

# Specialised transport analysis on intermodal connections and penetration of the Ports of Genoa

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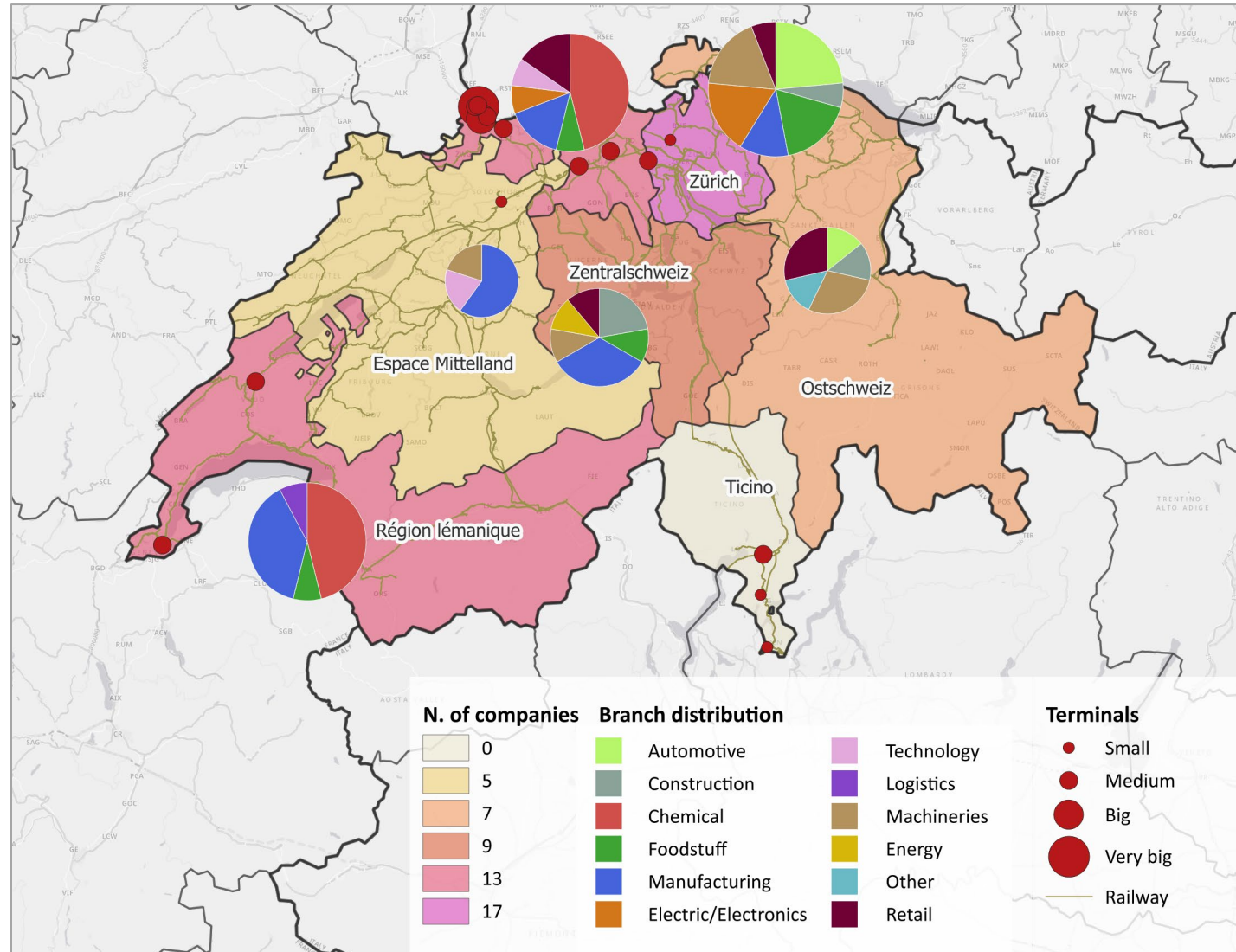
## Objective of the study

TRT, MC and TC are carrying out an in-depth activity for the Western Ligurian Sea Port Authority concerning the **intermodal penetration potential of the port system** with respect to Central European markets, with focus on specific target regions, namely **Switzerland, Austria, Baden-Württemberg** and **Bavaria**.

The activity analyses the **current supply and demand scenario** as well as a **perspective scenario** attributable to the completion of the infrastructural works planned in the area under analysis. An **estimate of the international trade volume** of the four regions is provided. The key **bottlenecks** in the study area are identified and analysed to assess their impact on intermodal flows.

The **cost of intermodal transport** is evaluated through the analysis of some case studies for shipments to and from the port of origin and destination, either via the Ports of Genoa or through one of the Northern Range ports.

