

National Training on E-mobility  
*Hanoi, 29-30 November 2022*

# Develop and Implement E-Transportation Models in Urban Areas

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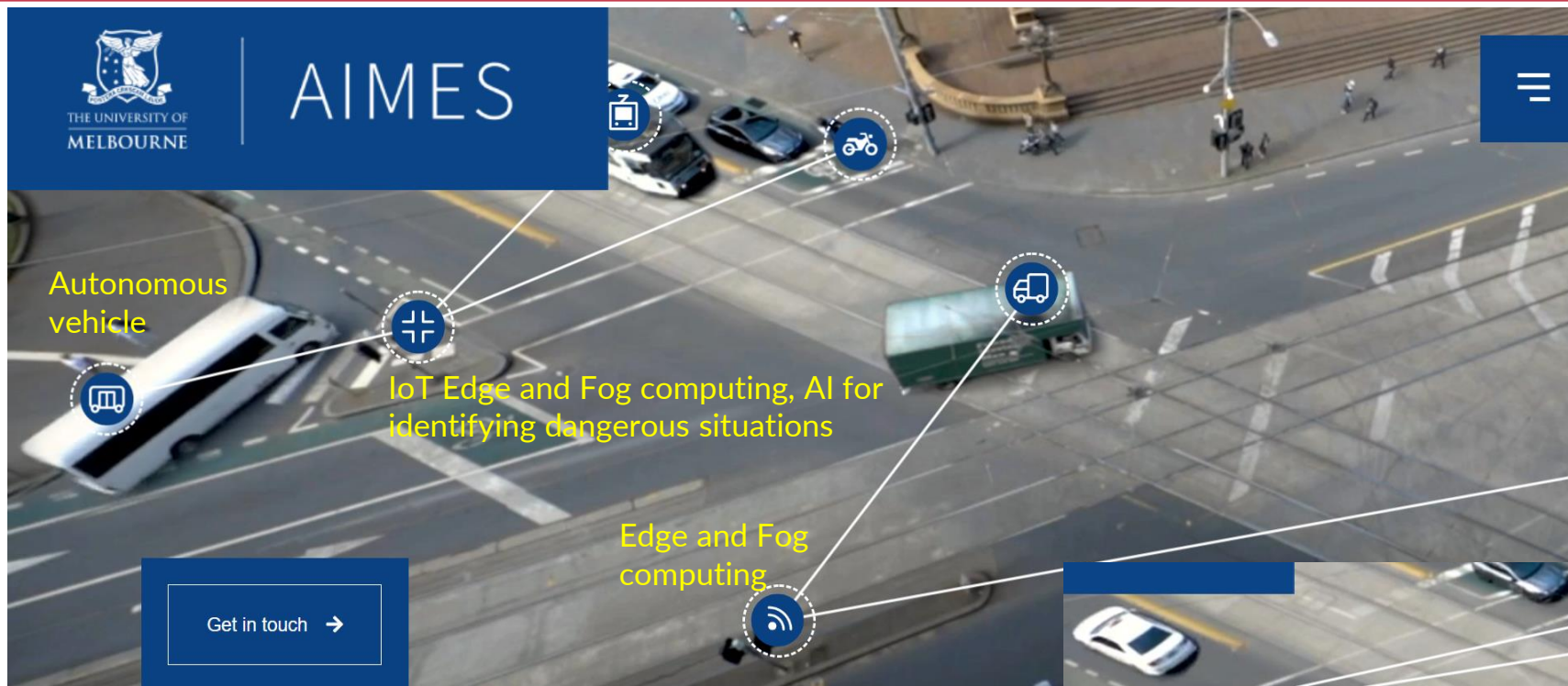
# Contents

- ❑ Introduction
- ❑ E-Transportation Modes for Urban Areas
- ❑ Stakeholder Relating to E-Mobility Development
- ❑ Steps for E-mobility Adoption in Urban Areas

