



**Look East Policy 2.0 :
End of Life Vehicle (ELV) v3.0**

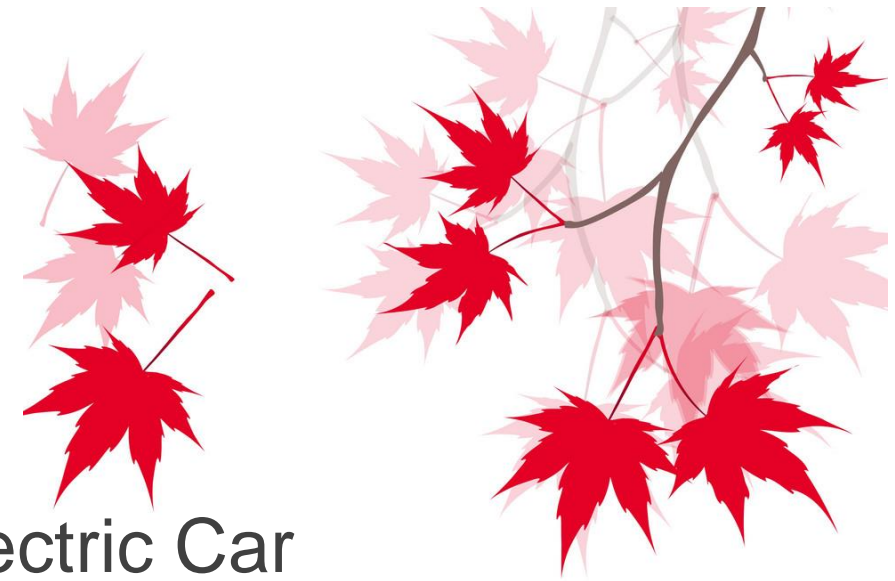
END OF LIFE VEHICLE COURSE

- Date: 14th October 2019- 2nd November 2019
- Venue: JICA Tokyo, Kaiho Sangyo Kanazawa Japan
- Participants: 17 participants consist of Government Agencies [DOE, Malaysia Automotive Robotics and IoT Institute (MARII), Malaysia Investment Development Authority (MIDA), KWP, Universities (UTM and UKM) and Company Owners (Hiap Huat Services and Narita Company)]



JAPAN ELV IMPLEMENTATION

- ❑ Establishment of ELV in Japan – 70 years
- ❑ ELV- KCar, Car, Lorries, Busses, Hybrid, Electric Car
- ❑ Average of ELV in Kanazawa prefecture – 12,000 vehicles
- ❑ Agencies Involved – Ministry of Economy, Trade and Industry and Ministry of Environment
- ❑ Laws and Regulations – Automobile Recycling Law, 2002



JAPAN ELV IMPLEMENTATION

- ❑ Central Government – Policy, Laws and Regulations Development
- ❑ Local Government – Provide license for dismantling operators & Enforce Laws and Regulations
- ❑ ELV recycling components – Airbags, Automobile Shredder Residue (ASR)



JAPAN ELV IMPLEMENTATION



3 Years



Inspection

1000 USD

2 Years



Inspection

1000 USD

Car Age 10 Years

1 Year



Inspection

4000 USD



SCENARIO SETTING



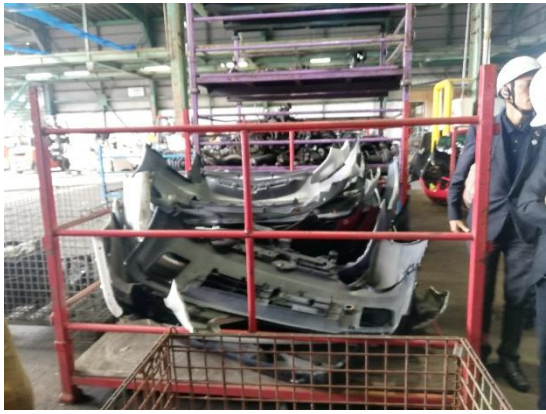








TECHNOLOGY







ABANDONED VEHICLES POLICY

The Public Complaints Bureau informed that the highest complaint received was related to the vehicles that was either abandoned or left by the roadside.

Kenderaan tersadai timbulkan masalah



Kenderaan yang terbiar di tempat letak kereta awam di Taman Sri Sinar, USAN/Syahmi Abu Bakar

Kosmo Online / NEGARA /

DBKL tunda 2,364 kenderaan buruk, tersadai

Oleh SAHLIZAH MOHAMED



PENGUAT KUASA DBKL melakukan operasi menunda kenderaan buruk di Perumahan Awam Negeri Sembilan, Sentul, Kuala Lumpur baru-baru ini.

KUALA LUMPUR - Dewan Bandaraya Kuala Lumpur (DBKL) menangkal bilangan kenderaan buruk yang ditinggalkan di sepanjang lorong bersebelahan Sungai Kerayong di Jalan Emas, hari ini.

