



Global Trends & Perspectives on Electric Mobility

CARICOM Webinar

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giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

TUMI VOLT 

Content

Part 1: GIZ E-mobility Projects

Part 2: Global context and trends

Part 3: Considerations relevant toward the CARICOM context

GIZ Transport Projects – some examples

On behalf of German Federal Ministries and further donors, GIZ transport is active in more than 30 countries.



Costa Rica:
Introduction
of electric
buses in
San José

Brazil: Promotion & regulation strategy, business
models & pilot projects

China: Life cycle analyses,
charging infrastructure
development, battery
recycling, electric car-
sharing, standardization.

Thailand: Promotion of
electric two-/three-wheelers



Transformative Urban Mobility Initiative



TUMIVolt – a new global project to support e-mobility



Capacity Development

- Support the planning skills of decision-makers and favorable conditions for strengthening the role of technical experts and decision-makers in local and national administrations.



Coalition and Network building

- Further cooperation between cities, international organizations and networks as well as the private sector in the field of e-mobility. Develop internationally adopted guidelines on e-mobility



Pilot projects

- Work with pilot cities to develop integrated e-mobility plans incorporating public policies, energy provision and public transport strategies.



E-bus project

- The TUMI E-bus project will work with cities worldwide to enable and ensure the readiness of 100,000 e-buses by 2025.

**The current penetration of EVs is a drop
in the ocean, however, it is expected to
grow rapidly in the coming years**

Number of electric vehicles

7 million



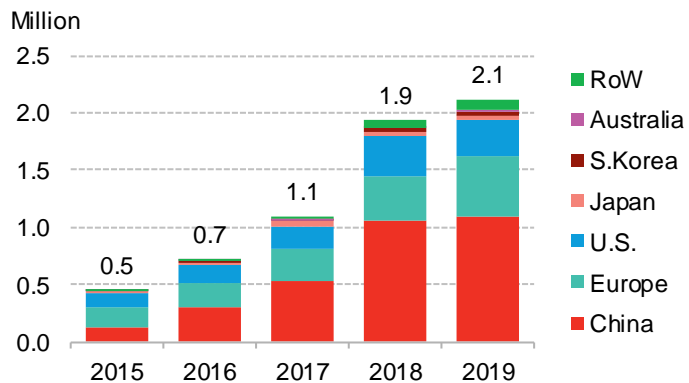
Vehicles with
internal combustion
engine:

1.7 billion

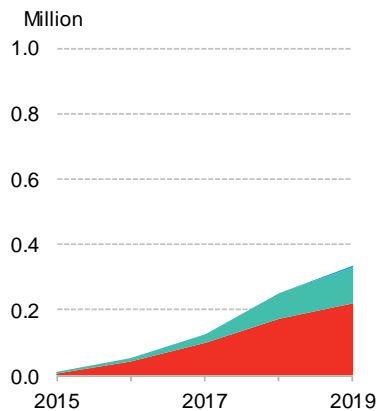
Fuente: from WRI with numbers from IEA, "Global EV Outlook", 2019

