



## Expression of Interest (EOI) for selection of Technology Partner to setup a Centre of Excellence in Electric Vehicle.

Walchand College of Engineering, Sangli  
Vishrambag, Sangli - 416 415  
Maharashtra, India  
Email: [registrar@walchandsangli.ac.in](mailto:registrar@walchandsangli.ac.in)  
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RFP No. WCE/EOI/01

01/12/2025

1. I/c Director, Walchand College of Engineering Sangli invites proposals from eligible firms for “Selection of a Technology Partner to set up a Centre of Excellence in Electric Vehicle” at the Institute.
2. Participating Agencies must fulfill the following pre-requisites:

Sr. No.	Pre-Qualification Criteria
1	Technology Partner should be a company recognized for providing technological products in the technology areas listed in the technical Section 4. They may execute it through their Authorized Partner and thereby name the Authorized Partner as Execution Partner
2	Technology Partner (TP) and the Execution partner should be an entity registered in India under the Companies Act/ LLP Act/ Societies Registration Act or as a Trust.
3	Technology partner should have been in existence for at least 3 years and have experience of setting up of three Centre of Excellence/Demonstration Centers
4	Technology partner or the Execution partner should not have been blacklisted by any Government/ Department/ Body.

3. The bids shall be processed in three parts

Part A	Fulfilment of eligibility criteria by the bidders as stipulated in table above.
Part B	The detailed report submitted by the bidders shall be evaluated by the committee constituted by the WCE Sangli. The prospective authorized bidders may be invited to make online/offline presentation before the committee.
Part C	The bidders who are declared eligible shall be entitled for opening of their financial bid(s). Technical bid will have 70% weightage whereas financial bid will have 30% weightage.



**Walchand College of Engineering**  
(Government Aided Autonomous Institute affiliated to Shivaji University, Kolhapur)  
Vishrambag, Sangli – 416415, Maharashtra



4. The documents may be downloaded free of cost from the website <https://www.walchandsangli.ac.in/>
5. Interested firms shall submit the EOI and RFP in the prescribed format up to 5:00 pm on 01.12.2025.
6. The proposals shall be submitted to the Office of the Registrar or Central store, Walchand College of Engineering, Sangli, in a sealed envelope.
7. The duly filled proposal in proper format should be submitted in person or sent by courier, registered/speed post etc., to The Registrar, Walchand College of Engineering, Sangli, Vishrambag, Sangli - 416 415 Maharashtra, India.
8. Each page of the proposal should be signed by the competent authority of the applicant.
9. All amendments, time extension, clarifications etc. will be uploaded on the website only and will not be published in newspapers. The interested parties should regularly visit the website to keep themselves updated.

**Key dates:**

Sr. No.	Description	Important Information
1	Date of Invitation for proposals	01.12.2025.
2	Due date for downloading the documents	08.12.2025.
3	Due date & time for submission of proposals	08.12.2025 up to 5 p.m.
4	Date of opening of response to RFP	09.12.2025 at 5.10 p.m.
5	Declaration of Final shortlisted Agency	Will be notified to the selected party
6	Tentative Date of MOA Signing	Will be notified to the selected party
7	Release of PO and advance	Will be notified to the selected party

**Registrar,**

**Walchand College of Engineering, Sangli**



## **SELECTION OF Technology Partner**

### **Expression of Interest and Request for Proposal**

Expression of Interest (EOI) for selection of Technology Partner to setup  
a Centre of Excellence in Electric Vehicle.

**Walchand College of Engineering, Sangli**

**Vishrambag, Sangli - 416 415**

**Maharashtra, India**

**Phone: +91-233-2300383**

**Email: registrar@walchandsangli.ac.in**

**Issued on: 01.12.2025.**



## **1. Section 1: Introduction**

### **1.1. About the Institute**

Walchand College of Engineering Sangli (WCE), established in 1947, is one of the oldest and premier engineering institutions in India. It is a Govt. aided autonomous institute catering nearly 2500 students for UG, PG and PhD programs in various disciplines of engineering. With a rich history of over 70 years and a beautiful campus of over 90-acres, the institute is providing unique learning experiences for the students across a spectrum of engineering disciplines.

The institute is affiliated to Shivaji University, Kolhapur and is approved by AICTE, New Delhi. It is also given autonomous status by UGC since 2007. It has all its programs NBA accredited and also has received 'A' grade from National Assessment and Accreditation Council (NAAC), Bangalore. The institute has 6 UG and 10 PG programs. It also has PhD programs under Shivaji University, National Doctoral Fellowship of AICTE and under Quality Improvement Program (QIP) scheme of Ministry of Human Resource Development (MHRD).

### **1.2. Scope of the Project**

WCE Sangli is inviting an expression of interest/RFP from Technology Providers to setup a Center of Excellence that focuses on Electrical Vehicle at WCE Sangli. The idea of setting up of CoE is originated from the need to align the engineering education with the latest industry trends and practices, better vocational training / interaction with industry, upgradation of tools, laboratories and faculty skills as well as the inclusion of latest engineering concepts into the academic curriculum structure.

