



Decarbonising Transport

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Environmentally Sustainable Transport
Japan Pavilion, COP 25

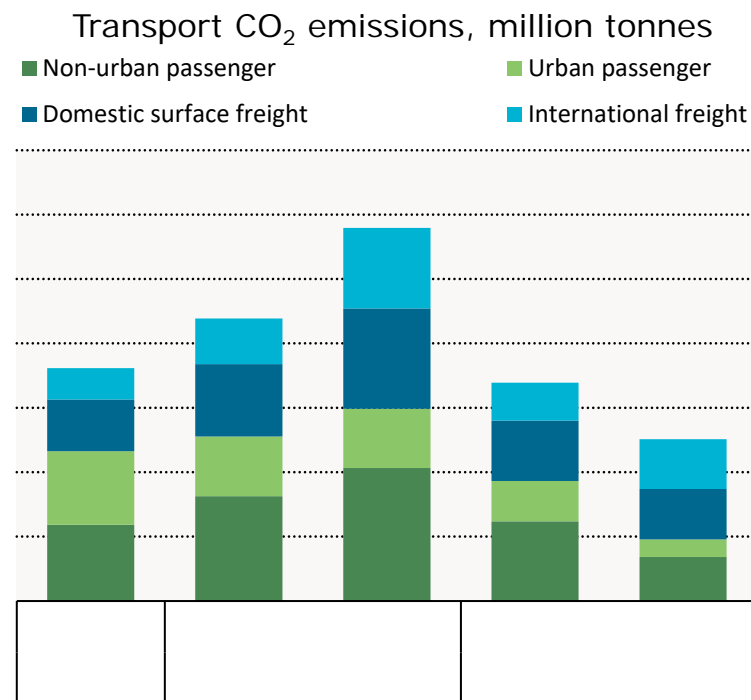
December 9, 2019

Transport is important for climate change policy

Only 10% of current NDCs set a specific target for the reduction of CO₂ emissions from transport

Transport-related CO₂ emissions to grow by 60% by 2050, to 11 585 Mega tonnes of CO₂

Current policies will not be enough – greater ambition with existing policies could reduce emissions by 30%, but additional policy measures will also be needed





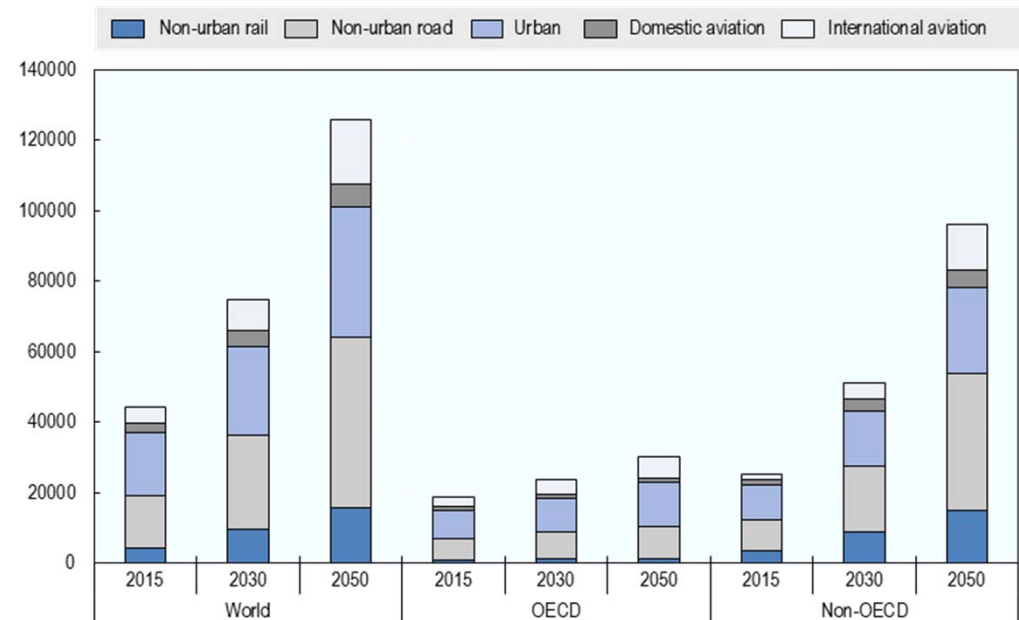
Passenger transport demand to triple by 2050

