

# TRANSPORTING MEDICINES AND VACCINES

## I. BACKGROUND

As a global healthcare leader fulfilling a public health mission, Sanofi considers the supply chain and the delivery of medicines to be among the company's most important responsibilities.

Sanofi is committed to make every effort to ensure that the supply chain will continue to deliver medicines and vaccines to the market without interruption. Protecting patients' health is a priority challenge every day.

Distribution and transportation are the last part of the supply chain, which is dedicated to serving all patients worldwide. The supply chain's purpose is to deliver our products in close proximity to patients and to ensure a high standard of quality.

Distribution and transportation must be performed with an eye on reducing environmental impacts by controlling CO<sub>2</sub> emissions. Sanofi has made clear commitments to ensure a sustainable medicine transportation organization and to reduce the company's direct and indirect greenhouse gas emissions.

## 1. Organization and network

The Transportation Department is part of the Supply Chain within Global Industrial Affairs. Sanofi's transportation strategy is to guarantee the continuous supply of drugs and vaccines to our patients without any disruption. This global strategy has been developed and implemented throughout the company.

The Supply Chain management team is responsible for enforcing various processes on all sites where the company operates (more than 80 Sanofi plants and 130 distribution centers belonging to Sanofi or external partners), ensuring controlled processes as well as compliance with our continuous improvement policy.

Once a year a meeting of the worldwide network is organized to strengthen team spirit, review constraints and solutions, and celebrate successes.

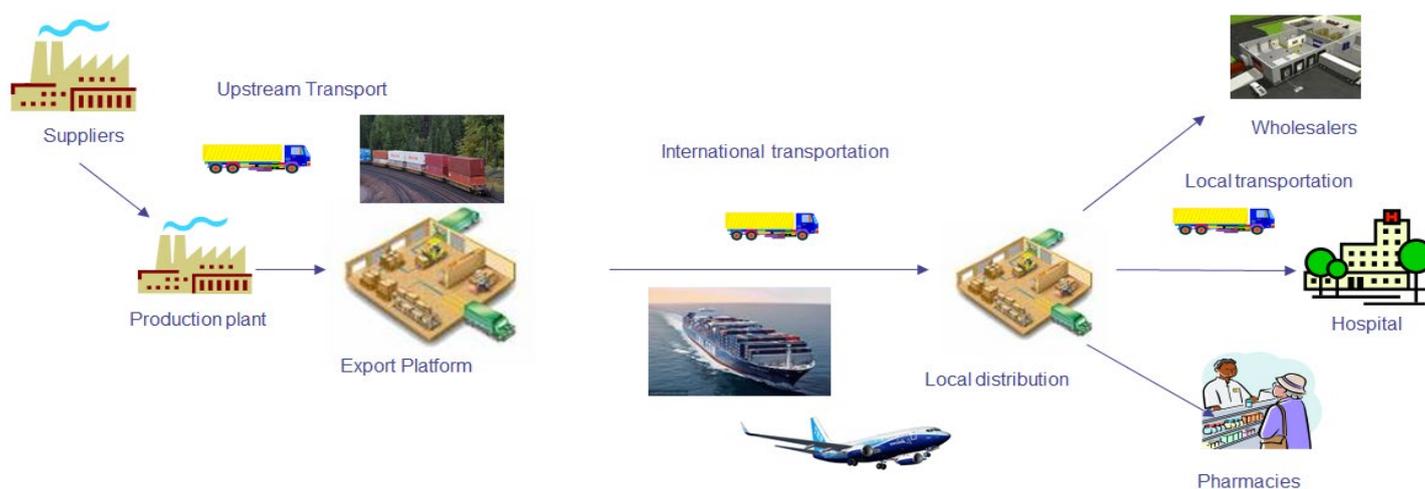


Figure 1- Our distribution organization

## 2. Several ways to transport our medicines and vaccines

- Delivery of products between our plants: We deliver products between our chemistry plants and pharmaceuticals plants in the most optimized way, determined according to location.

- Delivery to our distribution centers: Our products are consolidated and exported from our export hub to our local distribution centers. Pallet optimization and truck occupancy are key parameters to improve the transportation of our goods. This organization enables massification associated with cost competitiveness and a sustainable strategy.
- Delivery to our customers: This includes wholesalers, hospitals and pharmacies.

- Delivery in cities (the last kilometer): SANOFI asked his partner to use gas or electric vehicles when it is possible. In Paris, pharmacies are supplied by a truck fleet fuelled by natural gas.

