



EV Market Trends Globally and in Asia

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SAARC Training Workshop on Electric Vehicle and its Charging Infrastructure

27-29 August 2026 | Ramada by Wyndham Hotel, Islamabad, Pakistan



ESCAP at a Glance

One of the five regional commissions of the United Nations



53

MEMBER
STATES

9

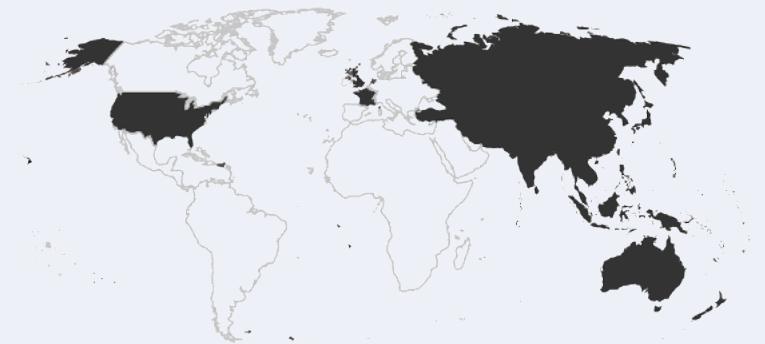
ASSOCIATE
MEMBERS

40%

WORLD
LAND AREA

60%

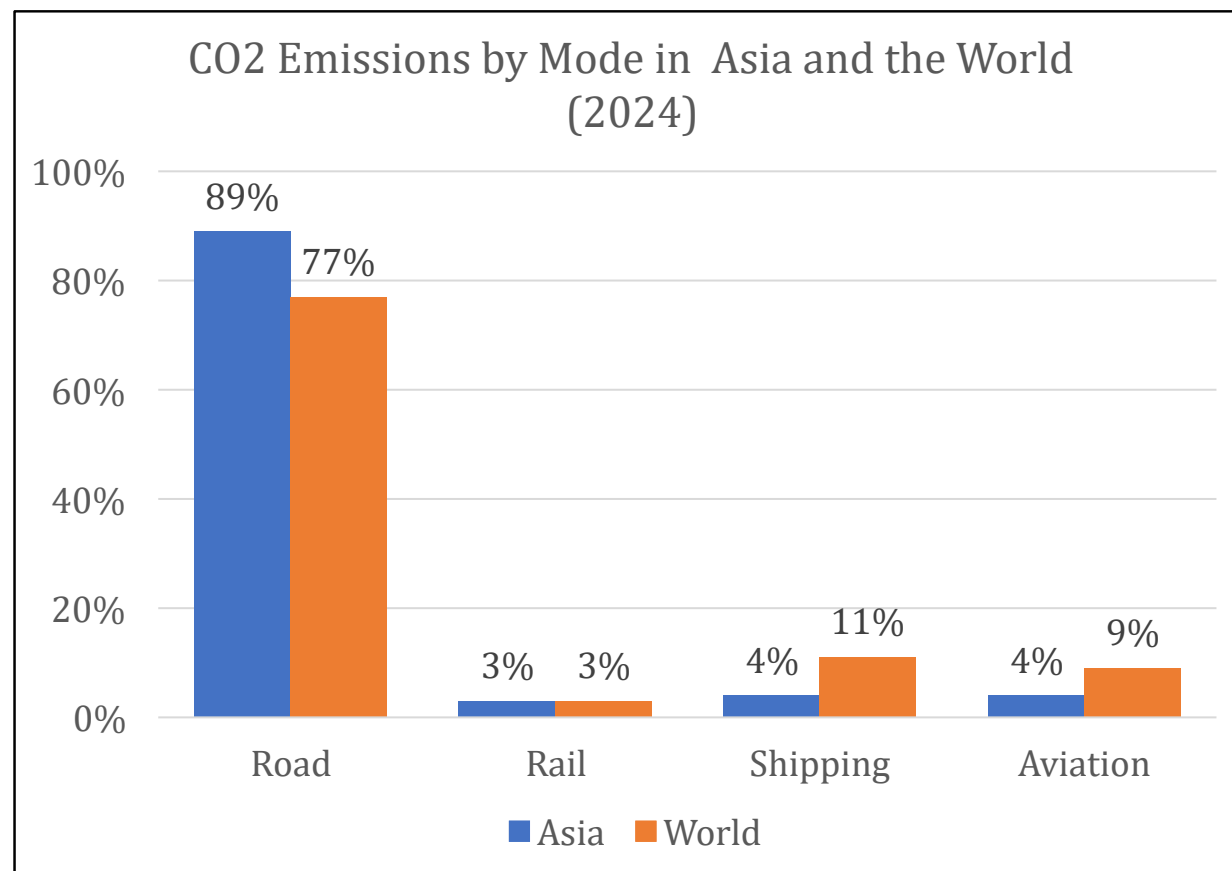
WORLD
POPULATION



Dominance of Road-Based Transport

Overview

- ~90% of transport-related CO₂ emissions come from road-based transport in Asia and the Pacific
- 90% of road transport is based on fossil fuels
- **Without decarbonizing road-based transport, there can be no sustainable climate action**

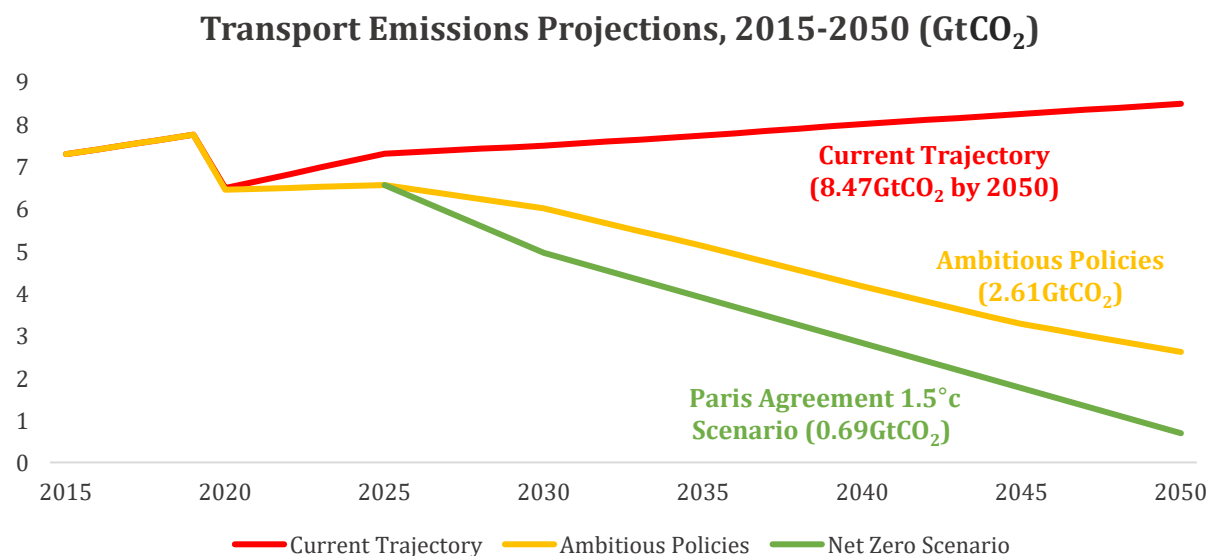


Low Carbon Mobility and Logistics

Overview

Transport is **not on track to meet the targets of the Paris Agreement** as emissions are set to rise, not fall.

Transition to electric mobility, as well as improving access to climate finance.

