrastructure

SN	Item	Unit Price	Total
1	Application Server		
2	Database Server		
3	Backup Server		

4	Storage		
5	Network Infrastructure		

PART F - AMC (5 YEARS)

SN	Item	Y1	Y2	Y3	Y4	Y5	Total
1	Software Maintenance						
2	Hardware Maintenance						
3	Reader Maintenance						
4	RFID Tag Replacement						
5	System Upgrades						
6	Technical Support						

PART G - Total Evaluated Cost

Component	Amount
Hardware	
Software	
Implementation	
Infrastructure	
AMC	
Total Evaluated Cost (TEC)	

Bidder Price Declaration

The bidder certifies that:

- (i) the quoted price includes all hardware, software, implementation, infrastructure and support services;
- (ii) the minimum hardware quantities specified by AIESL are included in the bid;
- (iii) no additional payment shall be claimed later for any omitted component within the scope of the tender.

For and on behalf of the Bidder

Name of the Firm : _____

Name of Authorised Signatory : _____

Designation : _____

Signature : _____

Date : _____

Seal of the Bidder : _____

ANNEXURE - A

(To be printed on the Bidder's Letterhead, duly signed and stamped)

To

The Deputy General Manager (PPMM)
AI Engineering Services Limited
Safdarjung Airport Complex
New Delhi - 110003

UNDERTAKING

In response to the Tender No. AIESL/HQRS/PPMM/2026/01, dated _____ 2026, for "Tender for Procurement, Implementation and Five-Year AMC of an AI-enabled/Intelligent Digital Tool Tracking System (Supporting RFID/QR/Barcode Identification) for AIESL Tool Stores across six locations", the undersigned hereby submits the following Undertakings:

1. Statutory Compliance

It is hereby confirmed that the Bidder holds valid registrations, licences, and approvals under all applicable Central and State laws, including but not limited to the GST Act, Income Tax Act, and other statutory requirements, and the same shall be produced for verification as and when required by AIESL or any authority authorised by AIESL or by law.

2. Acceptance of Tender Conditions

The Bidder confirms having carefully read, examined, and fully understood all the provisions of the Tender Document, including Notice Inviting Tender (NIT), General Terms & Conditions, Scope of Work, Technical Specifications, Eligibility Criteria, SLA, Payment Terms, and all Annexures, and hereby agrees to abide by the same unconditionally and without deviation.

3. Authorisation

The undersigned confirms being duly authorised to sign and submit the Bid on behalf of the Bidder and that the Bid has been submitted with the knowledge and consent of the competent authority of the Bidder.

4. Truthfulness of Information

It is hereby certified that all information, documents, and statements furnished in the Technical Bid and other submissions are true, correct, complete, and not misleading, to the best of my knowledge and belief, and that no material information has been concealed or suppressed.

5. Signing of Bid Documents

It is confirmed that all pages/documents forming part of the Bid have been duly signed/digitally signed by the authorised signatory, as applicable, and that any corrections or overwriting, if any, have been authenticated by the authorised signatory.

6. Consequences of Misrepresentation

In case any statement made or information furnished by the Bidder is found to be false, incorrect, misleading, or suppressed at any stage, AIESL shall have the right to reject the Bid, cancel the award (if any), terminate the Contract (if awarded), invoke the Performance Security, and/or take action including forfeiture of EMD (where applicable) or debarment action in case of submission of Bid Security Declaration (BSD), as per Tender conditions, GeM provisions and applicable Government rules, after due process.

For and on behalf of the Bidder

Name of the Firm : _____

Name of Authorised Signatory : _____

Designation : _____

Signature : _____

Date : _____

Seal of the Bidder : _____

ANNEXURE - B

(To be printed on the Bidder's Letterhead, duly signed and stamped, and submitted along with the Technical Bid)

To

The Deputy General Manager (PPMM)
AI Engineering Services Limited
Safdarjung Airport Complex
New Delhi - 110003

ACCEPTANCE OF TERMS AND CONDITIONS

In response to the Tender No. AIESL/HQRS/PPMM/2026/01, dated ____ 2026, for "Tender for Procurement, Implementation and Five-Year AMC of an AI-enabled/Intelligent Digital Tool Tracking System (Supporting RFID/QR/Barcode Identification) for AIESL Tool Stores across six locations", the undersigned hereby declares and undertakes as under:

1. Authorisation & Authenticity

I/We confirm that I/We am/are duly authorised to sign and submit this Bid on behalf of the Bidder. All information, statements, and documents furnished in the Bid are true, correct, complete, and not misleading, to the best of my/our knowledge and belief, and nothing material has been concealed.

