Green Deal Zero Emission Urban Logistics

The thriving city

The city has become the heart of the economy, a phenomenon that will only grow in the years ahead. The majority of the gross domestic product is already being produced in cities.

The highly demanding consumer lives, works and recreates in the city, where demand for goods and services continues to rise. At the same time, the consumer wants his environment to be, and remain, liveable, or even more than that.

Sustainable, efficient and responsive urban logistics is essential for the economic vitality and the attractiveness of cities. It ensures home deliveries of internet orders, that restaurants can serve their guests with fresh food, that stores have the right stock or that renovation of buildings can be undertaken without any problems.

Urbanisation sets new requirements of urban mobility. The growth in customer demand makes urban logistics increasingly more intricate and responsive. The demands for accessibility, liveability, safety and security in cities require a new approach to urban logistics, one that focuses on shipping more goods with fewer movements and lower emissions.

Innovative solutions

A new approach to urban logistics requires innovations that combine:

- **Organisation** (new logistics concepts, freight clustering, different methods)
- **Regulation** (customised solutions, parking policy, ‘delivery windows’)
- **Technology** (low-emission vehicles specially designed for urban use)
- **Attitude of consumers** (is direct delivery of an internet package always necessary?)
Green Deal initiative

At the end of 2014, 54 parties joined Secretary of State Mansveld in signing the Green Deal Zero Emission Urban Logistics (Green Deal ZES). Apart from the ministries of Infrastructure & the Environment and Economic Affairs, signatories were municipalities, haulage firms, shippers, car manufacturers, research institutes and related sector and lobbying organisations like BOVAG, EVO, TLN, Natuur & Milieu and Rai Vereniging.

These parties are investigating how the zero-emission delivery in urban centres can be implemented in practice, with the aim of realising zero-emission urban logistics as much as possible by 2025. There is a demand in the city for transporting more goods with fewer movements and lower emissions.

The Green Deal ZES participants are testing not only new practical logistics solutions but also combinations of new technologies, public-private partnership and amended regulations. The Topsector Logistics is helping to develop innovative urban logistics.

The Green Deal ZES participants are using Living Labs (regional pilots) to test various improvement options for alternative ways of organising transport, using new vehicle technology to test innovative logistics solutions. The government is exploring the what is feasible for this in terms of policy and regulation. The solutions that work and are affordable will subsequently be scaled up. Several Living Labs have already started up and the development is in full swing.

Green Deal goal

Parties in the Green Deal Zero Emission Urban Logistics share the goal of urban deliveries with the lowest possible emissions by 2025, the ultimate aim being to reduce harmful emissions (CO2, NOx, particulate matter) due to urban logistics to zero.

The parties are also striving to limit noise emissions. While today there is not yet any large-scale production of heavy duty zero-emission commercial vehicles, electric delivery vans are available. The first heavier, customised zero-emission trucks are now in use. In addition commercial vehicles with hybrid drive trains are in development whereby conventional fuel will be used on motorways but for the ‘last mile’ in the city zero-emission technology can be used.

The reduction of the number of vehicles needed to supply the city is also an important goal. Some goods are already being delivered in an efficient way, particularly those stocks whereby logistics service providers and companies have organised the (clustered) flow of goods well. The traffic for internet orders is also being significantly optimised by logistics parties, largely through making good agreements with buyers. But there are many other possibilities to improve the load factor.
**Green Deal Living Labs**

Together with the parties involved, practicable operational solutions for making urban logistics more sustainable are being targeted through Living Labs. Living Labs can generate innovative insights into the reduction of emissions and help realise Zero Emission Urban Logistics in 2025.

Everything will be geared to developing new solutions within the combination of logistics, regulation, vehicles and behaviour, such as new vehicle technology, the utilisation and loading of trucks, starting up innovative logistics programmes. And finding solutions to bottlenecks in law and legislation, and promoting and actually amending regulations.

