

# **TOR for Software Testing and Certification Services**

**National Institute for Smart Government**

[Course title]

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## Proprietary Notice

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## Important Timelines

NISG invites eligible agencies to submit their proposals in providing the services in conformity to this document. The particulars of TOR are:

S. No.	Information	Details
1.	TOR Availability	25-Mar-2022 *Start Time = T
2.	Last date of proposal submission	23:00; 04-04-2022 T+ 10 Days
3.	Online opening of PQ Proposals	11:00; 05-03-2022 T+ 11 Days Virtual opening of PQ proposal in the presence of representatives of applicants who wish to remain present
4.	Date & time of Techno commercial Presentation	06-03-2022 T+ 12 Days

**Venue for Technical Presentation:** Virtual online presentation session to be done by IA as per schedule.

### Background to the TOR

**National Institute for Smart Government (NISG)** is a not-for-profit company set up in 2002 by the Govt of India on the Public-Private-Partnership (PPP) model with Secretary, MeitY, Gol, as its chairman. NISG is shaped as an institution of excellence in the area of e-Governance to assist governments for ushering in smart governance, process reforms and digitalization. NISG has been at the forefront of e-governance initiatives in India and contributed towards improvement in government processes and establishment of service delivery systems resulting into faster and simpler service delivery to end-users including citizens and businesses.

RERA stands for Real Estate Regulatory Authority came into existence as per the Real Estate (Regulation and Development) Act, 2016 which aims to protect the home purchasers and also boosts the real estate investments. The bill of this Parliament of India Act was passed on 10 March 2016 by the Upper House (Rajya Sabha). RERA Act came in force in Bihar on 1<sup>st</sup> May, 2017.

To achieve the stated objectives, RERA Bihar has engaged NISG to design, implement and operate a new Digital System with following key features:

1. Supports fully digital, transparent, and time-bound Project Registration Process
2. Ensures on-time digital progress report of projects by promoters
3. Provide an online registration, ranking and feedback system on mobile to motivate real estate agents
4. Provides an Intelligent digital Complaints Redressal system covering full lifecycle of case hearings, orders and compliance
5. Promote real estate sector in Bihar by providing an authentic project review to consumers on web and mobile
6. Provide recommendation to appropriate Government on matters relating to development & promotion of real estate sector (in Bihar)

7. Integrate seamlessly with Patna Municipal Corporation, Patna Metropolitan Authority and Other Map passing Authorities and Authorities related to Land Records

Current RERA, Bihar online portal <https://rera.bihar.gov.in> is available for the access of users to initiate and upload documents, however, post submission of the application. Current RERA portal is not perceived as much informative and user friendly. RERA in its effort to streamline Real Estate projects for timely delivery, with adherence to regulatory and compliance norms and promise to the consumer segment, is looking forward for a Digital Platform that can enable paperless processes and proactive monitoring. The new platform, called as RERA Bihar Online, is supposed to cater to the following major processes:

1. Registration of Real Estate projects
2. Registration of Real Estate Agents
3. Project Progress Monitoring
4. Project Renewal
5. Legal Resolution
6. Grievance Handing and Customer Care

RERA Bihar has engaged with NISG as the turnkey partner to Design, Implement and Operate the new Digital System called RERA Bihar Online for the period of Five (5) years. While NISG holds overall accountability and will be driving the project, it has created an ecosystem of Implementation Agencies (IA) to cater to various specialized requirements. With this spirit, NISG has envisioned four key Implementation Agencies to be part of the project delivery ecosystem in following areas:

- UX Design
- AI enabled niche Complaint Management tool
- Custom Software Development and Support
- Software Testing and Certifications

NISG has published a multiple Terms of Reference (TOR) documents on the website of NISG <https://nisg.org> inviting bid responses from competent Implementation Agencies in all the above four areas.

**This document is the Terms of Reference (TOR) to invite bid response from qualified Implementation Agencies, referred as IA hereafter, specializing in Software Testing and Certification services as per the scope detailed in the following sections of this document.**

## Segregation of Duties

It is important for the bidding IA to get a view of segregation of duties (SOD) in a multi partner delivery ecosystem. Following table can be referred as high-level segregation of duties.

<div style="display: flex; justify-content: space-between; align-items: center;"> <span style="font-size: 1.2em;">Party</span> <span style="font-size: 1.2em;">→</span> </div> <div style="display: flex; justify-content: center; align-items: center; margin-top: 10px;"> <span style="font-size: 1.2em;">↓</span> </div> <div style="margin-top: 10px;"> <b>Responsibility Areas</b> </div>	NISG	UX Design IA	Complaint Management tool IA	Custom Software IA	Testing IA
Stakeholder management	✓				
Project Management	✓				
Development Management			✓	✓	
Solution Architecture	✓		✓	✓	
Functional Requirement Specification (FRS)	✓				
High Level Design (HLD)			✓	✓	
UX Design		✓			
Software Development			✓	✓	
Integration			✓	✓	
Release Management				✓	
System Integration Test (SIT)			✓	✓	
Dev and Test Environments			✓	✓	
Change Management	✓		✓	✓	
Hosting / Deployment			✓	✓	
Production Support (Application)			✓	✓	
Remote Help Desk			✓	✓	
Testing and Certification					✓
User Acceptance Testing	✓				✓



