Content:

1. Introduction

The National Automotive Policy (NAP) was first introduced in 2006 under the Third Industrial Masterplan (IMP3) 2006-2020 to transform the automotive industry as one of the important contributors of our economy, It outlined key directions and strategies in preparing the local automotive players towards a more competitive and sustainable automotive industry. In 2009, the second version of the policy was introduced, to focus on enhancing the capabilities of the domestic automotive industry and to create a more conducive environment for investments. A third version was introduced in 2014, named NAP 2014 which placed emphasis on green initiatives, market expansion, as well as enhancement of the entire automotive ecosystem through development of technology, human capital and supply chain. The ultimate objective of the NAP 2014 was to establish Malaysia as a regional Energy Efficient Vehicle (EEV) hub by the year 2020. The fourth version - the NAP 2020 envisions to enhance Malaysia's automotive industry in the era of digital industrial transformation from 2020 to 2030, thus enabling Malaysia to realise Connected Mobility.

The industry has become increasingly fraught with uncertainties due to global scenarios. Hence, through the review of NAP 2020, the Government has transcended the issues and identified crucial plans to focus on growth and investments towards technology development and industry transformation in Malaysia. New elements are also added to NAP 2020 focusing on Next Generation Vehicle (NxGV), Mobility as a Service (MaaS) and Industrial Revolution 4.0 (IR4.0).

Malaysia Automotive, Robotics & IoT Institute (MARii) as an agency under the Ministry of International Trade and Industry (MITI), which is serving as the focal point, coordination centre and think tank for the nation's automotive industry and responsible to ensure the smooth implementation of NAP and to enhance the

competitiveness of the automotive industry and overall mobility including Intelligent Transportation Systems (ITS) and Related Services through the adoption of Robotics & Internet of Things (IoT).

To deliver these tasks, MARii has been tasked by MITI to work closely with various stakeholders which include the establishment of necessary standards development as well as to manage its' implementation via certification scheme introduction. The certification scheme will the ensure continual improvement in product and service quality, emphasizing safety, defect prevention and the reduction of variation and waste in the automotive industry supply chain. This also includes the automotive aftermarket with the improved repair and service abilities with proper procedures and skilled mechanics as well as spare parts standardisation.

The scheme owner is the governing body of the certification system. Independent certification bodies that are registered with the Department of Standard Malaysia (JSM) and the scheme owner are allowed to evaluate the automotive services based on the relevant standards to ensure that all participating premises comply with the standards. Certificates are issued by the independent certification bodies after conducting successful audits and followed by MARii's approval.

2. Scope

The scope covers:

i. The implementation within Automotive stakeholders including the Government agency, certification body, industry player and consumer.

ii. The application and development of Robotics and IoT within the Big Data Analytics (BDA) architecture platform including Intelligent Transportation System (ITS) and the overall mobility of the related fields to automotive services.

iii. This scheme owner covers aspects relating to knowledge, process, method, materials, equipment, safety and environment. The activities including material and core recovery, processing and handling for reuse, repair, recycle and remanufacture of automotive parts and components.

3. Normative References

No	Code	Title/Subject
i	MS 2697:2018	Motor vehicle aftermarket - Repair, reuse, recycle and remanufacture (4R) for parts and components - Code of practice

4. Glossary of Terms

The glossary of this document are as per the followings:

Automotive	Moved by a self-contained motor or engine or something that has to do with automobiles.
Certification Body (CB)	Certification bodies are independent bodies that provide conformity assessments to organizations for their various management systems, either individual or as product manufacturers and service providers.
Corrective Action Requests	Request from the certification body to the audited operator, to close a major or minor non-conformity within the relevant timeframe, and with defined consequences in case of successful or non-successful implementation of the CAR.
EEV	A vehicles that meet a set of define specification in terms of carbon emission level (g/km) and fuel consumption (l/100km) and include fuel efficient vehicles, hybrid, EV and alternatively fuelled vehicles e.g LPG, Biodiesel, Ethanol, Hydrogen and Fuel Cell.
Governing Body	Body that formulates the policies and governs the implementation procedure of the sustainability certification scheme in the MARii scope of activities.
Third Industrial Masterplan (IMP3)	To achieve long-term global competitiveness through transformation and innovation of the manufacturing and services sectors.

