

CROSS-BORDER MOBILITY

DEPARTMENT : ALPES MARITIMES - LIGURIA

MASTER 1 TRANSPORT, TERRITOIRE, ENVIRONNEMENT
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What are the main challenges of cross-border mobility in the Alpes-Maritimes department ?

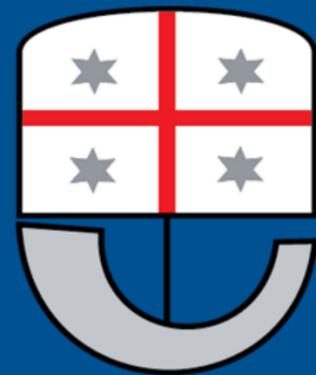
SUMMARY

- TERRITORY ANALYSIS
- PROBLEMS RELATED TO MOBILITY
- SUGGESTED SOLUTIONS



FIRST PART : TERRITORY ANALYSIS

A. Territorial diagnosis



REGIONE LIGURIA



DÉPARTEMENT
DES ALPES-MARITIMES



Principauté de Monaco

FIRST PART : TERRITORY ANALYSIS

A. Territorial diagnosis



The Alpes Maritimes department is located in the South East of France with Italy and the Principality of Monaco as border countries. The department is a valley surrounded by the Alps and the sea.

It has more than a million inhabitants in 2020.