## Technical Background

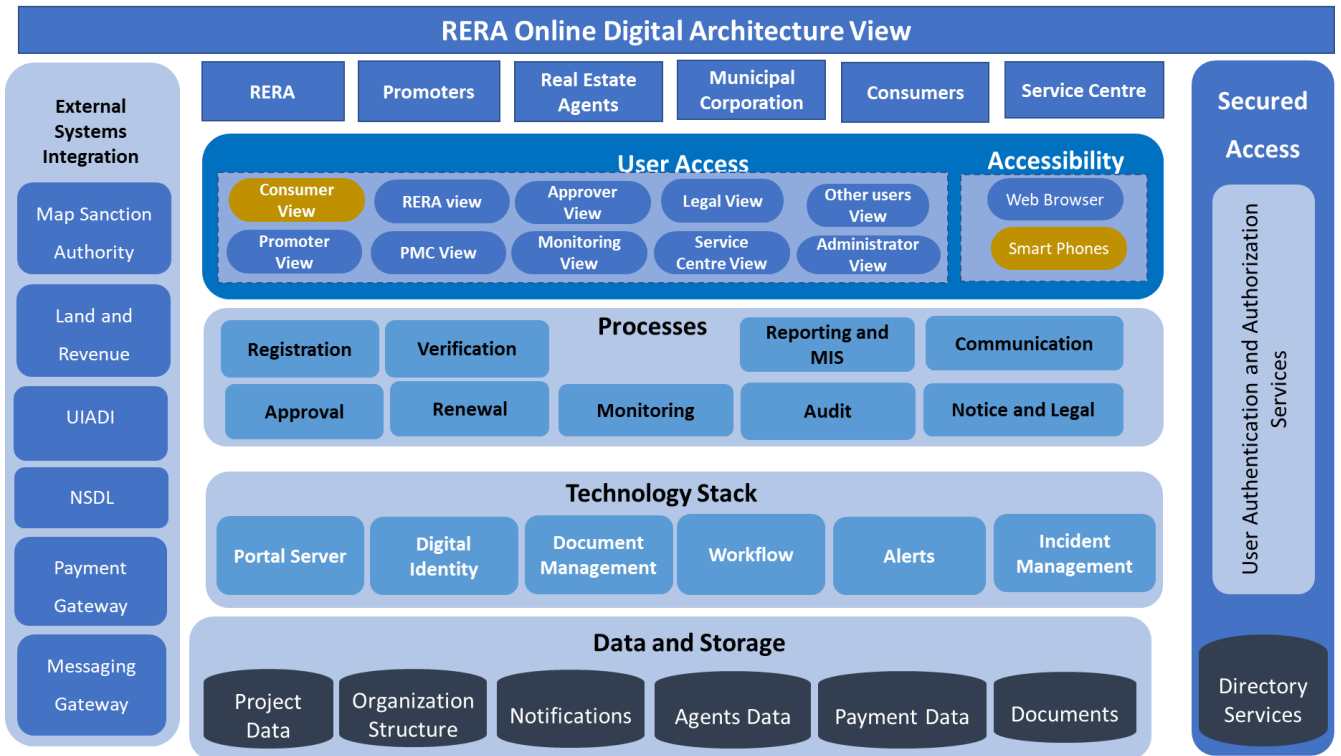
RERA Bihar Online is proposed to be a digital platform that is supported on the Web as well as Mobile Application on iOS and Android. The platform must have following characteristics.

1. Easy to use on web and as Mobile application
2. Responsive experience by users of each view performing at less than 3 seconds of response time
3. Secure handling of digital documents for each user
4. Automated notifications and alerts from the system on defined triggers such as expiry of map sanction etc.
5. Should be able to integrate with other departments of the Government and 3rd party services such as Municipal Corporation, UIADI Adhaar Authentication, PAN verification, OTP based authentication of users etc.
6. Should support digital signature process online
7. The platform should be able to handle routine tasks Automatically such as sending alerts and notifications, information being sought by users
8. Possible to be supported by responsible chat-bots and talk-bots
9. Must have multilingual support in Hindi and English.
10. Should be able to provide role-based views for different stakeholders

Following Architecture principles are applicable for the solution.

1. Solution Architecture should be interoperable and integrable with external systems with Open API
2. It should support configurable business processes
3. Use of Open-Source technology to the extent possible
4. Open API based integration architecture
5. Service Oriented Architecture
6. Automation capability to be built-in the system
7. Platform will primarily be cloud hosted, assumed to be in SDC of GoB

8. Technology stack chosen must support open architecture and be interoperable



## Scope of TOR

Overall scope of this TOR is listed as below:

- 1) IA will be provided with requirements documents and technical specification document for overall understanding of the project and will engage with NISG team for detailed discussions upon starting the engagement.
- 2) IA is expected to cover the following broad areas under Testing and Validation:
  - a. Develop Test Cases and Plan and conduct the following tests and coordinate with Implementation Agency in consultation with NISG for closure:
    - i. Functional Test
    - ii. Usability Test
    - iii. Performance Test
  - b. Develop Test Cases and Plan for User Acceptance Testing (UAT) and assist NISG team and identified team from the client in conducting UAT
  - c. Provide detailed requirement of Test Data
  - d. Prepare Test Reports until closure
  - e. Manage the process of Software Test Quality Certificate (STQC) and Security Certification such as CERT-In or any such GIGW compliant certifications suggested by the Ministry of IT (Meity) required for taking the software product go-live.
  - f. Manage penetration test for vulnerability (VAPT) at required intervals.
- 3) IA is expected to provide all the in-scope activities for both web portal and mobile applications, which are designed to be bilingual (Hindi and English).
- 4) IA is expected to deliver in tune with the iterative and modular approach of delivery for the project.
- 5) IA is expected to propose for a timebound milestone-based fixed price costing model.
- 6) IA is expected to participate in discussions with NISG and with its client in English or Hindi.

- 7) Some critical phases such as UAT will require some onsite presence of the resources from IA. IA must be ready and willing to provide onsite support at Patna, Bihar.
- 8) During the period of contract, IA shall depute a Single Point of Contact (SPOC) to liaison and coordinate with NISG Project Manager.
- 9) IA shall bear the cost of any license or tools required for various testing.
- 10) IA will be provided with the Test Environment and Test Data, however detailed requirement of Test Environment and Test Data will have to be provided by the IA.

### **Change Request Management**

IA is required to submit proposed Change Request (CR) management process as part of the response to this TOR. Change Management will come in force only after declared and accepted Go-Live of the entire project. IA will be expected to develop detailed understanding of requirements based on given documents and discussions with NISG team in the initial phase of the project. Some minor changes can be expected as per client's requirement and IA is expected to have the flexibility to accommodate the changes. However, changes that require major effort and are of new feature/functionality altogether, can be accepted under the Change Management process.

Also, Change Management process is required to handle future enhancements and new requirements once the application is live. A guideline for Change Management is as following:

- 1) There will be a Change Review Board (CRB) comprising of NISG and client representatives, which will be the sole authority to approve any proposed changes and associated commercial.
- 2) A service request submitted by NISG or Client that is perceived as change will be submitted by IA in a defined template to the CRB.

- 3) CRB meeting can be called on demand and will occur on a defined bi-weekly frequency to review all the changes and approve or seek clarifications or disapprove.
- 4) Criteria for approving a request as change request will be agreed during the planning phase of the project.
- 5) IA is expected to provide a blended man days rate card that will be applied to approve commercial of a Change Request.
- 6) IA must submit estimated effort while submitting the Change request.
- 7) All Change Requests will be managed through a tool for its lifecycle.

