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**Driven with Innovation,
Fueled by Impact**



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MALAYSIA AUTOMOTIVE ROBOTICS AND IoT INSTITUTE
An agency under the Ministry of Investment, Trade & Industry (MITI)

REQUEST FOR PROPOSAL (RFP) BRIEFING

TECHNICAL ENGINEERING OF PROVING GROUND CONSULTANCY SERVICES

RFP REF. NO.: MARii/SPD/COEFI/2024/TENDER/001

MALAYSIA AUTOMOTIVE ROBOTICS AND IOT INSTITUTE (MARii)

01st OCTOBER 2024



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01

> INTRODUCTION

INTRODUCTION TO MALAYSIA AUTOMOTIVE ROBOTICS AND IoT INSTITUTE (MARii)

- An agency under the Ministry of Investment, Trade and Industry, Malaysia (MITI) to **lead** the development of the Malaysian automotive sector and the overall mobility ecosystem through the adoption of Robotics and IoT.
- An organization established in April 2010.
- Headquartered in Cyberjaya, Selangor.

“ENHANCING THE COMPETITIVENESS OF THE
AUTOMOTIVE INDUSTRY AND OVERALL MOBILITY
INCLUDING INTELLIGENT TRANSPORTATION
SYSTEM AND RELATED SERVICES THROUGH
ADOPTION OF ROBOTICS & IOT”

THINK TANK

FOCAL POINT

TECHNOLOGY ENABLER

KNOWLEDGE & COORDINATION CENTRE

MARii ROLES AND RESPONSIBILITY



To continue the **development of National Automotive sector** towards global competitiveness, as well as to enhance the application and development of Robotics and IoT within the Big Data Analytics (BDA) architecture platform including Intelligent Transportation System (ITS) and use cases where necessary.

Engage and mobilize collective efforts among stakeholders in the Automotive, Robotics and IoT sectors, to plan and implement relevant industrial strategies with regard to the common data mining, analysis and analytic platform.

To **conduct strategic research** in the field of Automotive, Robotics and IoT as inputs and policy recommendations to the government and the industry.

To **create new jobs and businesses** in Robotics and IoT within the related fields to automotive manufacturing and services, ITS and the overall mobility.

ABOUT MALAYSIA AUTOMOTIVE ROBOTICS & IoT INSTITUTE (MARii)



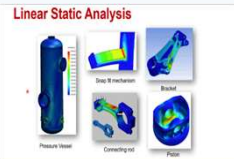
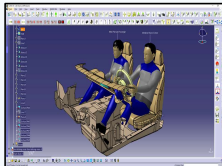
MARii was established under the Ministry of Investment, Trade & Industry (MITI) to lead the development of the Malaysian automotive sector and the overall mobility ecosystem through the adoption of Robotics & IoT.

An independent and corporatised organization established in April 2010.





MARii MAIN OFFICE & TECHNOLOGY CENTRES



MARii Additive Technology Centre (MAMTEC)

MARii Main Office
Block 2280, Jalan Usahawan 2,
Cyber 6, 63000 Cyberjaya

MARii Simulation & Analysis Centre (MARSAC)



MARii Academy of Technology
Jalan Jasmine, Bandar Bukit Beruntung,
Selangor (Relocation)

National Emission Testing Centre (NETC),
Mukim Serendah,
48000, Rawang, Selangor

MARii Design Centre (MDC)
Jalan Jasmine, Bandar Bukit Beruntung,
48300, Selangor (Relocation)

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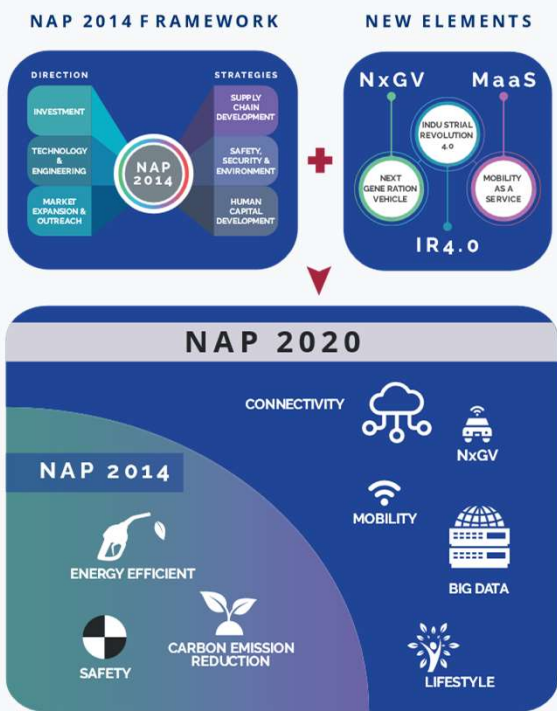
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INSTITUT AUTOMOTIF, ROBOTIK DAN IoT MALAYSIA
MALAYSIA AUTOMOTIVE ROBOTICS AND IoT INSTITUTE