# Demand and Supply (Switzerland)



**Population (2019)**  
8.6 million inhabitants

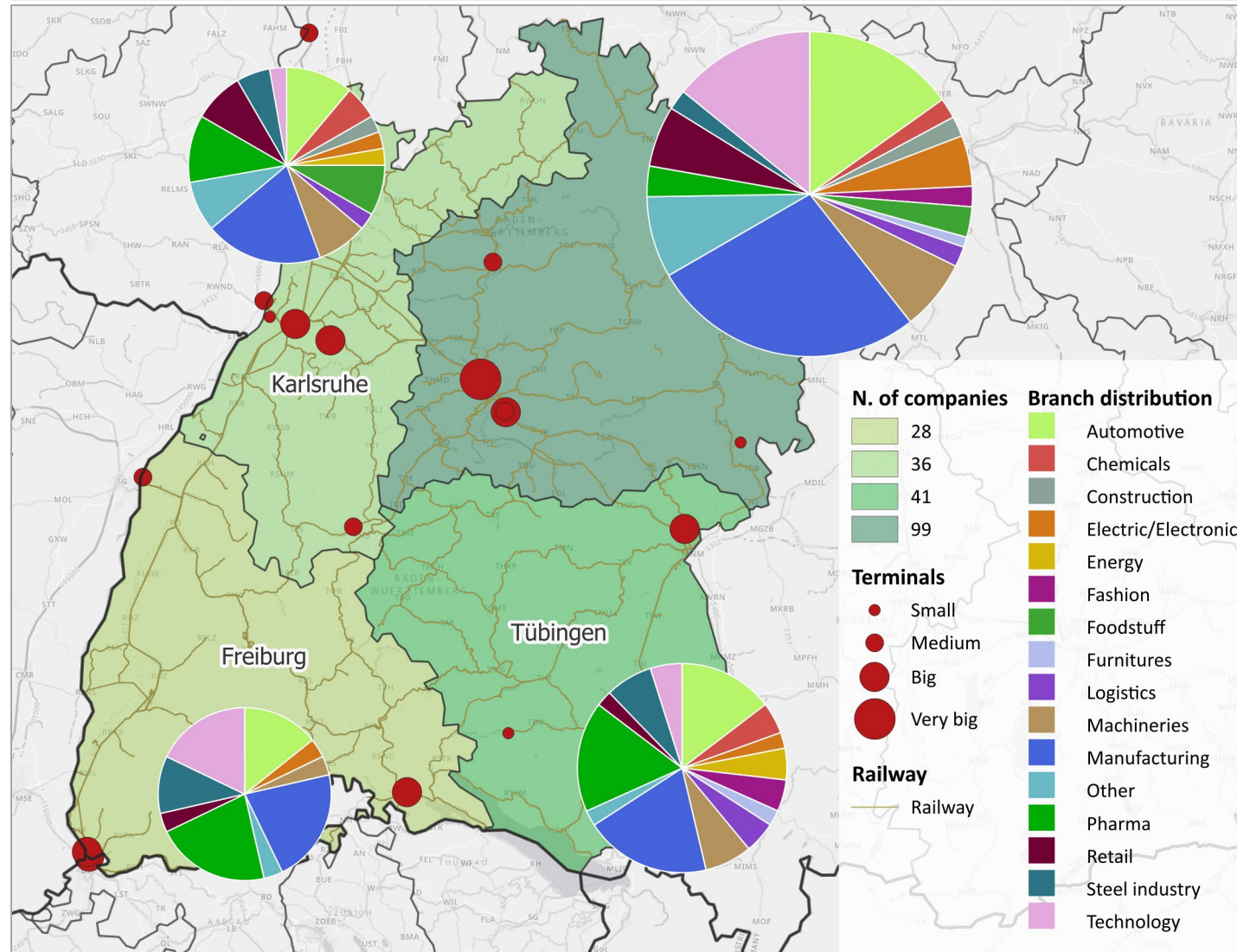
**GDP (2021)**  
687.6 billion €

**Top industrial & Retail sector by revenue (2022)**  
Chemical ≈ 191 billion €

**Top industry company for revenue (2023)**  
Nestlé, Vevey (HQ)  
Foodstuff sector

**The biggest intermodal terminal**  
Basel Nord – *Basel*  
Planned, to be opened in 2029

# Demand and Supply (Baden-Württemberg)



**Population (2021)**  
11.1 million inhabitants

**GDP (2021)**  
622 billion €

**Top industrial & Retail sector by revenue (2023)**  
Automotive ≈ 527 billion €

**Top industry company for revenue**  
Schwarz Gruppe, Neckarsulm (HQ)  
- Retail sector

**The biggest intermodal terminal**  
Kornwestheim Ubf DUSS –  
Stuttgart  
Ludwigshafen KTL - Rheinhessen-  
Pfalz

