Supermarket stores deliveries using waterways in Paris

KeyWords:
Innovative operational solution; Transport management; Interoperability and standardisation; waterways transport.

Description:
Franprix supermarket stores in Paris are being supplied through a new multi-modal and urban transport chain solution. In this innovation, the last transport leg between regional distribution centre and retail shop occurs via waterways. The shipment is transported in a special container, sent from the warehouse to a river port in the periphery by truck, then by barge to the centre of Paris, shipped on the Seine river for a distance of 20 km to the Quai de la Bourdonnais in central Paris. From there another truck transports the containers to the shop on a very short trip.

Benefits:
This project benefits:
- the traffic on the roads to and from central Paris, with less trucks kilometres, reducing congestion and other negative external impacts of road freight transport
- the environment with about 250 tons of CO₂ savings/year
- the Parisians, with less congestion, pollution and noise
- the supplied stores and their customers, with the guarantee to deliver stores on time.

Starting Point/Objectives/Motivation:
In 2012, Franprix, a French food retail company, started to use waterways as a transport mode to deliver its stores in the centre of Paris. The project is called “Franprix entre en Seine”. The logistics service provider Norbert Dentressangle developed and implemented the innovative door-to-door solution. Previously, the stores were directly supplied by trucks from the warehouse 20 km away from Paris. Before 2012, food deliveries by boat to ports situated several kilometres away from Paris had ceased. Only some construction sites were supplied via waterways in central Paris.

A multi-modal transport chain was designed and implemented between the warehouse and stores located in Paris near the Seine river.

The transfer of transport from road to the Seine river aimed to improve the sustainability of deliveries to stores located Paris: reducing road traffic and congestion, and mitigating greenhouse gas emissions.

The use of the barge is avoiding the equivalent of about 450,000 vehicle-kilometres by road-based goods vehicles per year. This corresponds to a CO₂ reduction of 37% for the trip between regional depot and shop.

This project was evaluated by TL&A, an independent consultant, for ADEME Ile de France, the French Agency for Energy and Environment, and found to be fulfilling its objectives of reducing the emissions together with reduced traffic on the roads to and from Paris.

Success Factors:
This project was enabled by:
- The willingness and the decision of a retail company (Franprix) to experiment with more sustainable deliveries,
- The availability of a quay in the centre of Paris, that was fitted out by Port Authority of Paris
- A public-private partnership to reduce truck traffic inside Paris, and the technical feasibility of the solution
- The know-how of the door-to-door, multimodal logistics service provider Norbert Dentressangle

Supported Strategic Targets:
- Better utilisation of infrastructure (reduced congestion & traffic)
- Improved image
- Greater safety and security
- Reducing greenhouse gas emissions
- Conservation of Resources
This project has public and private sector partners:

- Franprix, a supermarket retailer, part of Casino group
- Norbert Dentressangle, logistics service provider, responsible for developing, engineering and applying the solution
- Waterways of France (VNF) and Ports of Paris (two public companies) facilitated the flow and fitted out the availability of the intermodal facility located near the Eiffel Tower
- Terminal de Seine (TDS) and Paris Terminal are companies specialized in dock work on the Seine river
- SCAT is operating the river transport part of the project

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Reach Stackers are used to unload the containers from the barge on the quay, which is very close to the Eiffel Tower. Then, the containers are loaded on trucks for the final shop delivery on the following morning.

Retail outlets, located less than 4 km from this quay, receive their deliveries between 06.00 and 12.30.

The supermarkets, which receive their goods by barge, are identified with the logo “Franprix entre en Seine” (see picture on previous page).

Once the deliveries are completed, the barge begins the return journey to the port of origin, a return trip loaded with empty containers, and then prepared for the next load at Bonneuil-sur-Marne.

The Regional Distribution Centre (warehouse) of Franprix is located in Chennevières-sur-Marne, about 20 km South-East of Paris.

On weekdays, from 05.00 to 11.30, 450 pallets of goods are prepared and then loaded onto 26 containers that are specifically designed for intermodal waterways transport.

Between 12.00 and 18.30, these containers are transported by trucks to the Port of Bonneuil-sur-Marne, 8 km away.

Following arrival in Port of Bonneuil, containers are loaded on the barge by cranes mounted on heavy mobile vehicles called ‘Reach Stacker’.

From Bonneuil, avoiding the road and thus the risks of traffic jams, containers are carried 20 km on the Marne and then on the Seine river to the ‘quai de la Bourdonnais’ downtown in Paris.

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