

Global transport demand and its challenges

ITF Transport Outlook 2023





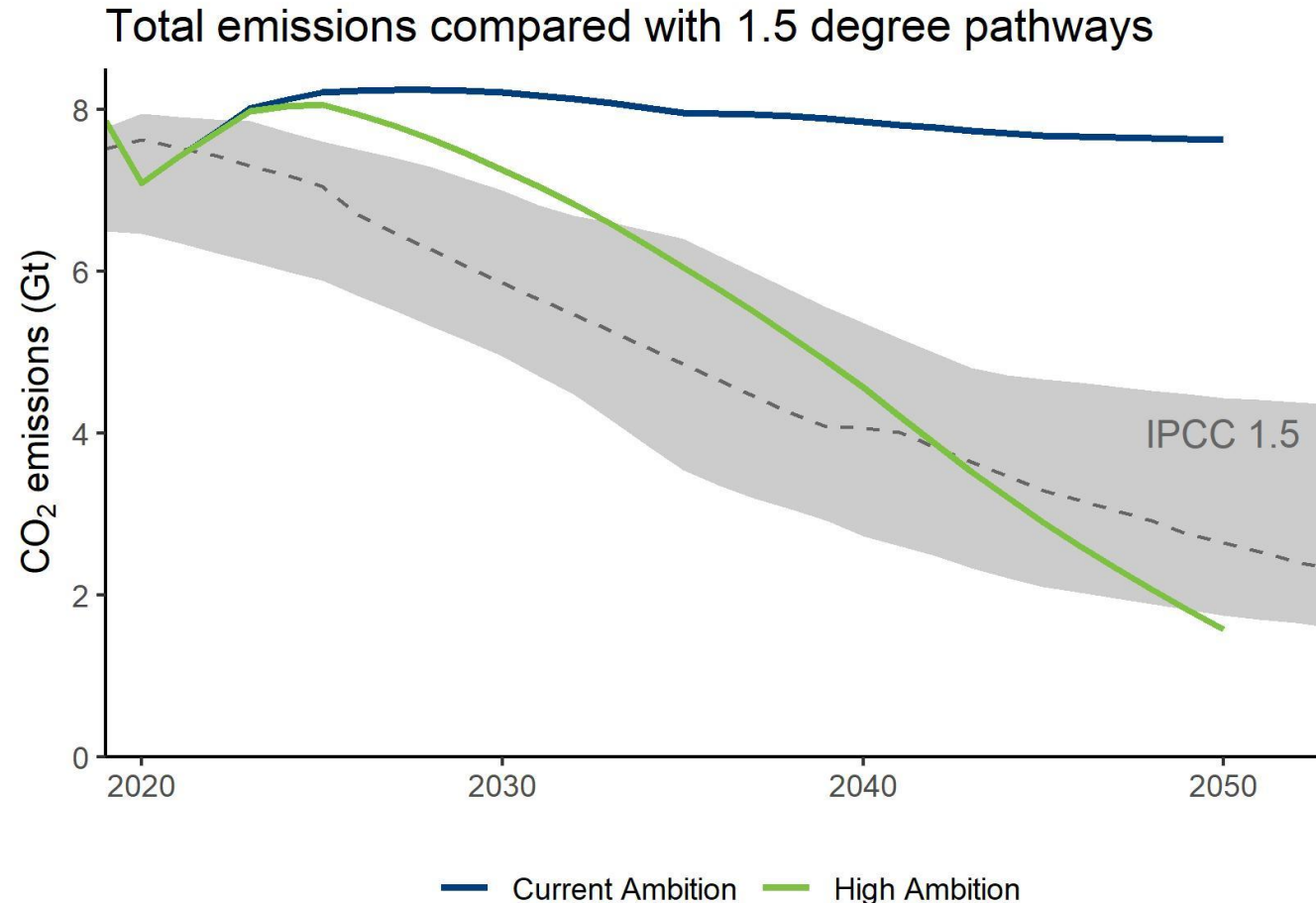
ITF Transport Outlook 2023



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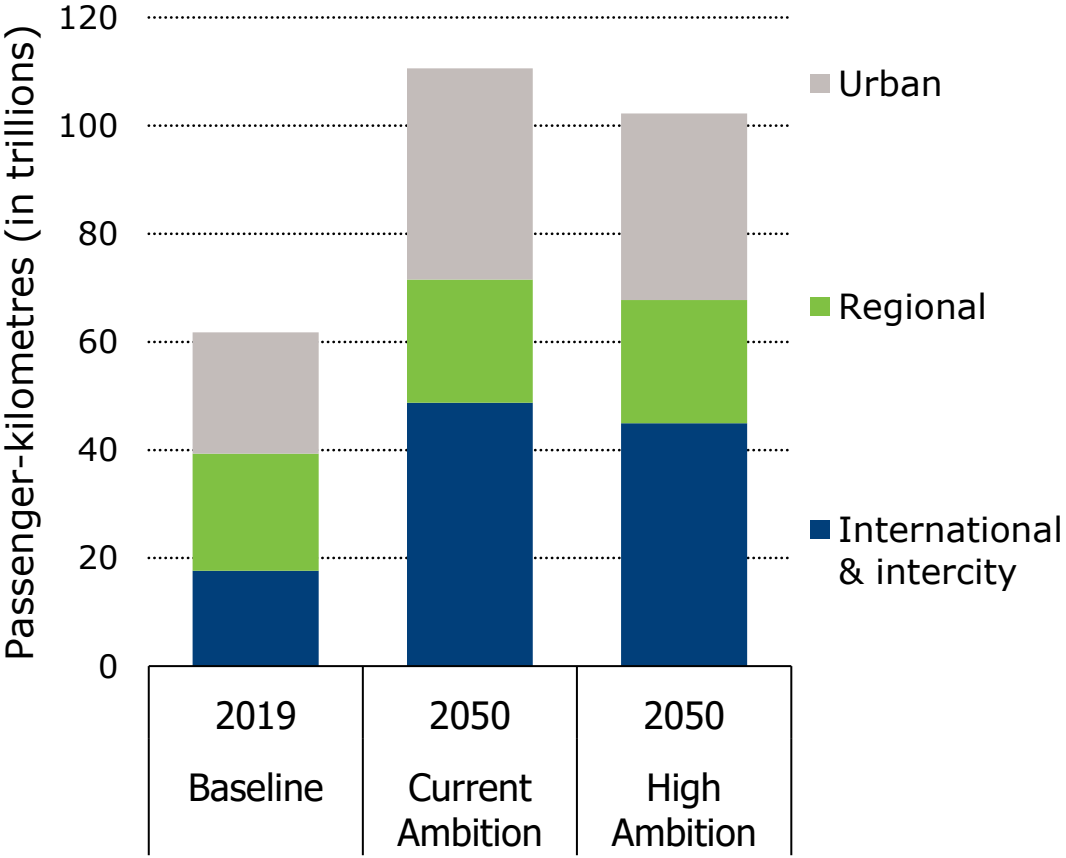
- Published every two years
- Reflects current world events and prospects for transport
- Reflects projections for population, economy and trade