It is a turnkey project where the Technology Provider will be responsible for the entire solution to our teaching requirement/technological product / lab Hardware and software, commissioning of it and provide training to the faculty for successful running of the facility. It must be the state-of-the-art, industry relevant and should cater to the current and futuristic requirements of the industry.

WCE Sangli will provide infrastructure to setup the Center of Excellence. The Technology Partner once selected must sign a Memorandum of Agreement (MOA). The services proposed in the CoE can be provided directly by the Technology Partner or through their authorized partner.

The Center of Excellence should be an interdisciplinary center focused on developing skill excellence in the field of Electric Vehicle. Through the training and implementation of industry- relevant technology and processes, the center should facilitate a multi-disciplinary learning environment across Technology, Engineering, and Science and Management faculties. It should meet the demands of the industries' ever-changing processes and help build skills around collaboration and innovation.

- a) The center is aimed at industry connected skill development programs.
- b) All the Hardware should be of industrial standards.
- c) The software should be an academic version having provision of full functionalities and features.
- d) The Technology Partner can depute their authorized partner for executing the CoE in terms of supply and running the center. However, the proposal should have a clear information on who is the Execution partner and who is the Technology Partner.
- e) Solution provider is free to suggest proper solution to suit our requirement as per section 4.



### 1.3. Objective

The COE should focus on practical applications, Research and Development and bridge the skill gap of students vis-à-vis industry needs and impart state-of-the art industry-oriented training to help foster significant innovation and learning in technical education. Following are the major objectives of the centre.

- f) **Product Development:** Developing the products and applications to solve the societal challenges.
- g) **Research and Innovation:** Conduct cutting-edge research to develop innovative solutions addressing contemporary industrial challenges.
- h) **Skill Development:** Offer training programs to equip students and professionals with practical knowledge and hands-on experience in Electric Vehicle.
- i) **Interdisciplinary Collaboration:** Promote *interdisciplinary collaboration* between academia, industry, and government agencies for development and deployment of Electric Vehicle.
- j) **Entrepreneurship Support:** Provide mentorship and resources to nurture startups and entrepreneurial ventures in the Electric vehicle sectors.

In this proposal, we invite Technology Partners to set up Centre of Excellence in Electric Vehicle with WCE, Sangli to address industrial needs of skill development and consultancy in the areas of product design & development, engineering, and innovation towards the following:

- Electric Two-Wheeler Test Rig (HIL Supported)
- Electric Four-Wheeler UTV EV Platform
- 4 Wheeler Working Model (Training Open Chassis)
- 2 Wheeler Working Model (Training Open Chassis)
- BLDC Motor Test Bench
- Battery Management Systems
- Battery Pack
- DC–DC Converter (48/51.2V to 12V)
- Traction Inverter (1–2 kW)
- BESS System (Bidirectional)
- ADAS Training Kit
- Vehicle Diagnostics Simulator
- CCS Fast Charging Protocol Simulator
- High-Performance Desktop Workstations

## Section 2. Instructions to Technology Partner (ITL) and Data Sheet

### A. General Provisions



<b>1. Definitions</b>	<p>1.1. “Client” means Walchand College of Engineering Sangli.</p> <p>1.2. “Technology Partner (TP)” means a legally- established firm or an entity that is contracted with under this Contract.</p> <p>1.3. “Contract” means a legally binding written agreement signed between the Client and the TP and includes all additional documents as may be specified by the Client.</p> <p>1.4. “Data Sheet” means an integral part of the Instructions to TPs (ITL) Section 2 that is used to reflect specific assignment conditions to supplement, but not to over- write, the provisions of the ITL.</p> <p>1.5. “Experts” means, collectively, Key Experts, Non-Key Experts, or any other personnel of the TP, Sector Partner or Consortium member(s).</p> <p>1.6. “Joint Venture (JV)” means an association with or without a legal personality distinct from that of its members, where one member has the authority to conduct all business for and on behalf of any and all the members of the JV, and where the members of the JV are jointly and severally liable to the Client for the performance of the Contract.</p> <p>1.7. “Key Expert(s)” means an individual professional whose skills, qualifications, knowledge and experience are critical to the performance of the Services under the Contract.</p> <p>1.8. “ITL” (this Section 2 of the RFP) means the Instructions to TPs that provides the TPs with all information needed to prepare their Proposals.</p> <p>1.9. “Proposal” means the response to this Request for Proposal” submitted by the TP.</p> <p>1.10. “RFP” means the Request for Proposals to be prepared by the Client for the selection of TP.</p> <p>1.11. “Services” means the work to be performed by the TP pursuant to the Contract.</p> <p>1.17. “TOR” means the Terms of Reference that explain the objectives, scope of work, activities, and tasks to be performed, respective responsibilities of the Client and the TP, and expected outcomes.</p>
<b>2. Introduction</b>	<p>2.1. The Client named in the Data Sheet intends to select a TP in accordance with the method of selection specified in the Data Sheet.</p> <p>2.2. The TPs are invited to submit a Proposal for the Labs named in the section 4. The Proposal will be the basis for negotiating and ultimately signing the Contract with the selected TP.</p>
<b>3. Conflict of Interest</b>	<p>3.1. The TP is required to provide services, at all times holding the Client’s interest paramount, strictly avoiding conflicts with other assignments or its own corporate interests and acting without any consideration for future work</p> <p>3.2. The TP has an obligation to disclose to the Client any situation of actual or potential conflict that impacts its capacity to serve the best interest of its Client. Failure to disclose such situations may lead to the disqualification of the TP or the termination of its Contract and/or sanctions by the Client.</p> <p>3.3. Conflicting Relationship: Relationship with the Client’s staff: an TP (including its Experts) that has a close business or family relationship with a professional staff of the Client, who are directly or indirectly involved in any part of (i) the preparation of the Terms of Reference for the assignment, (ii) the selection process for the Contract, or (iii) the supervision of the Contract,</p>



