

**VIGYAN PRASAR**  
**Department of Science and Technology**  
**REQUEST FOR PROPOSAL NOTICE**

No: VP/EFD/1517/IST/2016

Dated 12.10.2017

**Sub: Invitation of proposals for design & development of “India Science, Technology & Innovation” Knowledge Management (KM) portal**

## **1 Introduction**

Vigyan Prasar, an autonomous organisation under the Department of Science and Technology, New Delhi. Department of Science and Technology intends to design and develop a knowledge management (KM) portal, India Science, Technology & Innovation (ISTI) for rapid access to information about development in field of science and technology research/application in India. The KM portal would cater to students, teachers, scientists, general public and visually challenged person that will showcase information about research in progress, milestones, knowledge networks, schemes & funding opportunity, flagship programmes.

This proposal has been prepared to establish the robust portal that will also continually evolve in response to emerging calls for focused information support and knowledge networks. The proposed KM portal will follow the Guidelines for Indian Government Website (GIGW) to ensure proper standardization of all content.

Proposals are invited from agencies/companies having expertise in KM portal design and development as per the guidelines of Govt. of India with cyber security features.

### **1.1 Requirements**

The proposed KM portal will follow the Guidelines for Indian Government Website (GIGW) to ensure proper standardization of all content. The KM portal would cater to students, teachers, scientists and general public.

The KM portal will be designed with all dynamic features for updation enabled and prescribed accessibility features as below:

- (a) Least site opening time and portal should be providing high speed responses on users actions even on high traffic speed should be very fast.
- (b) Clean and professional design
- (c) KM portal reflect clear objectives
- (d) The KM portal enables to create a knowledge platform on S&T India.

- (e) KM portal will be viewable with the popular versions of major browsers like IE, Opera, Netscape, Mozilla, etc and should work with all commonly used resolutions.
- (f) The site will completely be in English language with the provision of Hindi version and graphics on pages, wherever required.
- (g) Search engine friendly
- (h) Site should be secure with SSL and solutions should be provided so that SQL Injection and other common practices of hacking get prevented.
- (i) Solutions should be robust and users should be seeing the pages and information which is expected.
- (j) Site should be easy to use.
- (k) Site should be friendly to end customers.

The KM portal will cover the following functionality points:

- (a) The KM portal will have a provision of providing clean URL.
- (b) There will be a provision to automatically archive the knowledge from Home screen. The design should be responsive for easy reading and navigation with a minimum of resizing, panning, and scrolling across a wide range of devices including mobile devices.
- (c) Provision for enabling RSS feed for users to subscribe to latest updates related to S&T India.
- (d) The site will have a provision for Quick Response (QR) Code for all the major sections on the portal.
- (e) Comments to be moderated using Captcha to discourage any automated process from entering any information to the KM portal.
- (f) Core content management system (CMS) code can be upgraded to the latest version as and when released.
- (g) Appropriate CMS will be used as per the requirement, preferably open source CMS.
- (h) Application will be developed using modules of the CMS proposed.
- (i) Font size increasing option may be present in KM portal.
- (j) Separation of Design and Content – content to be stored in the database and designed to be controlled by the use of cascading style sheet (CSS). Separate CSS for use with Internet Browsers and Mobile Browsers.
- (k) Portal should be mobile responsive.
- (l) The information should be view based on screen size and adapt accordingly.
- (m) Ideally three level of screens should get supported:
  - Tablets
  - Mobile phones
  - Desktops

## 1.2 Scope of Work

The scope will include the following specific activities:

Design and development of the browser and resolution independent KM portal for better presentability and usability of the KM portal for information dissemination with flexibility to re-arrange the contents, presentability and colour scheme as and when required; using CSS based design approach.

### 1. Components of KM portal:

- Dynamic web pages
- The page will pop up with the list of latest researches going on any new topic.
- Photo gallery/video management system
- Dynamic news/events/notification management system
- Discussion forum
- Streaming and live streaming of audio/video
- Hosting chat show
- Webinar & Online conference Social Media
- QR Code for all the major sections on the portal
- Feedback management system Sitemap
- Related links to other government web portals and web applications
- FAQ
- Banners and Advertisements
- Theme change, font change, screen reader etc.
- Other researcher can submit their institute information to get them listed on portal. They can provide whole list of research with complete information which once approved can be visible on portal accordingly.
- Search: This page will allow the user to search any particular S&T research by using filters like institute name, location, field of research, research topics etc.
- About Us: This page will provide the detailed information about the KM portal, infographics on S&T in India etc.
- Designs and development of portal
- Designs and development of back-end panel
- Design and development of knowledge submission & extraction workflows
- Migrate current knowledge stories to new portal
- Maintenance of newer portal and make all changes accordingly.

