C40 CITIES

iFOREST INTERNATIONAL FORUM FOR ENVIRONMENT, SUSTAINABILITY & TECHNOLOGY

PATHWAYS FOR A JUST AND INCLUSIVE TRANSITION IN E-FREIGHT

Knowledge Brief

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About the
Laneshift Programme

The Laneshift Programme, led by The Climate Pledge and C40 Cities Climate Leadership Group, is accelerating the transition to zero-emission freight by supporting the adoption of electric trucks and charging infrastructure across cities in India (Mumbai, Delhi, Bengaluru, and Pune) and Latin America (Rio de Janeiro and Curitiba in Brazil, Mexico City in Mexico, Bogotá and Medellín in Colombia, and Quito in Ecuador).

With road freight being a major contributor to air pollution and carbon emissions, Laneshift collaborates with businesses and industry stakeholders to decarbonize freight corridors and drive large-scale EV adoption. In India, the Programme is playing a crucial role in reducing emissions, improving air quality, and creating a more sustainable and efficient freight sector.

A key aspect of Laneshift is ensuring a Just and Inclusive Transition (JIT) in freight electrification by addressing both the environmental and social challenges of decarbonization. The Programme is committed to making the shift to zero-emission trucks fair, equitable, and inclusive, with a strong focus on skills development, economic opportunities, and worker protection. To achieve this objective, a roadmap - Pathways for Just and Inclusive Transition in e-Freight - has been developed by iFOREST in collaboration with C40 Cities. The Roadmap recommends workforce integration strategies to minimize job displacement and ensure a smooth transition for workers. It identifies reskilling needs to enable efficient workforce integration into the evolving e-freight sector.

This Knowledge Brief presents the key recommendations of the roadmap in a graphical format, offering practical guidance for stakeholders to support a just and inclusive transition. It serves as a valuable resource for policymakers, industry leaders, and workforce planners to foster an equitable shift toward sustainable freight solutions.

About iFOREST
Just Transition Programme

International Forum for Environment, Sustainability & Technology (iFOREST) is an independent non-profit environmental research and innovation organization. It seeks to find, promote and scale-up solutions for some of the most pressing environment development challenges. It also endeavors to make environmental protection a peoples' movement by informing and engaging the citizenry on important issues and programs.

The Just Transition (JT) program is designed to address the urgent need for a transition to decarbonized energy systems, which is critical to achieving Net Zero goals. However, this shift must be equitable, ensuring that workers and communities reliant on fossil fuel industries are not left behind. A Just Transition focuses on integrating energy access, security, and environmental and social justice into the climate action agenda. By doing so, it seeks to build a green economy that promotes fair outcomes for all stakeholders, including vulnerable groups and informal workers.

In India, the India Just Transition Centre (IJTC), established by iFOREST, is a key platform dedicated to driving this comprehensive agenda. Its mission includes conducting evidence-based research, developing actionable policies, and promoting best practices that can be implemented at both local and national levels. Through strategic collaborations, particularly in the Global South, the IJTC aims to influence international climate frameworks, ensuring that the Just Transition narrative is central to global policy discussions. The center's objectives are to integrate Just Transition into India's climate change policy, assist states in formulating policies and pilots, support industries in developing transition frameworks, and contribute to international frameworks. With a focus on sectors such as coal, thermal power, industry, and transport, IJTC is committed to making the transition inclusive, supporting capacity-building and ensuring that vulnerable communities are at the forefront of this transformation.

Abbreviations

₹	Indian Rupee
ACM	Automotive Component Manufacturer
CO_2	Carbon Dioxide
E-MHDV	Electric Medium- and Heavy-Duty Vehicle
EoL	End of Life
EV	Electric Vehicle
GVW	Gross Vehicle Weight
HDV	Heavy-Duty Vehicle
ICE	Internal Combustion Engine
IFOREST	International Forum for Environment, Sustainability & Technology
JIT	Just and Inclusive Transition
LFO	Large Fleet Operator
MDV	Medium-Duty Vehicle
MFO	Medium Fleet Operator
MHDV	Medium and Heavy-Duty Vehicle
NSDC	National Skill Development Corporation
NSQF	National Skills Qualification Framework
OEM	Original Equipment Manufacturer
PM2.5	Fine Particulate Matter (particles with a diameter of 2.5 micrometres or less)
SFO	Small Fleet Operator


Karnataka
2024

What is
Just & Inclusive Transition

Originated from labor movements advocating for fair and equitable change, and later institutionalized by the International Labour Organization (ILO) and the United Nations Framework Convention on Climate Change (UNFCCC).

Maximizes the social and economic opportunities of climate action, while minimizing and carefully managing any challenges

Just & Inclusive Transition

Equal participation and support for all social groups to promote diversity and equity.

Ensures a shift to greener, resilient systems while protecting workers, users, and citizens through fairness, skill development, and economic opportunities.