*IA must note that a Change Request however will be a discouraged activity and will go through stringent approval process through CRB.*

## Project Deliverables

The deliverables for the project shall include but not be limited to:

### 1. Project Plan

- a. Detailed testing schedule until go-live shall be prepared and submitted.

### 2. Documentation

- a. All Test cases and test plan documents will be submitted in advance of testing schedule.
- b. All test reports will be maintained and shared by IA.
- c. Detailed steps of creating test data and setting up test environment will be shared by the IA.
- d. Separate documents will be prepared and shared for:
  1. Functional Test
  2. Usability Test
  3. Performance Test
  4. User Acceptance Test

### **3. Deployment & Testing**

- a. IA shall own setting up of development and test environments.
- b. IA will be responsible for deployment in production environment post UAT by an independent agency identified by NISG.
- c. IA shall coordinate with independent testing agency for clarification during creation of Test Case and Test Plan phases.
- d. Any deviations/ discrepancies/ errors observed during the testing phase will be resolved by the IA. Any exceptions will have to be documented and signed off by NISG.

### **4. Implementation and Go-Live**

- a. Completion of VAPT to be carried out by Third Party audit agency before Go-Live.
- b. Completion of STQC and Cert-In certifications by an independent agency identified by NISG will be required for Go-Live.
- c. IA will be responsible for compliance to VAPT and certifications status.
- d. IA shall carry out necessary data migration before Go-Live.

### **5. Post Go-live Five years of Support & maintenance**

- a. IA may be engaged to carry out VAPT at regular and desired intervals.
- b. IA may also be engaged to carry out any further required.
- c. IA is expected to provide regular system performance monitoring in a controlled environment.

The IA will ensure that all the deliverables are submitted to NISG in both soft and hard copy format as required.

## **Acceptance Mechanism**

The deliverables shall be reviewed comprehensively by the NISG team. NISG will validate the deliverables which should confirm to the specifications of this TOR qualitatively. NISG will be the final authority for acceptance of the deliverables. After getting final acceptance, NISG will formally communicate to IA in writing about the

“Official” acceptance of the deliverable. Only after official acceptance of the deliverable from the client, the IA will raise an invoice for payment against those deliverables. Any queries about deliverables will need to be answered by the selected company within 3 working days of submission of query.

### **Addendum to Scope**

NISG has used its best judgement and experience to make the TOR’s scope of work as exhaustive as possible. However, there can be tasks which cannot be envisaged at this stage of the project. In case if any such task is revealed later during the phase of project, it will also be under the scope of IT vendor. Some features may be added or removed by NISG during further discussions. However, if such an activity impacts the timeline, then timelines would be revised with consent from client and mutual understanding of NISG and IA.

## Project Implementation Approach and Timelines

IA is expected to align its team and testing plan as per the delivery plan of other implementation agencies engaged for implementation of the solution. IA however is expected to execute the initial phase of understanding requirements and creating test cases and plan in a time bound manner, indicated in the table below.

S. No.	Activities	Timelines (in weeks) ('T' is the date of issuance of Letter of Intent by NISG)
1.	Team set up and baseline study	T + 2 weeks
2.	Test cases and test plan development for all modules	T + 6 weeks
3.	Comprehensive test of Complaint and Grievance module	To be aligned with the delivery of Complaint and Grievance Module
4.	Comprehensive Test of Registration Module	To be aligned with the delivery of Registration Module
5.	User Acceptance Testing before final Go-Live	To be aligned with final Go-Live plan of solution
6.	Certification compliance such as Cert-In	To be aligned with final Go-Live plan of solution
7.	VAPT in production environment	To be aligned with final Go-Live plan of solution
8.	Post Go-Live support	Required testing and lab support Post Go-live for Five years on demand basis.



## Terms of Payment

The amount payable to the TA will be linked to specific deliverables as per the following terms.

1. The payments would be made based on the completion of specific milestones, only after acceptance by NISG and its client.
2. There will not be any time-based payment or payments against elapsed time of the project.
3. Payment to TA will tied to payment clearance of NISG from its client.

Given below is the schedule of payment during the project.

S. No.	Milestone	Payment	Deliverables
1.	Test Cases, Plan and Test Data requirements and test environment set up	20% of contract value	<ol style="list-style-type: none"> <li>1. Test cases, test plan documents</li> <li>2. Test data requirement document</li> <li>3. Test Environment set up document</li> </ol>
2.	Functional, Usability and UAT of Complaint and Grievance Module	20 % of contract value	<ol style="list-style-type: none"> <li>1. All document pertaining to functional and usability and UAT for Complaint and Grievance Modules.</li> <li>2. Test reports.</li> <li>3. Successful UAT.</li> </ol>
3.	Functional, Usability and UAT of Registration Module	20 % of contract value	<ol style="list-style-type: none"> <li>1. All document pertaining to functional and usability and UAT for Registration Modules.</li> <li>2. Test reports.</li> <li>3. Successful UAT.</li> </ol>
4.	UAT and certification of final Go-Live	20% of contract value.	<ol style="list-style-type: none"> <li>1. All document pertaining to functional and usability and UAT for remaining areas.</li> <li>2. Test reports.</li> <li>3. Successful UAT.</li> <li>4. Certification compliance for Go-Live</li> </ol>
5.	System Performance Testing	20% of contract value	<ol style="list-style-type: none"> <li>1. All document pertaining to performance testing.</li> <li>2. Test reports.</li> </ol>

## Instructions for submission of Proposal

1. No marketing literature pertaining to the TA should be enclosed along with the proposal. If it is done, the same will be treated as disqualification.
2. Responses must be precise, specific, and relevant to the scope of work and must adhere to the specifications mentioned in the following sections.
3. This invitation for proposal is open to all companies who fulfill pre-qualification criteria as specified in this TOR.
4. Proposals must remain valid till 180 days from the proposal submission date.
5. NISG reserves the right to accept or reject any proposal, and to annul the bid process and reject all proposals at any time prior to award of contract, without thereby incurring any liability to the affected agency (s) or any obligation to inform the affected agency(s) on the ground for such decision. NISG also reserves the right to negotiate with the most competitive agency if required.
6. No work products, methodology or any other methods used by the TA should be deemed as proprietary and non-shareable with NISG by the TA.
7. The information contained in this document is only disclosed for the purposes of enabling you to submit a proposal to NISG. No part of this document including the Annexures can be reproduced in any form or by any means, disclosed or distributed to any person without the prior consent of NISG except to the extent required for submitting proposal. This document should not therefore be used for any other purpose.
8. The contract will be awarded to the responsible, responsive agency(s) whose proposal conforms to the TOR and is, in the opinion of NISG, the most advantageous and represents the best value to the assignment, price as per the evaluation criteria detailed in the TOR.
9. The agency is required to submit covering letter in the prescribed format.
10. The agency shall sign a Non-Disclosure Agreement with NISG at the time of signing the contract for protecting the client related information due to sensitivity of it.

