




## Meta Materials Circular Markets

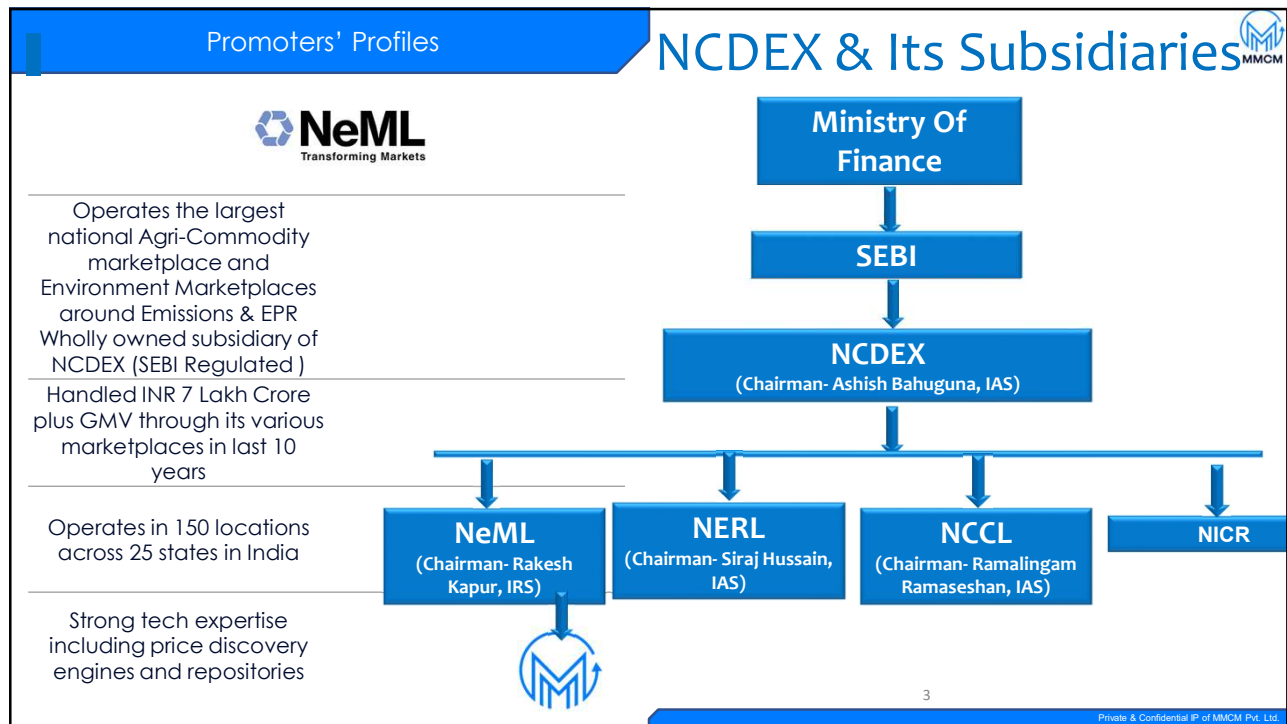
# Decarbonization of Auto Sector through End of Life Vehicle Management

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Cutting Edge Enviro-Tech		About Us	
<b>What We Are</b>	We are an Enviro-Tech enterprise focused on creating digital ecosystems around circular economy for creation and distribution of value.		
<b>What We Do</b>	<ul style="list-style-type: none"> <li>• Enabling market linkages around resource circularity and environment sustainability ensuring utmost traceability and transparency.</li> <li>• Additional Revenue linkages for Scrappers and Recyclers.</li> <li>• EPR and ESG fulfilment for Manufacturers and Brand Owners.</li> <li>• Creating Carbon Projects around circularity</li> </ul>		
<b>USPs</b>	<ul style="list-style-type: none"> <li>• Bridging digital solutions with physical processes in automotive recycling for a holistic industry development</li> <li>• Catalyst for India's End of Life vehicle scrapping policy               <ul style="list-style-type: none"> <li>• Operating ELV Certificate of Deposit (Govt. Discount Coupon) Trading Platform</li> <li>• Authorized by Ministry of Road Transport and Highways.</li> <li>• Completely integrated with Govt. Vehicle system</li> <li>• Designed Carbon Project for End-of-Life Vehicle Waste Management, the Global first fractionalized dMRV enable, 100% traceable Carbon Credit Project</li> </ul> </li> <li>• Experience of running India's first EPR marketplace and Industrial Particulate Matter Emission Permits trading platform</li> </ul>		