Elements of Just Transition

PRINCIPLES

- People-Centric
- Decent Work
- Restructuring economy
- Reskill
- Inclusive

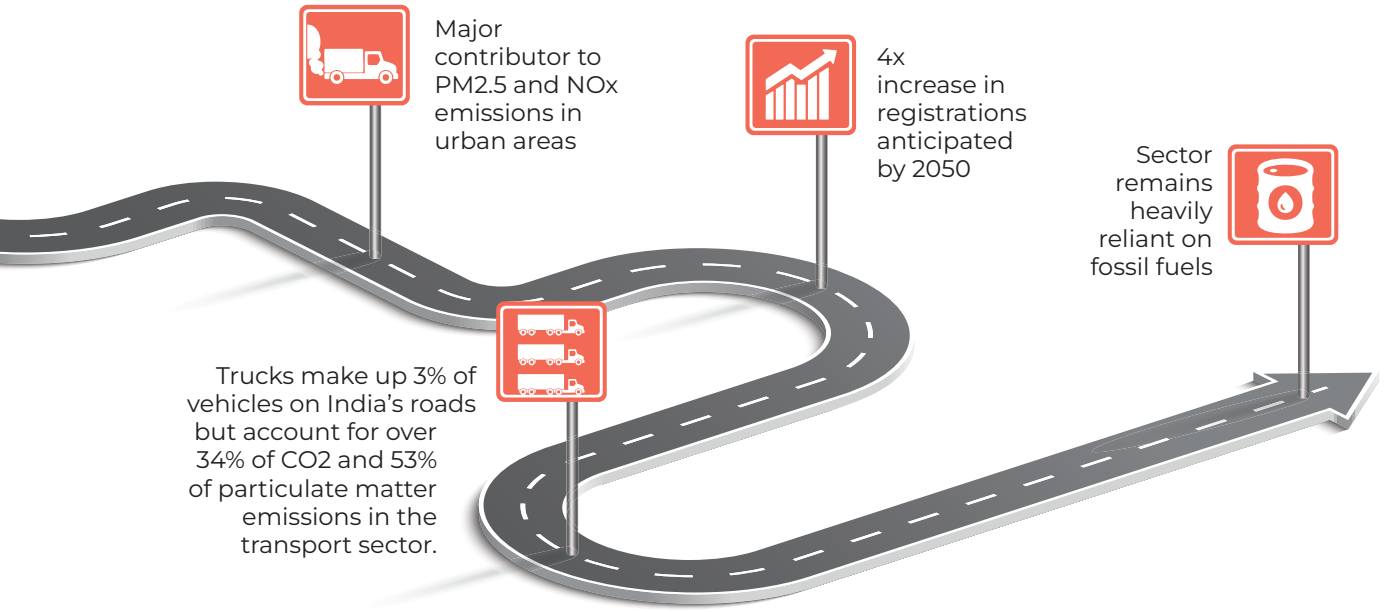
PEOPLE

- Workforce
- Consumers
- Communities

OUTCOMES

- Better Social Protection
- Inclusive Workforce
- Equitable Cost-Benefit Sharing
- Improved Livelihoods
- Green Jobs

