Technology and capacity challenges to Just Energy Transition in the Transport Sector

Second global dialogue and second investment-focused event under the Sharm el-Sheikh mitigation ambition and implementation work programme

15 – 16 October 2023

United Nations Climate Change
Technology Executive Committee

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What do we mean by “climate technology” ?

As per the IPCC- Climate technology is any equipment, technique, knowledge and skill needed for:

- **In the context of reducing greenhouse gas emissions**, through sectors such as:

Agriculture	Industry
Energy	**Transport**
Forestry	Waste

Also the TEC adopted understanding of technology

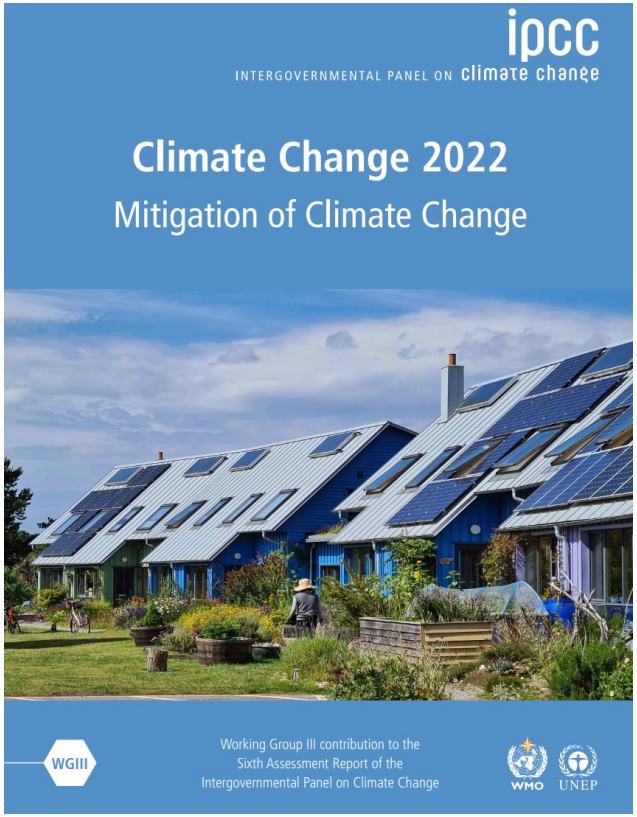
- **Hardware:** physical equipment and capital goods,
- **Software:** the processes, knowledge and skills required to use the technology, and
- **Orgware:** ownership and institutional arrangements pertaining to a technology.

IPCC AR6 WGIII

Some barriers identified in recent IPCC AR6

The IPCC AR6 reports identifies some barriers

- Effect of prices and income demand
- Shared vehicles
- Consumer preference for improved and alternative vehicles
- Alternative fuels



Source:
https://www.ipcc.ch/report/ar6/wg3

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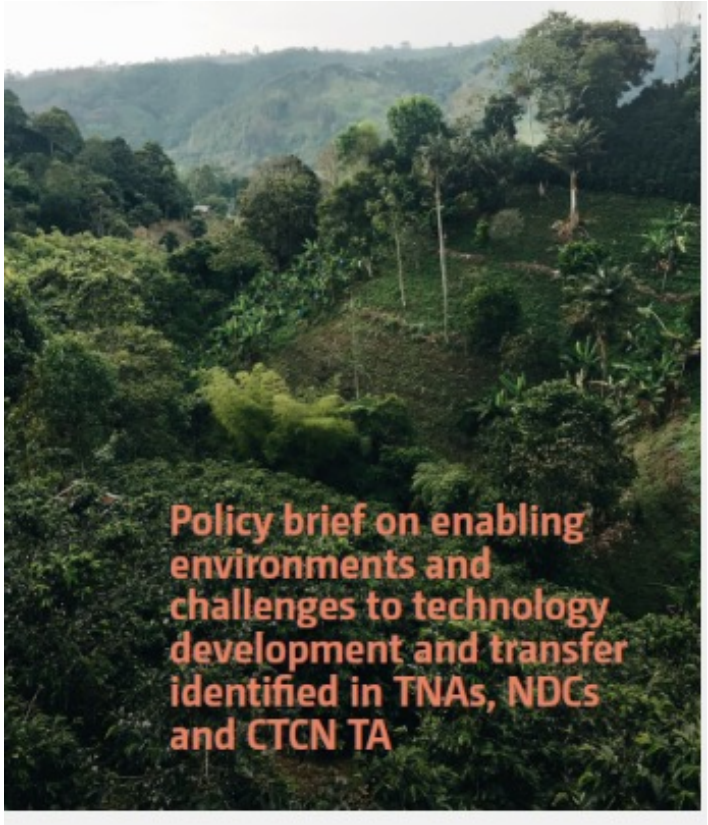
Challenges in transport sector identified from TNA, NDC and CTCN TA