China and India to generate 1/3 of global pkm

OECD share of pkm falls from 43% to 24%

Non-urban road is the largest mode by 2050

Current demand pathway, billion passenger-kilometres



Freight demand projected to triple by 2050

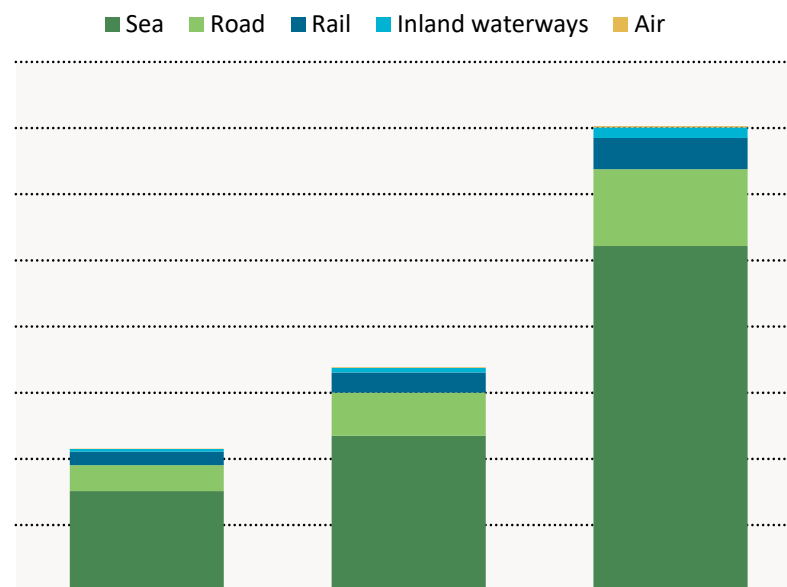
On its current trajectory, freight emissions will more than double

Could account for 48% of total transport CO₂ emissions by 2050

Maritime continues to dominate freight (no major modal shifts)

Freight growth is subject to significant uncertainty

Current demand pathway, billion tonne-kilometres





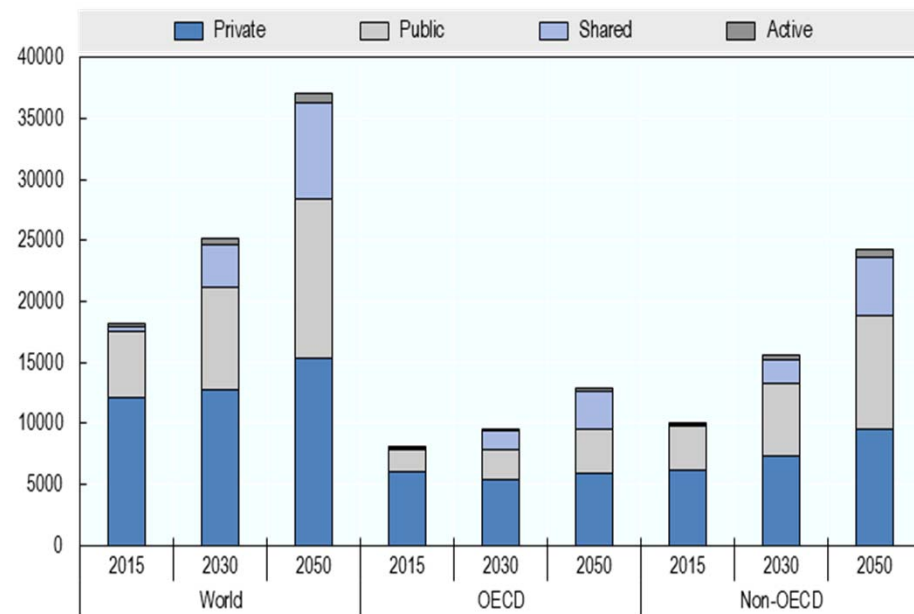
Urban passenger transport to double by 2050

Shared mobility* is the fastest growing mode

Public transport ridership growth strong in non-OECD rail and metro

Car use still dominant but declining

Current demand pathway, billion passenger-kilometres



*Free-floating shared vehicle systems (cars, bikes, scooter, motorbikes) and shared taxis and minibuses