Why does Freight Needs to **Decarbonize**

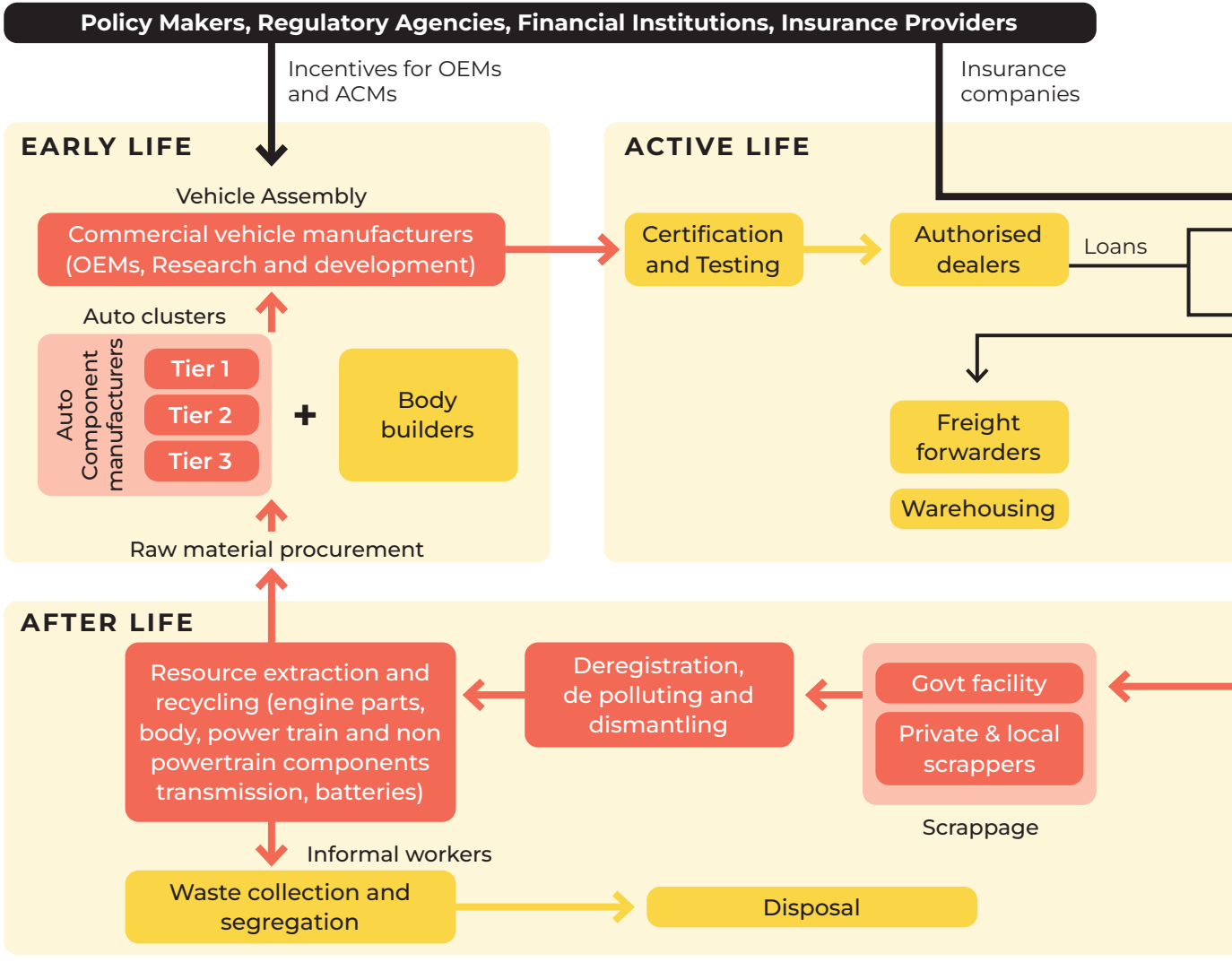


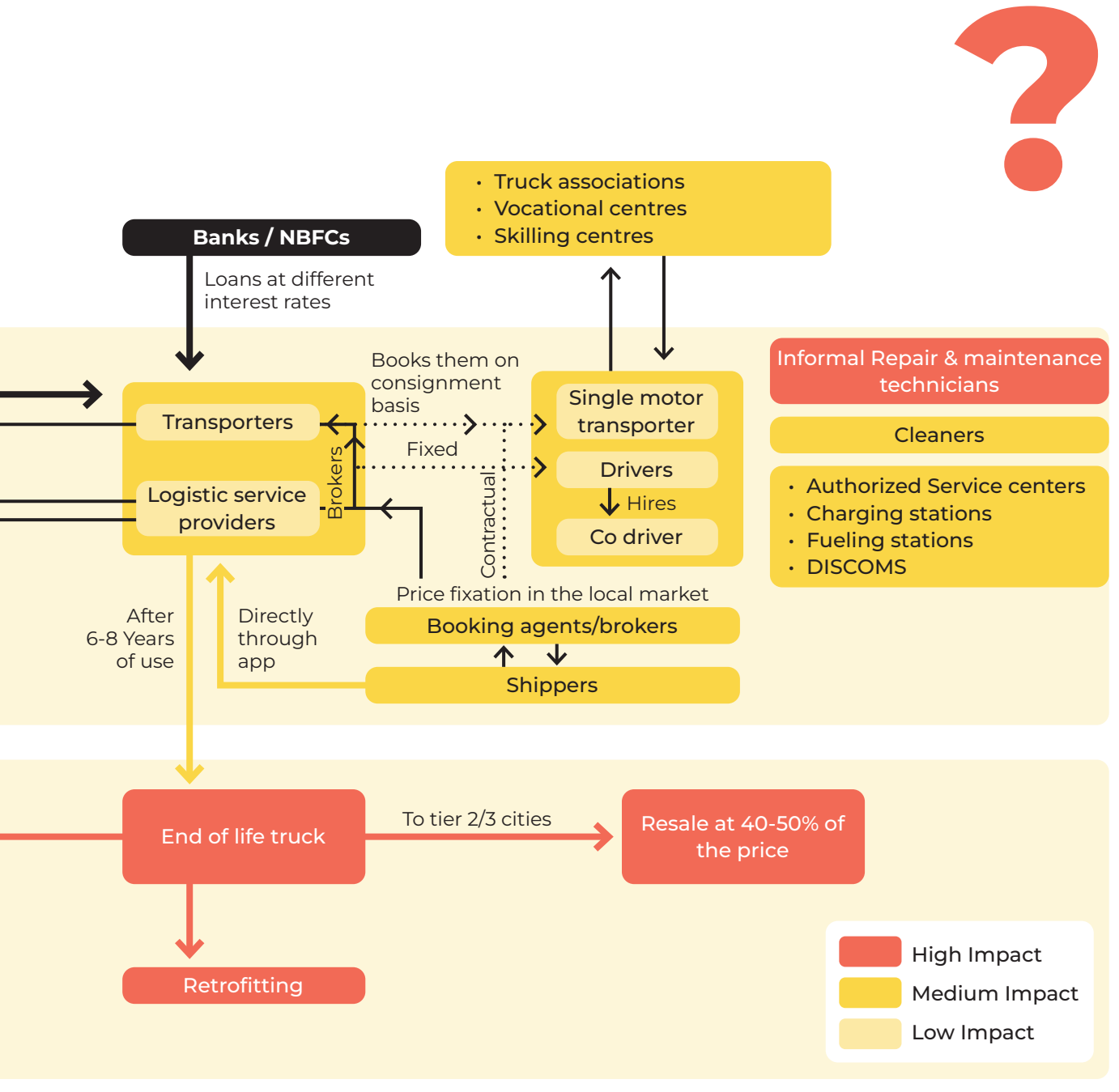
Why does Just and Inclusive Transition Matters in Freight Electrification?

The shift to cleaner fuels will disrupt the logistics sector, requiring a just transition to ensure all stakeholders adapt without exclusion.

High level of informality in the sector	Lack of social security, contracts, and protections	67% are small fleet owners with limited financial resilience.
Male dominance	Workers lack basic education qualifications needed for formal skilling programs.	

Who will Get Impacted by
Freight Electrification




Banks / NBFCs
Loans at different interest rates
Truck associations
Vocational centres
Skilling centres
Transporters
Logistic service providers
Brokers
Books them on consignment basis
Fixed
Contractual
Single motor transporter
Drivers
Hires
Co driver
Informal Repair & maintenance technicians
Cleaners
Authorized Service centers
Charging stations
Fueling stations
DISCOMS
Price fixation in the local market
Booking agents/brokers
Shippers
After 6-8 Years of use
Directly through app
End of life truck
To tier 2/3 cities
Resale at 40-50% of the price
Retrofitting
High Impact
Medium Impact
Low Impact

What does

Just Transition in Freight Electrification Look Like

Financing for Transition

01

Greening Freight

Promote green technologies and support businesses in transitioning to sustainable energy.

02

Improving Freight Mobility

Ensure efficient, affordable, and high-quality freight services for all.

03

Ensuring Equity

Fairly distribute costs and provide support to affected workers and communities.

04

Enhancing Resilience

Strengthen social, economic, and environmental resilience for all stakeholders.

What are the Implications for Just Transition in Road e-Freight

1. Greening Freight

Impact on value chain
Smaller enterprises face significant challenges with the transition; EVs perceived as less reliable than diesel trucks.

