

TERMS OF REFERENCE (ToR)

Consultant Firm Engagement

1. About the Organization and Project

Overview of the Organization:

India Resources Trust (IRT), an independent knowledge organisation, provides objective information and practical proposals to foster environmentally sound and socially equitable development. Know more: wri-india.org

Project Background

This work is being undertaken as part of the “Electrifying Mobility in Cities: Investing in the Transformation to Electric Mobility in India” initiative by the United Nations Environment Programme (UNEP), funded by the Global Environment Facility (GEF), guided by NITI Aayog and executed on ground by WRI India. The project workstreams focus on freight electrification, battery circularity and enabling a just and equitable transition to electric mobility in India. Under the workstream on ‘Enabling a just and equitable transition to electric mobility’, WRI India proposes to strengthen electric vehicle (EV) testing, validation and homologation infrastructure in collaboration with the Marathwada Accelerator for Growth and Incubation Council (MAGIC), Karnataka Chamber of Commerce and Industry (KCCI), Karnataka Digital Economy Mission (KDEM), and other local industry associations in the Chhatrapati Sambhajnagar (CSN) cluster in Maharashtra and the Hubballi-Dharwad-Belgaum (HDB) cluster in Karnataka, respectively.

Context about the assignment

With India’s dual push on transport electrification and EV supply chain localization, the country’s automotive sector stands at a pivotal juncture. The transition from internal combustion engine vehicles (ICEVs) to EVs is transforming vehicle technologies and creating demand for testing, validation and homologation¹ across the lifecycle of automotive product development, as depicted in Figure 1. The figure maps how testing progressively evolves from predictive and virtual validation to physical, integrated, and regulatory compliance testing. Thorough testing across batteries, electronic control units (ECUs), charging systems, sensors, and connected vehicle architectures extends well beyond homologation into design validation², supplier qualification, production³, end-of-line testing⁴, and lifecycle compliance.

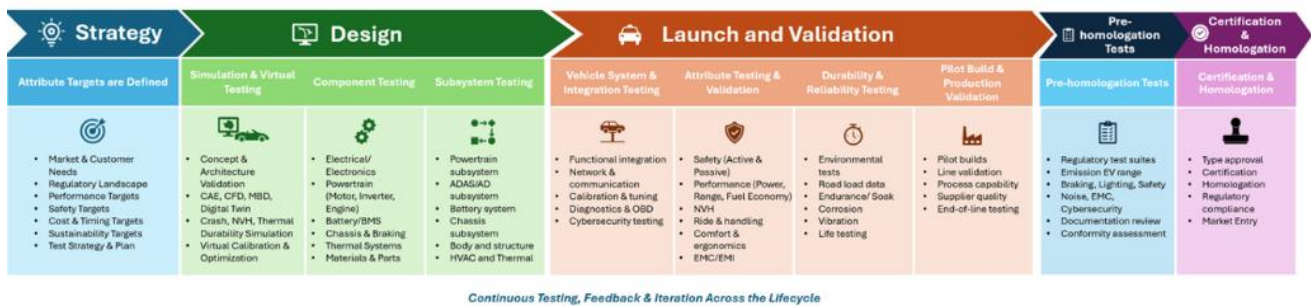
¹ **Homologation** is the process of certifying that a particular vehicle is roadworthy and matches certain specified criteria laid out by the government for all vehicles made or imported into that country. Essentially, the tests ensure that the vehicle matches the requirements of the Indian market in terms of emission and safety and roadworthiness as per the Central Motor Vehicle Rules. <https://vahan.parivahan.gov.in/makermode/vahan/welcome.xhtml>

² https://carsoftwarestack.com/public/EV&D/DesignVerificationAndValidationPlan_DVVP.pdf, <https://www.intertek.com/automotive/design-verification/>

³ <https://www.mefron.com/blog/mandatory-certifications-compliance-to-serve-ev-industry-guide-for-ems-companies>

⁴ **EOL Testing:** It refers to quality-control tasks executed at the end of a production line. The tests usually focus on evaluating the correct functioning of the device under test (sometimes under varying environmental conditions). https://wri-india.org/sites/default/files/2025-09/The%20projected%20EV%20transition%20in%20the%20Indian%20automotive%20manufacturing%20industry%20online_0.pdf

Figure 1: Automotive Testing Across the Product Development Lifecycle



India's testing and validation ecosystem needs to evolve beyond certification labs to enable faster, safer, and more scalable innovation. Limited access to advanced testing infrastructure⁵, high costs of testing, validation and certification, long homologation timelines⁶, and fragmented availability of testing capabilities for batteries, power electronics, cybersecurity, and advanced driver assistance systems (ADAS)⁷ continues to slow product development and prevents products from reaching market on time.