Non urban passenger transport is projected to triple by 2050

CO₂ emissions set to grow by over 70%

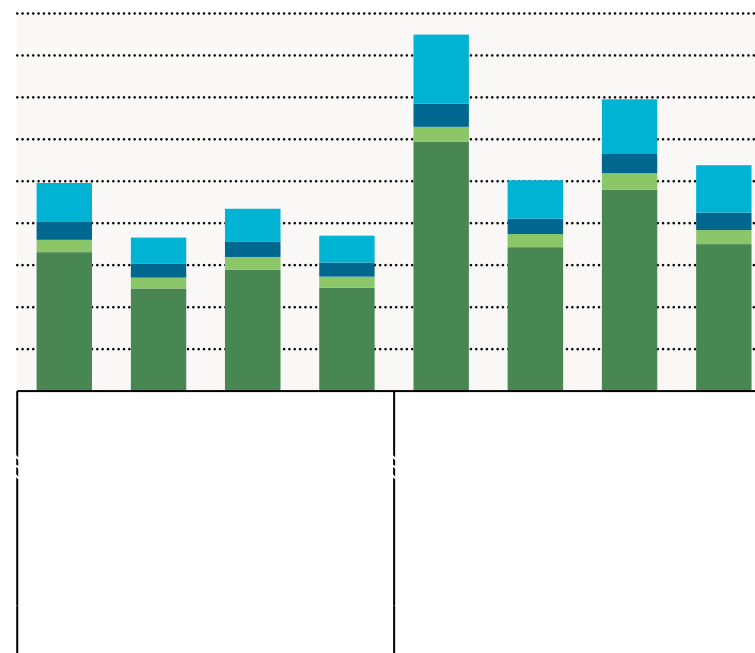
Overall share of CO₂ emissions to grow slightly from 33% to 36%

No major mode shift expected for non-urban travel

Governments should aim to improve attractiveness and affordability of rail where appropriate

Combined technology and policy disruptions needed to reduce CO₂

■ Regional ■ Domestic surface ■ Domestic aviation ■ International aviation





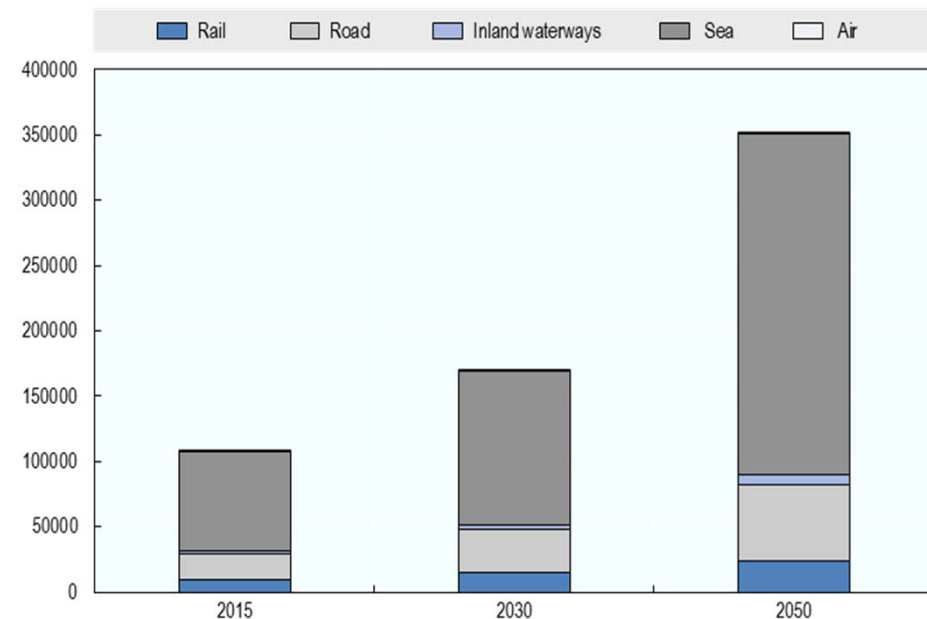
Freight growth subject to significant uncertainties