Impact on enterprises
Small ACMs highly impacted, LSPs to modify operations, and need for better end of life management

2. Improving Freight Mobility

Impact Of Digitization
30% of stakeholders reported discomfort in using smart devices;

Support Infrastructure
Limited Highway Charging; Rural Power Reliability Issues; Dependence on Thermal Power

3. Ensuring Equity

Access to Services
High logistics cost, Rural-Urban Disparities; Limited market access for small businesses

Gender & Inclusion
Women account for just 8% of the workforce; participation of other social groups negligible

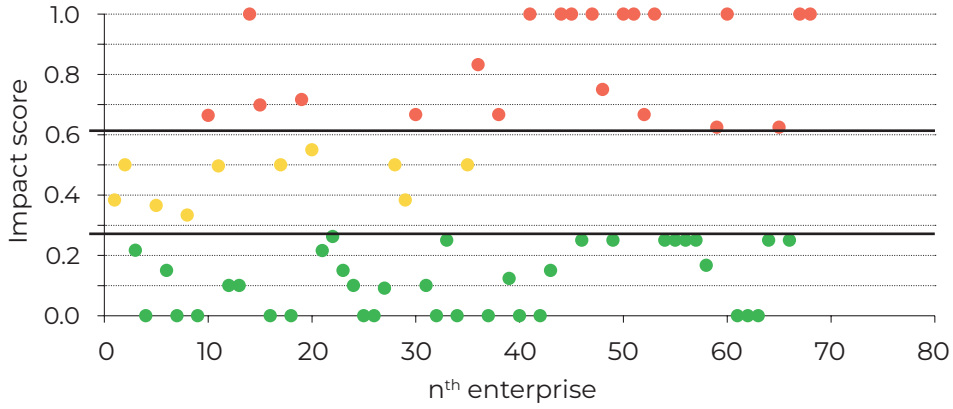
4. Enhancing Resilience

Environment resilience
Congestion concerns, over 50 Lakh Trucks could come up for scrapping by 2045

Social resilience
Large informal workforce, Unsafe working conditions for informal workforce, skill gaps

How does Freight Electrification
Impact the Enterprises

Average Impact Scores based on nature of Enterprise



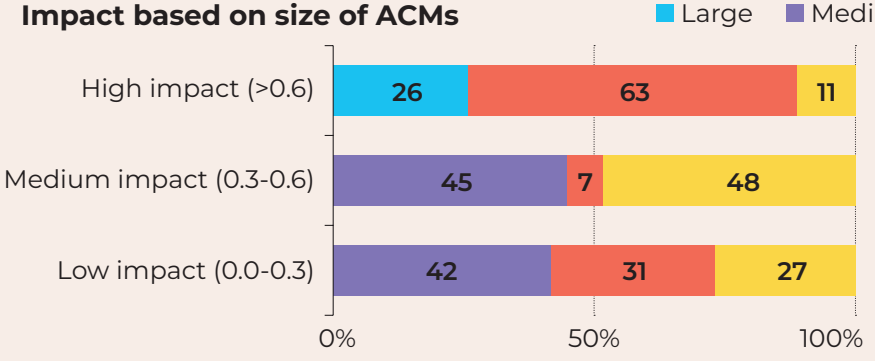
>0.6
High impact

0.3-0.6
Moderate impact

0.0-0.3
Least impact

30% of ACMs will be highly impacted (Engine assemblies, transmissions, exhaust systems, radiator systems), while 14% will be moderately impacted (Braking systems, steering assemblies, suspension components, lightweight body structures).

Impact based on size of ACMs



A deep dive into the impact by ACM size reveals that micro and small ACMs will be the most affected, followed by medium-sized ACMs.

How does Freight Electrification
Impact Small Fleet Operators

Fleet Ownership patterns

Large Fleet Operators (>20 Trucks)

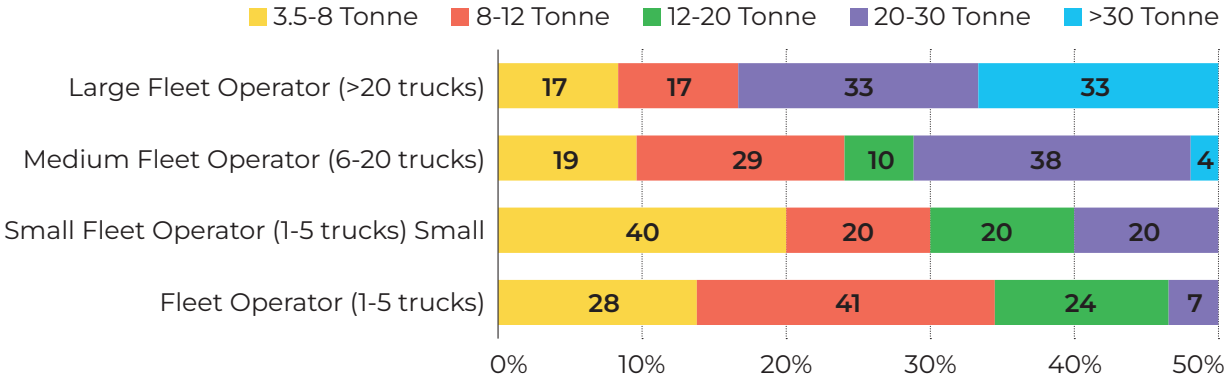
Logistic service providers | Freight forwarders | 3PL, 4PL, 5PL

Medium Fleet Operators (5-20 Trucks)

Small Fleet Operators (<5 Trucks)

