



**Smart Freight
Centre India**



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BAGESHWAR
BINSAR

Green Freight Program India

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Smart Freight Centre

- Who are we?

We guide the global logistics industry to track and reduce its GHG emissions to



We are an international non-profit organization focused on reducing greenhouse gas emission from freight transportation

We collaborate with our global partners to quantify impacts, identify solutions, and propagate logistics decarbonization strategies

Our Target Audience

Primary audience consisting of:

Shippers

LSPs

Carriers

Tool Providers

Delivery Partners

from a wide range of sectors including:

Food and Beverage

FMCGs

Chemical

E-commerce

Cement

Pharmaceutical

Fashion

Metal

Logistics

Automotive

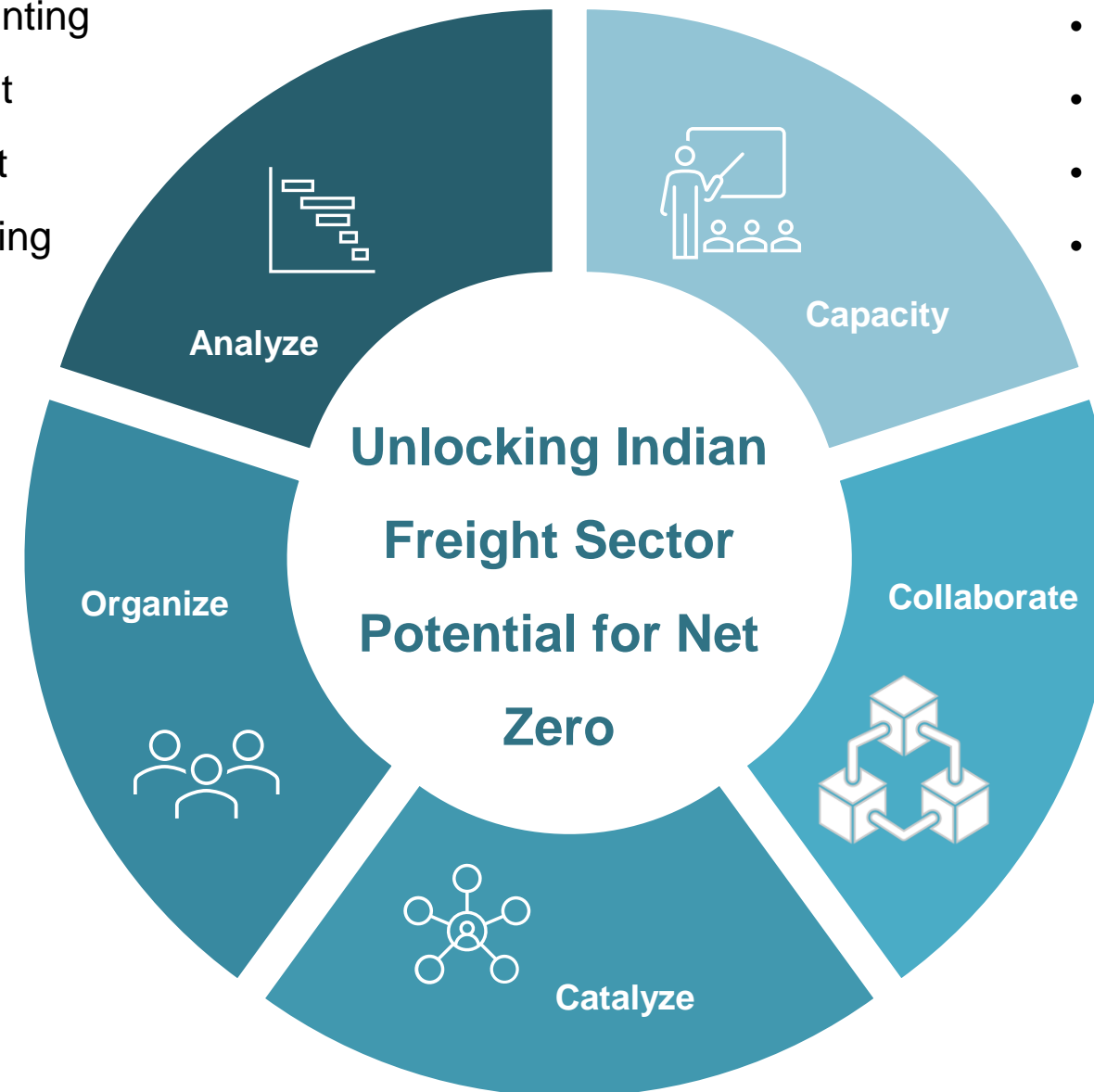
SFC India: Focus Areas

1. Quantify GHG footprint for action

- Institutionalize standardized emissions accounting
- Methodology development & GLEC alignment
- Awareness, Advocacy and external alignment
- Guidance and support on Emissions Accounting

2. Organize Shippers community

- Convene Shippers and LSPs with green freight vision
- Build emissions hygiene and establish ZET ambitions
- Establish collaborative models for ZET adoption
- Enable access to Global Shippers community



3. Catalyze ecosystem development

- Identify ecosystem barriers and mitigation strategies
- Collaborate with Policy for strategic road mapping for freight decarbonization
- Engage key stakeholders for Finance and tech enablement
- Catalyze partnerships and exchanges among stakeholders

5. Training and seminars

- Capacity development integral to all India programs
- Trainings and Cross border knowledge exchange
- Organize thematic knowledge share sessions and workshops
- Incubate large scale ZET centric event in partnership with GOI