Internet of Things (IoT)	A type of network to connect anything with the Internet based on stipulated protocols through information sensing equipments to conduct information exchange and communications in order to achieve smart recognitions, positioning, tracing, monitoring, and administration.
Industrial Revolution 4.0 (IR4.0)	application of digital technology beyond the technological elements under Industry4WRD. • The use of IR4.0-related technology applications especially Artificial Intelligence (AI), Big Data Analytics (BDA) and Internet of Things (IoT) will enable the implementation of NxGV and MaaS.
Intelligent Transportation System (ITS)	A group of technologies that can improve transportation system management and public transit, as well as individual decisions surrounding many aspects of travel. ITS technologies include state-of-the art wireless, electronic, and automated technologies with a goal to improve surface transportation safety, efficiency, and convenience.
Major non-conformity	A non-conformity which results in (or is likely to result in) a fundamental failure to achieve the objective of the relevant requirement.
Minor non-conformity	A non-conformity which is a temporary lapse, or unusual/non-systematic, or which has limited impacts in their temporal and organisational scale, and which does not result in a fundamental failure to achieve the objective of the relevant requirement.
Mobility as a Service (MaaS)	A concept created to integrate various types of services and transport modes into an efficient and

	centralised mobility service.
National Automotive Policy (NAP)	Facilitate the required transformation and optimal integration of the local automotive industry to regional and global industry networks within the increasingly liberalised and competitive global environment.
Next Generation Vehicles (NxGV)	Vehicle that meets the definition of EEV classifications and is enhanced with Intelligent Mobility applications with minimum of Level 3 Vehicle Automation i.e. Conditional Automation. NxGV vehicle technology is classified according to five levels of Autonomous/Automated and Connected Vehicle (AACV).
Observation	An assessment finding that does not warrant non-conformity but is identified by the assessment team as an opportunity for improvement. The CB is strongly recommended to take corrective / preventive actions to indicate commitment to continual improvement.
Categories of premises	All premises to undergo both Stage I and Stage II Audits.
Stage I audit	Stage I audit is carried out to determine the adequacy of the client's management system documentation and readiness to proceed to the Stage 2 audit.
Stage II audit	The Stage II audit is to evaluate the implementation, including effectiveness, of the client's management system on site.

JSM	The Department of Standards Malaysia (JSM) is the National Standards Body and the National Accreditation Body, providing confidence to various stakeholders, through credible standardisation and accreditation services for global competitiveness.
Surveillance audit	Comprehensive audit of the MARii certified operator, against the MARii standard requirements, within 12 months after (re-) certification. Same scope and extent as stage II audit.
Suspension (of certificate)	Temporary discontinuation of the MARii certificate.
Withdrawal (of certificate)	Revocation or cancellation of the MARii certificate.
Competency training	Competency-based training is focused on specific MS under the ACS. The participant will be assessed on the competency after completed the training course.

5. Certification

5.1 Individual Competency

Individual undergoes MARii's competency training related to specific scope under ACS

5.2 Organisation Certification

Certification for the organisation to become the authorised Certification Body (CB)

5.3 The Automotive Expert Committee (AEC)

The Automotive Expert Committee (AEC) will be established to advise the certification of individual and organisation.

AEC which will be chaired by MARii is comprised of the relevant Ministries and its' agencies, i.e. KPDNHEP, MOT, KPKT, MOSTI, KeTSA, MITI, KKR, industry, association and academia.

The related AEC shall also participate in the audit upon invitation by MARii.