Single motor operator | Small Fleet Operators

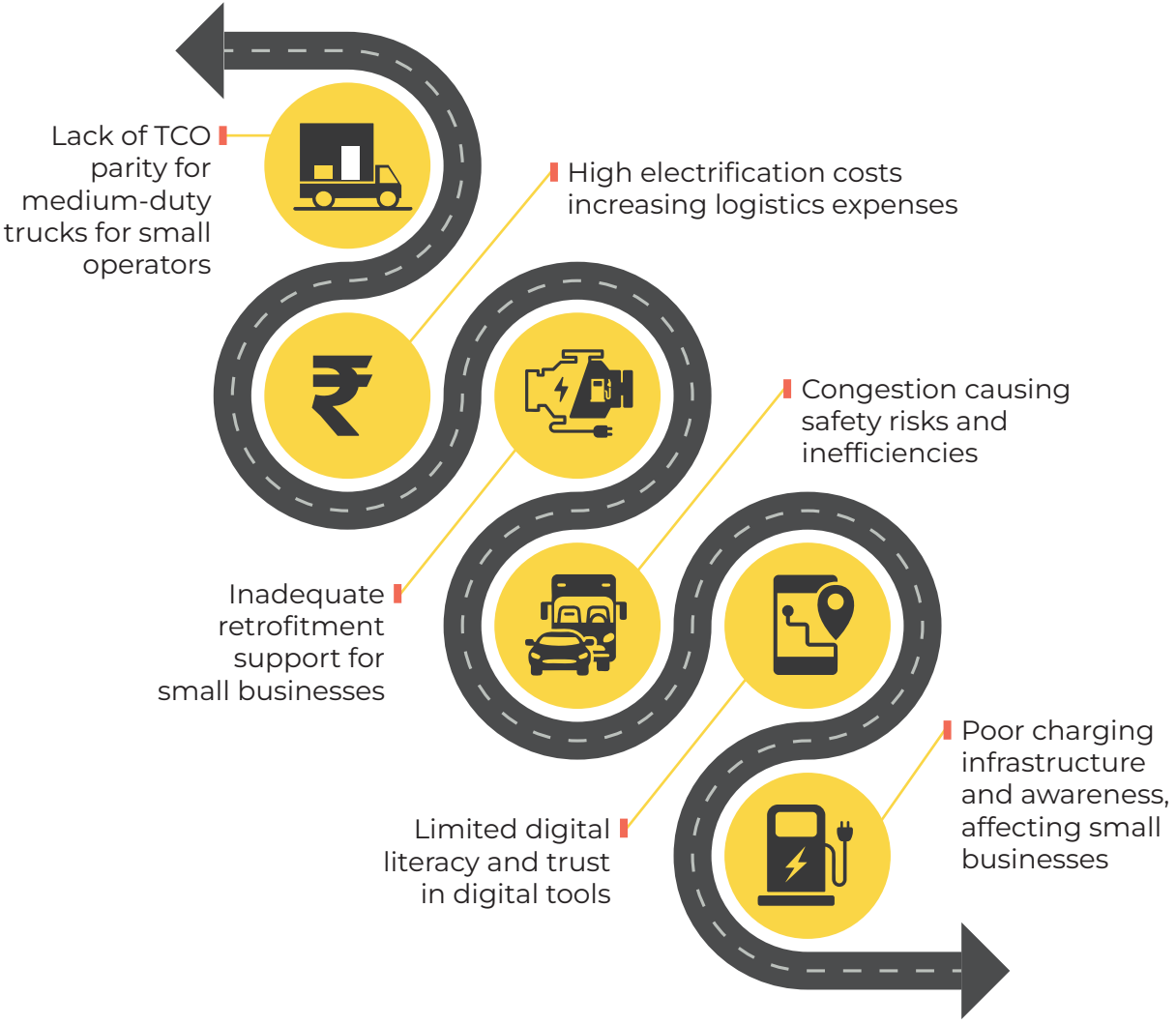
Share of common truck segments operated by size of the fleet operator



3.5-12 tonne trucks dominate the market, preferred by small fleet operators based on their business needs. However, recent studies on technology readiness indicate that TCO parity is yet to be achieved for this category. By 2030, heavy duty trucks are likely to achieve TCO parity.

How does Freight Electrification

Impact Small Fleet Operators?



How does Freight Electrification Impact the Workforce

The ICE MHDV industry currently has 529 distinct job roles across all segments of the vehicle lifecycle.

The ICE MHDV industry currently has 529 distinct job roles across all segments of the vehicle lifecycle.

Skill assessment reveals key skills required by stakeholders to transition to Electric freight are:

Technical Skills/ Expertise

- ✓ IIoT-Enabled Predictive Maintenance
- ✓ Mechatronics
- ✓ EV Powertrain Assembly & Maintenance
- ✓ High-Voltage System Handling
- ✓ Battery Management & Recycling
- ✓ Charging Operations
- ✓ Retrofitting

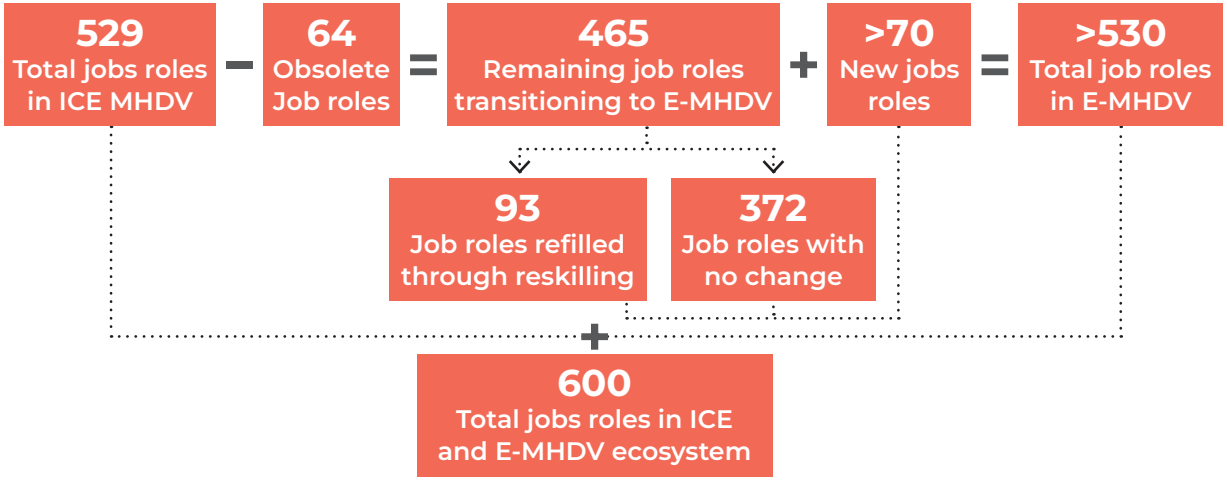
Theoretical knowledge

- ✓ Battery Technology & Power Electronics
- ✓ EV Regulatory & Safety Standards
- ✓ Vehicle Communication & Connectivity
- ✓ Supply Chain & Logistics Optimization
- ✓ End-of-Life Recycling & Waste Management