	may not be awarded a Contract, unless the conflict stemming from this relationship has been resolved in a manner acceptable to the Client throughout the selection process and the execution of the Contract.
<b>4. Corrupt and Fraudulent Practices</b>	<p>4.1. Client requires compliance with its policy with regard to corrupt and fraudulent practices.</p> <p>4.2. In further pursuance of this policy, TPs shall permit and shall cause their Experts, Partners, sub-contractors, services providers, or suppliers to permit the Client to inspect all accounts, records, and other documents relating to the submission of the Proposal and contract performance (in case of an award).</p>
<b>5. Eligibility</b>	<p>5.1. The Client permits TPs (individuals and firms, including Joint Ventures and their individual members) from all countries to offer services under this contract unless otherwise blacklisted</p> <p>5.2. Government Government-owned enterprises or institutions in India shall be eligible only if they can establish that they (i) are legally and financially autonomous, (ii) operate under commercial law, and (iii) that they are not dependent agencies of the Client. To establish eligibility, the government-owned enterprise or institution should provide all relevant documents (including its charter) sufficient to demonstrate that it is a legal entity separate from the government;</p> <p>5.3. Government officials and civil servants in India are not eligible to be included as Experts in the TP's Proposal unless such engagement does not conflict with any of the provisions of this engagement or employment or other laws, regulations, or policies of India.</p>

**B. Preparation of Proposal**

<b>6. General Consideration</b>	6.1. In preparing the Proposal, the TP is expected to examine the RFP in detail. Material deficiencies in providing the information requested in the RFP may result in rejection of the Proposal.
<b>7. Cost of Preparation of Proposal</b>	7.1. The TP shall bear all costs associated with the preparation and submission of its Proposal, and the Client shall not be responsible or liable for those costs, regardless of the conduct or outcome of the selection process. The Client is not bound to accept any proposal, and reserves the right to annul the selection process at any time prior to Contract award, without thereby incurring any liability to the TP.
<b>8. Language</b>	8.1. The Proposal, as well as all correspondence and documents relating to the Proposal exchanged between the TP and the Client, shall be written in the English.
<b>9. Documents Comprising the Proposal</b>	9.1. The Proposal shall comprise the documents and forms listed in the Data Sheet.
<b>10. Proposal Validity</b>	<p>10.1. The Data Sheet indicates the period during which the TP's Proposal must remain valid after the Proposal submission deadline.</p> <p>10.2. During this period, the TP shall maintain its original Proposal without any change.</p>





	<p>10.3. The Client will make its best effort to complete the negotiations within the proposal's validity period. However, should the need arise, the Client may request, in writing, all TPs who submitted Proposals prior to the submission deadline to extend their proposals' validity.</p> <p>10.4. If the TP agrees to extend the validity of its Proposal, it shall be done without any change in the original Proposal.</p> <p>10.5. The TP has the right to refuse to extend the validity of its Proposal in which case such Proposal will not be further evaluated.</p>
<b>11. Clarification and Amendment of RFP</b>	<p>11.1. The TP may request a clarification of any part of the RFP during the period indicated in the Data Sheet before the Proposal's submission deadline. Any request for clarification must be by standard electronic means, to the Client's address indicated in the Data Sheet. The Client will respond by standard electronic means.</p> <p>11.2. At any time before the proposal submission deadline, the Client may amend the RFP by issuing an amendment by standard electronic means and the amendment will be posted in the website of WCE Sangli.</p> <p>11.3. If the amendment is substantial, the Client may extend the proposal submission deadline to give the TPs reasonable time to take an amendment into account in their Proposals.</p> <p>11.4. The TP may submit a modified Proposal or a modification to any part of it at any time prior to the proposal submission deadline. No modifications to the Proposal shall be accepted after the deadline.</p>
<b>12. Proposal Format and Content</b>	<p>12.1. The proposal shall be as per the formats included in this RFP.</p>