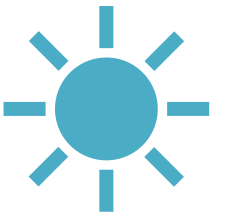
4. Collaborate on decarbonization projects

- Support Industry partners on ZET adoption strategy
- Establish a segmented framework for ZET adoption
- Co-develop business case and implementation roadmap
- Guidance and support on Emissions Accounting

Green Freight Program Design

Objectives	Key Results
1. Well-established and mobilized freight ecosystem	<ul style="list-style-type: none">• Tracking and reporting on the industry's progress• Recognized governance structure for stakeholder engagement• Knowledge exchange among leaders and regular platforms for exchange between industry and policy makers and other stakeholders• Rewards / recognition scheme for shippers, carriers and solution providers• More safe and inclusive working environment for truck drivers
2. Complete transparency of emissions	<ul style="list-style-type: none">• Stakeholders have increased capacity to calculate & report emissions• Recognition of the GLEC Framework and ISO14083 as standard methodology• Data is collected, calculated and shared
3. Efficient and low-emission truck fleets	<ul style="list-style-type: none">• Improved existing fleet composition -> higher efficiency & economic viability• Minimum standards for quality of imported secondhand trucks• Freight is optimized through modal shift and intermodality
4. Electric truck roll-out has started along corridors	<ul style="list-style-type: none">• Pilots with critical mass of e-trucks -> demonstrate viability• Financing for e-trucks at scale is mobilized
5. Empowered leaders, professionals and industry players	<ul style="list-style-type: none">• University courses on green logistics• Technical and vocational training on green logistics• Growing body of research on green logistics

India Ambition and Initiatives



Increase in **green freight fleet (electric commercial vehicles, hydrogen-powered commercial vehicles;** green hydrogen **manufacturing plants,** electrolyzers, EV charging stations).

Sustainable transportation options being developed [**Electric / CNG Ferries, Water Metro**].

Complete Railway track electrification;

Ethanol blending reached 12% resulting in savings of Rs 71,000 cr (\$8.53 bn); **lowering CO2 emissions** by over 400 Lakh MT in the last 9 years.

Eco-friendly transportation: cleaner fuels; electric vehicles (EVs) - Government launched several measures.

10,000+ EV Charging stations across the country.

Concessional financing for solar energy; **incentive schemes** for renewable energy.

Road Freight at a Glance

Globally, transport sector accounts for almost **one-fourth of the world's total energy consumption**, and derives more than 90% of its final energy from oil (IEA, 2022)



Road freight transport accounts for approximately **70%** of India's total freight (TERI, 2021)

India has the **2nd largest road network** in the world (MoRTH)

In India, **road freight movement has increased by 5.8 times*** (from 1999-2000 to 2018-19) (MoRTH, 2021), and it is **projected to increase to 9.6 TTKM** by the year 2050 (NITI Aayog, 2022)

As per TERI, India had approximately **55 lakh on-road HDVs** in the year 2021

HDVs and LDVs together consume approximately **64%** of the total diesel sold through retail fuel stations (PPAC, 2021)

*(0.47 trillion ton-kilometers (TTKM) in 1999-2000 to 2.69 TTKM in 2018-19)

SFC India Programs: e-FAST



SFC India is a part of the knowledge partner coalition for **e-FAST**, India's first platform, anchored by Niti Aayog (Government of India), to facilitate collaboration between government stakeholders and private sector players to shape strategies to create a conducive environment for freight electrification.

Focus Areas

Accomplishments so far



Scalable pilot & demand aggregation

Supporting consensus building and pilot demonstrations for electric freight, and creating a demand signal for scalable e-truck deployment.



Economic viability & financing

Analyzing viability of business models, developing instruments and de-risking mechanisms for financing electric freight fleets.



Long-term policy trajectories

Providing research and analysis to policy makers for development of policy incentives and regulatory frameworks to promote industry innovation and uptake of electric freight vehicles.