Employability Skills

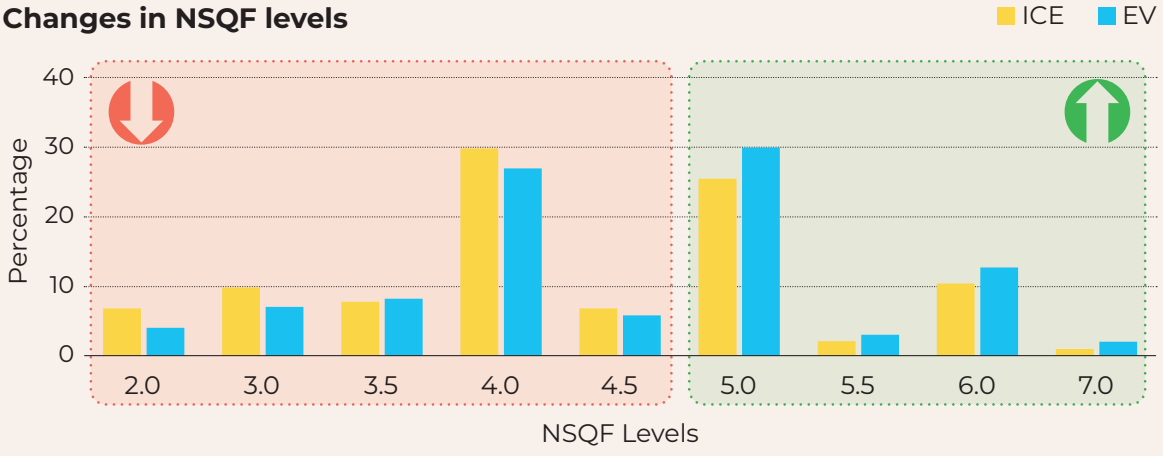
- ✓ Digital Literacy & Data Analytics
- ✓ Workplace Safety & Emergency Handling

With the shift from ICE MHDVs to E-MHDVs, 70% of jobs in the freight sector will remain unchanged, 13% will be new roles in E-MHDVs, and 17% will require re-skilling to meet the demands of freight electrification.



The shift to electric freight will require workforce reskilling as NSQF levels for E-freight job roles are generally higher, reducing demand for lower-skilled roles while increasing opportunities at mid-to-high skill levels.

Changes in NSQF levels



Executive Summary

Freight transportation is the backbone of economic growth, enabling trade, industrial supply chains, and job creation. India's goal of reaching a $30 trillion economy by 2047, up from $3.6 trillion, will be driven by a highly efficient freight and logistics sector that accelerates freight movement, lowers costs for consumers, and expands market access for its large base of small and medium-sized enterprises.

As decarbonization trends gain momentum, the sector is transitioning towards vehicles running on cleaner fuels, such as electricity and alternative fuels, to reduce carbon emissions and support environmental goals. This shift is evident across all freight modes including road freight which remains the key driver of freight movement in India. Road freight accounts for 71 per-cent of the freight share across all modes in India but is also responsible for 90 per cent of the transport sector's total emissions, contributing to air pollution and congestion. Medium and heavy-duty commercial vehicles (2-3 per cent of vehicles) are responsible for 45 per cent of road transport CO_2 emissions. India's rapidly expanding economy continues to drive a surge in demand for goods, straining infrastructure - particularly the road transport network and increasing costs. Logistics costs currently represent 14 per cent of India's GDP—significantly higher than the single-digit figures seen in developed nations. This is largely due to the freight transport modal mix. Over the past few decades, road transport's advantages, such as greater flexibility, shorter transit times, and better last-mile connectivity and unaddressed inefficiencies in other modes, have shifted freight to road.

As fossil-fuel powered trucks are gradually replaced by electric trucks, it is an opportune time to examine this transition through the lens of justice, equity, and inclusiveness. This approach will help us understand the impacts on consumers, small enterprises, the road freight workforce, and the overall efficiency of the freight and logistics sector to ensure transition benefits everyone.

About the study

This report has been developed by the **International Forum for Environment, Sustainability & Technology (iFOREST)** and the **C40 Cities Climate Leadership Group**. It outlines the 'Pathways for a Just and Inclusive Transition to Electric Freight (MHDVs)' in India, emphasizing that environmental sustainability must align with equitable transformation across the workforce, communities, and industry. This report is the result of an eight-month study focused on the following objectives:

1. Conduct a baseline assessment of key stakeholders and the existing workforce across the freight value chain.

2. Estimate the transition impacts in terms of enterprises, job roles and skill gaps and identify the transition barriers for stakeholders, especially for the workforce in road freight
3. Develop a strategic framework and actionable pathways for a just and inclusive transition to electric freight.

Transition Barriers

A "womb-to-tomb" assessment of transitioning from internal combustion engine (ICE) to e-trucks reveals the systemic barriers to a just transition across all lifecycle stages.

In the **Early Life** phase, higher upfront and operational costs of electric medium and heavy-duty vehicles (e-MHDVs) — ultimately borne by consumers as higher logistics costs, lack of total cost of ownership (TCO) parity for medium-duty trucks (8-12 tonne trucks), and limited domestic manufacturing — disproportionately impact small fleet operators (67% of the market) and informal Auto Component Makers (ACMs), risking business closures, job losses, and worker displacement. Low-skilled manufacturing workers at National Skills Qualification Framework (NSQF) levels 2-3, often from marginalised communities, face the risk of obsolescence, as only 34% currently hold permanent roles that offer job security. Additionally, the focus on electrification neglects the broader environmental impacts of automobile manufacturing, such as sustainable material sourcing and renewable energy adoption across the value chain.