### **C. Submission of Proposal**

<b>13. Submission, Sealing, and Marking of Proposal</b>	<p>13.1. The TP may submit a signed and complete Proposal comprising the documents and forms. The submission can be done by hand/ courier/ registered post/ speed post.</p> <p>13.2. The Technology Partner can also authorize their partner to submit a signed and complete proposal comprising of the documents and forms on their behalf.</p> <p>13.3. There shall be two sealed envelopes a) Technical proposal b) Financial proposal</p> <p>13.4. An authorized representative of the Technology partner or the Execution partner shall sign the original submission letter in the required format for the Proposal and shall initial all pages of both the Submission letter and Proposal. The authorization shall be in the form of a written authorization letter specific to the Proposal.</p> <p>13.5. The signed Proposal shall be marked "ORIGINAL", and its copies marked "COPY" as appropriate.</p> <p>13.6. The original and all the copies of the Proposal shall be placed inside of a sealed envelope clearly marked "PROPOSAL", "[Name of the Assignment]", RFP reference number, name and address of the TP, and with a warning "DO NOT OPEN"</p>
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	<p>13.7. The sealed envelope containing the Proposal shall be placed into one outer envelope and sealed. This outer envelope shall bear the submission address, RFP reference number, the name of the assignment, TPs name and the address, and shall be clearly marked “DO NOT OPEN”.</p> <p>13.8. The Proposal or its modifications must be sent to the address indicated in the Data Sheet and received by the Client no later than the deadline indicated in the Data Sheet, or any extension to this deadline.</p>
<b>14. Confidentiality</b>	<p>14.1. The Client’s evaluation committee shall conduct the opening of the Proposals.</p> <p>14.2. At the opening of the Proposals the following shall be read out: (i) the name and the country of the TP or, in case of a Joint Venture, the name of the Joint Venture, the name of the lead member and the names and the countries of all members; (ii) any modifications to the Proposal submitted prior to proposal submission deadline.</p>
<b>15. Proposals Evaluation</b>	<p>15.1. The TP is not permitted to alter or modify its Proposal in any way after the proposal submission deadline. While evaluating the Proposals, the Client will conduct the evaluation solely on the basis of the submitted Proposals.</p>
<b>16. Evaluation of Proposals</b>	<p>16.1. The Client’s evaluation committee shall evaluate the Proposals based on their responsiveness to the Terms of Reference and the RFP, applying the pre-qualifying criteria, evaluation criteria, and point system specified in the Data Sheet. Each responsive Proposal will be given a technical score. A Proposal shall be rejected at this stage if it does not respond to important aspects of the RFP or if it fails to achieve the minimum technical score indicated in the Data Sheet.</p>
<b>17. Delivery schedule</b>	<p>17.1. The TP must provide the delivery schedule and installation and commissioning timelines in the proposal.</p>

**D. Negotiations and Award**

<b>18. Negotiations, if needed</b>	<p>18.1. The negotiations, if needed will be held at the date and address indicated in the Data Sheet with the TPs representative(s).</p> <p>18.2. The Client shall prepare minutes of negotiations that are signed by the Client and the TPs authorized representative.</p>
<b>19. Conclusion of Negotiations</b>	<p>19.1. The negotiations are concluded with a review of the finalized draft Contract, which then shall be initialed by the Client and the TPs authorized representative.</p> <p>19.2. If the negotiations fail, the Client shall inform the TP in writing of all pending issues and disagreements and provide a final opportunity to the TP to respond. If disagreement persists, the Client shall terminate the negotiations informing the TP of the reasons for doing so.</p>
<b>20. Award of Contract</b>	<p>20.1. After completing the negotiations, the Client shall sign a MoA with the TP as per the instructions in the Data Sheet; and promptly notify the other shortlisted TPs.</p> <p>20.2. The TP is expected to commence the next steps on the date and at the location specified in the Data Sheet.</p>



# Walchand College of Engineering

(Government Aided Autonomous Institute affiliated to Shivaji University, Kolhapur)  
Vishrambag, Sangli – 416415, Maharashtra



## A. Data Sheet

A. General		
ITL Clause		
1	Name of the Client: Walchand College of Engineering Sangli. Method of selection: Quality Based Selection	
2	The name of the assignment is: selection of Technology Partner to setup a Centre of Excellence in Electric Vehicle at Walchand College of Engineering Sangli	
B. Preparation of Proposals		
3	English language.	
4	Proposals must remain valid for 60 (sixty) calendar days after the proposal submission deadline	
5	Clarifications may be requested no later than 4 (Four) days prior to the submission deadline.	
6	The contact information for requesting clarifications is: To The Registrar Walchand College of Engineering, Sangli Vishrambag, Sangli - 416 415 Maharashtra, India Phone: +91-233-2300383 Email: <a href="mailto:registrar@walchandsangli.ac.in">registrar@walchandsangli.ac.in</a> ; <a href="mailto:hod.electrinics@walchandsangli.ac.in">hod.electrinics@walchandsangli.ac.in</a> ; <a href="mailto:purchasemanager@wamchandsangli.ac.in">purchasemanager@wamchandsangli.ac.in</a> <a href="mailto:in">in</a>	
C. Submission, Opening and Evaluation		
7	The TP or their authorized Execution partner must submit :(a) Proposal: one (1) original and one (1) copy. In case of the Execution partner, then the Technology Partner should submit their authorization letter.	
8	The Proposals must be submitted no later than: Date and Time 10.12.2025, 5pm.	
	The Proposal submission address is:	
	To The Registrar Walchand College of Engineering, Sangli Vishrambag, Sangli - 416 415 Maharashtra, India Phone: +91-233-2300383 Email: <a href="mailto:registrar@walchandsangli.ac.in">registrar@walchandsangli.ac.in</a> <a href="mailto:purchasemanager@walchandsangli.ac.in">purchasemanager@walchandsangli.ac.in</a>	
9	The opening shall take place at: same as the Proposal submission address. Date and Time 10.12.2025, 5 pm.	
10	Criteria, sub-criteria, and point system for the evaluation of the Full Proposals:	
	Sl.	Evaluation Metric Documentary Proof