The growth of electric vehicles has been exponential

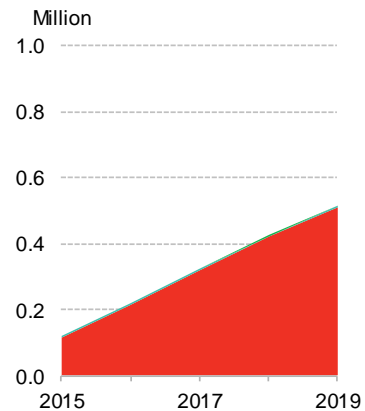
Global passenger EV sales by region



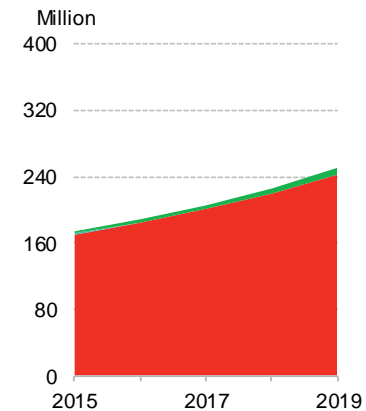
Electric vans and trucks



Electric buses

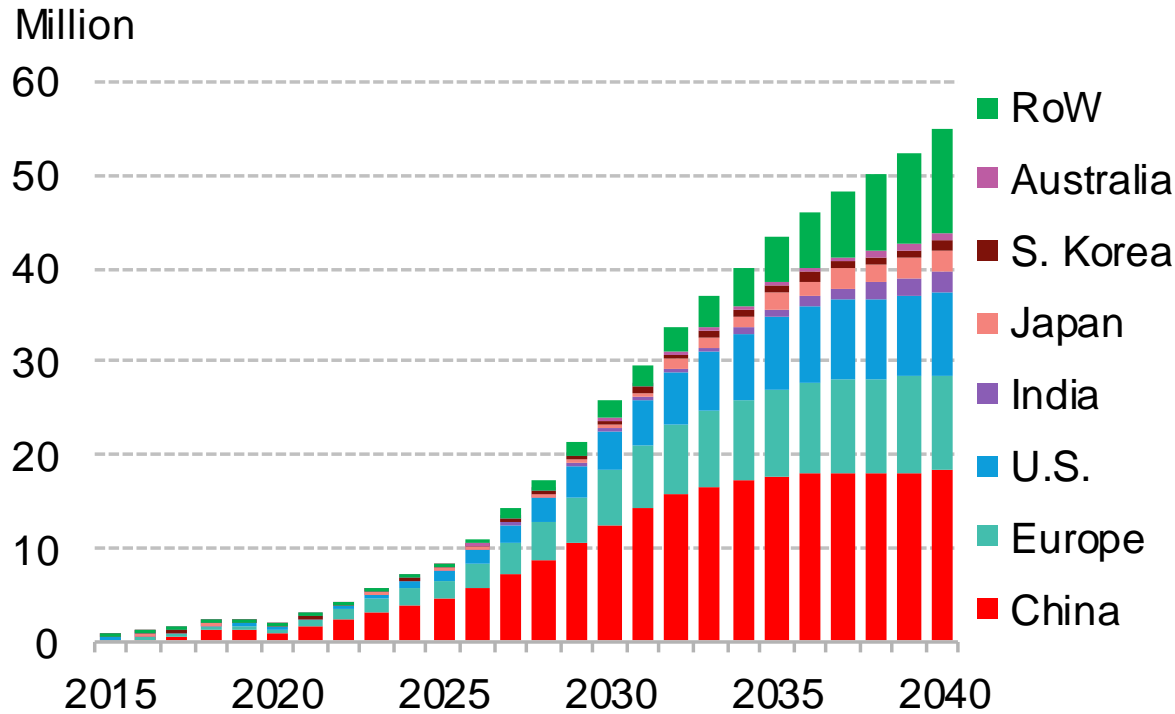


Electric two- and three-wheelers



Source: Electric Vehicle Outlook 2020, BNEF

Global forecasts predict further growth*



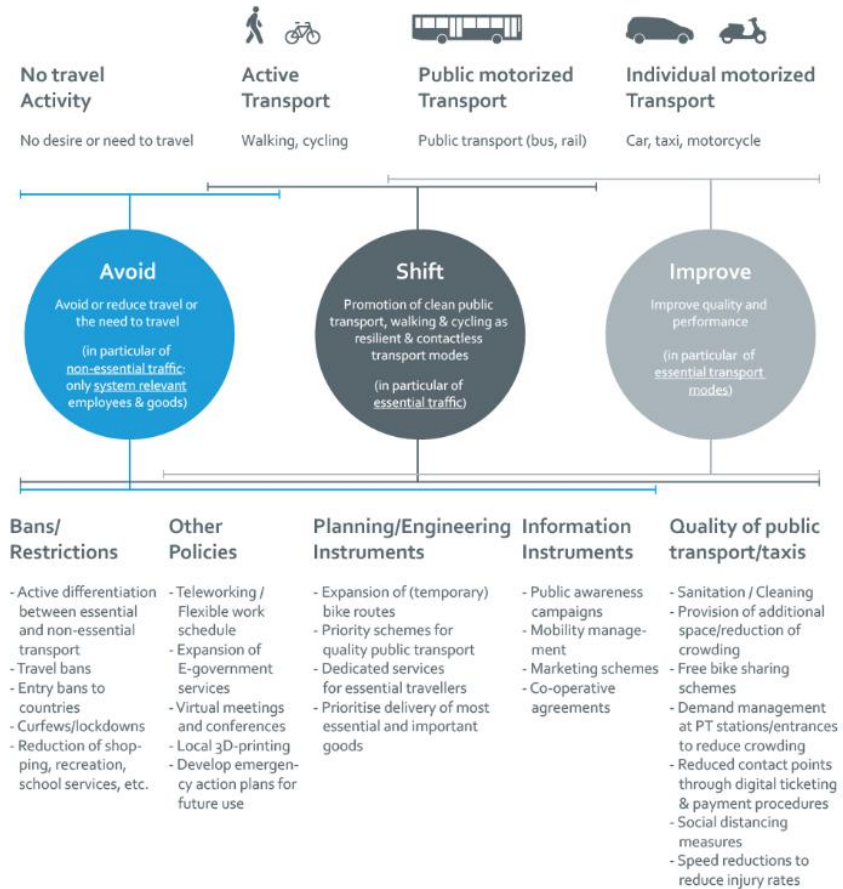
Source: Electric Vehicle Outlook 2020, BNEF

*Only passenger EVs
giz

Our Approach keep being Avoid – Shift – Improve



Less polluted and noisy Traffic Jams shouldn't be our goal!



