

# Sustainable city logistics

## Specific Challenge

Freight transport is key to the smooth running of a city. Freight transport includes the transport of goods, from parcel delivery, delivery of building materials to construction sites, to domestic and commercial waste disposal. Without freight transport, our cities would not function. City logistics is a term used to describe the running of freight transport in urban areas. Freight transport causes problems in terms of negative impacts for air pollution, noise pollution, GHG emissions, blocking areas of the public realm, and being involved in a disproportionately large number of deadly collisions with vulnerable road users. The freight transport industry adapts quickly to new trends such as e-commerce and on-demand consumerism, but these can cause additional problems when not considered with a focus of sustainability – increasing distances driven and number of vehicles on the road, and also creating unsustainable working conditions for delivery companies.

Introducing innovations in city logistics and making it more sustainable requires cooperation between a wide range of partners as well as new vehicles, business models and technologies. Solutions include new vehicles, new procurement / purchasing models, new consolidation solutions, new hub services, new production models (e.g. so that goods are produced “close-to-home”), new software solutions for optimising freight, new solutions for managing loading/unloading etc.

## Expected outcomes & impacts

The expected outcomes are improvement of urban logistic operations through logistical, future vehicle design, including urban air logistics, behavioural and technological innovations. The solution should be low-carbon, accessible, safe, efficient, and clean. The impacts should be healthier, safer environments, reduction of greenhouse gas emission and local air and noise pollution, as well as enhancing the overall quality of life of citizens.



## Examples

Some examples of specific topics that can be addressed include:

- Demonstration of solutions to increase freight intermodality with a focus on zero-emission last mile transport.
- Demonstration of solutions that reduce freight demand through for example waste management, local production, aggregate management, citizen engagement, etc.
- Demonstration of solutions that optimise routes based on reducing emissions and noise pollution
- Demonstration of real-time enforcement of freight demand and access restriction measures including digital cameras, ultra-low emission zone control monitoring and geofencing.
- Demonstration of solutions to reduce last-mile freight transport from e-commerce, e.g. freight hubs unmanned collection and drop-off points, collaboration with retail to reduce / deal with returns, optimised delivery services, etc.
- Demonstration of innovative logistics measures in urban areas with specific challenges such as dense historic city centres and use of waterways.
- Design and test air of drone delivery with vertical location mapping in a dense urban area considering issues such as noise, bylaws, airway zoning/ mapping, intrusion, reliability, and safety.
- Application of parking/ loading & unloading management solutions for freight to reduce obstructive vehicles – these can be both digital and physical measures.