2. Graphical, Pictorial and audio video interface, wherever and whenever needed;

3. Development of Comprehensive Knowledge Management System for role based management of the menus, submenus and contents in all sections/subsections of the

KM portal. It will maintain the audit trails of the documents hosted on the KM portal which will be accessible to the administrator as and when required;

4. Auto archival mechanism to maintain the archived documents with proper classification and auto archival system. The archival mechanism will allow creating the repository of the old documents in archive mode so that it could be retrieved as and when required for reference.
5. The Sections like ‘what’s new’, ‘latest updates’ etc must be dynamic.
6. Clearance of Security Audit of the KM portal by Department of Electronics and Information Technology (Deity) empaneled agency;
7. User Friendly navigation.
8. Database driven approach
9. Collaboration Features – All collaboration content will be public in nature. Visitors need not sign up and shall be able to view all content posted on the system without registration. A visitor who chooses to Sign up is expected to provide input on his intent of signing up – whether he intends to contribute an article or make a comment etc. This information will be used to approve write access to the collaboration platform. The users who register via the sign up process shall have a Public Profile page. The profile page should be auto created based on the inputs provided during the sign-up process. The sign up process shall incorporate an approval process so that only appropriate article contributors and readers are funnelled into the system. Such contributors or readers may represent institutions or researchers, teachers or citizens. The profile page shall allow posts or micro-blogs by the owner of the Profile and by other contributors and readers accepted in the system.

Apart from Profile page the following features should also be available on the site for use by the article contributors:

- a) File – to upload and share with all users including visitors who may download it anonymously.
- b) Blogs – Periodic Blog posts by interested and approved bloggers.
- c) Knowledge Space – Hosted on the site where institutions can upload information, blog or run Q&A Forums in the spaces.

**For detailed scope of work, please see Annexure-C attached.**

#### **1.2.1 Completion Period: 90 days**

#### **1.2.2 Language: Hindi and English**

#### **1.3 Due Diligence by Applicants**

Applicants may send email at [vigyanist@gmail.com](mailto:vigyanist@gmail.com) for clarifications or on phone 011-2404430.

#### **1.4 Availability of Proposal Document**

Proposal document can be downloaded from the Official website of the Vigyan Prasar ([www.vigyanprasar.gov.in](http://www.vigyanprasar.gov.in))

### 1.5 Validity of the Proposal

The Proposal shall be valid for a period of not less than 180 days from the Proposal Due Date (the 'PDD').

### 1.6 Brief Description of the Selection Process

Vigyan Prasar has adopted a two bid selection process in evaluating the Proposals. Firstly **Technical Evaluation** will be carried out as specified in clause 3 by an evaluation committee to be appointed by Vigyan Prasar. Based on this technical evaluation, a list of short-listed applicants shall be prepared as specified in clause 4. Subsequently the financial evaluation will be carried out as specified in clause 4.

### 1.7 Communications

All communications including the submission of Proposal should be addressed to: **The Registrar, Vigyan Prasar, A-50, Sector 62, NOIDA - 201309.**

**1.8** All communications, including the envelopes, should contain the following information, to be marked at the top in bold letters: [**PROPOSAL NOTICE NO: Design & development of "India Science, Technology & Innovation" KM portal (VP/EFD/1517/IST/2016)**].

**1.9** The application must be submitted with a **non refundable fee of Rs. 1000/-** byway of DD/bank order drawn in the name of "**Vigyan Prasar**" payable at **New Delhi.**

**1.10** Last date for the submission of the application, that is proposal Due Date is 30 October 2017, **5:00 PM.** The proposals may be submitted either in person or by the post.

**1.11** Vigyan Prasar shall open the technical proposal at **11:00 hours on 31 October 2017** at the **O/o Vigyan Prasar, A 50, Sector 62, NOIDA- 201309 UP.** Proposers are requested to be present on the day of opening.

**1.12** Technically qualified proposers will be given briefing on 31 October 2017 at **3 PM** about the proposed work and will be invited to give presentation on 3 November 2017 at **10 AM** at **Vigyan Prasar, A 50, Sector 62, NOIDA – 201309, UP.**

## 2 Application Procedures

**2.1** The proposals should be in the prescribed format appended herewith as Annexure-B. Proposals not in the format will be rejected.

**2.2** The proposer must submit its Technical Proposal and Financial Proposal in two separate 'sealed envelopes' (duly super-scribed "**Technical Proposal**" and "**Financial Proposal**" on the each envelope). Both these sealed covers should be enclosed in an outer cover and submitted to VP. All covers **MUST** have the full address of the applicant.

**2.3** The proposer will not vary/modify any aspect of the proposal/budget etc during the validity period or any extension thereof.

## **2.4 The technical proposal must be accompanied with:-**

Technical proposal should include following documents:

- Executive Summary.
- Company Profile.
- Company's years of experience.
- Company experience in conducting similar projects especially in KM portal design and development as per Govt. of India Guidelines. Please ensure that reference of past work should be included in this section and photocopy of work orders be attached.
- Organization chart and list of team members along with their specialization.
- An affidavit to the effect that the firm has not been blacklisted by the any Government/Semi Government/other Public Sector organization.
- PAN, VAT and Service Tax as applicable.
- The Proposal should provide satisfactory evidence, acceptable to the Vigyan Prasar to show that he has efficient technology, adequate capability, technical know-how and experience of design & development of KM portal for government organisation.
- The Proposal should have adequate financial stability and status to meet the obligations under the contract, for which he is required to submit detailed report of similar work done & proof of payments.
- The Proposal should have at least completed from start to finish, in the last three financial years (i.e. current year and three previous financial years) at-least one single work i.e. Design & development and maintenance of KM portal
- The Proposal should have a total contract amount received during the last three years (i.e. current year and three previous financial years).
- The Proposal from a Company conducting website related ongoing projects with Vigyan Prasar is barred, hence need not apply.