2. Bid Validity

I/We confirm that the rates quoted in the Price Bid shall remain valid and firm for a period of 120 (One Hundred Twenty) days from the date of opening of the Technical Bid, or such other period/reference date as specified in the Tender, whichever is applicable.

3. Firm & Final Pricing

I/We confirm that the prices/rates quoted in the Price Bid are final, firm, and exclusive of applicable taxes, and that no additional or hidden costs shall be payable by AIESL over and above the amounts quoted in the Price Bid.

4. Price Firmness During Contract Period

In the event of award of Contract, I/We agree to maintain the quoted rates firm for the entire Contract Period, including any extension, in accordance with the terms of the Tender.

5. Statutory Variations

I/We confirm that any reduction in statutory taxes, duties, or levies, if applicable, during the Contract Period, shall be passed on to AIESL as per prevailing Government rules.

6. Conflict of Interest/Near Relatives

I/We confirm that conflict of interest and near-relative disclosures, if any, shall be governed by the Tender conditions and the declaration furnished at Annexure - C.

7. Indemnity & Consequences

I/We understand that any subsequent detection of misrepresentation, concealment of facts, or conflict of interest may result in rejection of the Bid, cancellation of award, termination of the Contract, forfeiture of EMD (where applicable)/invocation of Performance Security, and/or debarment/blacklisting as per applicable rules and Tender conditions, after due process. Disputes, if any, shall be governed by the Dispute Resolution/Arbitration provisions of the Tender/Contract.

8. Signing of Tender Document

I/We confirm that all pages of the Tender Document, including Sections A to H and all Annexures, as applicable, have been duly signed/digitally signed by the authorised signatory in token of unconditional acceptance.

For and on behalf of the Bidder

Name of the Firm : _____

Name of Authorised Signatory : _____

Designation : _____

Signature : _____

Date : _____

Seal of the Bidder : _____

ANNEXURE - C

(To be printed on the Bidder's Letterhead, duly signed and stamped, and submitted along with the Technical Bid)

To

The Deputy General Manager (PPMM)
AI Engineering Services Limited
Safdarjung Airport Complex
New Delhi - 110003

UNDERTAKING REGARDING CONFLICT OF INTEREST/NEAR RELATIVES

In response to the Tender No. AIESL/HQRS/PPMM/2026/01, dated _____, for "Tender for Procurement, Implementation and Five-Year AMC of an AI-enabled/Intelligent Digital Tool Tracking System (Supporting RFID/QR/Barcode Identification) for AIESL Tool Stores across six locations", the undersigned hereby solemnly affirms and undertakes as under:

1. Declaration of Non-Relationship

I/We hereby declare to the best of my/our knowledge that no near relative (as defined in the Tender Document) of the Bidder, its Directors, Partners, Proprietor, or authorised signatory is an employee of AI Engineering Services Limited (AIESL) or its subsidiaries who is directly or indirectly associated with the Tendering, evaluation, award, or Contract administration/execution activities for this Tender/Contract.

2. Indemnity & Disclosure

I/We undertake that if any conflict of interest/near-relative relationship as defined in the Tender is found to exist or is subsequently discovered, AIESL shall have the right to take action including rejection of the Bid, cancellation of award, termination of Contract (if awarded), forfeiture of EMD (where applicable)/invocation of Performance Security, and/or debarment/blacklisting, as per applicable rules and Tender conditions, after due process.

3. Dispute Resolution

Any dispute arising out of or in connection with actions taken under this Undertaking shall be governed by the Dispute Resolution/Arbitration provisions of the Tender/Contract.

4. Binding Nature

This Undertaking shall remain valid and binding during the entire Tender process and throughout the Contract Period, including any extension thereof.