6. Governance Structure of MARii as Scheme Owner

The scheme owner is the governing body for this certification system. Independent Certification Bodies that are registered with the scheme owner are allowed to evaluate the organizations based on the relevant standards to ensure that all participating premises comply with the Standards.

Certificates are issued by these independent Certification Body (CB) after conducting successful audits. CB is subjected to accreditation scheme by JSM. The JSM accreditation system is in accordance with the credible international standard such as MS ISO/IEC 17021 or others to ensure that the accreditation services provided are impartial, non-discriminatory and credible.

The Process Flow for CB Certification is as the following diagram.

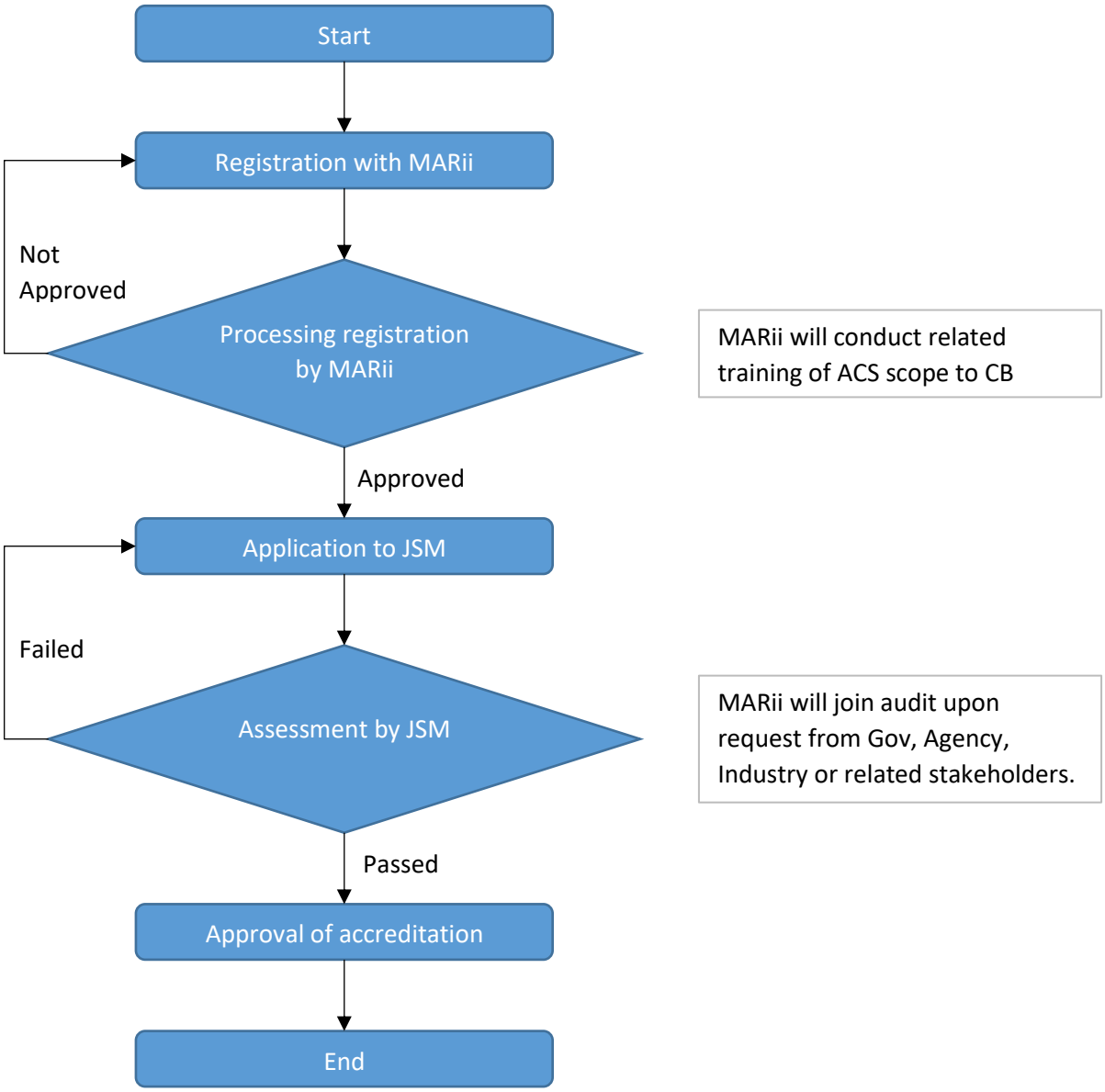

Figure 1: Process Flow for CB Certification

7. MARii Activities as Scheme Owner

7.1. MARii will undertake the following activities:

i. Conduct training on compliance and competency for individual and organization;

ii. The Auditor of an organization and individual (personnel) shall comply to the related MS; and

iii. Developing the new and enhancement of related standards

MARii programme	✓ Compliance Training ○ Company ○ CB ✓ Training Competency ○ Auditor ○ company ✓ Certification ○ Personnel ○ CB ✓ Developing ○ New & Enhancement of related standards

7.2 Requirement for CB

a. Participate training with MARii for all MS under Automotive Certification Scheme (ACS).