7,750

e-freight vehicle demand

45+

industry partners

17

knowledge partners

100+

bilateral discussions

3

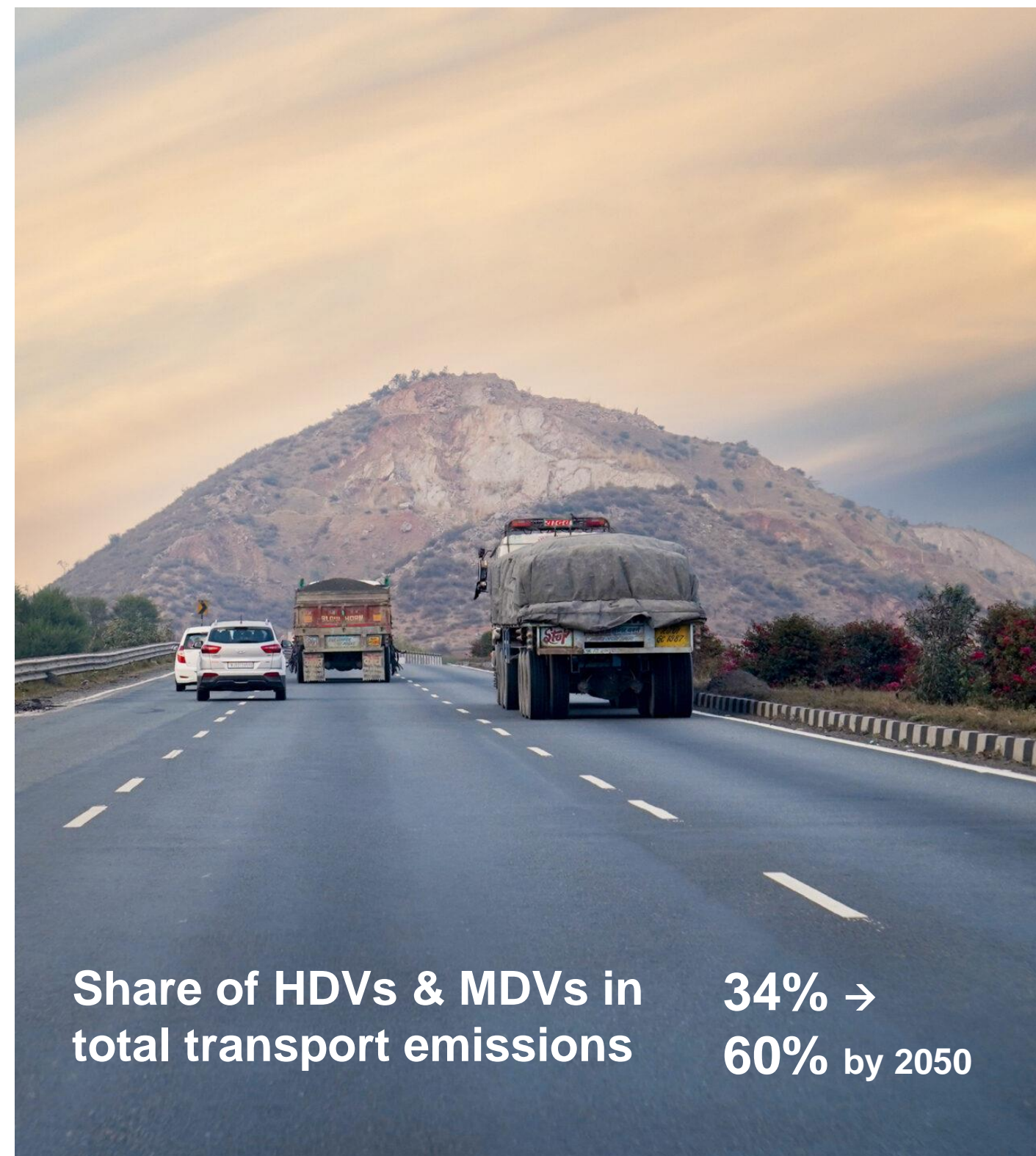
pilots declared

Contribution of Road freight sector to GHG emissions for India

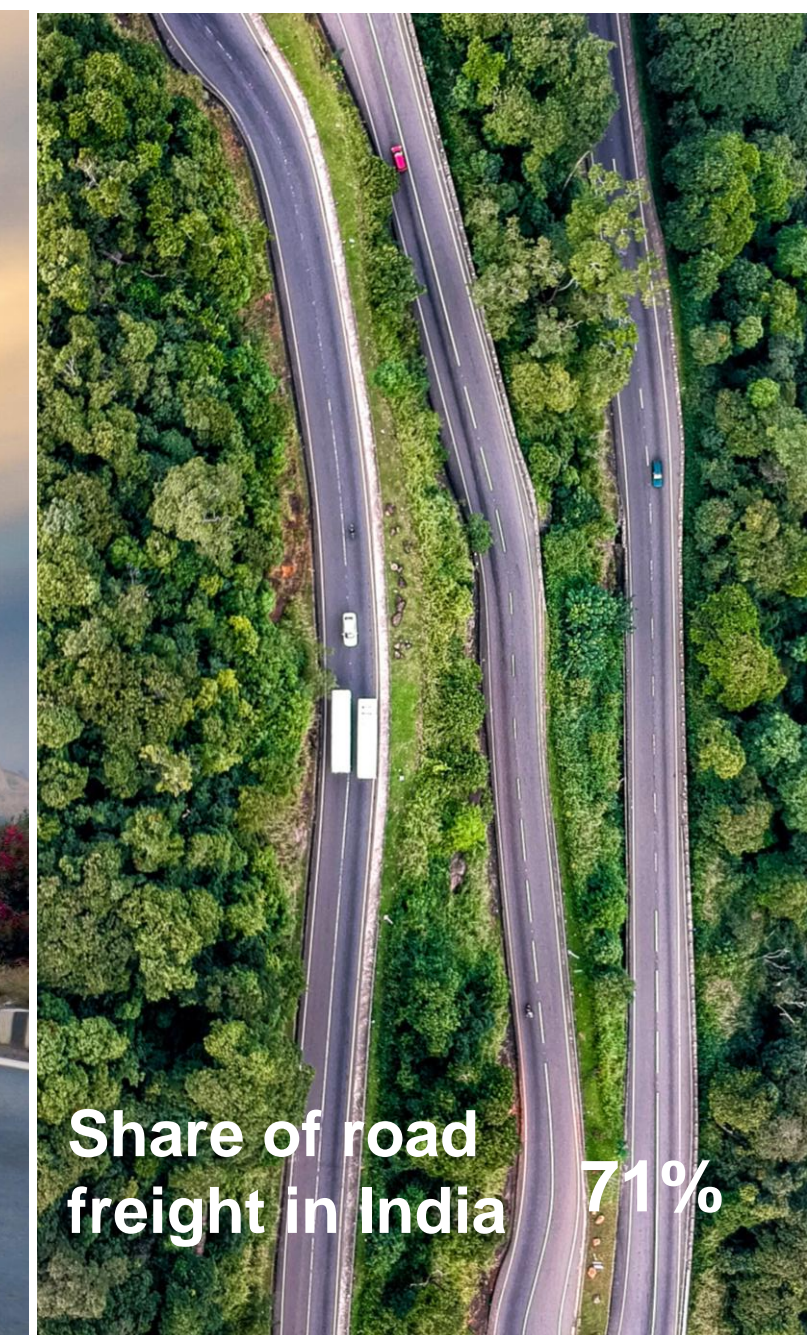
Transportation sector accounts ~14% global emissions, significantly contributed by road freight. World Bank estimates freight emissions will increase by **50%** by 2050