**Proposals not submitting the requisite information may note that their offer is liable to be ignored.**

**2.5** The financial proposal shall be submitted in format attached as **Annexure-B** and duly signed by the proposer. Financial proposal must be in separate sealed envelope as stated Clause 2.2.

### 3 Evaluation Process

- 3.1** Vigyan Prasar shall open the proposal at **11:00 hours on 31 October 2017 at the O/o Vigyan Prasar, A 50, Sector 62, NOIDA - 201309, UP** and in the presence of the Applicants who chose to attend. The packets marked “Technical Proposal” shall be opened first. The packets marked “Financial Proposal” shall be kept sealed for opening at a later date.
- 3.2** Vigyan Prasar shall subsequently examine and evaluate the Proposals in accordance with the provisions.
- 3.3** To facilitate evaluation of Proposals, Vigyan Prasar may, at its sole discretion, seek clarifications in writing from any Applicant regarding its Proposal.
- 3.4** Test of responsiveness: Prior to evaluation of Proposals, Vigyan Prasar will determine whether each Proposal is responsive to the requirements of the Proposal. A Proposal shall be considered responsive only if the proposal:
- It is received as per the formats (Technical Proposal) and (Financial Proposal)
  - It is received by the Proposal Due Date (PDD) including any extension thereof pursuant.
  - It is signed, sealed and marked as stipulated in the format.
  - The Financial proposal is in a separate sealed cover.
  - It contains all the information (complete in all respects) as requested in the Proposal
  - It contains information in the formats specified in this Proposal; and
  - It does not contain any condition or qualification
  - It is not non-responsive in terms hereof.
- 3.5** Vigyan Prasar reserve the right to reject any Proposal which is non- responsive and no request for alternation, modification, substitution or withdrawal shall be entertained by Vigyan Prasar in respect of such Proposals.
- 3.6** Vigyan Prasar would subsequently examine and evaluate the proposals in accordance with the Selection Process. Only those proposals that are found to meet the test of responsiveness would be evaluated.
- 3.7** Technically qualified proposers will be given briefing on 31 October 2017 at **3 PM** about the proposed work and will be invited to give presentation on 03 November 2017 at **10 AM** at **Vigyan Prasar, A 50, Sector 62, NOIDA – 201309, UP.**
- 3.8** After the technical evaluation Vigyan Prasar would prepare a list of qualified shortlisted applicants for opening of their Financial Proposals. A date, time and venue will be notified to all shortlisted applicants for announcing the result of evaluation and opening of Financial Proposals. Before opening of the Financial Proposals, the list of qualified Applicants along

with their Technical Score will be read out. The opening of Financial Proposal shall be done in presence of respective representative of applicants who choose to remain present. Vigyan Prasar will not entertain any query or clarification from Applicants who fail to qualify at any stage of Selection Process.

3.9 Selection will be entirely at the discretion of Vigyan Prasar. Applicants will be deemed to have understood and agreed that no explanation or justification on any aspect of the Selection Process or Selection will be given.

3.10 Any information contained in the Proposal shall not in any way be constructed as binding on Vigyan Prasar, its agents, successors or assigns, but shall be binding against the Applicant if any work is subsequently awarded to it under the Selection Process on the basis of such information.

3.11 Vigyan Prasar reserves the right not to proceed with the Selection Process at any time without notice or liability and to reject any Proposal without assigning any reasons.

#### **4 EVALUATION CRITERIA**

4.1 The technical proposals would be evaluated in two stages. In the first stage the written technical proposal would be evaluated and scores would be assigned as mentioned in Table 1 of clause 4.2.1. Short listing will be done based on the score in Table 1.

In the second stage short listed firms would be invited for a presentation on 03 November 2017. The presentation should include a few templates of ISTI KM portal designed by the respective companies along with work plan, methodology and technical details and score will be given as mentioned in Table 2 of clause 4.2.1. Combined technical scores would be prepared.

4.2 The Evaluation Committee shall evaluate the bids based on the eligibility criteria, the presentation made by the bidder and strict compliance to the information sought in Clause 3. All the shortlisted bidders will be required to make a presentation before a Committee appointed by Vigyan Prasar. The presentation shall contain details of the conception of the bidder about the work, the project methodology, the technologies proposed to be used in the work, some KM portals designed by the bidder containing features similar to that required by Vigyan Prasar. The Evaluation Committee may, at its discretion, call for additional information, live demonstration of technical capability of creating KM portals or seek clarifications from the bidder(s). Such information has to be supplied within the time frame set out by the Evaluation Committee; otherwise Vigyan Prasar shall make its own reasonable assumptions and do the evaluation accordingly. Seeking additional information / clarifications cannot be treated as acceptance of the bid. The bidders shall provide all the necessary documents, and reference information as desired by the Evaluation Committee (EC). After due evaluation of Technical bids, the EC would submit its recommendation.



