Railways Ports Connections: from a bottleneck situation to a future added value: Port of Genoa Case Study

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General Considerations

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Port of Genoa Case Study
General Considerations
Railways are vital for Mediterranean ports because they can’t take advantage the geographical position as European Atlantic ports.
When there is a railway bottleneck, how can we improve the capacity?

> **Timetable strategy**
The cheapest way is to optimize your own timetable plan: you plan a clock-face timetable (the same timetable each hour or every 2 hours) in which the slot are assigned according to the average speed (omotachia analysis).

> **Signalling strategy**
If the line is equipped with an old signalling system, the signalling renewal of the line with the modern national ATP system (LZB in Germany) or with the new European ATP system ERTMS increases definitely the capacity.

> **Infrastructure strategy**
Different works options are possible:
- Main nodes: to split passenger traffic from freight traffic
- Yards works: to optimize operations in the freight yards
- New lines: to build new dedicated freight lines that match the freight trains issues
Signalling strategy

The increase of capacity with a new signalling system is related to the gap between the old and the new system.
2

Port of Genoa
Case Study
Genoa as the European Gate for the freight connection Europe/Far East
Theoretical inland aerea of the Port of Genoa

600 Kms
From a distance of 250/300kms to 800/1000 kms railways are the cheapest transport.
Actual bottlenecks in the Port of Genoa railway connections

Anyway there are other relevant problems as terminal restrictions, maximum train weight restrictions, maximum train length restrictions and loading gauge.

Mostly of the bottlenecks are related to the interferences between passenger traffic (long distance and regional) and freight traffic.
New investments in the infrastructure to eliminate the bottlenecks

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- New High speed/High Capacity line to improve the connection with the inland part of the port
- New junctions to split the different traffics (passengers long distance/regional freights)
- Yards capacity improvement
Increase of capacity

Split of the traffic modality in the metropolitan area.

Port of Genova inland connection analysis

Shift of traffic from road to rail
Decrease of negative externalities connected with the port activities

More competitiveness in the European port environment

A sustainable development of the port in harmony with the urban area
Thank you for your kind attention

Any question?