[VIDEO] Longgokan kereta lama cetus persoalan



ANTARA kereta yang ditonggokkan di sepanjang lorong bersebelahan Sungai Kerayong di Jalan Emas, hari ini. - UTUSAN ONLINE



JURISDICTION ON AV MANAGEMENT

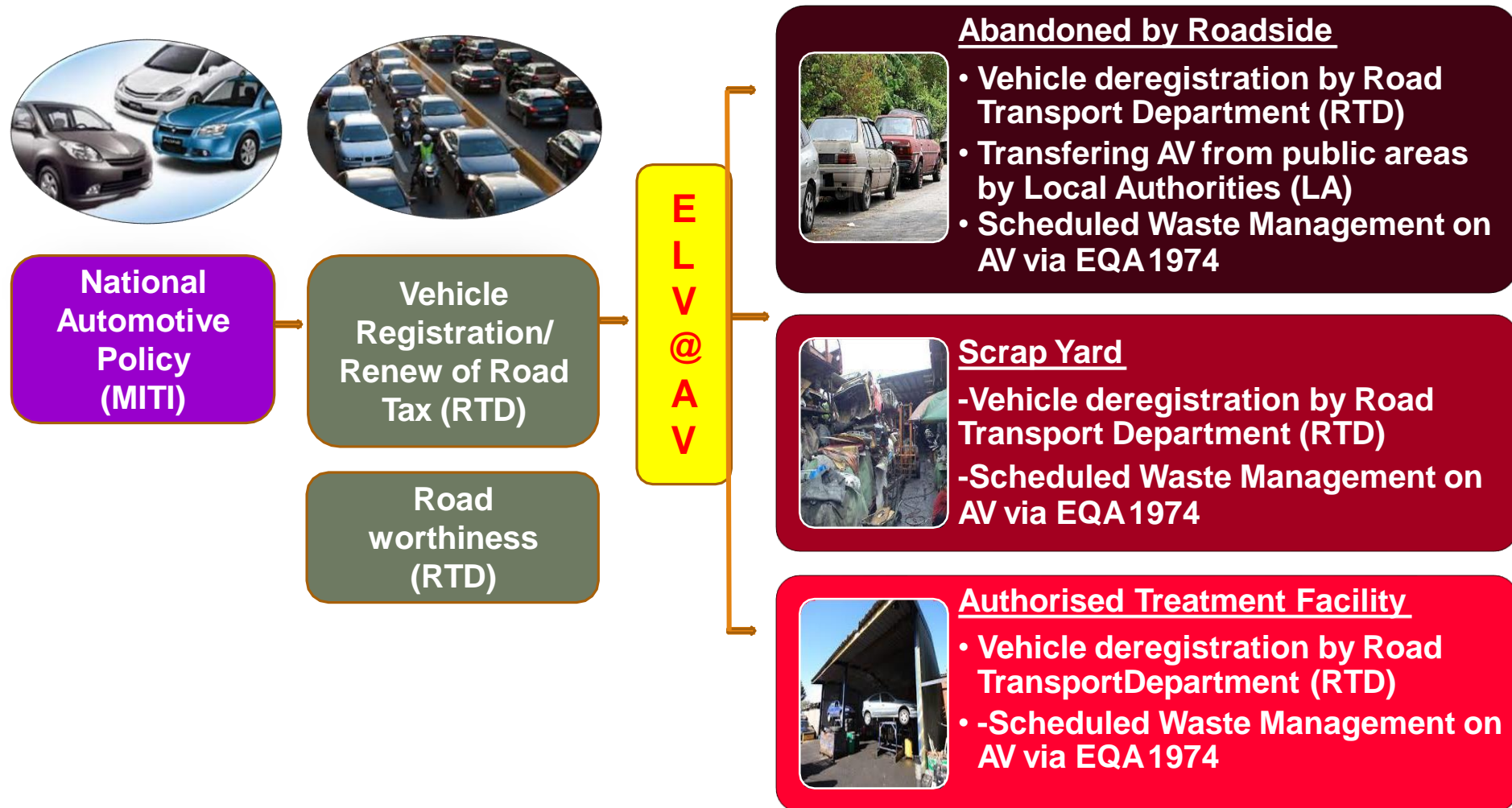
There were 4 Ministries with different jurisdiction involved in managing the Abandoned Vehicles (AV) in Malaysia

MINISTRIES	JURISDICTION
Ministry of Transport (MOT)	Regulate vehicle inspection and license deregistration
Ministry of International Trade and Industry (MITI)	National Automotive Policy
Ministry of Housing and Local Government (MHLG)	Unused car transfer from public areas by Local Authorities
Ministry of Energy Science Technology Environment and Climate Change (MESTECC)	Scheduled Waste Management on AV

LAWS AND REGULATIONS RELATED TO AV

- ❑ National Automotive Policy
- ❑ Local Government Act 1976 (Power to Enforce and Collect AV)
- ❑ Environmental Quality Act 1974 (Scheduled Waste and Hazardous Waste Management)
- ❑ Solid Waste and Public Cleansing Management Act 2007 (Recycling Programme)
- ❑ Street, Drainage And Building Act 1974 (Enforcement on Public Area and Road Obstruction)
- ❑ Road Transport Act 1987 (Vehicle Deregistration)

JURISDICTION ON AV MANAGEMENT



SCHEDULED WASTE MANAGEMENT IN AV UNDER ENVIRONMENTAL QUALITY ACT 1974 (EQA 1974)