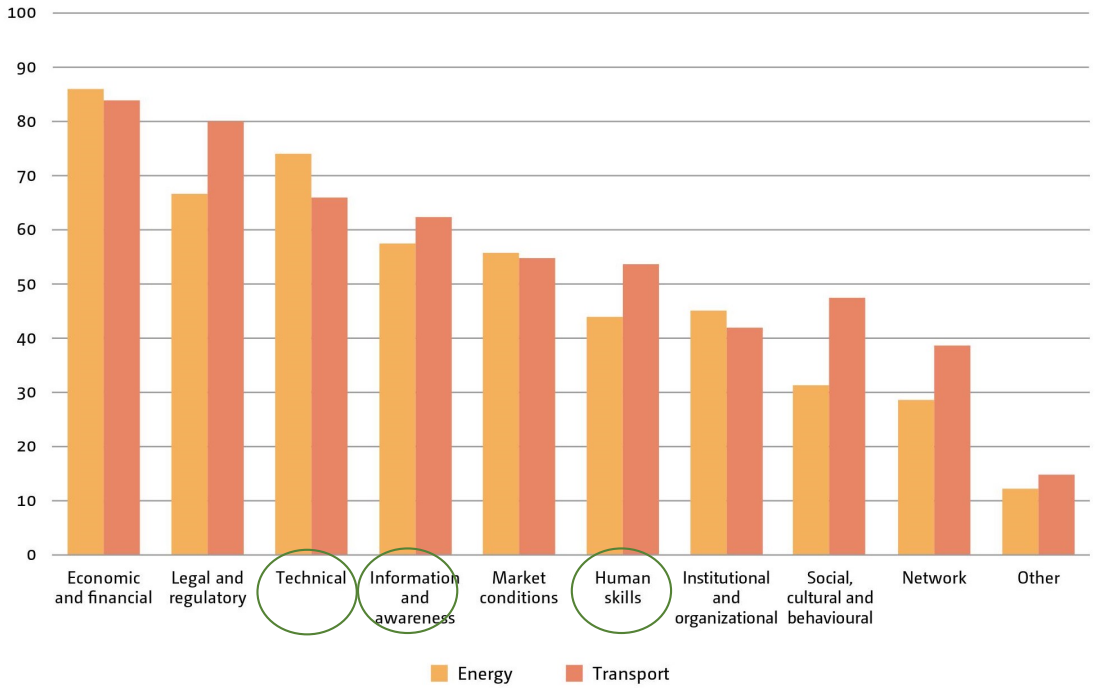
- TEC in 2022 published the policy brief and technical paper on this topic

- **Source:** https://unfccc.int/ttclear/tec/enablingenvironments.html



Challenges in transport sector based on CTCN TA and TNA data

- Generally, in the transport sector, economic and financial challenges are dominant, being reported for 84% of the technologies
- Capacity related challenges are split between several challenges: Human skills; Information and awareness; technical skills and etc.