The a-forementioned challenges are significant for emerging EV clusters like CSN and HDB, where recent investments by companies such as Ather Energy, Toyota, JSW Group, UNO Minda, Nidec Motors and Tsuyo Manufacturing are growing. Our engagement with stakeholders in these clusters revealed that MSMEs manufacturing automotive components lack EV-specific validation capability.⁸ They do not have the requisite technical knowledge and/or financial bandwidth to invest in capital-intensive testing infrastructure individually without guaranteed revenue.

Moreover, the upgradation of existing common facility centres in these clusters may not be feasible. This is because upgrading older ICE test setups for new components like EV motors does not work due to major mechanical differences. Existing facilities also struggle with old equipment that may not be able to support rapid EV advancements, such as newer battery chemistries or high-voltage safety requirements. At the same time, legacy facilities are already struggling to meet current ICEV standards, making them ill-equipped to handle EV validation. Advanced testing rigs also require massive annual maintenance and calibration facilities, which older facilities fail to sustain.

Hence, strengthening the EV testing, validation and homologation infrastructure in these regions would not only accelerate product development and improve compliance readiness but also strengthen the regional EV supply chain ecosystem. It will reduce dependence on distant national-level centers such as the Automotive Research Association of India (ARAI), Pune, and help decongest their capacity, while positioning the clusters as strategic EV innovation hubs.⁹

⁵ <https://wri-india.org/sites/default/files/2026-01/India%E2%80%99s%20battery%E2%80%99s%20ecosystem.pdf>

⁶ <https://electronicsindia.net/arai-certificate-approvals/>

⁷ <https://e-vehicleinfo.com/vehicle-ev-homologation-in-india/>

⁸ https://magicincubation.com/admin/reports/r_69c501097ef2a5_04768293_CTPReport.pdf

⁹ <https://www.thehindu.com/news/national/maharashtra/chhatrapati-sambhajinagar-will-become-countrys-ev-capital-maharashtra-cm-devendra-fadnavis/article70059920.ece>

In this context, WRI India, in alignment with the national vision of enhancing India's capabilities in the EV sector, intends to support the assessment, planning and development of an Electric Vehicle (EV) Common Testing Facility Centre (EV CTFC) to support the growing industry ecosystem at Chhatrapati Sambhajnagar (CSN) and Hubballi-Dharwad-Belgaum. The CTFC is envisaged to serve as a high-end infrastructure hub to meet the requirements of industry stakeholders engaged in EV and its component manufacturing, testing, validation and homologation. Through this RFP, WRI India proposes to engage an Industrial Consultant for preparing detailed project reports (DPRs) for an EV CTFC for the automotive industry at the CSN and HDB clusters, respectively.

2. Scope of Work

The selected Consultant will be entrusted with a range of responsibilities to ensure the successful preparation of the DPR. These responsibilities include:

A. Needs Assessment and Industry Mapping:

- a) Evaluate current capabilities, requirements, and gaps within the EV testing sector, for the HDB and CSN clusters.
- b) Engage with key stakeholders—such as industry players, testing agencies, and government bodies, etc. to identify their equipment requirements for design, prototyping, simulation, testing and validation.
- c) Conduct industry mapping to chart the existing ecosystem in the CSN and HDB clusters, including the geographic distribution of automotive enterprises, supply chain networks, R&D institutions, and support services.

B. Facility Planning and Equipment Listing:

- a) Undertake the strategic design and layout of infrastructure required to support industry operations, innovation, and growth.
- b) Identify types of facilities—such as testing labs, prototyping centres, clean rooms, integration bays, or assembly units—that are essential for the sector's functioning.

Note: The facilities should also be able to support training. Each facility needs to be equipped based on the specific technical requirements identified during the needs assessment, with detailed listings of machinery, tools, software, and instrumentation, along with their specifications and quantities. The planning process should also consider scalability, compliance with regulatory standards, interoperability, and optimal workflow to ensure efficient utilization of resources.

C. Land and Building Requirements:

- a) Determine the optimal size, location, and layout of the proposed EV CTFC based on the projected scale of operations and anticipated industry demand. Factors such as proximity to industrial clusters, accessibility, infrastructure availability (power, water, connectivity), and environmental impact are to be considered.
- b) Accommodate various functional areas, including equipment halls, administrative blocks, control rooms, storage, and utilities, with provisions for future expansion in the building

design. The goal is to ensure the physical infrastructure supports seamless operations and reflects long-term planning and sustainability.