# 1. INTRODUCTION



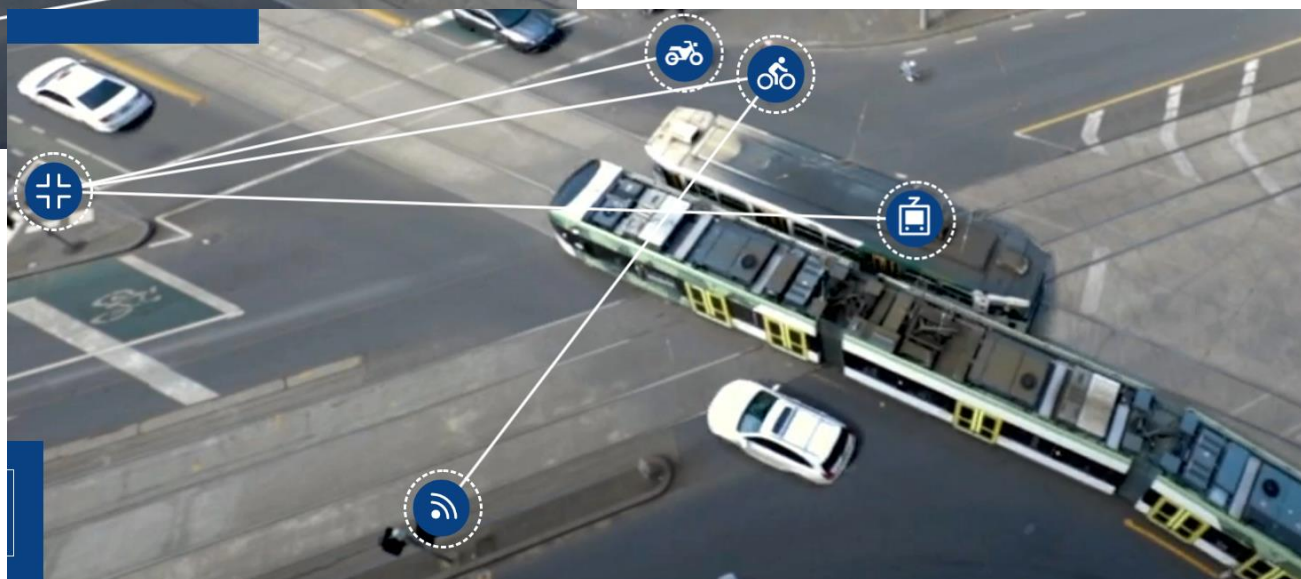
# 1. Introduction



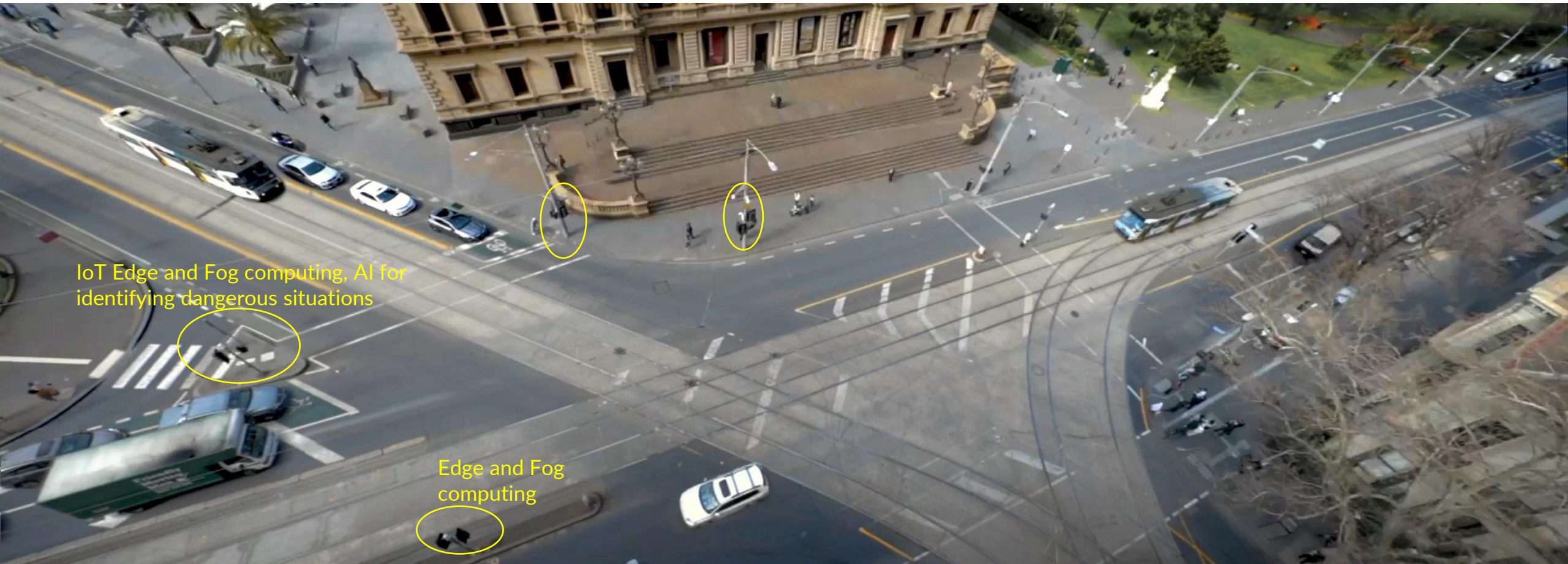
Dự án kết hợp 50 đối tác trong và ngoài nước

AIMES (Australian Integrated Multimodal EcoSystem)