11. The proposal submission and evaluation process will be done in ONLINE mode.
12. On the date of proposal submission, the agency in response to the Request for Proposal shall submit the proposal in non-editable pdf format as three separate files.
13. The pre-qualification, technical presentation proposal and commercial proposal files together as a proposal submission shall be e-mailed to [manoj.mishra@nisg.org](mailto:manoj.mishra@nisg.org) on the proposal submission due date in separate password protected excel files. The details of the password shall be provided to NISG by the respective agency on the day of opening of the proposal as per the schedule.
  - a. FILE 1: shall contain the Pre-qualification bid as per the PQ response format provided with the TOR.
  - b. FILE 2: shall contain the Technical Proposal in the technical presentation format as per requirements of the TOR.
  - c. FILE 3: shall contain the Commercial bid as per format of the TOR.
14. The commercial and technical proposals should be submitted separately. There should not be any commercial information in the technical proposal.
15. The technical presentation proposal and commercial proposals should be submitted in the given format and signed by authorized signatory.
16. NISG, by issuance of this TOR does not necessarily indicate or imply that the project will be commenced. The IA will absolve NISG of all responsibilities if the project does not start within a stipulated timeframe. NISG reserves the right to withdraw this assignment anytime without prior consultation or intimation to the agency(s).
17. The last date for submission: Please ref schedule for last date of proposal submission.

## Proposal Evaluation & Selection Process

TA must take a note of four step proposal evaluation process by NISG, once response to the TOR is received. Details of each step in the order is given below.

### 1) **Pre-qualification**

TA must fulfil the eligibility criteria mentioned in Annexure I to be qualified and be considered for evaluation. A proposal may be rejected at prequalification stage itself and not considered for technical presentation, if it fails to satisfy the prequalification criteria specified in Annexure I.

### 2) **Evaluation of Technical Proposal**

1. Proposals will be evaluated by a Committee of Experts (the "Committee") appointed by NISG. NISG along with its representative(s) or such other authority designated by NISG as the case may be is also referred to herein as the Committee of Experts (or "Committee").
2. NISG has the right to appoint any individual / organization as an expert member of this committee as long as the particular person does not have any conflict of interest in the bidding/evaluation process.
3. Agency having their proposals fulfilling the pre-qualification criteria shall be required to make a technical presentation and demonstration of their proposed solution to NISG evaluation committee via video-conferencing link as per the dates specified in the document.
4. The presentation of the proposed solution shall be evaluated against the technical evaluation criteria referred to in this document. The duration of the presentation shall be 30 minutes excluding the question and answers with the committee.
5. The presentation of the technical proposal must include the demonstration of the proposed solution.
6. The presentation of the Technical Proposal should be made by the proposed project manager of the agency for this Project of NISG, with some of the key

team members to support the project manager as part of the presentation team, instead of the sales representative or the senior executive of the organization.

7. Evaluations of bids will be only on the basis of information provided by the agency in the proposals, or any additional information provided by the agency against specific requests for clarifications sent by NISG during the evaluation process.
8. The responses given by agency will be specifically evaluated with respect to methodology, unique capabilities if any, the project structure, the quality of the project team, Solution Proposed, Organizational Experience, Methodology, IT Solution Proposed, Planning for Operations & Maintenance.
9. Agency should note that it will be assumed that all features shown as part of the technical presentation (for scoring) are part of solution delivery and are included in the price bid.
10. For calculating the technical score (St) the individual score shall be assigned as per process defined below. In order to qualify technically, a bid must secure a minimum score after summing up.

### **Scoring of technical proposal:**

1. The technical proposal will be evaluated for a total maximum score of 100 marks, based on the information provided by the agency in the technical proposal against the parameters listed in the next section and further discussions with technical architects of the implementation agency.
2. The conditions on presentation of proposals and demonstration of solutions are applicable to technical evaluation.
3. The marks to be allocated for different parameters and the description of the parameters and the basis of evaluation of a technical proposal against a specific parameter are listed in the table in the next section.

4. To qualify in the technical proposal the technical proposal by the agency has to score a minimum of 70 marks out of the maximum of 100 marks.
5. The technical proposal which does not get an overall score of 70 marks will not be considered for commercial evaluation.

The technical proposal shall be evaluated as per the criteria given below:

S. No	Evaluation Criteria	Scoring Logic
1.	<p><b>Testing Methodology Score:</b></p> <p>IA is expected to provide details of testing methodology adopted by them for various types of testing as part of scope of this TOR</p>	<p><b>Maximum Score = 25</b></p> <p>Score to be awarded by the evaluation committee on the merit of details and supporting artefacts provided by IA as part of bid response.</p>
2.	<p><b>Organizational Strength Score:</b></p> <p>Organizational Strength criteria are listed in Annexure III.</p> <p>IA is expected to respond to each criterion and provide supporting information and justification for the response.</p>	<p><b>Maximum Score = 50</b></p> <p>Each criterion in Annexure III carries a score of 10, thus maximum total of 5 criteria being 50.</p> <p><b>Organizational Strength Score =</b> Total of score awarded for each of the 5 criteria in Annexure III</p> <p>Each response will be evaluated by the evaluation committee of NISG to give a score on the scale of 1 to 10, 10 being maximum.</p>
3.	<p><b>Case Studies Score:</b></p> <p>Case studies criteria are listed in Annexure IV. IA is expected to furnish at least 3 case studies and a maximum 5 case studies.</p>	<p><b>Maximum Score = 25</b></p> <p>Each of the case study carries a maximum score of 5 as detailed in Annexure IV.</p>

**3) Evaluation of Commercial Bid**

1. Financial proposals of all the firms that meet the technical qualifications would be opened. Agency achieving the highest combined technical and financial score based on QCBS of 70:30 would be invited for negotiations for awarding the contract. The financial bid evaluation will be based on the following criteria:
  - The lowest financial proposal (Fm) after considering all expenses and prevailing taxes will be given a financial score (Sf) of 100. The financial scores of all the other proposals will be determined by  $Sf = 100 * Fm/F$  (F = value of financial proposal)
  - Proposals will finally be ranked according to their combined technical (St) and financial (Sf) scores using a weight of 70% for technical proposal and 30% for financial proposal. The overall score (S) will be computed as follows:  
 $S = St (0.7) + Sf (0.3)$
2. In case of a tie, agency with the higher technical score will be invited for negotiations.