- Models potential outcomes for two policy scenarios: *Current Ambition* and *High Ambition*
- Estimates demand and CO₂ emissions projections

As time runs out, accelerated action is needed

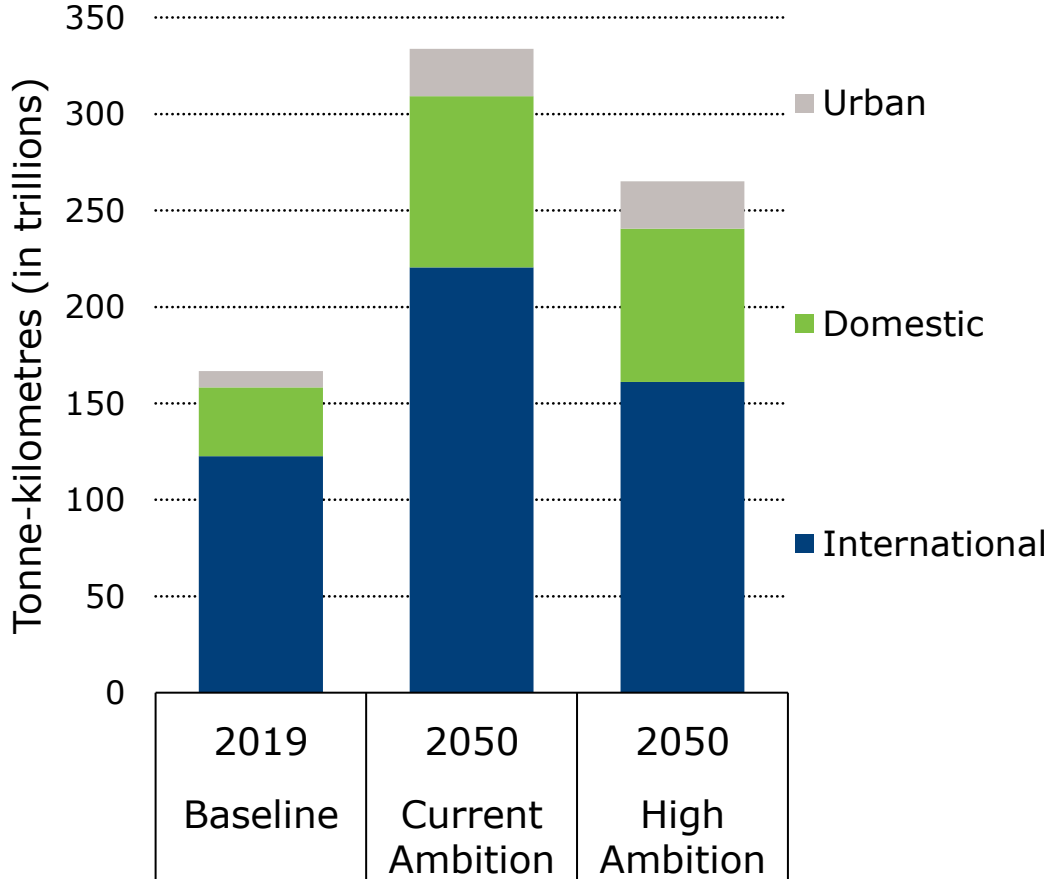


Key point: We are not on track to meet Paris climate targets of well below 2 degrees and aiming for 1.5