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## Voluntary Vehicle Scrapping Policy

- In the interest of a clean environment and rider and pedestrian safety, the Ministry of Road Transport and Highways has introduced Voluntary Vehicle-Fleet Modernization Program or “Vehicle Scrapping Policy” in 2021 which is aimed at creating an Eco-System for phasing out of Unfit and Polluting Vehicles.
- India has 51 lakh Light Motor Vehicles which are older than 20 years and 34 lakh Light Motor Vehicles which are older than 15 years. Around 17 lakh Medium and Heavy Commercial Vehicles are older than 15 years without valid fitness certificate. Older vehicles pollute the environment 10 to 12 times more than fit vehicles and pose a risk to road safety.
- The objectives of the policy are to reduce population of old and defective vehicles, achieve reduction in vehicular air pollutants to fulfill India’s climate commitments, improve road and vehicular safety, achieve better fuel efficiency, formalize the currently informal vehicle scrapping industry and boost availability of low-cost raw materials for automotive, steel and electronics industry.
- The scheme shall provide strong incentives to owners of old vehicles to scrap old and unfit vehicles through registered scrapping centres, which shall provide the owners with a scrapping certificate. Some of these incentives include:
  - (1) Scrap Value for the old vehicle given by the scrapping centre, which is approximately 4-6% of ex-showroom price of a new vehicle.
  - (2) The state governments may be advised to offer a road- tax rebate of up to 25% for personal vehicles and up to 15% for commercial vehicles
  - (3) In addition, the registration fees may also be waived for purchase of new vehicle against the scrapping

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# Vehicle Scrapping Statistics

**50+ RVSFs**  
RVSFs are operational

**Year 2024 (till date) – 40,575 ELVs Scrapped**  
Year 2023 – 28,200 ELVs scrapped

**18/36 States/ UTs have issued RVSFs License**  
Other 18 states / UT - RVSFs not yet opened

**14 States – 25%\* discount on Road Tax for Non-Transport Vehicles**  
Rest States have 10 or 15% discount on Road Tax

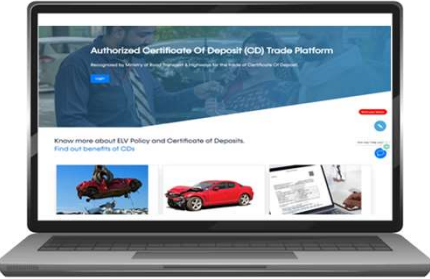
\* 3 States with 25% & cap

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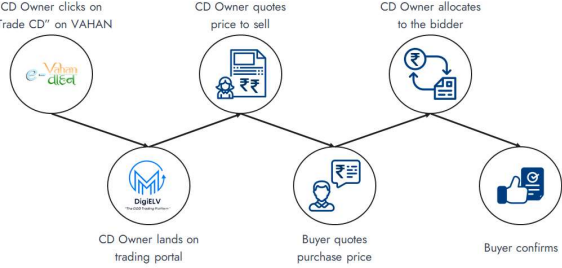
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# DigiELV Journey

DigiELV is a **Ministry of Road Transport & Highways (MoRTH) Authorized Certificate Of Deposit (CD) Trade Platform**



Sell & Buy CDs at best value



**MV Tax concession announced and implemented by States / UTs**

S. No.	State/UT	% tax concession for Transport vehicles	% tax concession for Non-transport vehicles
1	Bihar	15%	25%
2	Madhya Pradesh	15%	25%
3	Rajasthan	15%	25%
4	Assam	15%	25%
5	Jharkhand	15%	25%
6	Chandigarh	15%	25%
7	Odisha	15%	25%
8	Uttar Pradesh	10%	15%
9	Haryana	10% (or lower of 50% of scrap value)	10% (or lower of 50% of scrap value)
10	Uttarakhand	15%	25% (or Rs 50,000, whichever is lower)
11	Maharashtra	10%	10%
12	Punjab	15%	25%
13	Mizoram	15%	25%
14	Chhattisgarh	15%	25%
15	Kerala	10%	15%
16	DD&DNH	15%	25%
17	Goa	15% (or lower of 50% of scrap value)	25% (or lower of 50% of scrap value)
18	Gujarat	15% (capped at maximum sale value for different categories – e.g. buses, trucks, LCVs)	25% (capped at max. sale value of Rs. 60,000 for 2-wheeler and Rs. 10 lakhs for LMTVs)
19	Puducherry	15%	25% (or Rs 11,000, whichever is lower)

