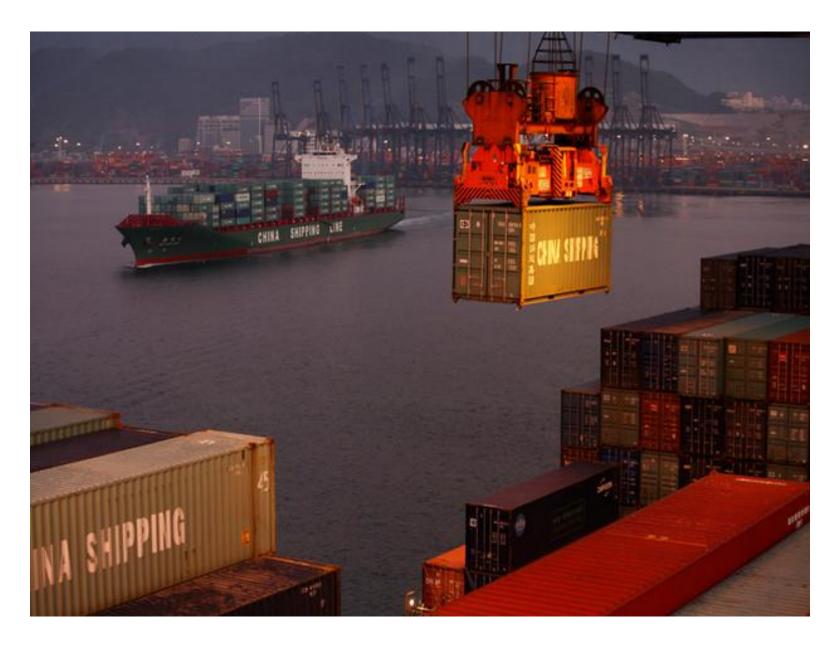
TRANSPORT MODES

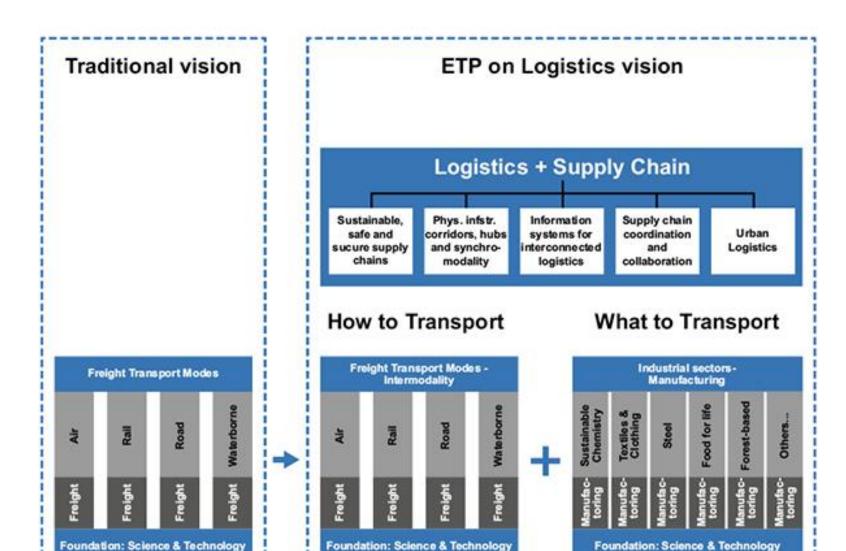
Intermodalism to the customer

- Safety security
- Cost savings
- Reducing duplicate functions within the organization
- Rolling stock

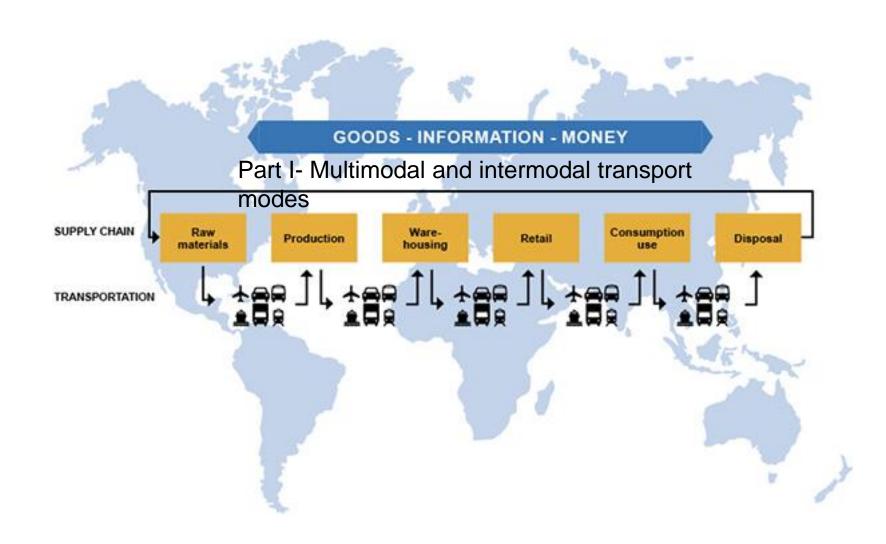
The objective

• To maintain continuous flows throughout the entire transportation and transfer processes





Availability of modes



BY ROAD

Size and regulation

- Minimum is 2.44 m
- Maximum width 2.60 m for controlled temperature equipment
- 2.55 m related to other vehicles
- Maximum length Trailer 12 m
- Articulated vehicle 16.50 m
- Semi trailer 13.65 m
- road train 18,75 m
- public works vehicles 22 m



WEIGHT

Maximum Load 2 axles load 19t

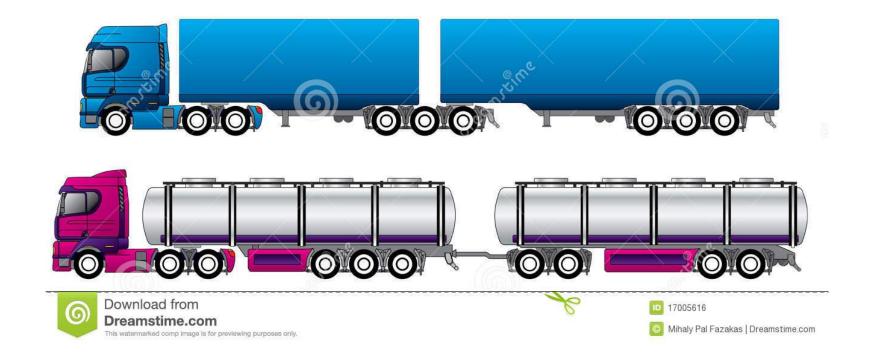
3 axles 26 t

4 axles 32t

Road train

5 axles or more 40t or 44t

2 axles + 2 axles 38t



Articulated vehicle

2 axles+2 axles 38t

5 axles and more 40t or 44t

Double Road train 40t or 44 t

Maximum load per axle

maximum weight on one axle 7,350 t

Engine axle: 13,15 t

Nota also depending on the distance between axles

still WEIGHT

Market conditions: kind of goods

- On pallets
- Containerized
- Bulk
 - not forgetting density
- Long size goods, large diameter, specific goods (hazardous, car industry ...)



Market conditions

distance, market and quantity

- Equipment in accordance with handling equipment
 - at departure
 - at destination
- According to requirements, constraints
 - city center delivery example
- Distance
 - long,
 - short
- Combined transport and roll on roll off
- Circulation conditions
 - geographic place,
 - way,
 - weather conditions

Offer conditions

Service frequency, overcrossing boarder transportation

Key information number of packages, weight, volume, sizes

Constraints: number of drivers per truck, drivers attending to handle, extra tasks (cash against delivery ...)

Customer access, shipping and delivery places (fixed or variable), speed ...

Load distribution and stowagekey to security(heavy goods have to be secured)

Loading conditions

	Full length of the	Full width of the	Full height of the
	vehicle (a)	vehicle (b)	vehicle ©
Length of the package (d)	1=a/d	2=b/d	3=c/d
Width of the package (e)	4=a/e	5=b/e	6=c/e
Height of the package (f)	7=a/f	8=b/f	9=c/f

Loading conditions

And we calculate the matrix

We integer the result to the upper digit

We have to fill remaining empty spaces

We have also to identify goods shipment constraints such as for instance we have to put in height sense of the package ...

With several goods, heavy density goods have to be loaded on the floor...

Pallets

Wooden, plastic, steel, corrugated

EUR, owner , expendable pallet, rented pallet

Possibility of exchange system

Pallets are included in the gross weight declaration of the shipment Security agreement needed as most of security problem in road transport are due to handling: loading and discharge

Road transport exceeding dimensions in France (example)

Category	Category 1	Category 2	Category 3
Gross comination	Less than 48t	Between 48 and 72 t	More than 72 t
weight rating (GCWR)			
Width	Less then 3 m	Between 3 and 4 m	More than 4 m
Length	More than 20 m	Between 20 and 25 m	More than 25 m

Under previous authorization

- Accompanying pilot and vehicle depending on the category :
 - more than 25m long with category 2

Picking (usually less than 3t) then receiving the goods and new shipment

Thanks to haulage vehicles

Star oriented network is frequent

Is usually managed by a consolidator and/or carrier

The network of several carriers is usually used to cover a wide territory such as France

Information tracking is crucial here

registration, control, identifying problems, proof to get in case of claim

the transport order than the transport receipt are the key starting points of information

Consolidation platform and disconsolidating platform

Document

date and signature

A routing tag sticked by the shipper is needed and might be supplied by the carrier (bar code to offer scanning at each step)

one for the shipper

one for the consolidation
platform,

one for the transport
invoice,

one for the arrival platform,
for the consignee

Document



To check possible gaps between what is really on the platform and what has been registered (movements):

missing or exceeding quantities have to be inquired



Claim management : documents needed are ...

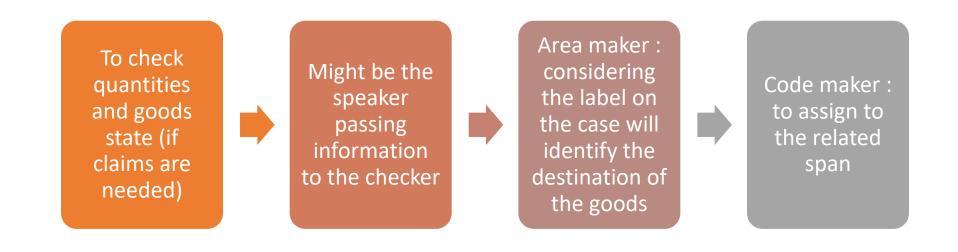
invoice copy, delivery receipt copy, transport order copy



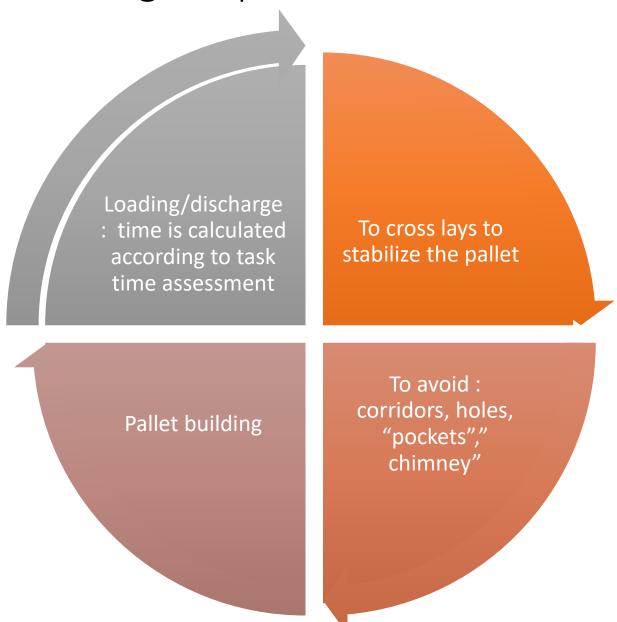
We can identify areas for :

quays, rod bay (travée de stockage),
non shipped goods bay,
preparation area,
maintenance area
(handling equipment ..),
storage bay,offices

Handling steps, skills



Building the pallets



Example

Discharge and sorting goods

To take goods in the vehicle, put them on the floor (quay) to pile them up to take them with a hand pallet truck

Vocabulary

One shipment = one position = one transport receipt form

Productivity transport tour information

number of number of Tour number, driver name, customer positions, deliveries, departure time, , number of actual deliveries disputes about past actual positions, compared with customer pickups, claims, expected ones, information about other difficulties non delivery to customers,

Transport contract

The driver is obviously representing the carrier during the transport operation

What the carrier has to offer his customer:

Shipping time is usually about 30° mm as accepted

the empty vehicle is moved to the shipping place, preparation of the trailer for loading, and discharge, safe positioning of the vehicle, shim (caler) the bottom plate or landing legs of the trailer Other services have to be duly requested

The shipper obligations



- Packing, packaging and labelling
- A pallet which is the reason for a damage during the transport engaged the responsibility of the shipper
- To remit goods at the expected time and the expected quantity
- For more than 3 t loading the shipper is responsible for securing of the load
- The belt is supplied by the carrier but fixed by the shipper (sangle)

The carrier obligations



- The vehicle has to be adapted but the shipper has not to accept it either if it is not convenient
 - Ex.The vehicle is dirty inside (trailer)
- The driver has to inform before leaving whether the load is not satisfactory
- The driver has to check the security along the transport operation
- Transport time in France is 450 kms per day
- Delivery has to be made to the right consignee at the right place

Consignee

The contract is achieved when delivery is made to the consignee



The consignee is obliged to accept to discharge except if there is a risk to discharge considering the pallets are broken for instance ...



