

TERMS OF REFERENCE (ToRs)

3D SCANNER OPERATOR & DESIGNER (SERVICE PROVIDER)

1. Background

TUSDEC is providing industrial support services including 3D scanning, reverse engineering, and CAD modeling to local manufacturing industries. To enhance service delivery and technical capacity, an individual is required to offer above services on job-to-job basis and deliver high-quality scanning and designing services.

2. Objectives of the Assignment

- Provide professional 3D scanning and reverse engineering services.
- Convert physical components into accurate digital CAD models.
- Support local industry in product development and improvement.

3. Scope of Work

The service provider shall be responsible for the following activities:

- Operate and utilize available 3D scanning and measurement equipment for industrial components and assemblies.
- Conduct accurate scanning of mechanical parts, fixtures, sheet metal components, molds, and machinery elements etc.,
- Process, clean, align, and optimize scanned data using appropriate software tools.
- Convert scanned and measured data into precise 2D and 3D CAD models.
- Prepare detailed engineering drawings including:
 - Assembly drawings
 - Part drawings
 - Fabrication and manufacturing drawings
 - Electrical and electro-mechanical component layouts (where required)
- Develop CAD/CAM-based designs for molds, tooling, fixtures, and machine components.
- Support reverse engineering activities for duplication, redesign, and improvement of industrial parts.
- Ensure drawings and models comply with manufacturing standards and tolerances.
- Technical assistance related to product design, tooling, and manufacturability.
- Maintain organized digital records of all projects, drawings, and scanned files and timely submission to TUSDEC
- Support training and knowledge transfer activities, where required.
- Ensure safe handling, proper usage, and basic maintenance of scanning and design equipment.
- Maintain strict confidentiality of client data, designs, and proprietary information.
- The service charges payable by the client shall be determined through mutual consent between TUSDEC and Service Provider.
- The Service Provider shall be required to visit the office frequently as required for the execution of scanning assignments and other related jobs and remain readily available via phone when assignments are received. The Service Provider shall preferably process the assignments on the same day.

4. Deliverables

- Scanned data files (raw & processed)
- Reverse engineered CAD models
- 2D & 3D technical drawings
- Develop CAD/CAM-based designs for molds, tooling, fixtures, and machine components
- Monthly reporting

5. Duration

- Initially the contract will be for 1 Year (extendable upto 3 Years).

6. Eligibility and Qualification Criteria

Sr. No	Criteria	Requirement
1	Education	Minimum Bachelor's degree
2	Professional Certification	Mechanical Draughtsman (At least two-year Mechanical Draughtsman Certificate)
3	Technical Experience	Minimum 12 years of professional experience in 3D scanning, reverse engineering, mechanical drafting, CAD/CAM design, tooling, and industrial product development
4	Academic Experience	Minimum 10 years of offering CAD/CAM related technical courses for industry
5	Software Proficiency	AutoCAD, Geomagic Studio, Autodesk Revit, PowerShape / equivalent
6	Reverse Engineering Skills	Practical experience in converting physical components into digital drawings and models
7	Communication Skills	Ability to prepare technical documentation and coordinate with clients
8	Professional Conduct	Demonstrated reliability, discipline, and long-term industrial service record
9	Profile	Attach CV detailing above requirements

The above is the minimum criteria and only fully qualified bidders will be considered for financial evaluation.

7. Instructions to Bidders

7.1 Technical Proposal Submission

- Attach copies of educational and professional certificates alongwith detailed CV through E-PADS.

7.2 Financial Proposal Submission

- Financial proposal of only fully technically compliant bidders will be considered. Non-compliant or partially compliant bidders will not be considered for financial proposal.
- Submit the attached "Financial Proposal" at Annexure-I

7.3 Proposal Validity

- Proposals shall remain valid for 90 days.

