

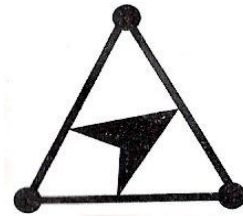
**TENDER FOR EXECUTION OF PHASE-II OF SAKSHAM
(SHRAMIK SHAKTI MANCH) PROJECT OF TIFAC
(June 2021)**

**Last Date of Receipt of
Tender in TIFAC**

**7th July 2021
Time: 5.30 PM**

Note:

1. TIFAC may at its discretion extend this date and this extension shall be binding on the bidders.
2. If the date up to which the bids are open for acceptance in TIFAC is declared as a Gazetted Holiday of Govt. of India, the bids shall be deemed to remain open for acceptance till the next working day (up to 5.30 PM). No separate notification regarding the last date would be issued in that case.
3. Bidders have to keep themselves updated with any corrigendum / amendment or new development by revisiting TIFAC website from time to time. Any change in the tender document, terms and conditions, eligibility, procedure, last date or any other related change would be notified on TIFAC website only and it would be binding on the bidders.
4. Bidders should read, sign on each page and understand the Terms & Conditions carefully before submitting the tender



TIFAC

**TECHNOLOGY INFORMATION, FORECASTING & ASSESSMENT COUNCIL
(TIFAC)**

(An Autonomous body under Department of Science and Technology, Govt. of India)

Vishwakarma Bhawan, A-Wing, Shaheed Jeet Singh Marg, New Delhi-110016

TENDER FOR EXECUTION OF PHASE-II OF SAKSHAM (SHRAMIK SHAKTI MANCH) PROJECT OF TIFAC

Technology Information, Forecasting and Assessment Council (TIFAC) is an autonomous body of Department of Science and Technology, Government of India and is primarily a Technology Think Tank for the nation.

TIFAC invites sealed tenders (two bid system - technical bid and financial bid) from the competent and eligible agencies for execution of Phase-II of SAKSHAM Project of TIFAC.

The details of SAKSHAM (Shramik Shakti Manch) project, its Phase-I execution, work envisaged for Phase-II, eligibility conditions, etc. are as given below:

1. BACKGROUND

In view of COVID – 19 pandemic and the ensuing lockdowns, which have brought acute misery and hardships to lakhs of Shramiks (blue collared workers) all across India due to reverse migration, TIFAC has taken up a project for development of a dynamic portal for mapping of skills of Shramiks vis-a-vis requirements of MSMEs and other industries. The objective of the project is to address the immediate need of these shramiks for their gainful employment and at the same time to support the MSMEs and other industries, to learn about the region/district wise availability of skilled/semi-skilled shramiks as per their requirements. The portal (SAKSHAM) is to provide a platform to shramiks as well as industries, where the available skills can be highlighted and utilised by the industries on a need based rational approach. There is a WhatsApp Chat bot used with missed call service. The portal with the data (demand and supply) uses artificial intelligence based algorithm and logic being integrated with the system, so that it would not only provide region wise information on demand and availability of shramiks, but would also provide analysis on skill match, skill gap, skill diary, recommendations on skill training programmes, etc .

2. PHASE-I ACTIVITIES (COMPLETED)

The first phase of the project, comprising of developing an infrastructure for data collection and analysis has been completed and launched Pan India on 10th February 2021.

As part of this first phase of the project, the following works have been completed:

- Dynamic portals were built for the following stakeholders:
 - Shramiks- the portal was built on Whatsapp chat where the shramiks can chat with a bot and share their current work status and their supply of skills with preferred locations.
 - Industries- the portal was built as a web application for industry representatives to log in and see the availability of shramiks across India, while also sharing their requirements; with the option to connect with “relevant” shramiks based on their workforce hiring needs and the consent of matching shramiks for the same
 - Administrators and Policymakers- the portal was built as a web applica-

tion for government representatives to see the spread of shramiks across India on a GIS dashboard, along with demand by industries, with skill evaluation done for each shramik based on which supply-demand mapping of skills were done. Also, the portal is able to show skill development needs across regions of India.

- Information was collected from Shramiks and evaluation of skill proficiency for each shramik was done:
 - A total of 65,000+ shramiks went through a complete skill evaluation process, with full profile of their skill proficiency known. These have a higher chance of placements with companies. These shramiks represent 719 unique districts of India, covering the entire country. The numbers are dynamic.
 - A total 250,000+ shramiks registered representing 720 unique districts of India, covering the entire country. The numbers are dynamic.
 - Hindi, English and Marathi were used as languages of communication.
- Information was collected from Companies and evaluation of their needs was done, besides giving them opportunities to contact the relevant workforce:
 - Companies from all across India, representing 595 unique locations (based on PIN Codes) have registered
 - The language of communication with companies is English and through extensive use of graphical user interface
 - The total number of registered companies is dynamic and is more than 940. More than 90% are MSMEs, with around 50% identifying themselves as small enterprises.
- Pilot Mapping of Jobs: A total of 2,500+ shramiks were connected to employers seeking to employ them, through the localized mapping process.