Demand will grow under both scenarios



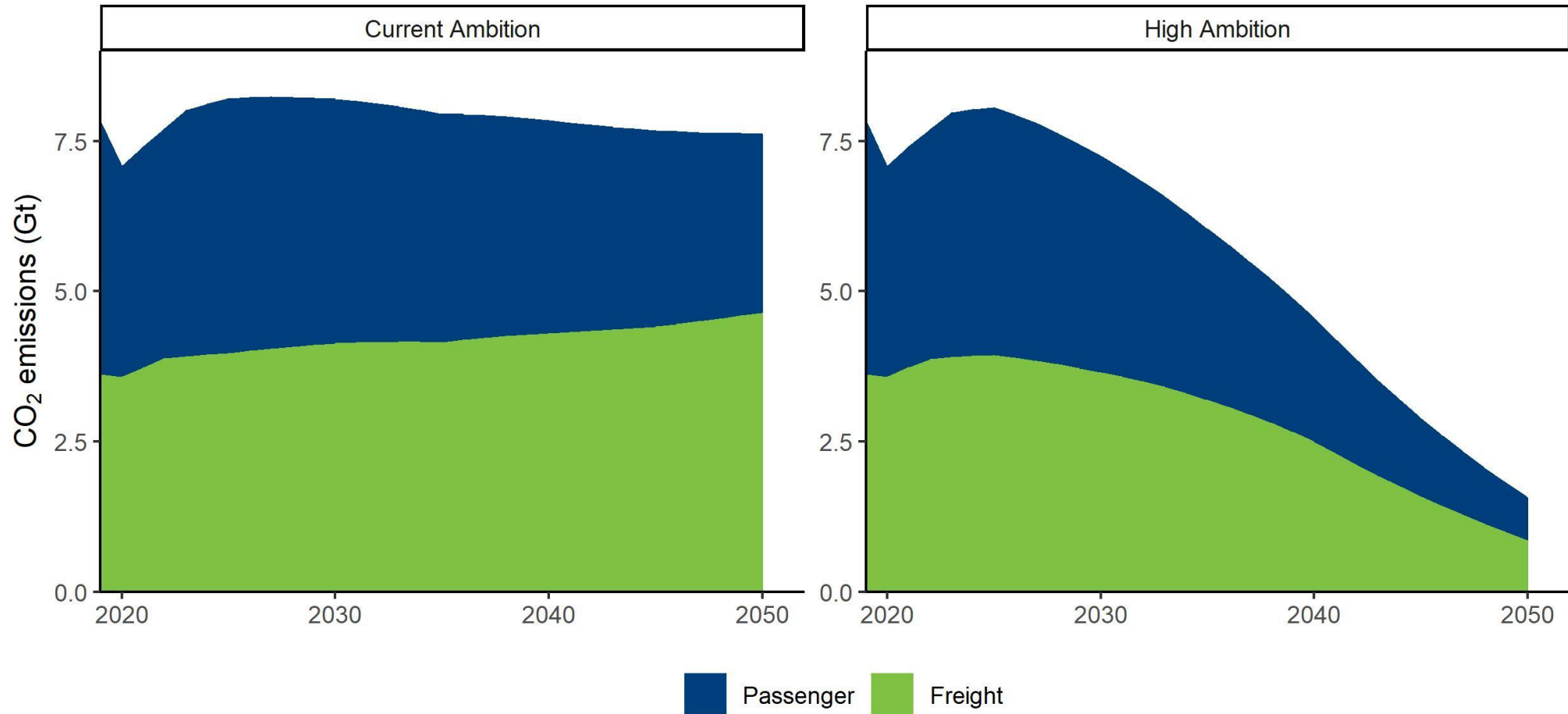
Passenger



Freight

Note: Figure depicts ITF modelled estimates. Current Ambition (CA) and High Ambition (HA) refer to the two main policy scenarios modelled, which represent two levels of ambition for decarbonising transport.

