



# Unit 4


# Mode of Transport

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# What is Transportation Modes?



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- ❑ Mode of transport is a term used to distinguish between different ways of transportation or transporting people or goods.
  - ❑ In general, transportation is used for moving of people, animals, and other goods from one place to another.
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# There are 5 Modes of Transportation

There are 5 modes of transportation in logistics:

- 1) Road
- 2) Rail
- 3) Marine / sea
- 4) Air
- 5) Pipeline



# The different types of freight traffic

## Multimodal

Carriage of goods by at least two different modes of transport, e.g., shipping by motor semi truck and aircraft.

## Intermodal

Goods are transported in the same loading unit or vehicle using different modes of transport. The handling of the freight itself is not necessary when changing modes.

## Unaccompanied

The driver does not stay with his road vehicle during transport by rail or ferry.

# The different types of freight traffic

## Block Train

A single shipper uses a whole train which is run directly from the loading point to the destination. No assembling and disassembling is required.

## Single-wagon

Train is formed out of individual wagons or sets of wagons which have different origins and different destinations.

## Piggyback

Combines road and rail transport: whole motor semi trucks, trailers or swap-bodies are carried by rail.

## Ex.1 : Match the beginnings of the sentences (1-6) with the endings (a-f) to make definitions of more key terms.

1. multimodal          a)    The driver does not stay with his road vehicle during transport by rail or ferry.
2. piggyback          b)    Goods are transported in the same loading unit or vehicle using different modes of transport. The handling of the freight itself is not necessary when changing modes.
3. Intermodal          c)    A single shipper uses a whole train which is run directly from the loading point to the destination. No assembling and disassembling is required.
4. unaccompanied     d)    Carriage of goods by at least two different modes of transport, e.g., shipping by motor lorry and aircraft.
5. block train          e)    Combines Road and rail transport: whole motor lorries, trailers or swap-bodies are carried by rail.



Match the pictures (a-d) with the names (1-4).



a. \_\_\_\_\_



b. \_\_\_\_\_



c. \_\_\_\_\_



d. \_\_\_\_\_

1. gantry crane
2. ISO container
3. reach stacker
4. transtainer

# GANTRY CRANE

A specialized crane which travels along a supported structure which can span a wide area which raises and lowers heavy cargo onto a form of transport





# ISO CONTAINER

specifically designed to carry goods overseas, aboard container liners. For this reason they have to be built to very precise specifications and standards, otherwise they could pose a risk to the safety of anyone handling it, or cause damage to other containers being transported alongside.



# REACH STACKER

a vehicle used for handling intermodal cargo containers in small terminals or medium-sized ports. Reach stackers are able to transport a container short distances very quickly and pile them in various rows depending on its access





# TRANSTAINER

is a hoisting (RAISING/LIFTING) device for loading or unloading containers onto or from railway wagons. It is a gantry crane that usually travels on rails and is set up across a track bundle at a container terminal.



#### Unit 4: Exercise 1

Now complete the descriptions of the intermodal transport and handling equipment with verbs from the box.

fitted, straddle, mounted, loading, attached, reach, handle, piling, made, move

1. A piece of machinery used for \_\_\_\_\_ and unloading container from ships onto trucks or rail wagons and vice versa. It is rail-mounted and can \_\_\_\_\_ at least four railway tracks. It is motorized and can \_\_\_\_\_ parallel to ship's side.
2. A special type of device which is able to \_\_\_\_\_ very heavy loads. It is used for transferring swap-bodies and containers from rail wagons to trucks and vice versa. It has four legs \_\_\_\_\_ with wheels and a spreader beam which can span a wide area. It can be \_\_\_\_\_ on rails or rubber tyres and is able to straddle several rows of containers.
3. A kind of forklift truck used in container handling. It is equipped with a spreader beam and a lifting arm and can be used for lifting containers and \_\_\_\_\_ them on top of each other. It is very flexible and has a high stacking and storage capacity as it is able to \_\_\_\_\_ beyond the first row of containers to lift a container.
4. A rigid box \_\_\_\_\_ of steel which is very common in intermodal freight transport. It can be used for transport by sea, rail, air, and road. It is available in many different versions and sizes. For example, there are open-top and flat-rack versions. Some of them have wheels or a bogie \_\_\_\_\_ to them. The most common lengths are 20, 40, and 45 feet. It is made to the specifications of the International Standard Organization.