**Green Deal ZES is: testing and scaling up, with a view to 2025. Supported by the Topsector Logistics.**

**Feasibility studies**

The Living Labs form the initial phase of the Green Deal, a phase in which it will become clear whether ‘Zero Emission Urban Logistics’ is feasible for a specific logistics flow from a technical, economic, legal, safety and security as well as enforcement perspective. On 1 January 2020 the subsequent path towards 2025 will be reviewed on the basis of these results.

During the second phase, through to 1 January 2025, the Green Deal will focus on scaling up the demonstrated concepts. The results of the Green Deal can be used in similar projects in other regions whereby the scaling up takes place without any specific government support.

**Urban Logistics umbrella themes**

The GDZES focuses on the main urban transport flows that also form the main themes of the Living Labs of Green Deal ZES. Added to these is a sixth theme that targets powertrain technologies, how these can be commercially deployed and how they can be financially aligned with different approaches.

- Fresh in the city
- Post, packages and pallets
- Smart deregulation
- Demolition and construction in the city
- Facility support flows in the city
- Business case of innovative vehicle technology

We want to eat fresh and healthy food, also in rapidly growing inner cities. The assortment of fresh daily (biological) products in the hotel & catering and retail trades is therefore growing significantly. This requires high-frequency stocking, but in a responsible way. For example, through the use of quiet and green material and vehicles.

**Charging for fresh deliveries**
Charging post and parking place for vehicles with electric cooling and refrigeration

**Noiseless early mornings**
Deliveries to supermarket chains in the early morning with quiet, green vehicles

**Discerning shopping basket delivery**
Zero-emission home deliveries

**Hotel & catering by e-car**
Supplies to the hotel & catering trade by electric vehiclesvoertuigen

The internet continues to surprise us with new ways to order products. If possible, we want our products delivered to our homes, and be able to return them with equal ease. To process this enormous flow of packages, post and pallets, the city requires innovative and sustainable solutions.

**Post, packages and pallets**

**White label delivery**
Creation of a delivery point for packages on the shopping centre periphery

**Pedal hard**
Quiet and green delivery for the last-mile using cargo-bikes

**Hub & hop**
Cluster goods on the city periphery and then zero-emission delivery to the centre

**Customisation on wheels**
Use of vehicles specially designed for urban distribution
Space in the city is limited but still we want to get more out of it: more liveability, more traffic safety with less inconvenience. Modern technology and customisation can help us make space that is currently locked up by a whole series of rigid regulations. So we have to be smarter as well as fairer and more just in applying regulations. Smart methods and flexible regulation can also make inner city logistics more sustainable.

Green and full is always welcome
Ample general delivery windows, strict enforcement and privileges for electric vehicles

Regulations? Then preferably the same
Aligning delivery windows and vehicle restrictions reduces the kilometres

Beep the enforcer
Cameras register those who park illegally and beep enforcers

Kerb parking for electric vehicles
Electric delivery vans and trucks may load and unload on the kerb

Cities are condensing. Living, working and recreating are taking place increasingly within the city. This leads to substantial demolition, construction and renovation work in cities, which, in turn, causes considerable peaks in the traffic flow; heavy material, resources and people. Reducing this inconvenience and hazard demands smart solutions and cooperation, from tender to execution.

Fast, smart procedures
Smart building logistics in Nijmegen thanks to the Environment Act

Smart tendering
Smart and green renovation of Kostverlorenkade in Amsterdam thanks to permit requirements

Clustering at the building depot
Out-of-the-way building depot where material is clustered and then taken to the building site

Smart supply
Using logistics expertise in building logistics
Facility support flows in the city

Not only do stores and citizens generate transport movements, so do offices. Office supplies, removals, catering, interior work, waste - these are all examples of sizeable transport flows to and from offices. These ‘office logistics’ are responsible for a large share of inner city transport flows. Purchasing is a key management instrument; a lot can be gained from smart and green purchasing.