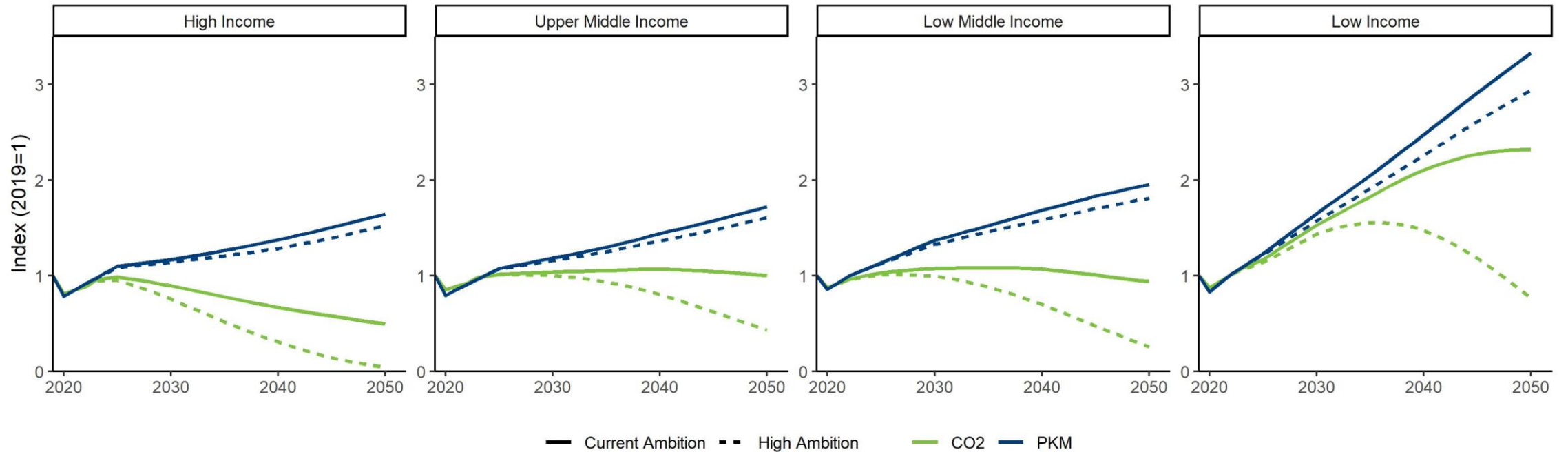
Freight decarbonisation has fallen behind passenger



Note: Figure depicts ITF modelled estimates. Current Ambition (CA) and High Ambition (HA) refer to the two main policy scenarios modelled, which represent two levels of ambition for decarbonising transport.