The consignee has the right to check outside and inside packages before signing document receipt

International road transportation contract

CMR convention: 55 countries

Management of contract related to road transportation against payment loaded and delivered in **two different**States with at least one country member of the convention

Example **Ireland** hasn't signed the CMR convention

Even related to a **subcontracto**r achieving a national part of the leg (consolidation example)

In case of claim, the proof of the contract is given by transport order, commercial offer, shipping instructions ...)

By the way CMR is applicable even without roadway bill

The CMR waybill has to be issued in 3 copies

NL 675232 2 Destinatoire (nom, sdresse, pays) / Geodressende (nasm, adres, land) Empflinger (Name, Anachvilt, Land) Like prive over is firmson de is marchendise (lex., pays) / Plants (besternd) voor de aflevering der goederen (plants, land) / Auslieferungsort des Gutes (Ort, Land) Libo et date de la prise en charge de la marchandise (leu, pays, date) / Plaste en det, v. leonhumget-neming der goedenm (plaste, land, datum) / Ort und Tag der Übernahme des Guise (Ort, Land, Datum) 18 Réservée et observations du transporteur / Voorbehoud en opmerbingen van de vervoorder Vorbehalte und Bemerkungen des Frachtitüteurs 5 Documents annexés / Bigavoegde documentan Belgetügte Dokumente 6 Kingson of numbers / Markes on numbers 7 Kindson do colo / Austral coll 8 Mode decadage / Wiles on respecting g hazar do a must natural / Austral or positions on numbers / Markes on respecting of Numbers of srecht Stichting Vervoer stellijn 070-3 510789 Art. 3010 - Model IRU / Auteur tel. 070-3 51 07 51 - BVA-ber le / de am 28 Marchandisse reques / Goederen ontvengen Gut empfangen Line / Pleads in / do Ort sen S-4vZ Signature of timbre de l'expéditeur / Handlelkering en stempel sen de afzender / Uniteradvirth und Stempel des Absenders Bignature et finibre du transportour / Hondiskening en stempel son de versoorder / Unterschrift und Stempel des Enschführers van de gescheuseerde / Unterschrift und Stempel des Enschführers



SEAWAY

Key to international trade

80% of world freight

• 1500 billions dollars turn over

Geographical and strategic space

• Some corridors of a few miles wide

Sea network with regular routes

Key cross places

- Ormuz straight 11m
- Panama more than 18 m and Suez 23 m canals
- Malacca 25 m; Pas De Calais 20 m
- Due to
- physical contraints
- Such as winds, oceans flows, rocks ...
- Political borders
- Coastal itinerary

'ld's 50 Busiest Container-Shipping Seaports in llions of TEUs 32.5 31.7 23.1 22.9 17.0 16.8 14.7 14.5 13.3 123 11.9 10.0 Notes: How busy a seaport is depends on the unit of measure, and could or value of shipments. The data displayed here are based on twenty-foot which is a metric of cargo capacity (volume). Values represent the total including filled and empty TEUs. As such, the busiest seaports may not b move the most cargo.

Inland waterway transport is limited

• In Africa, Australia and Asia ... except ...

Water transport picture

- Oceans and rivers
 - Seasonal use as far as rivers are concerned
- The most important rivers
 - Chang Chiang (6379 kms), Yang tsé Kiang (4672 kms)
 - Mississipi, Rhine, Amazon
- Oceans: 71% of world surface

Sea freight

- intercontinental
 - Trafic capacity and continuity
- Geaographical scale and density
- Heavy industries

Technical Innovations are Infrastructures

Expensive

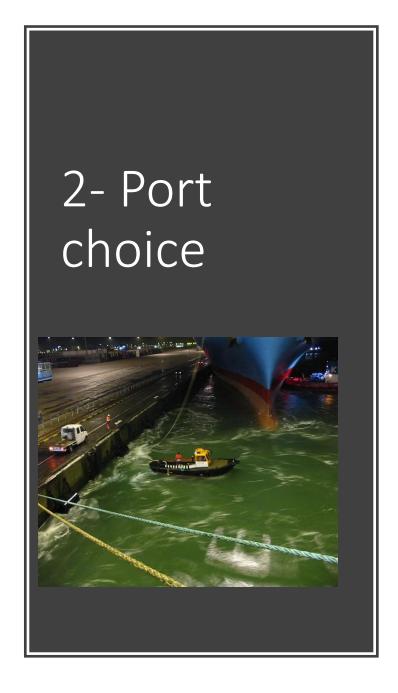
- locks to canals, transshipment capacities
- About speed : from 15 to 30 knots
- And saving energy: ships shape, material
 - hull
- Engine : double propeller
- Automatisation: navigation: assistance
 - system
- Specialization
 - Ships: bulk, breakbulk, containers
 - Routes

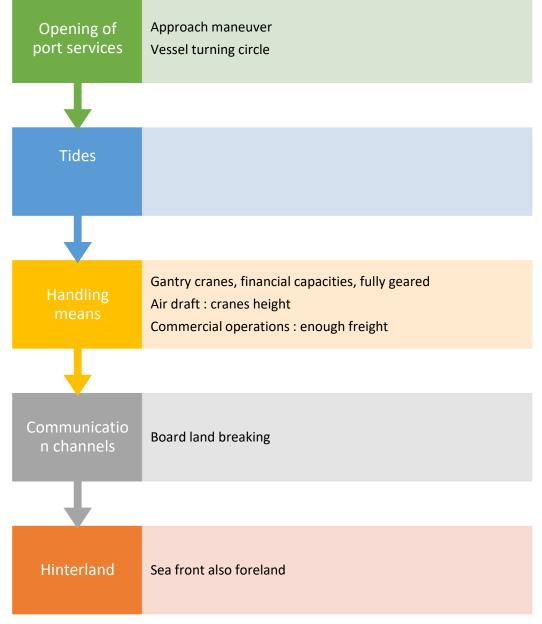
Sea transport

- The **most economical transport** mode
 - 1 I of fuel :312 kms by sea, 75 kms by truck
 - Turn over in 2020 : 2000 billions \$
 - But high investment
- Public sector
 - security, dredging, guiding /
 - private sector : terminals, ships, handling
- States influence
 - economical power, ships yards industry
- Flags of convenience
- Inland waterways : Volga, St-Laurent
- Trans continental connections
 - Energy
 - Sea mega firms
 - concentration

Flows organization

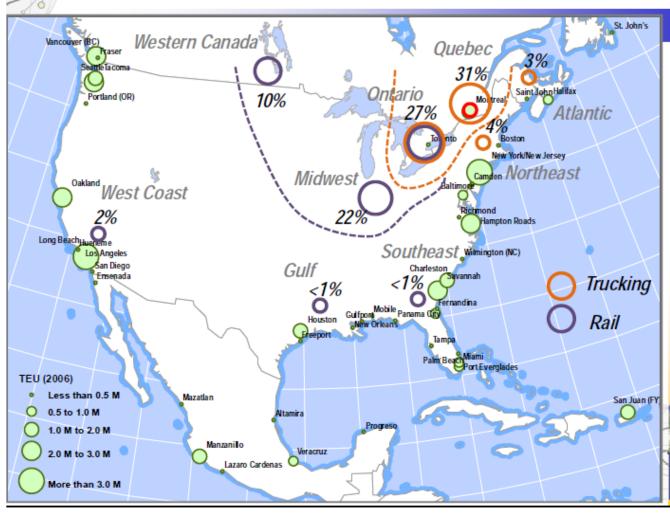
- Repetitive operation
- Flows
- Which volumes which products which period
 - At manufacturer premises
 - Intermediary stock
- Deliveries frequency
 - Volume and cost of transport
 - Fixed cost drop and inventory increasing cost
- Storage cost
 - Physical
 - Finance
 - commercial







L'arriere-pays du port de Montréal



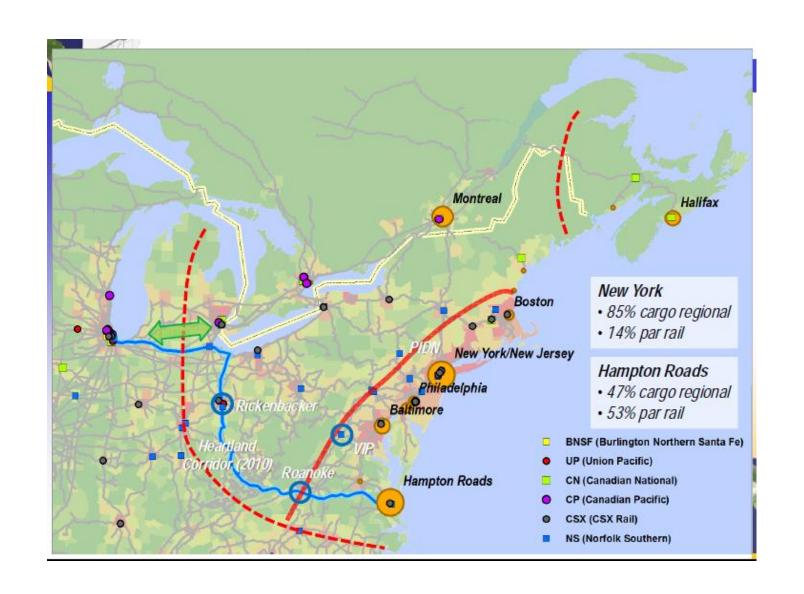
A range : several ports connected together

Main ports examples

- Northern range : from Dunkirk to Hamburg
- North America seafront from St Laurent to Mexico Gulf
- Western seafront : From Puget Sound to California
- Asian seafront : from Singapore to Korea

Feedering

 Increases due to big ships and limited number of ports



2- Intermodal moves

Export shipping- one shipping document

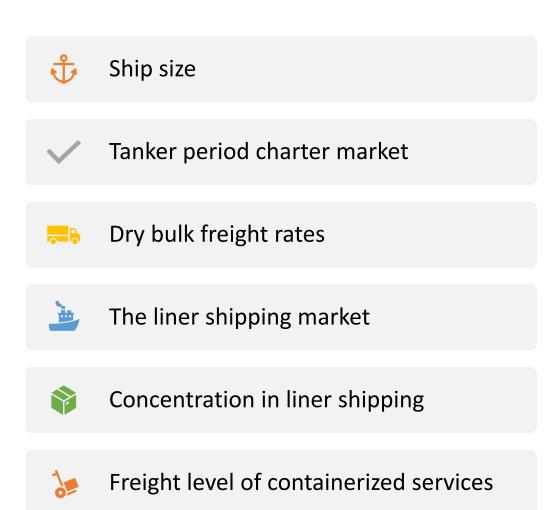
Ocean shipping

Liner – charter

- On demand a given period
- Bulk and heavy

Type of cargo

- Conventional : oversized cargoes
- Container : to unitize cargo —loading and unloading



Crude oil tankers

Very large crude carrier 200,000 dwt* plus

Suezmax crude tanker 120,000-200,000 dwt

Aframax crude tanker 80,000-119,999 dwt

Panamax crude tanker 60,000-79,999 dwt

Dry-bulk and ore carriers

Capesize bulk carrier 100,000 dwt plus

Panamax bulk carrier 60,000-99,999 dwt

Handymax bulk carrier 40,000-59,999 dwt

Handysize bulk carrier 10,000-39,999 dwt

Container ships

Post-panamax container ship beam of >32.3 metres

Panamax container ship beam of <32.3 metres

Geared bulk carriers

- Feature **a series of holds** (from 5 for a 35,000 ton vessel to 9 for a 250,000 ton vessel)
 - They have cranes or derricks which allow them to discharge cargo in ports without shore-based equipment.
 - This gives geared bulkers flexibility in the cargoes they can carry and the routes they can travel.