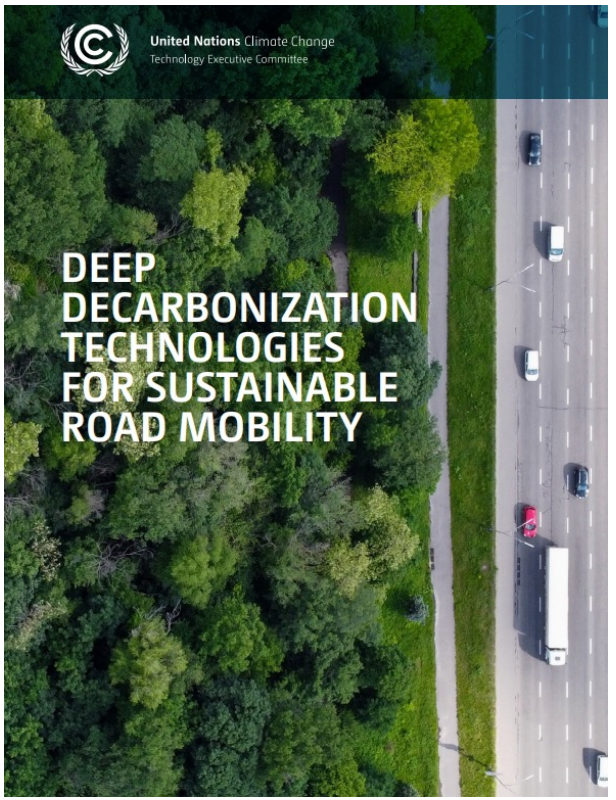


DEEP DECARBONIZATION TECHNOLOGIES FOR SUSTAINABLE ROAD MOBILITY

TEC in 2022 published the technical paper on this topic

Technical paper looks at selected technologies and solutions for sustainable road mobility.
It also summarizes the barriers, opportunities and policy options for:

- Plug-in electric vehicles
- Fuel cell electric vehicles (FCEVS)
- Advanced Biofuels
- Shared Mobility
- Fully Automated Vehicles (TRL4+)