+ 1 500 000 inhabitants

Liguria

+ 1 000 000 inhabitants

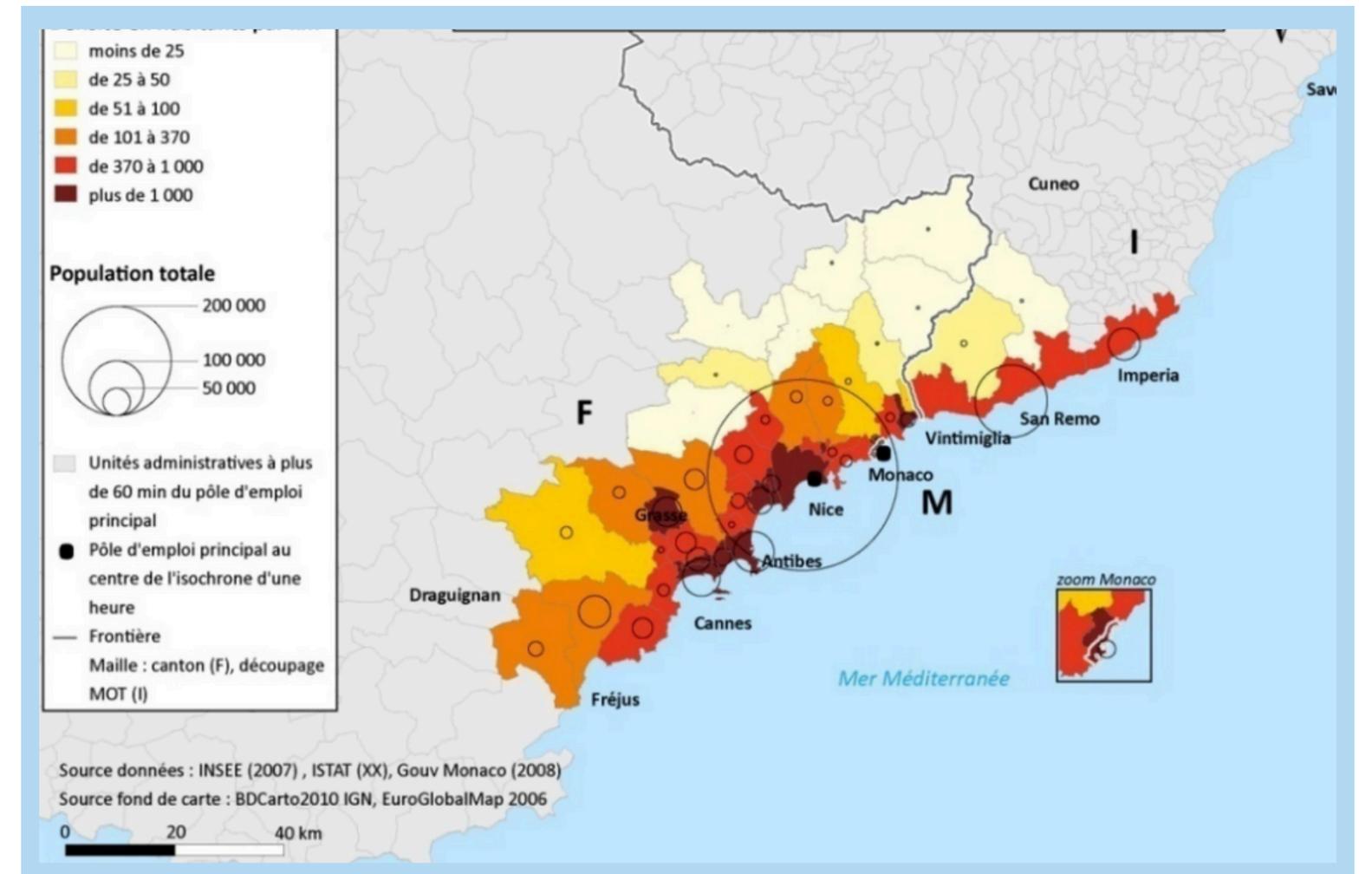
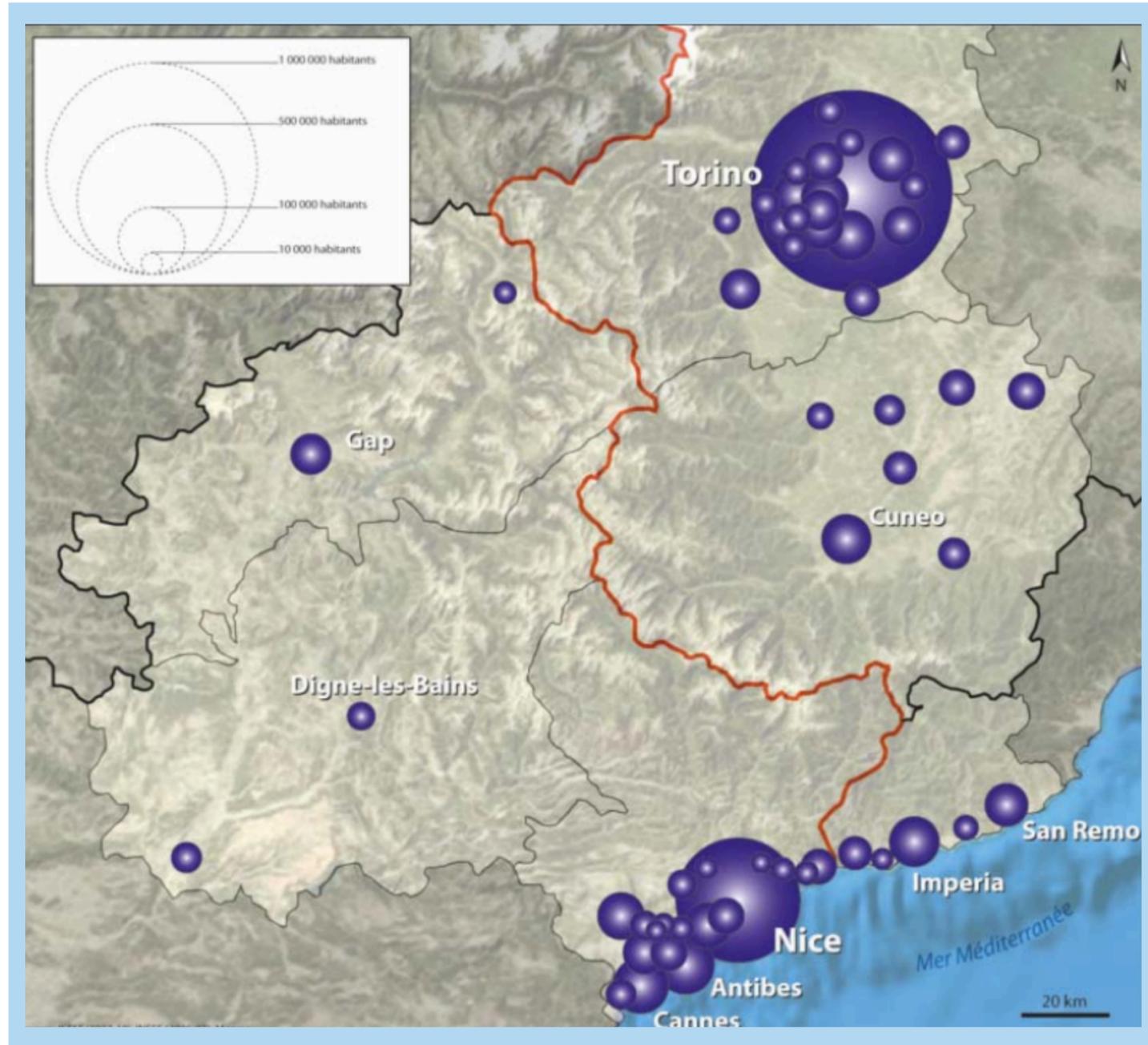
Maritimes-Alps