4.2.1 The **Scoring criteria** to be used for evaluation shall be as follows:

Table 1

<b>Parameter</b>	<b>Proof to be submitted by vendor apart from the presentation</b>	<b>Maximum marks</b>
Experience of Bidder in executing KM Portal projects with at least 80% of functional features referred under section scope of work within the last 5 years for any government or PSU clients.	Number of similar KM portal development projects successfully completed during last five years (attach names of projects, work order & completion document of each project)	30 marks
Value Addition	demonstrate and recommend any additional features / capabilities in proposed KMS, which are not specified in the scope	Average – 3 marks Good – 6 marks Very Good – 9 marks Excellent - 10 marks
The Maximum Equipped Capacity in terms of registered users of proposed KMS.	Work order or similar evidence	Upto 50000 --- 2 marks 50001 – 75000 ----3 marks 75001 - 100000 ----4 marks > 100000 ----5 mark
Proposed Project team to be deployed	Resume / Profile sheet of the project manager, KM Consultants, KM Leads and other developers who would be working on this project	20 marks

Table 2:

<b>Parameter</b>	<b>Proof to be submitted by vendor apart from the presentation</b>	<b>Maximum marks</b>
Proposed Approach & Methodology - Demonstration of understanding of the project's objectives, scope and requirements.	1) Clarity and depth of understanding of the project's objectives, scope and requirements 2) Fitment to the functional and technical requirements specified in the scope of work 3) Design effectiveness, built in redundancy, envisaged scalability aspects etc. 4) Completeness and responsiveness: The extent to which the proposal responds exhaustively to all the requirements of S&T Scope of work 5) Risks identification and proposed mitigation plan 6) KMS Implementation Plan	As per Evaluation Committee (Max 35 marks)

4.2.2 Vigyan Prasar will nominate one committee consisting of not less than four members to evaluate and score the written technical proposals and oral presentation as mentioned clause 4.2.1 of this document.

4.2.3 Only those Applicants whose Technical proposals score more than 70 points or more out of 100 shall be shortlisted. If the number of the short listed proposals are less than three, then the proposal that have received top three ranks, would be considered for opening of financial bid.

4.3 Generally, the successful Applicant shall be the Technically Qualified applicant having the Lowest Quote.

## **5 TERMS AND CONDITIONS**

### **5.1 General Instructions:**

1. The time for completion of the work shall be **90 days** from the date of issue of the Letter of award.
2. The successful bidder shall be required to present several designs of output templates out of which some templates will be selected by a Committee with/ without suggestions for changes which the bidder will have to incorporate.
3. The bidder must have experience of creating and managing quality KM portals, preferably Web Content Management System based KM portals of large Institutions/ companies. Documentary evidence by way of completion certificate should be produced in support of experience and performance clearly mentioning use of Web CMS Tools.
4. The bidder should be registered for Service Tax (Copy to be enclosed).

5. **Signing of Proposal:** Individual signing the Proposal or other documents connected with contract must specify whether he signs as:-

- (a) A “sole proprietor” of the concern or constituted attorney of such sole proprietor.
- (b) A partner of the firm, if it be a partnership firm, in which case he must have authority to execute contracts on behalf of the firm and to refer to arbitration disputes concerning the business of the partnership either by virtue of the partnership agreement or by a power of attorney duly executed by the partners of the firm.
- (c) Director or principal officer duly authorized by the Board or Directors of the Company, if it is a Company.

### **N.B.**

- (i) In case of partnership firms, a copy of the partnership agreement, or general power of attorney duly attested by a Notary Public, should be furnished on stamped paper duly sworn of affirmed by all the partners admitting execution of the partnership agreement or the general power of attorney. The attested copy of the certificate of registration of firm should also be enclosed along with the Proposal.
- (ii) In the case of partnership firms, where no authority to refer disputes concerning the business of partnership firm has been conferred on any parties the Proposal and all other

related documents must be signed by all partners of the firm.

(iii) A person signing the Proposal form or any documents forming part of the Proposal on behalf of another person should have an authority to bid such other person and if, on enquiry it appears that the persons so signing had no authority to do so, the Vigyan Prasar, Noida may, without prejudice cancel the contract and hold the signatory liable for all costs, consequences and damages under the civil and criminal remedies available.

(iv) The bidder should sign and affix his/his firm's stamp at each page of the Proposal and all its Annexure as the token of having read and understood the documents.

**6. Sub-letting of Work:** The contractor shall not assign, transfer or sublet or attempt to assign, transfer or sublet, whether wholly or in part, any portion of the work to any other entity.

## **5.2 COMPLETION OF PROPOSAL DOCUMENTS:**

- The rate should be quoted in figures as well as in words, if there is variation between the rates quoted in figures and in words, the rates quoted in 'Words' shall be taken as correct. If more than one or improper rates are proposed for the same items, the Proposal is liable to be rejected.
- Each page of the proposal papers is to be signed and dated by the Proposal/s or such person/s on his/their behalf who is/are legally authorized to sign for him / them.
- Proposals containing erasures and alterations of the Proposal documents are liable to be rejected. Any corrections made by the Proposal/s in his / their entries should be in Ink and must be attested by him / them under full signature and date.