Annually, India moves ~**4.6 Bill. Ton** freight covering **2.2 trillion TKm** emitting **2.3 Gton** of **CO2**

Today, **India ranks third in the world for CO2 emissions**, preceded by China and the United States



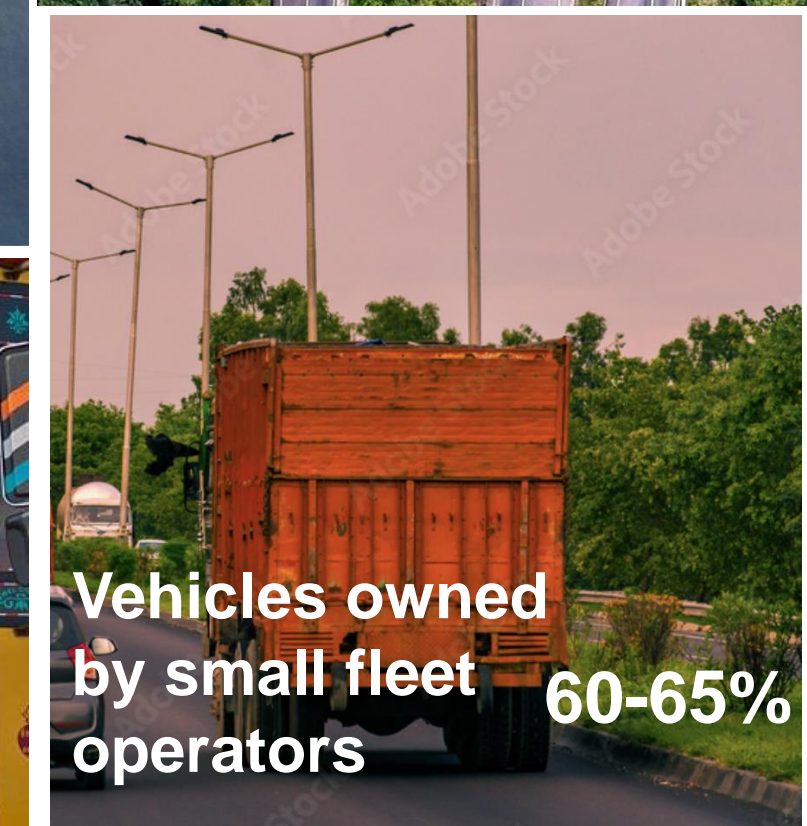
Share of HDVs & MDVs in total transport emissions **34% → 60% by 2050**