Laws regarding jurisdiction involving AV:-

- Section 21 and Section 51 EQA 1974

Laws regarding scheduled waste management from AV:-

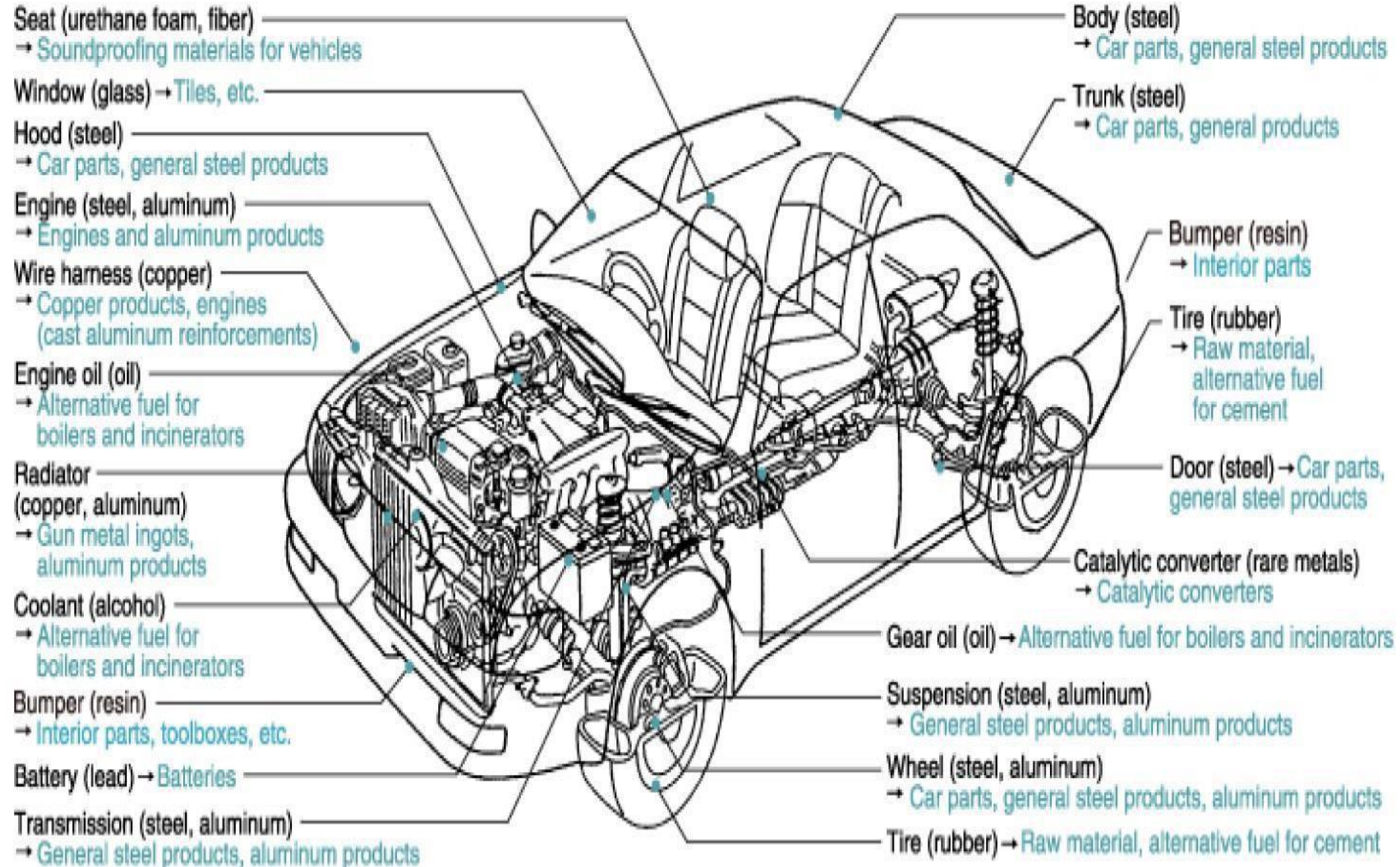
- Section 18 and Section 34B EQA 1974

DOE need to develop:

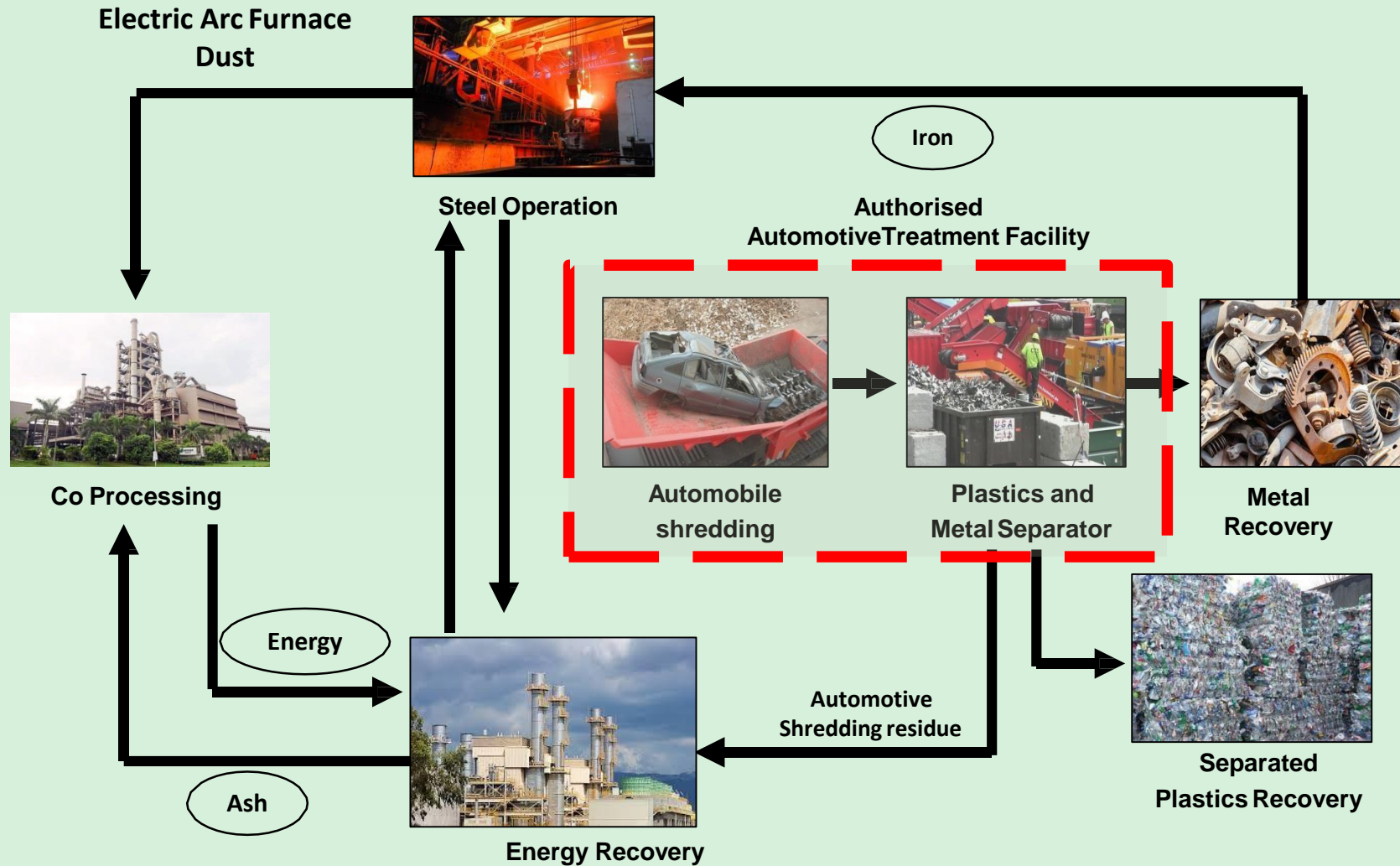
- Scheduled waste regulation pertaining to AV
- Guidelines pertaining to *Authorised Treatment Facilities*

Scheduled Waste in AV
Car battery
Mercury switches (ABS)
Electrical waste
Ballast & capacitor
Asbestos brake pads
Catalytic converter
Used engine oil
Hydraulic oil
Brake oil
Transmission liquid
'Power steering' liquid
Petrol/ diesel wastes
'Windscreen' Liquid
Coolant
Vehicle body paint
Shock absorber
Oil filter
Airbag Detonators (sodium azide)
Liquid/Gaseous AC