Tkm to triple by 2050

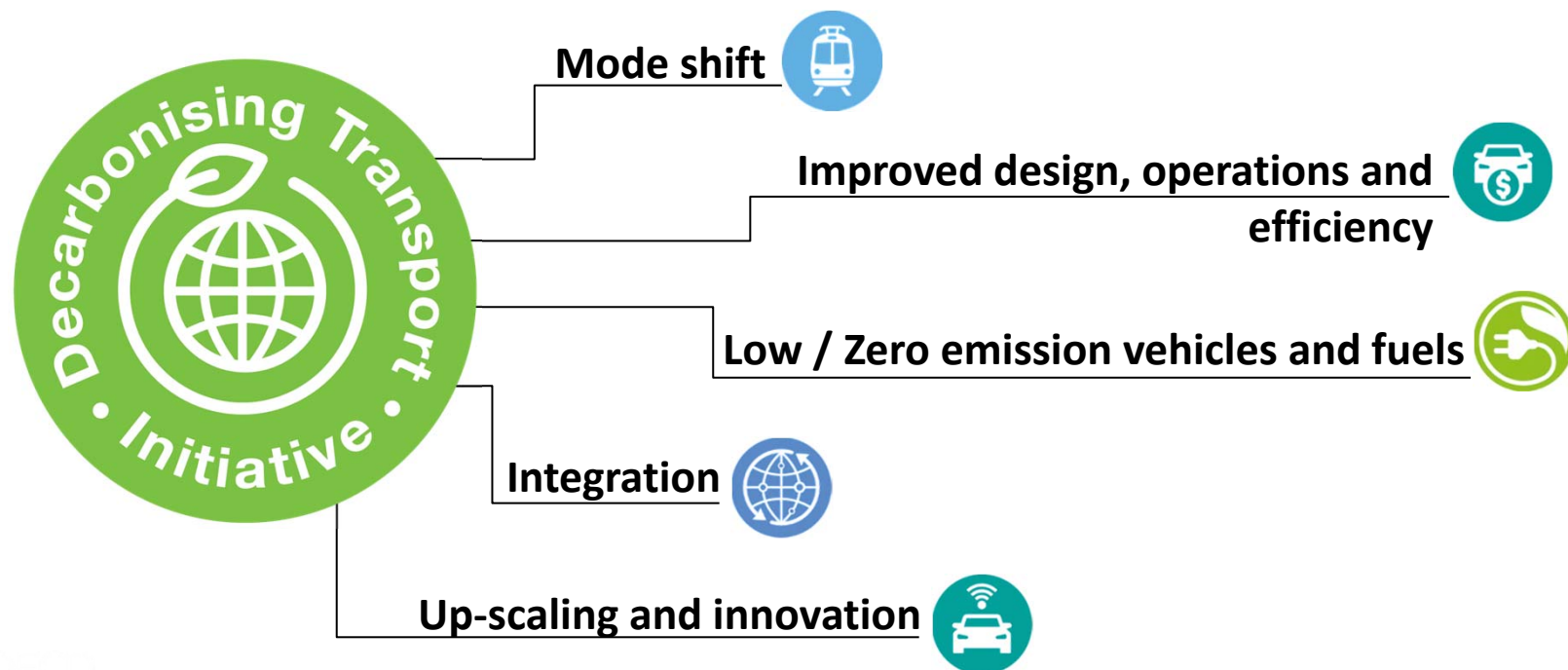
Maritime continues to dominate freight (no major modal shifts)

Anticipating bottlenecks and planning investment difficult

Current demand pathway, billion tonne-kilometres



Multiple objectives must be achieved, across different sectors, to decarbonise transport