For and on behalf of the Bidder

Name of the Firm : _____

Name of Authorised Signatory : _____

Designation : _____

Signature : _____

Date : _____

Seal of the Bidder : _____

ANNEXURE - D

(To be executed on non-judicial stamp paper of appropriate value by a Scheduled Commercial Bank and submitted through the GeM portal as per the GeM process/requirement)

To

The Deputy General Manager (PPMM)
AI Engineering Services Limited
Safdarjung Airport Complex
New Delhi - 110003

PERFORMANCE BANK GUARANTEE

WHEREAS, AI Engineering Services Limited (AIESL) has awarded Contract No. _____, dated _____, to _____ (Name and address of the Bidder), hereinafter referred to as "the Contractor", for "Procurement, Implementation and Five-Year AMC of an AI-enabled/Intelligent Digital Tool Tracking System (Supporting RFID/QR/Barcode Identification) for AIESL Tool Stores across six locations" (hereinafter referred to as "the Contract").

AND WHEREAS, in terms of the Contract, the Contractor is required to furnish a Performance Bank Guarantee for an amount equivalent to 5% (Five Per cent) of the total Contract Value, as security for the due and faithful performance of its obligations under the Contract.

AND WHEREAS, at the request of the Contractor, _____ Bank, a Scheduled Commercial Bank having its Head Office/Branch at _____ (hereinafter referred to as "the Bank"), has agreed to issue this Performance Bank Guarantee.

NOW THEREFORE, the Bank hereby irrevocably and unconditionally guarantees and undertakes to pay AI Engineering Services Limited, on its first written demand, without demur, reservation, protest, contest, or reference to the Contractor, any amount or amounts not exceeding ₹ _____ (Rupees _____ only), being the guaranteed amount, as may be demanded by AIESL on account of any breach or non-performance by the Contractor of any of its obligations under the Contract.

The Bank further agrees that:

1. Unconditional & Irrevocable Guarantee

This Guarantee shall be unconditional, irrevocable, and absolute, and AIESL shall be entitled to invoke this Guarantee in accordance with the Contract/Tender terms.

2. No Proof Required

AIESL shall not be required to prove or establish the grounds or reasons for its demand, and the Bank shall honour the demand without any objection or contest.

3. Waiver of Rights

The Bank hereby waives the necessity of AIESL first demanding the amount from the Contractor before presenting a demand under this Guarantee.

4. No Effect of Contractual Changes

Any change, modification, amendment, extension, or variation in the terms of the Contract or in the scope of work, including extension of the Contract period, shall not discharge the Bank from its obligations under this Guarantee.

5. Validity

This Performance Bank Guarantee shall remain valid up to _____ (date), which shall be at least sixty (60) days beyond the expiry of the Contract Period, including any extension thereof.

6. Claim Period

Notwithstanding anything contained herein, the Bank’s liability under this Guarantee shall be restricted to claims made by AIESL in writing on or before the expiry date mentioned above. Any claim received by the Bank after the expiry date shall not be enforceable.

7. Governing Law & Jurisdiction

This Guarantee shall be governed by and construed in accordance with the laws of India and shall be subject to the exclusive jurisdiction of the competent courts at New Delhi.

8. Limitation of Liability

The liability of the Bank under this Guarantee is limited to the maximum amount of ₹ _____ (Rupees _____ only) and shall stand reduced to the extent of any payments made by the Bank under this Guarantee.

9. Service of Demand/Invocation

Any demand/invocation under this Guarantee shall be made by AIESL in writing and served on the Bank at its Branch stated herein by hand delivery or registered post/speed post and shall be deemed effective as per applicable banking practice.

This Guarantee shall remain in full force and effect until its expiry date, unless discharged earlier by AIESL in writing.

For and on behalf of _____ Bank

Signature : _____

Name of the Officer : _____

Designation : _____

Date : _____

Bank Seal : _____

Branch Address : _____

ANNEXURE - E

(To be submitted by the Bidder along with the Technical Bid)

RFID TAG TECHNICAL SPECIFICATIONS & COMPLIANCE MATRIX

E1: PURPOSE OF ANNEXURE

This Annexure defines the mandatory technical compliance requirements for RFID tags to be supplied under this Tender and provides a standardised format for submission of compliance details by bidders.

This Annexure shall be read in conjunction with Clauses C5.1 to C5.4 of the Tender Document.

In case of any inconsistency, the provisions of Section C shall prevail.