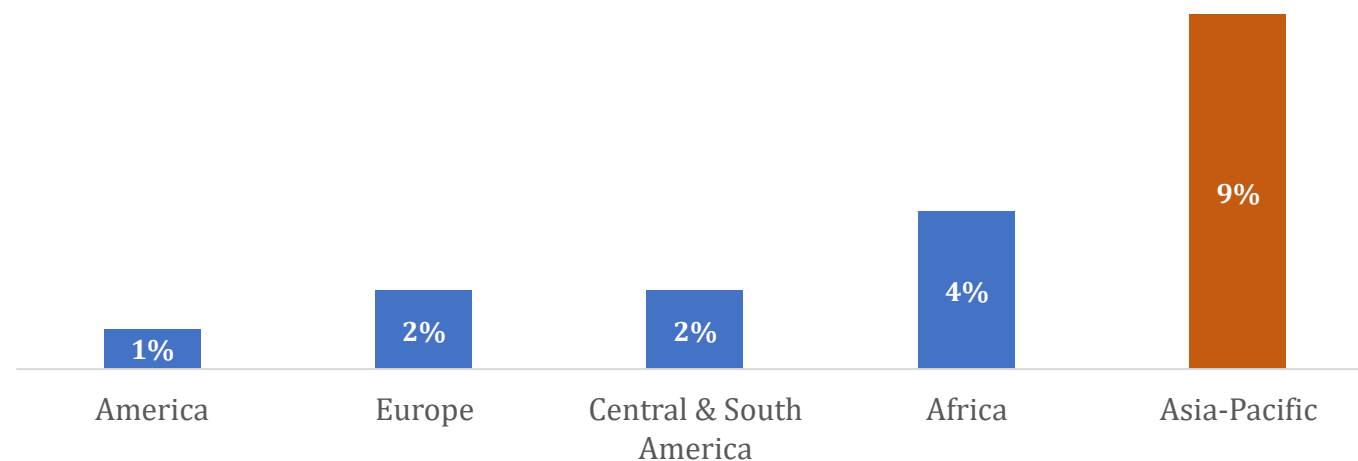


Urban Transport

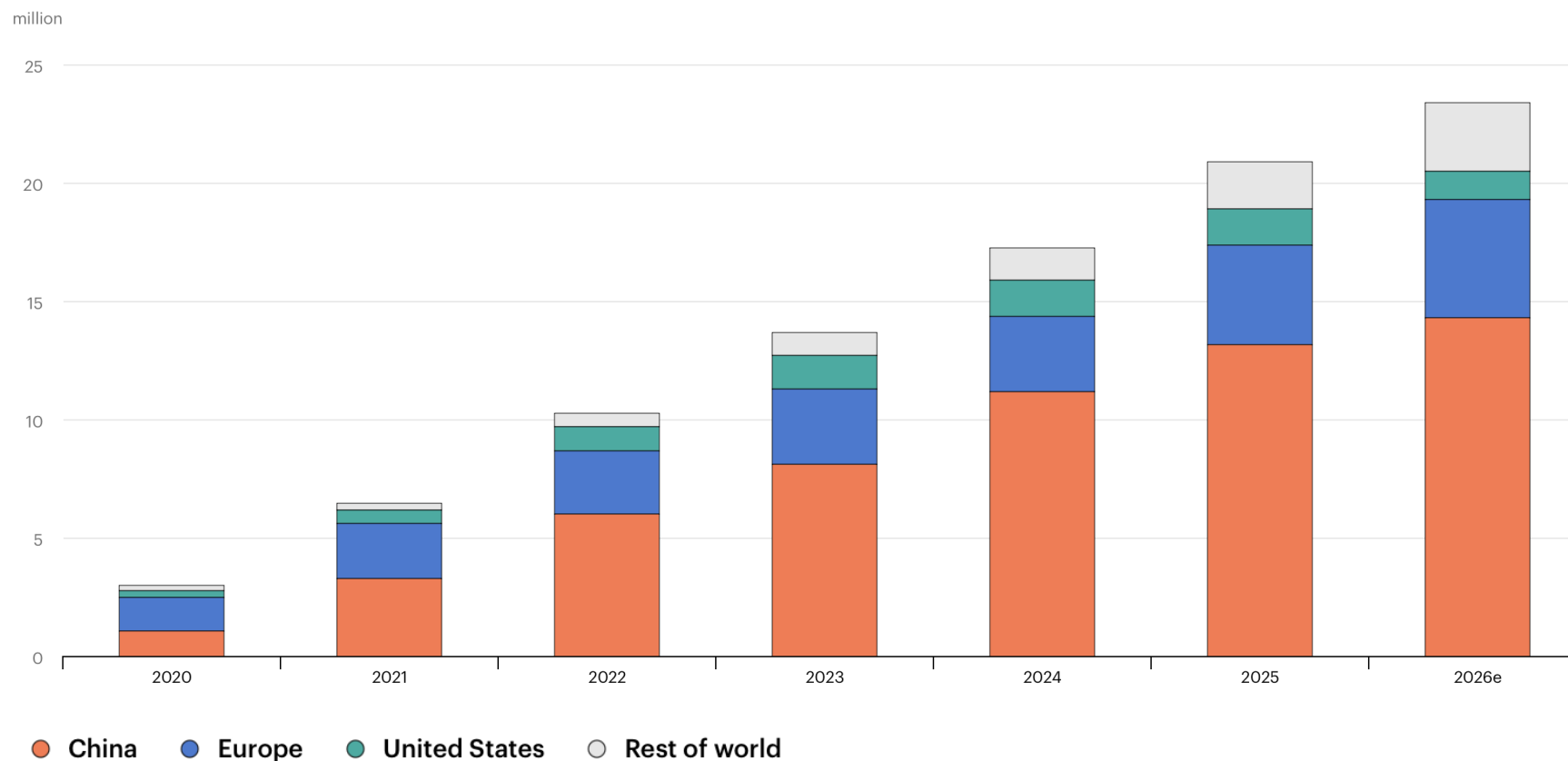
Overview

Passenger cars represent 70% of vehicles in the Asia-Pacific. As the region represents 55% of the world's urban population, this has resulted in more air pollution and road traffic crashes in cities. Promoting public transit such as BRT is essential for climate change mitigation.

Private Vehicle Average Annual Growth Rate, 2015-2025



- One in four cars sold globally is now electric
- 20+ million electric cars sold globally in 2025, which is 25% of new global car sales
- Around 23 million expected in 2026, approximately 28% of global sales



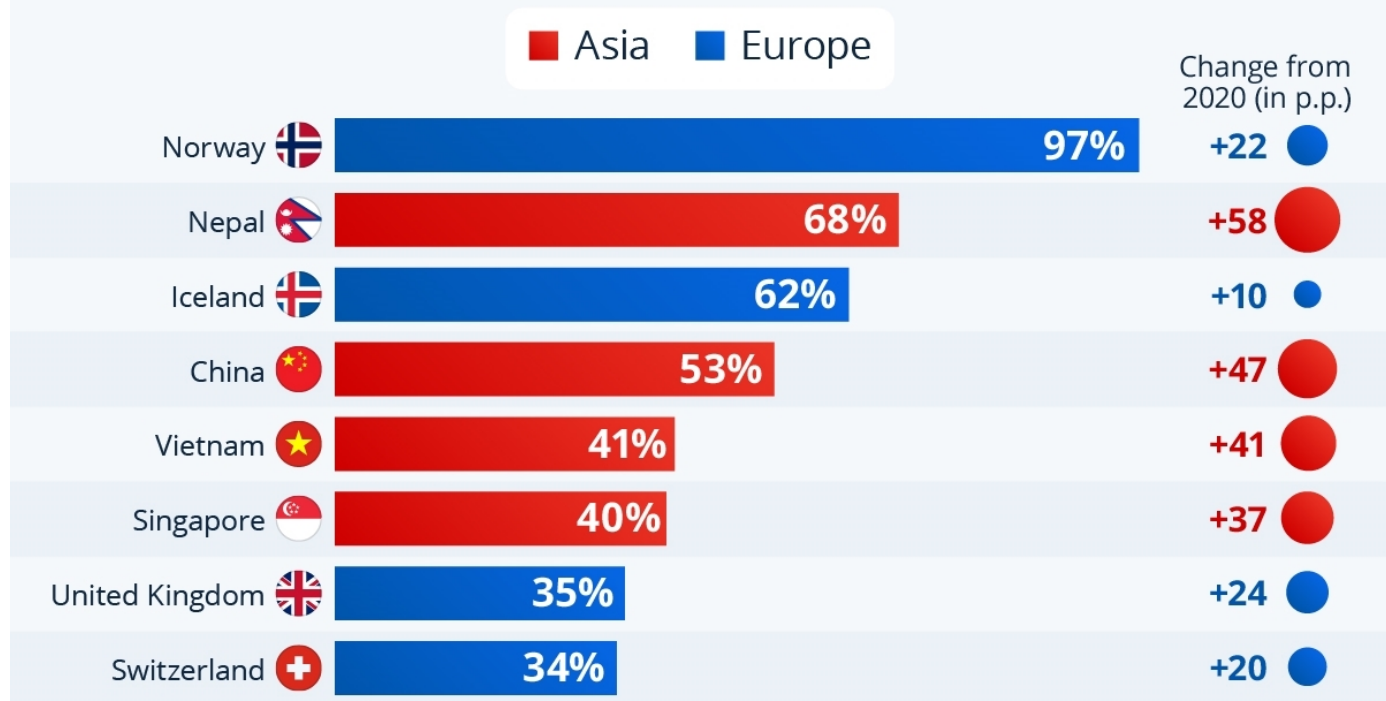


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EV Transition in Asia



Countries with the highest share of electric car sales* in total car sales (2025)