Policy scenarios: current and high ambition



Car access restrictions



Pricing



Mass transit



Transport integration



Urban density



Carbon pricing



Trade of coal and oil



Logistics efficiency



Efficiency and EVs



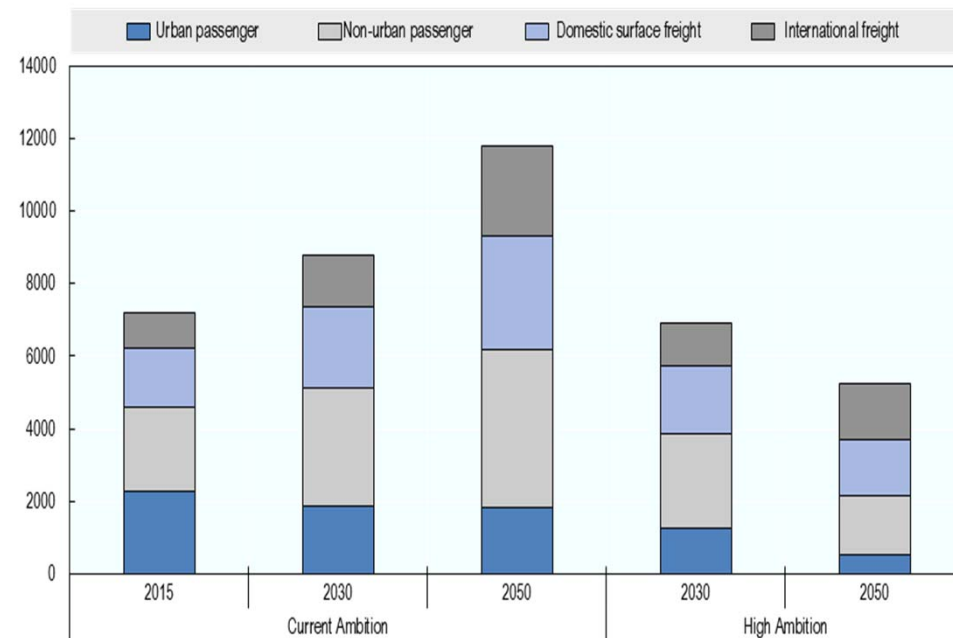
Current ambitions not enough to achieve climate goals

Transport-related CO₂ emissions to grow over 60% by 2050

More ambitious policies could reduce emissions by 30%

Importance of disruptive innovations

Transport CO₂ emissions, million tonnes





2019 Edition: Focus on disruptions



Teleworking



Shared mobility



Autonomous driving



Long-haul LCC



Energy innovation



Ultra-HSR



E-commerce



3D printing



New trade routes



Energy innovation



High-capacity vehicles

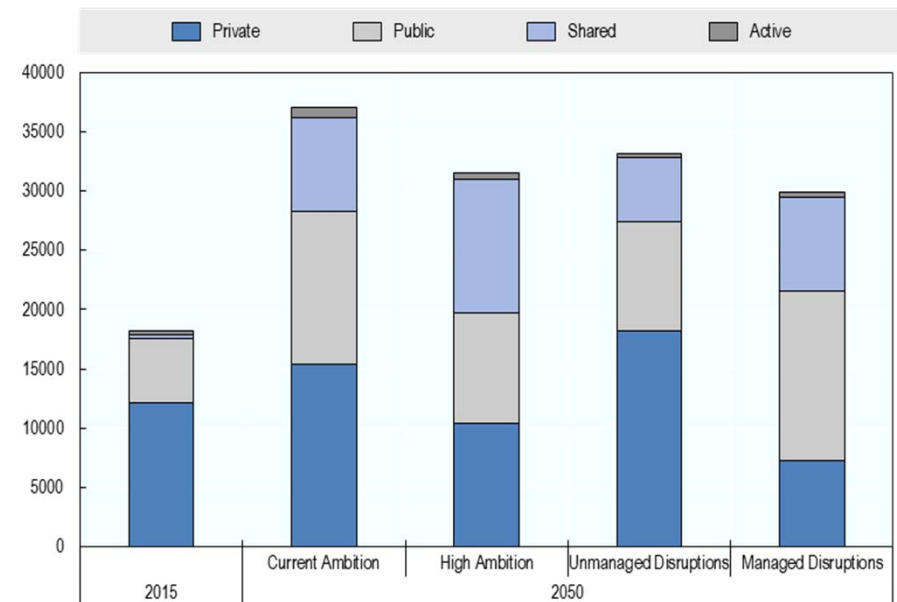


Importance of managing change

Unmanaged disruption leads to modal shift towards private car use in urban areas

Managed disruption (policy actions and regulation to support transition) can result in significantly more sustainable urban mobility