Decarbonisation trajectories vary by region

Change in passenger-km and CO₂ emission by region



Avoid & Shift have critical roles to play in cities



**Tackle congestion
and harmful
emissions**



**Free up space for
people centred
design**

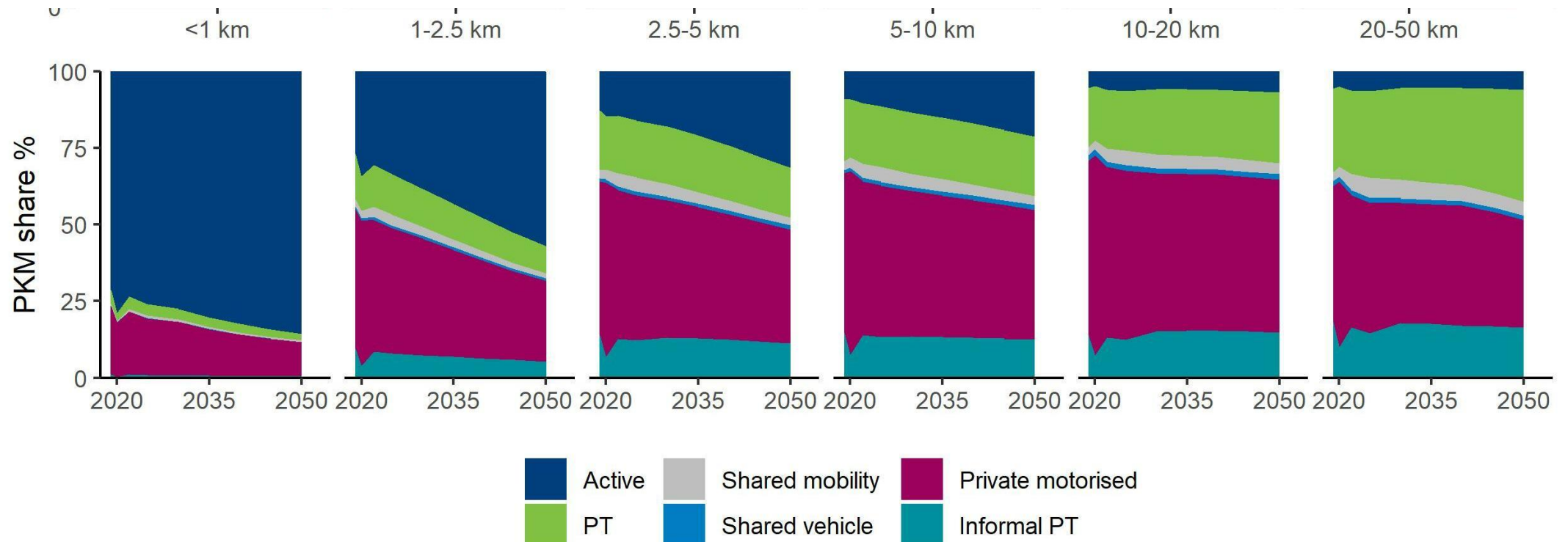


**Reduce Crash Risks
for cyclists and
pedestrians**



**Improve sustainable
access to
opportunities**

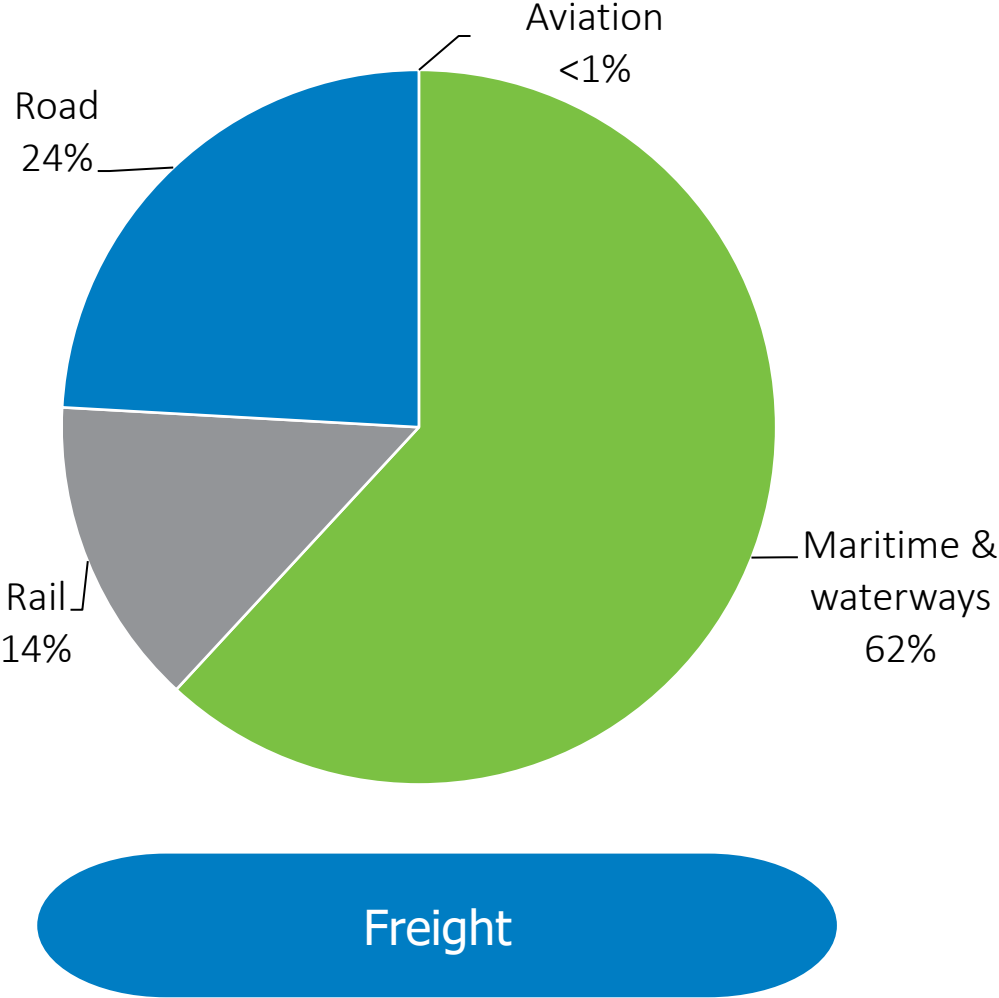
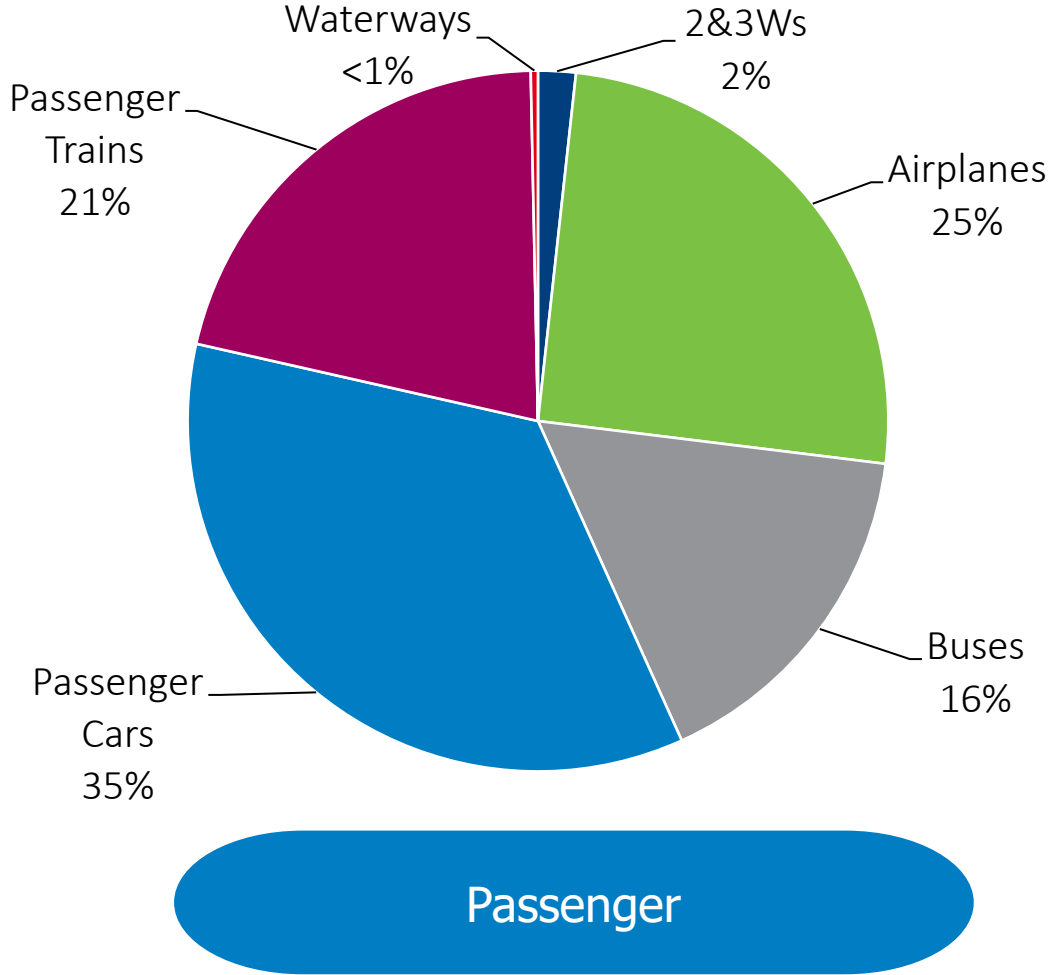
It's about opportunities and options...