Dự án công nghệ giao thông hỗn hợp, thời gian thực ở trung tâm Melbourne



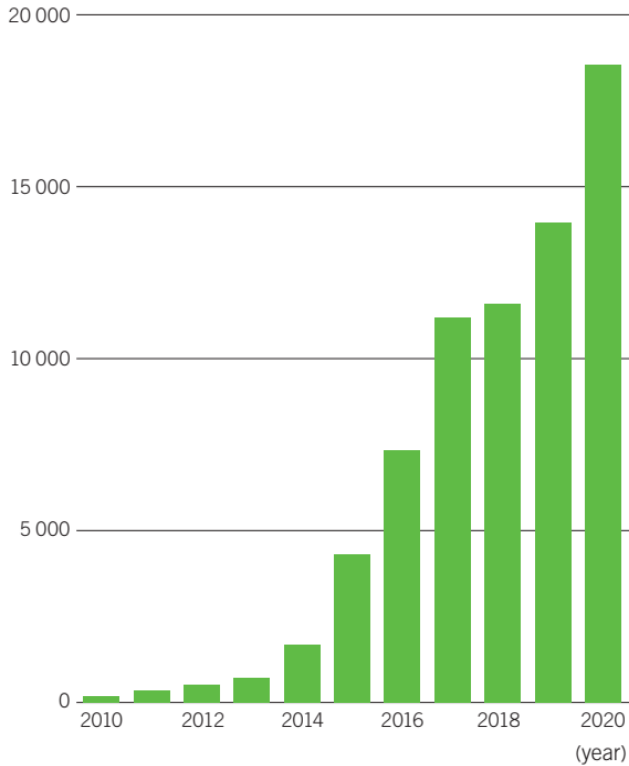
# 1. Introduction



IoT Edge and Fog computing, AI for identifying dangerous situations

Edge and Fog computing

# 2. E-Transportation Models for Urban Areas



Number of EVs in Hong Kong in 2010-2020



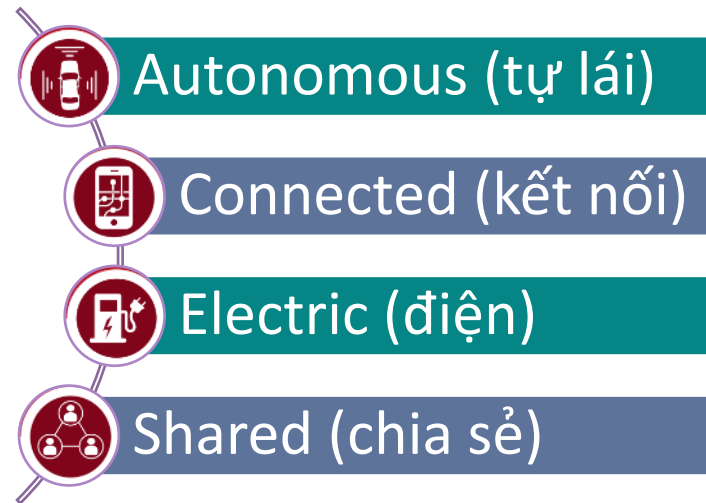
Target	
<p><b>Zero vehicular emissions by 2050</b> To act in concert with Hong Kong's target to achieve carbon neutrality before 2050</p>	
Key Measures	
<p><b>E-private cars</b></p>	No new registration of fuel-propelled private cars including hybrid vehicles in 2035 or earlier
<p><b>E-commercial vehicles</b></p>	Promote trials for e-public transport and commercial vehicles proactively in the next few years, with a view to setting a more concrete way forward and timetable around 2025
<p><b>Government fleet</b></p>	Set EV as standard for government small and medium private cars to be procured or replaced
<p><b>Charging network</b></p>	Develop a comprehensive and proper EV charging network comprising public and private charging facilities, and promote its marketisation for sustainable development
<p><b>Maintenance services</b></p>	Provide sufficient training, re-training and education opportunities to groom professionals and mechanics to support development of EV technology and maintenance
<p><b>Battery recycling</b></p>	Strive to legislate a Producer Responsibility Scheme for retired EV batteries in the next few years

The percentage of e-private cars among new private cars sold in **Hong Kong** increased to 12.4% in 2020. 1/8 new private cars is electric



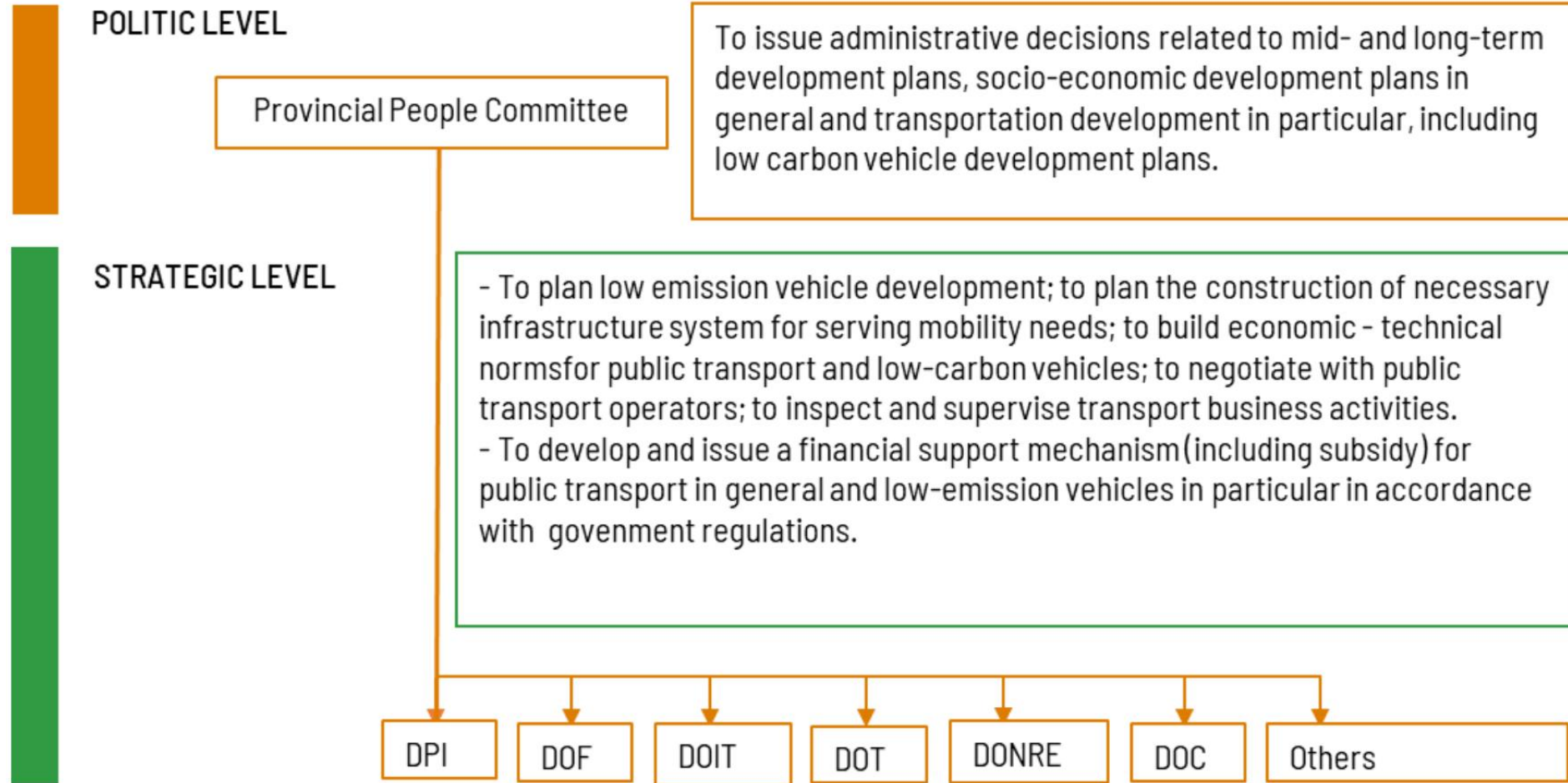
## 2. E-Transportation Modes for Urban Areas