## Rail volume estimates to and from major northern ports

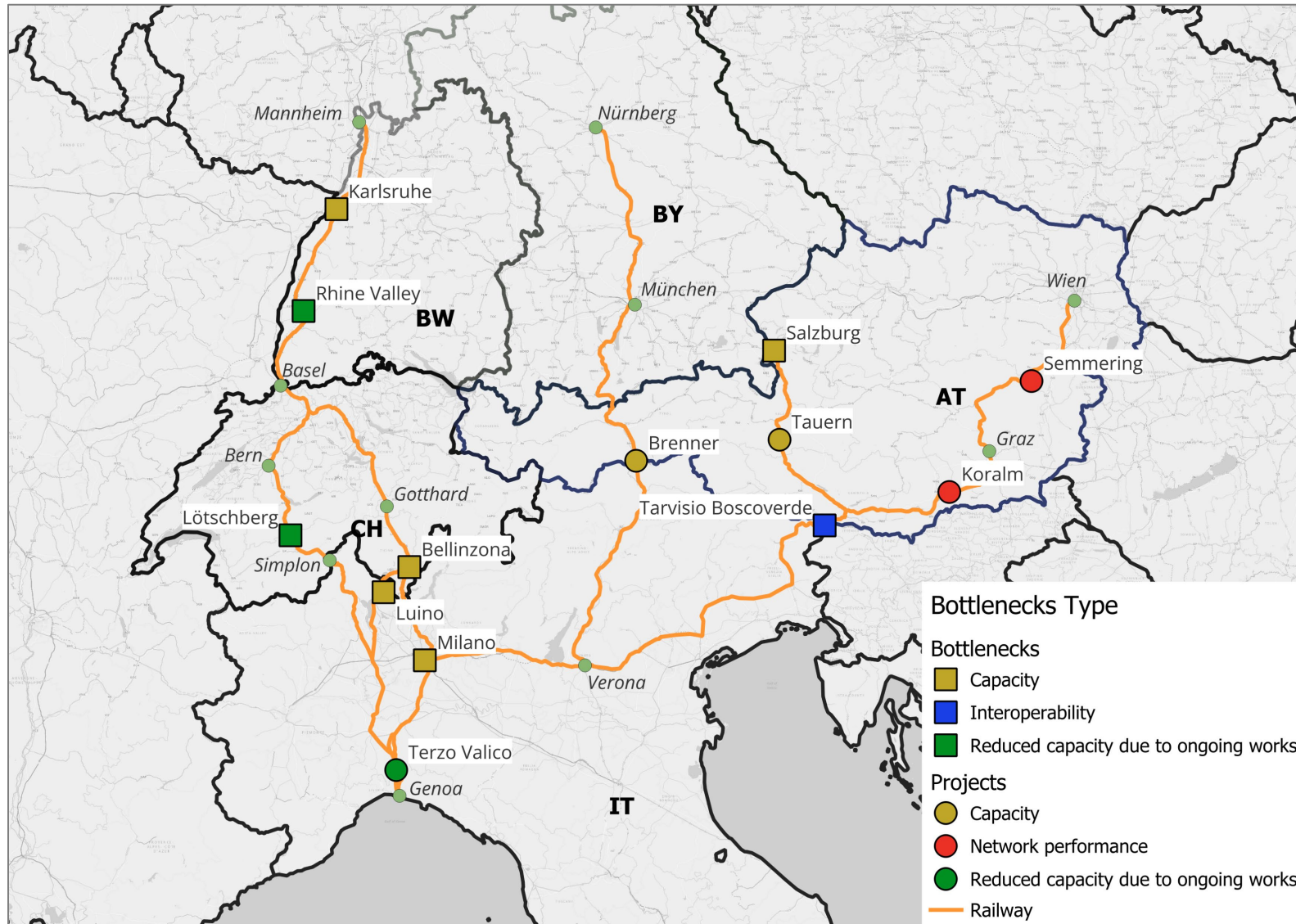
- 2023 data estimations
- TEUs

	Switzerland	Austria	Baden-Württemberg	Bavaria
Antwerp	46.000 <sup>(1)</sup>	47.500	42.000	-
Bremerhaven	3.000	114.000	144.000	234.000
Hamburg	22.000	287.630	474.000	559.000
Rotterdam	46.000 <sup>(1)</sup>	68.400	18.000	-
Wilhelmshaven	-	-	19.000	39.000
Total	117.000	517.530	697.000	832.000

<sup>(1)</sup>: the estimations refer to the aggregate sum of the ports of Antwerp and Rotterdam



# Bottlenecks and main investments



**Brenner** - transports from the Vorarlberg region, Tyrol and parts of Salzburg to Italy.

**Karlsruhe and Basel** - completion of new tracks expected in 2035.

**Lötschberg base tunnel** – completion of the second tube expected for 2034.

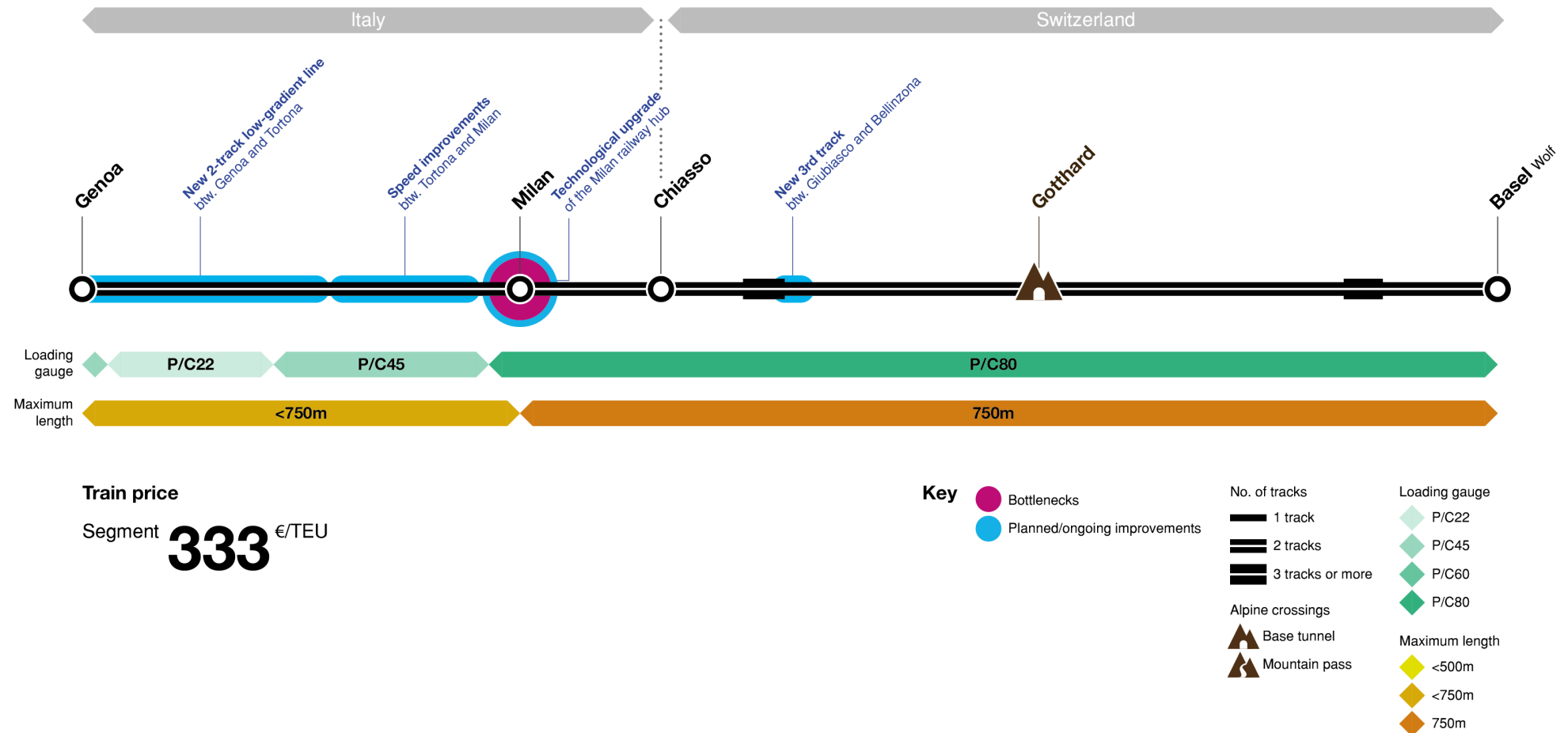
**Luino** - single track.

