

Terms of Reference (TOR)



Ergonomics Impact in Built Environment

Title	Training for onsite assessments on Impact of Ergonomics on Productivity and Wellbeing of Micro business entrepreneurs in North Karnataka
Timeline	10 days
Expected area of expertise	Training for On site assessments related to Ethnography, Anthropology, Architecture, Ergonomics, and community engagement.
Email and website	https://forms.gle/wDkWfWjS9R8BsKv49 (Contact Procurement for Form Link)

About SELCO Foundation:

SELCO Foundation's mission is to create a platform of solutions that uses sustainable energy as a catalyst to bridge environmental sustainability and poverty alleviation. With holistic development as the primary focus, the organization strives to create equitable societies, where services are accessed by all communities. The interventions of SELCO lead to a sustainable delivery model of essential services like livelihoods, education, and health till the last mile. (Read more about SELCO here: <http://www.selcofoundation.org/>)

About Built Environment

The Built Environment (BE) team works with vulnerable communities (migrants, laborers, street vendors, low-income households), providing access to safer and healthier environments, which directly impacts their overall well-being. The solutions that are wholly community-driven, combine user and designer expertise to come up with efficient spatial patterns, ecological design techniques, alternative material usage and innovative financial models.

Summary of the project:

1. Background

India boasts the world's fastest-growing economy, with its backbone predominantly composed of Small and Medium-sized Enterprises (SMEs). These SMEs are dispersed across various geographical locations, often operating in an unorganized manner. Their productivity and well-being are influenced by factors like climate, geography, drudgery, workspace layout designs, NLV, awareness and access to construction material and technology, financial constraints, and the quality of existing built environments.

Ergonomics plays a crucial role in shaping the livelihoods of individuals in the built environment. The way people live and perform tasks is significantly impacted by their interactions with their surroundings.

Numerous studies conducted by diverse groups of researchers in different parts of the world have explored ergonomics in the built environment. These studies have developed various methodologies to assess the effects of ergonomics, considering both physical and psychological aspects influencing the end user.

However, a notable limitation of these studies and methodologies is that they have primarily focused on cubicle office setups and organized manufacturing units in developed countries. This approach might not be suitable for a country like India, where a significant portion of the workforce operates from informal setups. It is crucial, therefore, to gain a deeper understanding of how ergonomics impacts the productivity and well-being of the workforce in these informal setups. Adapting and developing appropriate methodologies that consider the unique characteristics of these livelihoods will be essential for promoting sustainable growth and improved working conditions for the end-users.

2. Research Questions:

1. Does ergonomics impact productivity?
2. How does workspace ergonomics affect the health and overall wellbeing of the operators?
3. Do the effects on productivity and well-being on end-users and their businesses?
4. What are the most suitable methodologies for conducting workstation ergonomic assessments of micro livelihoods prevalent in India?

By addressing these research questions, we can gain valuable insights into the efficacy of ergonomics in enhancing productivity and worker's well-being and develop appropriate assessment tools for informal work settings in India. Such knowledge will contribute to creating more conducive work environments and fostering improved livelihoods for the Indian workforce.

3. Goals and Objectives

- The primary goal of this study is to investigate and validate relationship between workspace ergonomics of micro entrepreneurs/Home based entrepreneurs (which is an important component of the built environment) and how its impact on productivity and wellbeing.
- Develop a new, contextually relevant methodology for assessing ergonomics in the Indian livelihood context. The intent is to develop a tool that accurately captures the unique aspects of these informal work environments, providing a more accurate and applicable framework for ergonomic evaluations.
- Assess the tangible impacts of various elements, such as spatial layout, area, operational methods, lighting, ventilation, and exposure to indoor thermal stresses, on the human body and how it affects productivity.
- Mainstream the research and assessment of workspace ergonomics leading to user-centric designs in the context of Indian household livelihoods and SMEs
- Develop a practical guide for designers, contractors, and end-users to effectively assess existing conditions and design spaces that cater to the specific needs and requirements of these livelihoods.
- Investigate how ergonomics influences various aspects of health, including autonomy, physiology, and psychology. We will explore how well-designed workspaces can have a positive impact on

worker autonomy and psychological well-being. Additionally, we will consider the physiological effects of repetitive actions and potential health risks.