b. Company to register with JSM for accreditation related to ACS.

c. All certification bodies that are competent to carry out audits shall first be registered with MARii.

d. Company Profile which includes the following:

No.	Criteria	Details	Yes/No
1	Accreditation	Accredited by Department of Standard Malaysia (JSM) on Automotive Certification Scheme	
2	Legal Status	A copy of memorandum and articles of association or equivalent documentation indicating legal status of CB	
3	Knowledge & Experience	Certification body has appropriate knowledge and auditors with experience in automotive industry.	
4	Timeline	Audit schedule/timeline until certification	
5	Fee	CB fee schedule	
6	Number of Audit	the number of auditing days is adequate to cover all standards requirement	
7	Agreement	Have a legally enforceable agreement for certification activities to its clients/outsourced auditors	
8	Logo	CB will issue Certificate which will bear MARii logo	
9	Brochure	A copy of all information or promotional brochures of CB.	
10	List of Certified organisation	A current list of names and addresses of certified organisations.	
11	List of Subcontract /external	A current list of persons and/or organisations to which Certification Body subcontracts work, and a description of the work which is subcontracted, if applicable	
12	Any cooperative relationships	A description of any cooperative relationships (e.g. Mutual recognition) at national and international level, if applicable	
13	Certificate	A sample of the certification certificate and any related schedules	