Share of road freight in India **71%**

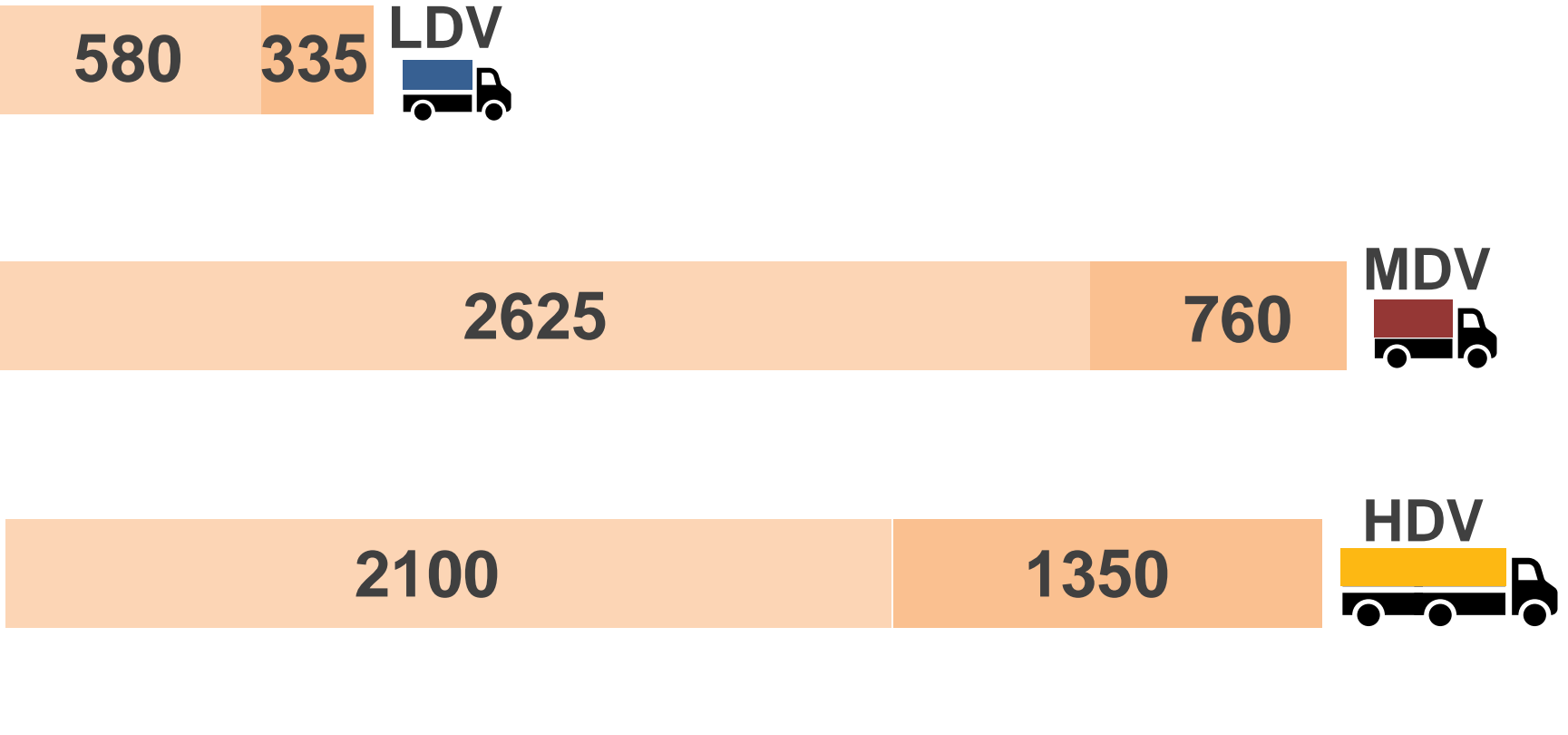


Truck market in annual sales volume terms **2 Million → 10 Million by 2050**



Vehicles owned by small fleet operators **60-65%**

1st Demand Signal for Zero Emissions Trucks in India



Light Duty Vehicles (LDV) | Medium Duty Vehicle (MDV) | Heavy Duty Vehicle (HDV)
 GVW: < 3.5 Tn GVW: 3.5 Tn – 12 Tn GVW: >12 Tn
 2027 2030

15 companies signaled demand for deploying 7,750 electric trucks by 2030 at At Clean Energy Ministerial in July 2023.



e-Fast Pilot Progress-Ambition to Action

PILOTS DECLARED TO DATE

1. **JSW Steels-** Pilot 50 electric trucks by end of FY2024 and scale up to 500 trucks by 2040.
2. **IKEA-** Goal to use electrified or ZEHDTs in all road transportation in OECD countries, China and India by 2040
3. **Flipkart-** Pilot first set of electrified trucks in inter-state segment by end of 2024.