Selfdischargers

 are bulkers with conveyor belts which allow them to discharge their cargo quickly and efficiently

Table 2.3: The average dimensions of different generations of container vessels.

Generation	Capacity in TEU	LOA (m)	Beam (m)	Draught (m)
First (1968)	1,100	(NA)	(NA)	(NA)
Second (1970–1980)	2,000-3,000	213	27.4	10.8
Panamax (1980–1987)	3,000-4,500	294	32.0	12.2
Post-Panamax (1988–1995)	4,000-5,000	280-305	41.1	12.7
Fifth (1996–2005)	6,400-7,500	300-347	42.9	14.0
Sixth (2006–2007)	8,000-9,000	330-380	47	14.5
Seventh (2007–2013)	12,500-15,000	380-400	58	15.0
Near future (2013–2014)	18,000	400	58	16.0

Source: OSC (2002) and Drewry (2011).

carry non-containerized general cargo

Breakbulk Vessels

As containerization proceeded, these ships were **forced off major trade routes** by more efficient containerships and ro/ro ships.

Today, breakbulk vessels remain in operation on secondary and tertiary routes.

FAS ISTANBUL

Capacity	At 14 T	450	Teus	G.R.T.	6638
	Total Intake	560	Teus	N.R.T.	3737
				S. DWT	9729
Speed	Service	14	Knots	L.O.A.	126.08
	Maximum	15	Knots	Draft	8.26
				Beam	18.6
				Geared	Yes
Charter Rate	8,314 \$			Cellular	No

Port	Dist			TIME	(hours)			Cumul		Port	
Name	Miles	Sea	Manouv	Wait	Berth	Port	Total	Days	Cost	Moves	Product.
DMT			2	0	46.7	48.7	48.7	2.0	3,540 \$	700	15
LPI	590	42.1	2	0	12.5	14.5	56.6	4.4	1,800 \$	150	12
CNZ	548	39.1	2	0	22.7	24.7	63.9	7.0	4,600 \$	250	11
ODS	173	12.4	2	0	27.3	29.3	41.6	8.8	12,000 \$	300	11
BRG	299	21.4	2	0	12.0	14.0	35.4	10.3	14,000 \$	120	10
LPI	478	34.1	2	0	11.7	13.7	47.8	12.2	1,800 \$	140	12
DMT	590	42.1					42.1	14.0			
Reserve											
TOTAL	2678	191.3	12	0	132.8	144.8	336.1	Hours	37,740 \$	1660	
		7.97	0.50	0.00	5.53	6.03	14.00	Days			

Vess	sel Consumption (t	day)		Voyag	ge Consumption		Bunke	er Price	
	FO 180 cst	DO		FO	DO		FO	114\$	Place
Sea	17	0		135.5	0.0		DO	208 \$	
Man	8.5	1		4.3	0.5				
Port	0	1		0.0	5.5	Total	FO	15,931 \$	
			Total	139.7	6.0	Cost	DO	1,255 \$	

VOYAGE	COST SUMMARY		s	ST	
CHARTER HIRE	116.437 \$	68%	%	Teus	Cost
BUNKER COST	17,186 \$	10%	100%	450	381 \$
PORT COST	37,740 \$	22%	95%	428	401 \$
			90%	405	423 \$
VOYAGE COST	171,363 \$		85%	383	448\$
			80%	360	476\$
YEARLY COST	4,466,103\$		75%	338	508\$
YEARLY COST	4,466,103 \$		75%	338	508\$

Specialized Vessels

- Tailored for certain functions such as transporting vehicles to overseas markets like those described under the heading of ro/ro.
- Specialized heavy-lift vessels are used to carry extremely large and heavy items.
- There are also customized ocean vessels for carrying livestock, and reefer containerships with plug-in facilities for maintaining low temperatures in fruit, vegetable and meat containers.





Combination Vessels



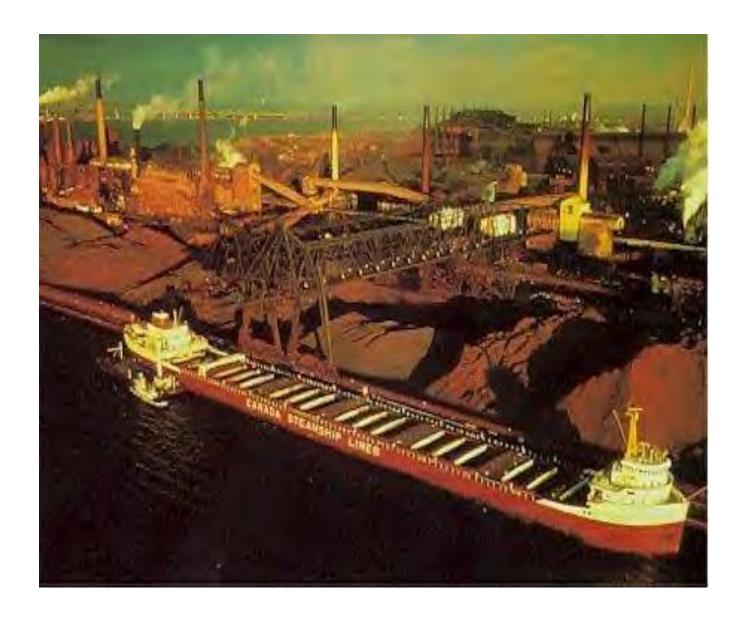
ARE DESIGNED TO TRANSPORT
BOTH LIQUID AND DRY BULK
CARGOES. IF BOTH ARE
CARRIED SIMULTANEOUSLY,
THEY ARE SEGREGATED IN
SEPARATE HOLDS AND TANKS.
COMBINED CARRIERS REQUIRE
SPECIAL DESIGN AND ARE
EXPENSIVE.



ARE OF NUMEROUS TYPES
AND CONFIGURATIONS,
INCLUDING RO/RO-LO/LO;
THREE-WAY COMBINATION
SHIPS FOR CONTAINERS,
RO/RO AND BREAKBULK
CARGO; AND LASH SHIPS FOR
CARRYING COMBINATION
CARGOS. AN UNUSUAL TYPE IS
THE OBO (OIL/BULK/ORE),
WHICH CARRIES BULK, OIL OR
LIQUID PRODUCTS.



IN FINDING THE SPECIFIC
HYBRID SOLUTION TO
PARTICULAR TRADING
CIRCUMSTANCES, CARGO MIX
AND OPERATIONAL
FLEXIBILITY MUST BE
EXAMINED IN TERMS OF PRICE
CHARGED, AVAILABILITY AND
LOCATION OF THE SHIP,
OPERATING AND CAPITAL
COST DIFFERENCES, AND ANY
RESULTING CHANGE IN
OVERALL VESSEL
PRODUCTIVITY



Gearless carriers

are bulkers without cranes or conveyors.

These ships depend on the shorebased equipment of the ports they visit for loading and unloading.

Due to their large size, they can only dock at the largest and most advanced ports.

The use of gearless bulkers avoids the costs of installing, operating, and maintaining cranes.

Dry Bulk and Tanker Vessels

Bulk ocean vessels are constructed for transporting **basic commodities** like coal, grain, bauxite and iron ore, or primary products like wool and cotton.

Petroleum and other liquid bulk commodities and products are transported in vessels called tankers, specifically designed for these types of cargos.

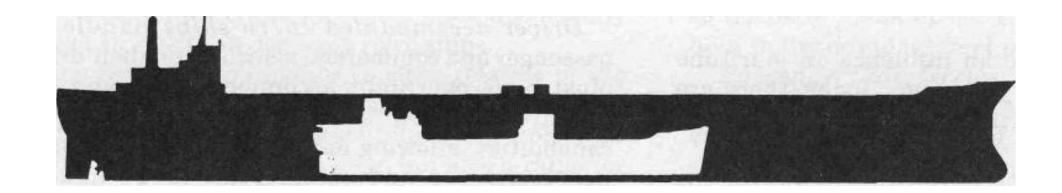
In a few, but **growing** number of instances, bulk commodities are being **containerized** for carriage in containerships such as cacao and coffee.



BIBO or "Bulk In, Bags Out"

bulkers are equipped to bag cargo as it is loaded.

In one hour, this kind of ship can load and package 300 tons of bulk sugar into 50 kg sacks





A World War II T-2 tanker (503 feet) compared to a modern 1,000-foot VLCC containership. Drawing courtesy of *A Half Century of Marine Technology, by* Steven Spear, published by the Society of Naval Architects and Marine Engineers.

Merchant oil tankers

- A wide range of hydrocarbon liquids ranging from crude oil to refined petroleum products.
- Their size is measured in deadweight tons (DWT).
- Crude carriers are among the largest, ranging from 55,000 DWT Panamax-sized vessels to ultralarge crude carriers (ULCCs) of over 440,000 DWT.
- Supertanker is an informal term used to describe the largest tankers. Today it is applied to verylarge crude carriers (VLCC) and ULCCs with capacity over 250,000 DWT.
- These ships can transport two million barrels of oil. Byoil consumption of Spain and the UK way of comparison, the combined is about 3.2 million barrels (510,000 m³) of oil a day.
- On the other end of the journey, they often pump their cargo off to smaller tankers at designated lightering points off-coast.

Containerships



Built	Name Length overal		(m) Length overall (ft)			Beam (m)	Beam (ft)	
	Maximum TEU	GT	Owner					
2015	MSC Oscar[1]	395.4	1,297	59	194	19224	193000	MSC
(Switzerland	d)							
2014	CSCL Globe[2]	400	1,300	58.6	192	19100	187541	CSCL
(China)								
2013	Magleby Maers	sk[3]	398	1,306	58	190	18270	174500
	Maersk (Denma	ark)						
2014	MSC Newyork[[4]	399	1,309	54	177	18270	176490
	MSC (Switzerla	and)						
2013	Madison Maers		398	1,306	58	190	18270	174500
	Maersk (Denma							
2013	Mærsk Mc-Kin	•	398	1,306	58	190	18270	174500
	Maersk (Denma	· ·						
2013	Majestic Mærsl		398	1,306	58	190	18270	174500
	Maersk (Denma	· ·						
2013	Mary Mærsk[8]] 398	1,306	58	190	18270	174500	Maersk
(Denmark)								
2013	Marie Mærsk[9]398	1,306	58	190	18270	174500	Maersk
(Denmark)								
2012	CMA CGM Ma	= =	396	1,299	54	177	16020	175343
	CMA CGM (Fr	,						
2013		exander von Hur		396	1,299	54	177	16020
	153022	CMA CGM (F	*					
2013	CMA CGM Jul		396	1,299	54	177	16020	153022
	CMA CGM (Fr	rance)						

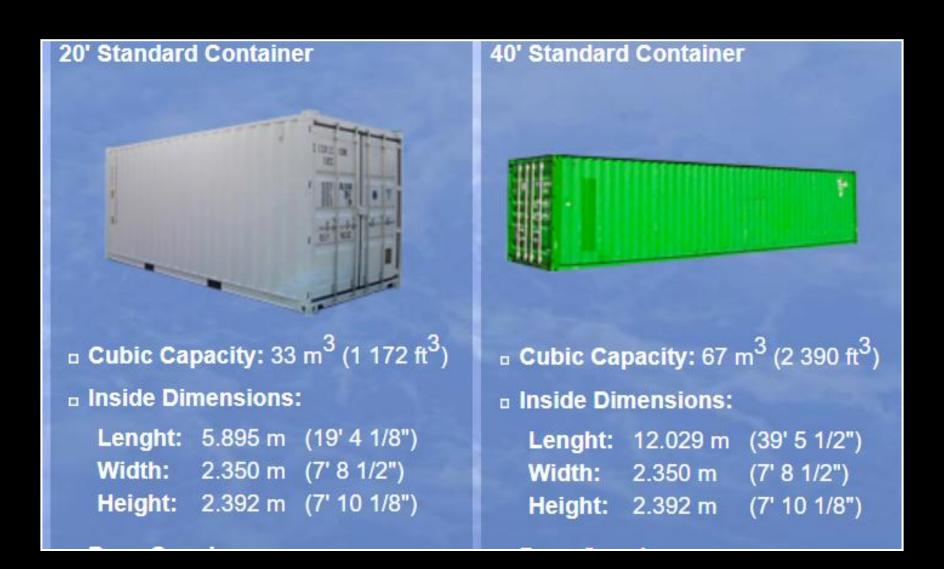
Container

Includes any equipment used **to unitize cargo**, all types of containers and/or flats with iso accepted.