Upto 25 Discount in Road Tax & Registration Tax waived off

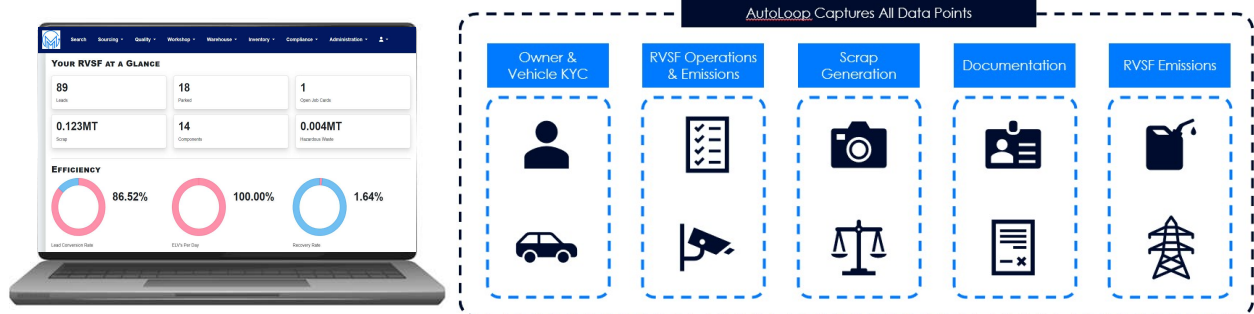
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# About AutoLoop



AutoLoop is cloud-based End-to-End RVSF management solution providing seamless workshop Operations management, Warehouse management, Inventory management, Compliance management and Sales Management.