- ❑ Public modes: Metro, tram, bus
- ❑ 2 wheelers vehicle: Bicycle, E-Bike, E-Motorbike
- ❑ Taxi
- ❑ Private cars
- ❑ LDVs
- ❑ Commercial vehicles



# 3. Stakeholder Relating to E-Mobility Development

## Stakeholder Mapping relating to e-mobility development (city level)



Source: GIZ, Study of Electric Mobility Development in Vietnam, Report for NDC TIA, August 2021



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## Stakeholder Mapping relating to e-mobility development (city level)

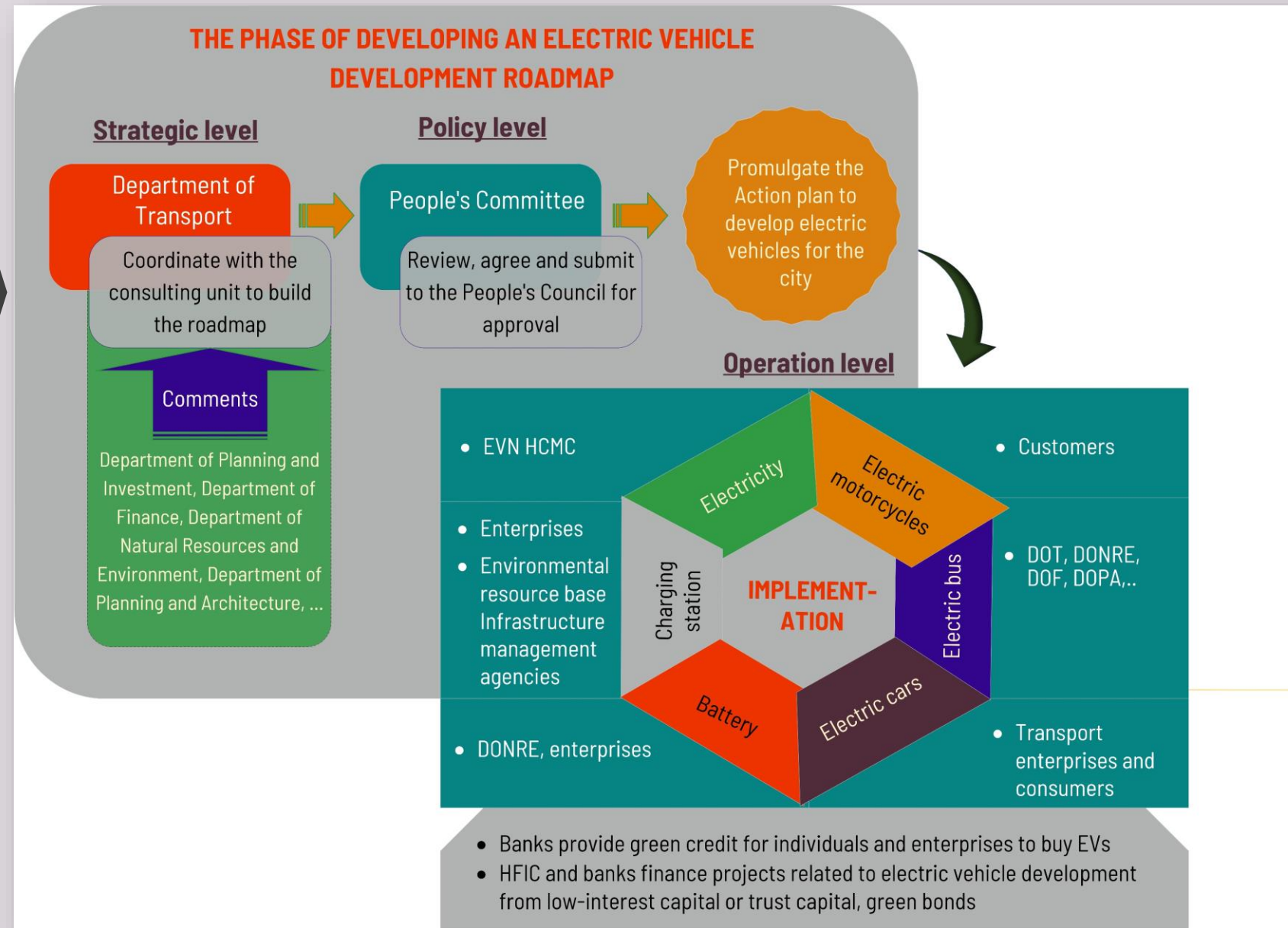


Source: GIZ, Formulating the city e-mobility action plan/roadmap for HCM city, Report for NDC TIA, Workshop 5/2022