	1	Technology partner Authorizing their Executing partner	Authorization letter from the Technology partner or proof of having technology of your own.
	2	TP and Executing Partners should be such entities registered in India under the Companies Act/ LLP Act/ Societies Registration Act or as a Trust.	Certificate of Incorporation / registration Certificate
	3	TP should have been in existence for at least 3 years.	The Certificate of Incorporation of the TP should be submitted. The Technology Partner must have a Cumulative Turnover of at least Rs. 3 Cr in last 3 years. The Technology Partner must have registered office in India
	4	TP and Executing partner should not have been blacklisted by any Government/ Department/ Body.	Self-declaration to be provided by TP and the Executing partner.
	5	Existing CoE Setups	The Technology Partner must have similar experience of setting up CoE's. The Technology Partner should have executed minimum 3 such CoE's within India. A copy of agreement/MOU must be submitted. There must be training going on through partner. Document proof must be attached.
	6	Domain Expertise	The Technology Partner should be in the domain, in at least 50% of the mentioned labs as per the technical scope and offering proprietary items in these labs completely manufactured by them. Barring utilities such as computer, compressor, stabilizer, the primary equipment / software in 50% of the labs must be a product owned by the Technology Partner.
	7	Training Expertise of Executing Partner (if Any)	The Executing Partner should be in the area of skill development and training at least for a period of 3 Years or should have personnel in the company with cumulative experience of training 10 years.
	8	Certification	The MoA should also allow the client to use the Technology partner's Logo to award training certificates to the trainees.
	9	e-Learning (Courseware)	The e-Learning (Courseware) materials should be a solution/product developed and



			owned by either the Technology partner or the executing partner.
		<p>The proposals submitted by the interested parties who clear the pre-qualification round only will be evaluated as per the criteria provided below: Evaluation Criteria (100 Points)</p> <p><b>A. Profile of the TP (10 points)</b></p> <ul style="list-style-type: none"><li>• Profile of the TP (maximum two pages).</li><li>• An additional one-page profile for the Execution partner to be attached.</li><li>• Details about the business clients (national and international) that the TP is closely engaged with in various capacities in the different sector.</li><li>• The TP / Execution partner should be able to show a continuous and on-going effort to use state of the art equipment/ machines/ tools as part of routine business activities.</li><li>• Details about the existing training infrastructure available with the TP or their Execution partner. Affiliation to various authorities of certification shall have weightage.</li><li>• Details of curriculum of its 3 best-in-class training programs with a clear indication of modules that are taught practically.</li><li>• Wherever the technology partner / Execution partner has relevant experience in training and skill development, this can be highlighted.</li></ul> <p><b>B. Technical Proposal of TP/Execution partner (60 points)</b></p> <ul style="list-style-type: none"><li>• The technical proposal will be evaluated on the basis requirement in Section 4. Solution shall be presented. Committee shall discuss all the specs and BoQ suggested by the solution provider and shall assess the same.</li><li>• The entire scope must be offered by one party – Technology Partner and their Authorized Execution Partner</li><li>• Additional scope will not be considered in the evaluation</li></ul> <p><b>C. Past Performance of TP and Execution Partner (if Any) (15 Points)</b> Section details the selection criteria for the Technical partner</p> <ul style="list-style-type: none"><li>• All the conditions must be met for the Technical Partner</li><li>• All the conditions must be met for the Execution Partner (if any)</li></ul> <p><b>D. Training and support (15 Points)</b> Number of free days training to 10faculties/support staff Charges per day for paid training. The trainer should be well qualified engineering graduate with minimum 2 years of relevant experience.</p>	
		<p>The interested parties who secure at least 75% of the points in the Evaluation Criteria A+B+C+D above will be shortlisted.</p>	
<b>D. Award of Contract after Evaluation and with due approvals of authorities.</b>			
10		<p><b>Expected date for award of contract: Date: To be informed by the Client.</b> Address: To The Registrar Walchand College of Engineering, Sangli Vishrambag, Sangli - 416 415</p>	



	Maharashtra, India Phone: +91-233-2300383 Email: registrar@walchandsangli.ac.in
11	<b>Expected date for the signing of the MoA: It will be notified to the Selected TP</b> Address: To The Registrar Walchand College of Engineering, Sangli Vishrambag, Sangli - 416 415 Maharashtra, India Phone: +91-233-2300383 Email: registrar@walchandsangli.ac.in

### Section 3. Proposal Standard Forms

All pages of the original Proposal shall be initialed by the same authorized representative of the interested party who signs the Proposal.