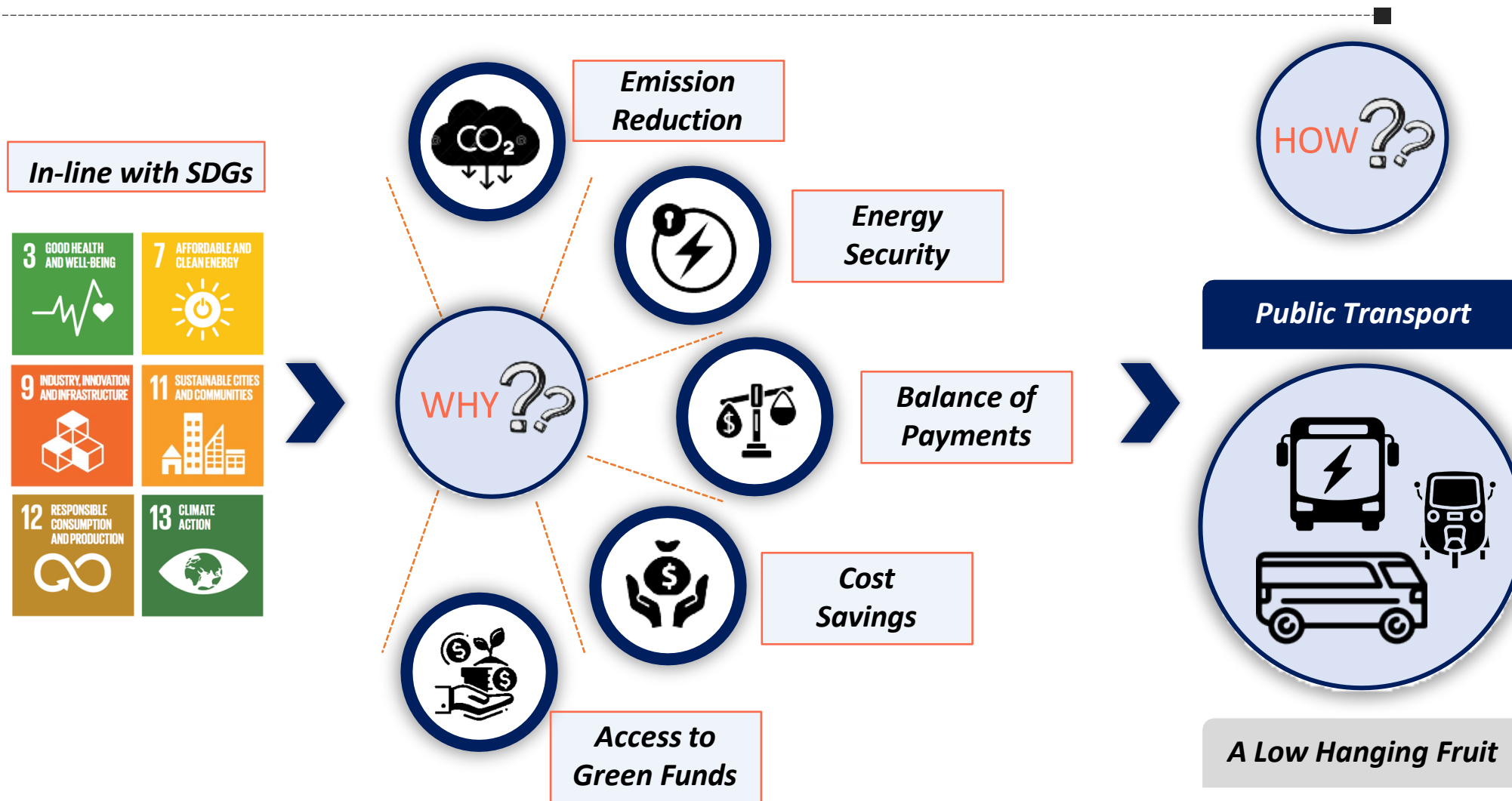


Asia leading growth

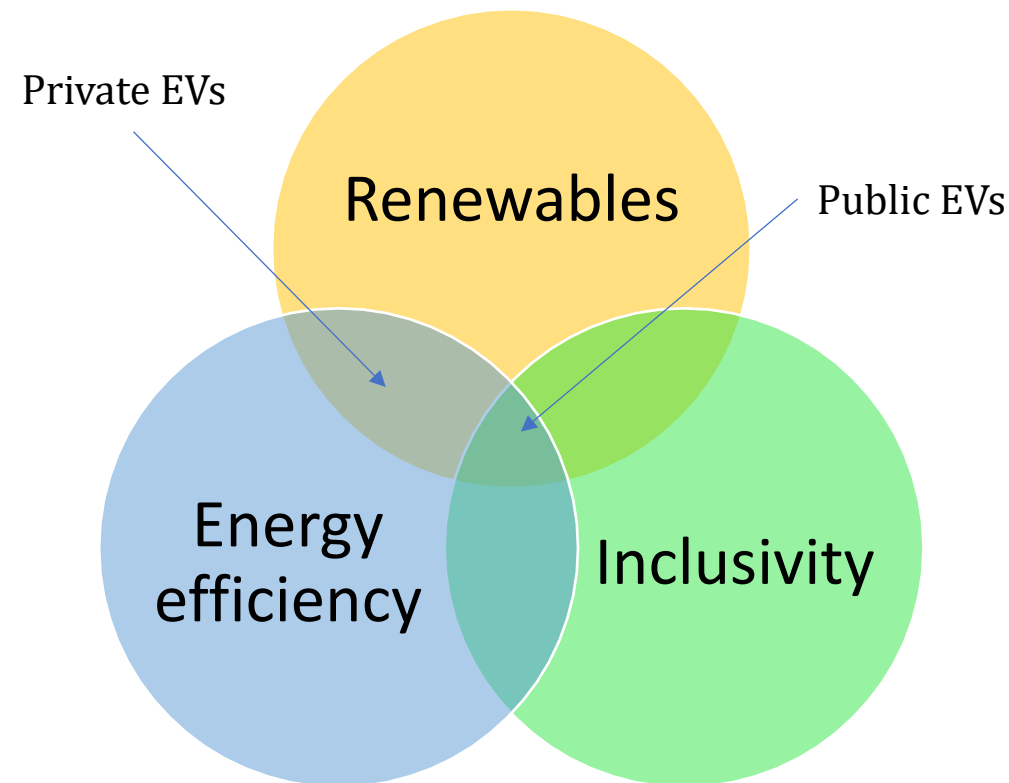
* Includes battery electric and plug-in hybrid electric vehicles

Source: IEA

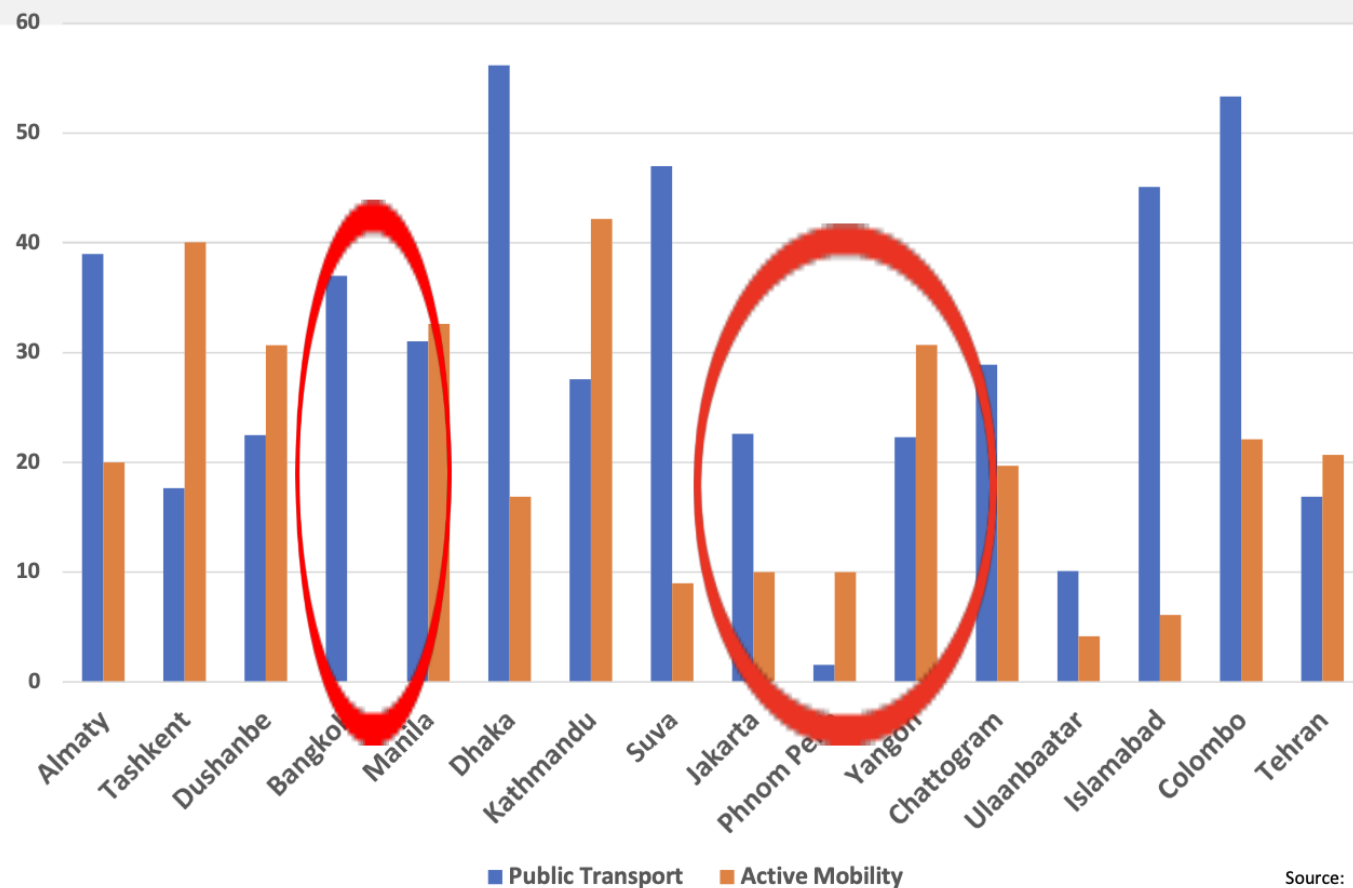
Identifying Objectives and Making a Case for E-Mobility (Country specific)



1. **Economics** – high mileage / stop-start vehicles offer stronger economic returns. Centralized charging.
2. **Acceptability** - fleet owners have more rational decision-making capacity than private owners and PT is often public-run
3. **Environment** – benefits from better urban air quality per passenger
4. **Scale** – substantial segment of transport demand, GHG savings potential.