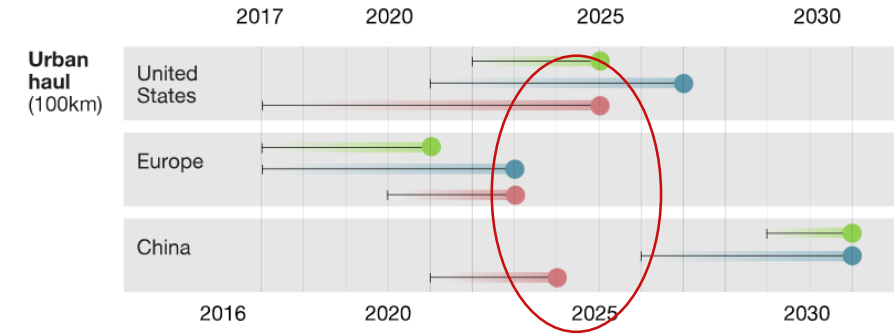
Main Challenges



Different applications and weight classes will see varying breakeven points for electric vehicle total cost of ownership.



Timing of battery electric vehicle total cost of ownership parity with diesel vehicle, year achieved range

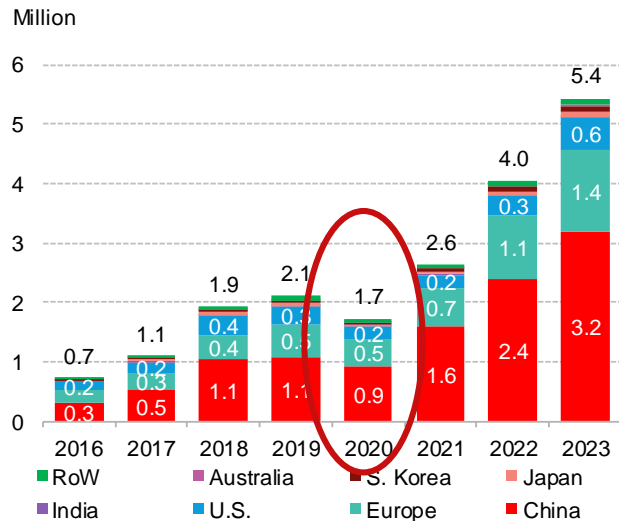


McKinsey&Company | Source: McKinsey Center for Future Mobility

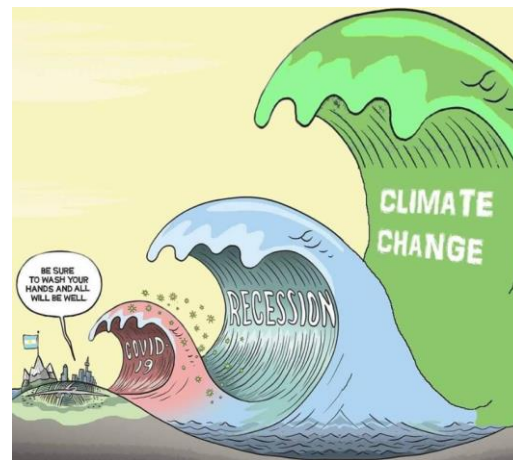
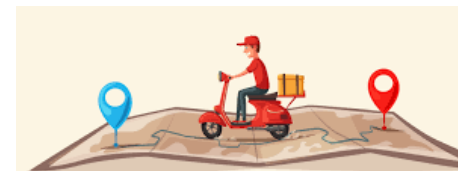


COVID-19 impacts on e-mobility sales

Global passenger EV sales by region



COVID-19 consequences that might influence a growth in e-mobility



Increasing climate ambition in the transport sector through electro-mobility

Policy Recommendations based on recent experience in Latin America

from Argentina, Barbados, Brazil, Chile, Costa Rica, Colombia, Panama and Uruguay and regional communities of practice

October 2019 in San José, Costa Rica

- ✓ Get started!
- ✓ Secure broad stakeholder participation
- ✓ Initiate pilot projects
- ✓ Create a narrative that goes beyond decarbonization
- ✓ Build political support for e-mobility
- ✓ Establish an enabling national policy framework
- ✓ Provide fiscal incentives