The acronym **ISO** stands for the International Organization for standardization with headquarters in Geneva.

The ISO freight container refers to a container complying with the ISO container standards in existence at the time of its manufacture.

In 1960's, export shipments often relied on conventional (break bulk) vessels. The cargoes were placed alongside a vessel for hoisting on board. The **stevedores (dockers) were often employed** to carry cargoes on and off the vessel.



Container inside dimensions

Load to prepare in a container?

- This order to Singapore is about
 - 800 products packed in 32 outer cases not stackable
 - To be loaded on euro pallets
 - Outer case
 - weight 565 kg
 - L 0.60 x I 0.40 x h 1.50 m
 - Europallet
 - 0.80x 1.30 x 0.15 m
 - Maximum load 2.5 t
 - Gross weight 30 kg
 - 20' container dimensions
 - as before
 - How many pallets do we need
 - How many pallets in a 20' container
 - Add any useful comment

The loading and unloading

vessels consumed too much time, which caused dockside bottlenecks and delayed shipments.

With the increased use of containers the congestion was decentralized and transferred from the docks or piers to the container freight stations or terminals.

Carry **standardized** containers that greatly facilitate the loading and unloading of cargo and intermodal transfers

The time a ship has to stay in a port is reduced

FCL / FCL (House to House), LCL/LCL (Pier / Pier)

to avoid disrupting points

goods protection

Suez Canal bridge





Suez max



Suezmax is a naval architecture term for the largest ships capable of transiting the Suez Canal fully loaded, and is almost exclusively used in reference to tankers.



The current channel depth of the canal allows for a maximum of 16 m (53 ft) of draft, meaning many fully laden supertankers are too deep to fit through, and either have to unload part of their cargo to other ships ('transhipment') or to a pipeline terminal before passing through, or alternatively avoid the Suez Canal and travel around the Cape of Good Hope instead. Currently, the canal is deepened to 20-23 m.



The typical **deadweight** of a Suezmax ship is about 150,000 tons and typically has a beam (width) of 46 m (151 ft). Also of note is the maximum head room -'air draft' - limitation of 68 meters,

Special containership

- The **Panamax size ship**: less than 294 m length and 32.20 m width
- In 1988 : 292 m length, 32 m width for 4000 containers loaded
- Panamax is determined principally by the dimensions of the canal's lock chambers, each of which is 33.53 metres (110 ft) wide by 320.0 metres (1050 ft) long, and 25.9 metres (85 ft) deep. The usable length of each lock chamber is 304.8 meters (1000 ft). The available water depth in the lock chambers varies, but the shallowest depth is at the south sill of the Pedro Miguel Locks and is 12.55 metres (41.2 ft) at a Miraflores Lake level of 16.61 metres (54 feet 6 in).

Overpanamax ships



They are unable to cross Panama canal



In 1996 with overpanamax ships, their size reaches 320 m length, 43 m width for 7000 containers



The container ships used in the international traffic are designed with the cells (compartments with cell guides) resembling a honeycomb wherein the containers are placed, thus named cellular container ships.

The ships are bigger and faster nowadays



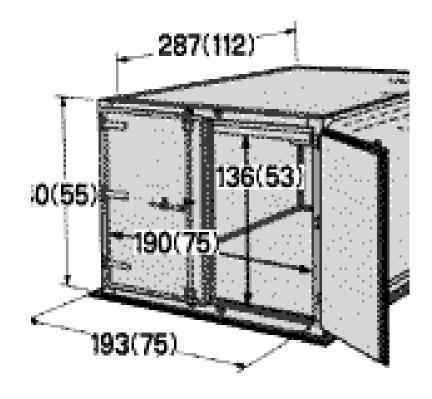
The ships are bigger and faster nowadays especially those used in the deep sea voyage (long haul). Those rated below 20 knots are commonly used in the short sea voyage (short haul.

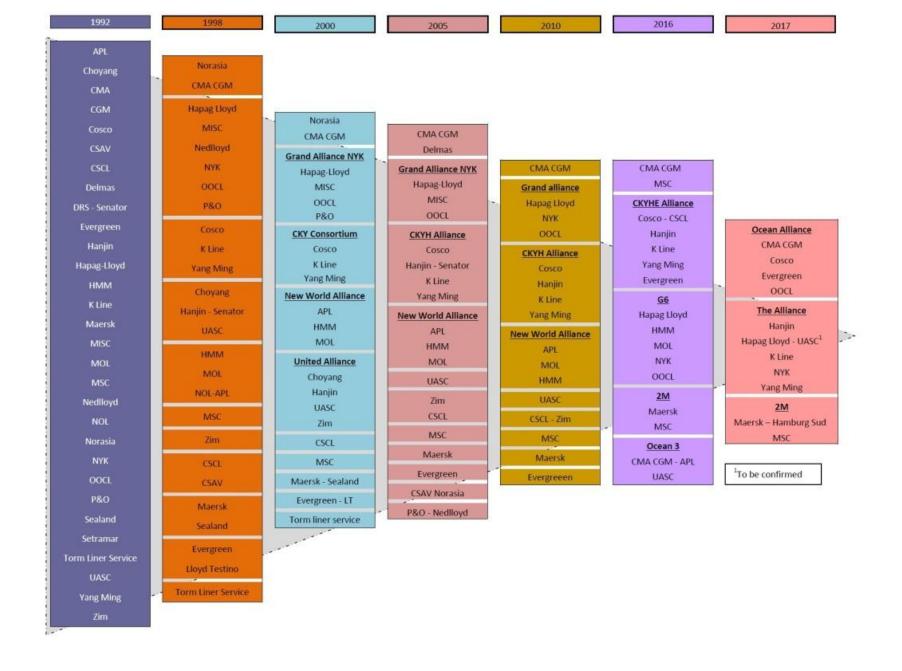


Some rated 24 Knots have a carrying capacity of 4000 to 4.900 TEUs and load to 75000 metric tons and more

TRANSPORT COST

- Sea freight
 - Alliances
- Freight calculation
 - Bulk
 - Container
- Road transport cost
- Asking for a quotation









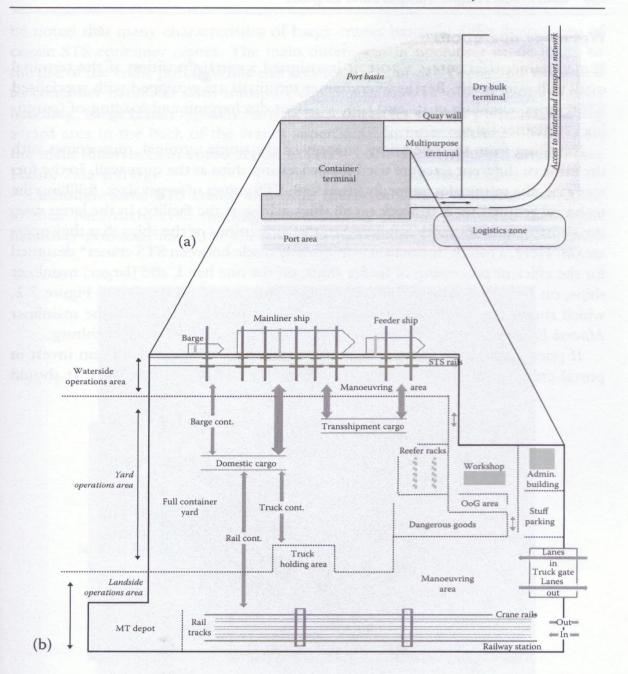


Suez max

Suezmax is a naval architecture term for the largest ships capable of transiting the Suez Canal fully loaded, and is almost exclusively used in reference to tankers.

The current channel depth of the canal allows for a maximum of 16 m (53 ft) of draft to 22m, meaning many fully laden supertankers are too deep to fit through, and either have to unload part of their cargo to other ships ('transhipment') or to a pipeline terminal before passing through, or alternatively avoid the Suez Canal and travel around the Cape of Good Hope instead. Currently, the canal is being deepened to 18-20 m.

The typical deadweight of a Suezmax ship is about 150,000 tons and typically has a beam (width) of 46 m (151 ft). Also of note is the maximum head room - 'air draft' - limitation of 68 meters



Container terminal

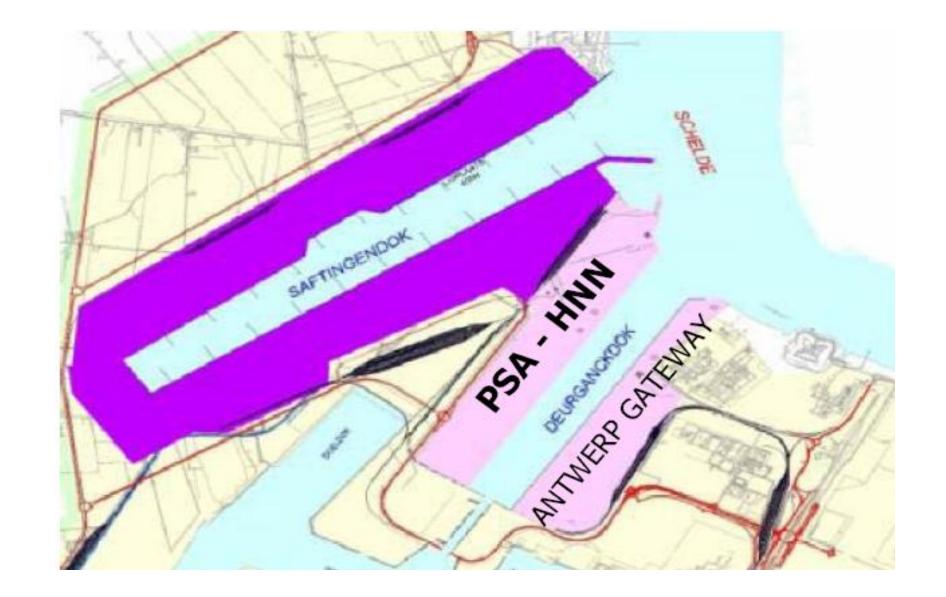


Table 7.2 Key figures for selected container ports

alexaline transfer	Port					
Characteristic	Port of Singapore	Port of Shenzen ^b	Port of Hamburg ^c	Port of Los Angeles ^d	Port of Klaipeda ^e	Port of Riga ^f
# terminals	7	4	4	8	2	2
# berths ^g	57	58	25	31	6	2
quay length	17.350 m	17.505 m	7.570 m	9.336 m	1.908 m	645 m
# STS cranes	212	175	80	72	9h	7'
terminal area	700 ha	792 ha	440 ha	684 ha	54 ha	125 ha
mio TEU (2014) ^j	33,87	24,03	9,73	8,33	0,49	0,39
Transhipment	85%	50%	36%	<10%	<10%	<10%
share	(2013) ^k	(2013) ^k	(2015)	(to date) ^m	(to date) ^m	(to date) ^m

a PSA Singapore, 2016.