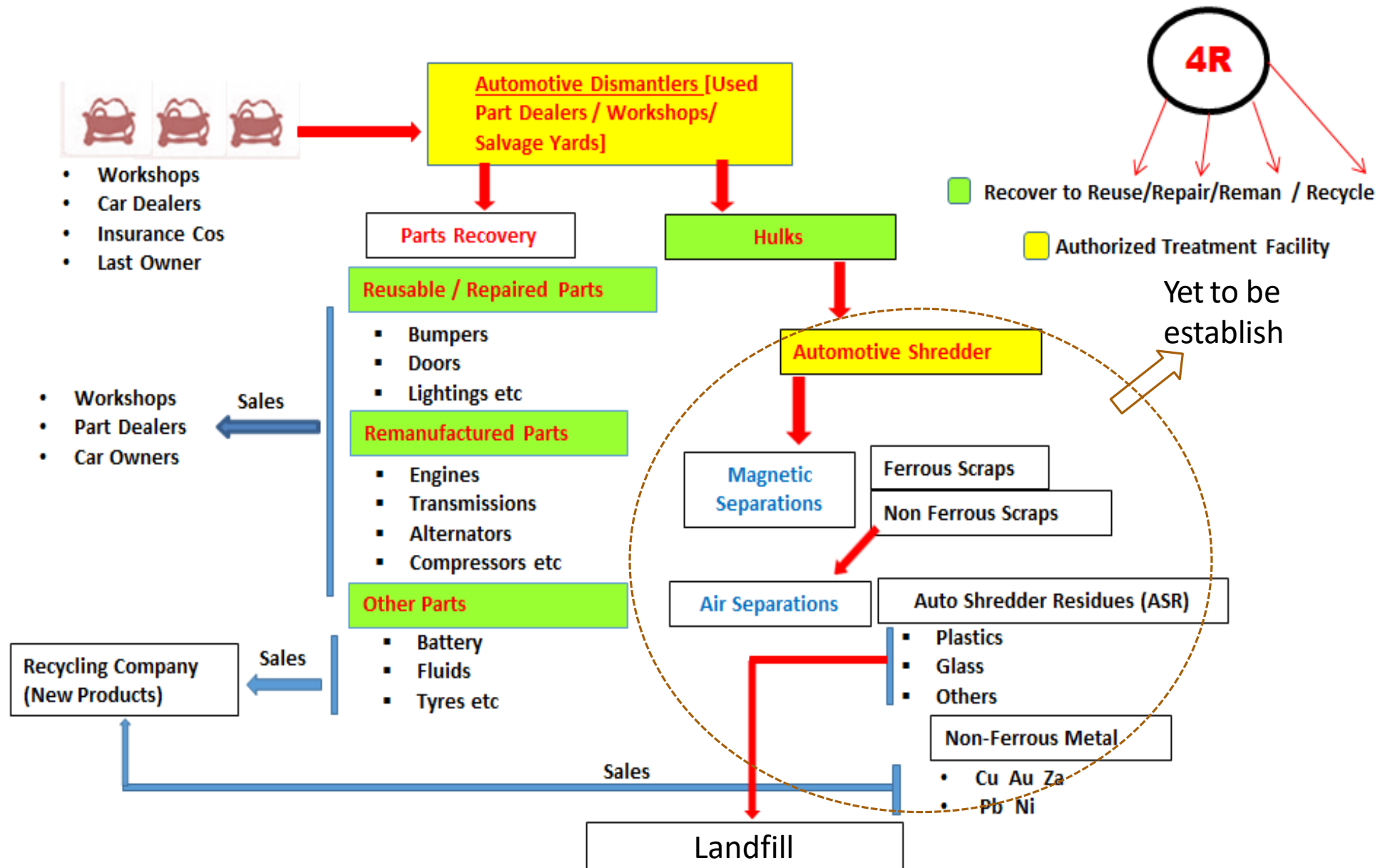
CAR PARTS & USES



MATERIAL FLOWS OF ABANDONED CAR



EXISTING ECO SYSTEM



ELV IMPLEMENTATION TIMELINE

No.	PHASE 1 – AV (2019)	PHASE 2 – ELV (2025)
1.	Reviewing of: <ul style="list-style-type: none"> • Environmental Quality Act 1974 (MESTECC) • Local Government Act 1976 (MHLG) • Solid Waste and Public Cleansing Management Act 2007 (MHLG) • Street, Drainage And Building Act 1974 (MHLG) • Road Transport Act 1987 (MOT) 	Implementation of laws and regulations amendment of ELV Policy: <ul style="list-style-type: none"> • Extended Producer Responsibility (EPR) – (MITI) • Mandatory inspection of vehicles – (MOT)
2.	Guideline on Licensing of ATF <ul style="list-style-type: none"> • Enforcement of MS 4R2S Standards – MITI • Compliance of the SOPs - (MOT, MESTECC, MITI, MHLG) • Human capital development and R&D by Universities • Execution by the industry (dismantlers/shredders) 	Implementation of ELV Regulations (MOT, MESTECC, MITI, MHLG)
3.	Establishment of Malaysia Automotive Recycling Committee (MARC) - (MITI) <ul style="list-style-type: none"> • Development of ELV Act 	Extended MARC role for ELV activities (MITI)

RECOMMENDATION

- ❖ To strengthen the AV policy through National Automotive Policy (NAP 2019) and establish ELV policy – MITI
- ❖ To request financial assistance from JICA through ODA Fund (Official Development Assistance) to establish Centre of Excellence for ELV activity and facilitate technology transfer to Malaysia - MITI
- ❖ To establish framework on ELV regulations and new guidelines for management of ELV from licensed treatment facilities (ATF) – MESTECC/MHLG
- ❖ To develop guidelines pertaining to fees/rebate on recycling procedure/recovery and guidelines on best management - MHLG.
- ❖ To introduce incentives (tax exemption) for ATF operators – MITI
- ❖ To increase more inspection facility throughout Malaysia - MOT



RESEARCH

Current Research Publications on ELV

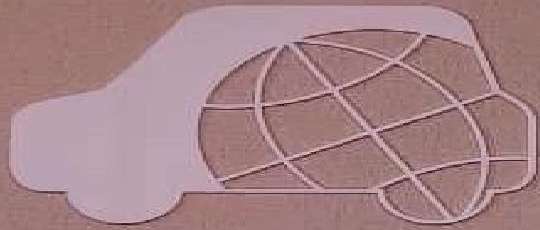
CURRENT STATUS & FEASIBILITY STUDY

1. Key success factors in establishing end-of-life vehicle management system: a primer for Malaysia
2. Analysis of remanufacturing practices in the Malaysian automotive industry
3. The future of end-of-life vehicles (ELV) in Malaysia—A feasibility study among car users in Klang valley
4. The Need of End-of-Life Vehicles Management System in Malaysia
5. A Survey Instrument Design to Determine the Success Factors in Implementing the End-of-life Vehicles (ELVs) Management System in Malaysia
6. End-of-life vehicles (ELVs) management and future transformation in Malaysia
7. Electric vehicle and end-of-life vehicle estimation in Malaysia 2040

