

Combined Transport Strategy using Railway Containers in Japan

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Japan Freight Railway Company

Profile of Japan Freight Railway Co.

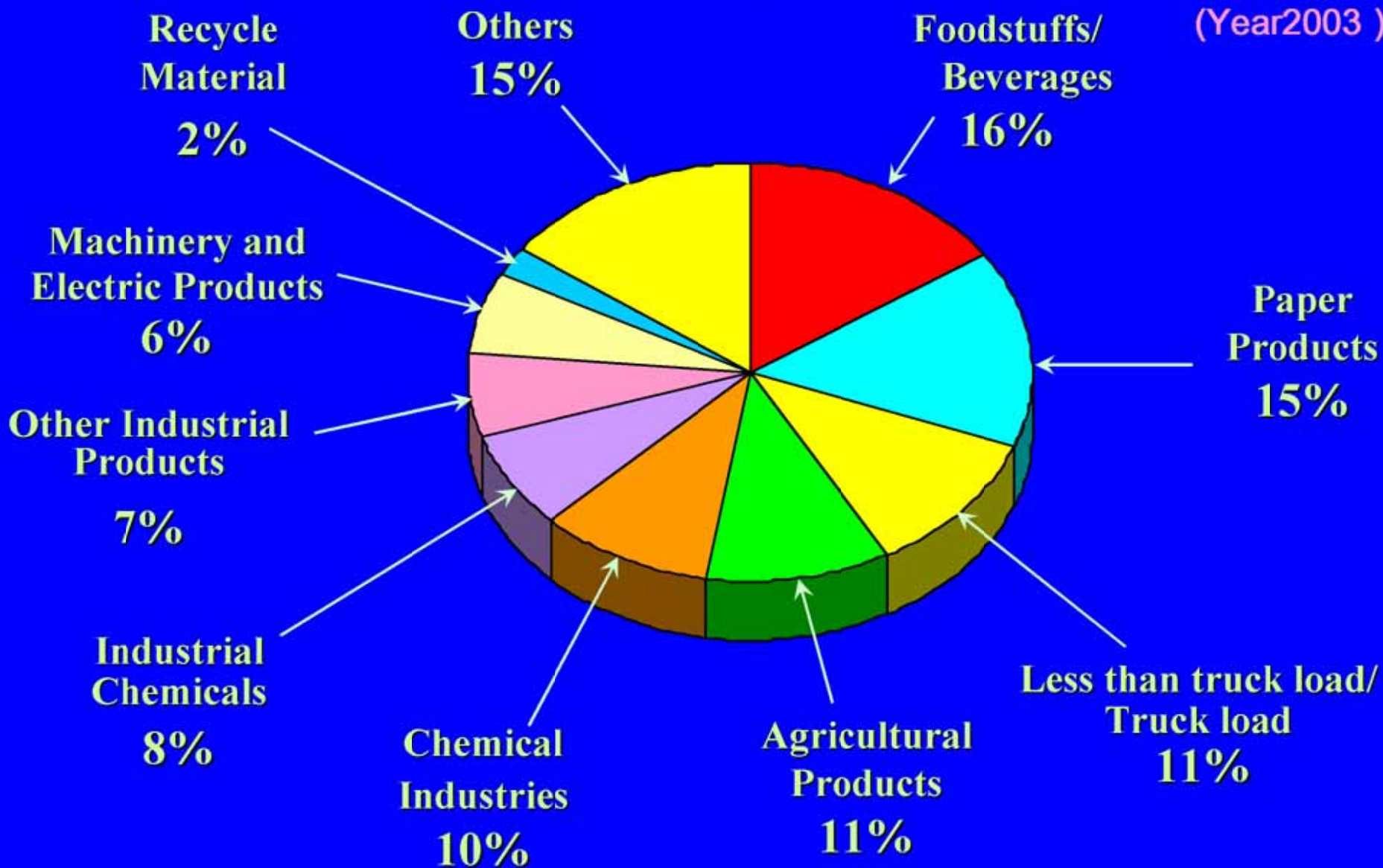


- Number of Lines : 79
- Number of Stations : 308
- Operation Network : 9100km
- Number of Trains : 680/day
(of which Container Trains : 431/day)
- Volume of traffic : 22.6 billion of ton-km
(of which Container : 19.8 billion of ton-km)
- Volume of Container transport : 4.3 million/year
- Container transportation : 86% of transport volume
in ton-km
- Average journey length : 900km
- Container Train punctuality : 97%