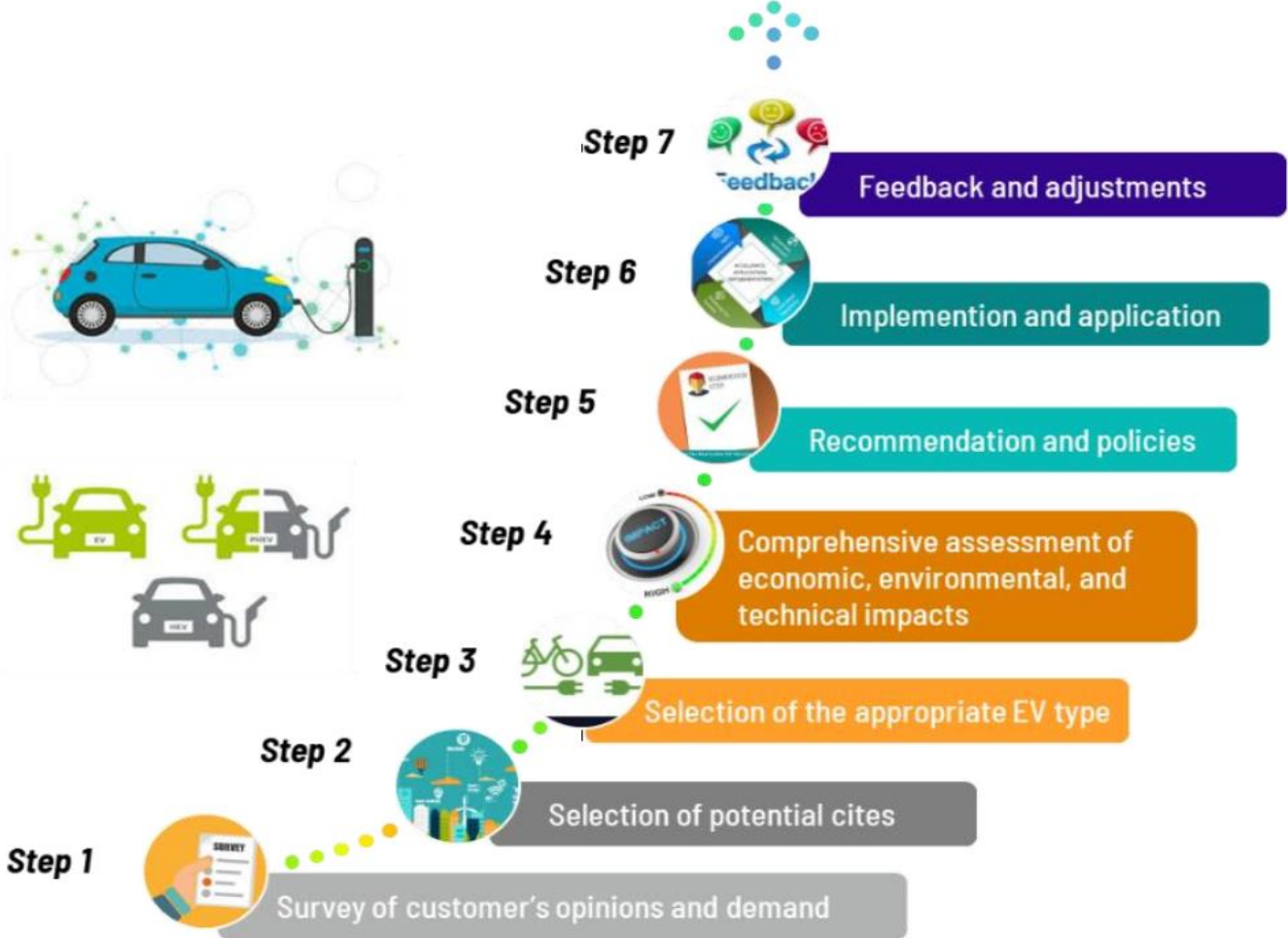


## Role of Stakeholders Relating to E- Mobility Development (City level)

- An example in HCM City...