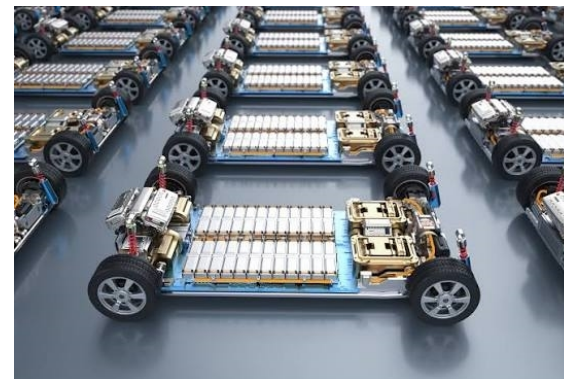


Mode Share of Public and Active Transport



Source: ESCAP SUTI Reports

Nearly 75% of global electric car production occurred in China in 2025



Thailand's **30@30 policy** is a national government target aiming for at least 30% of total domestic vehicle production to be zero-emission vehicles (ZEVs) by the year 2030



Vietnam's electric vehicle (EV) manufacturing policy centers on aggressive tax incentives for manufacturers

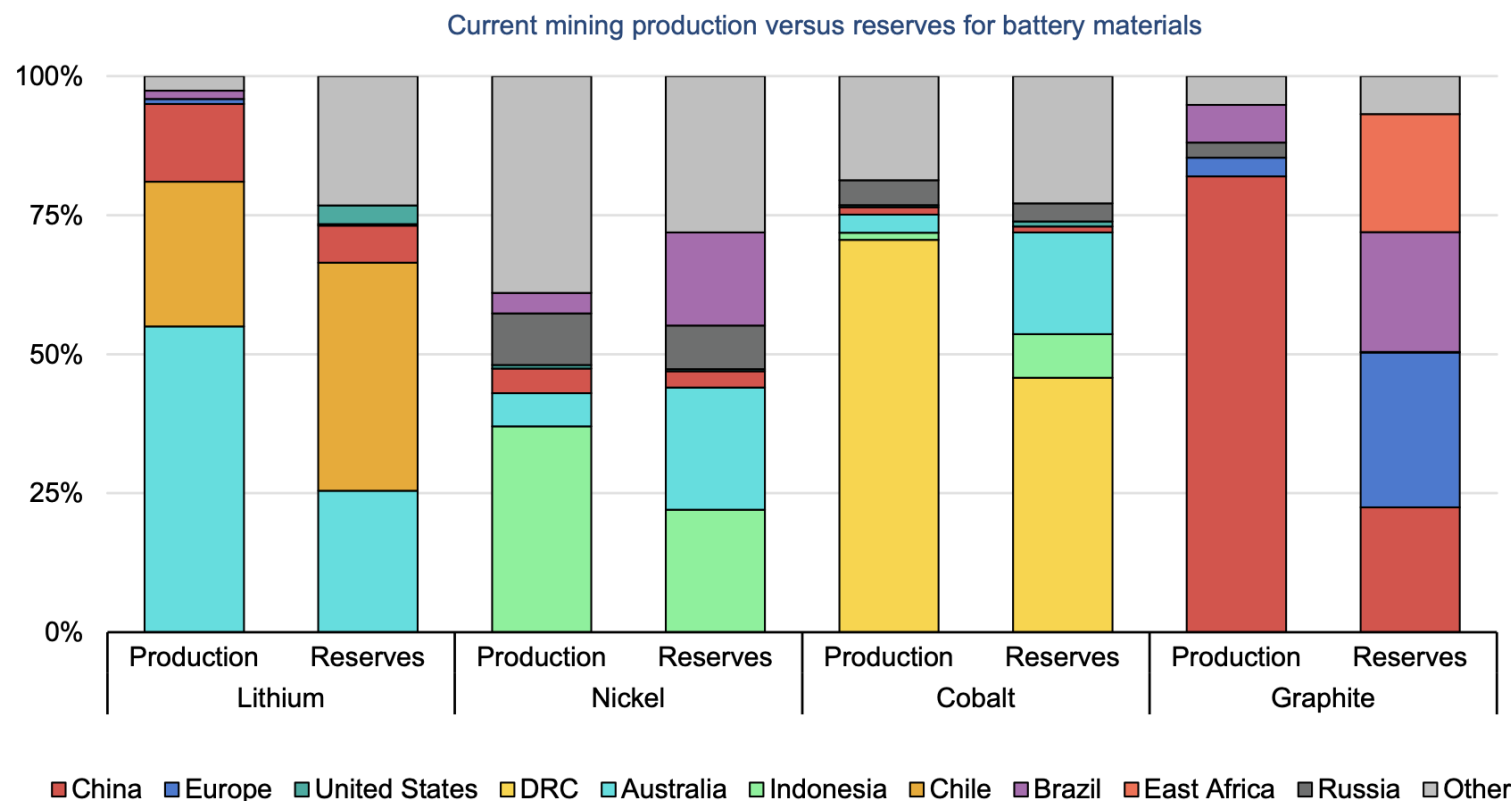


The Philippines' **Electric Vehicle Industry Development Act (EVIDA)**, is the comprehensive national law which mandates a % of corporate fleets to be electric, and offers tax breaks to manufacturers



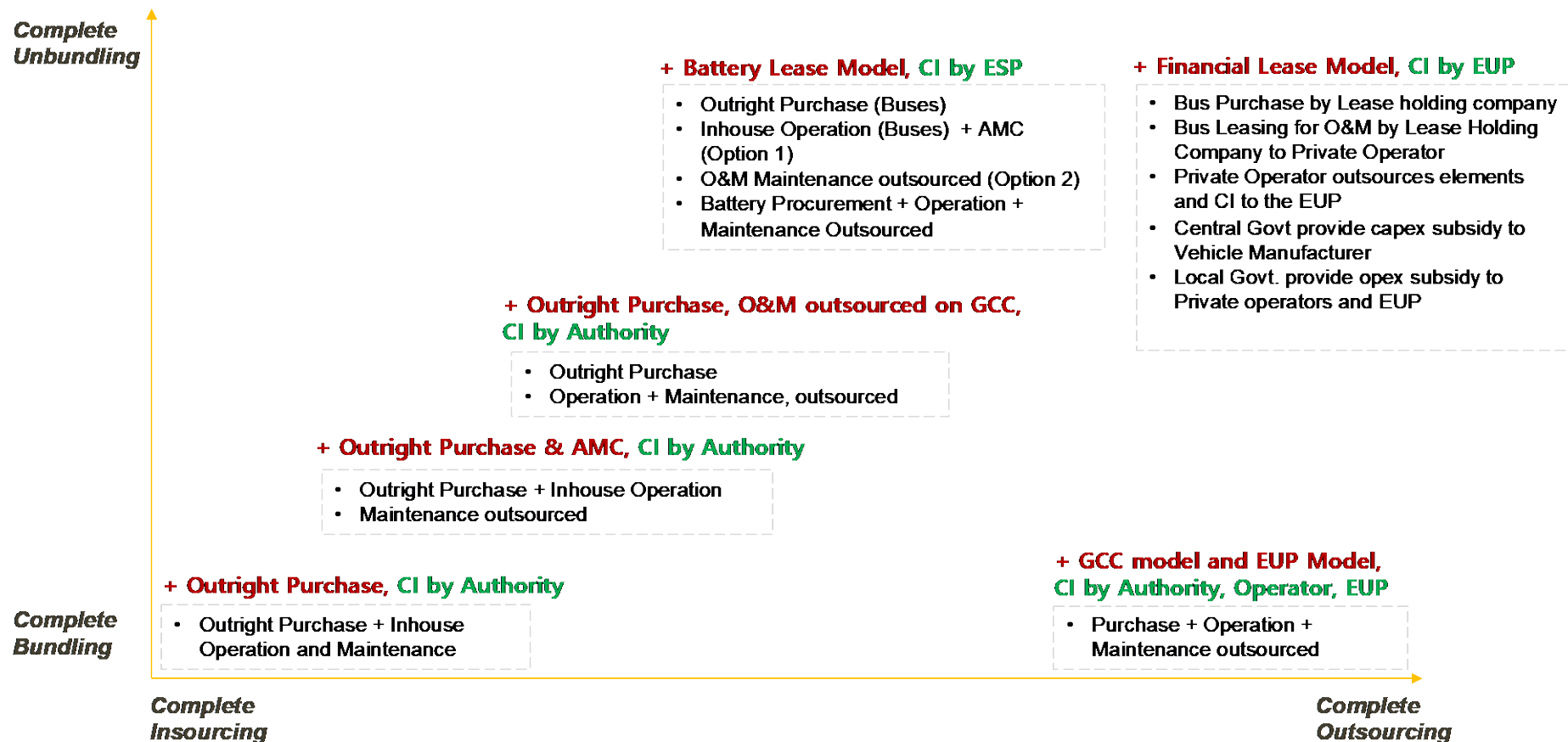
China produced more than 80 percent of battery cells in 2025, while virtually all global battery production comes from firms headquartered in China, Korea, or Japan. Enhancing critical mineral supply chains across South Asia is important.