### Section 4. Technical Scope

The overall plan is to encourage a TP to setup a Centre of Excellence (CoE). The CoE is being setup to offer an integrated high technology, modular, skilling facility and offer demand driven courses.

The CoE, to be designed by the TP, is envisioned to be setup as a state-of-the-art Centre of Excellence (CoE) in Electric Vehicle which the TP brings in their best-in-class equipment/ tools/ machines/ simulators (commonly referred to as equipment) to be used for training purposes. The COE will be located in an appropriate space offered by the client. The infrastructure for the CoE will be made ready by the client as per the specifications given by the TP and the Execution Partner. The Execution Partner, under the Guidance of the TP, will be responsible for ensuring that the CoE is constantly upgraded and provides a high technology ecosystem for skilling/ up- skilling/ re-skilling/ cross-skilling and multi- skilling. The Execution Partner, under the Guidance of the TP, will be expected to assist the client to mobilize students for training which will help generate revenues at the CoE.

Overall administrative, quality and financial responsibilities including the management of the CoE, marketing, branding, placement, costing of courses, management of hostels, course content, pedagogy, funding etc. will be the responsibility of the Client. The Client may engage with, invite and sign MoUs with industries (such as equipment manufacturers, tool and device manufacturers that service the sector) and continuously engage with the industries to ensure that the CoE remains relevant at all times.

#### Scope of the TP and their Execution Partner

The role of this TP and their Execution Partner shall include the following:

1. Setting up of Centre of Excellence in Electric Vehicle consisting of the above labs.
2. Providing sufficient training to Master trainers / faculty to run the laboratories.



3. Full responsibility for running the operations of Centre of Excellence for the warranty period and handholding for smooth transition.
4. Training of Trainers (deputed by WEC) by bidder through Master trainers to make them fully competent to independently run the CoE.
5. Identify and formulate training programs to develop skills in futuristic/ disruptive technologies and associated skill sets required for industry ready.
6. To impart high-end skills (and not generic skills) to Students, unemployed individuals and employed individuals (looking up skill/ re-skill themselves).
7. To conduct train, the trainer programs.
8. To conduct need based/ on-request training programs to cater to specialized requirements of corporate, and to generate revenues through these programs.
9. Maintenance of software and hardware and provision of software upgrades for at least the period of 1 year from the successful commissioning of the CoE. However, software upgrades and support will be provided even after the period of 1 year.
10. director/Registrar WCE Sangli reserves the right to award the contract partially or fully to the selected vendor.

#### **Scope of work under WCE Sangli**

1. Physical Infrastructure to be provided by WCE Sangli
  - Space for Labs including related civil works as required. (550 Sq. Ft.)
  - Flooring, Furniture and Fixtures
  - Air Conditioning
  - LAN connectivity
  - Power supply (including Backup)
  - Generator/ UPS Backup
  - Water
  - Running expenses for utilities
  - Security (Manned/ CCTV)
2. Providing nodal person for the CoE and requisite faculty for the laboratories

#### **Supply of labs/Items:**

The proposed CoE has six lab facilities however the EoI is invited for the following lab facilities and equipment. **The solution provider/TP should give integrated solution based on our following requirements but not limited to the list.** TP can write their solution with their specification but it shall be compared by the committee during the technical presentations.



Proposed lab facilities under CoE

## 1. Equipment List (with Specifications)

Mandatory equipment includes EV 2W/4W test rigs, BLDC/PMSM/SRM motor benches, BMS test bench, battery simulator, power converters, traction inverters, HIL platform, and high-performance workstations.

Sr. No.	Equipment Name + Detailed Specifications	Qty
1	Electric Two-Wheeler Test Rig (HIL Supported) <ul style="list-style-type: none"> <li>• BLDC/PMSM, Above 1kW motor, 48–60V</li> <li>• Li-ion battery with Smart BMS</li> <li>• CAN-enabled controller with MATLAB/Simulink HIL</li> <li>• Mechanical drum/eddy current load</li> <li>• Real-time results observation in MATLAB</li> </ul>	1
2	Electric Four-Wheeler UTV EV Platform <ul style="list-style-type: none"> <li>• Above 2 kW PMSM/BLDC motor</li> <li>• 48–60V Li-ion battery</li> <li>• CAN diagnostics</li> <li>• MATLAB/Simulink HIL compatible controller</li> </ul>	1
3	4 Wheeler Working Model (Training Open Chassis) 4W buggy with drivetrain, 15 Ah battery with smart BMS, BLDC 1 kW motor, DC-DC converter 48-12V, instrument cluster, steering, braking, lighting and wiring harness for training.	1
4	2 Wheeler Working Model (Training Open Chassis) 2W open chassis training model with BLDC hub motor 1 kW, DC-DC converter, wiring harness, display of voltage/current/power/SOC, and assembly/dismantling training.	1
5	BLDC Motor Test Bench <ul style="list-style-type: none"> <li>• 1 kW BLDC motor</li> <li>• Mechanical load</li> <li>• MATLAB/Simulink HIL for BLDC control</li> </ul> PMSM Motor Test Bench <ul style="list-style-type: none"> <li>• 1kW PMSM</li> <li>• FOC control</li> <li>• MATLAB/Simulink HIL for PMSM control</li> </ul> Facilities supported: Implementing and testing Motor Control Algorithms <ul style="list-style-type: none"> <li>• PID/FOC/DTC</li> <li>• MATLAB/Simulink real-time deployment</li> </ul>	1
6	Battery Management Systems multi-cell sensing, passive balancing, fault management, redundant CAN channels, SOC/SOH estimation, thermal compensation; designed for prototype packs and test rigs.	1
7	Battery Pack	1