3. TIFAC INVITES SEALED BIDS FOR PHASE-II OF THE PROJECT

The primary focus of Phase-II of the project SAKSHAM is on pan India outreach and use of data analytics for skill assessment and placement of the shramiks. In addition, it may also indicate skilling needs as required by the industries and design of training programmes accordingly.

3.1 SCOPE OF WORK

The bids are invited from the competent consultancy and technology firms for:

- Outreach:
 - Partner with various bodies across India, for both shramiks and MSMEs, and reach out to a much larger number of shramiks and businesses, with a minimum target of reaching additional 2000 company registrations and 3,00,000 shramik registrations within 3 months of execution of this phase. The companies registered on the portal should announce and indicate their manpower (Shramik) requirements on the portal.
 - The outreach shall require partnerships with MSMEs / State Govts. / Local bodies as well as on-ground activation in different parts of India, as

the distribution of either the companies or shramiks should not be skewed towards particular regions but should represent the entire country.

- **Communication Enhancement:**
 - The language of communication with companies need to increase, as currently only English is used. At least five (5) more Indian languages must be included. 2-3 more languages, if need arises will have to be included without any additional cost. Further, modification in the text as needed may be required.
 - The language of communication with shramiks also need to increase, as currently English, Hindi and Marathi are the languages available. At least five (5) more Indian languages must be included. 2-3 more languages, if need arises will have to be included without any additional cost. This will help increase the depth of association with shramiks.

- **Technology Infrastructure:**
 - With the project moving to Phase II, the servers used in Phase I need to be enhanced to account for the increased numbers. Currently, the data is stored in cloud server in AWS.
 - The ability of Whatsapp chat bot conversations needs to be enhanced, so that there is not too much delay in conversations, even if there are more than 5,000 concurrent conversations that may be running.
 - Code-level enhancements to optimize the increased numbers need to be evaluated and executed if required. Currently, the platform is built using Python for algorithms and MERN stack for the portals.
 - Data security has to be strictly maintained.
 - The system currently uses email services to ensure communication with the companies happen in the right time, an enhancement in the capability of email servers needs to be done to do all the required communication.
 - All the infrastructure costs (basic ongoing cost w.e.f. date of award of work as well as enhancement cost) shall be borne by the selected agency while making sure that the system is scalable and flexible to allow for further enhancements in later phases.

- **Skill Development Plan:**
 - Analytics Engines should be used to create a dynamic plan on how skill development courses need to be executed across India. Currently, the system already uses an analytical engine for the same, but the results are limited due to limited outreach. With higher outreach, the same engine can be used with further enhancements, if required.
 - Use the analytical outputs to create reports for the required authorities on “Hyperlocal Skill Development Policy Recommendations” across India.

- **Presentation of Success Stories:**
 - Success stories in terms of placement of shramiks will have to be created and shared on the portal @ one success story for every hundred placements facilitated through SAKSHAM.
 - The success stories shall be used to establish the importance of SAKSHAM in the lives of shramiks across India and for the growth of local businesses in different parts of India, not just limiting to the metro

cities.

- The success stories shall also be used to show how Saksham is playing an important role in an economic revolution.
- Creation of MIS:
 - Dashboard showing placement facilitated and success stories created in form of numbers
 - Dashboard showing different reports driven out of analytics:
 - Trend of Job Demands vs Type of Companies vs Criticality in placements
 - Number of Shramiks Placed across Skills
 - Number of Shramiks Placed across Regions
 - Recommendation Engine for Policy Makers based on above mentioned analytics driven outputs
- Additional Guidance for Shramiks:

Saksham is designed not just as a portal connecting shramiks to companies, but also as an Artificially Intelligent Guide or Mentor that can tell them what they should do next- the suggestion can be in form of recommendation to undertake a particular skill development course or to apply to a particular type of companies or to work in a particular sector or location based on the optimum match. This will make Saksham a lifetime coach or guide for the blue collared workforce of India, talking to them empathetically at different intervals and making their lives better in the process.

Such guidance is possible through application of the following steps:

- Creation of an algorithm preferably created based on feedback loops derived out of Phase I data and initial data from Phase II, that can replicate a guide or coach, or mentor meant for guiding the Shramiks, while maintaining an empathetic tone.
- Smart Integration with the Chat Bot System that is already in use with the Shramiks
- Creating a bank of recommendations for the shramiks that the algorithm feeds into.

Cost of all the above components including the cost of complete infrastructure required for the project period (servers, cloud space, chatbot, etc.) to be included in the financial bid.