## **5.3 ACCEPTANCE OF PROPOSAL:**

- 'IF THE PROPOSAL/S DELIBERATELY GIVES WRONG INFORMATION / WHOSE CREDENTIALS / DOCUMENTS IN HIS / THEIR PROPOSALS AND THEREBY CREATE(S) CIRCUMSTANCES FOR ACCEPTANCE OF HIS / THEIR PROPOSAL. VIGYAN PRASAR RESERVES THE RIGHT TO REJECT SUCH PROPOSAL AT ANY STAGE, BESIDES, SHALL SUSPEND THE BUSINESS FOR ONE YEAR.'
- The authority for acceptance of Proposal rests with the competent authority of the Vigyan Prasar, who does not undertake to assign reasons for declining to consider any particular Proposal or Proposals. He also reserves the right to accept the Proposal in whole or in part or to divide the Proposal amongst more than one Proposal, if deemed necessary.

## **5.3 Progress Monitoring**

Contractor will be required to give the Director/ VIGYAN PRASAR progress report of the

work done every week. He will also give to the Director/VIGYAN PRASAR the program of work to be done in the next week of the preceding period. The program will be subject to alteration or modification at the direction of the Director/VIGYAN PRASAR, who may discuss such modifications or alterations as considered necessary.

### **5.5 Entire Agreement**

This Agreement embodies the entire agreement and understanding between the parties as to the subject matter hereof and supersedes all prior negotiations, arrangements, agreements and understanding between the parties. Any changes in the terms of the document can only be made in writing and by mutual agreement.

### **5.6 Payment Clause**

No payment shall be made in advance nor any loan from any bank or financial institution recommended on the basis of the order of award of work. Payment for developing the IST KM portal work done under the contract shall be made as per following terms:

- 90% of the contract value (plus service tax thereof, less deduction if any) would be released on successful completion of the job.
- Balance 10% payment will be released after 6 months of successful running of the KM portal.

### **5.7 FAILURE AND TERMINATION CLAUSE:**

- If the agency fails to complete the Development of IST KM portal of Vigyan Prasar in accordance with the Proposal Notice within the time period(s) specified in the contract or any extension thereof granted by Vigyan Prasar.
- If the agency fails to perform any other obligation(s) under the contract / work order.
- If the agency fails to comply with instructions of Vigyan Prasar with respect to improving the quality of KM portal Designing, Content, Format, Web CMS software, Navigation Structure, Pictures, Ease of Use etc.

### **5.8 ARBITRATION:**

If any dispute, difference, question or dis-agreement shall at any time, hereafter arise, between the parties hereto or the respective representatives or assigns in connection with or arising out of the contract or duties of the said parties hereunder or any matter whatsoever incidental to his contract or otherwise concerning the works of execution or failure to execute the same whether during the progress of work or stipulated/extended periods or before or after the compilation or abandonment thereof, it shall be referred to the sole arbitrator appointed by Director Vigyan Prasar. It will be no objection to any, such appointment that the arbitrator so appointed is an employee of this Organization or that he had to deal with the matters to which contract relates and that in the course of his duties as this Organization employees he had expressed views on all or any of the matters in dispute of difference.

**(Maj Somesh C Jhingan)**  
**Registrar, VP**

VIGYAN PRASAR  
Department of Science and Technology

REQUEST FOR PROPOSAL

Proposal Particulars

Proposal No.....

1) Name of the Proposer:

2) Address of the Proposer:

.....  
.....  
.....

Telephone No. ....

Fax .....

E- mail .....

3) Date of Inception: .....

4) The Proposer should be registered for Service Tax (Attested copy of the Registration Certificate to be enclosed)

5) Name and Address of the officer to whom all references shall be made regarding this proposal:

Phone .....

Fax .....

E-mail .....

Signature.....

Name.....

Designation.....

Date.....

Company Seal.....

6) PAN No.

7) TAN No.

Attested all document with this application as stated closure 2.4 of this document.

**VIGYAN PRASAR**  
**Department of Science and Technology**

**PRICE SCHEDULE**

**No: VP/EFD /1517/IST/2016**

**Date: .....**

**Name of Proposer:**

**Validity of Proposal: 90 days from the date of Proposal**

**Date of Opening of Proposal - Technical Bid:** 11:00 hours on 30 October 2017

**Financial Bid:** Technically qualified Proposers will be informed accordingly.

**Total amount will be considered by rounding up to nearest one means less than 50 paise will be ignored and 50 paise and above will be considered as Rupee one.**

S. No.	Description	Rate as quoted by Proposer
1	Cost of designing, developing and launching of CMS based KM portal of IST as detailed in  “Scope of work” along with writing of content, structure of Bi-lingual KM portal, addition of HTML Pages, conversion to accessible format (PDF, DOC and HTML) with Desktop system (PC with Printer) and its software for KM portal purpose (off-line site to be maintained in the PC.	<i>To be quoted</i>

Note: Rate quoted by the bidder should be in figure as well as in words.