D. Cost Estimation and Financial Plan:

- a) Conduct detailed assessment of the capital and operational expenditure required for establishing and operating the EV CTFC. A phased investment strategy should be considered prioritizing critical infrastructure in the initial stages.
- b) Identify potential sources of funding like government grants, industry contributions, and multilateral support as part of the financial plan and lay out a cash flow analysis to ensure fiscal sustainability.
- c) Conduct sensitivity analysis to prepare for cost escalations and operational uncertainties.

E. Operational and Governance Framework:

- a) Study the potential institutional structure, roles, and responsibilities necessary for the effective management of the CTFC.
- b) Detail the standard operating procedures (SOPs), and decision-making processes.
- c) Assess and recommend an appropriate governance structure that may include representatives from government, industry, testing agencies, industry associations and academia, as appropriate. The framework should ensure accountability, efficiency, and alignment with stakeholder interests.

F. Operational Sustainability Model for the CTFC, including revenue and partnership models:

- a) Assess pathways for efficient functioning and long-term financial sustainability of the CTFC. Explore revenue models, including revenue streams such as user charges for testing services, rental income from co-located entities, training programs, and partnerships with private players for advanced services.
- b) Assess opportunities for value-added services such as annual maintenance contracts and public-private R&D collaborations.
- c) Enable strategic partnerships— with OEMs, MSMEs, industry associations, and certification agencies - to ensure steady demand and relevance of the centre's services.

3. Deliverables, Milestones and Payment Schedule

S. No.	Milestone / Deliverable	Detailed Output / Acceptance Criteria	Timeline / Due Date	Supporting Evidence for Review	Payment Terms
1	Contract kick-off / inception	Signed contract and kick-off meeting completed; workplan submitted	Within 1 week of joining	Signed contract / approved workplan	10%



2	Interim Industry Consultation Report: Two separate versions of the report should be submitted for CSN and HDB clusters tailored to the contextual assessment of both clusters. This report should capture insights gathered from consultations with industry stakeholders, including OEMs, MSMEs, start-ups, academic institutions, testing centres, and government agencies. It presents an analysis of sector-specific needs, pain points in testing and certification, and expectations from the CTFC. The report should also map the demand for various testing facilities and services, helping to refine the design and functional scope of the proposed centre based on real world inputs.	Two separate draft industry consultation reports for the HDB and CSN clusters, respectively (along with associated data files)	Within 2 months of joining	Approved Draft and Industry Meeting Records	30%
3	Two Draft DPRs with Cost-Benefit Analysis for CSN and HDB clusters: Two separate versions of the draft Detailed Project Report (DPR) will be prepared for the CSN and HDB clusters, respectively, tailored to the contextual needs assessment of both clusters. The two draft DPRs should	Two Draft Detailed Project Reports (DPRs) with Cost-Benefit Analysis for CSN and HDB clusters, respectively (along with associated data files)	3 months post submission of the interim industry consultation report	Submission email with the two draft DPRs attached and reviewer confirmation	30%



	outline the proposed structure of the CTFC, including land and infrastructure requirements, facility layout, equipment listing, and operational framework. These should include a preliminary cost-benefit analysis to assess the economic and strategic value of the project. This version of the DPR enables feedback from stakeholders and potential funding agencies before finalisation, ensuring alignment with policy objectives and industry requirements.				
4	Two final DPRs for the CSN and HDB clusters: Two separate versions of the final Detailed Project Report (DPR) will be prepared for the CSN and HDB clusters, respectively, tailored to the contextual needs assessment of both clusters. The two final DPRs would be a comprehensive blueprint for the establishment and operation of the CTFC. It should include detailed architectural and engineering drawings, equipment specifications with make and model	Two final DPRs for the CSN and HDB clusters, respectively (along with associated data files)	2 months post submission of the draft DPR	Final approved submission and handover of editable source files, if applicable	30%

	references, and a full-fledged financial model covering capital and operational expenditure, funding strategy, and revenue projections. The report should also present an implementation roadmap with clearly defined phases, timelines, risk mitigation measures, and monitoring mechanisms to ensure successful project execution and long-term sustainability.				
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- A. The duration of the services will be 7 months from the date of Letter of Award.
- B. Three physical copies of the two final DPR reports should be submitted, in addition to editable soft copies of both reports, including financial models/ calculations in MS-Excel, drawings generated in AutoCAD or such other workings forming part of the deliverables. In case such files are corrupted, then the Consultant shall be required to re-submit the same to the satisfaction of WRI India and other key stakeholders.
- C. Consultant shall attend periodical reviews to be conducted by WRI India with participation from various stakeholders from CSN's regional industry associations. Consultants shall make presentations to WRI India and CSN's regional industry associations as required during various stages of the assignment.
- D. Payment relating to a particular stage shall be done after approval of the respective stage report.