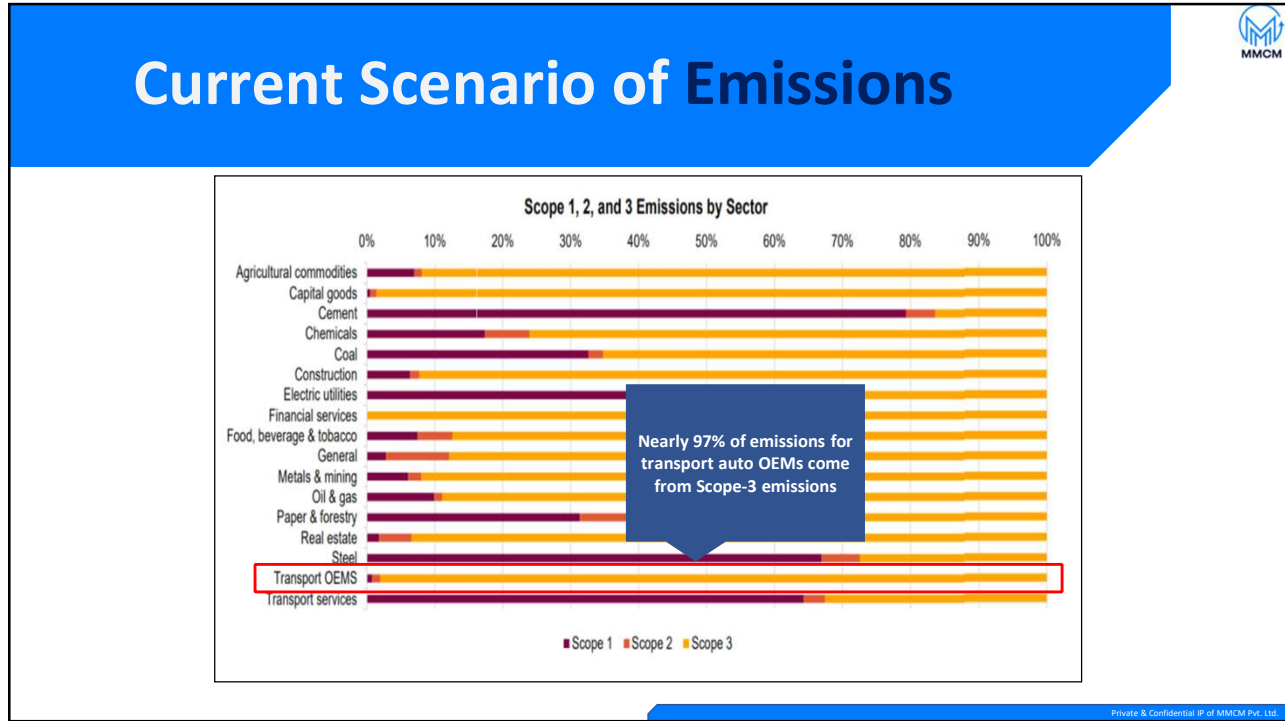
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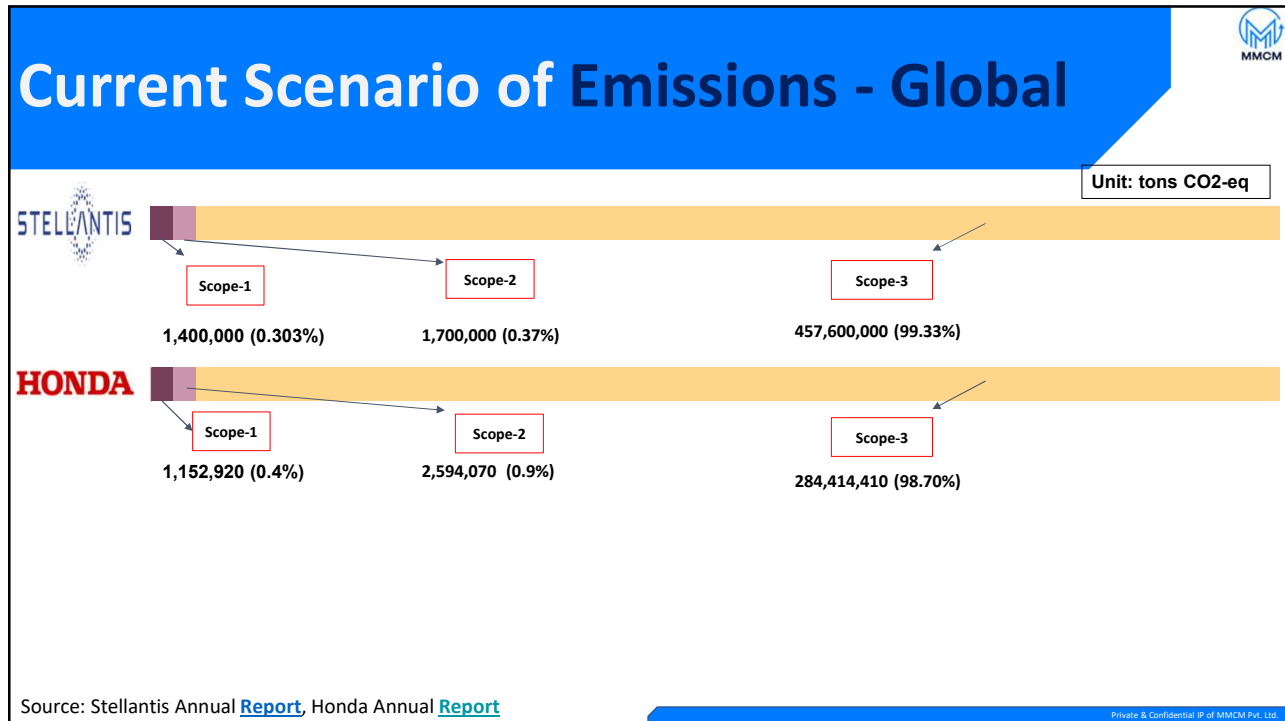
## MMCM solution around Decarbonization

1. Offsets through ELV Carbon Credits
2. Decarbonize scope 3 emissions through Material Recycling Traceability

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# Current Scenario of Emissions - India

As scope-3 emissions are outside the direct control of the organizations, they are quite difficult to measure and mitigate. Nevertheless, some companies have begun reporting on these emissions.