E2: RFID TAG CATEGORIES (REFERENCE TABLE), derived from Clause B2(v), to be read with Clauses C5.1–C5.4

RFID Tag Category	Typical Tool Application
Category A	Small hand tools, gauges, and accessories
Category B	Standard aircraft maintenance tools
Category C	Large/heavy/critical tools
Category D	Tool Boxes/Large Equipment

E3: RFID TAG TECHNICAL COMPLIANCE MATRIX (Bidder to fill – Mandatory)

SN	Technical Parameter	Category A	Category B	Category C
01	RFID Technology (UHF EPC Class 1 Gen 2)	Yes/No	Yes/No	Yes/No
02	Frequency Band (ETSI 865–868 MHz)			
03	Minimum Read Range (per Clause B2(v))			
04	Mount-on-Metal Suitability	Yes/No	Yes/No	Yes/No
05	Tag Construction Material			
06	Resistance to Oil/Grease/Vibration	Yes/No	Yes/No	Yes/No
07	Data Retention (Years)			
08	Write Endurance (No. of Cycles)			
09	Operating Environment Suitability (Hangar/Tool Store)	Yes/No	Yes/No	Yes/No
10	OEM/Manufacturer Name			
11	OEM Datasheet Page No. (Evidence)			

Responses such as "As per Tender", "Compliant", or "Standard" without datasheet page reference shall be treated as non-compliance.

E4: RFID TAG PROHIBITED TYPES - DECLARATION

The Bidder hereby confirms that the RFID tags proposed under all categories:

- (i) Are not paper-based
- (ii) Are not disposable or single-use
- (iii) Are not retail-grade adhesive labels
- (iv) Are suitable for long-term metal tool deployment

(Signature & Seal of Bidder)

E5: SAMPLE SUBMISSION & VERIFICATION

- (i) AIESL reserves the right to:
 - a) Seek physical samples of RFID tags for each category during technical evaluation; OR
 - b) Validate performance during pilot implementation.
- (ii) RFID tags failing to meet the minimum requirements during validation shall be rejected and replaced at no additional cost.
- (iii) Acceptance of RFID tags shall be subject to successful pilot performance and Go-Live certification.

E6: EVALUATION & REJECTION CLAUSE

Non-submission, incomplete submission, or misrepresentation in this Annexure shall render the bid technically non-responsive, irrespective of the quoted price.

F1. General Principle

The specifications contained in this Annexure are performance-based and indicative.

Any RFID tag meeting or exceeding the functional, operational, environmental, durability, and safety requirements specified herein shall be acceptable.

No specific brand, OEM, proprietary technology, or country of origin is implied.

F2. Operating Environment

RFID tags shall be suitable for deployment in:

- (i) aircraft maintenance hangars
- (ii) tool stores and workshops
- (iii) high metallic-density environments
- (iv) areas exposed to oils, grease, solvents, dust, and vibration
- (v) temperature and humidity variations typical of aviation maintenance environments

F3. Mandatory Technical Requirements (Applicable to All Tags)

All RFID tags shall:

- a) comply with UHF EPC Class 1 Gen 2/ISO 18000-63 standards
- b) be suitable for mount-on-metal applications
- c) provide reliable read performance in metal-rich environments
- d) be resistant to oils, grease, solvents, and workshop contaminants
- e) be durable for long-term industrial use
- f) support multiple rewrite cycles suitable for lifecycle use
- g) support long-term data retention
- h) not be easily removable without visible damage
- i) be mountable using industrial fastening methods appropriate to tool material and operational use

Removal or tampering shall result in visible damage or traceable evidence

F4. RFID Tag Categories

Due to the varied sizes and operational usage of aircraft maintenance tools, RFID tags shall be suitable for the following categories.

Category A: Small Tools

Examples: small hand tools, gauges, accessories

Requirements:

- a) compact and lightweight design
- b) mount-on-metal compatibility
- c) durable industrial construction
- d) reliable read performance for close-range identification

Category B: Medium Tools

Examples: standard maintenance tools

Requirements:

- a) rugged industrial construction
- b) mount-on-metal compatibility
- c) reliable read performance in tool crib environments

Category C: Heavy/Critical Tools

Examples: large or high-value tools

Requirements:

- a) heavy-duty industrial construction
- b) shock and vibration resistance
- c) reliable read performance for tracking and audits

Category D: Tool Boxes/ Large Equipment

Requirements:

- a) rugged housing suitable for industrial handling
- b) secure mounting integrity
- c) reliable read performance for inventory and transfer tracking

F5. Environmental & Durability Requirements

RFID tags shall withstand:

- a) industrial vibration and handling
- b) exposure to oils, grease, and solvents
- c) impact during normal maintenance operations
- d) workshop contaminants and dust
- e) temperature variations typical of indoor hangar and workshop environments

F6. Read Performance

RFID tags shall provide reliable read performance suitable for:

- a) tool issuance and return operations
- b) inventory audits and reconciliation
- c) tool search and tracking

Actual performance shall be demonstrated during pilot implementation.