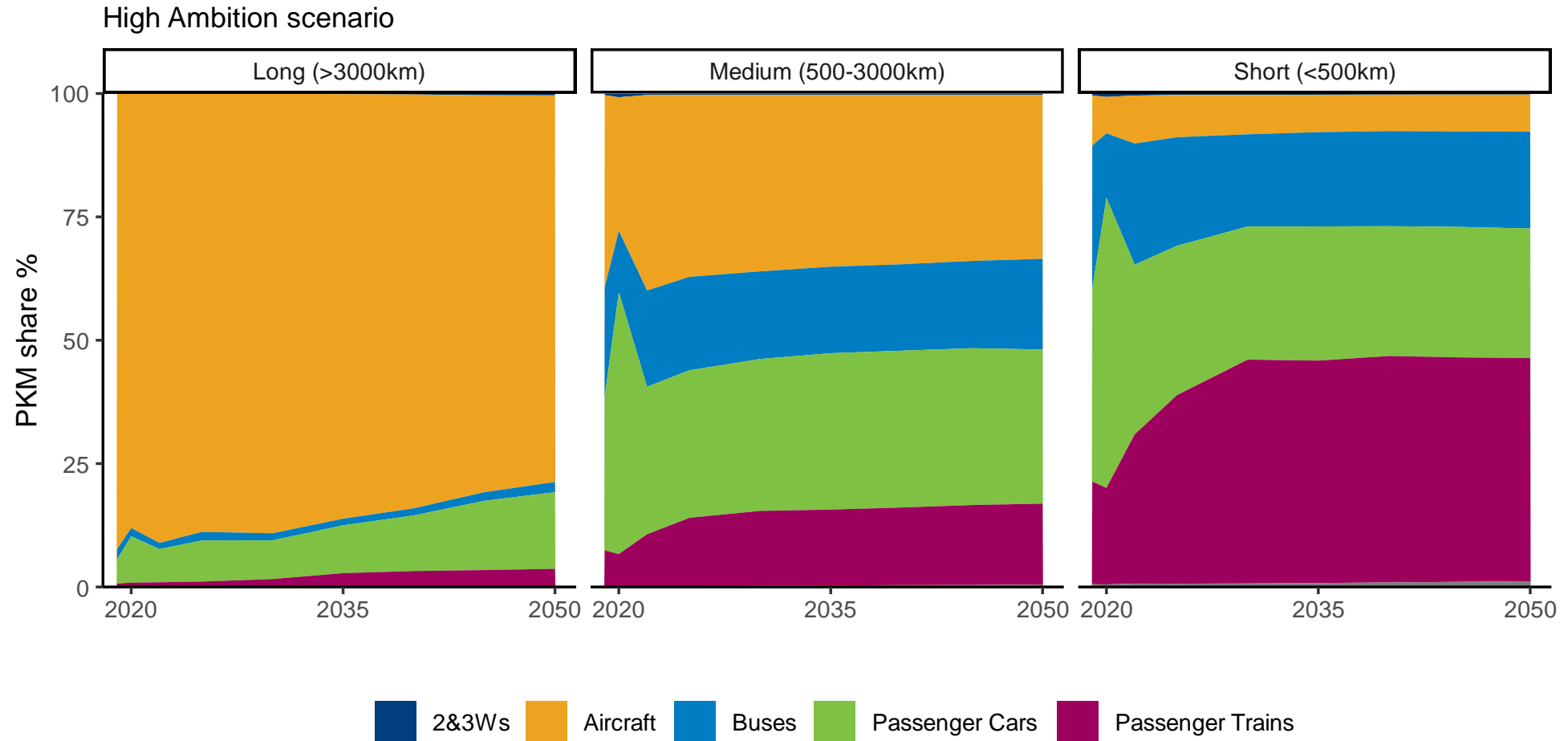
Reducing demand isn't always reducing activity

