



Logistics covers all the activities that are needed for planning, implementing and managing flows of goods and information, from raw material to end product. As well as the added value and the employment related to the logistics sector itself, it also has an enabling function for all other sectors (including the top sectors), by facilitating international trade. With just 0.25% of the world population and 1% of global production, the Netherlands facilitates 3.7% of world trade. Its high-quality logistics function is an important aspect of the attractive business climate in the country.

LOGISTICS

There are many parties that work together in the Top Sector Logistics, including shippers, logistics service providers, transport companies, knowledge institutes, and government bodies. The activities of these parties make a solid contribution to the powerful international position of the Netherlands.

Towards competitive, sustainable, and safe mobility

The Top Sector Logistics has a role to play in many social challenges for healthcare, agriculture, water, and food and the energy transition. This role is reflected in the action agenda of the Top Sector Logistics, which also focuses on, for example, agricultural logistics, sustainability in logistics and freight transport and care logistics.

The overall ambition for the Top Sector Logistics is logistics and freight transport to be competitive, sustainable, and safe by 2050. In the context of its mission-driven innovation policy, the Ministry of Infrastructure and Water Management has asked the top sector to draw up an innovation agenda that focuses on “Future-proof Mobility Systems” and to develop this in a triple-helix context. The Top Sector Logistics has developed a programmatic approach: the Multi-year Mission-driven Innovation Program Sustainable Mobility.

This program is aimed at the ambition for 2050: competitive and emission-free logistics in the Netherlands. With this, the Top Sector Logistics is building on the results of recent years. More emphasis is placed on scaling up and implementing existing techniques and innovations in the short term while on the

long term the focus is on research into new technologies and innovations.

Activities are developed along four application areas: cities, multimodal corridors, supply chains, and construction and mobile equipment.

- In city logistics, the Top Sector Logistics focuses on accelerating developments towards zero-emissions. Zero Emissions is explicitly aimed at CO₂, but goes hand in hand with the reduction of other negative externalities, such as particulate matter, noise and odors. The top sector is working closely with the Green Deal program for zero-emission city logistics and for city logistics it focuses on realizing possibilities for emission reduction and on the implementation of research. The relationship with new technology (fuel and propulsion) is explicitly included.

EXAMPLE: DATA SHARING IN THE SUPPLY CHAIN FOR GREENER TRANSPORT

Historically, achieving the desired coordination and synchronisation for efficient supply chain management has been challenging due to each involved actor having limited knowledge on the upstream progress and disruptions of others in the transportation chain. An EU project 'FEDeRATED' for digital co-operation addresses these shortcomings. It is based on the building blocks for platform inter-operability and digital data sharing as conceived by the Digital Transport Logistic Forum (DTLF) and aims to be an enabler for smart grids and load balancing.

In a first exploration, the FEDeRATED project has identified the following domains as promising directions for new services:

- Use of green transport: search function for available green transport
- Renewable products marketplace: cradle-to-cradle logistics
- Chain optimisation: real-time linking of supply & demand
- Non-fossil fuel use: significant improvement in energy efficiency
- Reducing carbon footprint: measuring CO₂ emissions.



- The challenge for the Netherlands is to organize the flow of goods via multimodal corridors as efficiently and sustainably as possible in order to achieve the target in the Paris' climate agreement: 900,000 tons of extra reduction of CO₂ emissions in 2030 in hinterland transport. The Top Sector Logistics has the ambition to proactively achieve this additional reduction through projects and programmes.
- The Netherlands plays an important role in globally managed supply chains. Smarter supply chain management in combination with ever-increasing requirements (faster, more sustainable, with fewer resources) relies on the digitization of data and

information, in many more applications, with many more sensors and in much greater detail than was customary until now. The objective of the Top Sector Logistics is maximum supply chain visibility, effective deployment of resources, optimal allocation of infrastructure capacity and stimulating an innovative environment for the development of new services.

- The sustainable mobility program is also meant to make construction logistics more sustainable and cleaner. It is part of the Clean and Emissionless Building program. It focuses on the reduction of nitrogen emissions in the construction logistics chain and on finding the way to 'emission-free' construction logistics.