- **Existing Best Practices:** We will also assess whether there are cases where traditional or modified versions of workstations within these livelihoods might be more effective in terms of ergonomics

4. Scope of Study

Livelihoods in underserved communities, characterized by individuals with limited socio-economic resources, often operate in suboptimal workspaces. These work environments are typically overcrowded, uncomfortable, lacking proper design, and, in some cases, even hazardous. As a result, the livelihood activities conducted in such spaces often lead to physical strain, discomfort, health risks, reduced productivity, and lower income.

Our research will focus on livelihoods related to food processing, manufacturing, retail, and service sectors. We have deliberately selected these livelihoods due to their frequent involvement with heat sources, a critical factor influencing workstation design and overall ergonomics.

The primary research area is North Karnataka.

Focus livelihood and Geographies:

State	Livelihood	Type of livelihood
Karnataka	Khowa making	Food processing
Karnataka	Chips making	Food processing
Karnataka	Papad making unit	Food processing
Karnataka	Chakli making unit	Food processing

The sites identified are in clusters and are around 5 districts. Belgaum, Dharwad, Raichur, Shimoga, Tumakuru

5. Scope of Work

Sr. No.	Output
1	Contribute to the development of assessment tool for the study and validate it after pilot testing.
2	Provide insights and feedback on the research process.
3	Provide subject matter expertise on ethnographic study. This includes formation of questionnaire for qualitative findings.
4	Facilitation of training sessions for the on-field team focusing on qualitative aspects and ethnographic study.
5	Review the findings post site assessments and support SELCO in analyzing the data to conclude the study.

6. Requirement:

- Firm/ Research firms/ consultants / should have strong background in conducting qualitative and quantitative research (scientific research design, data collection, quantitative and qualitative analysis survey using relevant software) and report preparation.
- Past experience of working in the social sector, with small business entrepreneurs at the community level and open to partner with SELCO Foundation at all stages (training field staff, data collection, data analysis and report) of the project.

7. Timelines:

10 days in total. The Study is to be completed by March 10

8. Eligibility Criteria:

- Minimum of 15 years of research experience in any or all the following fields: Anthropology, Ethnography, Architecture, and Spatial Design. Demonstrated expertise in conducting qualitative and quantitative research.
- Proven track record of successful projects in the specified fields.
- Strong analytical and interpretive skills in relevant disciplines.
- Exceptional written and verbal communication abilities.
- Experience working with diverse communities and engaging in community-driven research.
- Advanced degree in Anthropology, Ethnography, Architecture, or a related field.
- Added benefits if the firm has worked in the social sector, with small business entrepreneurs at the community level and open to partner with SELCO Foundation at all stages (training field staff, data collection, data analysis and report) of the project.

9. Selection Criteria:

The proposals submitted by the prospective research organizations consultants/ agencies/ firms will be evaluated and examined by an expert in-house committee. The final selection will rest with the competent authority of the SELCO Foundation.

Eligible Interested firms are requested to submit their Expression of Interest (EOI) with all supporting documents as indicated in eligibility criteria.

10. Payment Terms:

- The quotation is inclusive of all necessary taxes and applicable costs.
- Other than the proposed amount, no additional amounts will be paid for fuel, phone charges, etc.
- Deliverables need to be submitted as per the given timeline or before the expected date.
- Consultancy fees must showcase all inclusions and exclusions.
- The total cost should include travel and accommodation.

First payment installment:	50% advanced payment.
Second payment installment:	50% upon submission of findings analysis and completion and validation of the preliminary report.

1. Please provide a breakdown of the costs for the service provided.
2. Kindly mention your name, address, contact information along with correct bank details and signature in the agreement quotation.
3. Please note that the prices quoted by the consultant are firm, final, and binding and not subject to variation on any account.

11. To apply

Interested consultants / organizations, with relevant experience (please include samples and/or references of the previous similar work as proof of experience) and based out of India are requested to reach out with a detailed proposal giving a brief on the methodology and the process they will uptake for this project, including budgets (with break-ups and explanation), timelines and milestones and submit the same to google form <https://forms.gle/wDkWfWjS9R8BsKv49> on before **31st January 2024**.