Region	Difference in PKM per trip under High Ambition scenario in 2050 compared to Current Ambition scenario (%)	Difference in trips per-capita under High Ambition scenario in 2050 compared to Current Ambition scenario (%)
East and Northeast Asia	-8	-1
Europe	-14	-3
Latin America and the Caribbean	-15	-1
Middle East and North Africa	-11	-1
South and Southwest Asia	-8	-1
Southeast Asia	-11	-1
Sub-Saharan Africa	-10	-1
Transition and other Asia-Pacific	-11	-1
UCAN	-8	-4

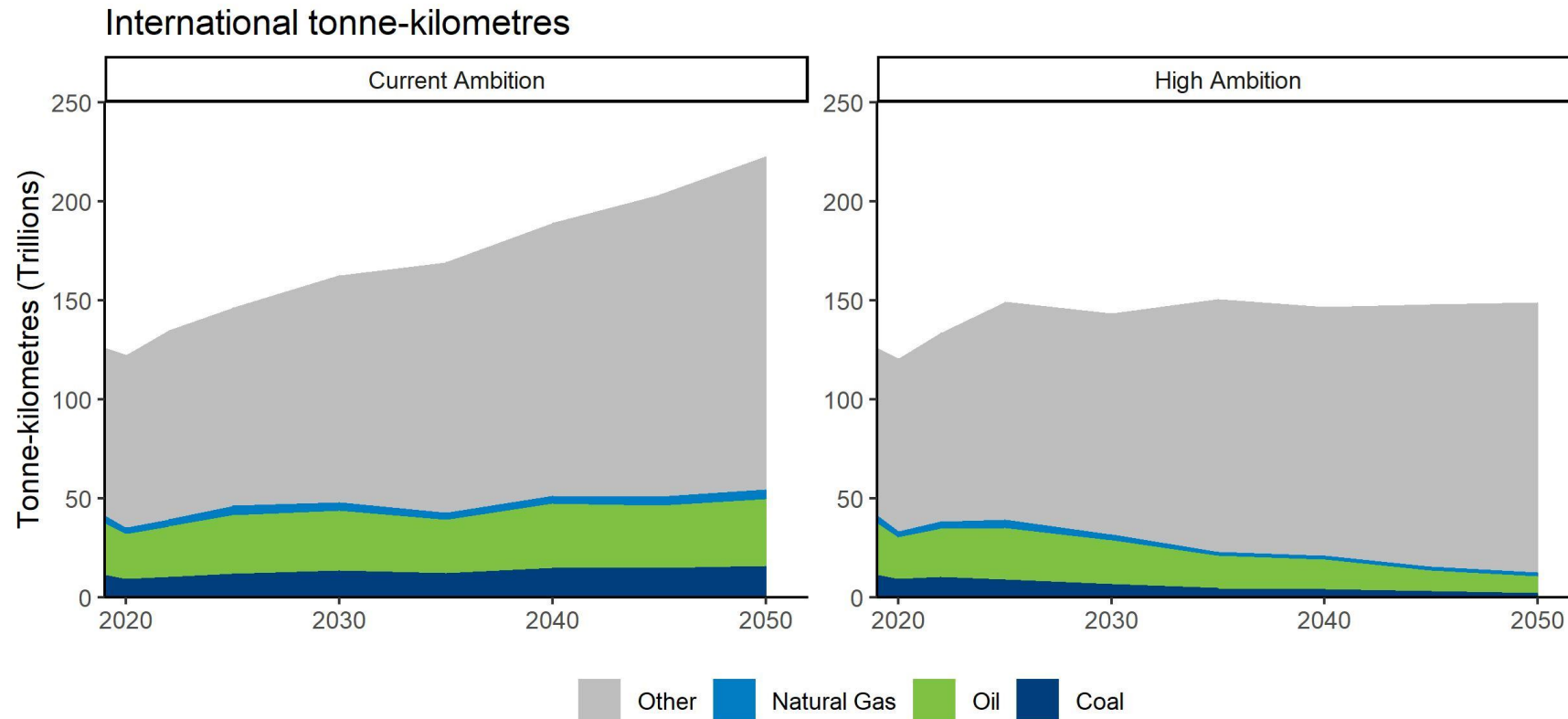
Non-urban demand measures are more specific