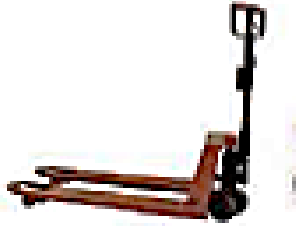
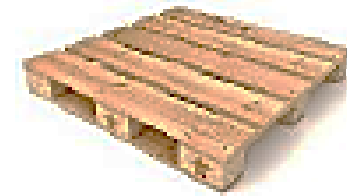
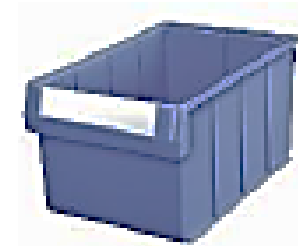
a. fork-lift truck

b. hand pallet-truck

c. trolley

d. pallet

e. tote bin





# Now label the different types of containers 1-5

1.



4.



2.



5.



3.



**Listen to an employee of a transport company presents some container options to a potential customer.**

First of all, we offer the general-purpose container for any general dry cargo. It comes with a timber floor and has various lashing devices to secure the load. These lashing points are located horizontally at floor level and vertically next to the door corner posts.

Our refrigerated container, called 'reefer', can be used for delicate cargo and perishables. It is temperature-controlled and is particularly suitable for cargo that needs regulated or cool temperatures. With our reefer your cargo reaches its destination in perfect condition. If you want to ship liquids, for example, foodstuffs or chemicals, we can provide you with our 'tanktainer'. This is a standard container frame with a tank fitted inside. As an extra, we also offer tank container with electric plugs in case the cargo needs cooling or heating during transport.

For bulky cargo we recommend the open-top container. It comes with a PVC tarpaulin cover instead of a roof panel to allow loading from the top. The doors can be removed to make loading easier.

Last but not least, there is our 'flat-rack' container which is especially designed for heavy loads. We recommend this special type of container for the transportation of heavy machinery and pipes.

Ex.2 : An employee of a transport company presents some container options to a potential customer. Listen and complete the table with the missing information.

Type of container	Suitable for transport of ...
1.	
2.	
3. tanktainer	
4.	
5. flat-rack	

**Hao:** Well, basically we have three shipping options: we can use inland waterways, road, or rail.

**Ying:** Right. Let's start with the river barge. How long would it take to ship the consignment by barge?

**Hao:** Normally about six days, but it often takes longer if the weather's bad.

**Ying:** And what about cost and flexibility?

**Hao:** It's cheap – it's actually the cheapest of all the transport options. It's not very flexible though, mainly because there are only infrequent sailings. There are barges to Shanghai twice a week.

**Ying:** Ok, let's look at road transport. It would only take four days to ship by truck, but the cost would be about 50% higher than by barge.

**Hao:** Yes, but wouldn't it be much easier?

**Ying:** That's true. Let's see how this compares with rail. Rail would definitely be faster than the truck option if we use the express service – that takes three days.

**Hao:** But it would also be more expensive than shipping by road – transport costs are about 40% higher. And the system isn't very flexible. Sometimes it is only possible to book space on the express train a few weeks in advance. And then perhaps we'd have to use the standard train, which is much slower.

**Ying:** So, I think we need to check with our customer first and find out what's most important to



# Comparing Different Transport Mode

- ❑ When comparing two or more things we use comparative adjectives. The comparative form is -er for short adjectives with one syllable, and two-syllable adjectives ending in -y.
- ❑ For example, transport by sea is cheaper than transport by air.
- ❑ We use more + adjective with longer words. Shipping goods by road is more expensive than shipping them by rail.
- ❑ Some adjectives have irregular forms.

good/well – better

Our rates are better than theirs.

bad/badly – worse

Their service is worse than ours.

far/further – furthest

This shipment will travel further than the last one.



# Comparing Different Transport Mode

- ❑ Compare different transport modes using some of the adjectives in the box.
- ❑ Example: I think shipping goods by rail is faster than sea transport.

Adjectives	Transport modes
slow / fast	rail
expensive / cheap	air
safe	road
suitable	sea
reliable	river
environmentally / friendly	pipeline

# Type of Goods in Cargo

In Logistics, goods are divided into three type of cargo:

1) **Perishable cargo**

หมายถึง สินค้าที่มีอายุสั้น หรือ เน่าเสียได้ง่าย

2) **Non-perishable cargo**

หมายถึง สินค้าที่ไม่เน่าเสีย

3) **Heavyweight and over width cargo**

หมายถึง สินค้าที่มีน้ำหนักมาก หรือ สินค้าที่มีขนาดใหญ่



## Ex.4 : Sort the goods under the correct heading.

meat – steel pipes – crude oil – fresh produce – industrial boilers – seafood – alcohol –  
flower – dairy products – tractors – chilled or frozen foodstuffs – harmful chemicals

Perishable cargo	Non-perishable cargo	Heavyweight and over width cargo



Thank you