**Mahindra and Mahindra** (India) 75% of business operation: FY23

Absolute Scope (1+2) GHG emissions:  
 Scope 1 (Direct Emissions) = 58,936 tCO<sub>2</sub>e  
 Scope 2 (Indirect Emissions) = 202,306 tCO<sub>2</sub>e  
 Total Absolute Scope = 261,242 tCO<sub>2</sub>e

Absolute Scope 3 GHG Emissions:  
 Scope 3 (Other Indirect emissions) = 80,214,591 tCO<sub>2</sub>e

**Tata Motors:** FY23

Absolute Scope (1+2) GHG emissions:  
 Scope 1 (Direct Emissions) = 42,200 tCO<sub>2</sub>e  
 Scope 2 (Indirect Emissions) = 185,394 tCO<sub>2</sub>e

Absolute Scope 3 GHG Emissions:  
 Scope 3 (Other Indirect emissions) = N/A

**TVS**

4. Please provide details of total Scope 3 emissions & its intensity, in the following format:

Parameter	Unit	FY 2022-23	FY 2021-22
Total Scope 3 emissions ( Break-up of the GHG into CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, PFCs, SF <sub>6</sub> , NF <sub>3</sub> , if available)	-	-	-
Total Scope 3 emissions per rupee of turnover	-	-	-
Total Scope 3 emission intensity (optional) - the relevant metric may be selected by the entity	-	-	-

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N)

No

If yes, name of the external agency.

Scope 3 inventorization considering upstream and downstream process is taken as one of the major projects for FY 2023-24.

**Maruti-Suzuki** FY23

Absolute Scope (1+2) GHG emissions:  
 Scope 1 (Direct Emissions) = 223,289 tCO<sub>2</sub>e  
 Scope 2 (Indirect Emissions) = 206,626 tCO<sub>2</sub>e

Absolute Scope 3 GHG Emissions:  
 Scope 3 (Other Indirect emissions) = N/A

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# Where to get started?

The GHG Protocol defines 15 different categories of Scope 3 emissions.

Automobile companies have a particular opportunity to take significant steps to decarbonize their activities in three of those categories:



**Scope-3**

**Category 1:**

Purchased goods and services

**Category 11:**

Usage of sold products

**Category 12:**

End-of-life treatment of sold products

Source [Report](#)

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# Decarbonizing Via ELV Recycling & Material Traceability



Auto-OEMs will account for 97% of total Scope 3 emissions. Within this, Category 1 and 12 emissions constitute 20%, with the remainder falling under Category 11. MMCM will aid in reducing Scope 3 emissions for Auto-OEMs through the mentioned approaches targeting Category 1 and 12 emissions.

**Scope 3, Category 1** emissions from Auto OEMs can be reduced by sourcing green materials from Tier 1 & 2 suppliers, with traceability ensured through materials originating from the OEM's own End-of-Life Vehicles (ELVs). MMCM's ecosystem and RVSF linkages provides material traceability to OEMs.

**Scope 3, Category 12** emissions from Auto OEMs refer to the emissions associated with the end-of-life treatment of their sold products. If Registered Vehicle Scrapping Facilities (RVSFs) are not available, End-of-Life Vehicles (ELVs) often end up abandoned on roads or in landfills, leading to increased emissions. By utilizing RVSFs, these vehicles can be properly recovered and recycled.

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## ELV Carbon Credits





- The ELV Carbon Credit is the global first project which is fully traceable around Material Circularity from ELVs.
- In India Around 10 million vehicles of different categories like 2w, 3W and 4w and above are getting retired every year, which are a major source of recyclable material and if handled in environmentally friendly way can generate nearly a million tons to Carbon Emission Savings.
- Carbon Emission savings are generated when different material is recovered and recycled from RVSFs, the Calculations for these credits are based in International Standards ISO 16042 and are vetted by IIT Mumbai.
- The revenue from these Carbon credits can help the RVSFs to source more vehicle from the market and offer better prices as compared to unorganised market.


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# Our Partners in the Journey




 **DOVU** - A UK based Carbon Credits Marketplace

 **Earthood** - Validation and Verification Body

 **IIT Bombay** - Validated the Calculation Algorithm for emission saving

 **THE HBAR FOUNDATION** - Hedera's Fund for Technical and funding support

 **Ecoveda** - Carbon Consultants

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# THANK YOU



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