**Bellinzona** - steep gradient.

**Terzo Valico** – completion expected for 2028.

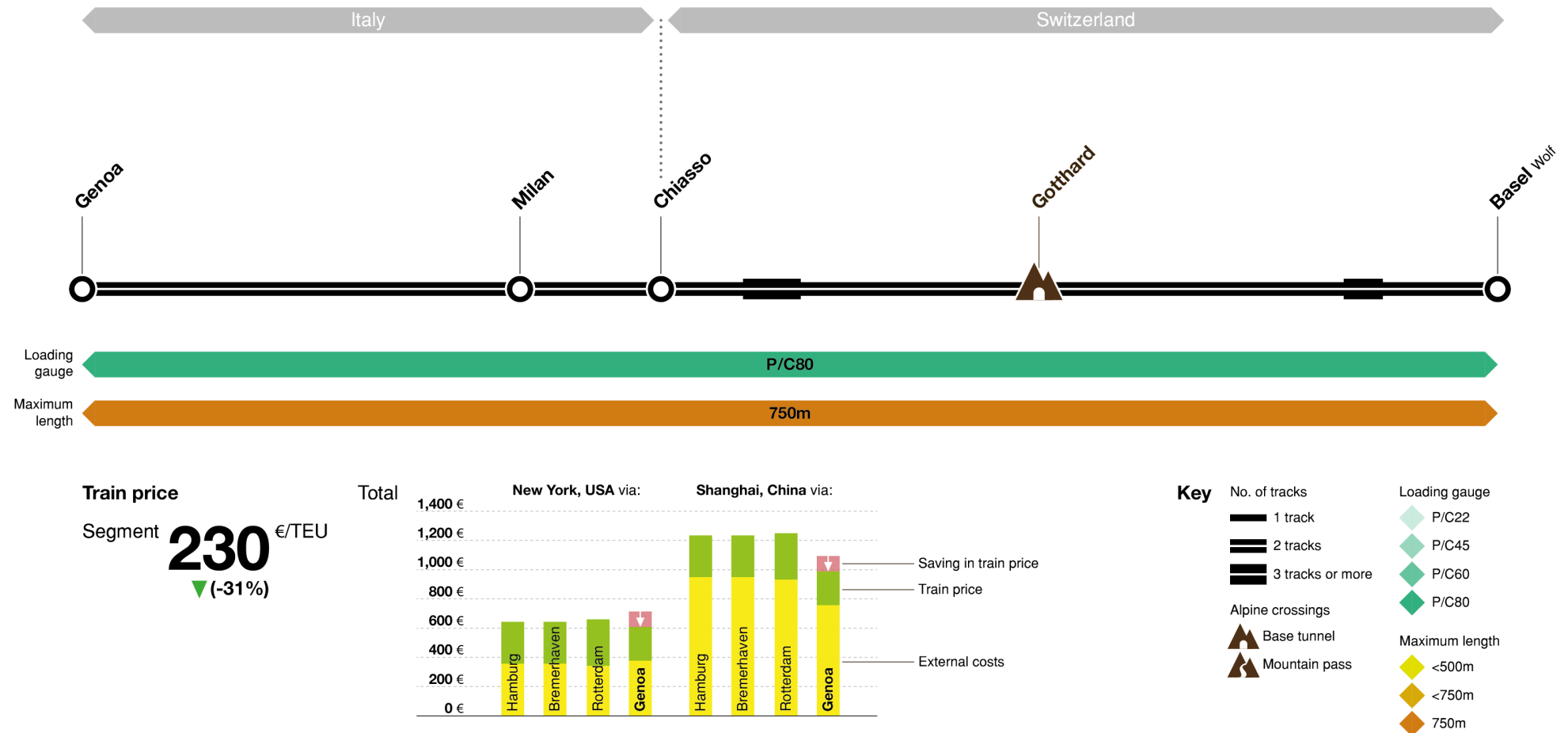
# Quantification of the cost of intermodal transport