Submit all the pages of this proposal documents duly signed as accepting all the terms and condition of the proposal.

**1. PROJECT REQUIREMENTS:**

Developer must follow guidelines for Government of India websites to ensure proper standardization of all content. KM portal needs to be designed with all dynamic features for updation and prescribed web accessibility features as below:

- Least site opening time and portal should be providing high speed responses on users actions even on high traffic speed should be very fast.
- Clean and professional design
- KM portal reflecting organization objectives
- Search engine friendly
- Security of KM portal
- KM portal should be viewable with the popular versions of major browsers like IE, Opera, Netscape, Mozilla, etc and should work with all commonly used resolutions.
- The site will completely be in English language with the provision of Hindi version and graphics on pages, wherever required.
- Site should be secure with SSL and solutions should be provided so that SQL Injection and other common practices of hacking get prevented.
- Solutions should be robust and users should be seeing the pages and information which is expected.
- Site should be easy to use.
- Site should be friendly to end customers.

**2. Project Methodology**

The project development cycle will include the following Phases:

**a. Requirement Analysis:**

After being awarded this assignment, the selected bidder will carry out a detailed requirement analysis with the VP team, for finalizing the proposed site map and Graphical layout of the KM portal. During this phase, the functionality of different pages will be determined with regard to dynamic and static aspects, etc.

**b. Finalization of Software Requirement Specification:**

Based on the input from the preceding phase the site map, graphical layout, page functionality, etc will be finalized between VP team and KM portal development firm.

**c. KM portal content preparation:**

The draft for KM portal content is already prepared by VP. The same will be finalized with the KM portal development firm.

**d. Implementation and Unit Testing:**

During this phase the vendor will carry out the implementation as per the requirements and contents finalized during the preceding phases. During this stage the vendor will provide access of the completed pages/module to VP for user testing and feedback.

**e. Final Testing:**

After completion of development efforts, final testing will be carried out by vendor's Quality Assurance team for the final KM portal. The detailed QA report will be shared with VP, for final testing of KM portal by the VP team. This testing will include performance testing of KM portal after hosting.

**1) Ensure such Important components of the KM portal as:**

- (i) Dynamic web pages
- (ii) Pop up with the list of latest researches on any new topic.
- (iii) Photo gallery/video management system
- (iv) Dynamic news/events/notification management system
- (v) Discussion forum
- (vi) Streaming and live streaming of audio/video
- (vii) Hosting chat show
- (viii) Webinar & Online conference
- (ix) All other Social Media compatibility
- (x) Feedback management system Sitemap
- (xi) Related links to other government web portals / and related web applications
- (xii) FAQs
- (xiii) Banners and Advertisements
- (xiv) Theme change, font change, screens reader etc.
- (xv) Individuals who interact with the portal should be able to
  - Submit relevant details to get them listed on portal. This should be along with such content that should be visible on portal after approvals.
  - Navigate, look for and secure information, using such leads / filters as institute name, location, field of research, research topic etc.
- (xvi) About Us: including detailed information about the KM portal, infographics on STI etc.
- (xvii) Designs and development of Portal, Back-end panel work flow
- (xviii) Transform current stories into newer CMS
- (xix) Maintenance of the evolving KM portal
- (xx) Make all changes accordingly including the graphical, pictorial, audio & video interface as needed
- (xxi) Development of Comprehensive Content Management System (CMS) for role – based management of menus, submenus and contents in all sections/subsections of the KM portal;



- (xxii) Maintain audit trails of documents hosted, accessible to the administrator as needed
- (xxiii) Auto archival mechanism to maintain the archived documents with proper classification and auto archival system.
- (xxiv) Sections such as 'what's new', 'latest updates' etc must be dynamic.
- (xxv) Clearance of Security Audit of the KM portal by Department of Electronics and Information Technology (Deity) empaneled agency
- (xxvi) User Friendly navigation &
- (xxvii) Database driven approach.

### **3. Functionality covered in the KM portal**

The proposed KM portal should cover the following functionality points:

1. The KM portal should have a provision of clean URL's. - There should be a provision to automatically remove expired content from primary screen. The design should be responsive for easy reading and navigation with a minimum of resizing, panning, and scrolling across a wide range of devices including mobile devices.
2. Provision for enabling RSS feed for users to subscribe to latest news/updates from IST.
3. Comments to be moderated using Captcha to discourage any automated process from entering any information to ISTKM portal.
4. No change in core CMS code to facilitate future upgrades of the CMS.
5. Application should be developed using modules of the CMS proposed.
6. Font size increasing option should be present in KM portal.
7. Simultaneously access test for testing purpose.
8. Separation of Design and Content – content to be stored in the database and designed to be controlled by the use of cascading style sheet (CSS). Separate CSS for use with Internet Browsers and Mobile Browsers.
9. Portal should be mobile responsive.