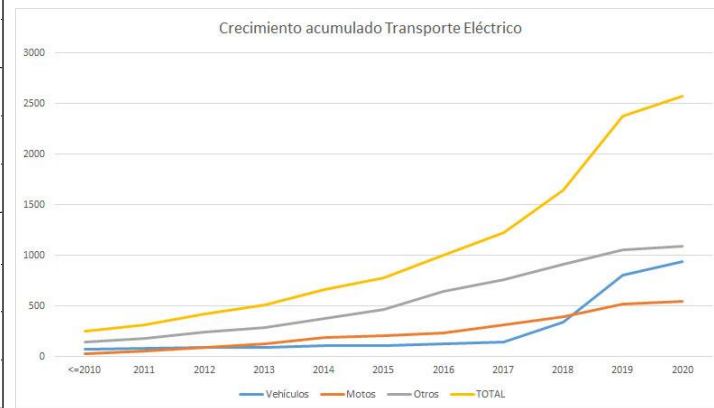
<https://www.changing-transport.org/publication/mitigate-greenhouse-gases-through-electro-mobility/>



Many countries in Latin America incentivize e-mobility

Categoría	Instrumento	Argentina	Brasil	Colombia	Costa Rica	Ecuador	Mexico	Panamá	Paraguay	Uruguay
Purchase incentives	Added value tax			✓	✓	✓			✓	✓
	Import taxes	✓	✓	✓	✓		✓		✓	✓
	Others	✓	✓		✓	✓	✓	✓	✓	✓
Use and Access incentives	Vehicle ownership / circulation taxes				✓		✓			
	Exception of road charges, parking fees,...			✓	✓		✓			
	Others			✓	✓		✓			
Other promotion instruments	Exception of vehicle restrictions			✓	✓					✓
	Differentiated tariffs					✓	✓			
	Regulation for charging infrastructure	✓			✓		✓	✓		✓
	National e-mobility strategy	✓		✓	✓		✓	✓	✓	

- ✓ Incentivo completo para vehículos eléctricos / Instrumento aprobado y en marcha
- ✓ Incentivo parcial para vehículos eléctricos / Instrumento en fase de diseño.



Impact of the Law on promotion and incentives for Electric Mobility on electric vehicle sales in Costa Rica

Source: MINAE 2020

Promoting different vehicle categories E-Mobility



Light Duty vehicles (cars and vans)

- ✓ Provide financial incentives for owners/operators of light duty vehicles
- ✓ Focus on institutional fleets (public and private), e.g. electricity companies and post or messenger services
- ✓ Early adopters have the chance to influence the electric vehicle supply



Deployment of electric buses

- ✓ Test electric bus technology under local conditions
- ✓ Work in close cooperation with bus operators
- ✓ Share risk between actors
- ✓ Revise the image of public transport

Lessons learned in Costa Rica

■ Ambitious Climate Agenda and political will

- Decarbonization Plan 2018-2050
- 98% of electric supply from renewable energies

■ Milestones achieved in e-mobility

- Law of Incentives and Promotion of Electric Mobility
- National Network of Fast Charging Stations
- National Electric Transportation Plan
- Electrification of Public Transport in 3 steps (1 + 3 +12)
- Pilot projects of institutional fleets (e.g. Energy Provider, Postal Service)
- Preferential tariff for e-bus charging

■ Civil society engagement: association **ASOMOVE**, **podcast**

- To promote the development of electric mobility, protect and defend the rights and interests of users; serves as an exchange of information and knowledge



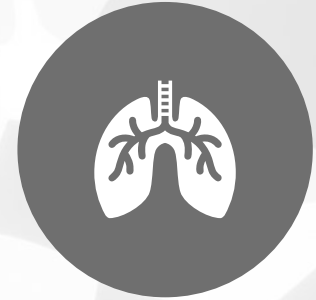
Electric mobility as key building block for transport decarbonization



more than just electric cars...
e.g. **buses**, taxis, delivery vehicles, e-scooters, e-bikes



Promote e-mobility while working on decarbonizing the electricity grid – don't wait!



Not only relevant for GHG reduction:
local air quality, noise reduction, business opportunities...



Thank you and stay tuned!

TUMIVolt Charging Station

2nd Webinar of the series:

"Future Battery Materials – Will solid state batteries change the game of e-mobility?"

June 17 2020 | 02 - 03 pm CET

Resilience & Transportation

5th Webinar of the series:

"International best practices of funding instruments to support public transit after Covid-19"

June 17 2020 | 04 – 05.30 pm CET



<https://twitter.com/TUMInitiative>



<https://www.facebook.com/transformativemobility>

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