**4) Notification of Award and signing the contract.**

1. NISG reserve the right to negotiate with the agency whose proposal for the implementation of Solution has been ranked as successful agency by the committee on the basis of price quoted in the commercial proposal and also the other commercial terms and conditions furnished in the technical proposal.
2. Award of contract for the project: After the completion of the bid evaluation process and determination of the successful agency, and completion of the negotiations if any, as listed in the TOR, a Letter of Award (the "LOA") shall be issued, in duplicate, by NISG to the successful agency and the successful agency shall, within 7 (seven) working days of the receipt of the LOA, sign and return the duplicate copy of the LOA in acknowledgement thereof. In the event the duplicate copy of the LOA duly signed by the successful agency is not received by the stipulated date, NISG may, unless it consents to extension of time for

submission thereof, cancel the LOA and the next highest-ranking agency may be considered.

3. The notification of award or the issue of LOA will not constitute the formation of the contract.
4. The successful agency who has been issued with a LOA is expected to furnish a Performance Bank Guarantee (PBG) for an amount which is equal to 10% of the contract value. This Performance Bank Guarantee has to be from any of the Nationalized Bank or Private Banks authorised by the Government to conduct Government Transactions.
5. The contract between the successful agency and NISG will come into force only upon the agency furnishing the Performance Bank Guarantee as per conditions laid out in this TOR and NISG signing the contract with the successful agency.
6. If the successful agency fails to furnish the Performance Bank Guarantee, within the specified period and subject to specified conditions, NISG has the right to withdraw the notification of award/LOA.
7. Expenses for the Contract-The incidental expenses of execution of agreement/ contract shall be borne by the successful agency.
8. Commencement of Assignment: The successful agency shall commence the project within seven days of the date of signing the Agreement. If the successful agency fails to commence the assignment as specified herein, NISG may invite the second ranked agency for negotiations. In such an event, the LOA or the Agreement, as the case may be, may be cancelled/terminated.



## Annexure I: Pre-Qualification Criteria

IA is expected to respond to the below details with supporting documents.

S. No.	Pre- Qualification Criteria	Supporting Document
1.	<b>Proposal Covering Letter</b>	On Company Letterhead signed by authorised signatory in the format given in Annexure I.
2.	<b>Details of the agency:</b> The agency must be registered under the Companies Act, 2013/GSTN for at least the last 3 financial years for the year ending 31 <sup>st</sup> March 2021.	Certificate of Incorporation issued by Registrar of Companies, India
3.	<b>Financial Information:</b> Agency should have an average annual turnover of Rs. 200 lakhs during the last 3 financial years from IT services.	Copy of audited financial Statements for last 3 financial years. Certificate from CA for revenue from IT components segment to be submitted by the selected IA at the time of Work Award.
4.	<b>Experience:</b> Agency must have successfully executed at least 3 projects in the Government or Citizen centric domains	Copy of Project/ Phase Completion certificate/ Work Order/ Client reference for Verification
5.	<b>Criteria for Startups:</b> The startup must be registered under startupIndia	
6.	<b>Statutory Registration:</b> The agency should be registered with the GSTN and carry a valid PAN/ TAN Number	Copy of the certificate of GSTN, PAN/ TAN Number

Proposal covering letter Format

Letter of Proposal  
(Company letter head)

[Date]

To

Manoj Kumar Mishra  
General Manager,  
National Institute for Smart Government,  
TSIIC Zonal Office Building, Financial District,  
Nanakramguda, Rajendra Nagar  
Hyderabad, Telangana – 50003

Subject: Submission of the Technical bid for <Selection of IA for Software Testing and Certification Services>

Dear Sir/Madam,

We, the undersigned, having examined the TOR, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to meet the requirements and provide the services as required and outlined in the TOR for the implementation of website development Project.

We are hereby submitting our Proposal, which includes this Pre-qualification bid, Technical bid and the Commercial Bid as PDF documents sent on [manoj.mishra@nisg.org](mailto:manoj.mishra@nisg.org).

We confirm that the information contained in this response/proposal or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to NISG is true, accurate, verifiable, and complete. This response/proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead the NISG in its selection process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the selection process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so.

We undertake that once our Proposal is accepted, Implementation services related to the assignment needs to be started within a week's time. We understand you are not bound to accept any Proposal you receive.

Yours sincerely,  
Authorized Signature [In full and initials]:  
Name and Title of Signatory:  
Name of Firm:  
Address:  
Location:

## Annexure II: Testing Methodology Criteria

IA will be assessed on the merit of testing methodology adopted by the organization.

IA is expected provide details of testing methodology for each of the areas of testing:

1. Functional Testing
2. Usability Testing
3. Performance Testing
4. User Acceptance Testing

IA will be rated on the scale of 1 to 5, 5 being maximum for this criterion. Award of the score will be at the discretion of the evaluation committee of NISG.

## Annexure III: Organization Strength Criteria

IA will be assessed in terms of the organizational strength on the parameters given below. IA will be rated on the scale of 1 to 10, 10 being maximum for each criterion. The rating will be awarded based upon the assessment by the designated evaluation committee of NISG.

#	Criteria	Description	IA Response
1	Manpower Mix and Ratio	IA should furnish a matrix of manpower mix of the organization for different roles required for various testing requirements.	
2	Understanding of NISG requirements	IA must describe and demonstrate its understanding of functional requirement listed in this TOR.	
3	Team mobilization readiness	What team composition is proposed by IA for the requirements listed in this TOR. How long would IA take to deploy team once contract is awarded?	
4	Empanelment status	Is IA STQC empaneled testing service provider?	
5	Recognitions	Has IA received any recognition by Industry or in any such forum and been recognized	

		as a premium partner? Please furnish details.	
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## Annexure IV: Case Studies Criteria

IA is expected to furnish at least Three (3) relevant case studies and a maximum of Five (5). Each of the case studies will be scored on the below criteria with a maximum score of 5.

The rating will be awarded based upon the assessment by the designated evaluation committee of NISG.