During the **Active Life** phase, inadequate charging infrastructure, unreliable grid capacity, and poor road conditions disrupt efficiency and escalate wear-and-tear costs of e-trucks, disproportionately burdening small operators. Vulnerable groups—including women, LGBTQIA+ individuals, and marginalised groups—currently face exclusion due to unsafe and remote workplaces, lack of inclusive facilities, and unsafe transport options. Digital literacy among informal service and maintenance workers further exacerbates the barriers, leaving them ill-equipped to handle advanced technologies such as computerised systems and diagnostics in e-trucks. Operational challenges include high maintenance costs, hazardous working conditions for drivers (12-hour shifts, health risks, harassment), and congestion from unregulated freight growth, worsening road safety and causing delivery delays and inefficiencies for freight movement. The sector's reliance on informal labour undermines worker rights and social security.

In the **After life** phase, informal truck scrapping practices and improper battery recycling pose environmental and health risks, while regulatory hurdles, such as complex regulatory approvals and high taxes, limit retrofitting accessibility and scalability. Informal end-of-life (EoL) workers, lacking training for EV-specific dismantling processes, face heightened dangers from unsafe practices, further harming the communities in the neighbourhood.

Collectively, these barriers threaten to deepen inequalities, exclude vulnerable stakeholders, and undermine environmental goals, necessitating targeted interventions to ensure an equitable transition.

Opportunities

Despite the challenges, the transition to e-freight vehicles offers a multitude of opportunities that span environmental, economic and social dimensions. The electrification of MHDVs could lead to a 40–50% reduction in particulate matter (PM2.5) emissions and eliminate tailpipe CO_2 emissions, improving urban air quality and public health outcomes. The environmental gains from electrification are not limited to new vehicles; **retrofitting old diesel trucks with electric powertrains could extend their operational lifespan by 8–10 years, providing an economically viable alternative at 24% lower costs than purchasing new e-trucks, especially for small businesses**.

Economically, by 2030, e-trucks in few freight segments (such as 55-tonne trucks) are expected to achieve a 9% lower TCO as compared with its diesel counterparts. This reduction in TCO is driven by lower fuel (charging) and maintenance costs as well as the declining prices of batteries and other EV components. Policies such as PM E-DRIVE and Production-Linked Incentive (PLI) schemes are already laying the foundation of domestic EV manufacturing, battery production and charging infrastructure expansion. **Lower costs driven by these initiatives, when passed on to consumers and shippers, can pave the way for increased access and expansion of freight services**.

The transition to e-freight also presents significant social opportunities, particularly in terms of employment and workforce development. Targeted interventions, such as gender-inclusive training programmes in software led diagnostics or driving training for alternate genders, can help diversify the traditionally male-dominated freight sector. By providing training and upskilling opportunities, these programmes can open up new career paths for women and other underrepresented groups, enabling a more inclusive workforce. Additionally, the formalisation of informal workers in the freight sector can lead to improved job security, better working conditions and access to social benefits. The adoption of advanced technologies, such as artificial intelligence-based (AI-based) route optimisation, can enhance the efficiency and safety of freight operations. These technologies not only reduce operational costs but also improve driver safety by minimising the risks associated with long hours and challenging routes. **Moreover, improvements in truck ergonomics can lead to better working conditions for drivers, reducing fatigue and enhancing overall job satisfaction**. Awareness of such aspects in the driving workforce can catapult driving to a more aspirational job than it is today and address a key challenge for road freight.

Just and Inclusive Transition Framework

Based on the factors discussed above, as part of the study, a comprehensive Just and Inclusive Transition Framework for the electrification of freight or MHDVs in India has been developed, focusing on achieving four key outcomes, as shown in the figure below.

Pillars for Just & Inclusive Transition for Road Freight

These outcomes are interconnected and collectively aim to create a sustainable, equitable, and resilient freight ecosystem. To realise these outcomes, the framework identifies specific levers that address environmental, economic, and social dimensions, ensuring a holistic approach to the transition. Financing of and supporting these levers, is critical to the transition, as they underpin the outcomes and ensure that the benefits of electrification are equitably and fairly distributed across all stakeholders.

The first outcome, Greening Freight, is centred on reducing the environmental impact of vehicle manufacturing and freight operations. This is realised through shifts in processes and business models in the value chain due to technological changes in e-trucks. As per the findings of this study, around **30% of ACMs will be highly impacted by the EV transition, particularly those producing engine, transmission, and body assemblies, which make up 57% of this group**. Business models across different types of service enterprises will also be impacted, necessitating measures to reduce costs and improve service reliability.

The second outcome, Improving Freight Mobility, focuses on the efficiency and accessibility of freight services. The Digitization lever involves the adoption of smart technologies to achieve the just transition goal of improved mobility.

The Support Infrastructure lever emphasizes expanding physical and logistical infrastructure, such as charging stations and electric grid upgrades, particularly in rural and underserved areas to support easier freight movement. **30% of the operational workforce is uncomfortable using smart technologies due to limited digital literacy, posing a significant barrier to digitization**. This further intensifies the requirement of additional skills for operating e- trucks.

The third outcome, Ensuring Equity, is essential to preventing end consumers and vulnerable segments from being disproportionately burdened. The Access to Services lever evaluates the availability, affordability, safety, and reliability of freight services, ensuring that all stakeholders, including small businesses and rural communities, benefit from the transition. **High logistics costs (13–14% of GDP) and accessibility challenges, especially in rural areas where costs are 30% higher on average, further hinder efficiency and inclusivity for small agricultural businesses and their access to market**. The Gender and Inclusion lever highlights the importance of

representation and opportunities for marginalised groups through targeted training programmes and policies that promote workforce diversity. **Women's participation in India's logistics sector remains low, at 20%, with only 8% in early-stage operations and negligible representation in heavy-duty roles**.