Characteristics of the branch

The logistics sector covers a wide spectrum of activities comprising the main ports and distribution centres, as well as the transport, financial and information services that enable the flow of goods. In each of these, Dutch companies play a leading role. Dutch main ports Schiphol (air cargo), Rotterdam and Amsterdam (maritime freight) are the largest in Europe and are serviced by companies specialising in storage, transshipment, warehousing and distribution.

Mainports

With transfers in excess of 320 million tonnes, Rotterdam harbour is Europe's largest sea terminal. Rotterdam is set to grow strongly

EXAMPLE: THE DREAMH2AUL PROJECT

The world's first hydrogen-powered zero-emission semi-truck that, under current European regulations, is allowed to tow any trailer, can drive more than 600 km on a single tank and offers the driver the necessary sleeping place.

Within the DreamH2aul project, a hydrogen fuel cell system with an extremely high-power density is being developed. This system will be integrated into 2 semi-trucks that will carry enough hydrogen tanks for a range of at least 600 km. These trucks will refuel green hydrogen at a public filling station that will be realized within the project on the important North Sea-Baltic TEN-T Corridor. In addition to demonstrating hydrogen technology, the economic feasibility of hydrogen trucks will be examined by comparing the total cost of ownership with both diesel and battery-electric trucks. This project will stimulate the wider transport sector to use green hydrogen as a fuel for heavy freight transport and thus reduce the emission of CO₂, NOx, particulate matter and noise emissions.

in the future, specifically in the field of containers and, with the world's largest land gain project, Maasvlakte 2, will substantially increase the capacity of its harbour facilities in the near future. Amsterdam's Schiphol Airport, with an annual transfer of over 1.5 million tonnes, is the third largest in Europe for cargo and Europe's fourth-largest civil aviation hub. In addition to Schiphol, the Netherlands has 16 regional airports. The Netherlands is unique when it comes to interconnectivity. Rotterdam harbour, other harbours such as Amsterdam, and Schiphol airport are closely interconnected logistically. Under the 'Smart Cargo Hub for Europe' initiative, Schiphol, the Port of Amsterdam and the private sector aim to turn Amsterdam into the fastest and most reliable multimodal hub for Europe. Additionally, the Netherlands is the country of choice for European Distribution Centres (EDCs): 57% of all American and Asian EDCs on the European continent are located in the Netherlands.

Road transport

The Netherlands is also the leading road transport nation in Europe and the largest inland shipper. The Dutch road haulage industry has a market share of about 22 per cent in international cargo transport within Europe. The road transport sector is highly internationally oriented and more than half the added-value created in the country's logistics branch is related to road haulage. Also, the Netherlands has over 12,000 professional haulage firms among which are several large enterprises that account

for well over half the total transport volume. From the Port of Rotterdam, all major industrial and economic centres in Western Europe can be reached in less than 24 hours.

Rail transport

Sizable investments have been made in high quality railway connections. During the past ten years the volume of goods transported by rail has doubled. The Dutch rail cargo market is open to competition and is currently served by a number of providers. Transport by rail is increasingly recognised as a viable alternative to road haulage, particularly for time-critical products such as food and flowers. The Betuwe-route, a dedicated double-track freight railway, enables fast transport of containers and bulk goods from Rotterdam to the rest of Europe.

Inland river transport

For inland shipping the Netherlands is strategically situated on the Rhine Delta. This provides good connections with the large European hinterland all the way to the Black Sea. This makes the Dutch inland shipping fleet the most important carrier of goods on the inland waterways of Europe.

Pipelines

A Dutch pipeline network connects the petrochemical industries at port of Rotterdam with industries in Zeeland, Amsterdam, Antwerp and Limburg, making it effectively one of the three largest clusters of chemical industries in the world, next to Houston and Singapore.



EXAMPLE: INLAND SHIPPING SUGAR CORRIDOR

In 2021, the European inland shipping cooperative NPRC started a large-scale operation to ship sugar beets from Maastricht (Limburg) to Oudenbosch (North Brabant). This operation removes 2,200 TEU (1,100 trucks) per day from the road. The cooperative's inland vessels have created a real 'sugar corridor' and avoid more than 15,000 truck movements a year on the national roads.