There are areas of unrealised potential for diversifying battery metal extraction



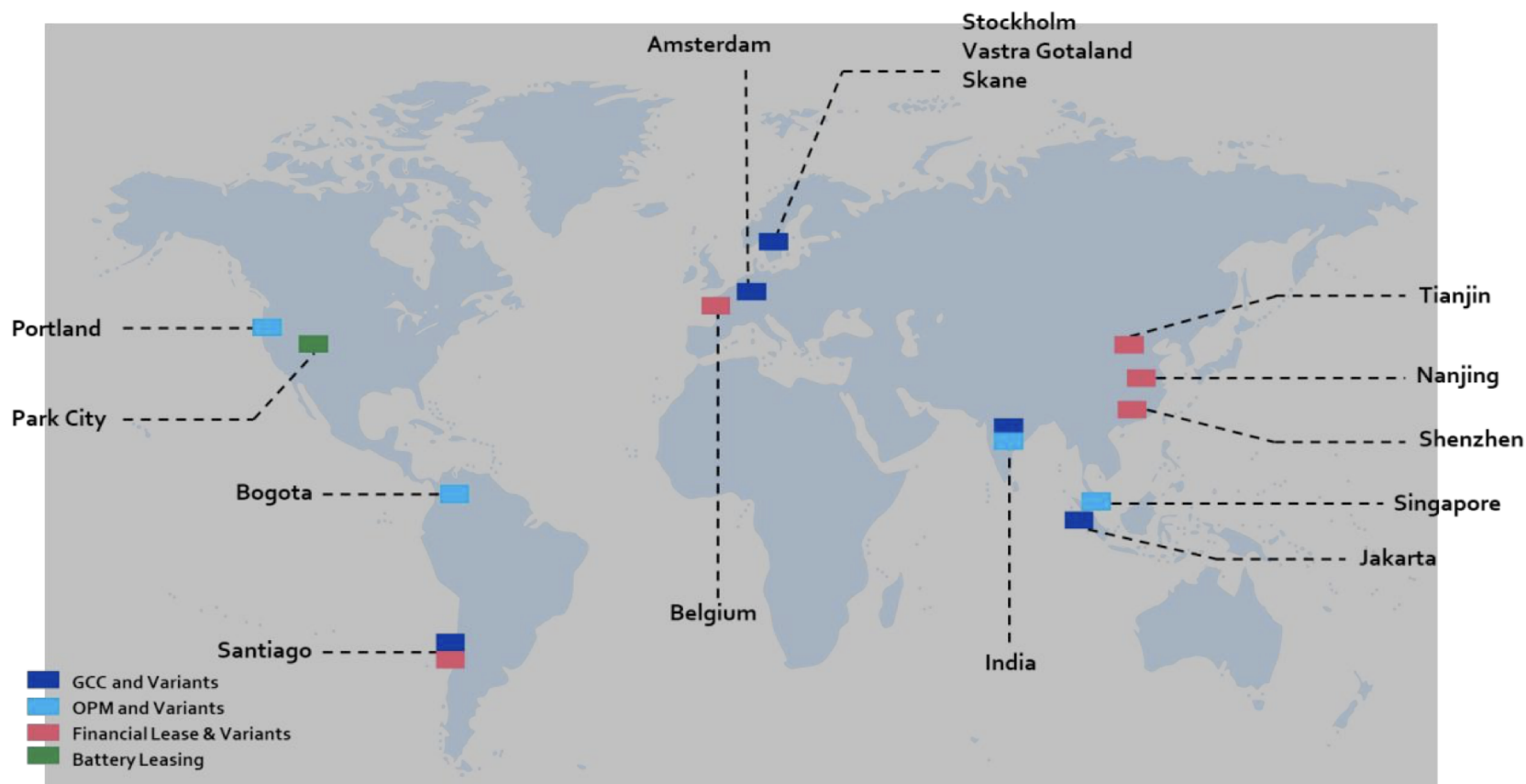
Procurement, Financing and Business Models for EVs in Public Transport

B. Understanding different Business Models



CI = Charging Infrastructure, EUP: Energy Utility Provider, AMC: Annual Maintenance Contract, O&M: Operation and Maintenance, Govt: Government

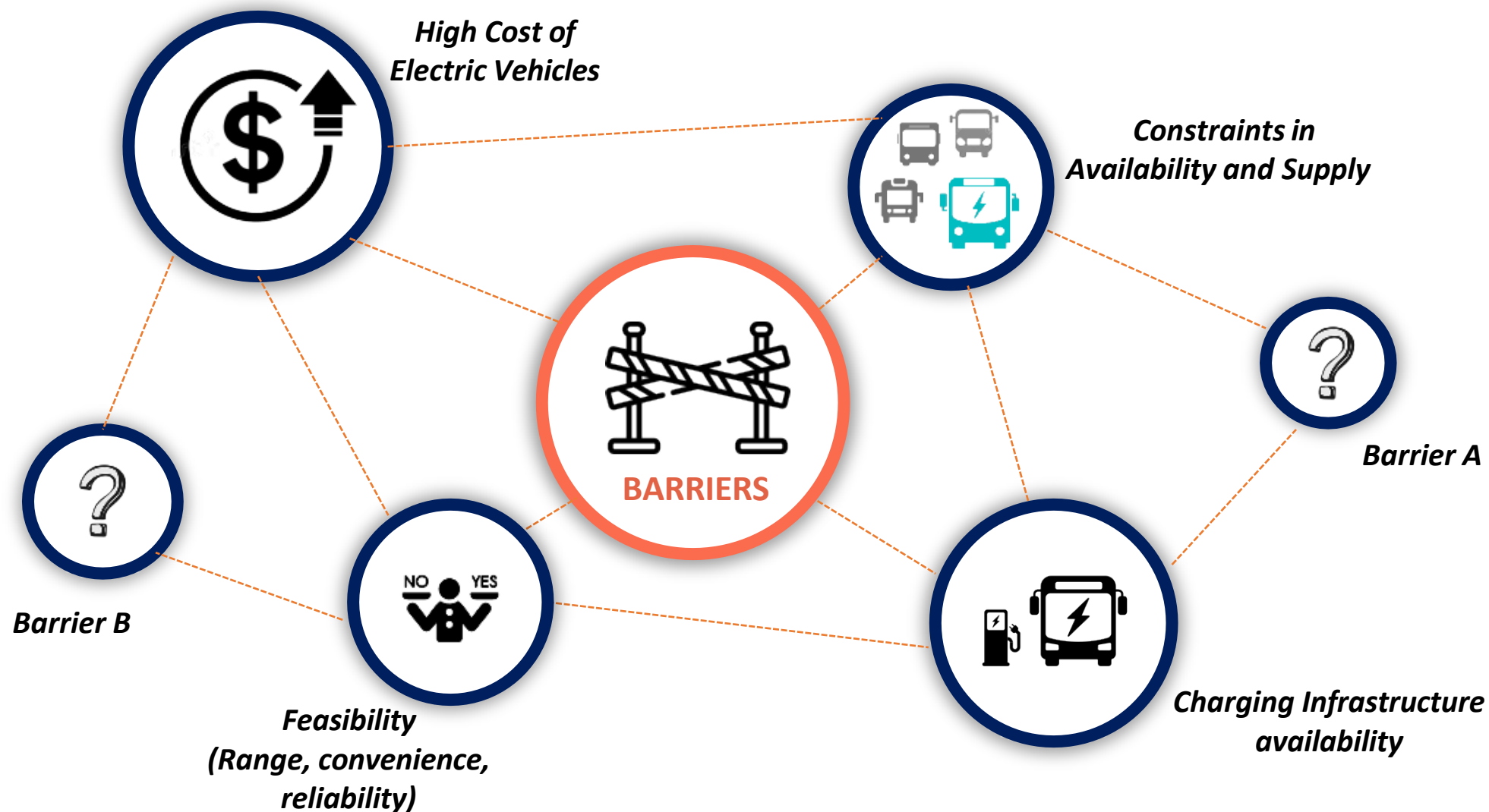
Business models for e-buses in public transport used in different parts of the world



GCC: Gross Cost Contract, OPM: Outright Purchase Model



Identifying barriers around EV Adoption in Public Transport



Looking into EV Promotion Policies adopted world-wide

How are EVs promoted globally?



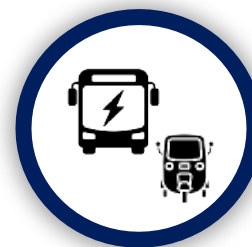
Fiscal Incentives

- Regional (Central/ State) subsidies
- Tax incentives
- Exemption from taxes
- Rebates for improving environment



Regulatory Strategies

- Free parking for EVs
- Number plate restrictions for fuel based vehicles
- Lowering prices of EV
- Battery Leasing



Focus on Public Transport

- Buses are given priority due to
- Mass movement of passengers
 - Owned/ operated by Government entities
 - Captive charging