1	Case Status	<ol style="list-style-type: none"> <li>1. Work order issued, work in-progress with WO [0.25],</li> <li>2. Work order issued, successfully completed [0.5],</li> <li>3. Work order issues, successfully completed with completion certificate [1]</li> </ol>
2	Customer type:	<ol style="list-style-type: none"> <li>1. Government, citizen centric [1]</li> <li>2. Non-government [0.5]</li> </ol>
3	Domain:	<ol style="list-style-type: none"> <li>1. Real-estate or similar domain involving processes/workflows, policies and business rules [1]</li> <li>2. Any other domain involving processes/workflows, policies and business rules [0.5]</li> </ol>
4	Application Load	<ol style="list-style-type: none"> <li>1. High – tens of thousands of users/millions of transactions [1]</li> <li>2. Medium – thousands of users/ lakhs of transactions [0.5] Low – hundreds of users/ thousands of transactions [0.25]</li> </ol>
5	Customer Recommendation	<ol style="list-style-type: none"> <li>1. Available [1]</li> <li>2. Not available [0]</li> </ol>

## Annexure V: Functional Requirements

It is expected that IA will understand detailed requirement including processes, use cases and data points during first week of requirement during project kick-off.

Following is the broad feature list.

1. RERA Bihar is looking forward to a paperless mode of working without having a need of paper movement. Applications are required to be e-signed by the applicants.
2. There shall be automated notifications and alerts system for all concerned internal and external stakeholders for various activities mandated in the acts, rules and regulations pertaining to RERA.
3. The portal shall be multilingual with Hindi and English.
4. Geo-tagged or GPS enabled image submission system for various functions such as – for general complaints to RERA on violations, inspection related submission etc.
5. Integration with Municipal Bodies issuing Building permits and Land and Revenue Department for cross verification of land records and seamless flow of information between the authorities is expected as part of the scope.
6. An automated document validation system for the documents submitted with the applications for ensuring the authenticity to the extent possible.
7. A digital library of orders and supportive documents of the projects archived for as much desired duration.
8. The Online portal should have features of hosting FAQ, relevant public documents related to Acts, Policies etc. and also relevant audio visual such as Chairman's vision of RERA Bihar etc.
9. Solution will need to be integrated with 3<sup>rd</sup> party services such as UIADI, NSDL, Digilocker etc.

Detailed list of features is given below.

**a. Registration of the Project**

1	Online facility for promoters and builders to create account on RERA site and manage their account
2	Account log-in to be protected with two factor authentication, Password and OTP based
3	Promoters can enter all details required to be submitted regarding the project online in designed web forms
4	Using his online account area, Promoter can enter details in his own time, with temporary saving feature and submit only when convinced of having entered all details.
5	Promoter can upload all required documents, sanctioned plan, property related documents, bank cheques etc online.
6	Dynamic fields will be provisioned to capture details of key aspects of the project such as, Land, Plan, NOC, Bank details, Agreement with land owners if any etc.
7	A feature of basic online checking of the validity of uploaded documents would be provided such as of minimum size, format, and basic checks ensuring the documents belong to the right category
8	An online validation of sanction plan approval would be integrated with bodies like Municipal Corporation
9	Integration with Land and Revenue to ensure validity of the proposed land / property for the development proposed
10	An online check of any cases against the promoters and builders would be enabled before granting approval
11	A classification of promoters and builders on RERA authorized criteria would be enabled to classify them automatically in A, B, C etc grades
12	Promoter need not submit the documents physically; a Digitally Signed form would be submitted online
13	KYC of the builders and promoters would be processed online using Aadhaar and PAN validation

## TOR for Software testing Services

14	Registration fee would be accepted online in the form of Net Banking, UPI or Credit/Debit card payments
15	Bank details of the Promoters will be maintained online with IFSC code-based Bank branch validation
16	Application for registration once submitted will be validated online on the above parameters and subsequently be processed for approval in designed steps using Workflow Automation
17	Workflow engine would ensure that the application moves to the designated officer of RERA online and that it is addressed in the allocated TAT
18	Application if not processed within the desired TAT, would automatically be escalated with mail and sms notification sent to the officer and his next level within the organization
19	Workflow would ensure strict adherence to the approval process within desired TAT and that a minimum words as response / comments / remarks captured at each step by each officer
20	A digital signature will be maintained for each of the approving official within RERA so that the application is digitally signed by him during each step
21	Promoter seeking approval will be kept informed via sms about progress of his application and objection and thereby corrective measures like additional justification or documents, if any
22	Any subsequent justification or additional documents sought by the promoter will be enabled online in his account area
23	Promoter can log-in to his account area and can check the status of the application and the expected time for approval as on date
24	Project once approved, will be enabled with the approval certificate and promoters can log-in to his account and can print/download digital certificate
25	Promoters will also be guided with the advisory as next steps during the development of the project in his account area and of the cut-off dates that he must not miss

**b. Registration of the Real Estate Agents**

1	Real estate agents will be enabled with online registration facility to obtain RERA authorized Real Estate Agent certification
2	Agents will have the facility to submit KYC like Aadhaar and PAN online and will be validated against it
3	Before given RERA authorization, cases if any against the agents will be checked online to ensure the Genuity of the agents
4	Agents once registered on RERA site and approved by RERA, will be given with a unique RERA ID and also a card size RERA Authorized Agent certificate which can be downloaded online
5	Each Agents will create his account on RERA site and all information submitted by him will be maintained.
6	Agents can log-in to his site and check status if any such as if any cases in light of RERA against the agent
7	Agents will have the facility to submit RERA fee online using Net Banking, UPI or Credit / Debit card
8	RERA authorized agents will also be provided with an Agent RERA App where he/she can see status with photo, ID, Authorization by RERA and remarks if any submitted by the consumer for the agent. This will encourage real estate agents to work with precaution and in professional manner.
9	Provision will be enabled to classify agents with stars basis comments received from the customers. Agents will be provided with stars (5 star, 4 star, 3 star etc.)
10	RERA online will also enable feature whereby agents may be asked to submit justification in case of any complaints registered

**c. Project Progress Monitoring and Extension**

1	Each real estate projects will be maintained with a unique ID, validity date and will be GEO tagged for exact location in the system
2	Projects will be provisioned with monitoring cycle with automated notification and alerts enabled for each stage of monitoring until completion of the project



