NET ZERO CITIES

EU MISSION PLATFORM | CLIMATE NEUTRAL AND SMART CITIES

MADLESS

Meta-Analysis Driven Logistics Emission Solutions through Stakeholder Collaboration

Workshop on the Development of City Logistics in Helsinki, 9.12.2025

Summary of Key Results

Funded by the European Union

Helsinki

Tampere University

Vision for good city logistics in 2040

Emissions and Environmental impact	Fleet, technology, digitalisation	Urban space	Operational culture
Greenhouse gas emissions from delivery traffic nearly zero	Electricity, biogas, and hydrogen established as energy sources	Sufficient loading and unloading areas; safe parking (not on sidewalks / bike lanes)	Permanent forum/working group with regular meetings; broad stakeholder engagement
Phased implementation of practices, considering limitations and exceptions	Charging infrastructure comprehensive and smart; reservation systems in use	Real-time information on loading places and reservation options reduces circling and unnecessary stops	Business-friendly and smooth operating culture, understanding companies' daily realities
Improving air quality and reducing noise, fine particles, and street dust	Quiet vehicle fleet, including control of noise from refrigeration units	Night-time deliveries supported by noise management and local practices; area-specific differences (city centre vs suburbs)	"Undriven kilometer" – reducing unnecessary driving, consolidated deliveries, denser distribution
A standard model for transparent emissions reporting, for both service providers and buyers	Predictability for investments: clear outlook for energy sources, infrastructure, and regulation; procurement criteria that guide investments	Space needs for depots, terminals, and logistics hubs; charging/fuelling networks as part of the whole	Continuous dialogue between the city and operators; low-threshold feedback and interaction
Emission reporting integrated into annual reporting	Real-time guidance of deliveries and AI-assisted route optimisation	Hubs and microhubs as last-mile solutions and sufficient space for parcel lockers/kiosks	Regional cooperation across municipal borders; unified rules and governance strategies

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Predictability: the Foundation of Change

- **Long-term guidance:** Clear roadmap 2030–2040 for fleet and infrastructure
- **Unified regulations:** Standards for energy sources (electricity, biogas, hydrogen) and charging/fuelling networks
- **Impact of procurement:** Emission-based criteria support investments
- **Regional coordination:** Same fleet operating across municipalities → uniform practices
- **Digital situational awareness:** Real-time data reduces unnecessary driving and improves efficiency

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Key drivers

- **Economic incentives and cost development:** TCO of electric vehicles becomes competitive with high mileage; technological development and decreasing prices accelerate investments.
- **Regulation and governance:** EU emission standards, minimum requirements for delivery infrastructure, and Green Deal commitments steer development. Consistent, predictable regulation and subsidies increase investor confidence.
- **Infrastructure:** Charging networks, loading spaces, and logistics hubs enable smooth distribution.
- **Technology and digitalisation:** Electric vehicle technology, high-power charging, and quiet fleet create win-win situations. Route optimisation and better data utilisation improve efficiency.
- **Cooperation:** Continuous dialogue, shared rules between city and operators, companies' own emission reduction goals and responsibility work support change.
- **Operational culture:** Electric fleet becoming normal; quiet vehicles and new work practices enable night deliveries and efficiency. Consumer expectations support responsible solutions.

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Key barriers

- **Financial risks:** High purchase prices and long payback times slow investments. Uncertainty in energy prices and rising transport costs increase risks.
- **Unpredictability of regulation and decision-making:** Political slowness and changing regulations undermine trust. Uncertainty about decisions slows investments in alternative energy sources.
- **Urban space constraints:** Limited space and lack of charging/loading areas hinder smooth operations. Slow zoning processes and competition for space slow development.
- **Lack of cooperation:** Conflicting goals between actors increase friction. Lack of a shared forum and clear leadership slows progress.
- **Challenges in digitalisation:** Data ownership and risks related to openness prevent data sharing. Lack of reporting skills and poor usability of tools restrict development.
- **Attitudes and resistance to change:** Prejudices and distrust toward new practices slow progress.
- **Security of supply:** Concerns over long power outages and energy availability.

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