Source:
https://unfccc.int/ttclear/tec/transport.htm

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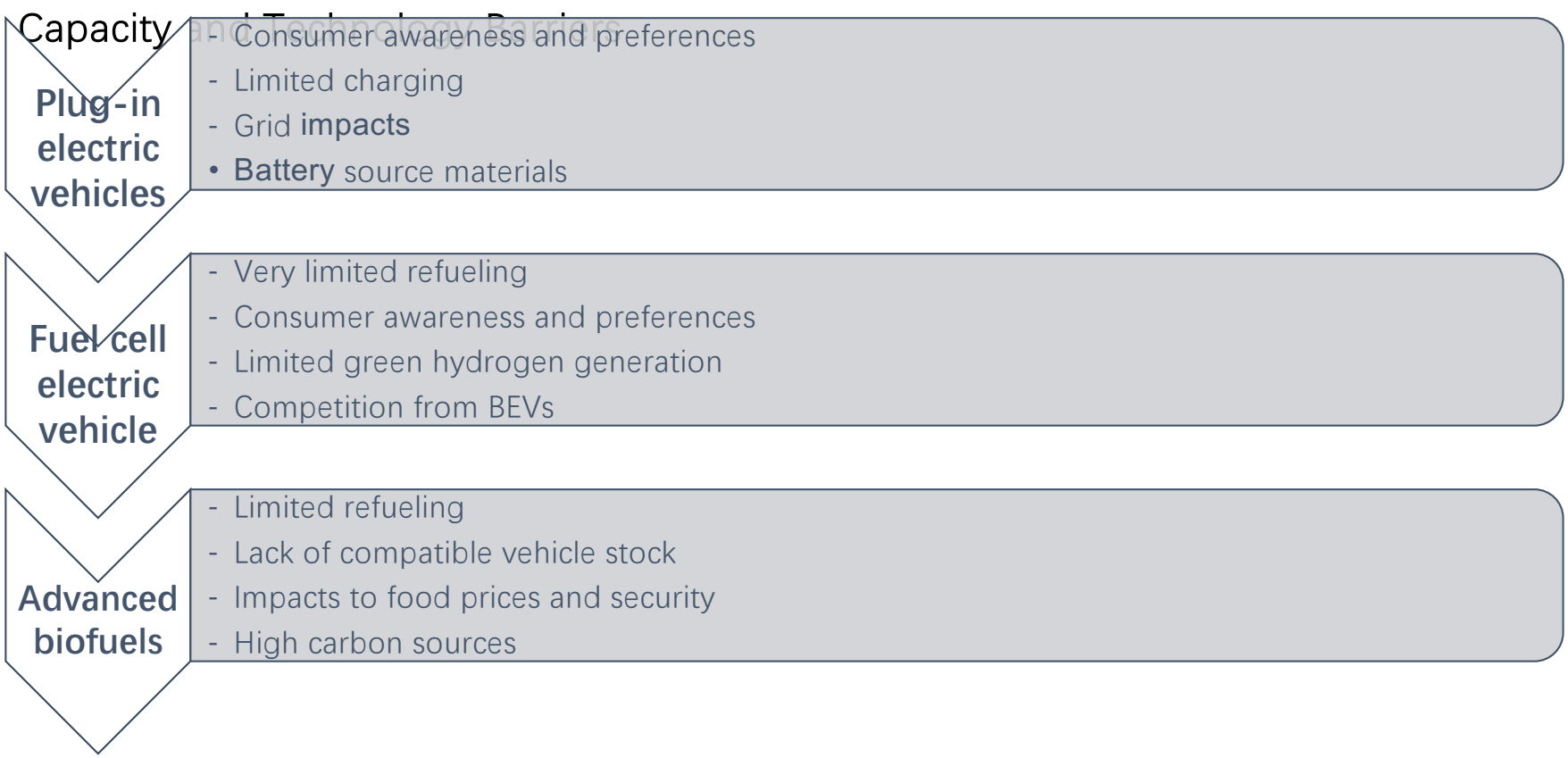
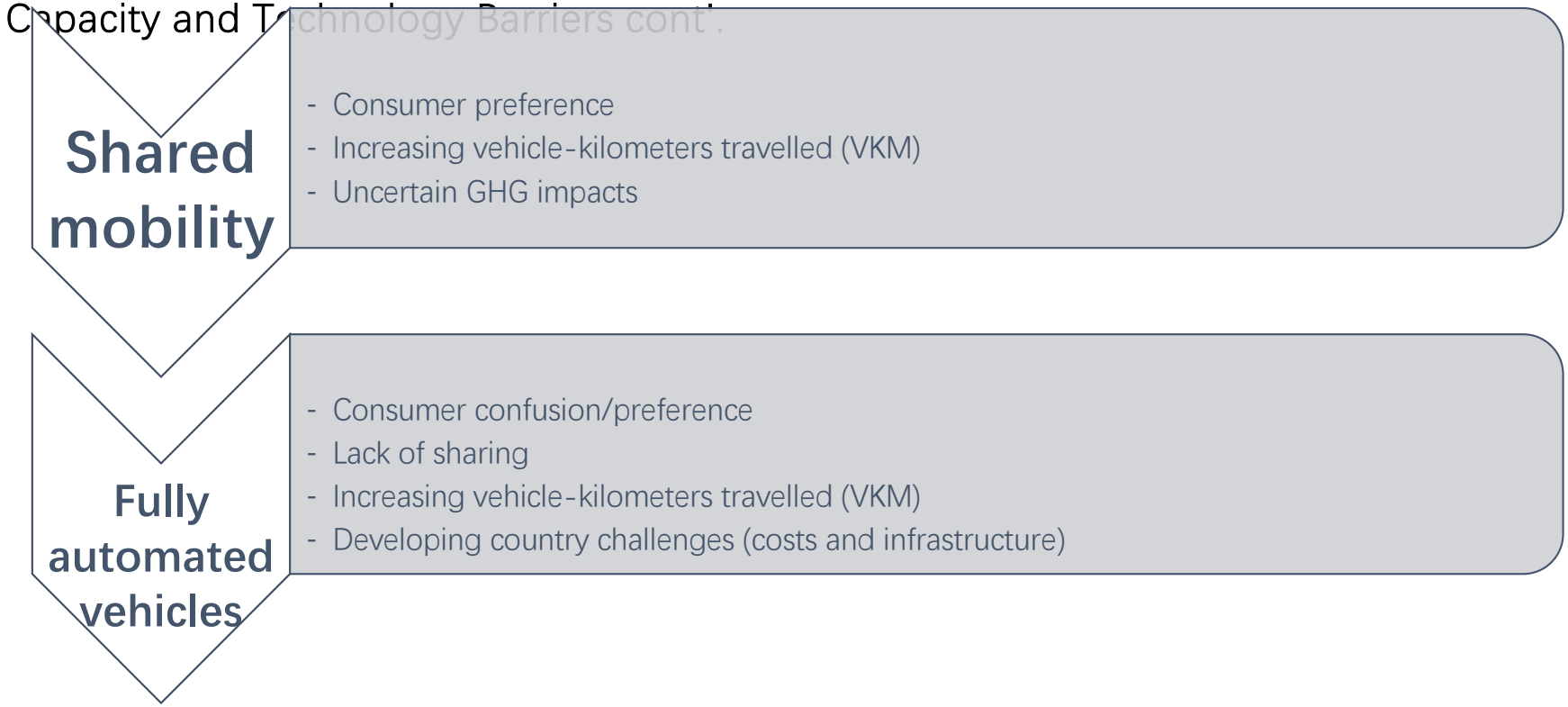
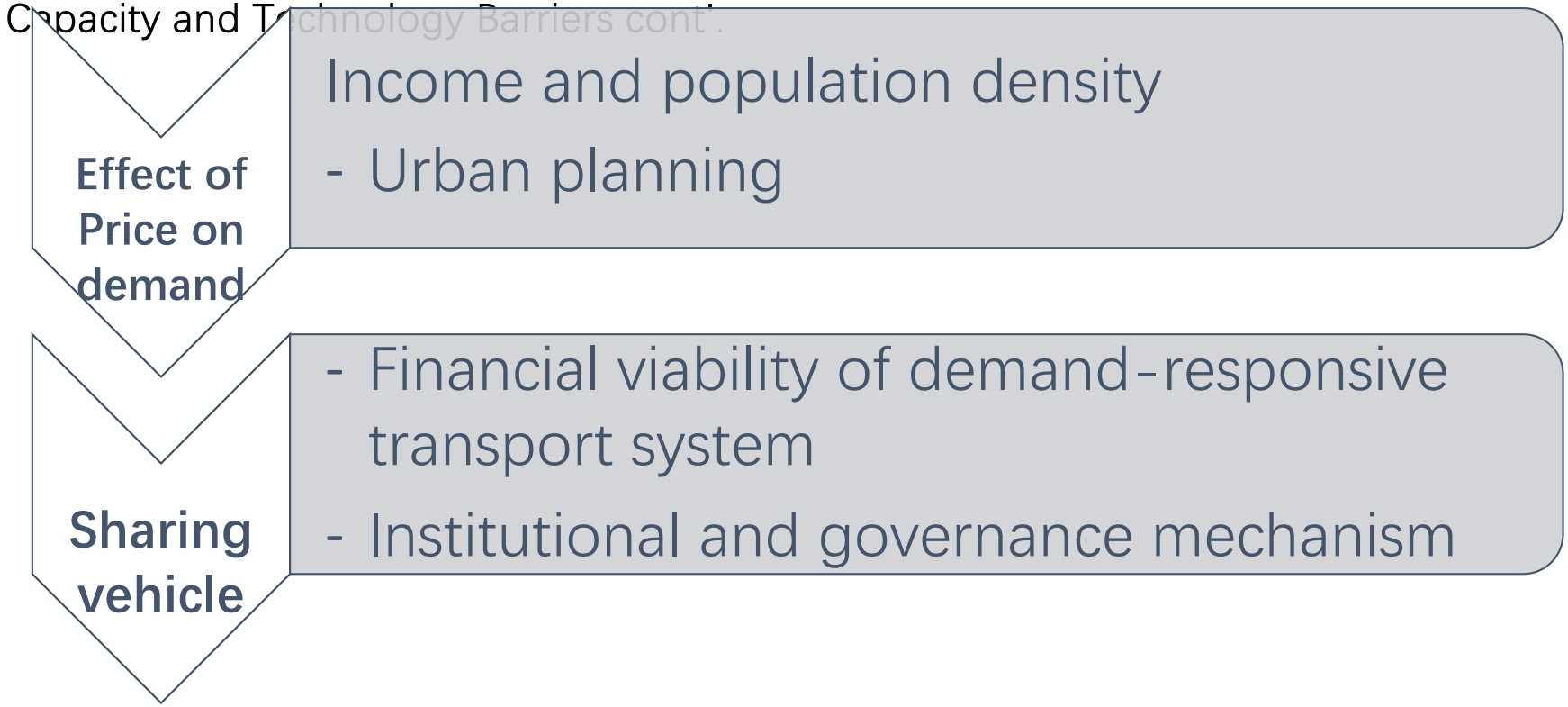