## TOR for Software testing Services

3	A project monitoring mobile App will be provided to the builders and promoters whereby it will be possible to update project status with images, geo tagging, remarks, and checklist at each stage
4	Project progress once captured and submitted by the promoter (without any manual intervention or manpower deployment from RERA) will be reported to RERA online and will reside in the database related to the project
5	Promoter will be able to check status of the progress report and its acceptance by RERA online in his account area
6	Notification via sms will be received by the promoter in case of any contention upon checking by RERA official online
7	In case of project completion at any stage breaching designated time, an alert will be enabled automatically and via sms and email to RERA officials and the promoter
8	RERA officials will also have a Project Progress Dashboard on which they will be able to see red flagged projects for various reasons
9	Payment related details will be maintained and will be mapped against the progress of the project. An automated alert to be issues to the promoters and RERA official if the progress is not inline with the received fund.
10	Automated notice will be sent to the promoter and builder for the next steps and in case of any cancellation of approval or stop notice on the project by RERA.
11	Promoters will be guided for the corrective steps online such as re-sanction of plan etc
12	Re-sanctioned plan will be validated online through online integration with map approving authority
13	Promoters can log-in to their account and can check all details related to the reason for renewal, steps to be followed, documents required, fee payment, resolution of any objections / cases etc.
14	Promoters will be given with all features to submit details online for renewal and renewal process will be workflow driven similar to the first-time registration with auto notification at each stage

**d. Features of RERA officials and related bodies and Miscellaneous**

1	There will be dashboard for each RERA role with action items and all details regarding required action
2	Each RERA official will have his log-in and account area under which he/she can check the action items depending upon assigned role
3	Related bodies such as Municipal Corporations will have their own log-in to the portal and will be able to check the dashboard for action items
4	RERA will be able to view pre-built reports and create dynamic reports online
5	RERA officials will be able to send and manage notes and notices online using the system
6	RERA officials will be able to log incidents or service requests related to any difficulties faced in terms of IT and systems. Incidents once logged online will be notified and managed online for resolution.
7	There will be administrative section of the Portal on which Admin role will be able to configure data such as role assigned to officer, rules modification as required per RERA guidelines etc.
8	Admin role will also be able to configure workflow steps and TAT attached if required
9	An easy-to-use Business Rules Engine will be inherent part of the solution to configure all business rules and mapping with each stage of the workflow
10	There will be self-service for the admin role in terms of workflow, rules, reports and master data information such as organization structure etc.
11	Admin role will also be able to monitor system availability and performance online and if any corrective action will be alerted online

**e. Administrative Features**

#	List of Features
1	There will be administrative section of the Portal on which Admin role will be able to configure data such as role assigned to officer, rules modification as required per RERA guidelines etc.
2	Admin role will also be able to configure workflow steps and TAT attached if required
3	An easy-to-use Business Rules Engine will be inherent part of the solution to configure all business rules and mapping with each stage of the workflow
4	There will be self-service for the Admin role in terms of workflow, rules, reports and master data information such as organization structure etc.
5	Admin role will also be able to monitor system availability and performance online and if any corrective action will be alerted online

**f. Complaint and Grievance Management**

#	List of Features
1	Support for life-cycle management of Grievances and Complaints, from logging until resolution.
2	Support for compliance during execution of the order for a case
3	Rule based conversion of grievances into cases.
4	Auto allocation of cases to the hearing bench, basis load balancing algorithm.
5	Support for sms and email-based notifications and alerts at the stages which are marked to be notified and is configurable to achieve this feature.
6	Supports Whatsapp based integration.
7	It is possible to auto resolve queries if of normal nature by having automation feature in the tool which can query database and facts.
8	Supports Artificial Intelligence features by which tool is able to guide resolution of Grievances with the history of similar cases before.

## TOR for Software testing Services

9	Support for complaints converting to legal cases through the lifecycle of legal hearings with multiple iteration, supporting documents, order passed etc.
10	Ability to schedule a virtual hearing by integrating with virtual conference platform such as Zoom automatically and notify parties with the link.
11	Provisioning of legal dashboard for the cases to be scheduled automatically basis availability of the hearing officer.
12	Legal dashboard of cases to provide visibility of case history, status and Turn Around Time (TAT) at different levels.
13	Facility to configure TAT of the cases and alert mechanism for the cases breaching or approaching TAT.
14	An automated notification will be enabled for the complainant and the related parties for the hearing process with date, time and venue for the appearance
15	An online library of all the judgements and notices will be available for search and easy reference of the hearing officer
16	Resolution once passed will be captured and processed digitally for the actions and actions to be reflected in the account area of the promoters.
17	Resolution actions will be tracked online with allocated TAT with automated alerts and notifications on non-compliance.
18	Consumers to be assured and notified by sms and status update on the grievances logged.
19	Voice bots available in Hindi and English should be available to convert a conversation into a Grievance automatically.
20	Voice bots available in Hindi and English should be available to convert a conversation into a Grievance automatically.
	RERA officials will be able to send and manage notes and notices online using the system

21	Tool should have all features of regular ITSM tool to also be used for internal helpdesk tool.
22	There will be administrative section of the Portal on which Admin role will be able to configure data such as role assigned to officer, rules modification as required per RERA guidelines etc.
23	Admin role will also be able to configure workflow steps and TAT attached if required
24	Tool should be able to give "my grievance" section to the consumers (end-users) who will be raising grievances or queries.

## Annexure VI: Service Level Requirements

List of service level requirements is provided so that IA can derive adequate testing requirements.

### 1. Service Level Requirement (SLA\_1): Delay in meeting of Milestones

IA will be required to sign an agreement with NISG with defined implementation milestones, deliverables, and timelines. IA shall meet the timeline of the milestones along with mentioned deliverables. Meeting of Milestone shall need to be notified by IA via email to the NISG and can be deemed to be met only after approval from NISG.

Any deviation in meeting of the Milestone due to unavoidable circumstances or situations like change in scope, shall need to be mutually agreed and signed with a rescheduling of the Milestone, or else it will be counted as a delay in meeting of the Milestone.

#### **Measurement:**

Delay = Number of additional business days taken to meet the milestone along with agreed deliverables.

#### **Liquidated Damages Clause:**

<b>Delay</b>	<b>Liquidated Damages as a % of the Total Contract Value</b>
<= 10 days	-
>10 and <=20 days	0.1%
>20 and <=30 days	0.2%
>30 days	1% and subject to further agreement between the IA and NISG

**2. Service Level Requirement (SLA\_2): Quality of Training and Capacity Building**

All the trainings and capacity building activities shall be monitored for the quality of delivery and adherence to the timelines. It is required that more than 80% of the training audience give satisfactory and above rating.