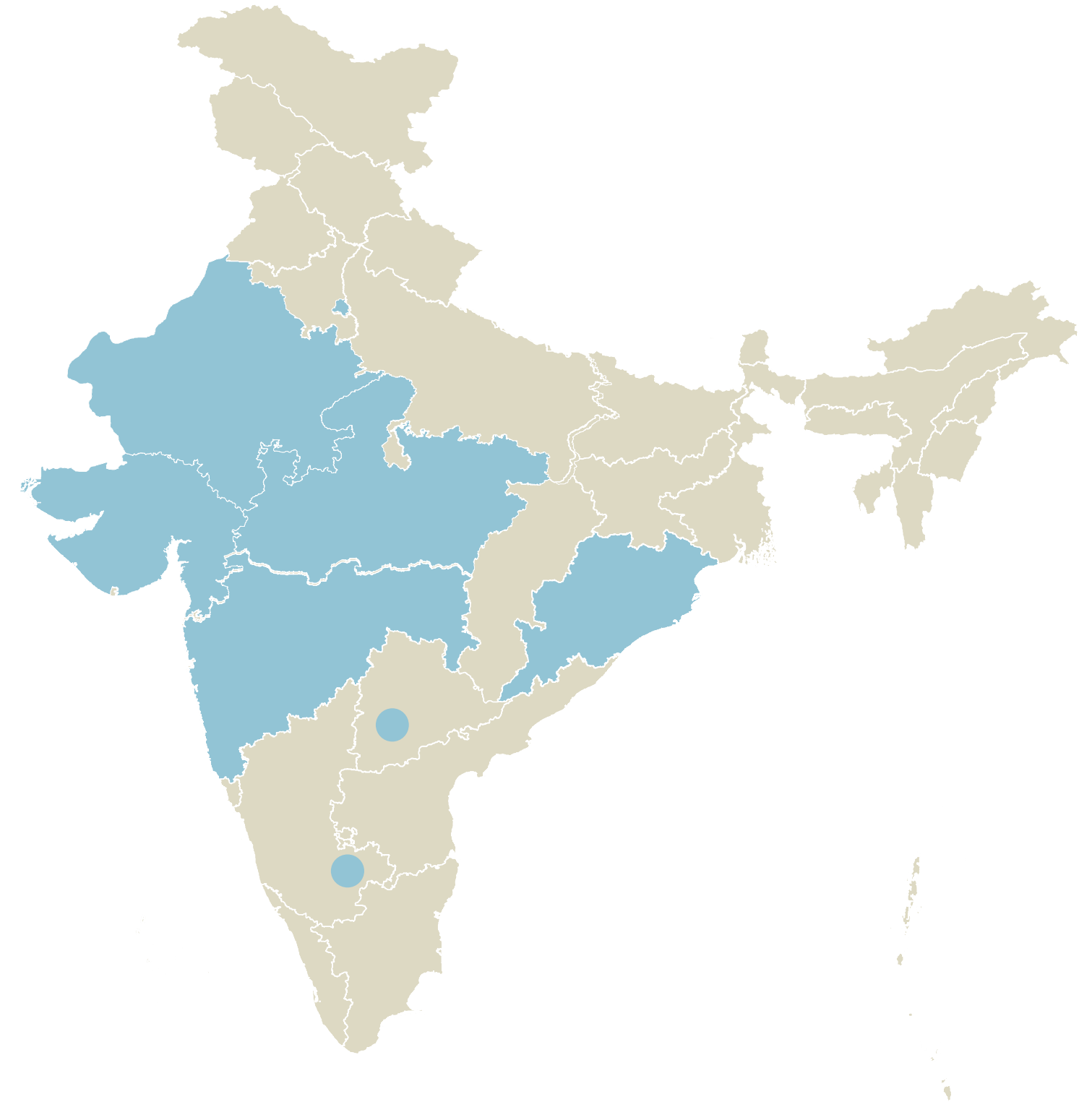
SCALABLE PILOT UPDATES – IN PROGRESS

9+ | Sectors

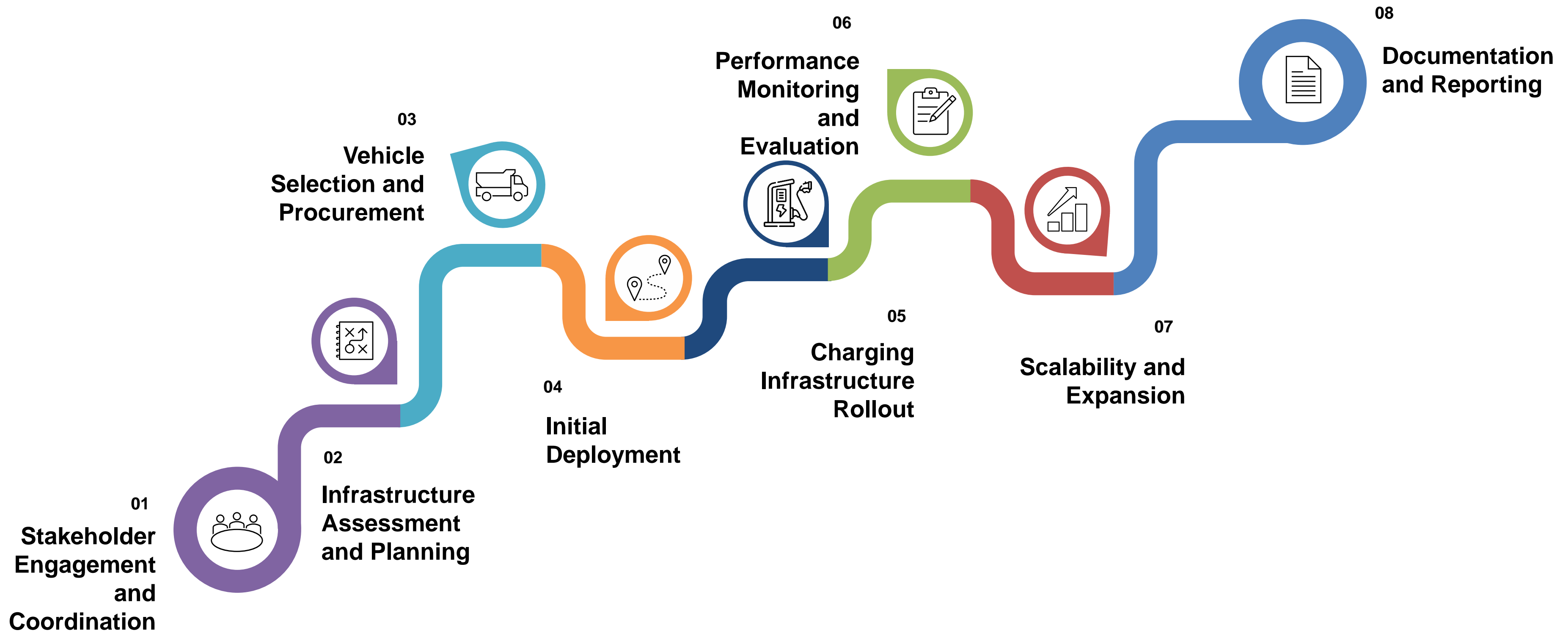
15+ | Solution-designs with IPLT, VECV, AL, BYD

8+ | Geographies

2-8T
28-40T | vehicle classes



Roadmap for Corridor Electrification



Way Forward

E-FAST ambition: 2024



Onboard

150

industry partners by
Dec 2024



Aggregate

15,000

e-trucks demand
in within 5 years



Define

Sourcing

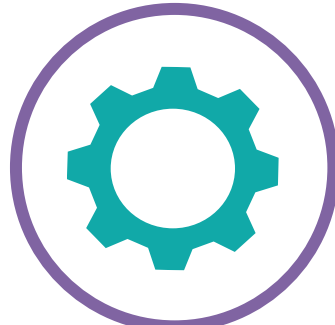
Product with a view
on product availability