Urban mobility, million passenger-kilometres





Disruptions for freight transport





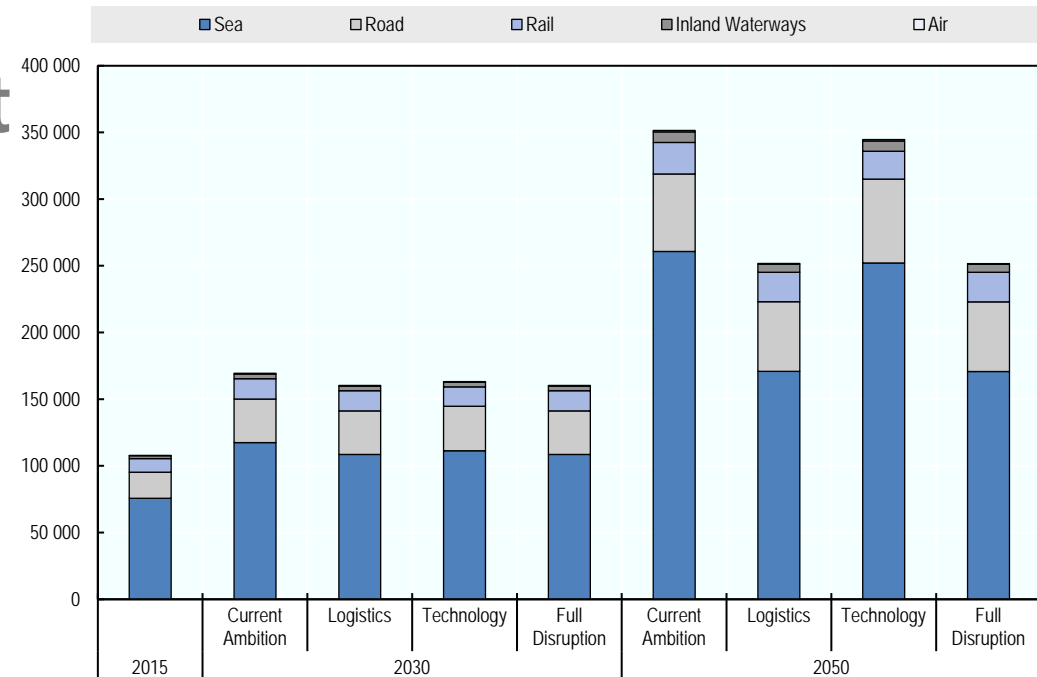
Potential impact of disruptions the largest for freight

Massive changes in costs, activities and supply chains

Changes trade patterns, infrastructure use, logistics chains

Poses a challenge for investment decisions

Freight, Billion tonne-kilometres





Disruptions: messages for policymakers

- ▶ Transport policy must anticipate disruptions that originate outside the sector
- ▶ Better planning tools needed to improve adaptability to uncertainties
- ▶ Transport systems will benefit from policy frameworks that foster innovation
 - › From static regulation to frequent regulatory reviews



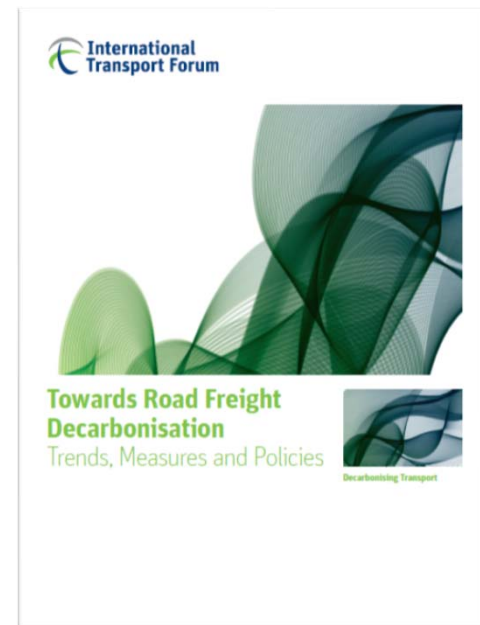
Disruptions: impact on industry

- ▶ **Data** is crucial for better understanding the dynamics and potential impact of these disruptions
- ▶ **Scenario planning** helps to select strategies that are more robust to the largest number of possible futures
 - › Need robust risk assessment tools
- ▶ Need to also design the transport system and products that are **adaptable** to change
- ▶ Innovations and business models are changing faster than regulation

