

## 4.4 Sustainable urban logistics

### The Beer Boat – waterborne last mile deliveries in Utrecht (Utrecht, the Netherlands)

Fast, efficient and silent deliveries

*Utrecht using waterborne freight distribution for last mile deliveries in its city centre.*

**City:** Utrecht

**Country:** The Netherlands

**Implementation body:** Municipality of Utrecht

**Level of implementation:** City level

**Topic:** Sustainable urban logistics

**Target group(s):** Shops, restaurants, bars and commercial activities in general in the city centre

**Stakeholders involved:**

- City of Utrecht
- Breweries
- Catering industry wholesaler
- Final customers: clients, shops, bars and restaurants in the city centre



### INTRODUCTION

The city of Utrecht has a medieval city centre characterized by narrow streets and several canals. The local authority was concerned about the negative impacts of freight distribution in the city centre including damage, blocking of streets due to loading and unloading, accidents, noise and air pollution (CIVITAS MIMOSA Project 2008–2012). As a result, over the years it has introduced different vehicle restrictions such as time windows for freight traffic to deliver goods and a low emission zone. One of the most successful initiatives was the introduction of waterborne freight distribution for last mile deliveries to the city centre.

### OBJECTIVES

- Decrease freight traffic in the city centre
- Exploit waterborne freight distribution to improve the accessibility of goods to the city centre.

### MEASURES IMPLEMENTED

The Municipality of Utrecht introduced waterborne freight deliveries in its city centre in 1996. More specifically, it established the Beer Boat, a specially adapted diesel barge that carried out beer deliveries to bars and restaurants along the canals. This measure proved very effective in reducing the number of trucks and the related negative impacts at the city centre while it guaranteed the delivery of beer and compliance with labour laws (for carrying barrels and crates).

Considering the results and following a market survey and feasibility study, the city of Utrecht introduced in 2010 an electrically-powered vessel (with auxiliary diesel engine), increasing the load capacity to 18 tons while reducing air pollution (BESTFACT, 2013).

### RESULTS (BESTFACT, 2013)

- Continuous operation from 1996 till today.
- Decongestion of roads in the city centre.
- Better air quality: the electric vessel has reduced emissions of CO<sub>2</sub> by 17 tons, nitrogen oxides (NO<sub>x</sub>) by 35 kg and PM<sub>10</sub> by 2 kg per year.
- Fast, efficient and silent deliveries.

Thanks to the success of the Beer Boat, in 2012 the Municipality of Utrecht, in a continuing effort to minimize negative impacts of heavy traffic in the city centre, introduced a second electrically-powered cargo vessel called ECOBOOT for the collection of waste from the city centre (Connecting Citizen Ports 21).

### SUCCESS FACTORS

- Existing vehicle restrictions at the city centre.
- Cost and time efficient practice.
- Reduction of transport costs.
- Higher flexibility for deliveries as the delivery time window for the city centre was extended.
- Informed decision making and business plan: market survey and feasibility study before the acquisition of the electrically-powered vessel.

### BARRIERS AND OBSTACLES

- High original investment for the acquisition of the vessels.