8. Certification Procedure

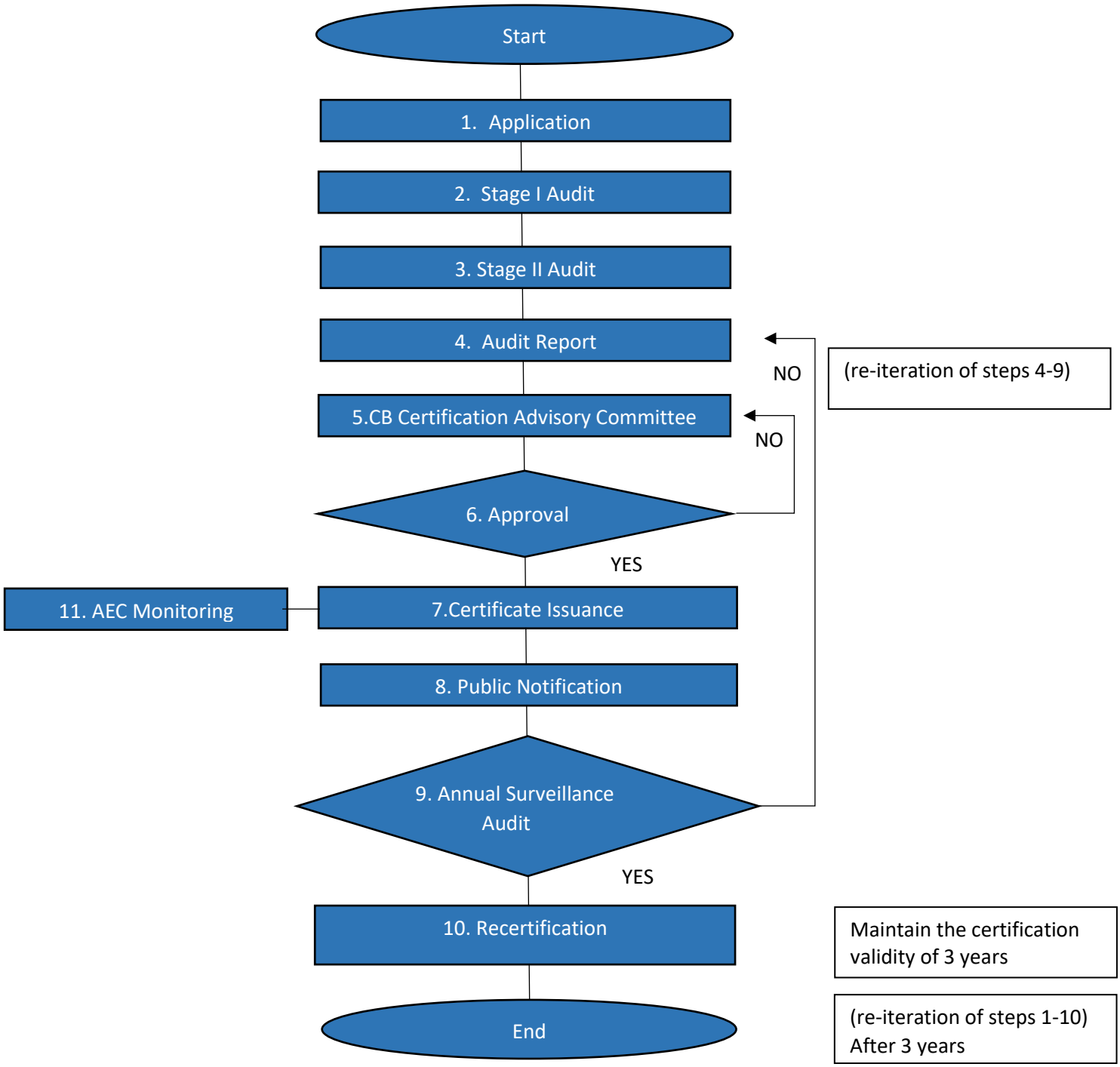

Figure 3: Certification Procedure

9. Scheme Owner AEC Roles

9.1 Two AEC reviewers shall be appointed by the MARii to review the summary audit report on the premises audited. The audit report shall be submitted by the CB to the AEC reviewers.

9.2 The role of the AEC reviewers is to ensure that the audit report has the necessary content to act as the basis for the recommendation to award or renew the certificate for 4R2S Certification.

9.3 The AEC reviewers shall (within fourteen (14) days) confirm that the audit team has:

i. carried out an objective and professional audit against the requirements of the certification standard for Certification;

ii. investigated all relevant data sources and avenues of enquiry;

iii. arrived at the appropriate conclusion and recommendation based on the available audit evidence; and

iv. prepared a concise and comprehensive audit report

10. Competency requirements as AEC

The AEC reviewers shall meet the following competency criteria:

10.1 have a minimum of five (5) years working experience in automotive industry

10.2 have the necessary training and work experience to assess the adequacy of the reports submitted by the auditors. In-depth knowledge on the applicable local regulations and condition of the areas audited

10.3 have a good understanding of the certification standard for automotive industry;

10.4 have not provided any consultancy services including the preparation of the automotive industry scheme owner, in the three (3) years prior to the audit; for this purpose, the reviewers shall submit a list of all related consultancy projects undertaken in the past three (3) years; and

10.5 have no financial, trade or business interest in the outcome of the certification decision made for the premises audited.