Current Research Publications on ELV

FRAMEWORK & APPROACH STUDY

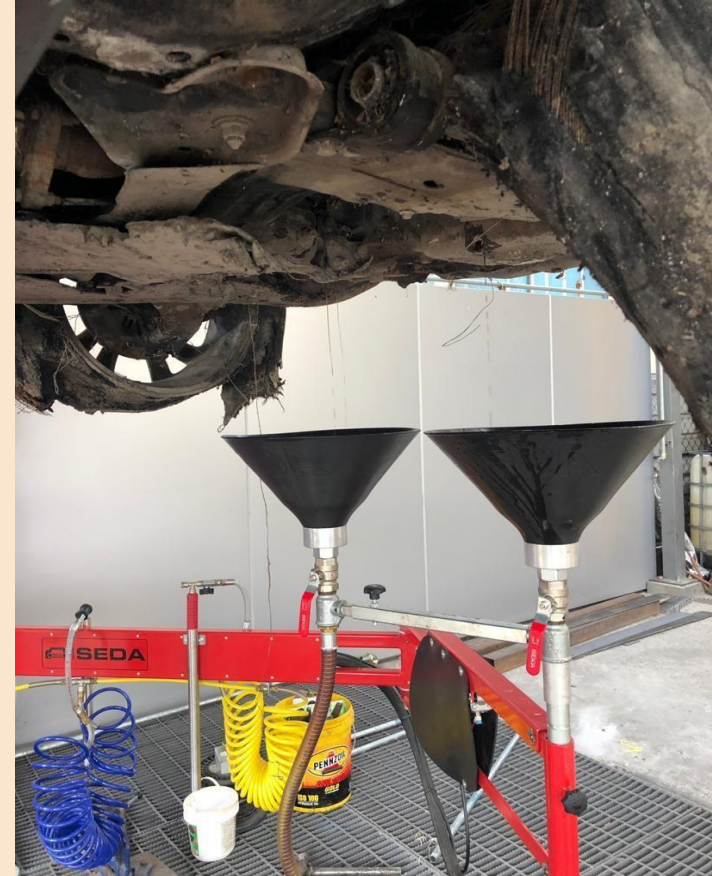
1. Proposed framework for end-of-life vehicle recycling system implementation in Malaysia
2. A system dynamics approach to develop a recovery model in the Malaysian automotive industry
3. Reverse Supply Chain Framework Proposal for Malaysian Automotive Industry
4. Proposed framework for end-of-life vehicle recycling system implementation in Malaysia
5. Recycling of end-of-life vehicles (ELVs) for building products: Concept of processing framework from automotive to construction industries in Malaysia
6. Analysis of Supply Chain Disruption Risks in the Malaysia Automotive Remanufacturing Industry – A case study