100% zero-emission paper
Print paper is electrically delivered thanks to purchasing criteria

Zero emission removals
Every removal operation is electric thanks to cooperation and purchasing criteria

Collective waste contract
All entrepreneurs in the street are with the same waste collection company

Real sustainable purchasing
Encourage green, smart transport for the purchase of products and services

Business case of innovative vehicle technology

To make the use of green vehicles with new technology a profitable venture, a smart interplay of technology, logistics and policy is needed along with production scale to further restrict the costs of a vehicle. Different logistics concepts can boost the utilisation rate of the vehicle. And that sometimes requires policy and regulations to be amended. It’s a matter of finding the best combination.

Plug in Pk’s
Development of a hybrid semi-trailer

Between bicycle and delivery van
New, green and economical vehicle types that fall in the ‘mezzanine segment’ between bicycle and delivery van

Engine off, machine on
Electric power makes quiet, green work possible

Integral cost calculation
Integral business cases with vehicle costs, logistics organisation and legislation
What the parties say

“We cluster efficiency and innovation to cooperate on a better environment!”
Wierda Hybrid Technologies

“Sock it to the socket.”
Sligro

We want to organise our urban logistics in a smart, healthy and safe way. With the respective parties in the city. The Green Deal ZES makes this possible via the Living Labs.
Gemeente Tilburg

Green Deal ZES means less diesel and fewer harmful emissions in cities. NomadPower backs more renewable power outlets for urban distribution in city centres that can be used by refrigerated vehicles and hybrid trucks. These goals are fully in line!
Nomad Power

We - E-Trucks Europe - are signing up to the Green Deal ZES covenant because we want the generations that come after us - our children and grandchildren - to be able to live in a green world.
E-trucks

We - E-Trucks Europe - are。“

Electric removals, a game changer.
Aad de Wit Verhuizingen

Smart and green run through our company like a green thread.
Stad Alkmaar

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Cooperation

The Green Deal Zero Emission Urban Logistics mainly concerns cooperation. Cooperation between logistics companies and the authorities, knowledge institutions and producers. The parties want to work together to scale up logistics concepts and boost the development, availability, reliability and affordability of zero-emission vehicles for urban logistics. Together they are making a commitment to establishing, implementing, monitoring and evaluating Living Labs for zero-emission urban logistics. Scaling up the successful pilots will help realise the goal.

The parties involved are:

- Shippers
- Recipients
- Logistics service providers
- Fuel suppliers
- Vehicle manufacturers
- Knowledge institutions
- Local authorities

Government, business and industry along with sector and lobbying organisations like BOVAG, EVO, TLN, Rai Vereniging, Connekt and Natuur & Milieu support the Green Deal ZES parties in their activities. In addition, there is close cooperation with the Topsector Logistics. The parties involved in the Living Labs will play an essential role in achieving the ambition of zero-emission city centres in 2025.
Green Deal benefits

Signing the Green Deal ZES generates a number of significant benefits:

- **Participating**
  in the Green Deal ZES allows you to collaborate and actively cooperate on actually shaping the future of urban logistics.

- **Innovation**
  Green Deal ZES offers a stage to develop new solutions within the combination of logistics, regulation and vehicles.

- **Experimentation**
  Innovations can be applied in practice and successful projects can then be scaled up.

- **Inspiration**
  Via the Green Deal network you come into contact with more than 65 other parties and have the opportunity to share knowledge and experiences with them.

- **Orchestration**
  Affiliation to the Green Deal ZES provides direction and accelerates the creation of a route towards zero-emission urban logistics, supported by the Topsector Logistics.

- **Profiling**
  Via the Green Deal network you can put your logistics solutions in the spotlight, both at home and abroad.

Help orchestrate the future of urban logistics, and participate!

Contact

Participation in the Green Deal ZES offers a whole range of interesting possibilities for both large and small companies as well as municipalities. If you have an innovative idea or solution in the area of urban logistics, we would like to hear from you.

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