Genoa ↔ Basel (via Gotthard) | Current situation



# Quantification of the cost of intermodal transport

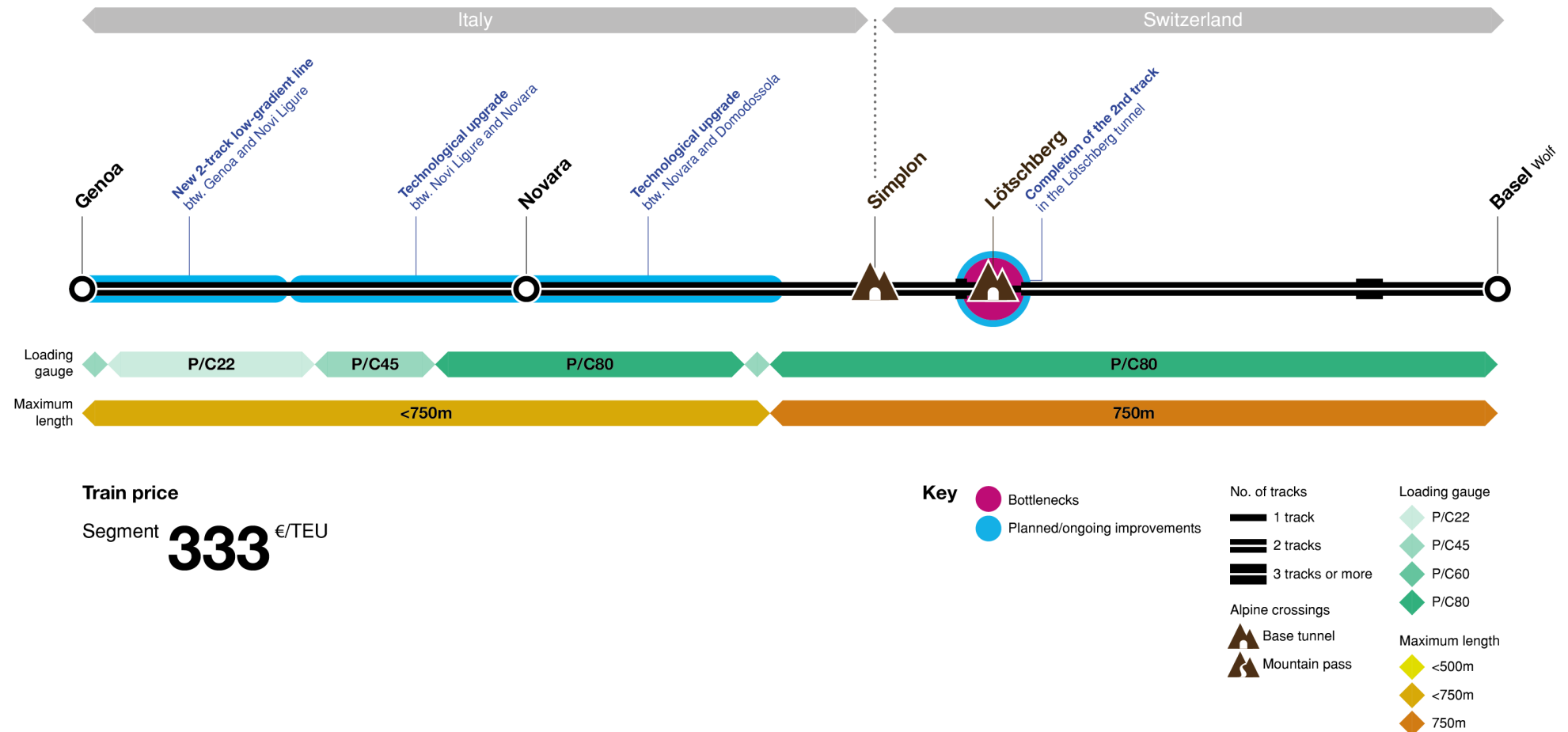
Genoa ↔ Basel (via Gotthard) | Situation after improvements





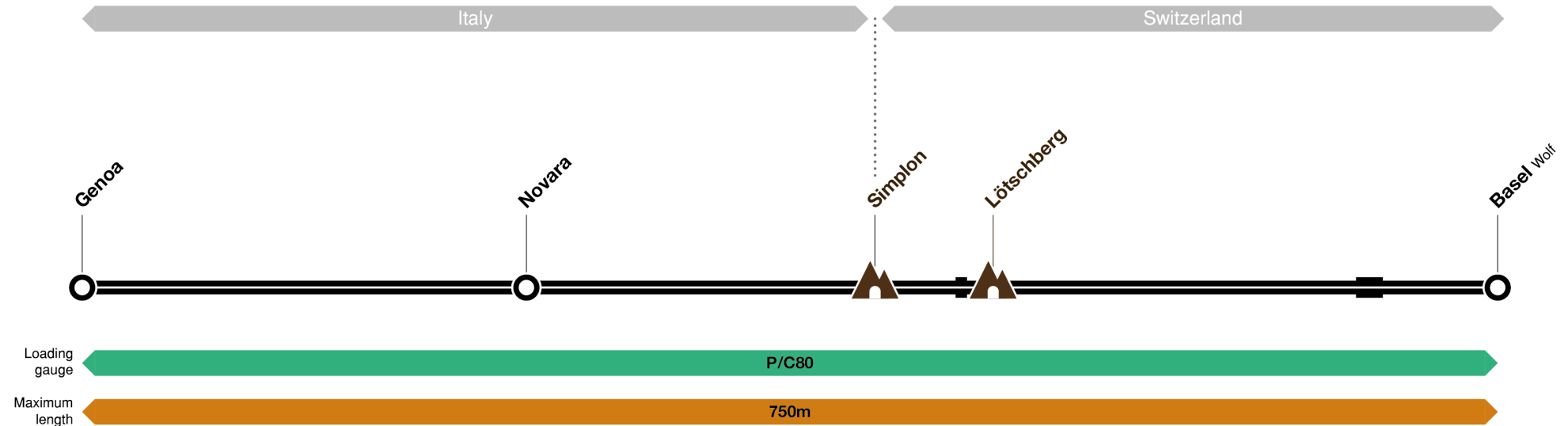
# Quantification of the cost of intermodal transport

Genoa ↔ Basel (via Simplon) | Current situation

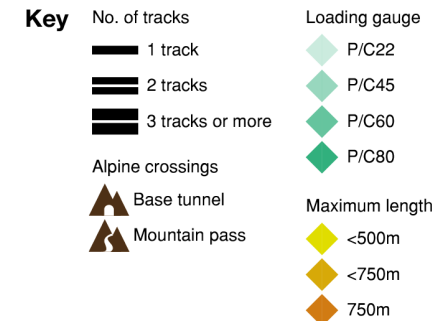
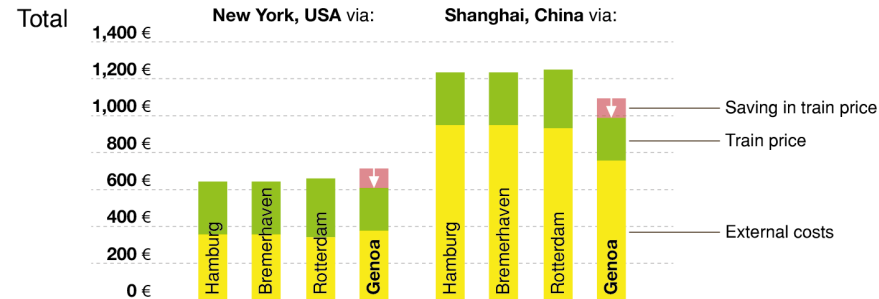