Any further queries please write to procurement@selcofoundation.org with a subject line: **“Application for Research Consultant Role - Ergonomics Study”**

Refer Terms and Condition:

- 1. Sub-contracting:** In the event that the Consultant requires the services of subcontractors to perform any obligations under the Contract, the Consultant shall obtain the prior written approval of the Foundation. Any rejection or non-performance of the subcontractor shall not, in and of itself, entitle the Consultant to claim any delays in the performance, or to assert any excuses for the non-performance, of any of its obligations under the Contract, and the Consultant shall be solely responsible for all services, obligations and deliverables performed by its subcontractors
- 2. Quality Assurance**
The data submitted to Selco Foundation should be accurate, complete, reliable and relevant. Consulting agency shall establish additional layers for data cleaning and submission.
- 3. Financials & Reporting**
TDS will be deducted on the fixed amount as per Income Tax Act and Rate of Percentage. In accordance with the Central Board of Direct Taxes circular No. 7 of 2022 dated 30th March, 2022 in relation to the clarifications with respect to Section 114AAA of the Income-tax Rules, 1962, failure to link Aadhar number to the PAN card and/or failure by any person, who falls within the income tax bracket or otherwise, to file tax returns in relation to payment of TDS for any service (in accordance with Section 206AB and 206AA) and/or an inoperative PAN card will result in a 20% tax deduction.
- 4. Indemnification**
Both parties shall indemnify and hold its Trustees, Directors and representative officers, employees, agents harmless from and against any and all claims, demands, actions, losses, liabilities, charges, damages, costs and expenses (including but not limited to reasonable attorney's fees) arising out of or

resulting from (1) any claims arising in connection with activities undertaken by both parties in connection with the project or (2) Consultant's gross negligence or willful misconduct or breach of any undertaking, covenant, representation or warranty contained in this agreement and/ or the actual infringement of any patent, trademark, copyrights, trade secret or any other intellectual property right of the third party.

5. Patent, Copyright and other Proprietary Rights

- (i) Except as is otherwise expressly provided in writing in the Contract, the Foundation shall be entitled to all intellectual property and other proprietary rights including, but not limited to, patents, copyrights, and trademarks, with regard to products, processes, inventions, ideas, know-how, or documents and other materials which the Consultant has developed for the Foundation under the Contract and which bear a direct relation to or are produced or prepared or collected in consequence of, or during the course of, the performance of the Contract. The Contractor acknowledges and agrees that such products, documents and other materials constitute works made for hire for the Foundation.
- (ii) Subject to the foregoing provisions, all documents, reports, recommendations, documents, and all other data compiled by or received by the Consultant under the Contract shall be the property of the Foundation, shall be made available for use or inspection by the Foundation at reasonable times and in reasonable places, shall be treated as confidential, and shall be delivered only to the Foundation's authorized officials on completion of work under the Contract
- (iii) The Consultant will treat all information given to him/her as information with proprietary value and will not disclose the same to competitors or any outsiders. The Consultant will not at any time, except under legal process, divulge any trade or business secret relating to the Foundation or any customer or agent of the Foundation, which may become known to him by virtue of his position as consultant, save in so far as such disclosure shall be necessary in the interest and for the benefit of the said Foundation and will be true and faithful to the Foundation in all dealings and transactions whatsoever relating to the said Foundation.
- (iv) Reports or other data that are developed specifically for the performance of this Contract shall be the property of the Foundation and the Consultant shall deliver reports and data to the Foundation as per the milestones. Dissemination of the reports and any information from the said contracts shall be done with written approval from the Foundation.

6. Publicity, use of name & Logo of the Foundation: The Consultant shall not advertise or otherwise make public for purposes of commercial advantage or goodwill that it has a contractual relationship with the Foundation, nor shall the Consultant, in any manner whatsoever use the name, emblem, logo or official seal of the Foundation or that of SELCO in connection with its business or otherwise without the written permission of the Foundation.