7.4 Bid Security

- The bid security shall be submitted in the form of "Bid Securing Declaration Form" on E Stamp Paper of PKR 200. The format of Bid Securing Declaration Form is attached as Annexure II

7.5. Payment Terms

- Monthly basis upon submission of invoice by the service provider
- Payment will be made to the service provider by Contracting Authority (TUSDEC) through cheque after deduction of applicable taxes
- Payment subject to satisfactory performance and deliverables.

8. Performance Evaluation Criteria

- Accuracy of models
- Timely completion of assignments
- Client feedback
- Equipment handling & care
- Professional conduct

9. Confidentiality Clause

The individual shall not disclose, share, or reproduce any client data, designs, drawings, or proprietary information without written approval.

10: Termination

10.1 In the event that the Contracting Authority discovers any acts of misconduct by the service provider, the contract will be deemed null and void. In such an event, the Contracting Authority will not be required to make any further payments for delivered or undelivered service(s).

10.2 In the event of any breach of the service provider, or its failure to deliver the requested service(s) within the specified and scheduled periods of time, or failed to comply with any of its obligations, the Contracting Authority shall have the right to terminate this Agreement at any time by serving a termination notice and without the need for a court order.

11. Hold Harmless

11.1 The service provider agrees to hold harmless, defend and indemnify TUSDEC, its officers, agents, and employees, from and against any and all liabilities, claims, demands, losses and actions for injury to and/or death of persons and /or damage to property arising out of or incurred in connection with service provider performance of this contract.

12. Previous Agreement(s)

Any and all existing agreements or renewals between the parties hereto, covering the same subject matter, are hereby canceled and superseded by this agreement and such prior arrangements shall have no further force or effect.

FINANCIAL PROPOSAL

Subject: Tender Ref. No # TUSDEC/P&O/SCAN/001/2026

Technology Upgradation and Skill Development Company (TUSDEC), incorporated in 2005 as a not-for-profit, guarantee limited company, is mandated to upgrade technology and skills of key industrial clusters and connect Pakistan to the global value chain.

Sr. #	Particulars	Information / Details
1	Name:	
2	CNIC #	
3	Address:	
4	Telephone No / Mobile No:	
5	Email:	
6	Venue:	TUSDEC Head Office, Lahore
7	*Services Fee quoted by bidder (%age of each scanning part /job, inclusive of all applicable taxes)	

*The service fee quoted by bidder shall be calculated on the net amount after deduction/adjustment of applicable sales tax charged to the client and any direct reimbursable expenses incurred during the execution of the assignment, including but not limited to travel, accommodation etc.

SCOPE OF WORK:

As per ToRs.

TERMS AND CONDITIONS:

1. Payment Terms: As per ToRs
2. Mode of payment: By cheque after deduction of all applicable taxes

I agree to provide the above services to TUSDEC, according to the scope of work outlined in ToRs.

Name: _____

Date: _____

Signature: _____

Form of Bid-Securing Declaration

[The Bidder shall fill in this Form in accordance with the instructions indicated.]

Date: *[date (as day, month and year)]*

No.: *[number of bidding process]*

To: *[complete name of Procuring Agency]*

I, the undersigned, declare that:

I understand that, according to your conditions, Bids must be supported by a Bid-Securing Declaration.

I accept that I will be blacklisted and henceforth cross debarred for participating in respective category of public procurement proceedings for a period of six months, if fail to abide with a bid securing declaration, however without indulging in corrupt and fraudulent practices, if I am in breach of my obligation(s) under the Bid conditions, because I:

- (a) have withdrawn my Bid during the period of Bid validity specified in the ToRs; or
- (b) having been notified of the acceptance of my Bid by the Procuring Agency during the period of Bid validity, (i) fail or refuse to sign the Contract;

I understand this Bid Securing Declaration shall expire if I am not the successful Bidder, upon the earlier of (i) my receipt of your notification to me of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of my Bid.

Name of the Bidder _____

Signature of the Bidder _____

Date signed _____ day of _____,