

Problem Statement

Nodal Department: TNMD

Category (Hardware/Software): Software

Title: Design and development of a platform for organizing online activities/games to develop interest, knowledge and awareness on Indian Standards and its importance for ensuring quality and safety among the general public/BIS stakeholders.

Background: Bureau of Indian Standards (BIS) is the National Standards Body of India involved in Standardization, Conformity Assessment, Laboratory Testing, Training and other related activities. Through its activities, BIS ensures the products available in the market are complying to the requirements of Indian Standards, thereby ensuring quality, health, and safety of common consumers. BIS also carries out Standards Promotion activities for creating awareness among common consumers, industries, students on Indian Standards and BIS certified products. Occasionally BIS has been conducting Quiz on the theme of Quality and Standards for creating awareness. To further create mass awareness among the stakeholders, more online activities are envisaged.

Description: The awareness of quality and standards is very important in infrastructural and social development of the country. For Standards Promotion, BIS engages with the stakeholders broadly classified as Government Stakeholders, Industries, Consumers and Academia through various activities and programs like Quality Connect, Manak Mahotsav, Manak Manthan, Capsule Course, Gram Panchayat Sensitization, State Level Committee on Standardization, District Level Official Sensitization, State Level Officials Sensitization, Consumer Awareness Programs, Resident Welfare Association Sensitization, Licensee meets, Industry and Industry Association Meetings, Standards Clubs and its activities, Exposure Visits, Mentor Training, Resource Personnel Training, Science Teacher Training, etc. To engage various stakeholders, BIS has also been organizing online activities like Quiz Competitions for students and general public alike.

Online activities help engage large number of stakeholders with activities of BIS with the comfort of their location, while also disseminating useful information regarding quality and standards. BIS has conducted few online Quiz Competitions on the topic of Quality

and Standards. More attractive and thought-provoking online activities should further increase the awareness and understanding of quality and Indian Standards.

The online activity may include various aspects of BIS activities in its effort to increase awareness and quality consciousness. The activities, games can be time bound, or perpetual. The activity could be held by BIS on various special occasions like World Standards Day, World Consumer Rights Day, Foundation Day etc with or without rewarding system. The participation in these activities may be in excess of 5 Lakhs.

Expected Solution: To develop an innovative, interactive, engaging, awareness creating, knowledgeable online activity or game with participation from general public, students, consumers etc. which includes aspects of regular activities of BIS, like Standardization, Conformity Assessment, Testing etc. which can be hosted on website.

Platform/Software: The software/application may be developed for use on existing website, or android and iOS mobile phones, or as a standalone portal.

The software may be developed using open-source platforms with source codes. The participants should indemnify BIS in case of any legal conflict arising due to their submissions. The software should comply to all safety standards, Government of India laws, regulations, guidelines, etc. The software/application may be tested using real use case scenarios. The declaration in this regard shall be submitted by each team member.

Deliverables: Preliminary round proposal shall contain detailed concept note highlighting, among other things, the idea, background, approach, implementation plan, software and hardware requirements, and the end goal that can be achieved.

Final round submissions shall include the following:

- a. A functional working solution/prototype of the application/software/module, demonstrating all features and functionality which can be upscaled to ready-to-use enterprise level software application.
- b. Sample online activities for various stakeholder groups such as Academia, Industry, Standards Clubs, Consumers etc.
- c. Software Package: The actual software files, source code, including executables, libraries, and any necessary dependencies etc.

- d. Documentation: Comprehensive user manuals, configuration, installation guides, and API documentation etc.
- e. User testing and feedback data, indicating the effectiveness and usability of the platform.
- f. Platform: Details on the hardware requirements, such as CPU, RAM, disk space, etc.
- g. A comprehensive report (in the given template Annexure-1 for guidance) and a presentation on the development process, including design decisions, technical challenges, and ethical considerations, security aspects, documentation etc.

BIS may suggest modifications and changes to the working solution/prototype developed and demonstrated during the final round. The participants shall include, incorporate the suggestions and modifications subsequent to the final presentation.

Timelines:

Last Date for Registration: 15 September 2024

Last Date for Submission of Proposal: 15 Oct 2024

Communication of Shortlisted Proposals to Final Round: 25 Oct 2024

Last Date for Final Submission of Deliverables/Presentation: 09 Dec 2024

Note: The Problem Statement is to be read in conjunction with the guidelines for Hackathon.

Annexure – 1 Template for Submission of Final Report

Title Page, Title of the Report, Name of the Software, Author/Developer/Team Name

Table of Contents

1. Introduction
2. Walkthrough of Software/Application
3. Software Overview
 - a. Description
 - b. Features
 - c. System Requirements
4. Development Process
 - a. Methodology
 - b. Tools and Technologies
 - c. Version Control
5. Implementation Details
 - a. Key Algorithms
 - b. Code Structure
 - c. Data Structures
6. Testing and Quality Assurance
 - a. Test Cases
 - b. Bug Tracking
 - c. Performance Metrics
7. Deployment
 - a. Deployment Process
 - b. Environment Setup
 - c. Post-Deployment Checklist
8. User Guide
 - a. Installation Instructions
 - b. User Interface Overview
 - c. How to Use the Software
9. Maintenance and Support
 - a. Troubleshooting Guide
10. Appendices
 - a. Glossary of Terms
 - b. References
 - c. Additional Resources
 - d. Mandatory Declarations (To be signed and submitted by all team members)