Discussion Outcome: Barriers and solutions to accelerated transport decarbonisation- electric freight vehicles

This infographic has been created with the input of the panelists and participants at the TDA side event: Barriers and solutions to accelerated transport decarbonisation - zero emission freight vehicles at the 2021 International Transport Forum Summit on 21 May, 2021

PRIORITY	SYSTEMIC ISSUES	SPECIFIC PROBLEMS AND BARRIERS	POSSIBLE SOLUTIONS What has to be done? Who needs to act?
★★★	Urban Planning	Cities leading - but a lack of standardization of approaches across cities	Urban Logistics Plans for each city - clear goals for ZE Zones (working with all local partners to define locally appropriate solutions) Capacity building on new ways of thinking to plan cities and city systems
★★★	Capacity Building	Human Capacity building - need for training in the new skills / knowledge required to design, install and operate new electric mobility systems	Provide skills / education / training
★	Transition management	Need to think more in terms of transition (e.g. for now we need space for 2 systems in parallel fossil system + electric system	Last mile - using active mobility solutions Engage traditional fuel station providers to commit to e-mobility

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★	Data-Sharing	Lack of willingness to share data - e.g. demand, facilities, capacity	Need to organize new information
★	Collaboration	Highly fragmented and complex electromobility eco-system Risk of friction between actors/ players as new system takes shape	Cross sector collaboration to bring e.g. utilities/operators/public authorities together
★	Strategy and Direction	Strategy / direction e.g. HGV Hydrogen or overhead electric? What is the solution?	Targets needed in national legislation (companies should also set targets) EU TEN-T network should provide nodes/ charging spaces for long distance freight Governments: Manage transport demand / new mobility patterns for higher efficiency)

COMMENTS

- 20 - 40% of urban emissions are freight
- Fleet vehicles run most miles and have specific characteristics.
- DHL: 60% zero emissions by 2030 worldwide (probably means 100% in Europe)
- Electric: Creating a reliable electrical charging network on top of an already fragile electrical grid

PRIORITY	CHARGING SYSTEM ISSUES	SPECIFIC PROBLEMS AND BARRIERS	POSSIBLE SOLUTIONS What has to be done? Who needs to act?
★ ★ ★	Delivering the power	How to get enough power to freight vehicle charging sites? Longer charging times for trucks Lead times for power system upgrades too	Use real-time info. for operators to mitigate demand changes at chargers Charging solution providers working with manufacturers Upgrading grid connections to supply higher voltage chargers and green electrolysers Grid upgrades to provide power for high voltage chargers/electrolysers at public charging sites
★ ★	Market Organisation	Setting the right business model to ensure supply of charging infrastructure. Who pays? Private or shared?	Need to define roles Government needs to organize the market
★	Space for charging	Not enough space in cities for all these vehicles and their fueling/harging facilities	Charging actions plans at city/regional/national level - ambition and steps Allow HDV in cities

PRIORITY	NEW VEHICLE ISSUES	SPECIFIC PROBLEMS AND BARRIERS	POSSIBLE SOLUTIONS What has to be done? Who needs to act?
★ ★ ★	Lack of vehicle supply	Lack of supply of freight/commercial vehicles - on the normal market (affordable price)	Need for supply of suitable vehicles (more models, more space)
★ ★	Battery weight penalty	Batteries are heavy so reduce payload	Allow "normal" drivers to drive 4.2 tonne trucks- if electric (EU law allows derogation)
★ ★	Access to financial capital	Small operators don't have access to capital required (or the better prices big operators can)	
★	Space for energy storage	No space for batteries on conventional vehicles!	Maybe use hydrogen to supplement power

COMMENTS

Are drones a solution?