Key figures for selected container ports

b Zheng and Park, 2016.

Hamburg Port Authority, 2016.

d Port of Los Angeles, Container, https://www.portoflosangeles.org/, 2016.

e Drungilas, 2015.

f Freeport of Riga Authority, 2009.

g Berth length: about 300m

h Thereof 4 mobile cranes.

i Thereof I mobile crane.

j World Shipping Council, Top 50 world container ports, http://www.worldshipping.org/about-the-industry/global-trade/top-50-world-container-ports, 2016.

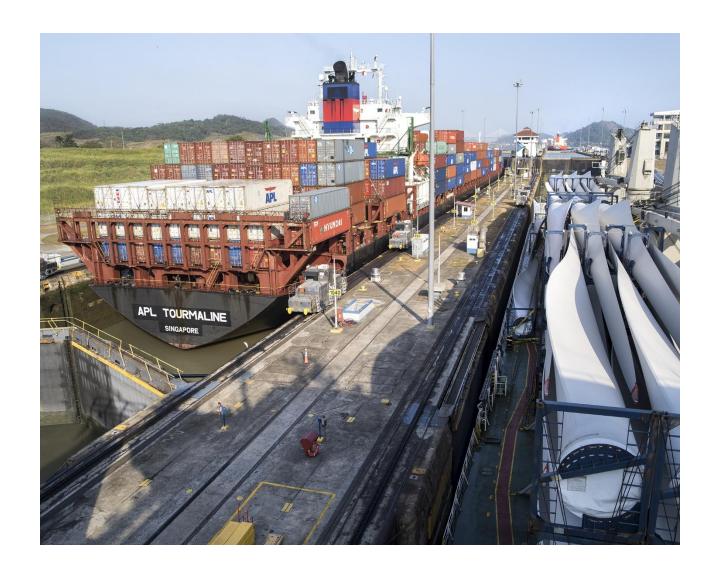
k Marine Information Service, 2015.

Hafen Hamburg Marketing, 2016.

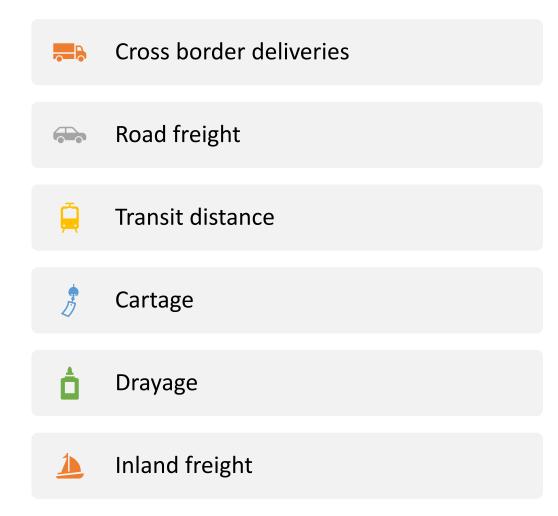
m Rodrigue, J.P., The geography of transport systems: Levels of transshipment incidence, https://people.hofstra.edu/geotrans/eng/ch4en/conc4en/transshipment_incidence.html, 2016.

- Bulk sea freight services
 - Liquid / non liquid freight





3-road freight



Cross border deliveries

the delivery of export goods between mainland European countries and between north American countries.

About 50 to 80% of cross border deliveries are completed using **road freight**.

Generally a **transit distance** within 100 kilometers using road freight is competitive compared to rail and air freight.

The delivery charge is called the **cartage** or trucking fee.

The hauling charge for transporting the ocean freight container on land, normally not including the loading and unloading of the cargo, is called **drayage**.

Together with waterway freight and rail freight they are known as **inland freight**.

4- RORO vessels

Trucks can drive onto built in ramps and roll off at destination.

The cargo on a trailer may be **accompanied** by a driver who completes the trip to the final destination,

or another driver continues the journey with the same trailer at certain juncture to the final destination,

or a subsequent carrier collects the cargo and trailer or the cargo only and continues the transit to the final destination such as in the case of a transshipment.

- Rail cars
- TOFC
- COFC
- Double stack train system
- Rail sidings
- 5- Rail freight

Rail freight

- Flat cars can be 40' to 89' long and trains can run at 120 kms. per hour.
- Some rail cars are specially designed to carry road trailers in a road rail service or TOFC (trailer on flat car) service, which is often referred to as the piggyback.
- In a COFC (container on a flat car) service for example using 50 flat cars each with a 60 ton capacity, the combined flat cars may carry loads weighing up to 3000metric tons, which is far more than a truck or an airplane can carry.
- The USA Canada and other countries have a double stack train system that moves more freight. The 80' feet and longer container flat cars may carry 8 TEUs when the ocean containers are double stacked.
- Large shippers who have rail sidings at their facility, may arrange directly with the rail carrier to have the rail cars moved to their facility for loading.

Shipper's choice

Pre and post carriage conditions

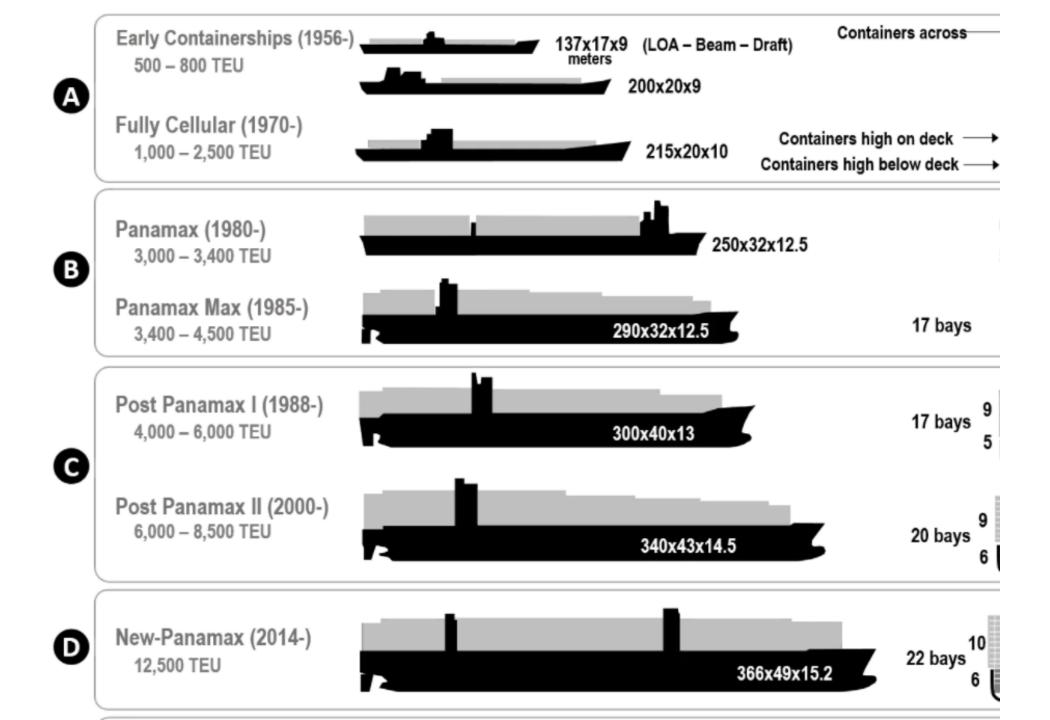
Transshipment

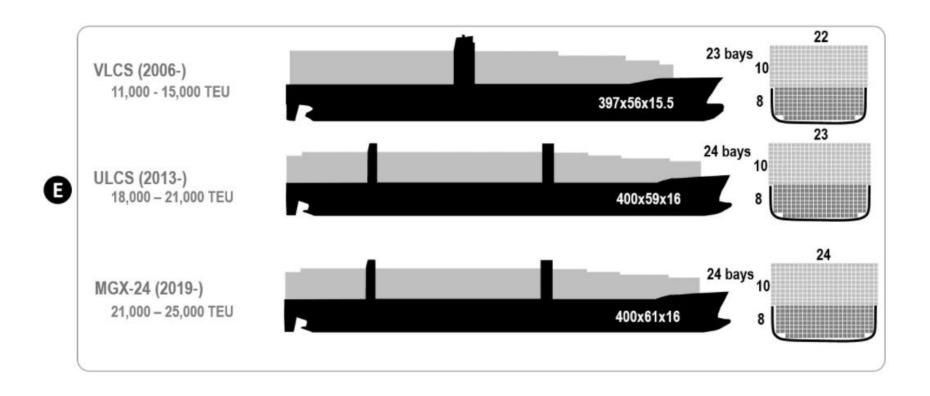
Transit time

Frequency

Security and safety

Available lines





Geography of transport systems Jean-Paul Rodrigue



Charter contract

Related products Utilization rate Charter party



Charter

tramp
Time period
Bareboat
charter
contract

Ship
owning
charges

Salaries of crew members

Supplies

Insurance

Ship choice

A compromise

Ship rent

Offer and demand

Size, capacity, speed

Cargo gear for handling on board

Useful and maximum capacity

Vessel stability parameters

consumption

Pavillion

Fuel choice

- Heavy fuel oil and diesel oil
- Quality charter of supplies

Contract deal

RE: M/V VESSEL NAME

WE ARE PLEASE TO OFFER FIRM ON THE ABOVE MENTIONED VESSEL FOR REPLY HERE DEC 31ST -1.00 HRS AM FRENCH TIME

- -NEGOCIATIONS TO BE KEPT STRICTLY PRIVATE AND CONFIDENTIAL NOT TO BE DISCLOSED TO ANY THIRD PARTY
- -DELIVERY: APS FOS SUR MER ATDNSHINC
- -LAYCAN: 27-28TH JANUARY 1997-00.00/24.00HRS
- -TC PERIOD : 6 MOS IN CHARTERS OPTION 6 ADD MOS, 15 DAYS MOLCHOPT ON

FINAL PERIOD.

OPT FOR 6ADD MOS TO BE DECLARED 5 MOS AFTER ACTUAL DELY.

-TRADING : FULL MED INCL ADRIATIC, BLACK SEA, RED SEA ALWAYS WITHIN IWL

VIA

SAFE PORT(S) SAFE BERTH(S).

INTENTION WITHOUT COMMITMENT FOS SUR MER / BARCELONA /

VALENCE / GENOA / ALGIERS / ORAN AND MAYBE MAROCCO.

- -REDELIVERY: DOP ONE SAFE PORT FULL MED OR BLACK SEA OR RED SEA IN CHOPT.
- -HIRE: USD 6 100 -PDPRINCLOT
- -LESS: 3.5 PCT ADDCOM (PLS ADVISE TTL COM)
- -SUB DETAILS BASED ON CHRS ASBATIME EXECUTED PROFORMA
- -SUB CHRS BOD TO BE LIFTED 2 WORKING TIME DAYS AFTER FIXING MAIN TERMS END OF OFFER

COMMENTS

PLS BEAR IN MIND 'PRIM VIVID ' REPORTED ON THE MARKET FIXED FOR 6+6 MOS AT 6100 USD HAVING A MUCH LOWER SPEED OF 14.5 KN .THEREFORE ABOVE RATE IS MARKET LEVEL.

BETS REGARDS

contre-offre est la suivante :

Citation:

RE: M/V VESSEL NAME

THANKS TO YOUR OFFER TO WHICH OWNERS NOW REVERTING AS FOLLOWS: WE COUNTE RAS FOLOWS FOR RPLY 10.30 HRS ACC/EXC

M/V SUZANN -DETAILS AS BELOW-

- -LAYCAN 20/28 JAN
- -PERIOD 8 MOS-OPT FOR 6 ADD MOS TO BE DECLARED 4 MOS AFTER ACTUAL DELY
- -REDELIVERY -DOP ONE SAFE PORT FULL MED
- -HIRE: USD 6550-1ST PERIOD -USD 6650 2ND PERIOD
- -SUB ALL FURTHER DETS.