	Modular 96V DC battery pack with passive balancing, multi-node NTC thermal sensing, CAN 2.0B interface, bench-mount enclosure, HV interlock ready.	
8	DC–DC Converter (48/51.2V to 12V) <ul style="list-style-type: none"> <li>• Isolated converter</li> <li>• MATLAB/Simulink observation via integrated sensors</li> </ul>	1
9	Traction Inverter (1–2 kW) <ul style="list-style-type: none"> <li>• IGBT-based inverter</li> <li>• MATLAB/Simulink HIL for PWM/FOC control</li> </ul>	1
10	BESS System (Bidirectional) Modular Li-ion/LFP battery energy storage with digital-twin model, bidirectional power stage up to 10 kW, DC I/O 0-120V, CAN interface, configurable charge/discharge/regeneration profiles.	1
11	ADAS Training Kit <ul style="list-style-type: none"> <li>• Camera + ultrasonic</li> <li>• MATLAB/Simulink ADAS model testing</li> </ul>	1
12	Vehicle Diagnostics Simulator <ul style="list-style-type: none"> <li>• UDS/OBD-II</li> <li>• MATLAB/Simulink CAN scripting for diagnostics</li> </ul>	1
13	CCS Fast Charging Protocol Simulator <ul style="list-style-type: none"> <li>• CCS2 communication</li> <li>• MATLAB/Simulink HIL for charging curve modelling</li> </ul>	1
14	Operating System: Windows 11 Professional Processor: 13th Generation Intel® Core™ i7-13700F (up to 5.2 GHz with Intel® Turbo Boost, 30 MB L3 cache, 16 cores, 24 threads) Chipset: Intel® H670 Memory: 32 GB DDR4-3200 MHz RAM (1 × 16 GB); 2 DIMM slots; Provision for expansion of RAM; memory transfer rate up to 3200 MT/s Primary Storage: 512 GB PCIe® NVMe™ M.2 SSD Secondary Storage: 1 TB 7200 rpm SATA HDD Graphics: NVIDIA® GeForce RTX™ 3060 (12 GB GDDR6 dedicated) Monitor: 60.5 cm (23.8") FHD (1920 × 1080 @ 75 Hz), Flat IPS (edgelit or higher), tilt stand, on-screen controls, AMD FreeSync™, low blue light mode, anti-glare, Adaptive Sync, Eyesafe® certified; Ports: 1 VGA, 1 HDMI 1.4 (HDCP support) Network Interface: Integrated 10/100/1000 GbE LAN Wireless: Realtek Wi-Fi 6 (2×2) Bluetooth: Version 5.3 (supports gigabit data rate) Ports: 1 × USB Type-C (5 Gbps), 2 × USB Type-A (10 Gbps) 2 × USB Type-A (5 Gbps) Audio Connectivity: 1 × Audio-in, 1 × Audio-out, 1 × Microphone, 1 × RJ-45 Expansion Slots: 2 × M.2, 1 × PCIe x16, 1 × PCIe x1 Video Connectors: 1 × HDMI 2.1, 1 × DisplayPort™ Warranty: 3 years	5

Further please include the following as a requirement to be fulfilled by every vendor. The CoE must be provided with following items:

Wallchart, Banner and Hoarding for training	12-15 wallcharts, internal and external branding, acrylic hoarding (4x3) and LED EV tree display for lab demonstrations.
Safety Tool Kit	PPE kits including gloves, masks, goggles, aprons, helmets with face shields, first aid boxes, fire extinguishers, high-voltage insulated gloves.
Tool Box - Hand Tools and Safety Tools	Comprehensive hand tool set including spanners, pliers, hammers, impact tools, multimeters, socket sets, drum puller and allen key box.





## FORM TECH-1

### A. PROPOSAL SUBMISSION FORM

**[Location, Date]**

To,  
The Director,  
Walchand College of Engineering, Sangli  
Vishrambag, Sangli - 416 415  
Maharashtra, India

Dear Sir/ Madam,

We, the undersigned, intend to participate as a Technology Partner (TP) for setting up of Center of Excellence in Electric Vehicle in accordance with your Request for Proposal dated [Insert Date]. Our execution Partner will submit proposal and execute it. {Insert a list with full name and the legal address}.