The Decarbonising Transport initiative

- ▶ builds a **catalogue of effective CO₂ mitigation measures**
- ▶ provides **targeted analytical assistance** for countries and partners to identify climate actions that work
- ▶ gathers and shares **evidence for best practices** that will accelerate the transition to carbon-neutral mobility
- ▶ **shapes the climate change debate** by building a global policy dialogue and by bringing the transport perspective to the table

Sectoral Reports



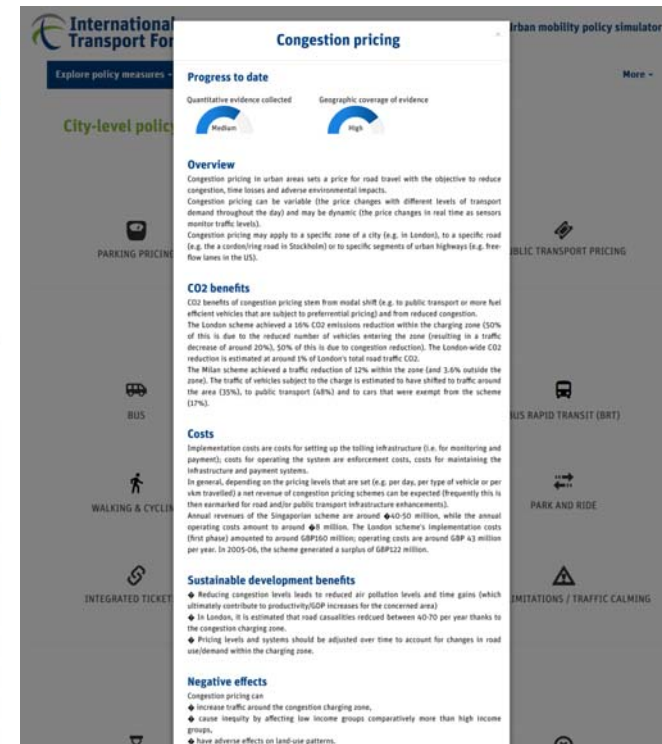
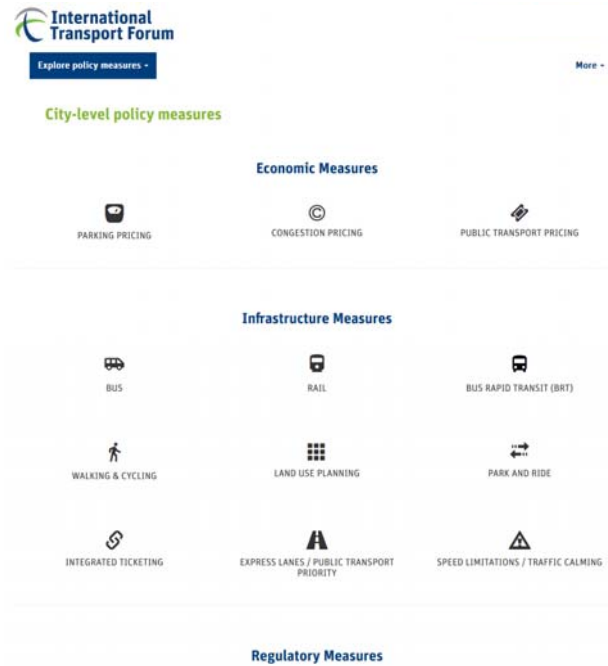


Regional/National Pathways

- ▶ Decarbonising Transport in Europe (EC Horizon 2020)
Two model development workshops in 2019; two scenario development and two dissemination workshops in 2020
- ▶ Decarbonising Transport in Latin American cities: Bogota, Buenos Aires, Mexico City
Kick-off and technical workshops in each city in 2019
- ▶ Decarbonising Transport in Emerging Economies: Argentina, Azerbaijan, India, Morocco
Project kick-off meetings in 2019 and 2020

Catalogue of measures online from May 2020

- Based on literature
- For inclusion in future ITF models and case specific studies
- Intended to facilitate dialogue on decarbonising transport





Thank you

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