Modal alternatives vary by distance



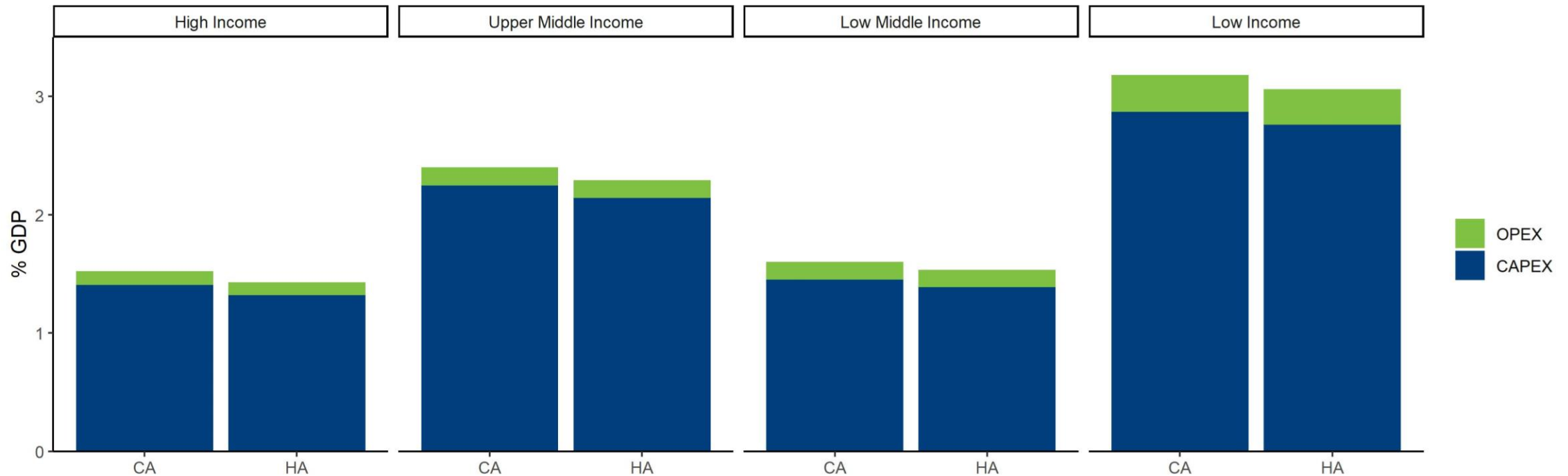
Energy demand impacts transport demand



Key point: In High Ambition, fossil fuel transport will decrease, impacting required infrastructure. Carbon pricing also has a big impact on commodity flows.

Align investment towards a low carbon future

Total investment needed for infrastructure capacity to cater to demand under the two scenarios



Key point:

- High demand growth leads to significant transport infrastructure investment needs to build enough capacity.
- Reductions in the capacity required under the high ambition scenario could result in lower investment needs.

Policy Recommendations

- Develop comprehensive transport and land-use strategies to reduce private vehicle use, manage urban sprawl, and allow for strategically aligned investment.
- Accelerate the transition to cleaner fleets and fuels and make necessary reforms to vehicle taxation. Set targets and collaborate across sectors.
- Support multimodal and sustainable networks. Encourage efficiency improvements in freight.
- Evaluate the wider benefits for urban areas.

EDITS project

- EDITS (short for Energy Demand changes Induced by Technological and Social innovations)
- Based on the Low Energy Demand (LED) scenario, published in 2018 in Nature Energy (Grubler et al. 2018)
- LED relies on shrinking the energy system through major lifestyle, behaviour, infrastructure, and business model transformations, resulting in a reduction of global energy use, but also gains on equity and the SDGs.
- The project is creating a network of experts and researchers aiming to identify gaps and potentials to enhance modelling, analysis, and communication of the demand-side solutions for climate mitigation and the SDGs.
- ITF is co-lead for the transport working group, looking at low-demand modelling and foresight

Project website: [Energy Demand changes Induced by Technological and Social innovations \(EDITS\) | IIASA](#)

Thank you

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<https://www.itf-oecd.org/itf-transport-outlook-2023>