# Quantification of the cost of intermodal transport

Genoa ↔ Basel (via Simplon) | Situation after improvements

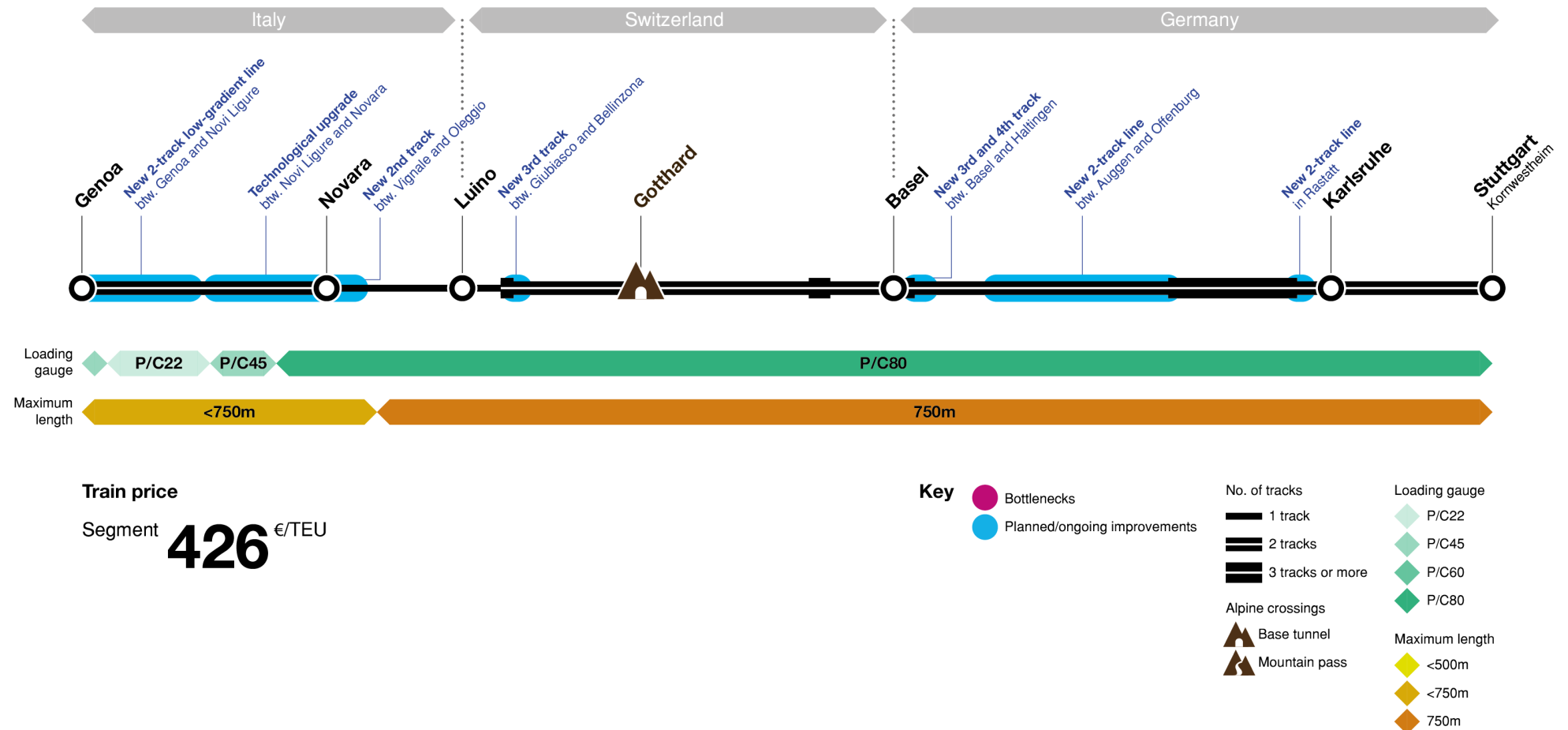


**Train price**  
Segment **230** €/TEU  
▼ (-31%)



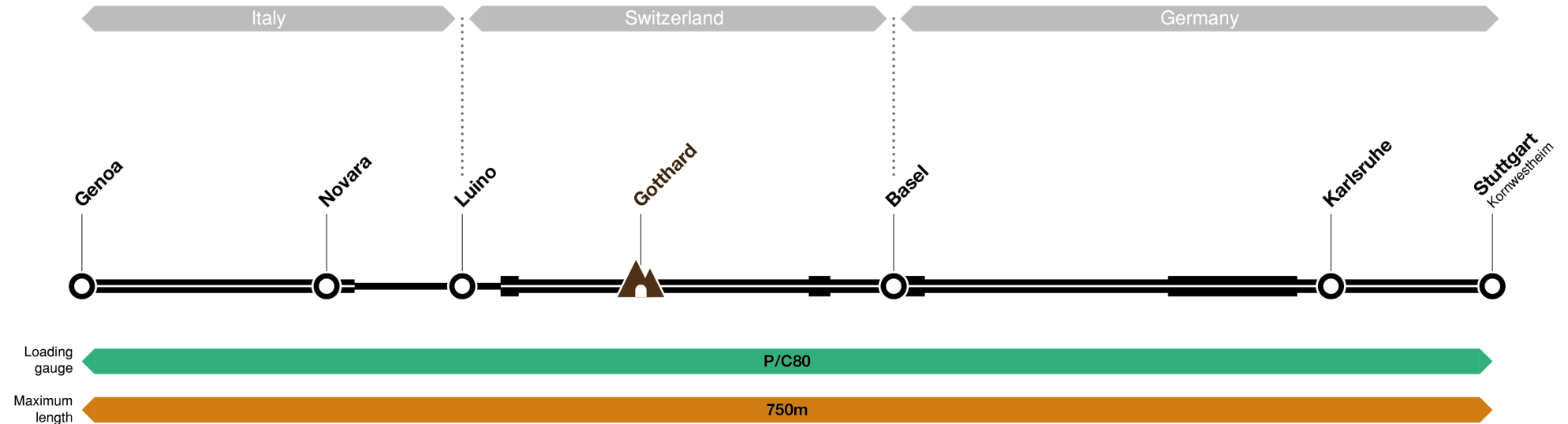
# Quantification of the cost of intermodal transport