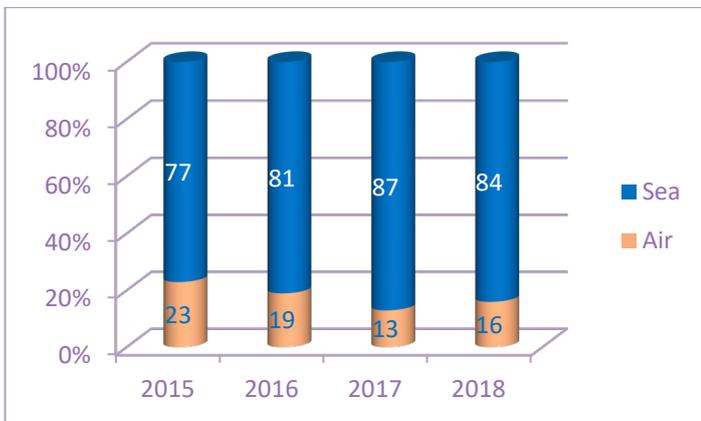
## II. ACTIONS

- Choose sea instead of air transportation for long-distance shipments.
- Increase the level of occupancy for truck and sea containers.
- Develop railway transportation.
- Consolidate flows and mutualize transport to reduce the number of trucks on the road.
- Promote green models of transportation with all forwarders.

### 1. Encouraging the use of sea transportation instead of air transportation whenever possible

Sea transportation is 30 times less polluting than air transportation. That is the reason why, Sanofi choose as much as possible to use sea transportation for our medicines instead of air shipments.

As such, sea transportation for destinations outside Europe went from 78% in 2011 to 84% in 2018.

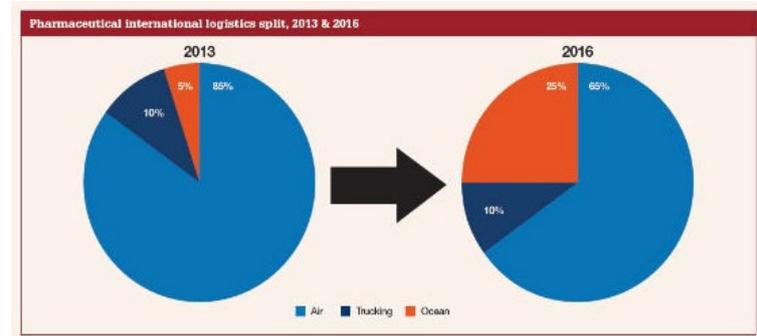


**Figure 2-Percentage of sea transportation used by Sanofi from 2015 to 2018 for medicines shipments.**

**84%**  
of our intercontinental shipments are by sea in 2018



The resort to sea transportation is part of our core strategy, whereas most of pharmaceutical companies usually favor the use of air transportation (around 65% in 2016). However, more and more pharmaceutical companies switch to sea transportation as this mode of transport increased from 5% in 2013 to 25% in 2016 for the whole pharmaceutical industry.



**Figure 3 - Pharmaceutical international logistics split, 2013 and 2016**

Source: [World pharmaceuticals](#)

### 2. Choosing alternatives to road transportation whenever possible

In Europe, regular flows are switched from road to rail transportation, for example from Riells (Spain) to Frankfurt (Germany) and from Frankfurt to Milan (Italy).

### 3. The challenges of complying with new regulations

In order to guarantee the quality of distributed medicines and vaccines, transportation has to respect very strict rules, especially in terms of temperature. In 2013, the EU implemented new Good Distribution Practices (GDP) to protect medicinal products.

The appropriate temperature must be maintained during the transportation of medicines, regardless of external conditions.

Vaccines and insulin are extremely sensitive. To respect the cold chain during the transport of these products, the temperature must be maintained between 2° and 8°C.

## 4. Deliveries using natural gas vehicles

### Within the city of Paris

Sanofi has started a new project for deliveries to pharmacy customers within Paris using Natural Gas Vehicles.



Inside the city of Paris we use only Natural Gas Vehicles respecting EEV norms.

### The Brazil, Saõ Paulo example



After a very well received pilot in green delivery of products in Saõ Paulo, Sanofi will include an electric car in its next anti-flu campaign in 2019. The idea of this exclusive electric car called BYD T3 launched by the Supply Chain rose following a workshop on new technologies and careers of the future.

Thanks to this modern vehicle, around 5 tons of CO<sub>2</sub> emissions and 2,000 liters of diesel will be saved per year.

This car can run 250 kilometers without needs to be restocked. The extension of such delivery for other products is currently under study.

[For more information](#) about our CO<sub>2</sub> emissions, see in our [Documents Center](#):

- *Carbon Footprint factsheet.*
- *Sanofi's risks and opportunities related to Climate Change factsheet*