02

➤ PROJECT BRIEF

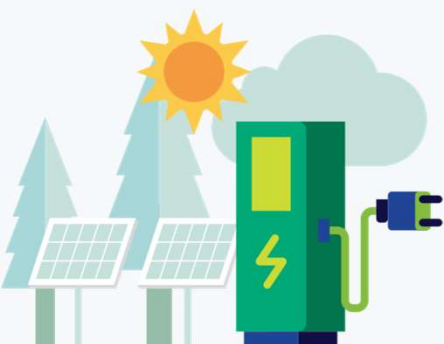
NATIONAL AUTOMOTIVE POLICY 2020 (NAP2020)

MARii's dedication to innovation, sustainability, and workforce development isn't just about us – it's about propelling Malaysia towards a brighter future.



NAP 2020

→
The framework of the NAP is supported by the implementation of these documents:



- 01 National Roadmap for Automotive & Mobility Value Chain (NRAMVC)
- 02 National Roadmap for Automotive & Mobility Technology (NRAMT)
- 03 National Roadmap for Automotive & Mobility Talent (NRAMTa)
- 04 National Roadmap for Automotive Aftermarket (NRAA)
- 05 National Blueprint for Automotive Mobility as a Service (NBAMaaS)
- 06 National Blueprint for Automotive Robotics (NBAR)
- 07 National Blueprint for Automotive Internet of Things (IoT) (NBAlIoT)

PROJECT TITLE



“PROPOSED PRE-DEVELOPMENT PHASE FOR PROJECT DEVELOPMENT OF CENTRE OF EXCELLENCE FOR FUTURE INDUSTRY (CoEFI), CONSISTS OF MOBILITY TEST BED OF ZERO EMISSION VEHICLE INTEROPERABILITY CENTRE (ZEVIC) & NEXT GENERATION (NxGV) VEHICLE PROVING GROUND IN MALAYSIA”

PROJECT BRIEF

The Request for Proposal (RFP) is to solicit proposals for the title:

“TECHNICAL ENGINEERING OF PROVING GROUND CONSULTANCY SERVICES FOR PROPOSED PRE-DEVELOPMENT PHASE FOR PROJECT DEVELOPMENT OF CENTRE OF EXCELLENCE FOR FUTURE INDUSTRY (CoEFI), CONSIST OF MOBILITY TEST BED OF ZERO EMISSION VEHICLE INTEROPERABILITY CENTRE (ZEVIC) & NEXT GENERATION (NxGV) VEHICLE PROVING GROUND IN MALAYSIA”

for MARii, according to the specifications and guidelines set in this document. MARii wishes to engage the services of Professional Engineering Services and Expertise in the areas of vehicle electrifications and Connected Autonomous Vehicle (CAV) as a Technical Engineering Service Consultant (the “TS Consultant”) to carry out activities and providing the following:

- 1) Technical Information;
- 2) Blueprint and details designs (architectural and structural);
- 3) Guidelines and specifications;
- 4) Engineering research study;
- 5) Feasibility study of construction project development;
- 6) Construction method plan;
- 7) Marketing collateral; and
- 8) Capacity building

PROPOSED DEVELOPMENT COMPONENTS

Description	Unit (No)	Requirement
<u>Operational Office</u>		
Main office	1	Landmark building (Auditorium, Exhibition).
Big Office (double storey)	1	Ground floor is workshop, upper floor is office.
Medium Office	4	For R&D.
Small Office	6	For R&D.
Authority Office	1	Authority Office.
<u>Other Buildings</u>		
Single-storey ZEVIC (covered)	1	Minimum 4 poles of charger – AC, DC, MCS
Triple volume workshop (covered)	2	For bus and truck (rigid & prime mover).
Standard car workshop (covered)	2	For normal car (M1 vehicle category).
Triple volume workshop VTA Testing Area (covered)	1	For Vehicle Type Approval activities: fit bus, heavy-duty vehicle and car.
<u>Proving Ground</u>		
CAV test track – 5km (smart city)	1	CAV and Smart city features.
Multi-storey car park	1	CAV parking test bed.
Open space car park	1	All types of car park bays (including EV, CAV).
Dummy buildings	1 set	Detachable.
<u>Technology Component</u>		
V2X and 5G Connectivity, Digital twin and Cybersecurity, Sensor Fusion and Data Management, Global EV Interoperability Solutions, Grid Integration and Energy Storage System, Building and Energy Management System, Integration Works, Testing Hardware and Software, Servers – on-premise, cloud-based, storage, applications, firewall, etc	1 set	Specifying the requirements in terms of functionality, performance, safety, infrastructure, operational, sustainability, budgeting and regulatory compliances for having the technology components in the testing facility.



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➤ SCOPE OF SERVICES

SCOPE OF TS CONSULTANT

01 Master Blueprint Development

Development of the Project's Master Blueprint covering the Proposed Development Component of the Project. The Master Blueprint shall include the detailed architectural and structural designs, and any other details deemed necessary. All drawings and designs shall be created in accordance with the local authority guidelines and requirements.

The Master Blueprint shall be developed in the following:

- 1) Master Layout for the Project;
- 2) Preliminary Concept Design (for the Proposed Development Component)

The Master Blueprint information shall include of:

- | | |
|---|--|
| 1) Project Brief; | 8) List of Testing; |
| 2) Technical Information; | 9) Feasibility Study; |
| 3) Standards and Specifications; | 10) Research Study on Previous and Future Testing Ecosystem; |
| 4) Schedule of Area (SOA); | 11) Recommendation for Supplier of Testing Solution/Equipment; and |
| 5) Design Theme; | 12) Recommendation for Contractor Selection Criteria. |
| 6) Design Brief; | |
| 7) Details Design (architectural & structural); | |

SCOPE OF TS CONSULTANTS

02 Engineering Research Study

Conduct a comprehensive engineering research study for development of Proving Ground and prepare report covering the areas including but not limited to:

- 1) Critical Reviews on technology benchmarking and best practices;
- 2) Technical feasibility and evaluation in terms of technology requirements, functionality, performance, safety, infrastructures, operational, sustainability, budgeting and regulatory compliances;
- 3) Provide extensive information on Proving Ground capabilities to perform testing and validation activities, in accordance to relevant Regulations/Standards – UNECE, ISO, SAE, MS, etc.; and
- 4) Provide minimum list of UNECE Vehicle Regulations, ISO and MS with respect to the Proving Ground capabilities to conduct the testing and validation activities.

03 Feasibility Study

Prepare a comprehensive feasibility study for development of Proving Ground, covering the items including but not limited to.

- 1) Develop and propose the Project's design brief;
- 2) Establish project viability in term of design and technicalities;
- 3) Develop and prepare detail cost breakdown, inclusive of overall financial implications & cost-saving measures;
- 4) Develop and outline comprehensive findings on legal and regulatory compliance.

SCOPE OF TS CONSULTANTS

04 Propose Construction Method Plan

Establish and propose the Construction Method Plan for development of Proving Ground covering the areas including but not limited to:

- 1) Propose the construction methodology with consideration of latest industry practices, specifications of materials and equipment, quality control and assurance strategies, manpower planning, HSE, etc;
- 2) Develop and propose comprehensive Master Plan Development for the Project, including the master checklist of documents submission to obtain DO/BP approval (inclusive of documents review); and
- 3) Develop and document Master List of Project Risk Register with the mitigation plan.

05 Marketing Collateral

Produce and propose the marketing collateral package consists of:

- 1) Animated video presentation;
- 2) 3D concept designs;
- 3) Physical scale model; and
- 4) Any other promotional materials, as deemed necessary.

SCOPE OF TS CONSULTANTS

06

Capacity Building

Develop and propose the capacity building program covering Transfer of Knowledge & Technical Know-how to MARii covering:

- 1) Customised capacity building/training session; and
- 2) Technical benchmarking to CAV Proving ground and testing facilities.