Genoa ↔ Stuttgart | Current situation



# Quantification of the cost of intermodal transport

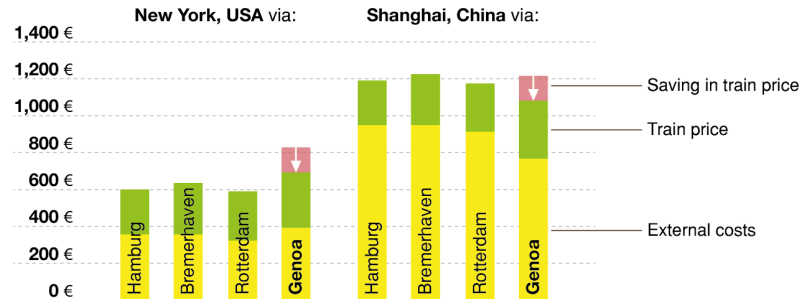
Genoa ↔ Stuttgart | Situation after improvements



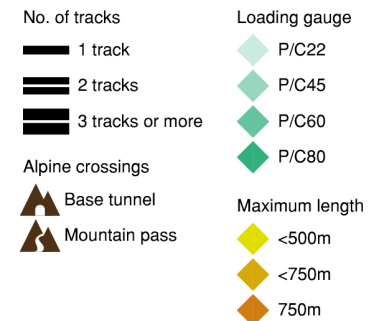
Train price

Segment **285** €/TEU  
▼ (-33%)