International Recycling Education Center
i r e c

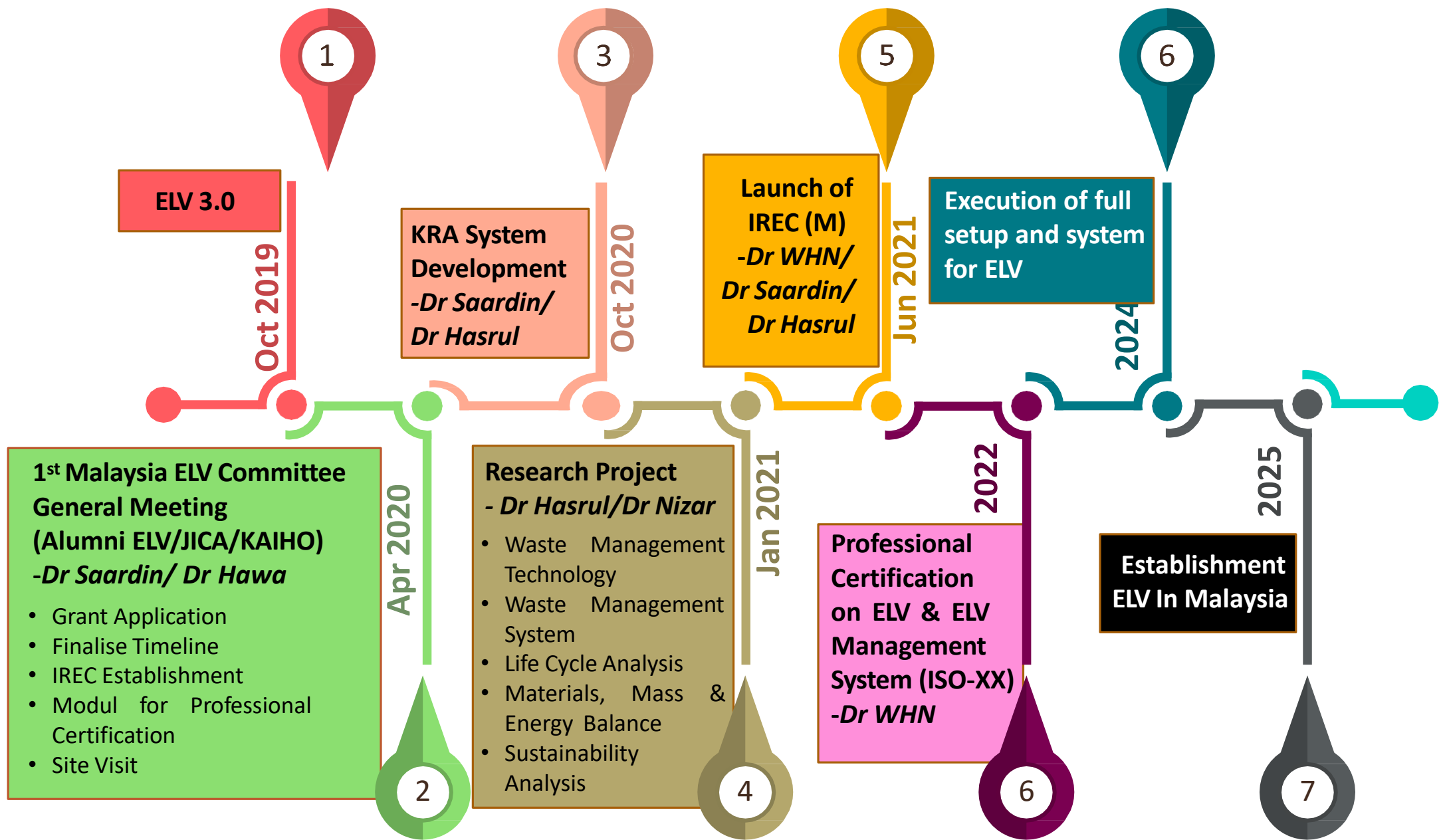
HUMAN CAPITAL DEVELOPMENT

ELV workshop in Malaysia





Timeline



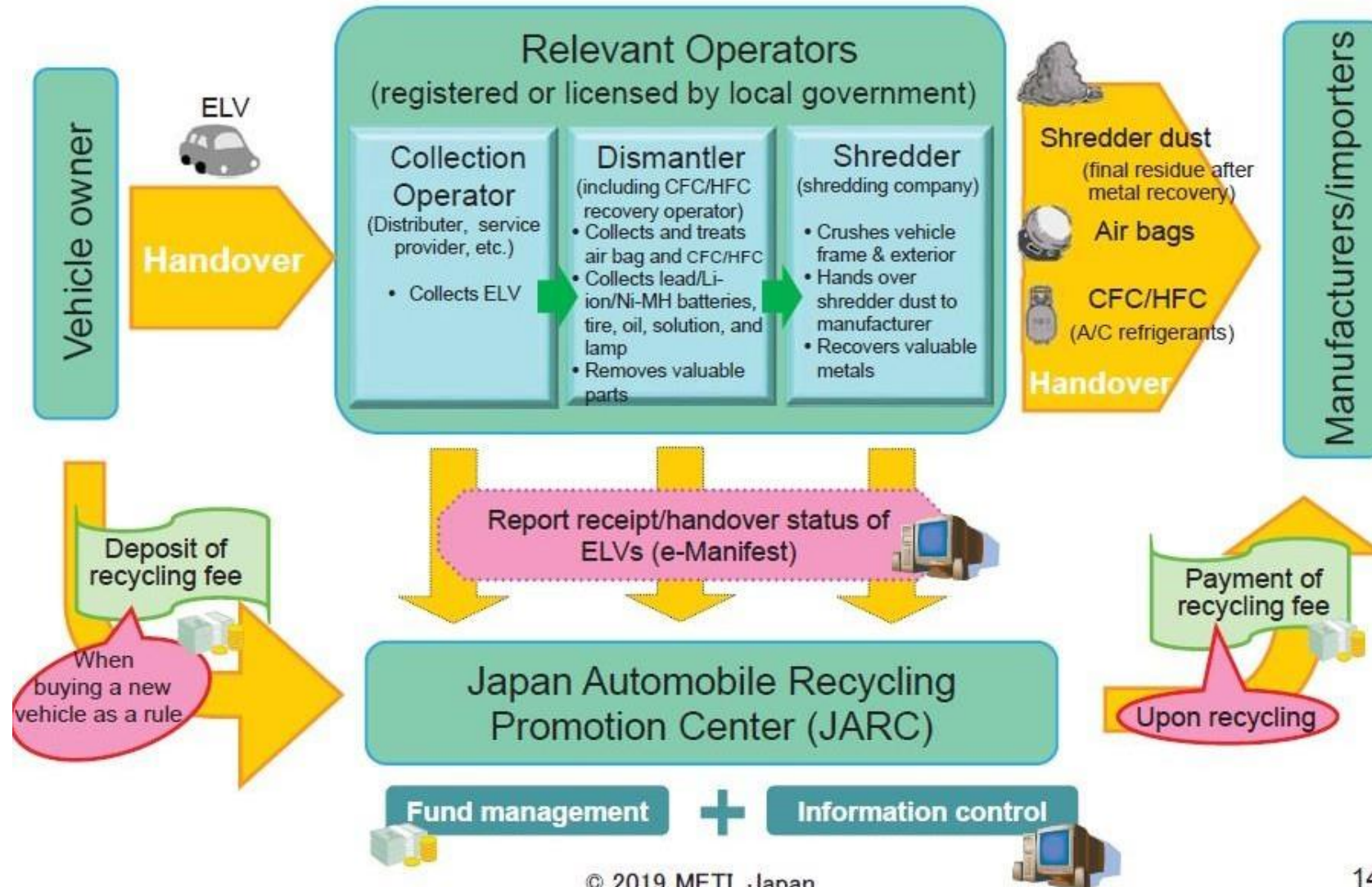


Industrial Aspect

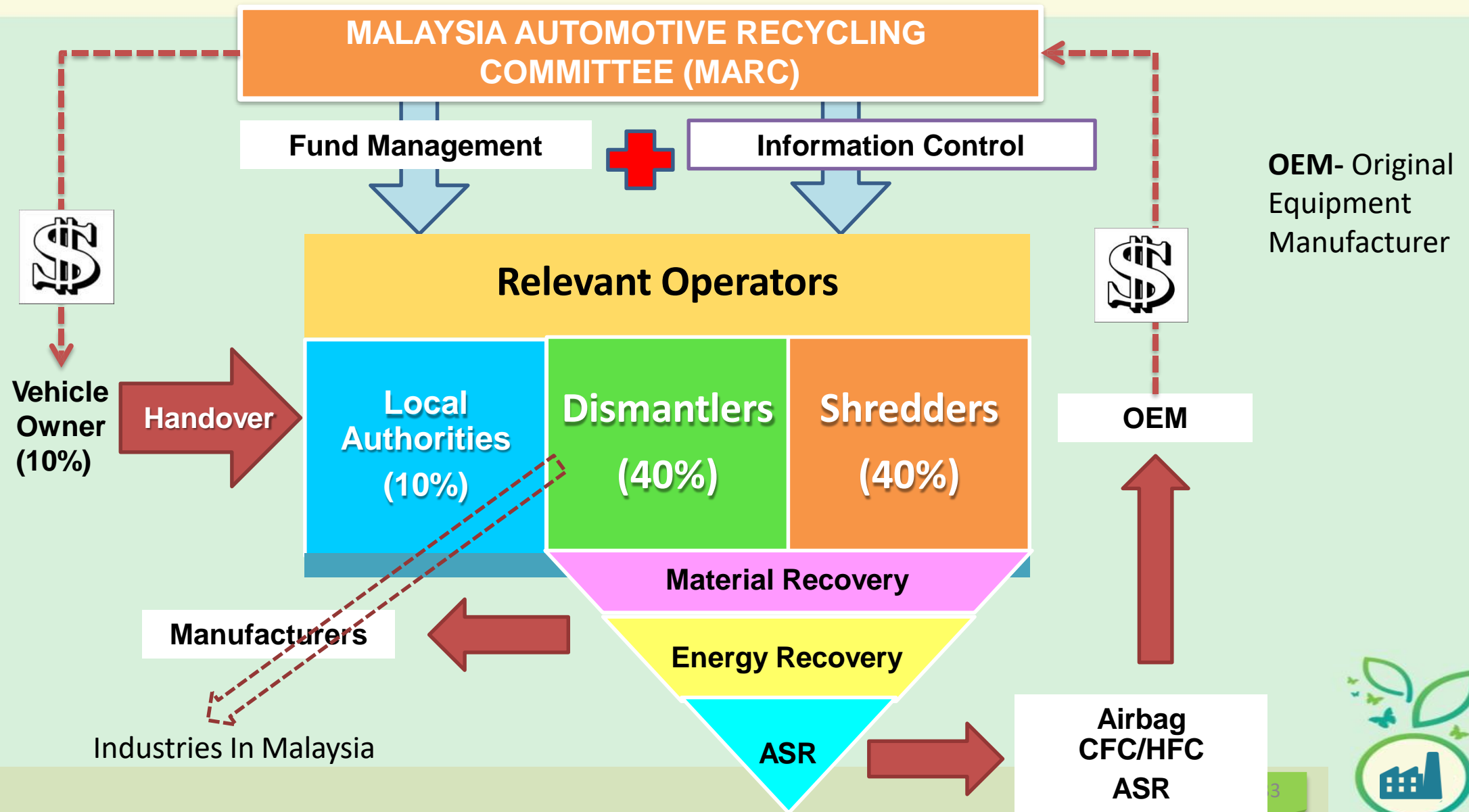


95% Reusable / Recoverable

JAPAN ELV ECOSYSTEM



PROPOSED MODEL



Dismantling Infrastructure

Licensing

- Documentation
- Criteria (manual/machinery/automation)

4R2S Certificate

- QMS - Reused & Recycling (excluding Recovery & Reman.)
- Supply & Demand (AV/ ELV – sustainability of raw material)

Awareness

- Deregistration certification (proofing document)
- Insurance increments for ELV

Take back program by OEM

- Tires / glasses/ seat etc - ASR

Incentive by government / MARC

- Setting standard – minimum requirement for starting ATF
 - oil/ fluid/ fuel extractor
 - Gases recovery machine

[illegible]