04

➤ PROJECT TIMELINE

RFP PROJECT TIMELINE

Activity	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6				Month 7				Month 8				Month 9				Month 10				Month 11				Month 12			
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
0. Planning and Preparatory Works																																																
0.1 Tender (RFP) Exercise																																																
0.2 Tender (RFP) Award																																																
1. Development of Master Blueprint																																																
1.1 Land Selection & Survey																																																
1.2 Master Concept Design																																																
2. Development of Engineering Research Study																																																
2.1 Critical Reviews of technology best practice																																																
2.2 Comprehensive reviews on technical feasibility and viability (technology, functionality, performance, safety, financial, etc)																																																
2.3 Review and findings on Regulations and Standards compliance against facility capabilities																																																
3. Carrying out the Feasibility Study																																																
3.1 Technical surveys - Geotechnical, Topographical, soil, land structure, etc.																																																
3.2 Due Dilligence																																																
3.3 Outline Detaisl on Design Brief, budgeting and financial measures																																																
3.4 Legal and Regulatory Compliance																																																
4. Development of Propose Construction Method Plan																																																
4.1 Option Execution Process																																																
4.2 Propose Construction Method Plan																																																
5. Development of Marketing Collateral																																																
5.1 Marketing and Mock-up Materials																																																
6. Conducting the Capacity Building and Transfer of Knowledge & Technical Know-how																																																
6.1 Customised Technical Benchmarking Activities																																																
6.2 Customised Training for Transfer of Knowledge and Technical Know-how																																																
7. PMC Final Submission and Hand-over (pre-development phase)																																																
7.1 Item No. 1-6																																																
8. Pre-Construction																																																
8.1 Consultant Appointment																																																
8.2 Submission for Authority Approval (DO, BP, Earthwork, etc.)																																																
8.3 Site Preparation																																																



05

➤ RFP HIGHLIGHTED ITEM



PURCHASE OF RFP DOCUMENT

- **Document Format:** Softcopy (online)
- **Purchase Start Date:** 2nd October 2024
- **RFP Document Cost:** RM100 (Ringgit Malaysia)
- **Request to Purchase:** Bidders must email procurement@marii.my to request the RFP Document.
- **Eligibility:** Documents available only to eligible bidders based on the Screening Form, SSM or Any related certification
- **Payment Process:**
 - Eligible bidders will receive an account number via email.
 - Payment of RM100 must be made in **Ringgit Malaysia** via **instant transfer** only.
 - Proof of payment must be emailed to **procurement@marii.my**.
 - **Email Subject:**
"[BIDDER NAME] - Proof of Payment for RFP Document Purchase - [Project Name]"
- **Submission Requirement:**
 - Deadline: **Before or on the RFP closing date.**

SUBMISSION OF RFP



SUBMISSION REQUIREMENTS

➤ Submission Format:

The Bidder must submit the RFP in two separate envelopes:

- **ENVELOPE I** – Technical Proposal
- **ENVELOPE II** – Commercial Proposal

➤ Sealing & Labelling:

- Each envelope should be sealed and clearly marked with the project title.
- Submit **2 originals** of the RFP submission in each envelope.

➤ Softcopy Submission:

A softcopy of the full RFP Submission (Technical & Commercial) must be provided on a **Solid State Drive (SSD)**:

- Clearly label the SSD with the bidder's number and RFP reference number.
- Enclose the SSD securely within **Envelope I (Technical Proposal)**.

➤ RFP Closing Date:

Proposals must be received by **MARii no later than 11th October 2024, 12:00 PM.**

- Late submissions will **not** be accepted.

SUBMISSION OF RFP



➤ **Delivery Address:**

RFP Title – [Insert Project Title Here]

THE CHAIRMAN OF TENDER COMMITTEE

Procurement Unit, Corporate Services Department,
Malaysia Automotive, Robotics and IoT Institute
Block 2280, Jalan Usahawan 2, Cyber 6,
63000 Cyberjaya, Selangor, Malaysia

RFP IMPORTANT DATE



- **RFP OPENING DATE** : 25th September 2024
- **RFP BRIEFING DATE** : 1st October 2024
- **RFP DOCUMENT PURCHASE DATE** : 2nd October 2024
- **INFORMATION ENQUIRY DUE BY** : 7th October 2024
- **RFP CLOSING DATE & TIME** : 11th October 2024 / 12.00 PM
- **RFP CLARIFICATION & NEGOTIATION** : 17th & 18th October 2024

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MALAYSIA AUTOMOTIVE ROBOTICS AND IoT INSTITUTE

06

> Q&A SESSION

Q&A SESSION (15 Minutes)

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**Driven with Innovation,
Fueled by Impact**



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An agency under the Ministry of Investment, Trade & Industry (MITI)

Thank you



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