5. Duration, Level of Effort and Location

- **Contract duration:** From 01/11/2026 to 31/05/2027 (this may be subject to changes based on the exact onboarding date)
- **Estimated level of effort:** Full milestone/deliverable-based engagement
- **Work location:** On field sites (with consultant team members be based out of Chhatrapati Sambhajanagar (CSN) and Hubballi-Dharwad-Belgaum (HDB) clusters respectively)
- **Travel requirement:** Travel, if any, is included in the fee; consultant team members are required to work out of CSN and HDB clusters, respectively

6. Required Qualifications and Experience

To be considered for empanelment as a 'Consultant' under this program, applicants must satisfy the following criteria:

Organization Registration

- Must be a registered firm, company, partnership, society, or trust incorporated under applicable Indian law.
- Must have been in operation for a minimum of three years as of the date of this RFP.

Educational qualification / discipline

- Qualified team members pertaining to each of the following disciplines/areas are required: (i) Automobiles and automotive components; (ii) Financial Analysis/ Cost Estimation; (iii) Infrastructure planning; (iv) Testing, validation and homologation of automobiles and automotive components.

Minimum years of relevant experience required

- Must have a demonstrated track record of at least five years in the design and development of detailed project reports (DPRs) for the automotive and/or industrial sectors.
 - Similar Project Experience undertaken for DPR or techno-economic feasibility report for automotive or industrial projects during the last 5 years
 - Similar Project Experience undertaken for each relevant industrial infrastructure during the last 5 years

Technical / thematic expertise required

- Must provide evidence of expertise in automotive testing equipment.

Experience with similar assignments, sectors, geographies, or stakeholders

- Must provide evidence of past projects in DPR preparation including scope of work and outcome, preferably in the automotive and industrial sectors

Language / writing / analytical / software proficiency requirements:

- Proficiency in Hindi, English, Kannada and Marathi (applicable for consultant team members to be based out of HDB and CSN clusters)
- Proficiency in writing DPRs
- Proficiency in data analysis softwares such as SPSS, STATA, etc.

8. Commercial Terms and Payment Conditions

- Deliverable-based engagement: Payment will be made only upon submission and written acceptance of the relevant deliverable(s).

- Taxes, travel, printing, logistics, software licenses, communication, insurance, and incidental costs are included in the fee.

9. Proposal Submission Requirements

Interested institutions are invited to submit separate technical and financial proposals addressed to 'India Resources Trust' to develop and deliver the proposed DPR as described in this document.

A. Technical Proposal or statement of interest describing the proposed approach and understanding of the assignment

- **Understanding of the assignment:** A concise articulation of the objectives, scope, and context of the program, demonstrating a clear grasp of the target beneficiaries and sector-specific challenges.
- **Methodology and approach:** A detailed description of the proposed approach to preparation of the industry consultation report and the DPRs specific to CSN and HDB clusters.

B. Updated CV(s) / team composition

- **Team profile:** CVs of proposed experts, including qualifications and relevant experience
- **Team composition:** Team structure and management plan detailing roles and responsibilities.

C. Relevant work samples or past project experience

- **Relevant experience:** An overview of past assignments or similar programmes, with outcomes data.
- **Work samples:** Provide samples of DPRs prepared in the past

D. Financial Proposal with clear cost break-up and taxes

- A detailed cost breakdown covering all the program components.
- Clear statement of any assumptions, exclusions, or conditions.
- Total cost for completing all deliverables.

The selected Consultant shall comply with all branding, acknowledgement and visibility requirements communicated by WRI India and applicable to the project. No use of UNEP, GEF, WRI India or key stakeholders' names, logos, emblems or branding shall be made without prior written approval from WRI India. Reports, presentations and other outputs intended for external dissemination shall be subject to review by WRI India, UNEP, GEF and/or key stakeholders prior to publication or public release.

10. Selection Criteria:

- Proposals will be evaluated based on technical quality and financial cost.
- IRT may seek clarifications from applicants during the evaluation process.



WRI INDIA

- IRT reserves the right to modify or cancel the RfP process, reject any proposal, or make no award at its sole discretion.
- Contracts will not be awarded to organisations failing to meet our due diligence criteria.
- All proposal preparation and submission costs shall be borne by the applicant. IRT will not reimburse these costs.

Disclaimer

- No part of this Request for Proposal shall be construed as an offer document. The acceptance of a proposal does not contractually bind IRT. The consultant must sign definitive contractual documents governing their relationship with IRT.

Deadline for submission

10th October 2026

Expression of interest

All expressions of interest, queries and proposals in response to this RFP must be received via email to the contact below by 10th October 2026.

For any queries, please contact: Priya Bansal (Program Manager – Electric Mobility) at Priya.bansal@wri.org