Capacity and Technology Barriers
Plug-in electric vehicles
- Consumer awareness and preferences
- Limited charging
- Grid impacts
• Battery source materials
Fuel cell electric vehicle
- Very limited refueling
- Consumer awareness and preferences
- Limited green hydrogen generation
- Competition from BEVs
Advanced biofuels
- Limited refueling
- Lack of compatible vehicle stock
- Impacts to food prices and security
- High carbon sources

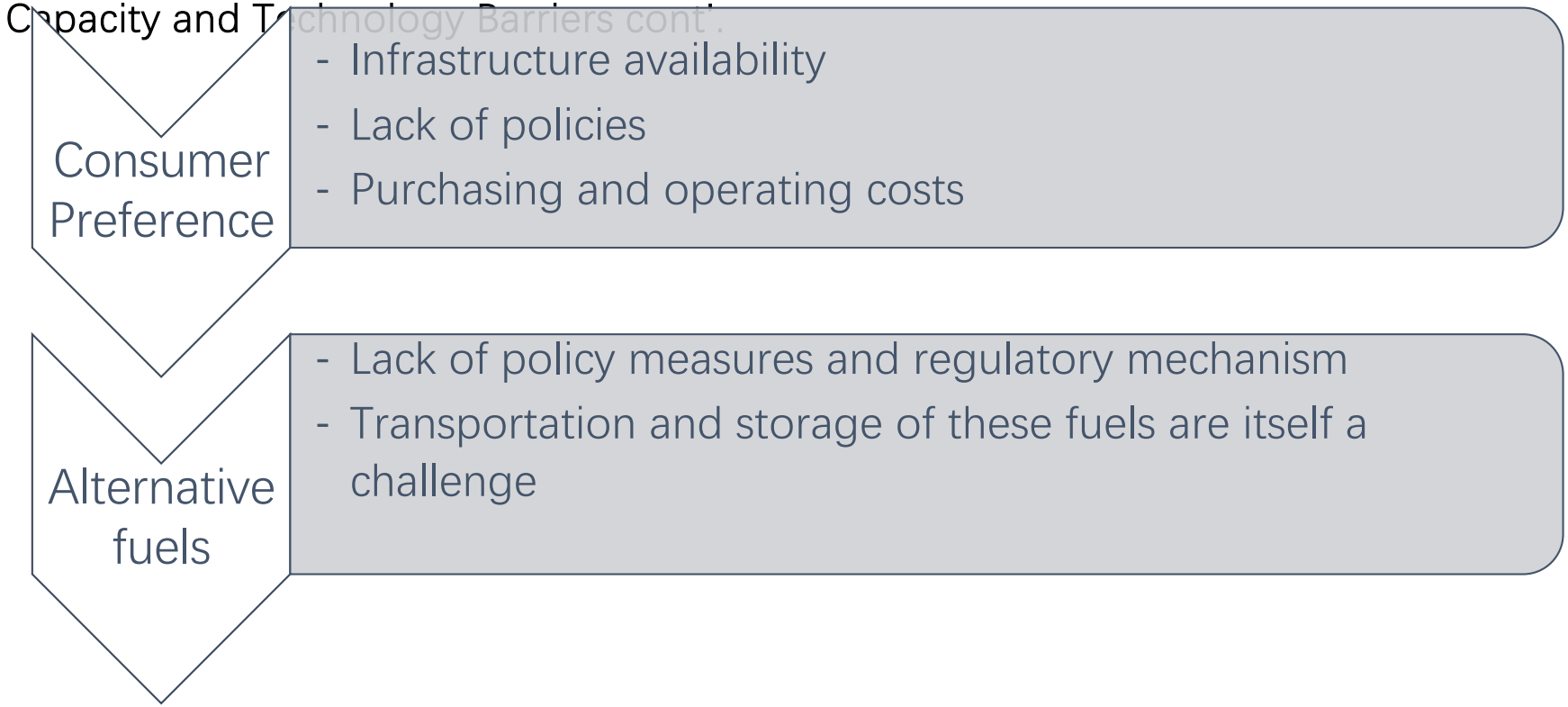
Capacity and Technology Barriers cont'.



Capacity and Technology Barriers cont'.



Capacity and Technology Barriers cont'.



Thank you

Find out more at:
https://unfccc.int/ttclear