LATEST POSITION -ETS SKIKDA ARND 13/14 JAN

COMMENTS:

IN ORDER TO SPEED UP DID VERY BEST TO MEET CHRTS BEST POSSIBLE THE SHIP SAILED CAEN LAST NITE FOR DISCH 4 PORTS ALGER - SO PLS DE BEST AND OBTAIN THE ABV REQUIRED LAYCAN AND RVT BEST CLOSEST POSSIBLE-DETAILS M/V SUZANNE HAS BEEN SENT BY PREVIOUS FAX.

Fin de citation

W/M weight or measure

Comparative relation

Sea freight

Charge basis

Metric ton

Units of weight or measure used in the freight cost calculation

Mode of transportation

• Weight - measure

Weight or measure

- The freight rate on export goods is often based on W/M weight or measure that is based on the weight or the volume of cargo (cube or measurement of cargo).
- The rate uses the **comparative relation** between weight and volume of cargo.
 - A cargo that is large in relation to its weight is charged according to its total cube, while a cargo that is heavy in relation to its size is charged according to its gross weight.
- The unit of ton being used in freight cost calculation may differ among carriers.
 - A metric ton (2204.6 lbs or 1000 kgs),
 - A short ton (2000 lbs or 907 kg)
 - Or a long ton (2240 lbs or 1016 kg)

Weight or measure 2

Mode of transportation	weight	measure
Ocean freight	1 MT 1000 kg	1 CBM 35.3 CU FT
AIR FREIGHT	1 MT 1 KG 1 LB	6 CBM 6000 CU CMS 166 CU INS
ROAD AND RAIL FREIGHT	1 MT 1 KG 1 LB	3.3 CBM 3300 CU CMS 91.3 CU INS

Measure unit

MT metric ton

Kg kilogram

Lb pound

Cbm cubic meter

Cu cms cubic

Cu ft cubic feet

Cu ins cubic inches

Sea freight

- Attractive freight rates to fill their ships
- World service
- Pools
- consortiums

POOLS

- considering huge investments needed to build and to run big ships like container ships or tanker ships, some companies buy together these kinds of ship.
- CONSORTIUMS: COMPANIES CREATING A POOL, GO FURTHER AND CREATE A COMMON COMMERCIAL SERVICE TO FIND FREIGHT: FOR INSTANCE SCANDUTCH OR TRIO ...
- Strategic alliances are powerful (except MSC) but unstable

Freight calculation

- ► Volume of freight on a given route
- ► Kind of cargo
- **▶**Bulk transport cost
- Case sample
- ► Container transport cost
 - ► Flat rate
 - ► Positoning cost
 - ► Loading cost
 - FCL versus LCL
 - ► Full payload



THE FREIGHT RATE IS
OFTEN INFLUENCED BY
THE VOLUME OF
TRAFFIC ON A GIVEN
ROUTE.



WHEN AN EXPORTER
CONTACTS THE CARRIER
FOR THE FREIGHT RATE
THE INFORMATION
NORMALLY REQUIRED
OF AN EXPORTER IS THE
KIND OF CARGO AND ITS
INTENDED



BULK TRANSPORT COST



COMMODITIES NOT SHIPPED THROUGH A CONTAINER ARE CONCERNED.



CONSIDERING VOLUME AND WEIGHT OF A SHIP, THE FOLLOWING EQUIVALENCE IS ACCEPTED: 1 CBM = 1 TON



THE HIGHEST WILL BE KEPT TO CALCULATE FREIGHT COST.



FOR INSTANCE, A SPRAYING DEVICE IS MEASURED BY: 7 CBM AND 3 TONS. WHAT WOULD BE THE UNIT KEPT FOR THE CALCULATION?

CONTAINER TRANSPORT COST

- a **flat rate** is calculated for each container, taken into consideration :
 - the link,
 - nature of the goods,
 - offer and demand situation (by instance Singapore).
 - We will not fail to add the positioning cost (transport from the container pool to the shipping place), transport to the shipping port, surest Aries (if the container needs more than 4 hours to be loaded and to clear the goods),
 - **loading cost** at the port of departure, disloading cost at the port of arrival.
 - In case you have different kinds of goods in the container, a bulk tarification will be applied.

Freight calculation

LCL freight rate

Carrier's container freight rate

Container freight station

Example

Risk of damage and loss

CY versus CFS

- Company yard
- Container freight station premises legal limitation

CY/CY-CY/CFS- CFS/CY-CFS/CFS

Turn over rate of containers

 24-48 hours – demurrage-substatial amount of business **FCL** the whole container is intended for the consignee.

The FCL means the load reaches it allowable maximum of full weight or measurement.

However the FCL in the ocean freight does not always mean packing a container to its **full payload** or full capacity.

CY versus CFS

- The company yard is the delivery or receipt of a whole container from or at shipper's or the forwarder's or the consignee cargo yard or premises.
- The Container freight station is operated by the carrier for the receipt, forwarding, and assembling or disassembling of cargo:
- The kind of cargo and quantity does not warrant the use of a whole container
- The shipper's or the consignee's **premises** are inaccessible by container due to poor road conditions or
- The overall load of vehicle exceeds the **legal limitation**
- CY/CY: door to door or house to house container service
- **CY/CFS** : door to port container service
- CFS / CY : port to door container service
- CFS / CFS : port to port container service or pier to pier container service

- Turn-over rate of containers
- The carrier allows the shipper to retain (hold) the container at their premises normally for **24-48 hours** only, in order to maximize the turn rate of the container.
- An overtime use charge, know as demurrage, is collected on overstayed containers.
- In special cases such as when the shipper or consignee is doing a substantial amount of business with the carrier, some carriers may allow a longer time without charging demurrage.

Freight calculation







Adjustments

BAF - CAF

Sea freight basis

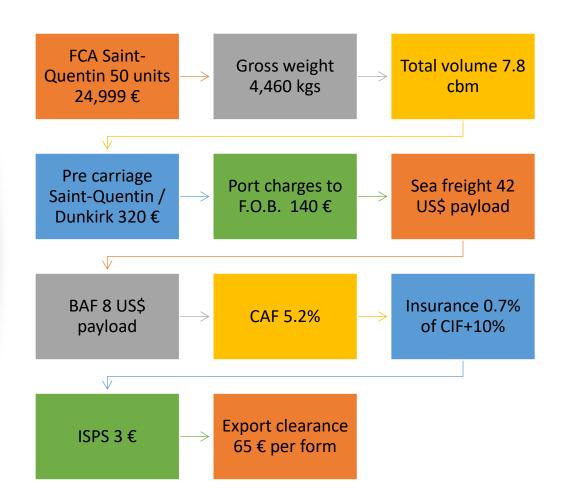
Possible rebate

• Fidelity – promise



- In roll on Roll off shipment (you load the trailer directly in the ship)
 - A METER COST WILL BE APPLIED.
- Adjustments
- B.A.F.: BUNKER ADJUSTMENT FACTOR WILL BE APPLIED BY INSTANCE IF OIL PRICE INCREASED DRASTICALLY,
- C.A.F.: CURRENCY ADJUSTMENT FACTOR WILL BE APPLIED FOR INSTANCE IN CASE OF DROP OF US DOLLAR AGAINST EURO ...
- THESE ADJUSTMENTS ARE CALCULATED ON SEA FREIGHT BASIS.
- Possible rebate
- YOU CAN BENEFIT OF **FIDELITY REBATE** WITH MOST OF CONFERENCE SERVICE FROM 8 TO 9.5% OF FREIGHT COST.
- ANOTHER REBATE CAN BE MADE AVAILABLE FOR A PROMISE TO USE A COMPANY OR A SERVICE. THE RESULT IS TO GET REDUCED FREIGHT RATES HOWEVER VOLUME NEEDS TO BE SIGNIFICANT.

Freight calculation CIF Kaoshiung



Seaway quiz QuizMaritime.pdf

Air shipping

- Developping countries
 - Ineffective to protect
- International airfreight
 - And concentration
- Developping airfreight
 - U.L.D. ex. 317.5x243.8x299.7cm
- Commodities using air transport
 - Expensive value
 - Fragile
 - Perishable
- Sea air

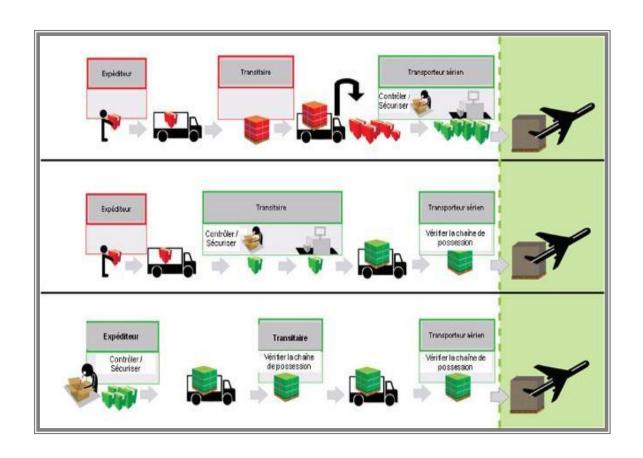


Air Shipping

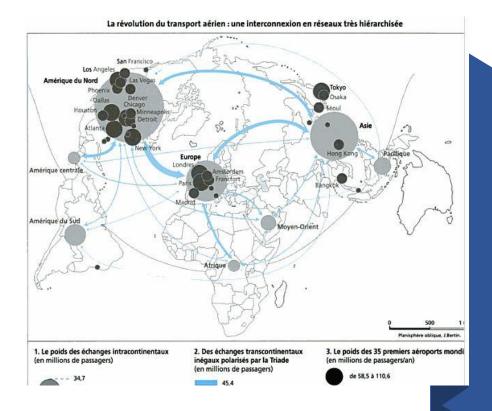
MAIN CECK CARROD AMEA AFTICAL BALK PROMADULOUS STRIKE

- Cargo handling at airports
 - Traditional airports
 - Freight for domestic flights
 - Freight for international flights
 - Terminals and equipment
 - International shipment
 - Classification of handling equipment
 - Intermodal air surface containers
 - Small package express equipment
 - Intermodal airports and equipment





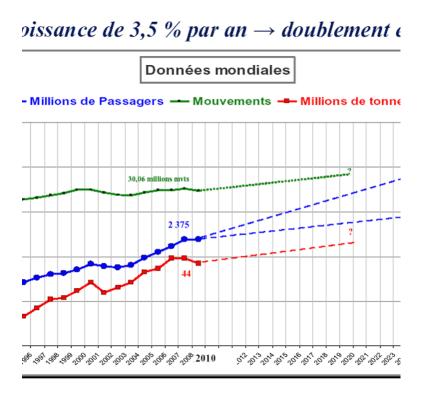
A CONNECTION IS NEEDED



A POLARISED CONNECTION

AN INCREASING KEY ROLE

- 4%OF GOODS CARRIED WORLDWIDE
- however...
- 10 % OF VALUE...



IATA CONVENTION



- Conventions
 - IATA
 - OACI
 - DGAC IN FRANCE
 - EU REGULATION
- alliances

IATA CONVENTION

- Conventions
 - IATA
 - Some agreements are outside iata convention : bilateral or by governments
- Deregulation in the U.S.
- Outsiders increasing development



IATA CONVENTION

- Alliances
 - Skyteam example
 - Air France and 11 members
 - Star Alliance 26 members
 - One World 15 members





- FLIGHT RIGHT
- TECHNICAL RIGHT
- TERRITORY OF ORIGIN
- THIRD STATE TO THIRD ONE

INTERNATIONAL REGULATION OF AIR TRANSPORT

INTERNATIONAL REGULATION OF AIR TRANSPORT

- Overflight rights
- To land in an third part country for technical reasons
- To drop off passengers or freight in a third country coming from the departure country
- The same when the country of destination is yours
- Or from one third country to another one, one needs to be member of the convention
- Controlled airspace
- Restricted areas
- Hazardous Areas
- Mandatory Radio Use Areas
- Mandatory transponder (signal) area



Air regulation

Authorized aircrafts

- Nationality
- Location
- Dimensions
- Printing types

Air regulation



- registration
- Ability to fly
- International (O.A.C.I.)