Mobilize

Finance

for asset acquisition
and infra development



Implement

5+

scalable pilots



Establish

Policy

levers to accelerate
ZET pilots

Ongoing project tracks: Led/Supported by SFC



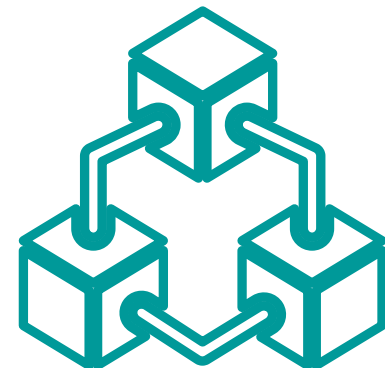
**ZET Pilot
Scoping**



**Financing
Framework
Development**



**Shippers
Coalition**

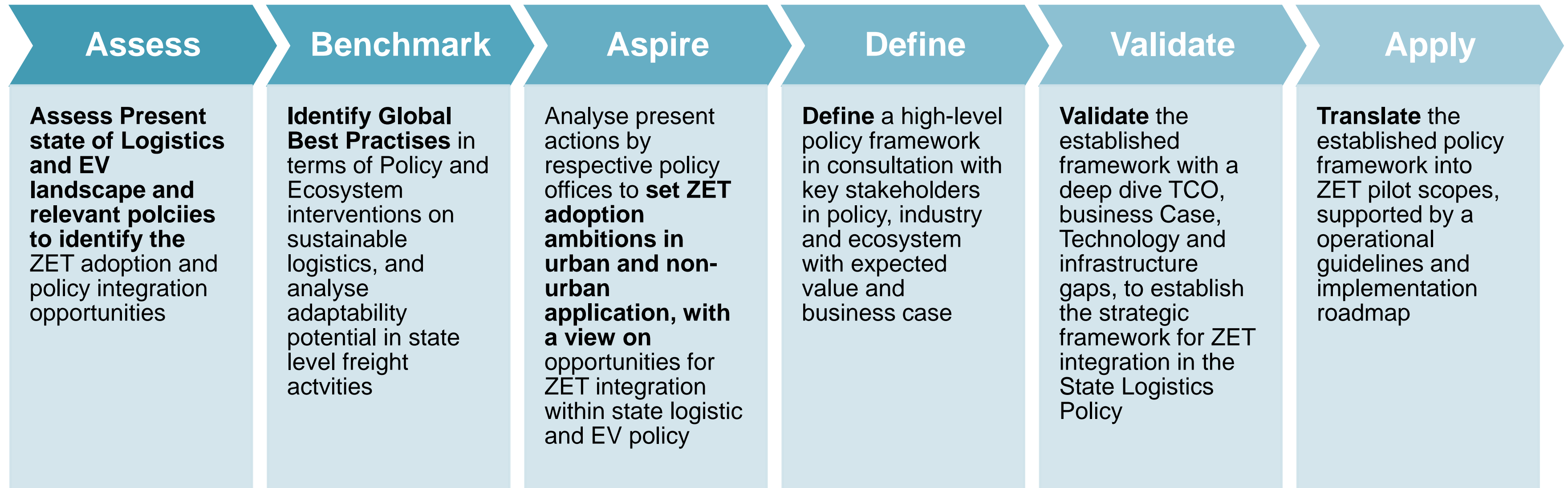


**Sub-nation ZET
policy framework**

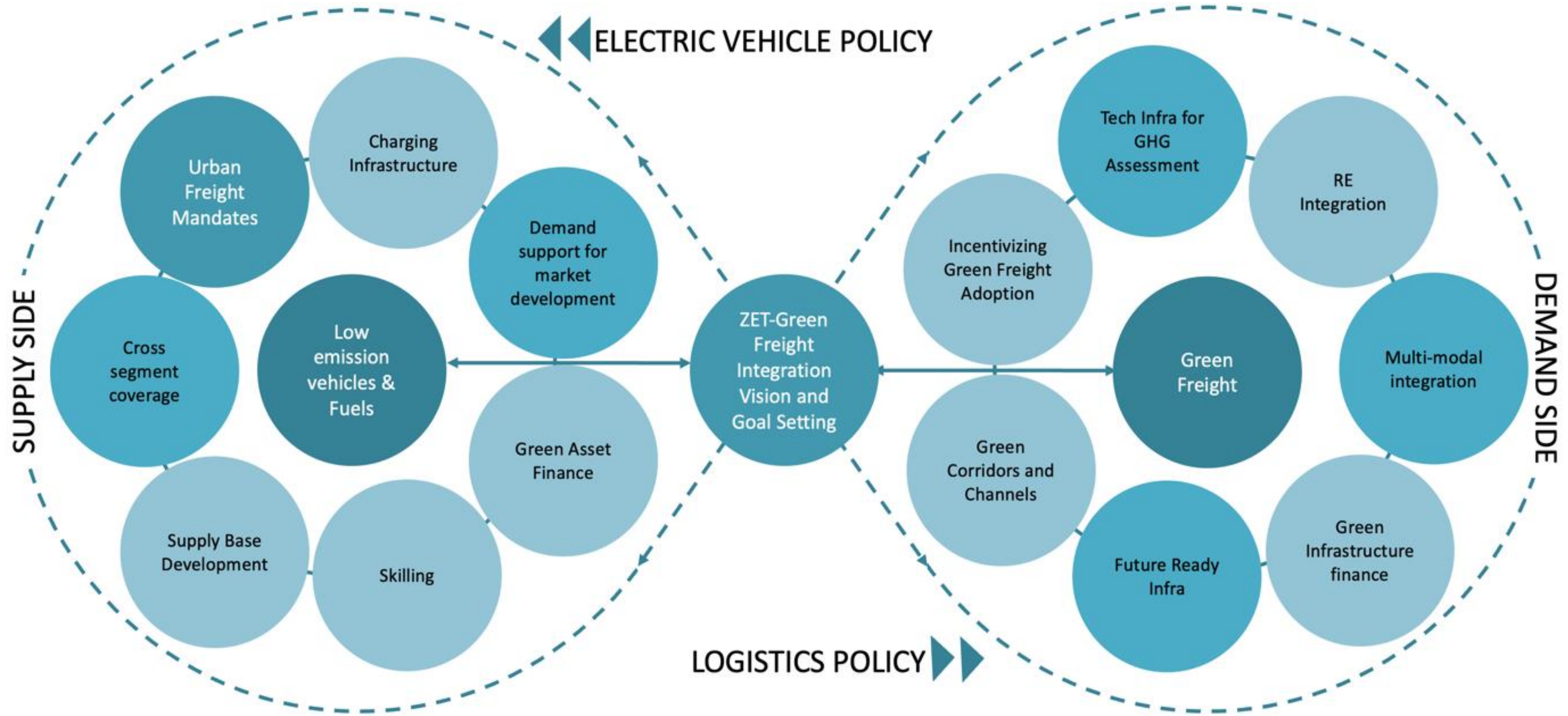


**Evidence
collation for
Policy Advocacy**

Process for Sub-Nation ZET Policy Framework



Value Chain View for the ZET Ecosystem



Decoding Indian Freight Sector: Key Insights

CHALLENGES

Unorganized sector,
multiple small fleet
operators

TCO economics & asset
finance – key barriers

Inefficiencies leading to
high logistics cost (14% of
GDP)

Inadequate policy support
for ZETs

No standardized Emission
Accounting Framework for
India

Capability & technology