The information should be viewed based on screen size and adapt accordingly. Ideally three levels of screens should get supported:

- Tablets
- Mobile phones
- Desktops

**KM portal-Components:** The proposed KM portal should have following components:

#### **(a) Visitor Section**

- (i) **Landing Page:** There would be landing page of the KM portal which should contain links to English Version, Hindi Version. The tentative horizontal heads to include Government Institutions, Industry Associations & Laboratories, Centres of Higher Learnings, Civil Societies and Financial Institutions. For each of these horizontal heads, the vertical heads on the subsequent pages to cover Research in Progress, Milestone, Knowledge Networks, Funding Schemes and Scholarship / Fellowship.

- (ii) **Hindi Content:** The Hindi Content should be in Unicode font (Mangal). The visitors would be able to view the content with ease without any requirement of font download. However there might be a case wherein browser might not support automatic font configuration, so proper guidelines should be there font configuration for such users.
- (iii) **About Us:** This page will provide the detailed information about the portal and its features.
- (iv) **What's new:** This will provide new updates of respective Section.
- (v) **List your Project:** Researchers can submit the information related their project or institute on portal (registration required).
- (vi) **Dynamic news/events/notification:** This will show the list of latest news/events/seminars/conferences.
- (vii) **Science News** – this section will showcase the news related to science and technology in India. India Science News Feature Service of Vigyan Prasar & others to fetch RSS feed through an administrative control panel. Administrator can upload pictures to their events. Also can add Caption to the pictures, facility to search news via a strong search engine, Facility to manage news/event write-up/contents by multiple users from anywhere through browser based administrative module using a WYSIWIG editor.
- (viii) **S&T institute Location:** This page will show the presence of S&T institutes over the country's map. After selecting on any particular institute, the user will be able to see the list of areas the institute is engaged in.
- (ix) **Search:** This page will allow the user to look for any particular S&T institute; using such filters as institute name, location, field / topic of research, etc.
- (x) **Main Menu** – This will have the list of the S&T institutes segregated as Government Institutions, Industries associations & labs, Centre of Higher Learning, Civil Societies & Financial Institutions. After selecting any particular organization, the user will be redirected to the selected link and following sub link with a brief about the organization will be displayed.
- Research in Progress with a link to open detail page of particular project.
  - Milestones in research and the Institute as a whole
  - Knowledge network with the list of experts associated with the area / project/institute
  - Funding Schemes / Scholarships / Fellowships: This will show the aim, objective & the benefits of the fellowship/scholarship.
- (xi) QR Code – This will be reflected for all the major sections of the portal.
- (xii) Archives of researches that can help access with such filters as research title / field / Location / citations.
- (xiii) Video Gallery / Image Gallery of events at institutes
- (xiv) FAQ
- (xv) RSS Feed with provision to subscribe to latest news/updates related to S&T India.
- (xvi) Feedback /Suggestions
- (xvii) Contact us
- (xviii) Forums and Dashboard -
- a. Users can select area of study they wish to know / talk about.

- b. They can view all forums, threads, replies, update their profile snap, change their password etc., receive notifications etc., & as a mentor mentee platform.

#### **4. Media Centre: This would have following sections:**

- a. **Dynamic Photo gallery/Video Management System:** Event-wise photographs should be listed under this section. Each photograph would have a brief description. All photographs would be listed in thumbnail (small) size and on clicking on the photograph it should be opened in a new window with original size. Facility to manage photo gallery via an administrative control panel, facility to create photo gallery category dynamically i.e. add/edit/delete photo gallery categories, facility to upload new pictures to these categories along with caption, facility to manage pictures and caption.
- b. **Events Calendar:** List along with details of all forthcoming events should be mentioned under this section. When the date of event passes on the event should automatically be moved to archives section under Events.
- c. **Dynamic News Management System:** India Science News Feature Service of Vigyan Prasar & others to fetch RSS feed through an administrative control panel. Administrator can upload pictures to their events. Also can add Caption to the pictures, facility to search news via a strong search engine, Facility to manage news/event write-up/contents by multiple users from anywhere through browser based administrative module using a WYSIWIG editor.

#### **5. Blog**

#### **6. Chat Module**

7. **Forum Module:** A time bound forum for getting views from visitors of the KM portal on a particular issue. The Department Administrator would create a topic and provide views of Department on that topic. The visitors should then be able to post their views on that topic. The views posted by the visitors would be first approved by the department and then should be made available on the portal. However, the administrator should be able to make any changes in the view posted by the visitor. Discussion forum should be completely moderator driven and intelligent features to be plugged in to make it safe secure and within a close group.

8. **Related Links:** Links to other government websites and web applications should be provided.

9. **Frequently Asked Questions:** Provision of frequently asked questions along with answers to those questions. The department administrator should also have the option to link the feedback received from visitors with frequently asked questions.

10. **Banners and Advertisements:** Facility to promote schemes of different ministries of GOI and programs they can be displayed prominently on government websites in the form of banners (image/flash in centre of page) and panels (image/flash on left/right side of page).

11. **Feedback:** Provision for visitors to post the feedback through the portal. The feedback can be a general feedback, feedback on content and department/section specific feedback.

**12. Content Structure:** The KM portal should have level content structure (for both Hindi and English) i.e. there should be main links in the KM portal. Under each main link, there should be sub-links. Under each sub-link here should be sub-links level 2 and so on.

