

**Summary:**

# **General cargo terminals in Norway**

## **Structure and key figures**

### **Background**

Knowledge about freight terminals for general cargo is important, because in such terminals goods are consolidated for long distance transport, or larger shipments are divided for distribution in the terminal's surrounding country. Such consolidations or fragmentations of shipments give better utilization of freight capacity and thereby reduced freight transport costs compared to direct transport.

### **Objectives and approach**

The main objective for the project has been to generate and increase knowledge about general cargo freight terminals and the freight terminal structure in Norway. Other objectives have been to:

- Survey and analyse current general cargo freight terminal networks in Norway with emphasis on location, freight flows, time consumption and costs.
- Analyse and appreciate freight transport development trends that can affect the structure of future freight terminal networks.
- Appreciate strengths and weaknesses with current general cargo freight terminal networks and how more effective terminal networks could be established.

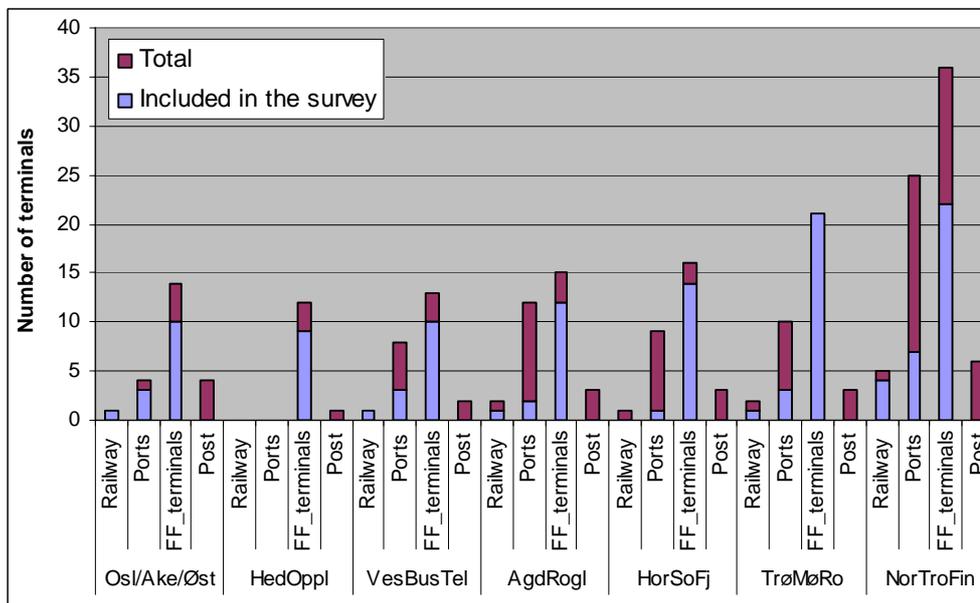
Data collection and mapping in the project is restricted to publicly available unimodal and intermodal general cargo freight terminals in Norway. The study includes both intermodal freight terminals (ports and rail freight terminals) and general cargo terminals (most often unimodal road freight terminals).

### **The survey**

The sample of ports consists of the 22 largest public ports as measured by annual general cargo freight flows (1000 tonnes). In addition, the ports of Hammerfest, Bodø, Alta and Sør-Varanger are included in the survey, as these ports are important to the Northern part of Norway. Thus, 26 ports are included in the survey. Also, all of the 13 Norwegian rail freight terminals are included. There are four main freight forwarders (Linjegods/Schenker, NorCargo/Posten, Tollpost Globe and DHL) with a nationwide network of general cargo freight terminals in Norway. In total these four freight forwarders has 135 freight terminals in Norway.

In total, we received answers from 124 terminals consisting of 19 public ports, 8 rail terminals and 97 freight forwarder terminals. The number of freight terminals that answered the survey and the total number of terminals are given in figure 1.

Figur 1. Number of general goods freight terminals in the survey and total, given by main type of terminal. (FF\_terminal = Freight forwarder terminals)



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The figure shows that there are notably many freight terminals in the northern part of Norway (36 freight forwarder terminals, 25 ports and 5 freight railway terminals, while there in Oslo, Akershus and Østfold are only 14 freight forwarder terminals, 4 ports and 1 freight railway terminal.

The freight flows in the survey represent ca 46 % of the freight flows handled by the forwarders and ca 10 % of all general cargo transported on road in Norway.

## Findings

### Ownership, efficiency and freight flows

The survey shows that railway freight terminals are in general publicly owned, the public ports are owned by the municipality, and the freight forwarder terminals are privately owned.

On average, 0,40 manyear for goods handling and 0,15 manyear for administration is utilized per 1000 tons freight flow in freight forwarder terminals. For public ports, the corresponding figures are 0,05 manyear for goods handling and 0,02 manyear for administration.

The total goods turnover included in this survey amounts to 24 million tons. This total figure consists of 12,6 million tons through the ports, 7,4 mill tons through railway freight terminals and 3,7 mill tons through freight forward terminals. Almost 40 % of the reported turnover is handled in the Oslo, Akershus and Østfold region.

The turnover in freight forward terminals consists of general cargo (56 %), containers and articulated trailer (30 %) and parcels (13 %). The use of containers and articulated trailers is increasing by increased size of the terminal.

All the terminals are accessible by road transport, 26 % of the freight forward terminals have access from railway, 23 % have access from ship and 7 % have access from plane.

On weekdays the terminals are open 12 hours on average, which indicates two working shifts per 24 hours. One working shift is most common for the small terminals, two shifts are most common in terminals with annual freight flows between 10 000 tons and 30 000 tons. Three working shifts are most common in terminals with a yearly freight flow over 100 000 tons.

The survey shows that the most commonly offered service is distribution (93% of the terminals offer this service), followed by tracking (87%), in-house storage (76%), and container storage (58%). 53% of the terminals can offer quality checks on the goods, 52% report that they perform stripping and outdoor storage, while 51% report the service of re-packing. 39% of the terminals offer other value-adding services.

Eighteen of the general cargo freight terminals report having a container lift truck available. Three general cargo terminals report having container cranes on the premises. These are all in the group with the highest annual goods turnover. Eight of the ports are equipped with container cranes.

Reloading costs are substantially lower in the ports than in the general cargo freight terminals, which must be caused by higher labour intensity in the general cargo freight terminals. A comparison of cost levels in the general cargo freight terminals with that the ports reveal striking differences: The costs in NOK of handling one ton of containerized goods in the ports only amount to 7% of such costs in the general cargo freight terminals. The corresponding ratio for goods in semi-trailers is 6%. At first glance this seems unrealistic, but recall the differences in employment reported in ch. 7.2, revealing a 1:8 ratio between ports and general cargo freight terminals.

In the general cargo freight terminals, small shipments generally have shorter turnover times than full-loads: The time spent in terminal turnover time is well below 10 hours for small shipments while it is between 10 and 20 hours for full-loads. In general, this means that shipments arrive and are dispatched the same day, eventually that they arrive in the afternoon and are dispatched the next morning. Small shipments in the ports have substantially longer turnover times than in the general cargo freight terminals, ranging from approximately 24 hours in the small ports to 84 hours in the largest ports.

Either loading or unloading a delivery truck takes on average 35 minutes, while the average time spent on loading or unloading a container is 100 minutes. The mean unloading time for a wagon train is 12 minutes longer than for a semi-trailer (130 minutes in total), partly due to the time used on de-coupling the hanger from the truck during unloading.