INTERNATIONAL REGULATION OF AIR TRANSPORT

- OACI
 - navigation AND MANAGEMENT USE OF WHAT DOES FLY
- NON GOVERNMENTAL ORGANISATIONS: IATA et ATAF
 - IATA
 - International Air Transport association
 - TO PROMOTE TRANSPORT
 - TO SUPPORT AIR TRANSPORT DEVELOPMENT
 - PARTNERSHIP WITH oaci
 - Cargo Account Settlement System CASS
 - IATA Agreement

Air regulation

- OACI Organisation de l'aviation Civile Internationale
 - Flying and technical management
 - 200 Member States
 - Security
 - Hazardous goods

INTERNATIONAL REGULATION OF AIR TRANSPORT

- Dgac example Autorisation in France
 - Liable for security and safety
 - infrastructures
 - Trainings: pilots and air control
 - Prevention of negative impacts
 - Operation license (moral and financial)
 - Air Carrier certificate (technical guarantees)
 - Maintenance and Repair Overhaul
- EU regulation

International transport regulation

Contents

- Ability to be air carrier
- Air carrier certificate
- Licence authorisation
- Autorisation to carry

Air transport regulation

Changing points

- Transport documents: A.W.B. But not only, substitution transport
- Carrier responsability
- Damage during transport
- Exoneration responsability of the carrier: nature, inherent vice to the goods, packaging, public authority act
- Maximum indemnity
- Responsability for delay

About the demand

Varsaw convention, Montreal (successive carriage, 22 SRD per kg but excluding freight cost including commission)

Deregulation

- US
- Collapse in freight rates together with stopping some lines
- EU
- Eu license and State members limits

Demand

- Per ton or per loading unit: 1 t=6 cbm
- Expected traffic : +4% per year till 2030

EXAMPLE: France / other countries worldwide: more than 1 287 937 TONs

DEMAND

First approach, difficult connection with other transport modes packing

Bulk

Container

Consolidation

Express parcel

Integrated service

Concentration and alliance, cargo 20% of air traffic



Dangerous Goods

Hazard and Handling Labels

Hazard Labels Class 1 Class 2 Class 3 Class 4 Class 5 * Articles bearing the Englosive labels shown above and falling into Divisions 1.1, 1.2, 1.45, 1.5 and 1.6 are normally forbidden. Class 7 Class 6 Class 8 Class 9 Alle Alle NADIOACTIVE RADIOACTIVE II **Handling Labels and Markings** Minimum size for hecard labels 190 a 100 eve. For full information on heard and handling labels for dangerous goods refer to the current edition of the IATA Dangerous Goods Regulations. For further information on Dangerous Goods, centact us at dangeod@tata.org. Order products online at www.iataonline.com www.iata.org/labels

Frédéric Gauthier

local long Capit - Printed in Great is

Class 1 Explosives



Subclass 1.1: Explosives with a mass explosion hazard



Subclass 1.2: Explosives with a severe projection hazard



Subclass 1.3: Explosives with a fire



Subclass 1.4: Minor fire or projection hazard

EXPLOSIVES



Subclass 1.5: An insensitive substance with a mass explosion hazard



Subclass 1.6: Extremely insensitive articles

Class 2 Gases



Subclass 2.1: Flammable Gas



Subclass 2.2: Non-Flammable Gas



Subclass 2.3: Poisonous Gases

Class 3 Flammable liquids



Class 4 Flammable solids or substances



Subclass 4.1: Flammable solids



Subclass 4.2: Spontaneously combustible solids



Subclass 4.3: Dangerous when wet

Class 5 Oxidizing substance and organis peroxides



Subclass 5.1: Oxidizing agent



Subclass 5.2: Organic peroxide oxidizing agent

Class 6 Toxic and infectious substances



Subclass 6.1: Poison



Subclass 6.6: Biohazard

Class 7 Radioactive



Class 8 Corrossive substances



Class 9 Miscellaneous dangerous substances and articles



Air freight security

Key

- X-raying control
- Approved control companies
- Known consignor agreement is needed

Air freight security

Key

- The cost increases without known consignor
- Includes also the need for an approved agent
- Specified goods, obligation of knwon consignor



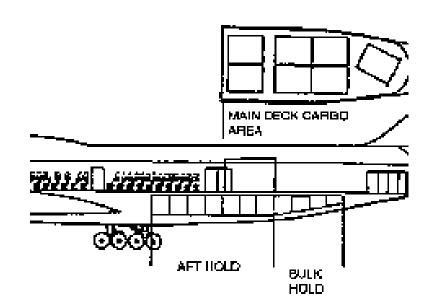
Technics

- An aircraft is identified: Name, address, NATIONALITY
- COMBINED AIRCRAFTS
 - LUGGAGE AND POST PARCELS ARE A PRIORITY
 - Airbus a300b AND b747 combi
- ALL CARGO AIRCRAFTS
 - MAIN DECK AND UNDER DECK
- COMBINED PLANES EXAMPLES
- SHORT, MEDIUM, long SERVICES
- SOME dc3 a 2,3 t TILL antonov 125 AND a380 Ao 150 t of freight



Technics

- Substitution transport
 - Competitive advantage
- products
 - Bulk, CONTainer, consolidation, express parcel, integrated service
- World fleet
 - Air companies
 - AIR France KLM, JAPAN AIRLINES, LUFTHANSA, KOREAN AIR



Technics

Competitivity

- AIR France TRANSIT HUB IN ROISSY
- Tracking
- Issuing and control efficiency of the air transport document

Distributors

- 94% market share = air forwarding agent
- The 5 first companies
 62% of total turn over



AIR FREIGHT

LOADING

- NON DIVIDED CARGOES
- GENERAL CARGOS

Unit loading devices

 Time to pack diverse packages together

NEWS CONTRACTOR OF THE RESERVE OF TH

Full loads

- On pallets or full containers
- Real drop in freight rates



AIR FREIGHT

10 or 20' pallets

- Aluminium made
- Safety cage
- 16 to 24 mm deep
- Util volume till 5,92x2,3x2,35 i.e. one container
- till 28 850 kg



To sum up

- Under deck container
- Deck container
- Pallets with securing package



handling

- U.L.D. LOADING
 - By the neck, by the deck gate, by a rear door, by an under deck gate
- Honrizontal loading
- Airport choice



Airport infrasgtructures

- Handling air stations
- In bond warehouses and regular warehouses
- Landing lines

Leading cargo airports

Shanghai, Séoul, Anchorage, Paris, Tokyo, Louisville

HK, Memphis,



- Itinerary and the airport
- Companies and aircrafts
- Technical constraints : goods and plane



Air lines

 Attached services: more and more haulaGe, storage, marking...

Forwarding agents

- Approved IATA (AWB)
- Approved DGAC (security)
- Clearing agent

Handling companies

- Handling, storage
- Freight safety

integrators

• Door to door service





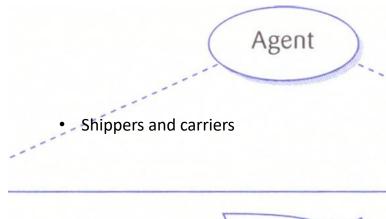
Achievement

proof

Carrier responsability

Intermodal transport

- Air forwarder
 - Promoting and selling air freight, to pay for
 - mandatory
 - forwarder
- ataf agent
- Exclusive air way bill
 - Air company chosen by the agent

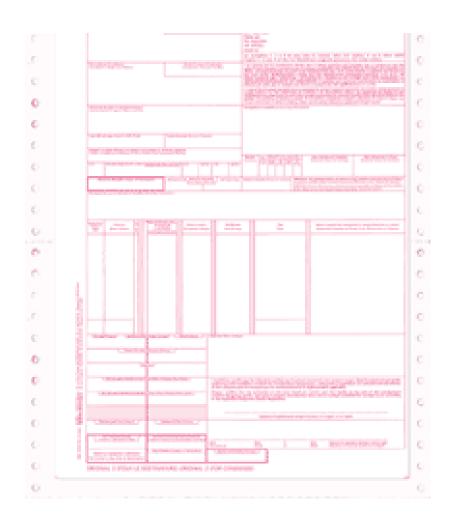




liact	Issue till 14 copies
	Remittance to consignee
	Particular shipments, several succesive and combined air transports
	Original copies
	Non negcotiable
	Master airway bill
	Formalities at arrival
tation	

- House Airway Bill
- Exclusive AWB
- International transportation

- The Airway bill
 - Boxes
 - Transport contract proof
 - This not an ownership proof of the goods
- Useful as
 - Instruction document
 - Accompanying document
 - An invoicing proof
- copies



- Shipper
- Cannot be to order
- Flight and successive TRANSPORTS
- Declared value
- Insurance value
- Attached documents
- pricing

Value according incoterm

Boxes

COPIES

- Original copies : carrier, shipper, consignee
- Delivery receipt
- Airport of destination
- Other carriers
- Issuing carrier

INSTRUCTIONS FORM

hipper's Name and Address	Shipper's Account	Number	Air Waybill	SOUTH	AFRICAN	
ario as Shipper			Issued by		YS	
7 Home address			SOUTH AFRICAN AT South Africa	20000000		
onsignee's Name and Address	Consignee's Accoun	et Nicolae	Copies 1, 2 and 3 of this A	r Waybii are originals and hav described herein are accepted		
instruces Name and Address	Consigned a Account	in Number	condition (except as noted)	for carriage SUBJECT TO THE ERSE HEREOF, ALL GOODS	E CONDITIONS OF	
Mario as Consignee	35		ANY OTHER MEANS INC. SPECIFIC CONTRARY IN	JUDING ROAD OR ANY OTH STRUCTIONS ARE GIVEN VI	ER CARRIER UNLESS A INTERMEDIATE	
8 The street			STOPPING PLACES WHI SHIPPER'S ATTENTION IS	HITHE CARRIER DEEMS AS DRAWN TO THE NOTICE O	PPROPRIATE, THE CONCERING CARRIER'S	
			LIMITATION OF LIABILITY. Shipper may increase such limitation of liability by declaring a higher value for carriage and paying a supplemental charge if required.			
Issuing Carrier's Agent Name and City Diagno, Agent			Accounting Information THIS IS A KNOWN	SHIPPER - KNOWN SH	ATDDER	
Demo Agent 22 Rivonia Rd				MBER: 11223344556		
andton sents IATA Code	Account No.		Hall to the state of the state of the state			
1 1970 - 19 MARC 98909A	SECURIOS THOUSENS		- 1455e - 16 19	NAMES OF THE STATE	DE BIT	
rport of Departure (Addr. of First Car .R. TAMBO INTERNATION			Reference Number	Optional Shipping Inform	ation	
By First Carrier Routing and C	Destination to by	to by		ther Declared Value for Carriag	e Declared Value for Custom	
HR SOUTH AFRICAN AL	RWAYS Requested Flig	LIFTON /		cour NCV	NVD	
Airport of Destination EATHROW, GB	(Nequesies Fig.	inuae/	NIL e	BURANCE - If Carrier offers Insure juested in accordance with conditi ured in figures in box marked 'Am	ons thereof, indicate amount to be	
andling information			1 115	ues in igues it sux tianes. Am	oant of inserence	
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LIABILITIES

SHIPPER LIABILITY

- OBLIGATIONS: to pack and to mark, information, to pay the price
- DUTIES

Liabilities for

Loss

Delay

Responsability exoneration

Claim against the carrier

Responsability limit

Insurance

Property transfer

FCA SALE

CIP SALE

DAP AND DDP SALES

INSURANCE OF CARRIER LIABILITY

CLAIMS TO THE INSURANCE COMPANY

PRICING

PRICING

COMMON

- ACCORDING TO WEIGHT CLASSES
- PAYING FOR

SPECIAL RATES

- Co rates
- Class rates
- PRICES PER LOAD UNIT, pivot weight and maximum weight

Pricing

Weight/volume 1t=6 cbm

Général

- Weight classes: less than 45 kg, from 45 to 100, from 100 to 300, from 300 to 500, more than 500
- Chargeable : from 45 to 100 kg 8 € , from 100 to 300 : 6 €, weight 75 kgs as x=600/8
- La messagerie / back to back (port dû) / le groupage