7. Observance of Law:

- (i) The Consultant shall comply with all laws, ordinances, rules, and regulations bearing upon the performance of its obligations under the Contract.

- (ii) The Consultant represents and warrants that neither it, its parent entities, partners or subcontractors nor any of its subsidiary or affiliated entities (if any) is engaged in any practice inconsistent with the rights set forth in the *Child Labour (Prohibition and Regulation) Act of 1986*, which, *inter alia*, requires that a child shall be protected from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.
- (iii) The Consultant represents and warrants that it shall adhere to the mandates prescribed under the *Sexual Harassment of Women (Prevention, Prohibition & Redressal) Act, 2013*, which requires all workplaces to have a Policy and Internal Committee to address complaints of sexual harassment that women may face at the workplace

8. Termination:

Either party may terminate this contract by giving a notice in writing to the other party stating their intention to terminate the same on the expiration of Seven (7) days from the date of such notice. In addition, the Foundation may also terminate this contract forthwith in the event of any fraud, misconduct or neglect of duties on the part of the Consultant. Any notice to be given hereunder shall be sufficiently given to the Consultant if forwarded by registered post or by Courier Service to the last known postal address of the Consultant and shall be sufficiently given to the Foundation if similarly forwarded to the registered office. Upon the termination of this contract and payment of the said fees due up to such termination, and payment of all disbursements and out-of-pocket expenses incurred up to the date thereof (provided the same have been incurred after obtaining prior approval), the Consultant shall deliver all deeds, documents and paper in his possession relating to the business of the Foundation or as the Foundation shall direct, and shall continue to afford him all reasonable assistance for concluding pending matters at the date of such termination without making any charge thereof.

9. Force Majeure:

- (i) *Force majeure* as used herein means any unforeseeable and irresistible act of nature, any act of war (whether declared or not), invasion, revolution, insurrection, terrorism, or any other acts of a similar nature or force, *provided that* such acts arise from causes beyond the control and without the fault or negligence of the Consultant
- (ii) In the event of and as soon as possible after the occurrence of any cause constituting *force majeure*, the affected Party shall give notice and full particulars in writing to the other Party, of such occurrence or cause if the affected Party is thereby rendered unable, wholly or in part, to perform its obligations and meet its responsibilities under the Contract. The affected Party shall also notify the other Party of any other changes in condition or the occurrence of any event which interferes or threatens to interfere with its performance of the Contract. Not more than fifteen (15) days following the provision of such notice of *force majeure* or other changes in condition or occurrence, the affected Party shall also submit a statement to the other Party of estimated expenditures that will likely be incurred for the duration of the change in condition or the event of *force majeure*.
- (iii) On receipt of the notice or notices required hereunder, the Party not affected by the occurrence of a cause constituting *force majeure* shall take such action as it reasonably considers to be appropriate or necessary in the circumstances, including the granting to the

affected Party of a reasonable extension of time in which to perform any obligations under the Contract.

- (iv) If the Consultant is rendered unable, wholly or in part, by reason of *force majeure* to perform its obligations and meet its responsibilities under the Contract, the Foundation shall have the right to suspend or terminate the Contract on the same terms and conditions as are provided for in this Contract.

10. Both the Foundation and the Consultant fully and freely intend to create an independent Contractor relationship under this Contract. Nothing herein shall be deemed to establish a partnership, joint venture, association or employment relationship between the parties. Both parties agree that the consultant has the right to sole and exclusive control over the manner and means employed in performing their activities under this Contract.

11. Settlement of disputes:

- (i) The Parties shall use their best efforts to amicably settle any dispute, controversy, or claim arising out of the Contract or the breach, termination, or invalidity thereof.

Any dispute, controversy, or claim between the Parties arising out of the Contract or the breach, termination, or invalidity thereof, unless settled amicably, within sixty (60) days after receipt by one Party of the other Party's written request for such amicable settlement, the matter shall be referred by either Party to arbitration in accordance with the Arbitration and Conciliation Act, 1996. The venue of the arbitration shall be at Bangalore. Likewise, the jurisdiction will vest with courts in Bangalore.