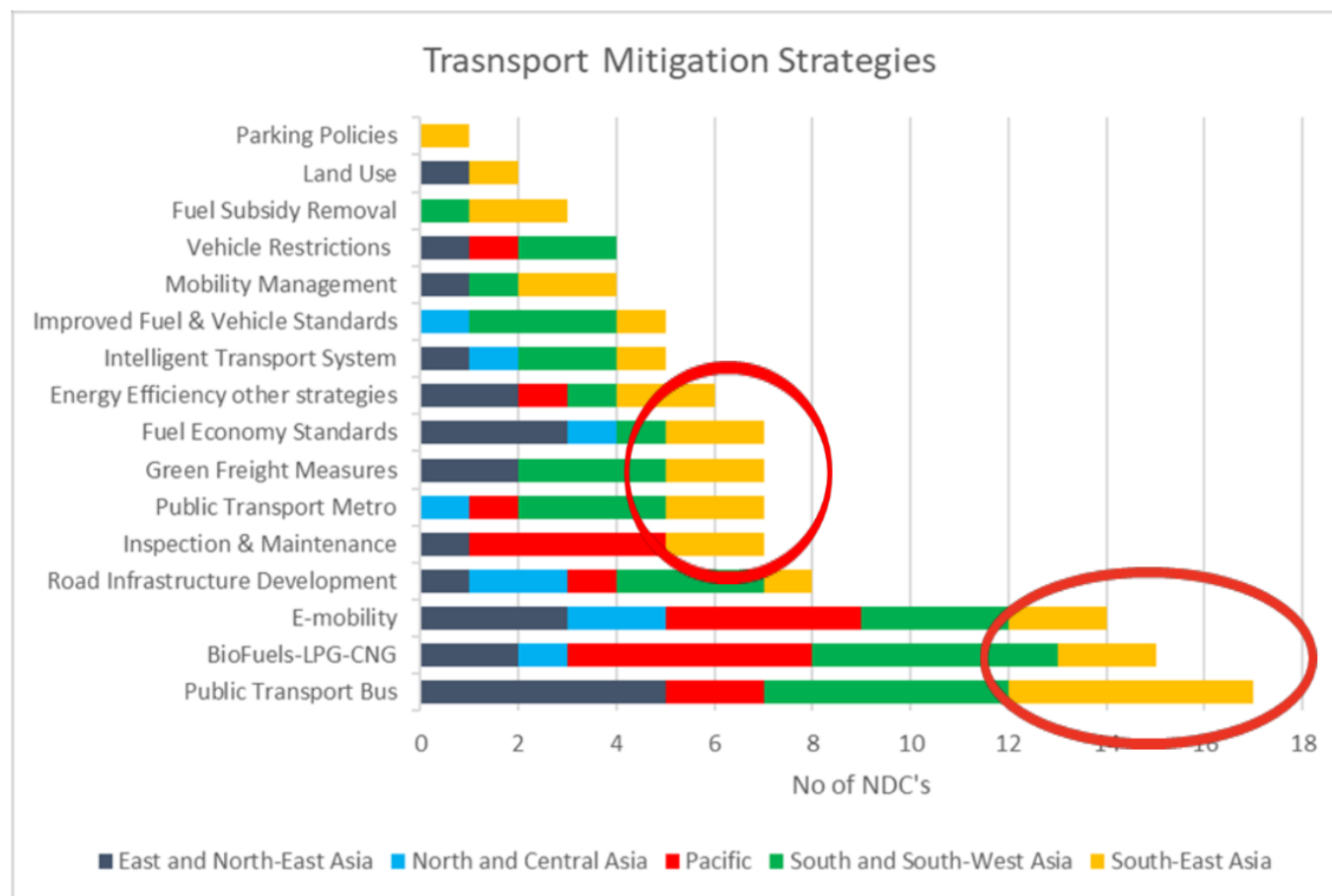


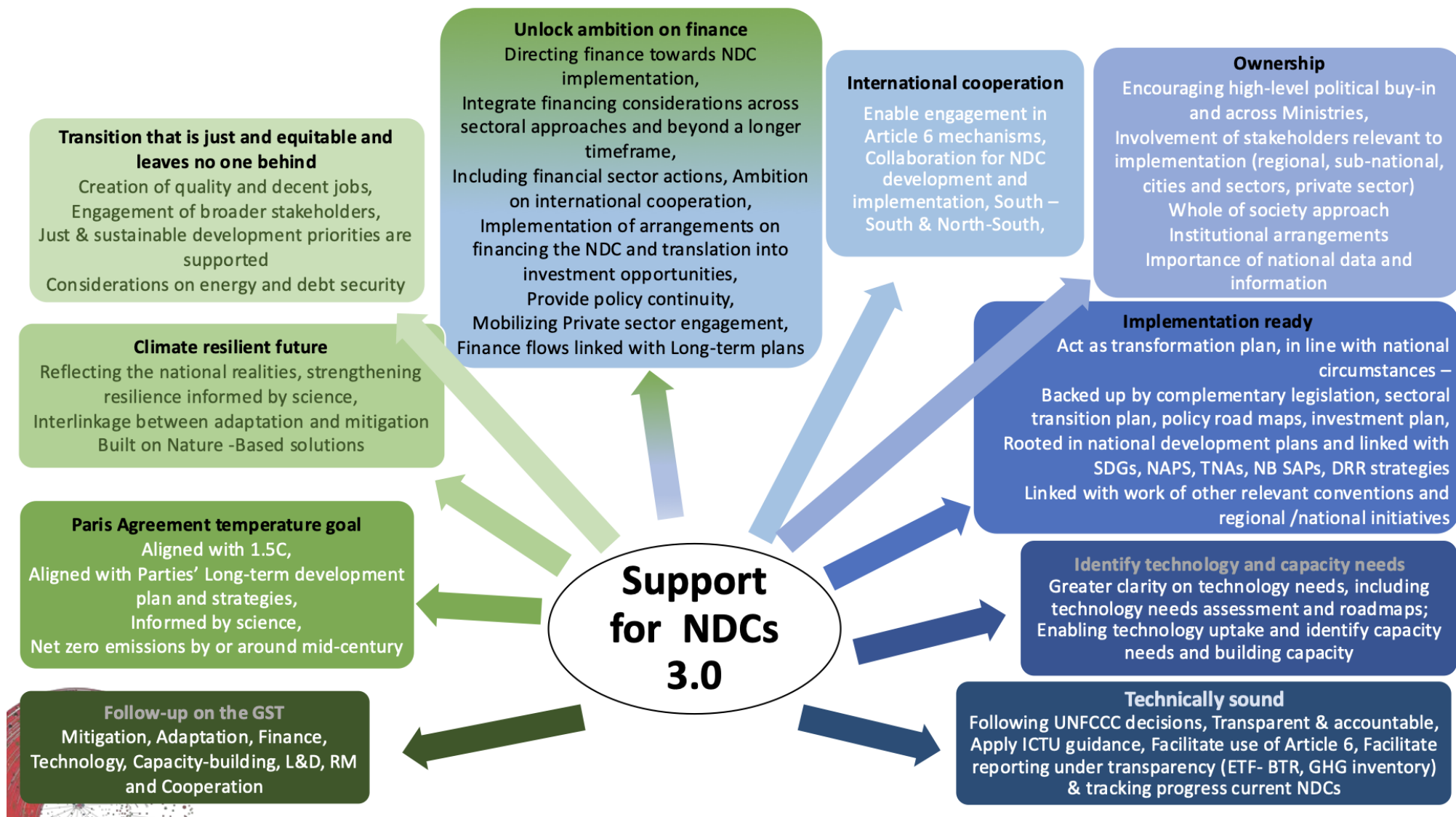
Development of Infrastructure

- Targets setting up of Charging Stations at regular intervals or at depots/ terminals



Transport Mitigation Strategies in NDCs





Country	Quote
Bangladesh	"30% of passenger cars will be EVs" by 2035. (UNFCCC)
	"Worker support: micro credit and scrappage incentives for drivers/owners to shift to cleaner vehicles and EV charging/maintenance training." (Scribd)
Nepal	"In 2030 and 2035, increase sales of battery electric vehicles (BEVs) to 90% and 95% for all private passenger vehicles."(Ministry of Federal Affairs)
	"Just Transition Impact Assessment for each sector will be conducted." (Giwmscdntwo)
Pakistan	"Develop sector specific Just Transition plans, starting with energy, transport, and energy intensive manufacturing."
	"Programs for workers' protection and re employment in transitioning industries."
Sri Lanka	"The transition to electric mobility and improved public transport systems is likely to impact traditional employment structures in the transport sector." (UNFCCC)
	"Electric mobility systems are designed to ensure mobility is more responsive to GESI aspects." (UNFCCC)
Maldives	"Promote technologies for electric vehicle deployment by expanding charging infrastructure, introducing battery swapping solutions." (UNFCCC)
	"Foster gender responsive technology adoption...to enable a just transition." (Asian Transport Observatory)
Bhutan	"Promotion of electric vehicles." (Asian Transport Observatory)





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Industry Forecast

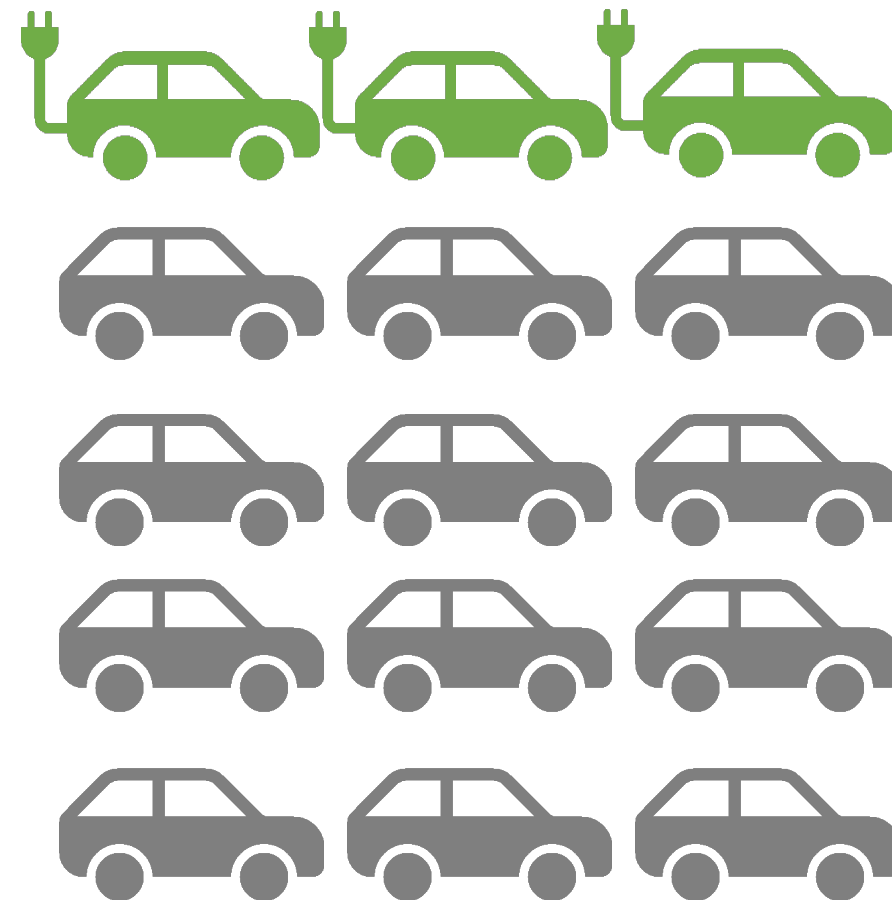


2030 EV Target:

Limiting the global temperature increase to below 2 degrees Celsius requires **at least 20 percent of all road transport vehicles globally to be electric by 2030.**

