

Implementation options

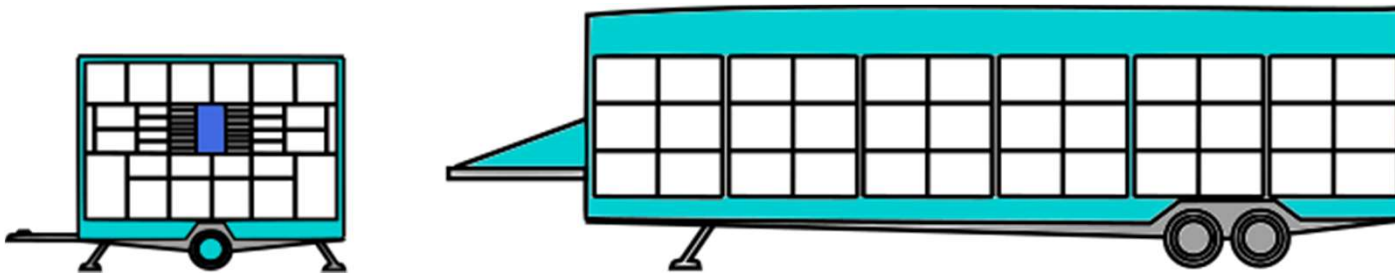
Delivery trailer concept is versatile

www.pickdelso.com

20.10.2018

What kind of trailer?

- Delivery trailer is transportable with a road vehicle from a picking site to a delivery site
- Capacity can be flexibly used such that one or more lockers are reserved for an order
- Delivery trailers can be of various size and they are possibly intended for various purposes:

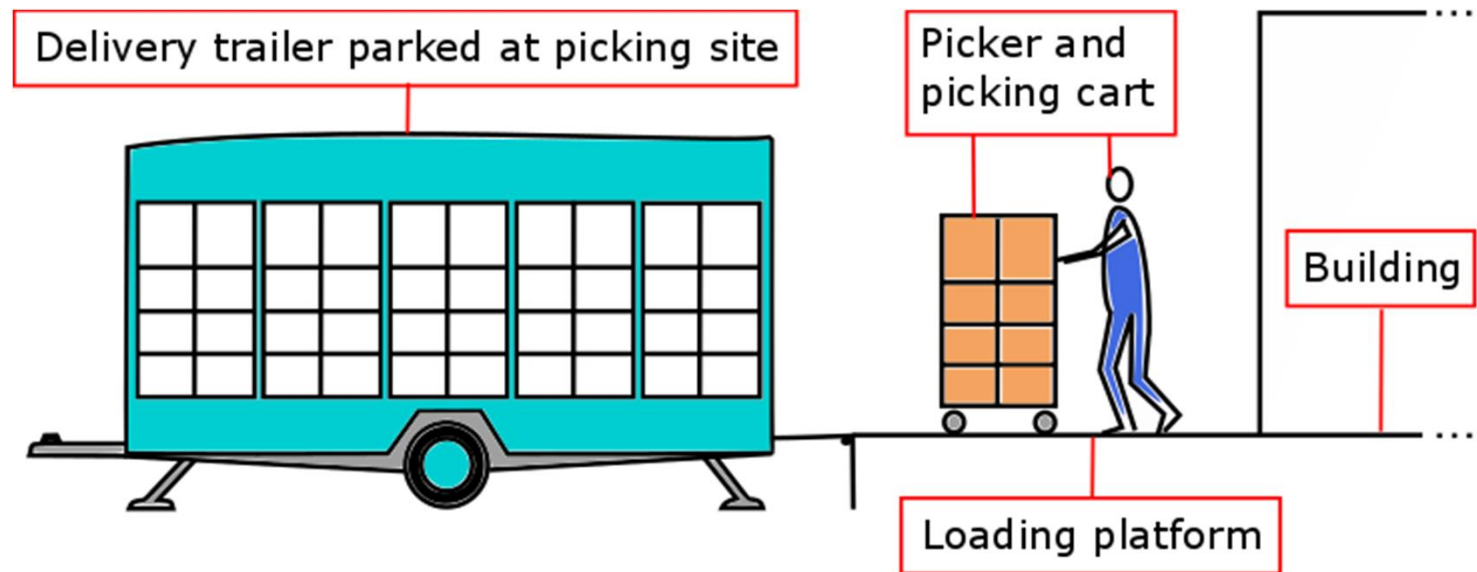


When to use it?