infra gaps for emissions
accounting

Low OEM readiness to
service Medium & Heavy-
Duty segments

OPPORTUNITIES

Large freight volumes &
logistics activity scale for
early ZET adoption

Upcoming FAME III policy
an opportunity to integrate
ZETs

Green credit initiative at
COP28 trigger for freight
emission accounting
standard development

Focus of Freight Community
on sustainability

Leverage SFBA models to
overcome financial barriers

Indian market propensity to
adopt new technology

Demand aggregation for
OEMs to accelerate ZET
development

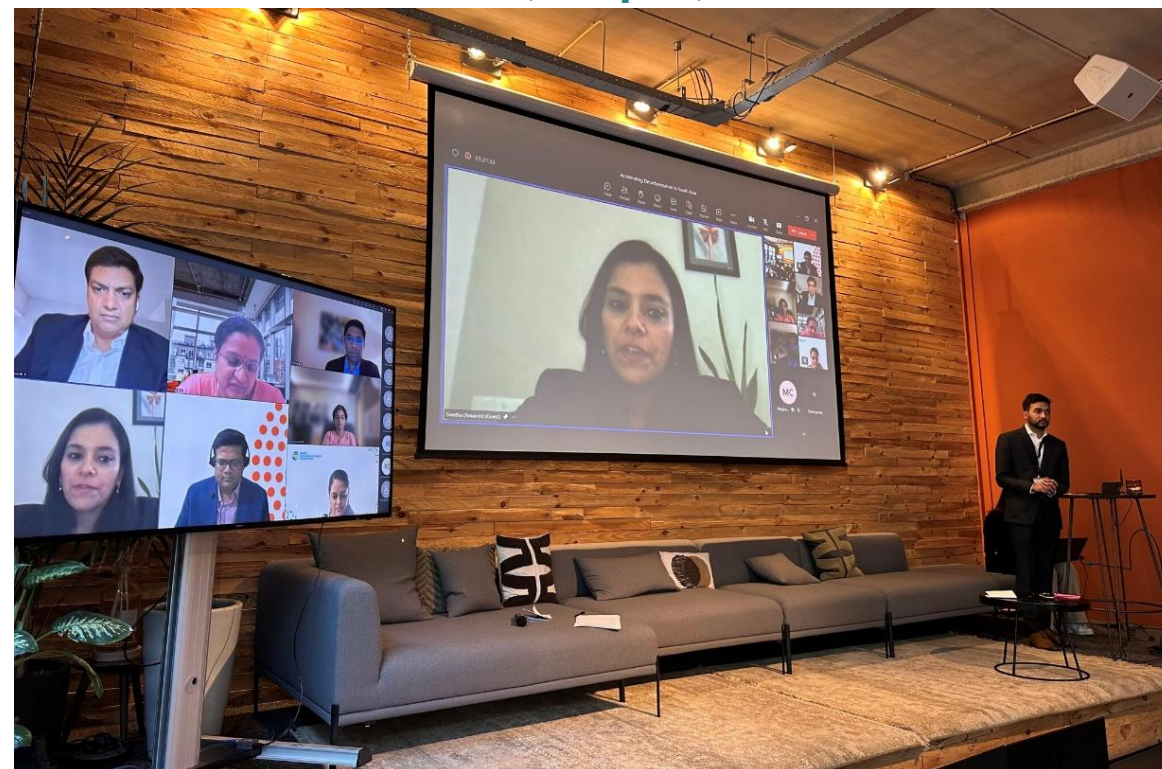
SFC India Events



4th E-fast Summit, Jaipur, March 2023



SFC India launch with Shippers Roundtable", New Delhi, May 2023



SFC India soft launch with an India Panel during "Smart Freight Week" Amsterdam, April 2023



e-FAST Task Force Announcement at CEM14, Goa, July 2023

SFC India Events: 2nd Shippers Roundtable, Mumbai-Nov, 23



Thank you!