F7. Prohibited Tag Types

The following shall be considered non-compliant:

- a) paper-based RFID labels
- b) disposable or single-use tags
- c) retail-grade or non-industrial tags
- d) tags not suitable for metal tool environments

F8. Compliance & Documentation

Bidders shall submit:

- a) OEM datasheets for RFID tags
- b) environmental and durability specifications
- c) confirmation of EPC Gen2 compliance
- d) mounting methodology and recommended installation method

F9. Pilot Validation

Final acceptance of RFID tags shall be subject to successful pilot validation demonstrating:

- a) read reliability in tool store conditions
- b) performance in dense metal environments
- c) durability under operational handling
- d) accuracy during batch scanning and inventory audits

The bidder shall carefully review all requirements of the Tender Document and confirm compliance by filling in the following checklist.

Failure to submit this checklist or submission of incomplete/incorrect information may render the bid liable for rejection.

SN	Tender Requirement	Clause Reference	Compliance (Yes/No)	Page No. of Bid Document	Remarks
1	Bid submitted through GeM portal under Single Stage Two Bid System	A2.1			
2	Technical Bid submitted without any price information	A2.1			
3	Price Bid submitted strictly in prescribed format on GeM	A2.1			
4	Bid Validity of minimum 120 days from Technical Bid opening	A3.3			
5	EMD of ₹2,00,000 submitted through GeM (or valid exemption proof enclosed)	A3.1			
6	Bidder legally registered entity in India	D1			
7	Documentary proof of registration (Certificate of Incorporation/Registration) enclosed	D1			
8	Bidder not participating as Joint Venture/Consortium	D1			
9	Experience of at least one similar project involving minimum 10,000 tagged assets/tools	D2.2			
10	Similar work value criteria satisfied as per tender conditions	D2.3			
11	Supporting documents submitted (Work Order/Completion Certificate/Client Certificate)	D2.4			
12	The proposed solution is a proven production-grade system already deployed in live environments	D3			
13	Capability to support large-scale deployment of approx. 1,00,000 tools	D3			

14	Capability to supply RFID hardware, software platform and mobile application	D3			
15	Positive net worth in the last three financial years	D4			
16	Audited financial statements for the last three financial years submitted	D4			
17	Acceptance of Pilot Implementation at AIESL Nagpur	B2.8A			
18	Acceptance of phased rollout across the remaining five locations	B2.8A			
19	Acceptance of fixed-price turnkey implementation responsibility	B2.15			
20	Confirmation that all hardware and RFID tags supplied shall become the property of AIESL	C			
21	Compliance with RFID technical standards (EPC Gen2/ISO 18000-63)	C5			
22	Compliance with cybersecurity and data protection requirements	C6			
23	Confirmation that all data ownership shall vest with AIESL	B2.9			
24	Confirmation of system uptime and SLA compliance	SLA Section			
25	Acceptance of Five-Year Comprehensive AMC	A5.1			
26	Acceptance of the Liquidated Damages clause	A5.2			
27	Confirmation that no deviations have been proposed in the bid	A6.1			
28	Self-declaration regarding non-blacklisting/non-debarment	A10.4			
29	Declaration regarding conflict of interest/near relatives	A10.11			
30	Confirmation of unconditional acceptance of all tender terms	Entire Tender			

Bidder Declaration

We hereby certify that:

1. All information provided above is true and correct.
2. We have carefully read and understood the entire Tender Document and confirm compliance with all requirements.
3. We accept all terms and conditions of the Tender without any deviation.

For and on behalf of the Bidder

Name of the Firm : _____

Name of Authorised Signatory : _____

Designation : _____

Signature : _____

Date : _____

Seal of the Bidder : _____

Annexure - H
Document Submission Checklist (Mandatory Uploads by Bidder)
(To be submitted along with Technical Bid)

Bidders shall upload the following documents on the GeM portal as part of the Technical Bid. Failure to upload any mandatory document may render the bid technically non-responsive.