**13. FULL TEXT SEARCH:** Provision of Full text search in the KM portal for all the content. On entering any keyword, the system must be able to search in all links, sub-links and sub sub-links and should provide links where that word is present. On clicking the link the content should be displayed.

**(b) Administrator Section:** KM portal should have all facilities be available as below:

**1. Secure Login:**

- Admin section must be protected by username and password. It should be role based login. There should be administrative login and user's login to facilitate to update respective sections with restrictions. No user should be able to modify other pages not assigned to that role.
- At database level also password should be stored in encrypted format.
- After 5 consecutive wrong attempts the password should be reset and new password would be sent to administrator through email.

**2. Links:** Administrator would be able to add/delete the links pertaining to Hindi/English in the KM portal at any point of time from any location. The control for the same should so user friendly that a simple data entry operator should be able to update the links. There would be three types of links, File (link to a file i.e. Doc, PDF, JPG etc), URL (Link to some other website) and Content (Static information in rich text format). Also the administrator should be able to set the order in which the links would appear in the KM portal.

**3.** At the back end, mentioned below are the user panels with their functionalities:

**1. Admin Panel :** Admin will have the following functionalities:

- Admin will be able to create/manage the sub admin. Admin can delete/block any sub admin from the system at any point of time.
- Admin will be able to see the reports of the research submission by any particular institute/department.
- Admin should be able to create new research items, create new research institute and should be able to push content accordingly.
- Admin will be able to add/unpublish/update the content of the KM portal at any point of time.

**2. Sub Admin Panel :**

- Sub admin will be able to create the User profile. Sub admin can delete/block /update any user at any particular point of time.
- Sub admin will be able to provide rights to any particular user to publish/upload the content of the research over the portal.
- Sub admin will allow the user to publish their research on the portal by approving their request.
- Sub admin will allow the user to add/unpublish/update the video & image gallery by approving their request.
- Sub admin will be able to view the uploaded content on the portal.
- Sub admin will be able to generate the reports of the uploaded content on the KM portal by the different users.
- Sub admin can update and manage the content of the KM portal.

- Sub admin can track the record of the funding schemes & scholarship schemes which would be opt by any particular research institute/department.
- Should be able to unpublish forums, forums topics.
- Should be able to block external users based on their activities.
- Should be able to view report abuse in forums and delete content as and when required.
- Admin should be able to view, block, unblock content on site (forums) as and when required.

### 3. User Panel:

- User will be able to generate the request to the sub admin to upload the research content on the KM portal.
- User will be able to delete/update the details of the uploaded research content.
- User will be able to view the list of the uploaded content on particular date.
- Participate in forums.
- Users should be able to report abuse any forums topics, or replies which in future can be blocked.
- Facebook type of notifications to show what is happening in their areas of interest.

### Designs

- Designs will be trendy and good looking
- User Experience will be good

### 4. Page Title: For each link created the admin would specify the title of page.

- a. **Link Validity:** For each link created the admin would specify the date by which the link expires. The default value should be never expires.

(i) **Ownership:** For each content, the admin should specify the source of the content and owner of the content.

(ii) **Meta Data:** For each content the admin should specify the metadata

### b. Content Structure:

- The admin should add/delete links in the KM portal. Now each link can be a main link. At the same time it can be a sub-link to some other link. Also simultaneously it can be a sub-link level 2 thus achieving complete flexibility.
- KM portal development will include provision for content management system (CMS) of the portal for allowing; different content owners control over their material posted on the portal, flexibility for administrator to change the graphic background theme when required.
- Add more feature in the Content Management System (CMS) of the portal (as and when required).

- b. **Feedback Management System:** The admin should be able to view all feedback received for a particular date or for duration. Now the admin should be able to send the reply for the same and email would be sent to the visitor's email address. Two types of feedbacks would be viewed and replied.

- a) General
- b) Content Specific

#### 4. Technology Used:

The proposed KM portal for IST should be developed with latest technology with complete CMS driven, GIGW Compliance and Security clearance as per GOI guidelines.

#### 5. Implementation Approach

- On receipt of work order the Developer should prepare 3 sample layouts for the KM portal and should be submitted to VP for approval. All changes suggestion for the layout would be done by the Developer.
- Further work should only be started after approval. Work should be done based on cyber security guidelines. All proposed content of the KM portal should be converted so as to comply with Govt. of India website guidelines including all PDF and HTML files. The KM portal should be subsequently launched.

#### 6. Project Schedule Time to specified

S. No.	Activity	Start	End	Remarks
1.	Project Initiation			
2.	Preparation of Sample Layout			
3.	Finalization of Page/Colour			
4.	Portal Functionality			
5.	Approval of functionality			
6.	Content Placement			
7.	Web Guidelines Audit			
8.	Security Audit, Submission & Security Clearance as per GOI guidelines.			
9.	KM portal uploading & Launch			
10.	Maintenance of KM portal			

#### 7. Others

- User Manual & KM Portal Contents
- KM portal Setup/Installation, Maintenance Guidelines