The fourth outcome, Enhancing Freight Resilience, focuses on building a robust and adaptable freight ecosystem while addressing unintended negative externalities. The Environmental Resilience lever emphasizes sustainable practices across the entire lifecycle of e-freight vehicles, including responsible material sourcing, congestion reduction, battery recycling, and the use of recycled materials. India's road transport sector significantly contributes to air pollution, with Heavy- Duty Vehicles (HDVs) emitting high levels of black carbon, PM2.5, and nitrogen oxides (NOX). Besides, truck accidents alone cost 3% to India's GDP. Poor road conditions, lack of safety measures, and high fatality rates (71% in truck crashes) underscore the urgent need for regulatory reforms. Informal vehicle scrapping and lithium-ion battery recycling exacerbate environmental hazards, with 90% of used batteries handled by the unorganised sector.

The second lever of Social Resilience examines the implications of the transition for the workforce and for society, to ensure there are safeguards against negative consequences and to support livelihoods. **Surveys indicate that 80% of ACM workers operate informally, facing job insecurity, low wages, and limited access to training. Truck drivers work long hours, with 38% exceeding 12-hour shifts daily, leading to exhaustion, health risks, and increased accident rates**.

This lever highlights workforce requirements, including improving working conditions and addressing skill gaps, which are crucial for building a resilient freight sector. In terms of skills, gaps will emerge across the three skill categories – technical, competence, and employability skills. **The assessment as part of this study reveals that the transition to electric MHDV will create ~70 new job roles, but the shift will leave ~64 existing roles obsolete, primarily in the manufacturing and service/repair segment**.

Additionally, a total of ~93 job roles will require reskilling, particularly in manufacturing, service/repair, and EoL management, focusing on skills such as electric motor assembly, high voltage systems handling, battery system repair, and EV charging infrastructure. Digital literacy gaps will compound the employability related skill gaps in communication and problem-solving. About 76% of the new job roles will be in manufacturing and service/repair. **More formal job roles requiring higher NSQF levels have been identified in EoL management and retrofitting segments**.

Recommendations

The report outlines several policy recommendations based on the outcomes, aimed at addressing the environmental, economic and social challenges of transitioning to electric freight.

KEY POLICY ACTIONS FOR A JUST AND INCLUSIVE TRANSITION IN E-FREIGHT

Integrated Multimodal Green Freight Network

- Develop an integrated and optimized electric trucking network aligned with national logistic plans for Dedicated Freight Corridors (DFCs) and multimodal connectivity (PM Gati Shakti) to drive efficiency gains from green freight networks, prevent congestion risks .
- Create a centralized user-friendly digital platform to integrate telematics to provide real-time charging data, route optimization, and compliance management.
- Invest in decentralized renewable energy solutions and promote public-private collaborations to expand infrastructure.
- Introduce payload-based GST slabs to incentivize efficient loading and reduce empty runs, alongside GST rebates for EV charging, spare parts, and maintenance to lower operational costs for small operators.

Charging Infrastructure and Grid Resilience

- Prioritize charging infrastructure development in public infrastructure planning, while upgrading electrical grids and retrofitting existing fuel stations with EV chargers.
- Provide diverse and high-capacity chargers (250 kW+) along key freight corridors, logistic parks and freight handling hubs to minimize vehicle downtime.
- Establish safety standards for high-power charging stations (emergency protocols, zoning) and deploy Battery Energy Storage Systems (BESS) to stabilize grids.

Inclusive Support for Small Enterprises and Regional Clusters

- Promote cluster-based support (shared R&D platforms, collective credit lines) for emerging ACM hubs

- Relax eligibility criteria under PLI and FAME schemes for small/micro-enterprises (ACMs), reducing investment thresholds and production volume requirements.
- Expand green financing (blended finance, concessional loans) and provide pre-production financial support (bridge loans, working capital) for small businesses to ease liquidity challenges during the transition.
- Encourage large OEMs to integrate small and micro-enterprises into EV supply chains through partnerships and upskilling programs.
- Strengthen e-MHDV support infrastructure in rural areas to make electric freight services accessible for small businesses, helping them expand market reach.

Green Manufacturing and Recycling

- Incentivize adoption of renewable energy and green manufacturing practices by OEMs and ACMs.
- Promote circular economy practices by incentivizing battery second-life applications and end-of-life vehicle (EoL) collection.
- Address EV recycling gaps by formalizing informal sectors and investing in battery recycling infrastructure.
- Streamline retrofitment approval processes, lower taxes, and extend scrapping policies for retrofitted e-trucks to encourage fleet electrification.

Green Logistics and Digital Enablement

- Align zero emission trucking to business needs of India's road freight industry dominated by small freight operators by prioritizing medium duty e-trucks for first and last mile logistics and scaling retrofitment for affordable fleet replacements.
- Mandate green certifications for Logistics Service Providers (LSPs) to promote sustainability (renewable energy, circular packaging) and align market incentives for small operators.
- Boost digital literacy for drivers and informal workers on fleet management tools, using rest stops as training hubs.
- Streamline GST/E-Way Bill compliance with digital tools and create a simplified dispute resolution mechanism for small operators.

Workforce Transition and Skilling

- Formalize labor contracts and support worker representation to protect employment rights of ACM workforce. Ensure workplace safety via updated Occupational Safety Codes for EV hazards (high-voltage systems, chemicals), improve conditions to prevent overworking and enforce PPE compliance.
- Expand social security (health insurance, pensions) to informal drivers and workers through amended labor laws and digital platforms for benefit accessibility.
- Update skilling programs (PMKVY, ITIs) with EV-specific curricula (battery safety, digital diagnostics) and mandate dedicated e-MHDV licensing with training on regenerative braking and telematics.
- Reassess existing job roles for reskilling as well as develop and approve new job roles NOS and QPs as needed for MHDV segment.
- Establish localized EV training centers at transport hubs and develop programs to retrain ICE technicians for EV repair roles.
- Equip technicians with expertise in charging infrastructure maintenance, ensuring workforce readiness for the growing EV ecosystem.
- Promote gender diversity in logistics through targeted incentives and specialized training programs for women in EV maintenance and technology-driven roles.
- Develop safe and inclusive facilities at transport hubs to accommodate diverse worker needs.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