SN	Document Required	Clause Reference	Submitted (Yes/No)	Pg No. in Bid	Remarks
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1	Covering Letter/Bid Submission Form duly signed by the authorised signatory	Tender			
2	Certificate of Incorporation/Registration of the bidder	D1			
3	PAN Card of the Bidder	Eligibility			
4	GST Registration Certificate	Eligibility			
5	EMD proof or valid exemption certificate (MSE/Startup)	A3.1			
6	Undertaking of unconditional acceptance of tender terms	A6.1			
7	Bidder Compliance Checklist (Annexure-G)	Tender			
8	Documentary evidence of Similar Work Experience	D2.2/D2.3			
9	Copy of Work Orders/Contracts for similar projects	D2.4			
10	Completion Certificate/Go-Live Certificate issued by the client	D2.4			
11	Client certificate for ongoing projects (if applicable)	D2.4			
12	Technical architecture and system description of the proposed solution	Section C			
13	OEM datasheets of RFID readers, handheld devices, and tags	C5.6			
14	Proposed implementation methodology and project plan	Scope of Work			
15	Details of proposed project team (Project Manager, Engineers, etc.)	B2.13			
16	Audited financial statements for the last three financial years	D4			
17	Net worth certificate from a Chartered Accountant	D4			
18	Self-declaration regarding non-blacklisting	A10.4			
19	Declaration regarding conflict of interest/near relatives	A10.11			
20	Any other document required under the Tender	Tender			

Annexure - I
Technical Compliance Matrix
(To be filled and submitted by the Bidder as part of the Technical Bid)

The bidder shall provide point-wise compliance against each technical requirement specified in the tender. Bidders shall clearly indicate whether the requirement is Complied/Not Complied/Partially Complied.

SN	Tender Requirement	Clause Reference	Compliance (Yes/No)	Description of Compliance	Page No. of Supporting Document
1	Web-based enterprise application for tool management	C2			
2	Android mobile application for handheld RFID operations	C2			
3	Role-based access control (Admin/Store Operator/QA/Auditor)	C2			
4	Secure audit logs for all transactions	C2			
5	RFID-based tool issuance and return management	B2.3			
6	Support for batch issuance and return operations	B2.3			
7	RFID tagging of individual tools and tool boxes	B2.2			
8	Capability to manage approx. 1,00,000 tools	B2			
9	Calibration tracking and automated alerts	B2.5			
10	Blocking of overdue or unserviceable tools	B2.5			
11	RFID-based inventory audits	B2.6			
12	Proximity-based tool search capability	B2.6			
13	ERP/SAP integration readiness through APIs	B2.7			
14	Compliance with EPC Gen2 RFID standards	C5			
15	Industrial-grade RFID tags suitable for metal tools	C5.3			
16	Handheld RFID readers for inventory scanning	C5.2			
17	Secure authentication and data protection mechanisms	C6			
18	Data residency within India	C7			

19	Data ownership vested with AIESL	B2.9			
20	System scalability and multi-location deployment	C1			

Important Instruction to Bidders:

Failure to provide clear compliance with supporting documents may render the bid technically non-responsive.

The Pilot at AIESL Nagpur shall be considered successful only upon satisfactory completion of the following criteria:

SN	Acceptance Parameter	Requirement
1	RFID tagging completion	Tagging of all tools identified for the pilot location
2	System deployment	Installation and configuration of the software platform
3	Hardware deployment	Installation of RFID readers and handheld devices
4	Master data creation	Tool master database created and validated
5	Issuance and return workflow	Successful testing of tool issuance and return transactions
6	Inventory audit capability	Successful inventory scanning using handheld readers
7	Calibration tracking	Automated alerts and blocking of overdue tools were demonstrated
8	MIS reporting	Generation of system reports and dashboards
9	User training	Training completed for tool store staff and supervisors
10	System stability	Continuous operational performance for a minimum of 15 days

Pilot Acceptance

The Pilot shall be deemed successfully completed only after written certification by the Authorised Officer of AIESL.

Failure to achieve satisfactory pilot performance may result in:

- a) extension of the pilot period, or
- b) termination of contract as per tender conditions.