Commodity of container transportation



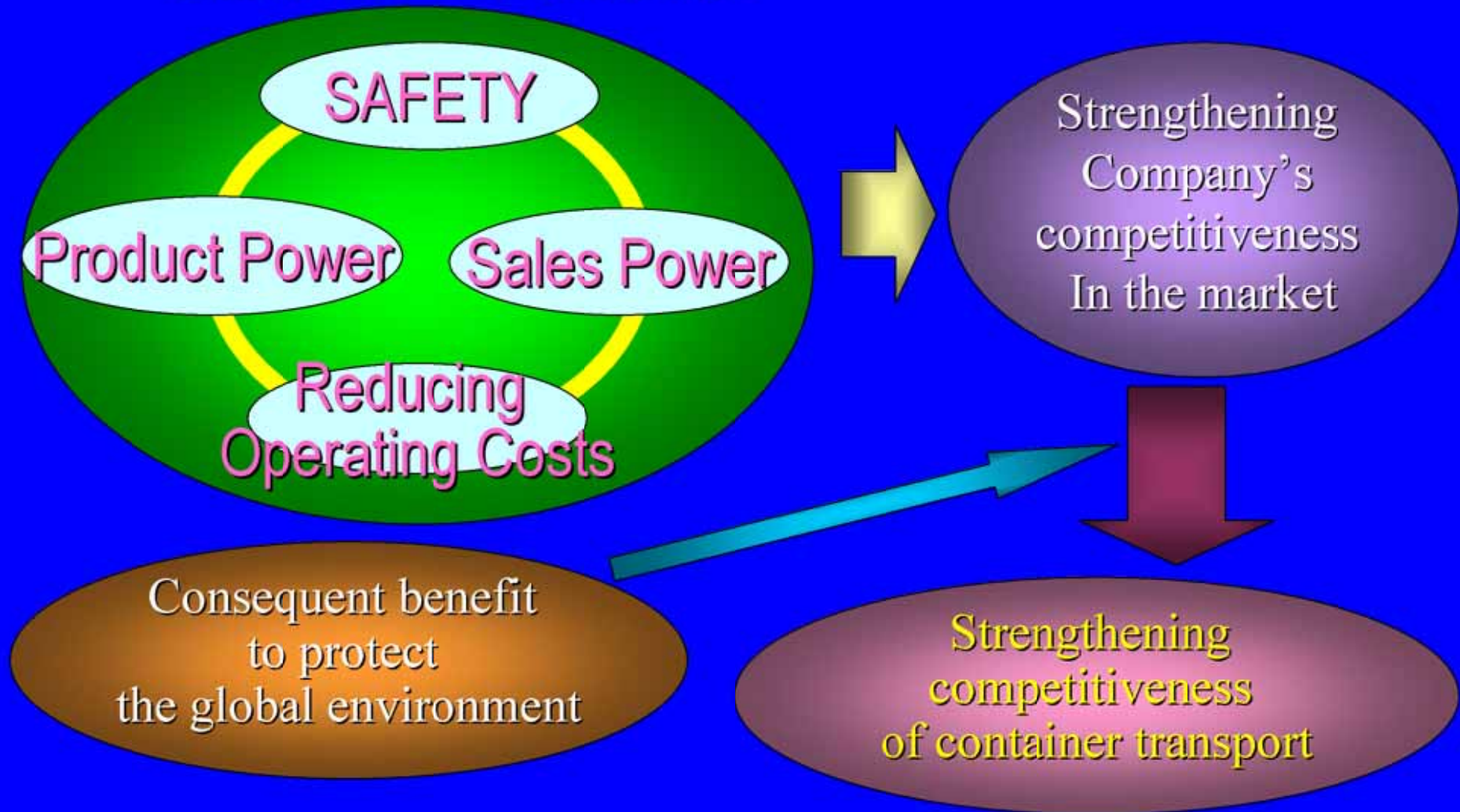
(Year 2003)



Business Plan “New Challenge 21”



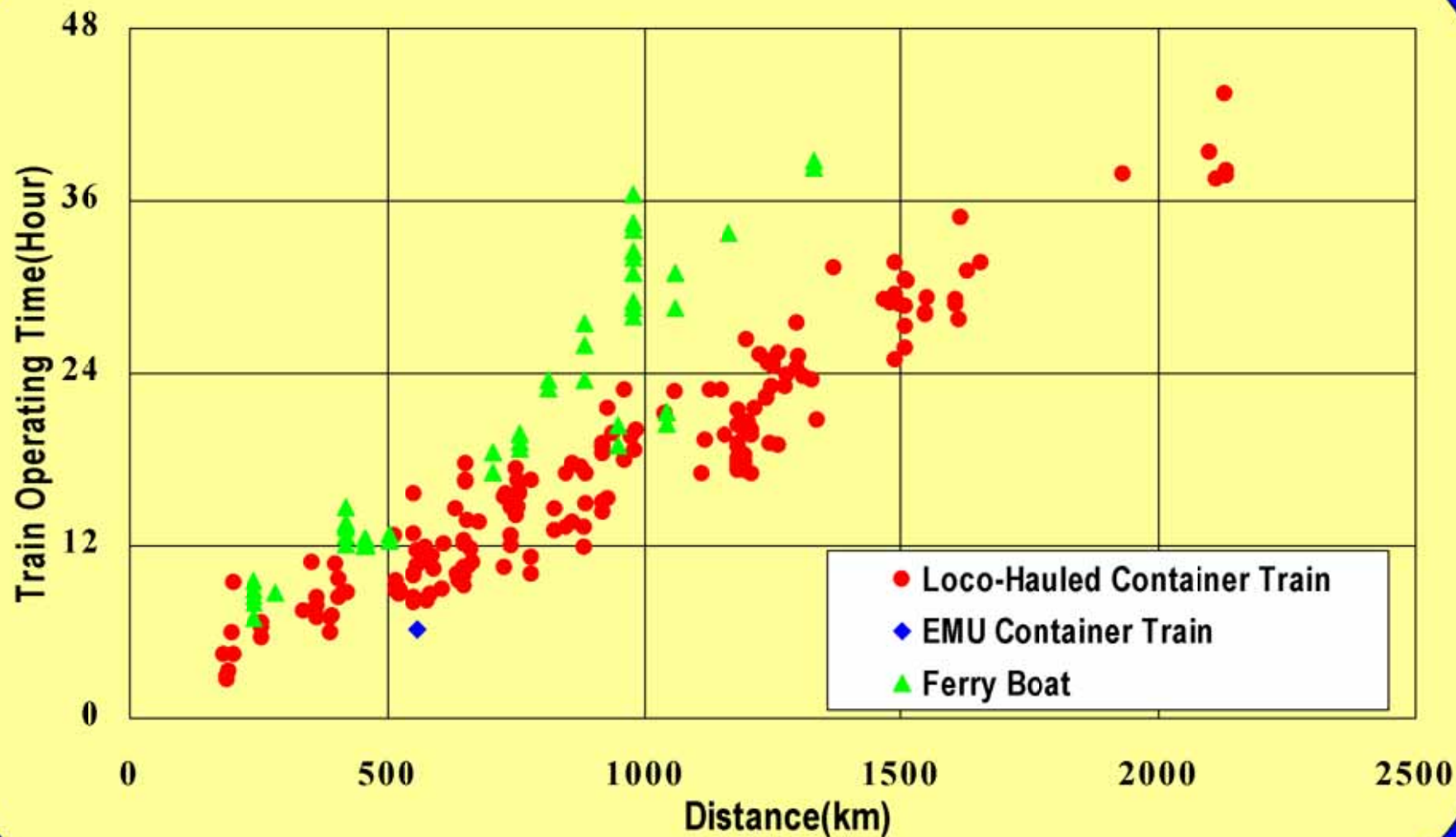
Customer Satisfaction



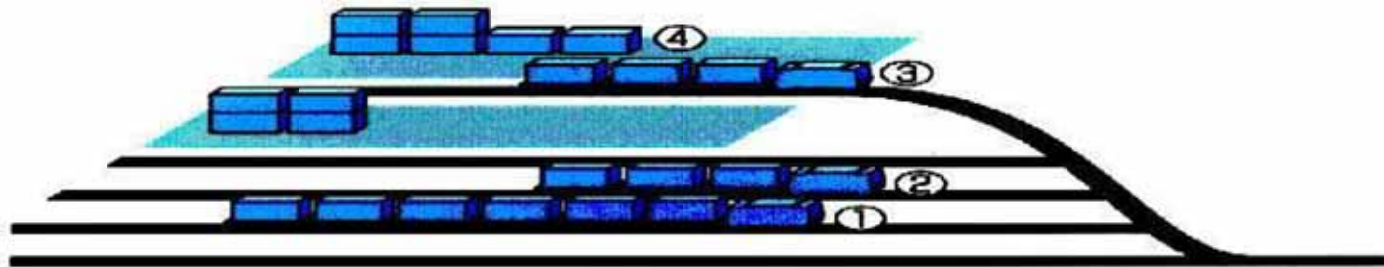
Strengthening competitiveness of container transport

- Speed-up of container train
- Introduction of new inter-modal terminals
“E&S-Station”
- Introduction of EMU-high-speed container train
- Introduction of various different types of containers
- Development of IT-FRENS & TRACE system
(New container transport information system
by new technologies IT)

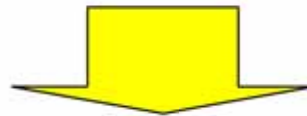
Train Operating time by distance zone



New inter-modal terminals



①Arrival → ②Uncoupling → ③Shunting → ④Loading/Unloading
④Loading/Unloading → ③Shunting → ②Coupling → ①Departure



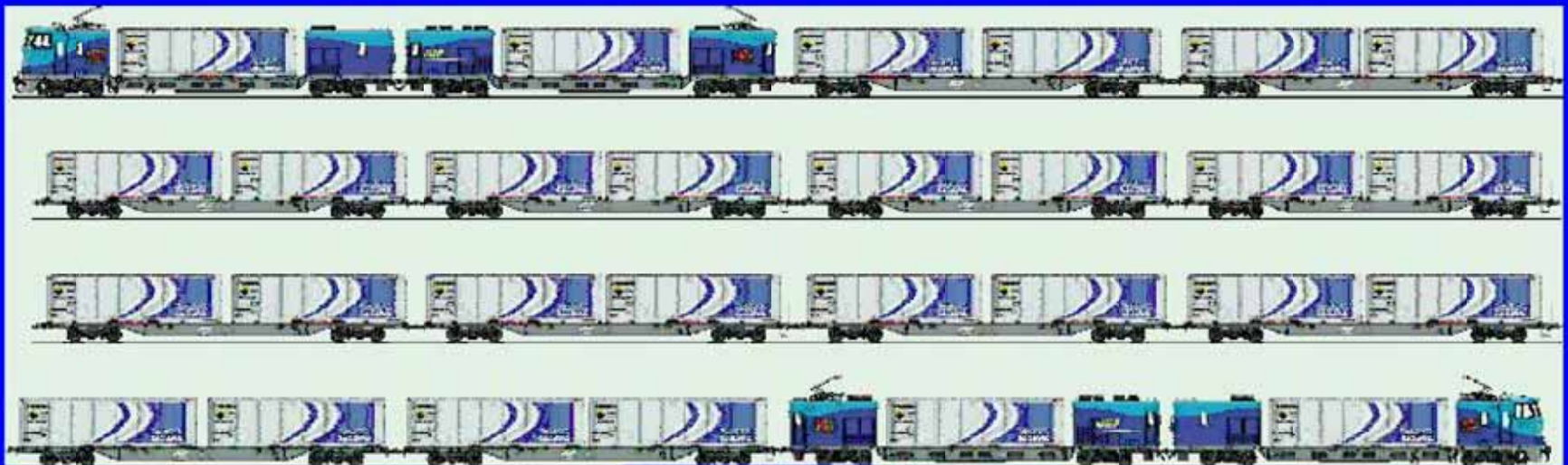
①Arrival → ②Loading/Unloading → ③Departure

E & S – Station (Effective & Speedy Container Handling System)

EMU-high-speed Container Train



Electric Multiple-Unit Train



Specification of EMU-high-speed Container Train “Super Rail Cargo”



- Train composition : 16 cars
(2 motor cars + 12 trailers + 2 motor cars)
- Gross weight : 728ton
- Maximum axle weight : 12.5ton
- Total output(1 hour rate) : 3520kW
- Maximum running speed : 130km/h
- Loading containers : 28 of 31ft containers
- Operating time : 6hour10minute(560km),
Scheduled speed : 91km/h
- CO₂ emissions : 14,000ton/year

Various different types of Containers



12ft(19m³)



15ft(24m³)



20ft(31m³)



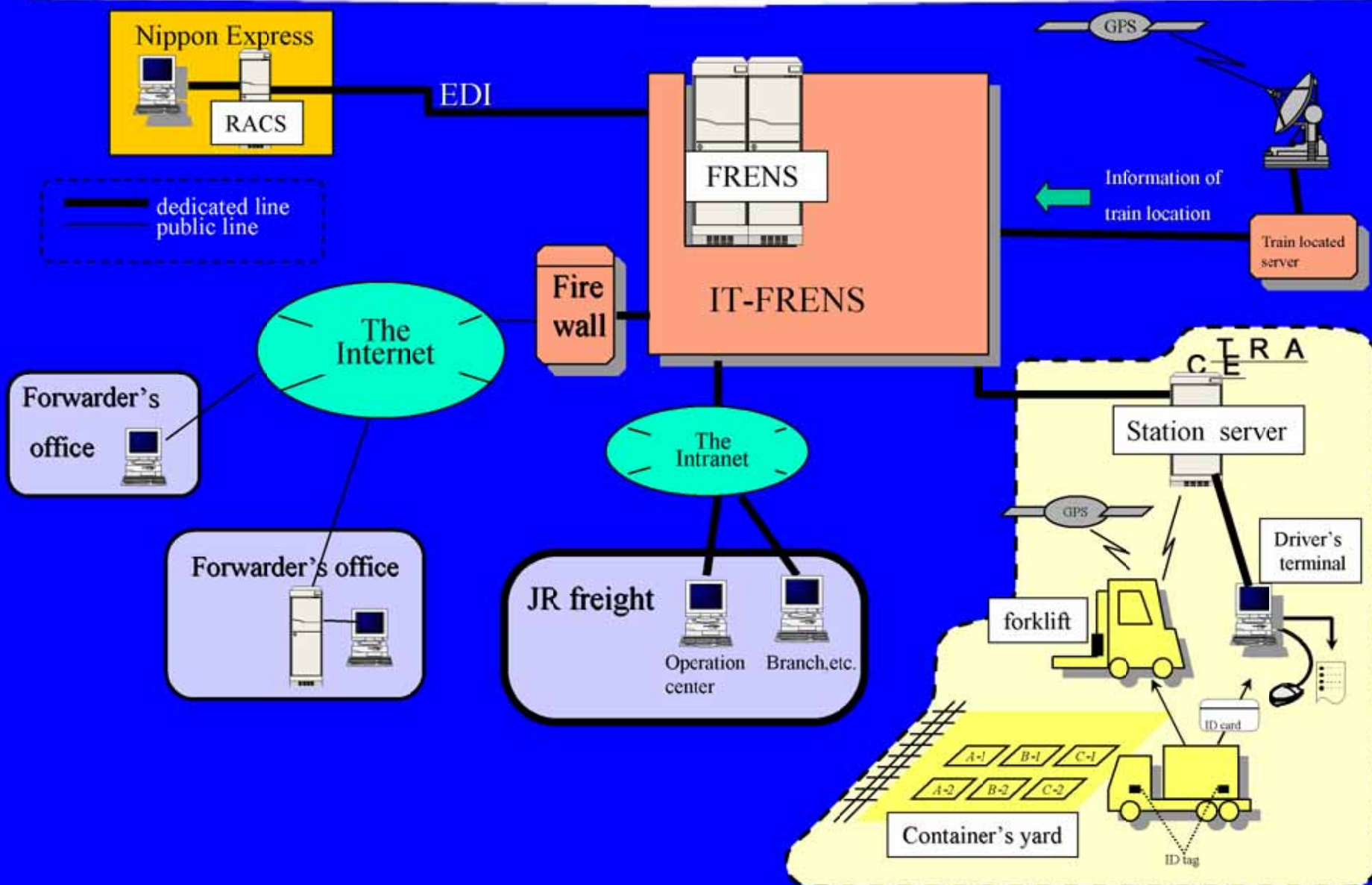
31ft(54m³)



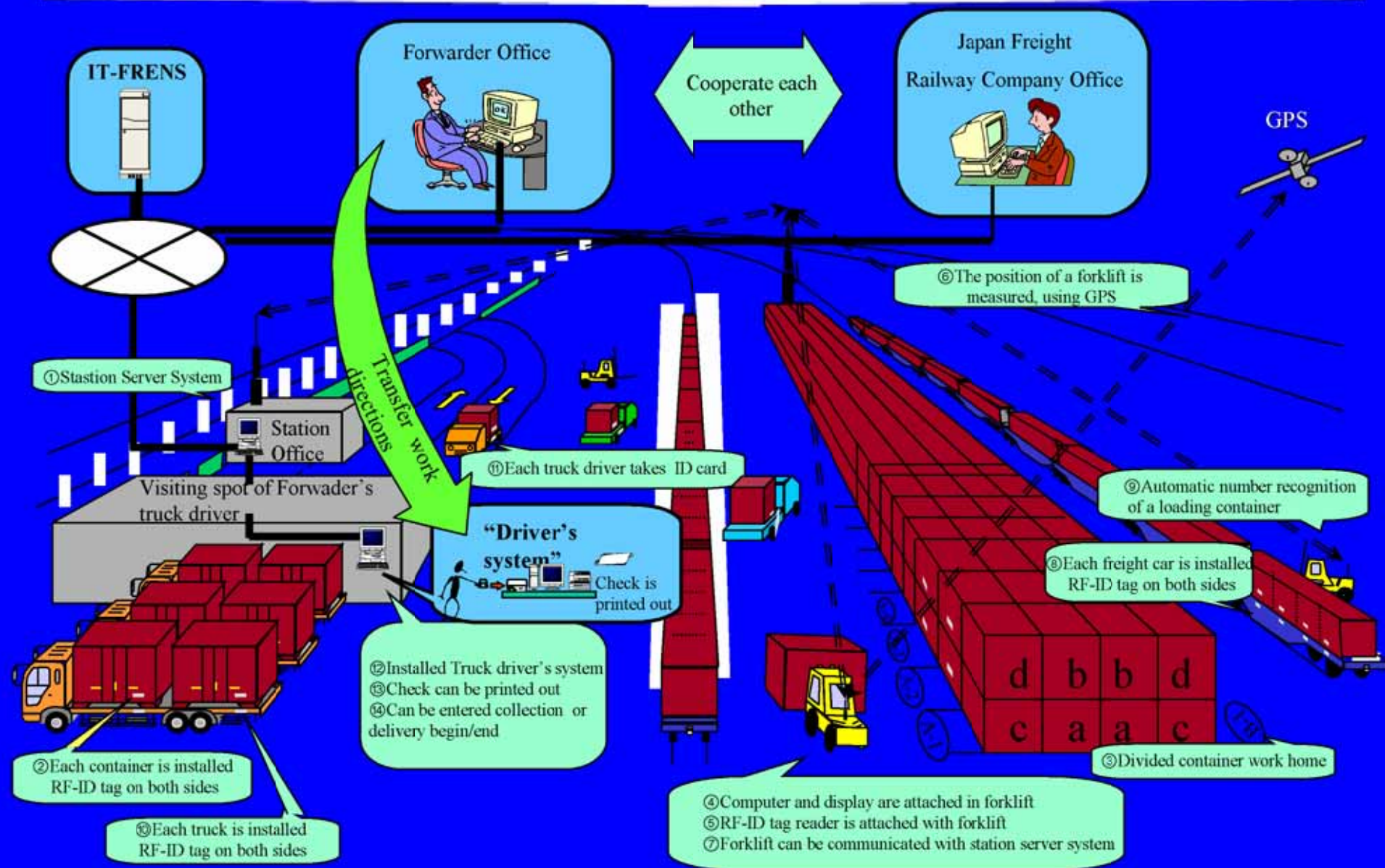
40ft(68m³)