3.2 ELIGIBILITY CRITERIA

Following are the technical qualifications required as a pre-requisite for a bidder to become eligible:

- Strong experience of database management with high level security and application of IT tools using the languages and softwares as defined above (Python, MERN stack, etc.).
- Strong technical and analytical capabilities to develop, maintain and operate a pro-

ject of such size and criticality; experience of conducting technology projects in the space of data analytics and artificial intelligence is mandatory.

- Availability of the required cloud infrastructure for hosting the entire portal
- Prior experience of working with messaging chatbot facility through direct or indirect means so as to connect with the Shramiks
- Wide experience of building dashboards with GIS mapping, particularly for usage by governments
- Prior experience in working with any State / Central government bodies; experience of having worked with state governments in different parts of India (e.g. a state from the north of India as well as the south of India) is preferred because of the requirement of Phase II to be pan-India
- Strong connect and experience in the industries through partnerships and previous experience of the bidder and/or its promoters; experience of engaging with thousands of companies in India in any manner is required

The Technical Bid to include the details about the firm / company, its capabilities / strengths to undertake such assignment and its delivery within the given time frame and budget, proposed methodology and complete details on how it would execute and finish this assignment.

The firm / agency MUST include attachments in support of its proposal, especially with respect to the eligibility criteria species above.

3.3 IMPORTANT TERMS AND CONDITIONS

- a. This bid shall be processed in two bids system – namely (i) Technical/Prequalification bid and (ii) Financial bid. The interested bidders shall submit both the bids in two separate sealed envelopes and both the envelopes to be kept in a single large envelope. The bids must be received in the office of In-charge (F&A), TIFAC, Vishwakarma Bhawan, A-Wing, 1st Floor, Shaheed Jeet Singh Marg, New Delhi-110016 on or before the last date / time (as mentioned on the cover page of this document).
- b. The bidders should superscribe on the separate envelopes as “Technical Bid”, “Financial Bid” and on the large envelope as “TENDER FOR EXECUTION OF PHASE-II OF SAKSHAM”. Bidders should provide its name & complete postal address on the outer envelope and also indicate its name on other two small envelopes.
- c. Bids received after the prescribed submission date / time will not be considered.
- d. The technical bids will be opened first as per the date / time mentioned on the cover page of this document. The financial bid of the technically qualified bidders will be opened on the date to be fixed later on and made known to the qualified tendering agencies/firms over phone/email. Those firms that do not meet the requisite criteria/non-fulfilling the preconditions and prescribed requirements, their financial bid shall not be opened.
- e. The envelope containing the Technical Bid should include all documents and details in support of the capabilities, competency and experience of the agency along with sup-

porting documents. The technical bid document must also include a table confirming the eligibility conditions as per following format:

S. No	Eligibility Conditions as per tender document	Yes / no
1	Strong experience of database management with high level security and application of IT tools using the languages and softwares as defined above (Python, MERN stack, etc.).	
2	Strong technical and analytical capabilities to develop, maintain and operate a project of such size and criticality; experience of conducting technology projects in the space of data analytics and artificial intelligence is mandatory.	
3	Availability of the required cloud infrastructure for hosting the entire portal	
4	Prior experience of working with messaging chatbot facility through direct or indirect means so as to connect with the Shramiks	
5	Wide experience of building dashboards with GIS mapping, particularly for usage by governments	
6	Prior experience in working with any State / Central government bodies; experience of having worked with state governments in different parts of India (e.g. a state from the north of India as well as the south of India) is preferred because of the requirement of Phase II to be pan-India	
7	Strong connect and experience in the industries through partnerships and previous experience of the bidder and/or its promoters; experience of engaging with thousands of companies in India in any manner is required.	

- f. A bidder can submit only one proposal. Submission of more than one proposal will invite disqualification.
- g. Bidders are advised to study carefully the Tender Document before quoting their bids. All the pages should be signed by the bidder as a token of acceptance.
- h. No advance payment would be released. The payment would be released in minimum three instalments subject to completion of respective milestones (to be defined on the basis of completion of proportionate work).
- i. Taxes, if any to be mentioned clearly in the financial bid. In case, no mention of taxes is found in the financial bid, the quote would be considered as inclusive of all taxes.
- j. If as a result of post payment audit, any overpayment is detected in respect of any work done by the agency or alleged to have done by the agency under the tender, it shall be recovered by TIFAC from the agency.
- k. If any underpayment is discovered, the amount would be paid by TIFAC to the agency.
- l. TIFAC reserves the right to reject any or all the quotations in whole or in part without assigning any reason thereof. The decision of Executive Director, TIFAC shall be final and binding in respect of this clause.
- m. Bidder has to sign and stamp every page of this Tender document as token of acceptance of all terms and condition and produce it with the Technical Bid. Non-compliance of this clause may render such bid ineligible for consideration at the discretion of TIFAC.