# 4. Steps for E-mobility Adoption in Urban Areas

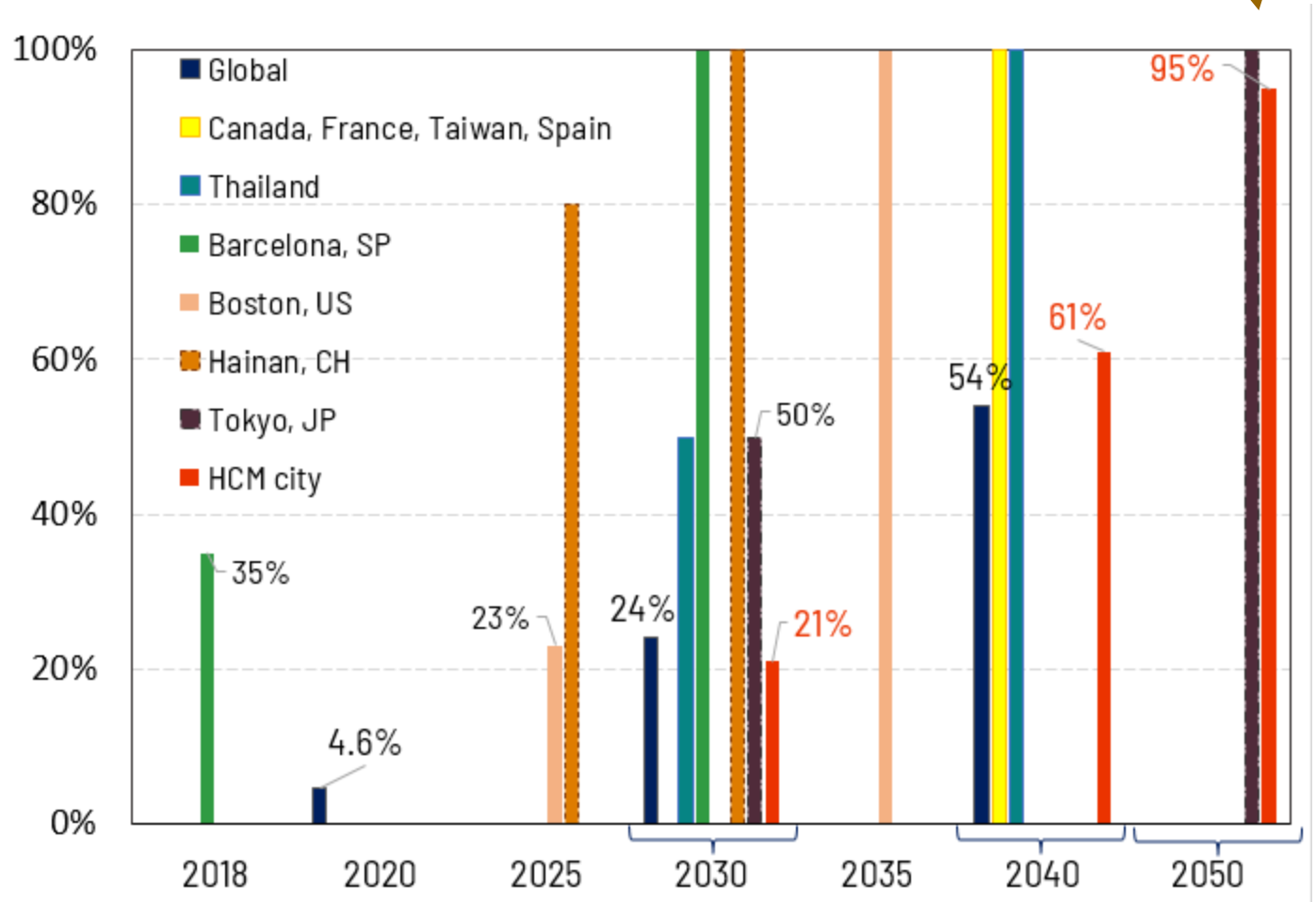


Source: GIZ, Study of Electric Mobility Development in Vietnam, Report for NDC TIA, August 2021

# 4. Steps for E-mobility Adoption in Urban Areas

Medium scenario for HCM City

The proportion of electric cars in the total number of cars sold could reach 21% in 2030 and 95% in 2050