We have attached a copy {insert: “Authorization letter”} authorizing our Channel partner to execute the project.

We hereby declare that we have read the Instructions to TP included in the RFP, and abide by the same, and specifically to conditions mentioned in Instruction to interested parties. [In case of any declaration, reference to concerned document attached must be made]. We hereby declare that all the information and statements made in this Proposal are true and we accept that any misleading information contained in it may lead to our disqualification.

We undertake, if our Proposal is accepted, to sign the MoA and initiate the project as per the timelines prescribed.

Yours faithfully,

Authorized Signature [In full and initials]:

Name and Title of Signatory:

Name of Firm:

Address:

- B. Authorization letter from the technology partner to the Execution partner
- C. Certificate of registration/incorporation of the Technology Partner and execution Partner
- D. Self-Declaration against blacklisting of TP and the Execution partner



## Concept Note on Centre of Excellence in Electric Vehicle

### Introduction

The convergence of Electric Vehicle is revolutionizing industries, driving efficiency, precision, and innovation. India has made significant strides in the field of electric vehicle, with a focus on developing and harnessing the potential of cutting-edge technologies to promote innovation and develop applications to solve real-life challenges faced by society leading to sustainable and inclusive development across the economy. **The present challenges faced by Electric Vehicle in India includes heavy reliance on imports, high costs, inadequate skilled resources, high costs, technological limitations etc.** An economy around the world diversifies and recalibrate their supply chains, India has the generational opportunity to strengthen its electric vehicle ecosystem and realign its global positioning. There is an immediate need to undertake comprehensive efforts to develop indigenous capabilities and leverage the potential opportunities from the revolution. This necessitates to develop Centre of Excellence in the electric vehicle to promote the applications and research in this area. Walchand College of Engineering, Sangli one of the oldest and renowned Institute would be gearing up in developing a Centre of Excellence in Electric vehicle.

### 1. Vision

To become a globally recognized Centre of Excellence in Electric Vehicle, in product development into enhance human lives, fostering innovation, promoting entrepreneurship ecosystem.

### 2. Objectives

- **Product Development:** Developing the products and applications to solve the societal challenges.
- **Research and Innovation:** Conduct cutting-edge research to develop innovative solutions addressing contemporary industrial challenges.
- **Skill Development:** Offer training programs to equip students and professionals with practical knowledge and hands-on experience in Electric vehicle.
- **Interdisciplinary Collaboration:** Promote *interdisciplinary collaboration* between academia, industry, and government agencies for development and deployment of electric vehicle technologies
- **Entrepreneurship Support:** Provide mentorship and resources to nurture startups and entrepreneurial ventures in the electric vehicle sectors.



### 3. Importance of the Centre of Excellence

- **Bridging the Skill Gap:** CoE can address the growing demand for skilled professionals in electric vehicle by offering specialized training and certification programs.
- **Driving Technological Advancements:** Through product development and research, CoE can contribute to the creation of advanced technologies that enhance industrial processes and productivity.
- **Promoting Industry-Academia Collaboration:** CoE serve as platforms for collaboration between educational institutions and industries, facilitating the exchange of knowledge and resources.
- **Supporting Economic Growth:** By fostering innovation and entrepreneurship, CoE can contribute to the growth of the electric vehicle sectors, leading to job creation and economic development.

### 4. Implementation Strategy

- **Infrastructure Development:** Establish state-of-the-art laboratories and facilities equipped with the latest technologies in electric vehicle.
- **Curriculum Integration:** Integrate electric vehicle modules into existing engineering and vocational training programs to build a skilled workforce.
- **Industry Partnerships:** Collaborate with leading companies in the electric vehicle sectors to ensure that the CoE's initiatives align with industry needs and standards.
- **Continuous Evaluation:** Regularly assess the impact of the CoE's programs on skill development, technological advancements, and industry collaboration to ensure its effectiveness and relevance.

### 5. Focused areas of Applications

While electric vehicle is a multidisciplinary technology that has the potential to transform and disrupt a wide range of sectors and industries, its adoption to date has been primarily driven by economic motivations. However, given the potential of electric vehicle to catalyse large-scale social transformation, there is a need for national strategies, policies, and programs to converge efforts towards a few priority sectors that are poised to create large-scale socio-economic impact. The proposed CoE will be working the on solving the real-life challenges in the following sectors aligning with the National strategy.



# Walchand College of Engineering

(Government Aided Autonomous Institute affiliated to Shivaji University, Kolhapur)  
Vishrambag, Sangli – 416415, Maharashtra



## 6. Proposed Facilities

Under the Centre of Excellence in electric vehicle following facilities are proposed. The development of the CoE is planned in two phases. In the first phase,

Proposed lab facilities under CoE

## 7. Summary

Establishing a Centre of Excellence in electric vehicle is a strategic initiative that can propel WCE Sangli to the forefront of the electric applications and technological innovation. By focusing on product development, research, skill development, and industry collaboration, the CoE can drive advancements in these critical sectors, contributing to the solving real-life problems of the society, academic excellence, economic growth and global competition.