Special tariffs

- Co rates : commodity
- Class rates : commodity and depending on specific destination
- Unit loaded device price : ULD

Pricing

- ULD, example
- Shipment from Paris to New-York, type UAA,
- 50 cartons of chairs 11 cbm and 2172 kg

Pallet basis 88" x 125",

Maximum volume 12,4 cbm Maximum weight 3765 kg Empty weight 239 kg Pivot weight 1980 KG, Chargeable minimum 2300 EUR, per kg

More than pivot weight 1 € per kg

Shipment weight is 2172 kg

i.e. 192 kg more than pivot weight X 1 EUR (2172-1980)x 1 €

La tarification

Les surcharges et frais annexes

- Les frais obligatoires : taxes LTA, aéroport, sureté, surcharge carburant, du risque, ad valorem
- Conjoncturelles
- Les frais annexes
- Les codifications

PRICING

OVERCHARGES AND OTHER COSTS

- TEMPORARY: bunker, Security tax
- ATTACHED COSTS: AWB tax, security tax, Ad valorem and treatment tax
- CODES

EXTRA COSTS

- AC ANIMAL CONTAINER
- AS ASSEMBLY SERVICE FEE
- AW AIR WAY BILL FEE PACKAGING
- CD CLEARANCE AND HANDLING DESTINATION
- DB DISBURSMENT FEE
- DF DISTRIBUTION SERVICE FEE
- GT GOVERNMENT TAX
- LA LIVE ANIMALS

EXTRA COSTS

- MAI MISCELLANEOUS DUE AGENT
- MC MISCELLEANEOUS DUE CARRIER
- RA DANGEROUS GOODS SURCHARGESD SURFACE CHARGE DESTINATION
- SI STOP IN TRANSIT
- SQ STORAGE ORIGIN
- SP SEPARATE EARLY RELEASE
- SS SIGNATURE SERVICE
- SU SURFACE CHARGES
- UH ULD HANDLING

TRANSPORT ORGANISATION

CONSOLIDATION

- INTEREST
- MODALITIES



AIR FREIGHT CHARTERING

SECURED PAYMENT WITH AIR FREIGHT

COMMERCIAL INVOICE

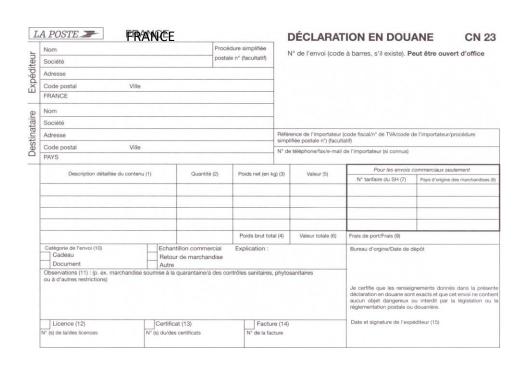
CASH AGAINST PAYMENT

LETTER OF CREDIT

Shipper advantage

POSTAL PARCEL

- WHAT IS AT STAKE WITH EXPRESS SERVICE 0 to 30 kg
- TRADITIONAL SERVICE
 - SERVICES
 - WEIGHT AND dimensions
 - DELAY
 - CLEARANCE





POSTAL SHIPMENT

Europe follow up ex. colissimo

Intermediary offers

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PRENOM / FIRST NAME	RAYMOND DANIEL
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QUIZ AIR Quiz3air.pdf

THE FORWARDING AGENT

- A coordinator of transport
- Clearing agent
 - Formalities
- Consolidator
- Freight forwarder
- Pricing
 - Export
 - import
- Criteria of choice
- Selection
 - Geographical
 - Mean of transportation
 - specialty



Case: a freight consolidation

Vamos consolidator 'buys' 100 containers of 20' from RS Shipping on vessel S/S/AMIGO voyage no 8 the route is from Antwerp to Vera Cruz (importing country) at a discounted box rate of US\$ 1300/ container. To explain the case, it is assumed that the freight is charged on measure basis only, instead of weight or measure, and assumed that the capacity of a 20' container is 33 cbm.

As such Vamos consolidator 'buys' a total fixed shipping space of 3,300 cbm at the ocean freight cost of US\$39.394/CBM.

If the shipper VIXTOOL books 10 cbm of space for its product directly with RS Shipping, on the same vessel and voyage number, the LCL rate is US\$55/CBM. If the shipper KRUGER books a 20' container directly with RS Shipping the FCL flat rate is US\$1500/container which is US\$45.455/CBM.

In case Kruger is able to load 28 cbm only due to the odd sized export packages, the freight cost is US\$53.571/CBM.

In general the CBM cost of FCL is lower than the LCL.

Vamos consolidator, which does not operate or own any ships, offers VIXTOOL and other LCL shippers to transport their goods at US\$ 54/CBM against US\$55/CBM from RS Shipping.

VAMOS offers KRUGER and other FCL shippers at US\$1,450/container against the US\$1,500/container from RS Shipping.

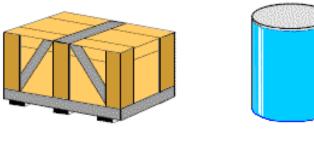
In practice, the consolidator 'selling' at the same rate as the shipping company is not uncommon.

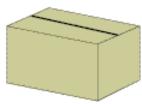
Vamos groups all LCLs of individual shippers into FCLs, and then delivers all FCLs to RS Shipping in one lot, that is 100 containers of 20' or less, if the space is not fully 'sold'.

In such a case, VAMOS consolidator operates as a NVOCC and issues freight forwarder bill of lading to each shipper, without receiving a commission from RS Shipping.

INTERNATIONAL PACKAGING ISSUES

- Main goal
- Stresses in intermodal movements
 - Insufficiency of packing
 - Major maritime casualties
 - Climate
- Case of a Taiwan firm
- Weight of packaging, a dual purpose





TRANSPORT RESPONSABILITY

- Transport liability
 - Liabilty insurance
 - Carrier insurance
 - Quay insurance
 - Warehousing insurance
- Transport risks
 - Damage
 - delay
 - Forwarding agent's responsability
 - Various sea transport guarantees



Risks that can be covered

Fire or explosion

Vessel sunk, burnt ...

Land conveyance overturned or derailed

Collision or contact of vessel with any external objects except water

Discharge of cargo at port of distress

Earthquake, volcanic eruption

Malicious damage: theft
Delay
Inherent vice or nature of the subject matter insured
Willful misconduct of the assured

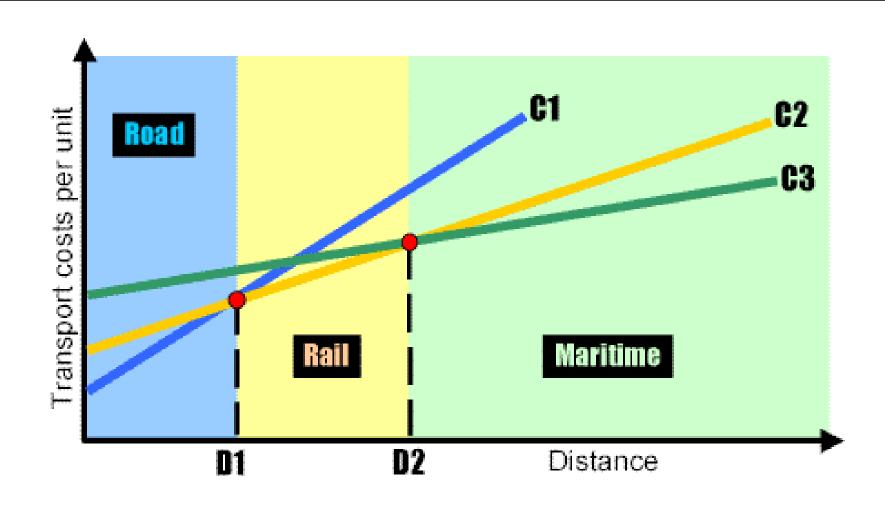
General average sacrifice

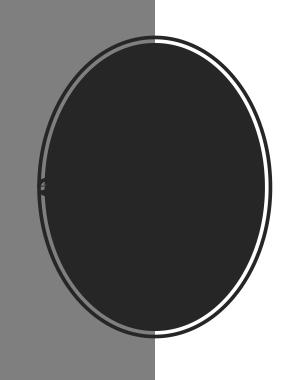
Jettison (délestage)
Entry of sea, river or lake into vessel or place of storage
Total loss of any package lost overboard, or dropped while loading on to
Piracy

War

Strikes riots and civil commotions includes terrorsits or any persons acting from a political motive Use of any atomic or nuclear weapon
Ordinary leakage, ordinary loss in weight or volume
Insufficiency of packing
Unseaworthiness of vessel at the time of loading
Insolvency or financial default of the owners or operators of the vessel

Intermodal costs





SHIPPER EXPORTER KLARA HOBZA C/O S 63 FLUSHING AVE, BROOKLYN NY 11205	323A	BILL OF LADIN NYCHAM10054			T REFERENCES :OE-10054		
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To Obtain Delivery Contact WORLD NET LOGISTICS (GERMANY) DIEPENAU 28195 ON BOARD DATE 09/26/09 SHIPPER REFERENCE B/L ISSUED IN NEW YORK EXCESS VALUE BREMEN, GERMANY TEL: 49-421333088-12 FAX: 49-42133308

Stipper (full style and address)	BIMCO LINER BILL OF LADING CODE NAME: "CONLINEBILL 2000" Amended January 1950; August 1952; January 1973;			
	July 1974; August 1976; January			
Consignee (full style and address) or Order	B/L No.	Reference No.		
	Vessel			
sotty Party (full style and address)	Port of loading			
	Port of discharge			
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Code Name: "CONLINEBILL 2000"

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1. Definitions.

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Code Name: "COMBICON	NBILL"	DI No.
Shipper	TOTAL	B/L No
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		COMBINED TRANSPORT BILL OF LADING Revised 1995
Consigned to order of		
Notify party/address		
	Place of receipt	_
Ocean Vessel	Port of loading	-
Port of discharge	Place of delivery	Freight payable at Number of original Bills of Lading
Marks and Nos.	Quantity and description of gov	Grobe weight, kg, Measurement,
9	All A	
2	Particulars ab	ove declared by Shipper
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		One of the Bills of Lading must be surrendered duly endorsed in exchange for the goods or delivery order. IN WITNESS whereof TWO (2) original Bills of Lading have been signed, if not otherwise stated above, one of which being accomplished the other(s) to be void.

An appear of the fact that according to Chauses 10 to 12 and the fact that acc

COMBINED TRANSPORT BILL OF LADING

Adopted by The Baltic and International Maritime Council in January, 1971 (as revised 1995) Code Name: "COMBICONBILL"

Deficitions.
 "Carried" means the perty on whose benefit this Bill of Lading has been signed.
 "Marchard" includes the Shipper, the Rockiew, the Consignar, the Consignar, the Consignar, the State of Lading and the owner of the goods.

IL PERFORMANCE OF THE CONTRACT

6. Methods and Results of Transportation research are all
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7. Optional Stowage.

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Code Name: "COMBICONBILL"

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Seller

Asking for a quotation

Load

Insurance information

Seller

- Company
- Name of contact
- Occupation of contact
- Email
- Company phone
- Cell phone
- Fax
- Postal address
- Zip code
- City
- Country
- Company website
- European vat no

Load

- Description
- Number of pallets / of parcels
- Unit weight (tone), Length (m), Width (m)
- Height (m), Volume (m)
- Regulated product : yes no
- Should it be yes, kind of product
- Packaged product, Paletized product
- Company for delivery, Adress for delivery
- Zip code for delivery, City of delivery
- Country of delivery
- Expected date of delivery
- Type of favourite transportation : none, sea, rail, air, road, barging

Insurance information

- Cargo insurance : yes , no
- Coverage required
- Insurance value to be covered

Transport quiz QuizTransport.pdf