Total

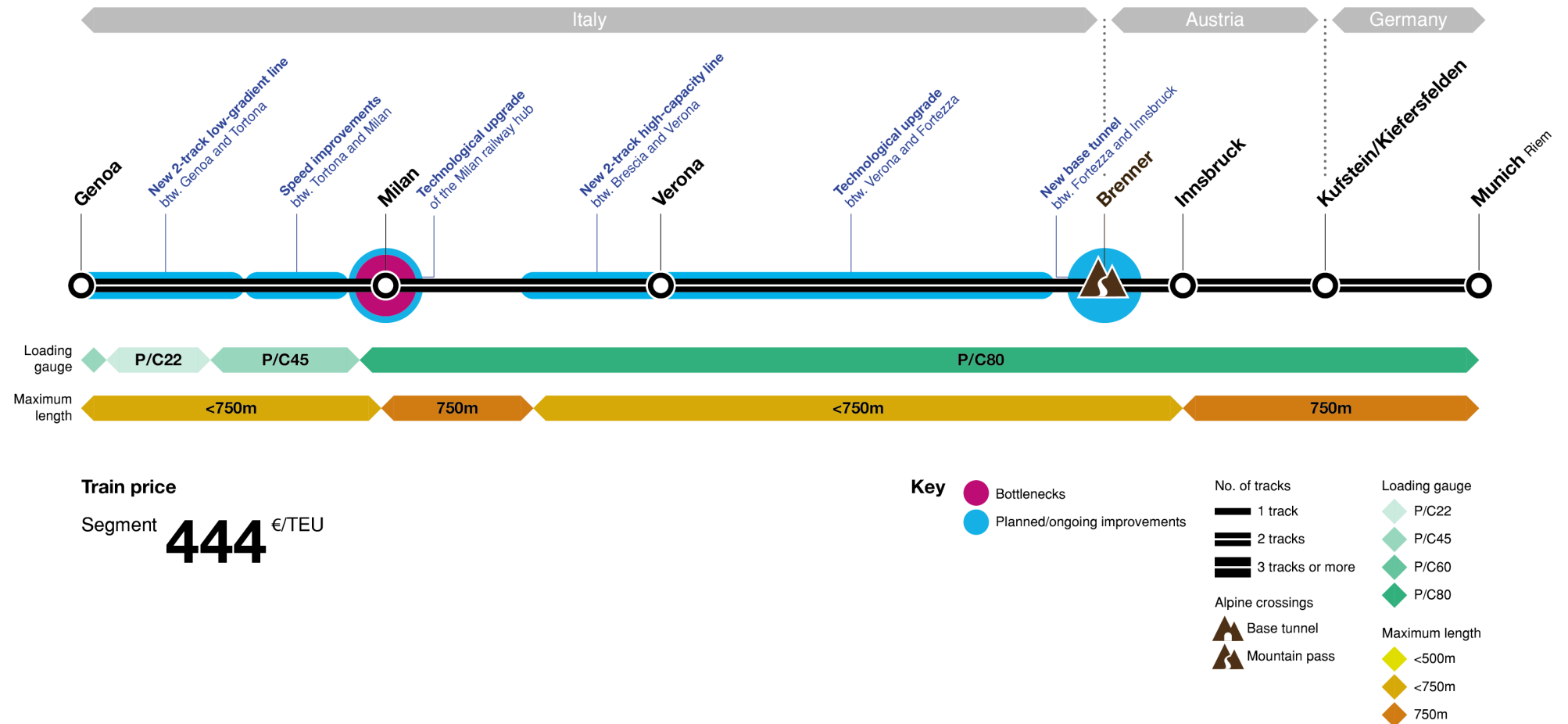


Key



# Quantification of the cost of intermodal transport

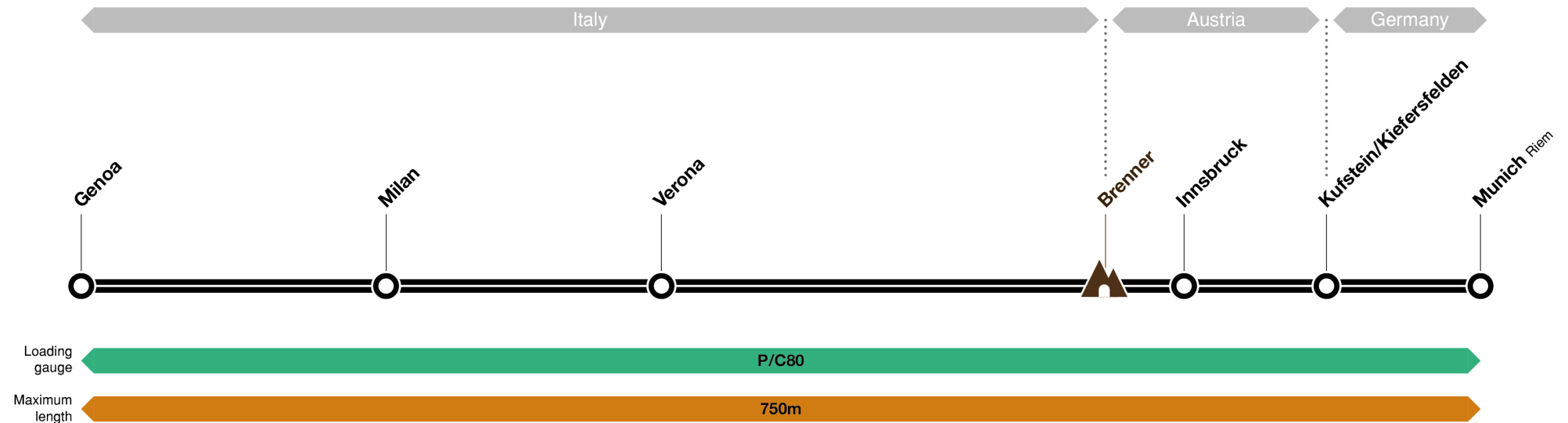
Genoa ↔ Munich | Current situation





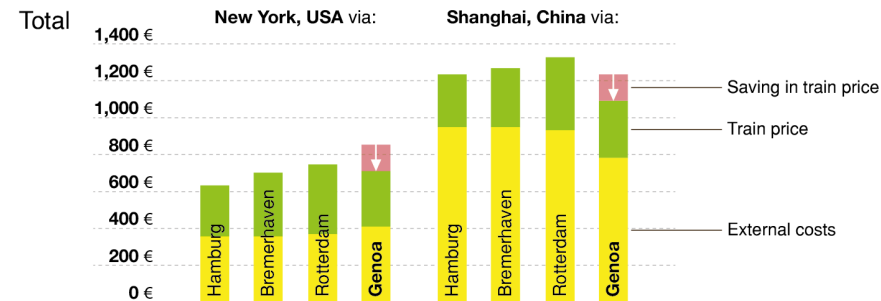
# Quantification of the cost of intermodal transport

Genoa ↔ Munich | Situation after improvements



## Train price

Segment **296** €/TEU  
▼ (-33%)



## Key

- No. of tracks
  - 1 track
  - 2 tracks
  - 3 tracks or more
- Alpine crossings
  - Base tunnel
  - Mountain pass
- Loading gauge
  - P/C22
  - P/C45
  - P/C60
  - P/C80
- Maximum length
  - <500m
  - <750m
  - 750m

## Main conclusions

- ❖ *LEADING ECONOMIC AND INDUSTRIAL CLUSTERS*

*Switzerland **chemical**, Austria **retail**, Baden-Württemberg and Bavaria **automotive**.*

- ❖ *MAIN INTERMODAL TERMINALS LOCATION*

*Switzerland **Basel area***

*Austria key hubs in **Vienna, Enns, Linz**,*

*Baden-Württemberg, some major terminals in **neighbouring regions** (managed by DB's DUSS)*

*Bavaria's **Nürnberg** TriCon, **Regensburg** and **München**-Riem (managed by Bayernhafen)*

- ❖ *OVERALL INTERNATIONAL TRADE VOLUME **around 2 million loaded TEUs***

**The Ports of Genoa**

**currently handle a small share** despite shorter route to the Far East

have the **potential to increase their market share**, as pressure on external costs is growing

## Main conclusions

- ❖ The **Brenner** plays a distinct role in Austria's traffic to and from Italy
- ❖ Traffic between the Ports of Genoa and Switzerland or Baden-Württemberg uses the Rhine-Alpine corridor, where improvement on the rail capacity **between Karlsruhe and Basel** is expected
- ❖ Switzerland also benefits of the **Gotthard** and the **Lötschberg-Simplon** route. The potential of the Lötschberg base tunnel cannot be fully exploited yet
- ❖ In Italy, the **Terzo Valico** project will bring additional capacity between Tortona and Genoa
- ❖ On the maritime side, the Ports of Genoa's competitiveness stands out for **connections with the Med regions, Middle and Far East**
- ❖ On the land side, the Ports of Genoa suffer from the current limited standard of the Italian network

With the completion of the ongoing infrastructural enhancements, longer and more efficient trains will be operated, **significantly boosting the competitiveness of the port of Genoa.**

# Thank you for your attention!

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logistic