– *The Paris Declaration on Electro-Mobility and Climate Change and Call to Action*

20% of vehicles on the road

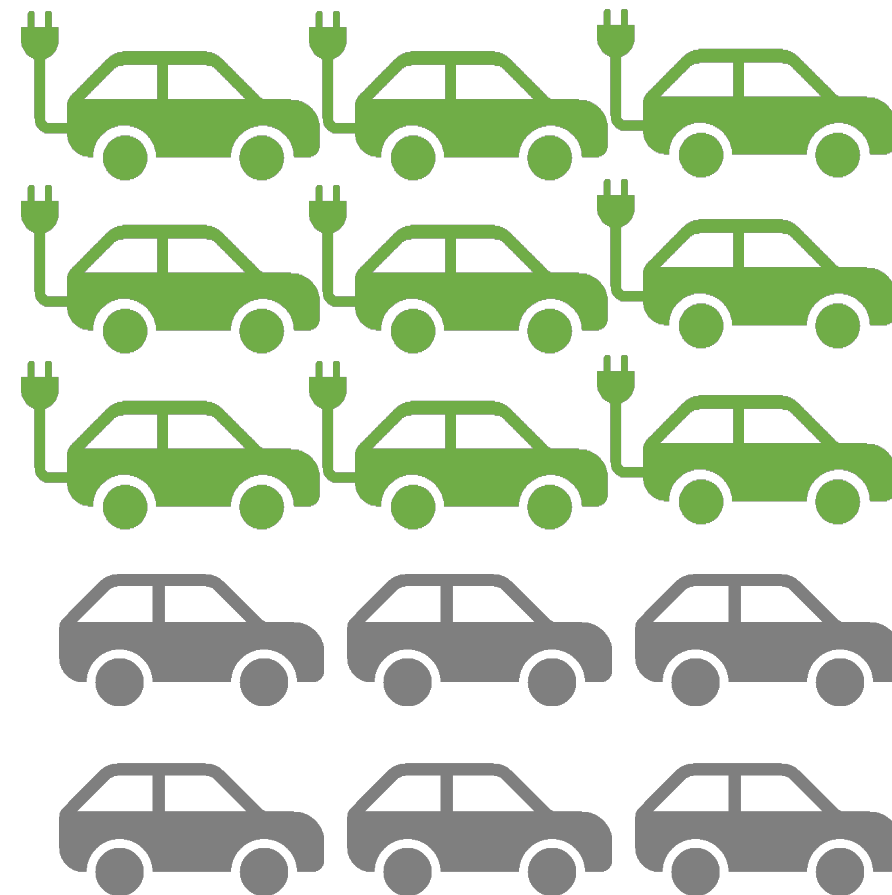


2030 EV Target:

The share of EVs in total sales needs to reach around 60% by 2030 to stay the course and reach net zero CO₂ in 2050.

– *IEA Net Zero Emissions by 2050 Scenario*

60% of vehicle sales



PULL

Policy and Regulatory Frameworks

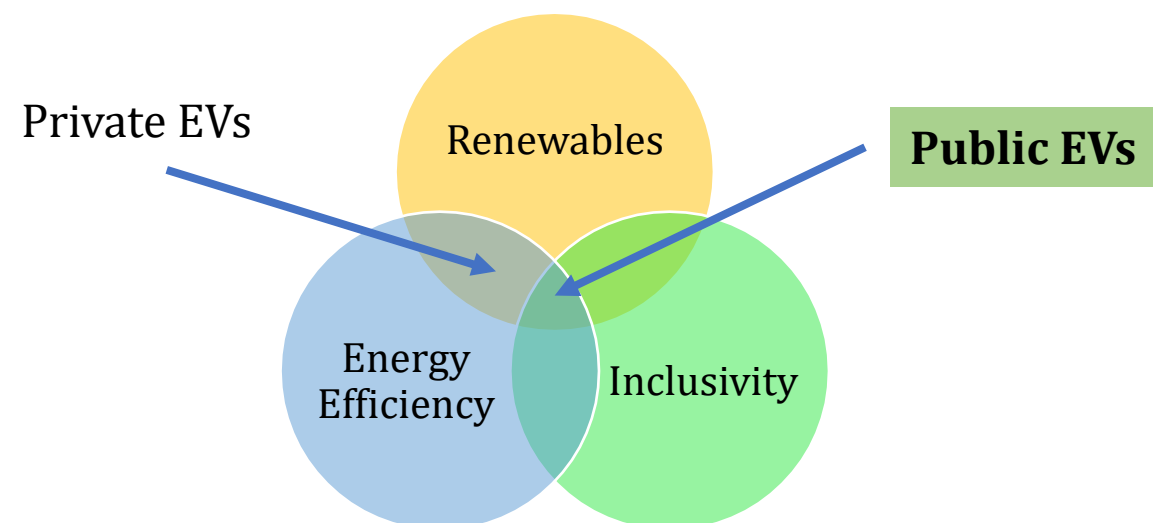
- To incentivize EV adoption, such as subsidies for EV purchases, tax breaks, and the development of standardized regulations

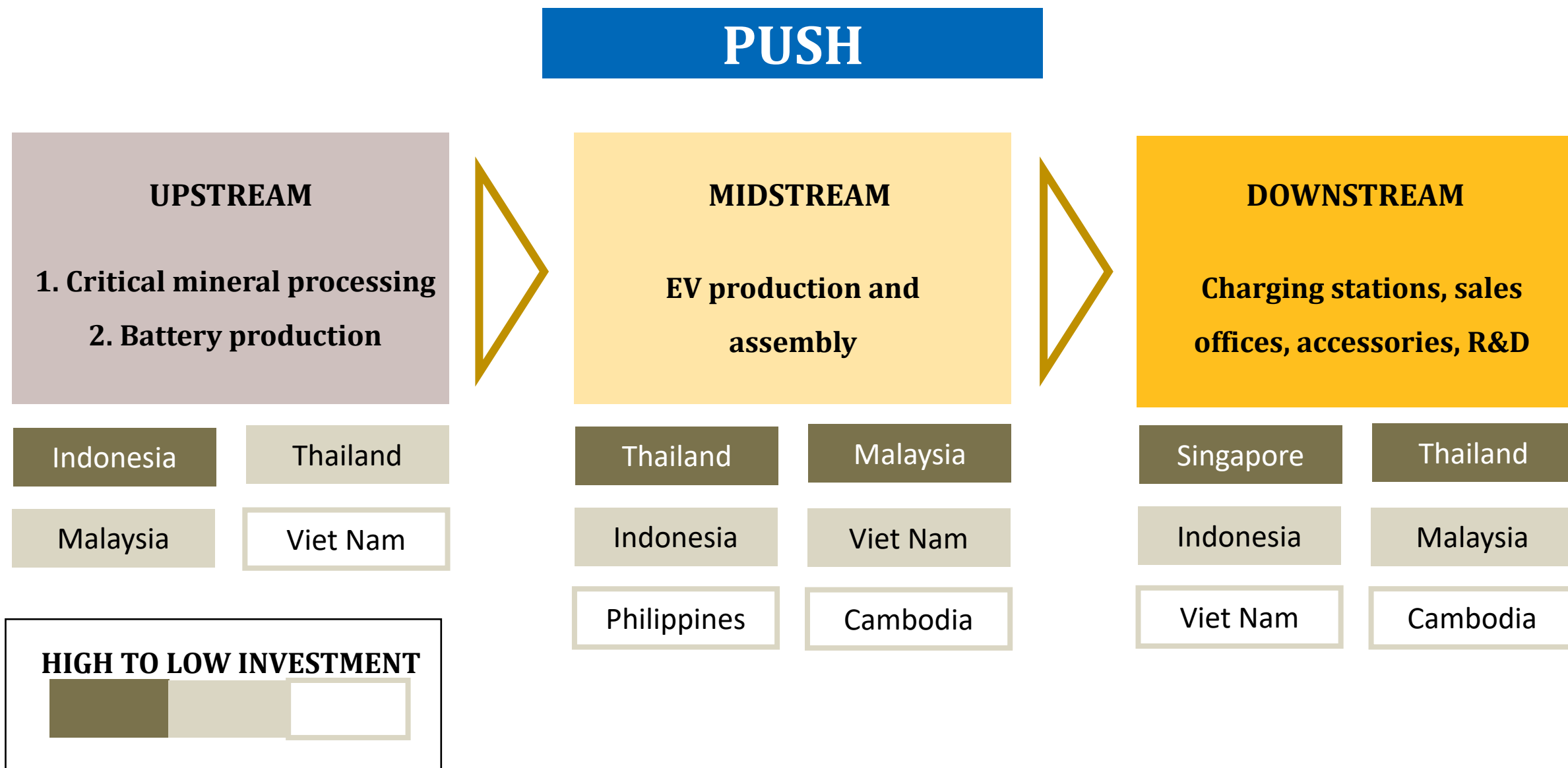
Globally, direct
subsidies for EVs
doubled in 2021