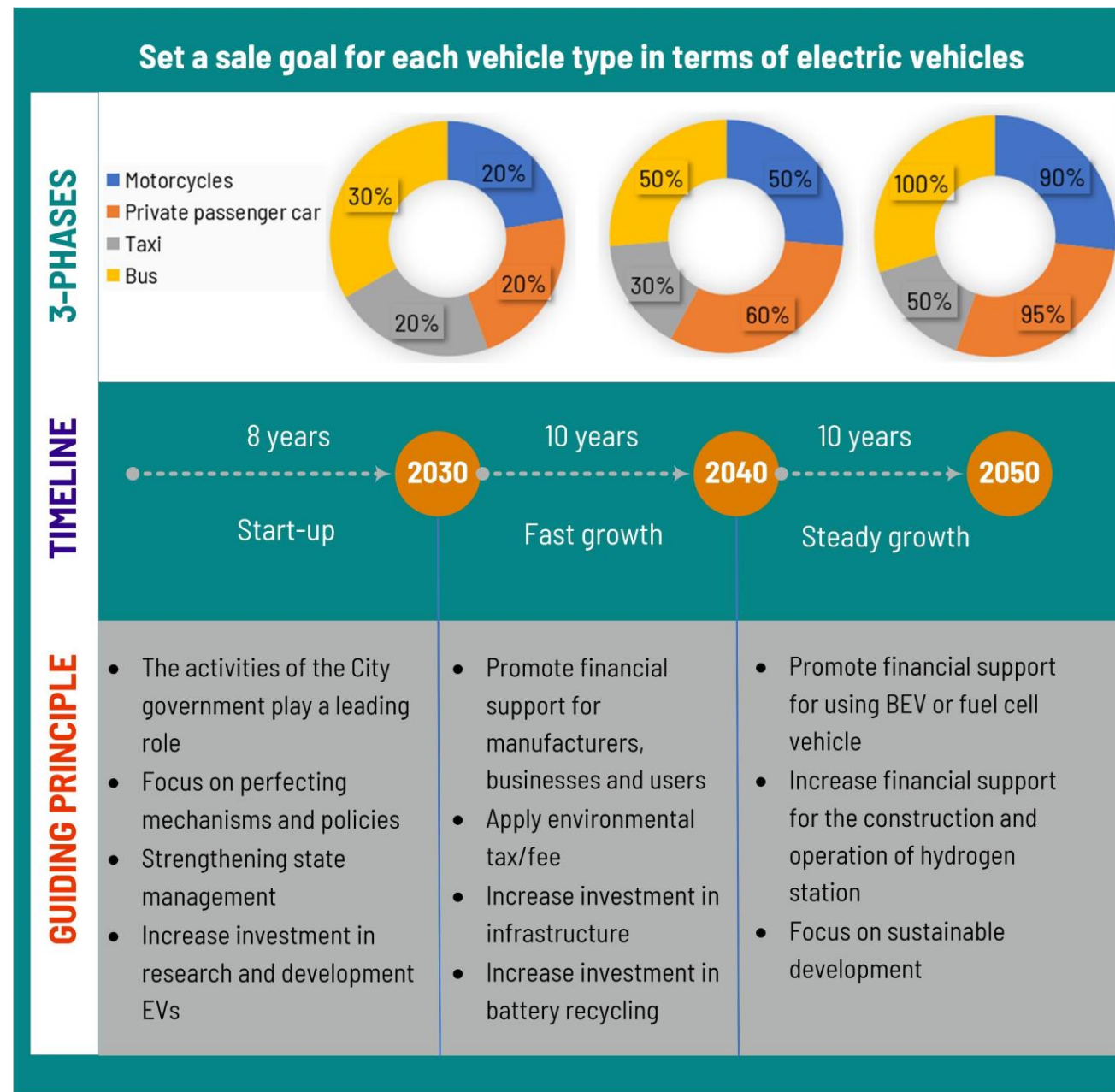


## 4. Steps for E-mobility Adoption in Urban Areas (con't): an example

- 1 Develop and complete mechanisms and policies to promote the development of electric vehicles
- 2 Communicate and raise awareness
- 3 Develop transport infrastructure and power grid infrastructure to meet the roadmap for switching to electric vehicles
- 4 Control the use of motor vehicles
- 5 Improve management capacity, develop human resources
- 6 Strengthen international cooperation and science and technology







# 4. Steps for E-mobility Adoption in Urban Areas (con't)



Source: GIZ, Formulating the city e-mobility action plan/roadmap for HCM city, Report for NDC TIA, Workshop 5/2022

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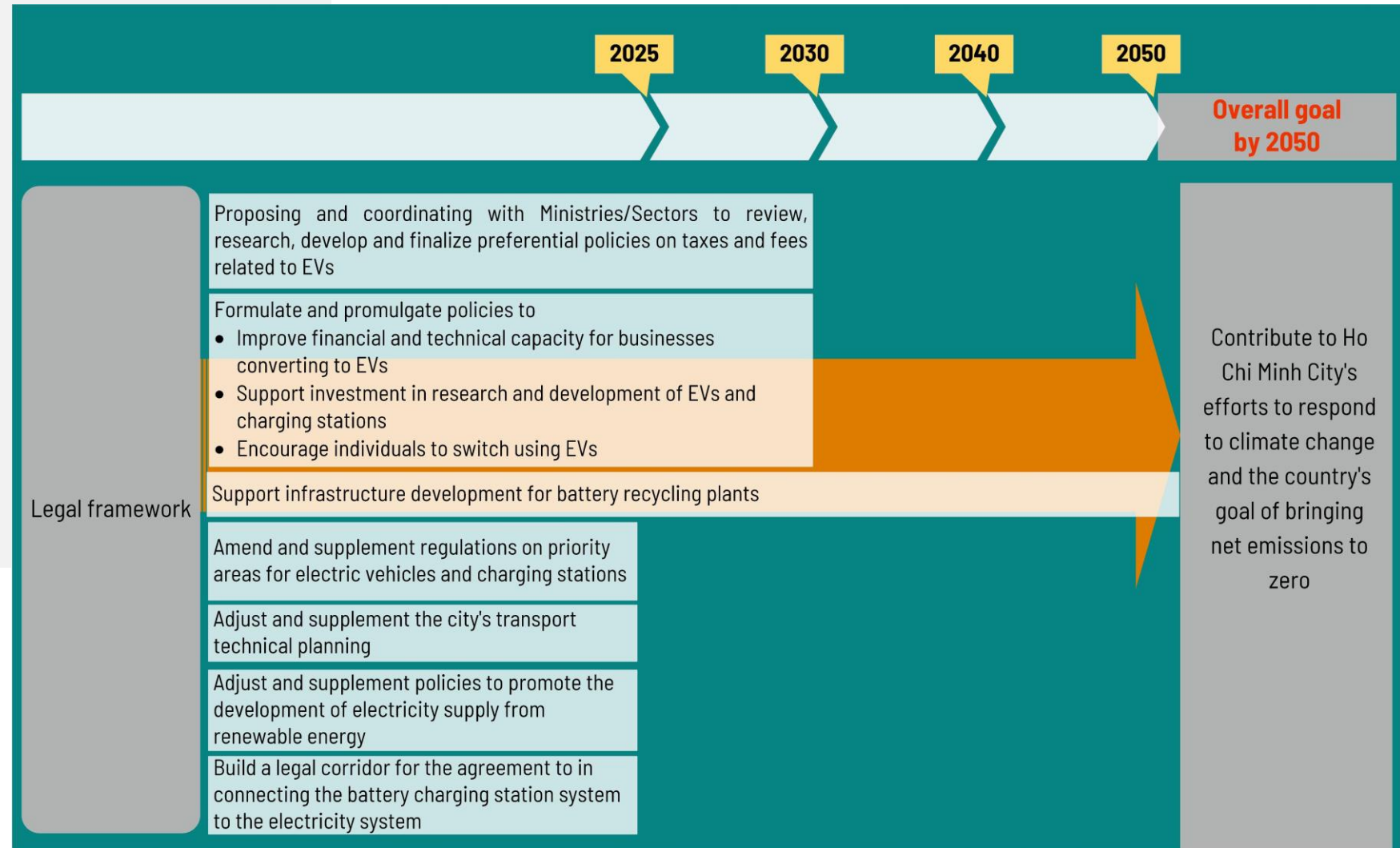
Key solutions	
<p><b>Private transport vehicles and taxi</b></p> 	<ul style="list-style-type: none"> <li>• Divine emission control zones and pollution fee collection in 2025 or earlier</li> <li>• Apply restrictions on vehicles using ICE in entering the city in 2035 or earlier</li> <li>• Stop issuing new registrations for cars using diesel by 2030 or earlier</li> <li>• Stop issuing new registrations for motorbikes/ motorcycles; all cars, including taxis, that use ICE by 2040 or earlier</li> </ul>
<p><b>Bus</b></p> 	<ul style="list-style-type: none"> <li>• Divine emission control zones and pollution fee collection in 2025 or earlier</li> <li>• Pilot incentives for bus transport businesses to convert to electric buses in the period 2022-2030</li> <li>• Stop issuing new registrations for buses using ICE by 2025 or earlier</li> </ul>
<p><b>Charging infrastructure</b></p> 	<ul style="list-style-type: none"> <li>• Promulgate uniform charging standards before 2025</li> <li>• Increase investment in building charging infrastructure to reach an annual average growth rate of 20% in the 2025-2050 period; total public charging stations reach 5500 units by 2050</li> <li>• Develop green building criteria based on the planning level of the charging station system before 2025</li> <li>• Study the pilot construction of hydrogen supply stations in the period of 2025-2040</li> </ul>
<p><b>Battery recycling</b></p> 	<ul style="list-style-type: none"> <li>• Tighten regulations on battery collection, transportation and recycling before 2025</li> <li>• Support infrastructure development for battery recycling plants in the period of 2025-2050</li> </ul>