- Especially when there is a need to transport a large number of items to a delivery point
- Delivery trailer can be used, for example, to deliver (postal) packets, products, or laundry to customers
- Racks of Delivery trailer suit for goods-to-man methods to be used in sortation hubs or dark stores
- Racks (picking carts) suit for a man-to-good method, if walking distances are short enough

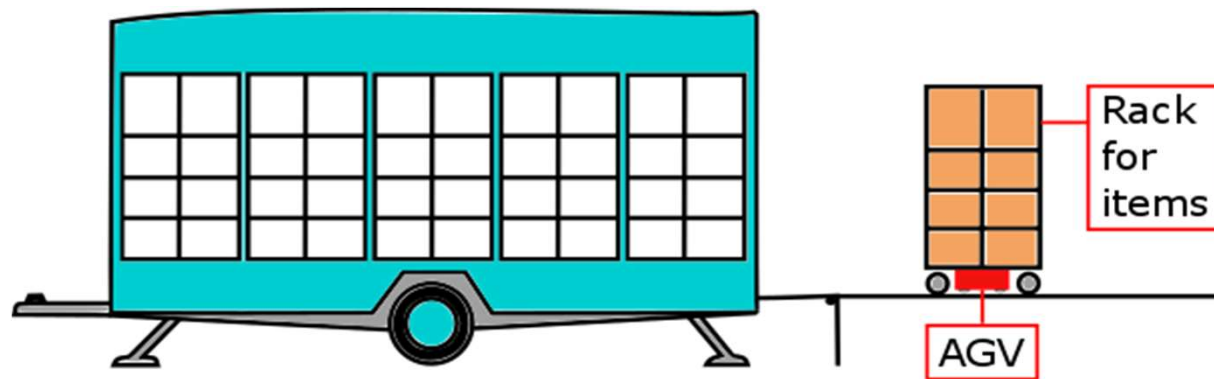
Manual loading

- Loading and storing can be the same process phase
- Picking phase ends such that a picker pushes a picking cart into Delivery trailer:



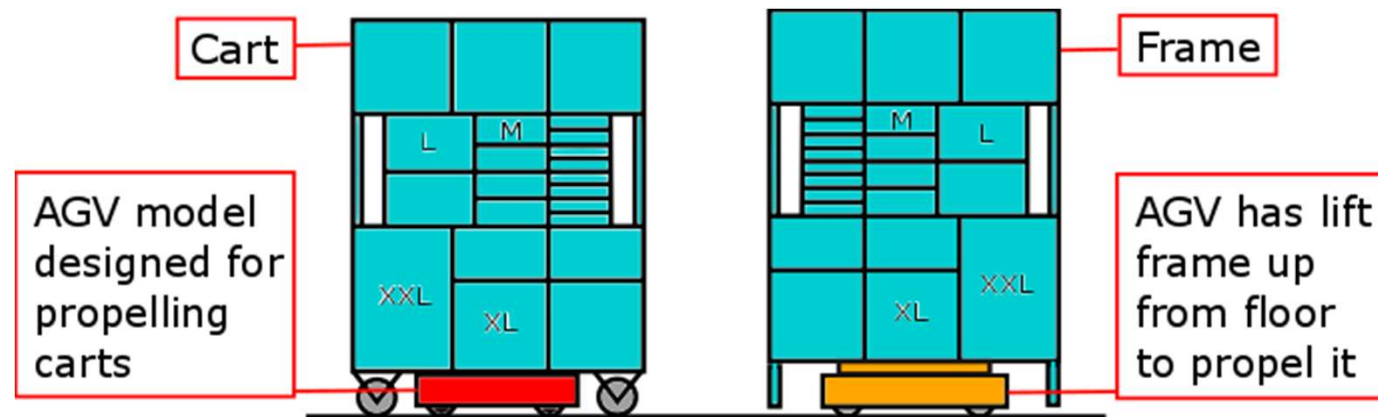
Loading by AGVs

- Loading of Delivery trailer can be performed using an AGV (automated guided vehicle)
- Loading dock or a loading platform (as here) is used
- Picking phase ends such that the AGV moves a rack into Delivery trailer:



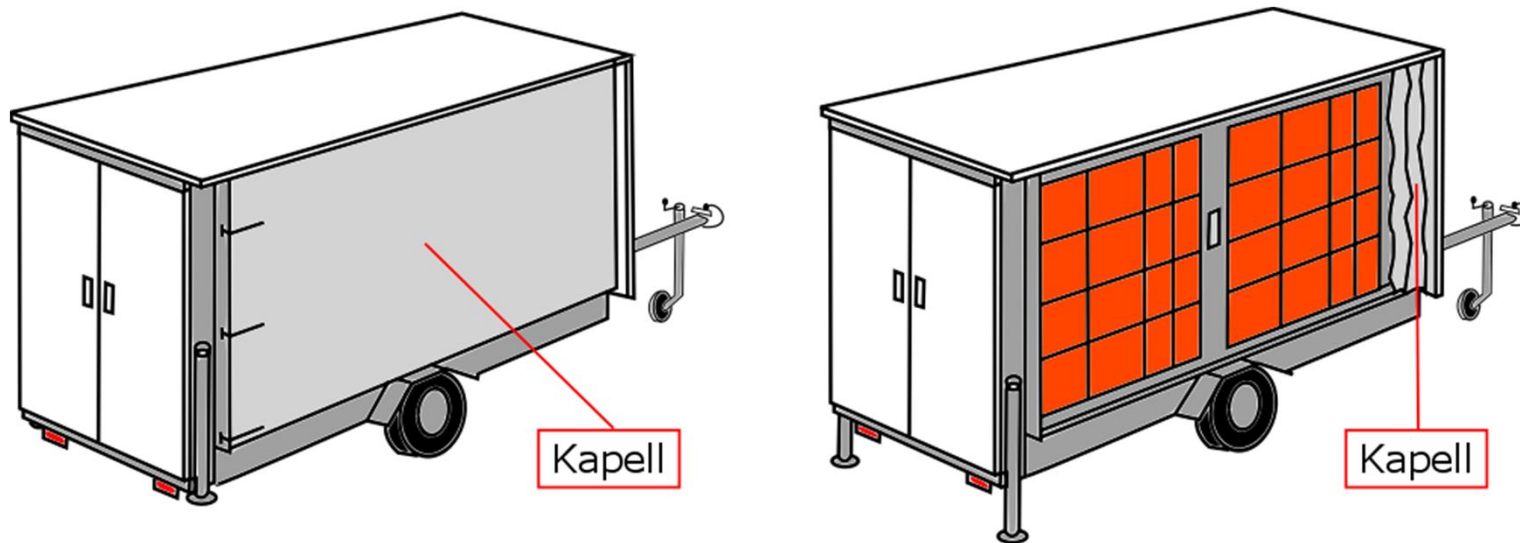
AGV models

- AGV attaches itself to the bottom of a rack
- Rack is a cart with wheels or a frame with legs
- Some known manufacturers: Amazon Robotics (previously Kiva Systems), Swisslog (CarryPick), PEK3
- Examples:



Covering of locker doors

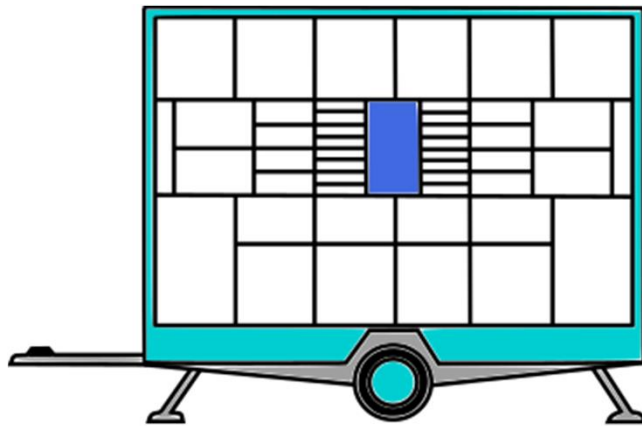
- Dust, rain water, snow, and ice may cause troubles
- Locker doors can be covered for transportation
- Then the locker doors stay clean and operational
- Example:



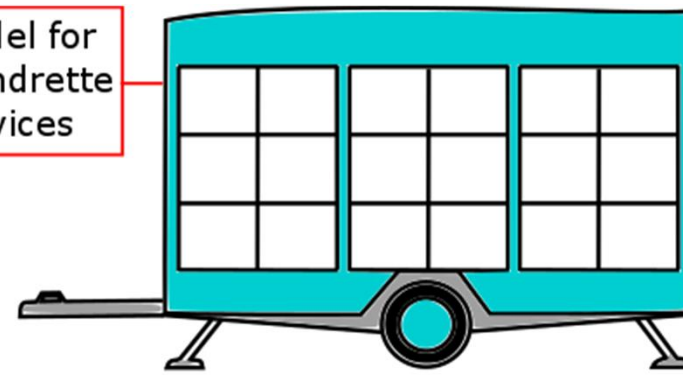
Different needs

- For example: a model for laundrette services, another model for (postal) parcels, and another model (with cool lockers) for shopping bags
- Refrigerator and/or freezer temperature are needed for certain food
- Cool lockers are not necessary for food, because the food can be placed with a gel pack into a thermo box
- Thermo box and gel pack may have a pledge payment

Examples

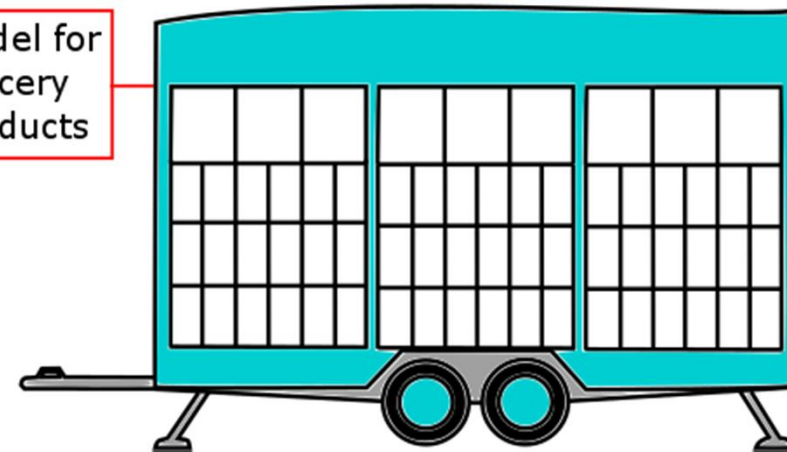
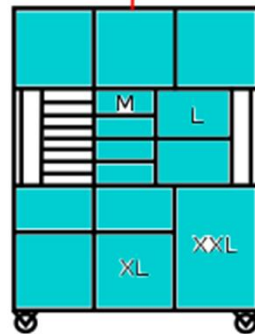
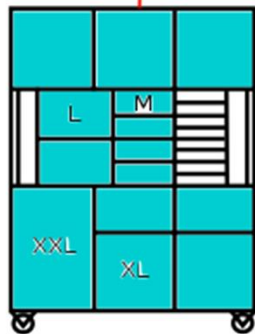


Model for (postal) parcels



Model for laundrette services

Racks for the above model



Model for grocery products

Heavy duty trailer

- Average volume of a grocery order is quite high, for example, five shopping bags
- In addition to grocery orders, the delivery capacity is needed for large-sized items such as TV monitors
- Capacity can be increased by manufacturing large-sized Delivery trailers:

