DEPARTURES

train	time	platform
METROCARGO	GOODS	08:27	4
METROCARGO	GOODS	09:13	5
METROCARGO	GOODS	10:06	12
METROCARGO	GOODS	11:54	9
METROCARGO	GOODS	13:39	10
METROCARGO	GOODS	14:20	11
METROCARGO	GOODS	15:44	7
METROCARGO	GOODS	16:18	2
METROCARGO	GOODS	17:30	6
METROCARGO	GOODS	18:57	3

NEXT DESTINATION METROCARGO

	Intermodal system	Metrocargo system
Full train handling time (hours)	4-8	½-1
Trains loaded/unloaded per day	2	8
Shunting time (hours)	2	0
Terminal daily loading capacity (TEU)	200	800

(Average values for a 500m-long train with a loading capacity of 70 TEU)

Metrocargo is an innovative container handling concept that uses horizontal shift technology to move units from one train to another or to a truck in one single automated operation, with high security and low environmental impact.

Metrocargo operates in parallel to rail tracks, under the catenary, eliminating the need for shunting and the time and cost this involves, and can be fully adapted to any railway wagon and intermodal loading unit.

Metrocargo adopts an increasingly passenger transport network approach to reduce many critical issues and improve efficiency significantly.

metrocargo

THE GOODS' WAY.

What is Metrocargo?

- Metrocargo is an innovative concept for **intermodal door to door transport**. It has been conceived by I.LOG, a company operating in innovative logistics, with the engineering support of Metrocargo Automazioni, specialized in the design and manufacture of equipments and automated handling systems.

- Metrocargo solves the problem of handling goods by road and rail with an **economic and faster transfer in horizontal mode** that can be built along the rail tracks immediately **under the catenary**, **i.e. without the need for any shunting activities**.

- **Complete automation**, **quickness**, **adaptability to any kind of train and container size**, **low environmental impact**, **high security** are the most valuable assets of Metrocargo technology, a unique solution for ports, interports and logistics operators.

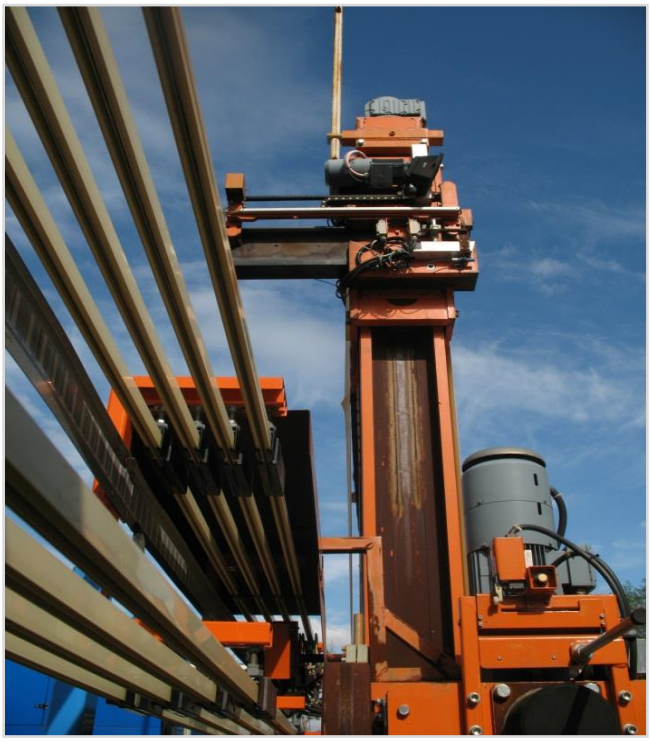
Why Metrocargo?

- Rail freight is losing market share to road and sea transport. This is due to cost and time of (un)loading of trains, that restrict use of railway. **Only fully loaded trains** and transport of certain kind of goods **can compete in the market**. Moreover, stopping a train to (un)load a few units of cargo is not economically viable using traditional terminals.

- Metrocargo allows the creation of a **logistics system capable of networking all infrastructure** where existing equipped intermodal terminals and traditional terminals can be easily combined.

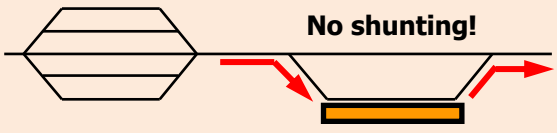
- Handling time with Metrocargo is approx. **3 minutes for each unit load**, while the (un)loading of a **freight train** takes **less than 40 minutes**.

- Metrocargo system requires **no technical changes to railway wagons and unit loads**.



Terminal operational aspects

Trains remain **under the catenary**: Metrocargo automatic handling allows movements of containers in **total safety**.



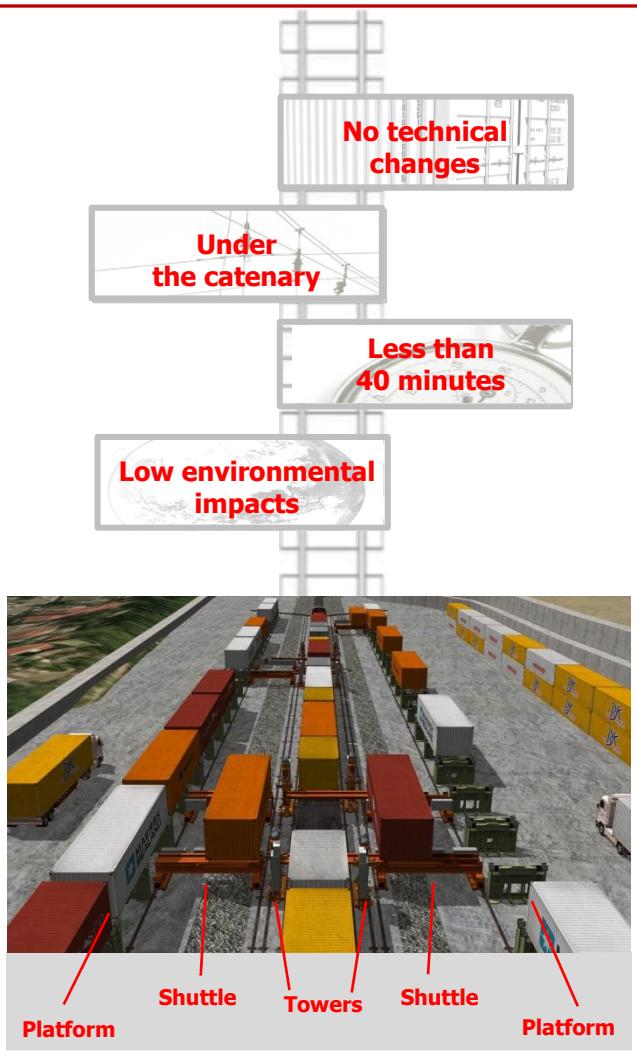
Handling is:

- **fast and parallel** to the principal railway
- **highly automated**
- adaptable to **any kind of train and container size**

The technology

- Metrocargo has been designed to be built along the rail tracks. This allows the **loading process of a whole train in one operation** and **without** the need for **shunting activities**.
- Transport units arrive by truck at the Metrocargo terminal and the complete automated equipment transfers them in the best position for their next destination. When train is stationary, transport units are loaded on wagons moving **horizontally under the catenary**.
- At terminal of destination the train units are unloaded and stored on the staking platforms until being transferred to the following train or truck that will deliver them to final destination.
- Metrocargo system is **modular** with each module consisting of:
  - **four lifting towers**
  - **one shuttle**
  - **staking platforms**

  Each element of the module has a **carrying capacity of 40 tons**.



Metrocargo performance

The two following charts show the excellent performances that can be obtained with Metrocargo in terms of **saved time for handling** and of **capacity**, with also a comparison to traditional intermodal systems.

Metrocargo modules	Performance
2 modules	30 handling/hour
3 modules	45 handling/hour
4 modules	60-80* handling/hour
5 modules	75-100* handling/hour

*The highest performance are related to terminal operating on both sides of the railway line.

Metrocargo vs traditional systems**	Traditional systems	Metrocargo
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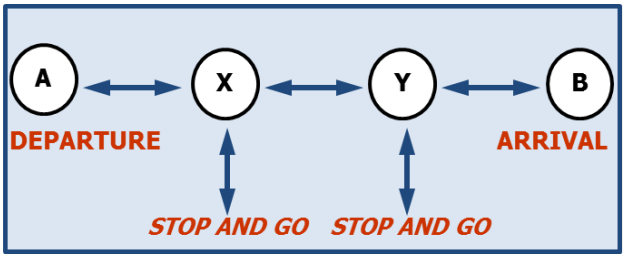
**Average values for a 500-m long train with a loading capacity of 70 TEU

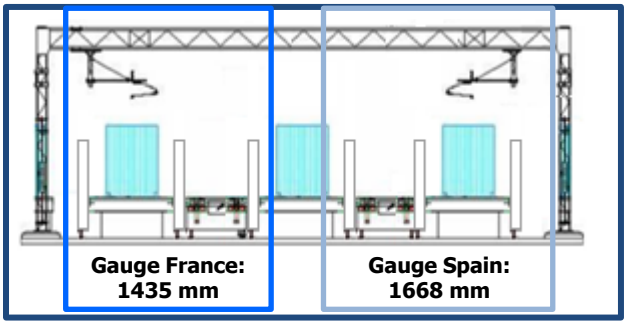
Application 1: Network creation

Nowadays a loaded block train leaves and goes to its destination to be unloaded. With Metrocargo it is possible to move **from a "point to point" to a "stop and go" approach**, creating a network for the first time.



Application 2: Break of gauge

Metrocargo can be installed on **railway lines with different gauges**. That flexibility allows a **fast and economical transhipment of goods**. Shunting activities are not required, space occupied by transhipment is reduced and the time for intermediate storage is limited.



About us

I.LOG - Iniziative Logistiche S.r.l. is an engineering company specialized in the **development and the promotion of innovative activities in the logistics field**. Founded in 2004, the company avails itself of the **collaboration of many international firms as partners** and has led European projects **VIT – Vision for Innovative Transport** and **MIT – Metrocargo Intermodal Transport**.

Metrocargo Automazioni S.r.l. is specialized in **design and manufacture of equipments and automated handling systems**. Headquartered in Genoa, the company is **committed to the engineering of Metrocargo** system.

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