**US\$30
Billion**
global total

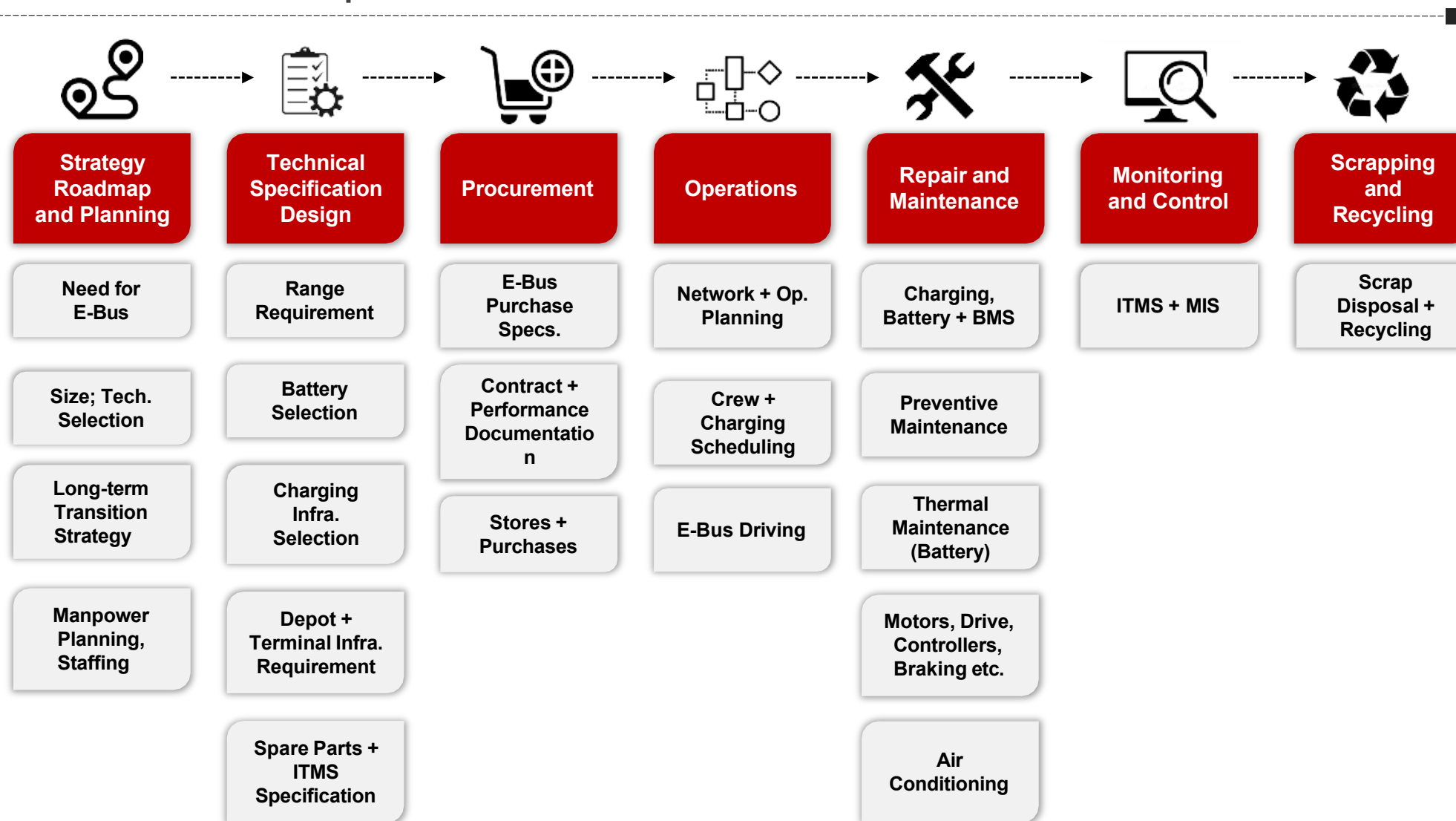
Pilot Projects

- More member States will prioritize pilot projects to demonstrate the viability of EVs. **Electrification of public transport is attractive in this regard**



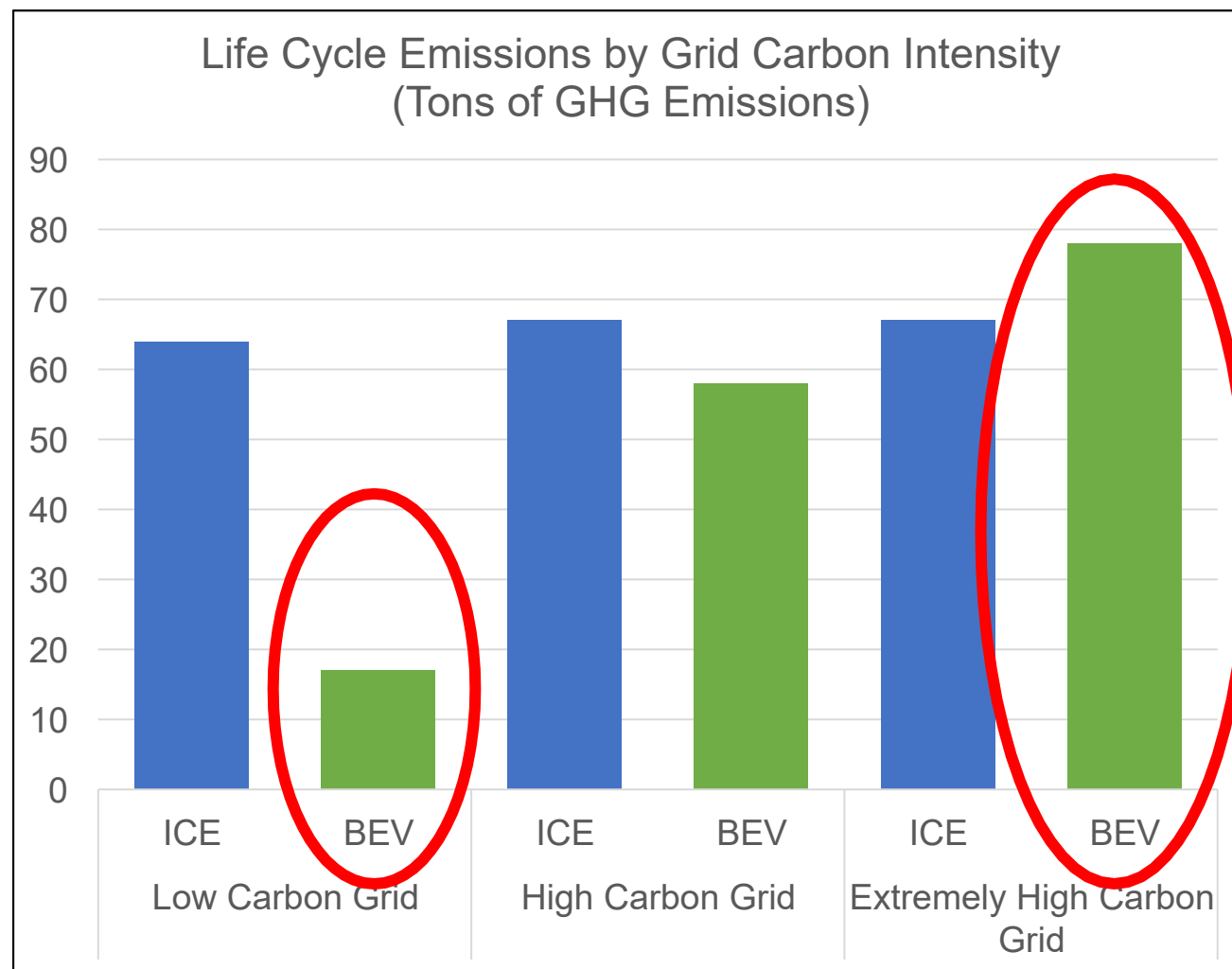


Workforce Skill Development



Expansion of Charging Infrastructure and Integration with Renewable Energy

- GHG emissions of an EV are highly dependent on the intensity of the electricity grid on which it charges
- Opportunities for many ASEAN countries with a high share of renewable energy
- As charging networks grow, it can drive demand for clean energy and renewable infrastructure like solar panels and wind



Vehicle-to-Grid (V2G) Integration

- V2G will optimize energy use by allowing vehicles to return power to the grid, which supports grid stability and maximizes the efficiency of renewable resources
- In emergencies or climate disasters, V2G can provide critical backup power, enhancing resilience and supporting disaster preparedness.



Key learnings from prior consultations



- EV adoption is **not a one-actor responsibility**. Private sector innovation needs collaborative government backing with supportive policies and incentives.
- Electrification can **start with public transport and ride hailing** fleets such as buses, ride-hailing and last-mile delivery.
- **Minimization of needed behaviour changes** can support a smoother transition.
- Government support is needed to **address high CAPEX** for batteries and charging infrastructure.

OBJECTIVES

- Launched in August 2022 to promote the transition to electric mobility in public transport to reduce GHG emissions
- Joined by 20 countries and 4 partner organizations
- Enhance regional cooperation, provide technical assistance, provide opportunities for peer learning and sharing of experiences
- Enhance collaboration among energy, transport, finance, and others
- Develop a knowledge base on electric mobility ecosystem

ONGOING & COMPLETED WORK

- Regional guidebook for Electric Mobility in Public Transport (2023), case studies on New Energy Vehicle Policies and E-Bus Development and Operation in China (2023), and national EV policy frameworks for Cambodia, Georgia, Lao PDR, Nepal, and Thailand
- Electric bus pilot projects in 4 countries (Lao PDR, the Philippines, Sri Lanka and Tajikistan)



Resources: Regional Asia-Pacific guidebook and case studies

ELECTRIC MOBILITY IN PUBLIC TRANSPORT A Guidebook for Asia-Pacific Countries



2022



New Energy Vehicle Policies and Promotion in China



Case Studies on E-Bus Development and Operation in Chinese Cities



Support provided to Asia Pacific member States



Done

Developed national EV policy frameworks for Cambodia, Georgia, Lao PDR, Nepal, and Thailand

Study on challenges and opportunities of EV development for land-based public transport sector in cities of Indonesia, and for four provinces of Thailand



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