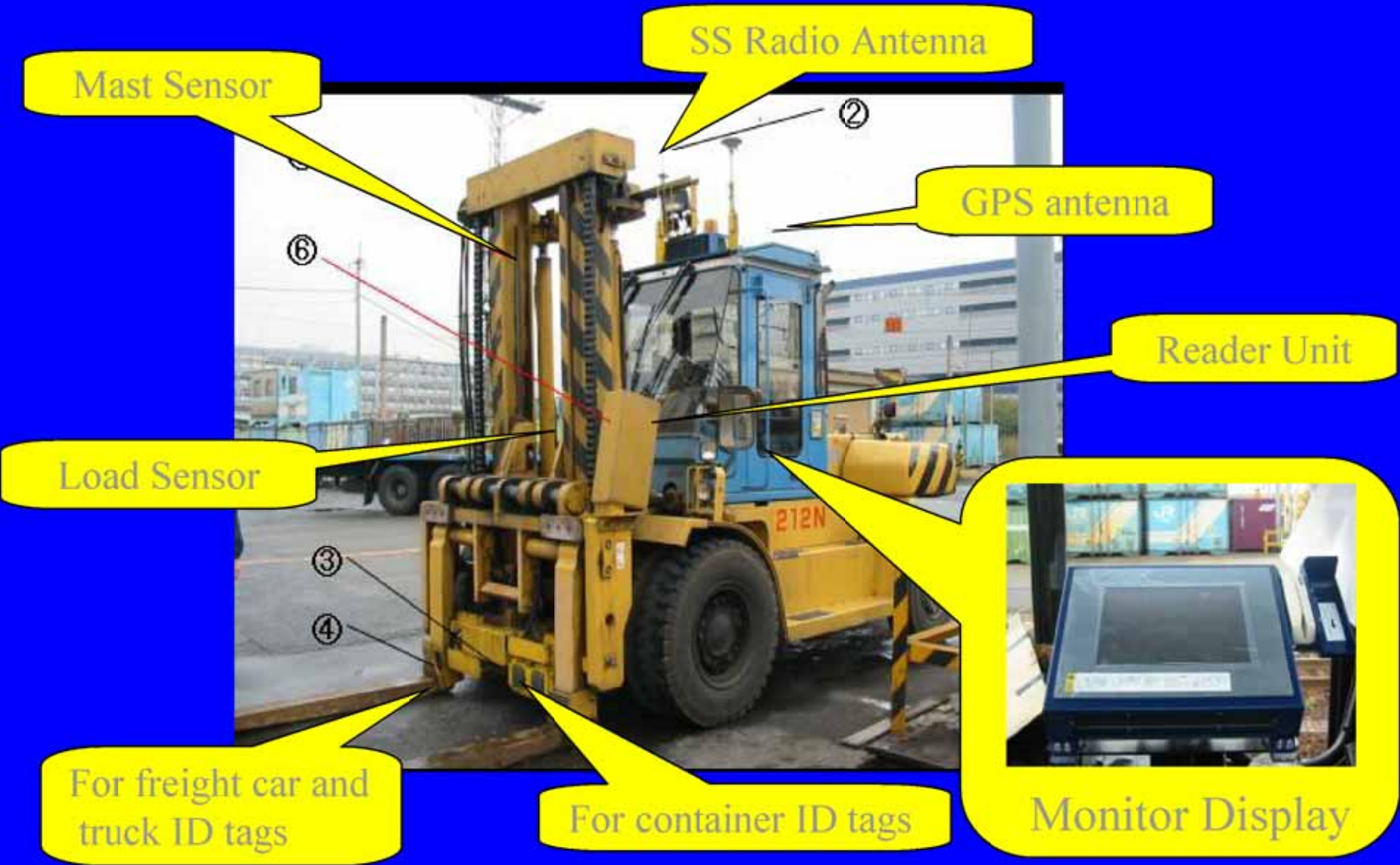
Outline figure of IT-FRENS & TRACE



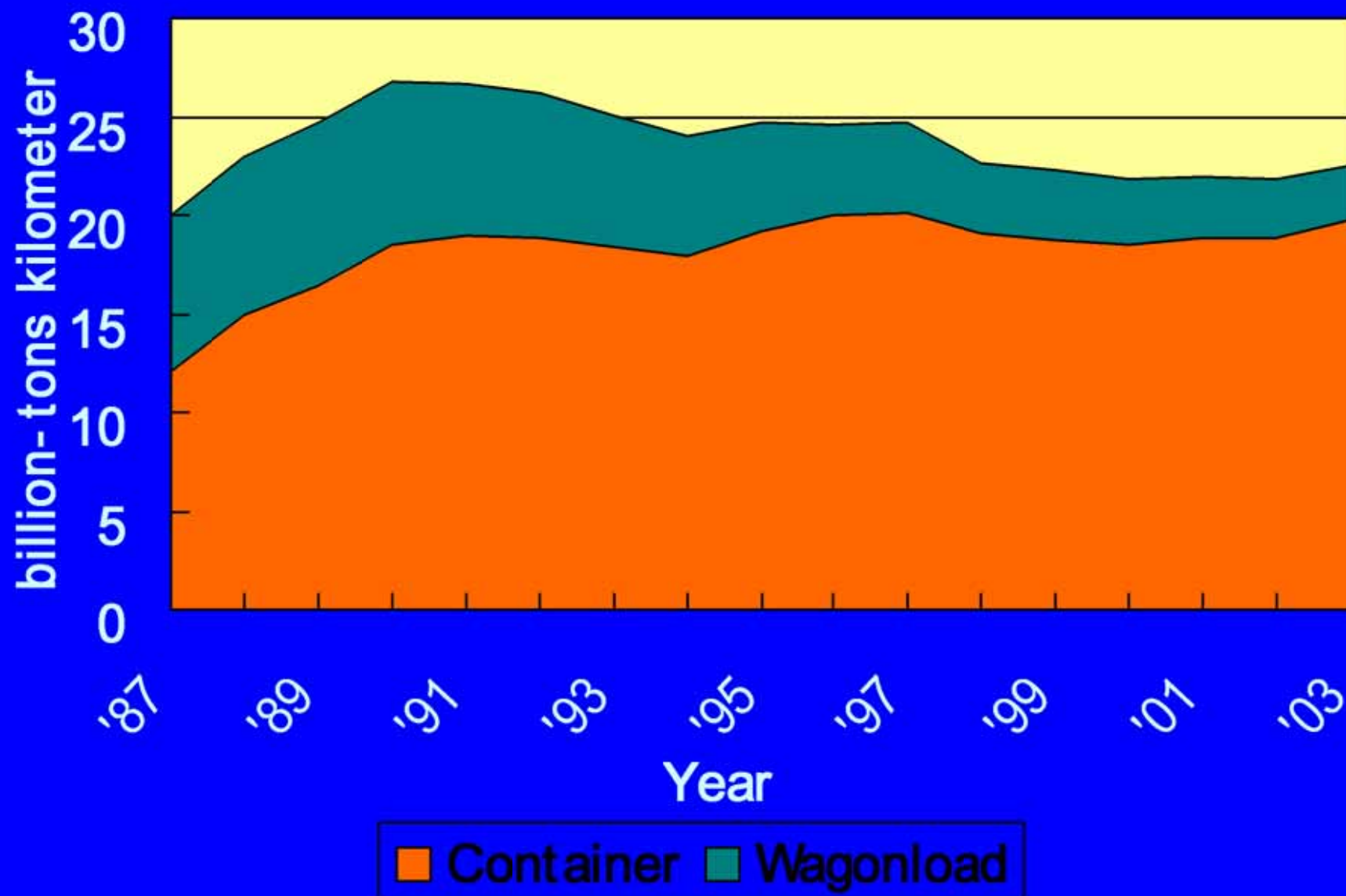
Outline of TRACE system



Equipments of Loading Machine



Trend of Transportation Volumes

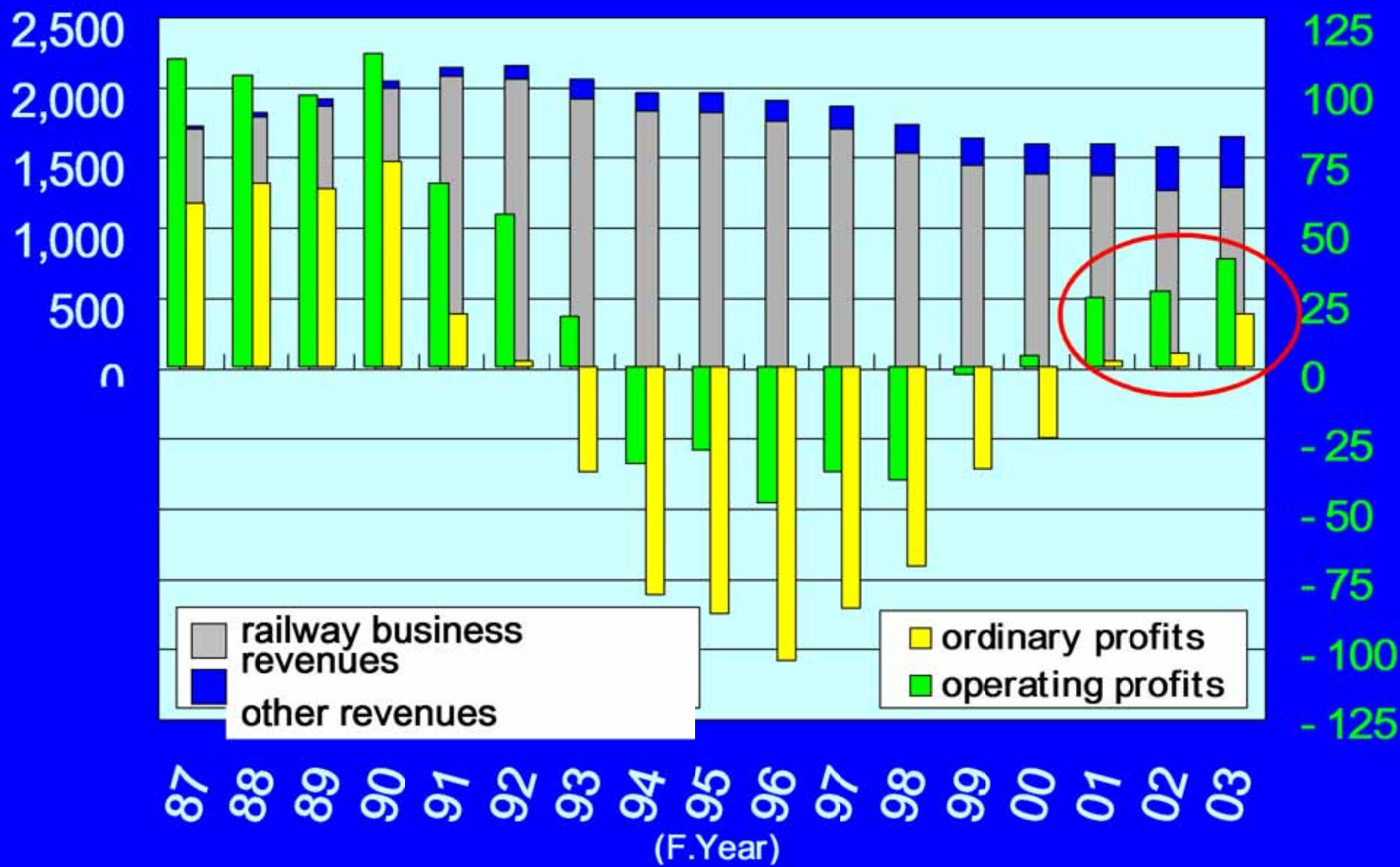


Trend of Business Status



Revenues (unit:100 million Yen)

Profits (unit:100 million Yen)





東海線岐阜川一瀬川駅間を走るコンテナ列車

Various different types of Containers



**31ft type Dry Container with
fullwing-sidedoor type**



**40ft type FlatRack Marine Container
(Loaded 3 JR's 12ft Containers)**



30ft type Dry Container



31ft type Reefer Container

View of E&S Station



EMU-Train “Super Rail Cargo”



Thank you for your kind attention.