**Measurement:**

Feedback score = [((Number of attendees given Satisfactory or Above rating) / number of attendees attended training session and provided rating for the session) × 100].

Measurement shall be taken for each training sessions conducted by the AGENCY and the Liquidated Damages Clause applies to each of such sessions.

**Liquidated Damages Clause:**

<b>Feedback Score</b>	<b>Liquidated Damages as a % of the Total Contract Value</b>
<= 20 %	0.1%

**3. Service Level Requirement (SLA\_3): Applications shall need to have a minimum Uptime of 99.9%.**

**Measurement:**

Uptime shall be measured on the monthly basis and an average will be taken for the month.

$$\text{Uptime \%} = \left[ \frac{\text{Total uptime of the Application}}{\text{Total available Time in the Month} - \text{Total Planned Downtime during the month}} \right] * 100$$

**Liquidated Damages Clause:**

Quarterly Uptime %	Liquidated Damages as a % of the Total Contract Value
< 99.9% and >99%	0.1%
< 99% to >=98.5%	0.15%
< 98.5% to >=97%	0.2%
<97% to >=95%	0.3%
<95%	0.5% and subject to further agreement between IA and NISG

**4. Service Level Requirement (SLA\_4): System Performance**

Applications shall need to have a Applications services are required to respond in a reasonable time, which is deemed to be less than 3 seconds.

**Measurement:**

*Response Time* = Time taken to open a page of the application on the web interface or navigate to another page, excluding the pages that depend on 3<sup>rd</sup> party services. Any time taken in upload and download of the files and slowdown of Data Centre will be excluded.

Measurement shall be taken by an independently appointed third party in a controlled environment with adequate network availability. The measurement shall be taken randomly for at least 10 instances on different days of the month. Measurement will include all the pages along with navigation for each instance. The most frequently occurring band of response time will be plotted and will be considered as the measured Response Time for the month.

**Liquidated Damages Clause:**

<b>Response Time</b>	<b>Liquidated Damages as a % of the Total Contract Value</b>
> 3 sec and <= 5 sec	0.05%
>5 sec and <=10 sec	0.07%
> 10 sec for the month	0.1%
> 10 sec in continuation for last 3 months	1%

**5. Service Level Requirement (SLA\_5): Help Desk Resolution Time**

Any incident logged into the Incident Management Tool shall be classified in three (03) categories basis their Severity Levels, i.e. Severity Level 1 (S1); Severity Level 2 (S2) and Severity Level 3 (S3). Any query logged about change in the functionality will follow the Change Request Process agreed between IA and NISG.

IA must follow the below Service Level Requirement for queries logged and classified as S1, S2 or S3:

Type of Query	Permissible Resolution Time
S1 (Severity Level 1)	4 business hours
S2 (Severity Level 2)	8 business hours
S3 (Severity Level 3)	16 business hours

Response Time report shall be taken from the Incident Management tool on monthly basis and will be calculated for % deviation from the Service Levels across three categories of queries.

**Measurement:**



% deviation = [Number of queries that did not observe permissible resolution Time in the month / Number of queries under that category in the month] \* 100

Deviation will be calculated separately for each category of incidents and the liquidated clauses will also be applicable for each category separately.

**Liquidated Damages Clause:**

<b>% Deviation</b>	<b>Liquidated Damages as a % of the Total Contract Value</b>
>= 5% and <10%	0.01%
>= 10% and < 20%	0.02%
>= 20%	0.03%; doubles for every additional 10% deviation

**6. Service Level Requirement (SLA\_6): Percentage of reopened queries**

Number of reopened S3 (Severity Level 3) incidents (user queries) for a quarter should not exceed 5%. A re-opened query is the query that was resolved by the help desk, but the user has reopened it in the tool as the solution was not deemed to be satisfactory by user who logged in the query. Logging of queries in Incident Management Tool alone are in the scope of this requirement.

**Measurement:**

% Reopened queries = [Number of S3 queries that were reopened in the quarter / Number of S3 queries in the quarter] \* 100

**Liquidated Damages Clause:**

<b>% Reopened Queries</b>	<b>Liquidated Damages as a % of the Total Contract Value</b>
>= 5% and <10%	0.01%
>= 10% and < 20%	0.02%
>= 20%	0.03%, doubles for every additional 10% deviation

**7. Service Level Requirement (SLA\_7): Confidentiality and Security Breach of Information**

IA shall ensure that all application-level data access and security measures to ensure that there is no instance of data loss, breach or tampering throughout contract period, are built in the solution. Only Application Software level security measures are in the scope of this requirement.

IA shall provide a detailed report comprising of the Root Cause Analysis and the mitigation plan in consultation with the Hosting Service Provider, to prevent future occurrence of the incident in not more than Three (3) calendar days after the actual occurrence of the incident.

**Measurement:**

Days = (number of calendar days taken by the IA to furnish Root Cause Analysis and the Mitigation Plan from the actual occurrence of the incident) - (number of calendar days taken by the Hosting Service Provider to furnish details required by the IA)

**Liquidated Damages Clause:**

Days	Liquidated Damages as a % of the Total Contract Value
> 3 days and <= 7 days	0.01%
> 7 days and <=15 days	0.02%
> 15 days	0.03%, doubles for every additional delay of 15 days

## Annexure VII: Commercial Bid Format

### Guidelines for Commercial Proposal

1. The agency is expected to provide the cost of following components:
  - a) Fixed price cost for:
    - i. Functional Testing
    - ii. Usability Testing
    - iii. Performance Testing
    - iv. User Acceptance Testing
    - v. Certification Services
  - b) A rate card for handling any Test Lab requirements requests in future
2. There should be no hidden component of the cost and the above should be all inclusive.
3. Prices shall be quoted entirely in Indian Rupees.
4. Proposed cost shall be frozen for a period of Five (5) years without any escalation in the price and any escalation in price thereafter shall be subject to mutual discussion and agreement.
5. No clauses for price fluctuations due to fluctuation of the Indian currency against any of foreign currency will be accepted during the period of the contract.
6. It should be separately and clearly indicated how the Taxes will be applied for selling these services by a registered entity in India to NISG.

**Note:** The commercial figure quoted will be an all-inclusive figure – inclusive of out-of-pocket expenses and all taxes, duties, etc. payable. No out-of-pocket expenses will be reimbursed separately. Should the commercial quote include separate out of pocket expenses or any taxes, duties, etc., such a commercial bid will be treated as an invalid bid.

**\*\*\*\*\*END OF DOCUMENT\*\*\*\*\***