4. Steps for E-mobility Adoption in Urban Areas (con't)

For example:

Roadmap for HCM City

...with legal framework



Source: GIZ, Formulating the city e-mobility action plan/roadmap for HCM city, Report for NDC TIA, Workshop 5/2022

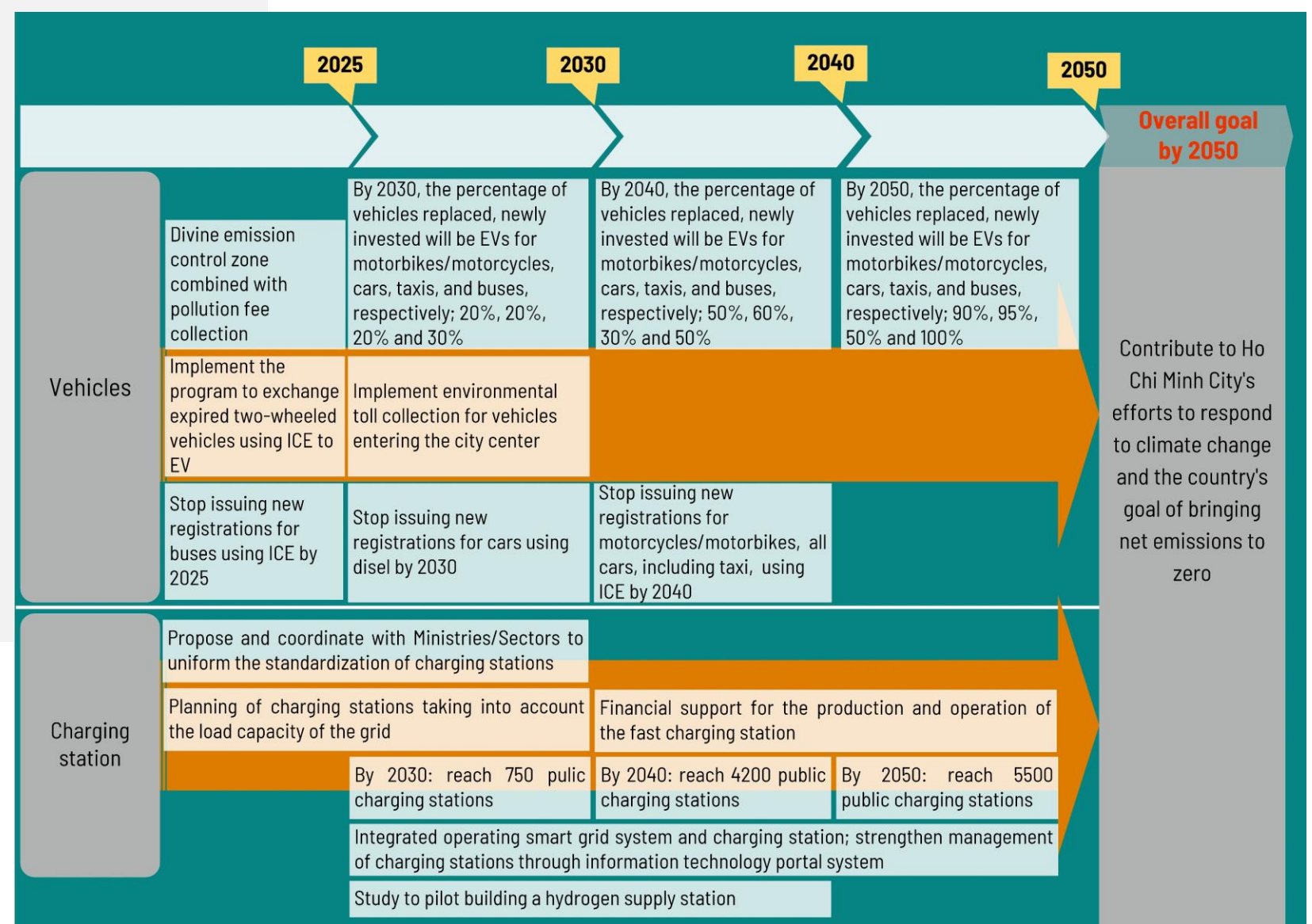


## 4. Steps for E-mobility Adoption in Urban Areas (con't)

For example:

Roadmap for HCM City

...with vehicle and charging infrastructure



Source: GIZ, Formulating the city e-mobility action plan/roadmap for HCM city, Report for NDC TIA, Workshop 5/2022



**HUST**

# THANK YOU !

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