Maritimes-Alps
+ 4 000km²

Liguria
+ 5 000km²

FIRST PART : TERRITORY ANALYSIS

A. Territorial diagnosis

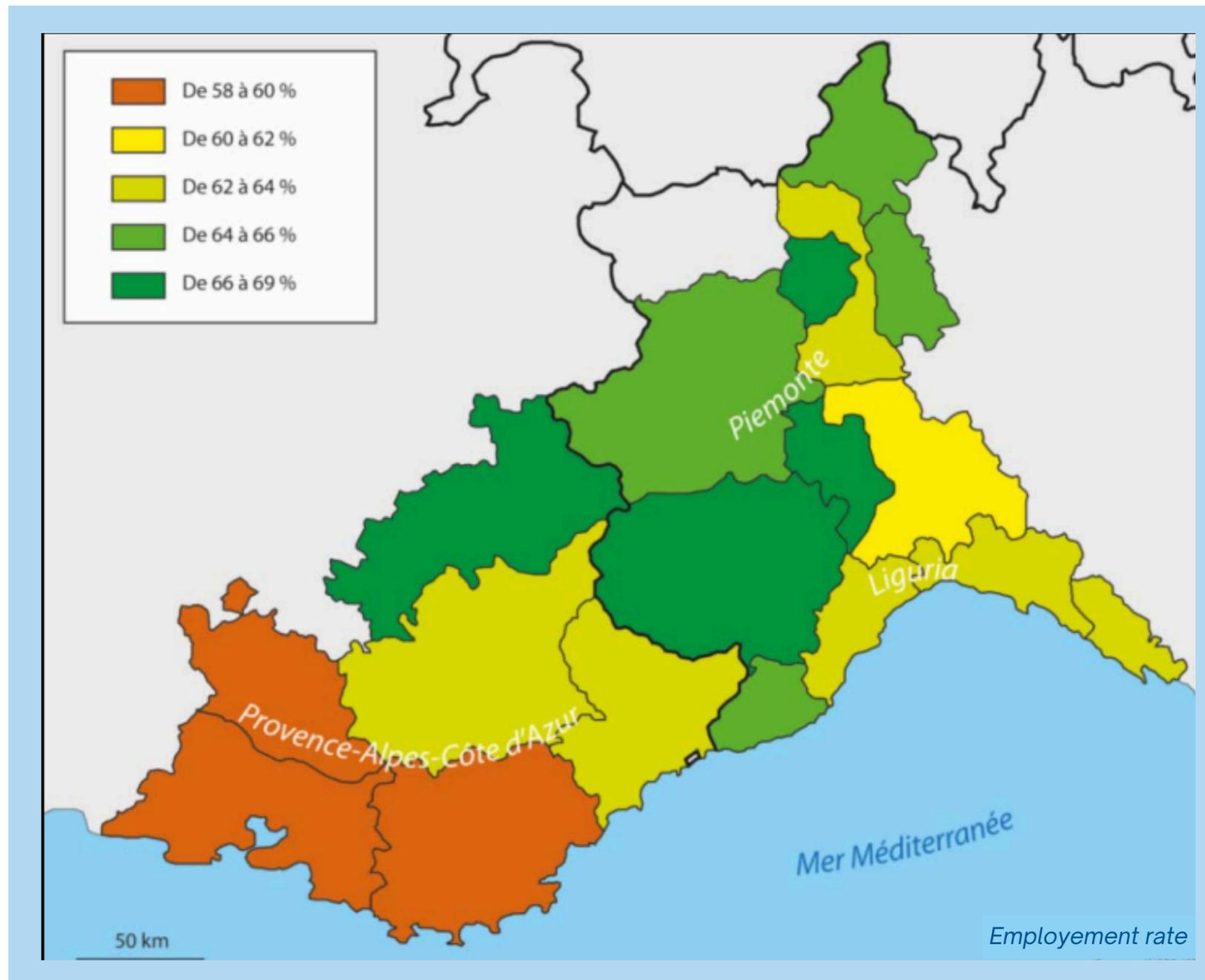


On the French side, the Riviera coastline includes three urban areas: Nice, Cannes-Antibes-Grasse, and Monaco-Menton. This urbanization extends into Italy through the towns of Ventimiglia, Bordighera, San Remo, and Imperia, forming a cross-border conurbation.

On the Italian side, Turin serves as the primary economic center. However, there is no urban center along the coastal area of Italy that rivals Turin in economic significance.

FIRST PART : TERRITORY ANALYSIS

A. Territorial diagnosis

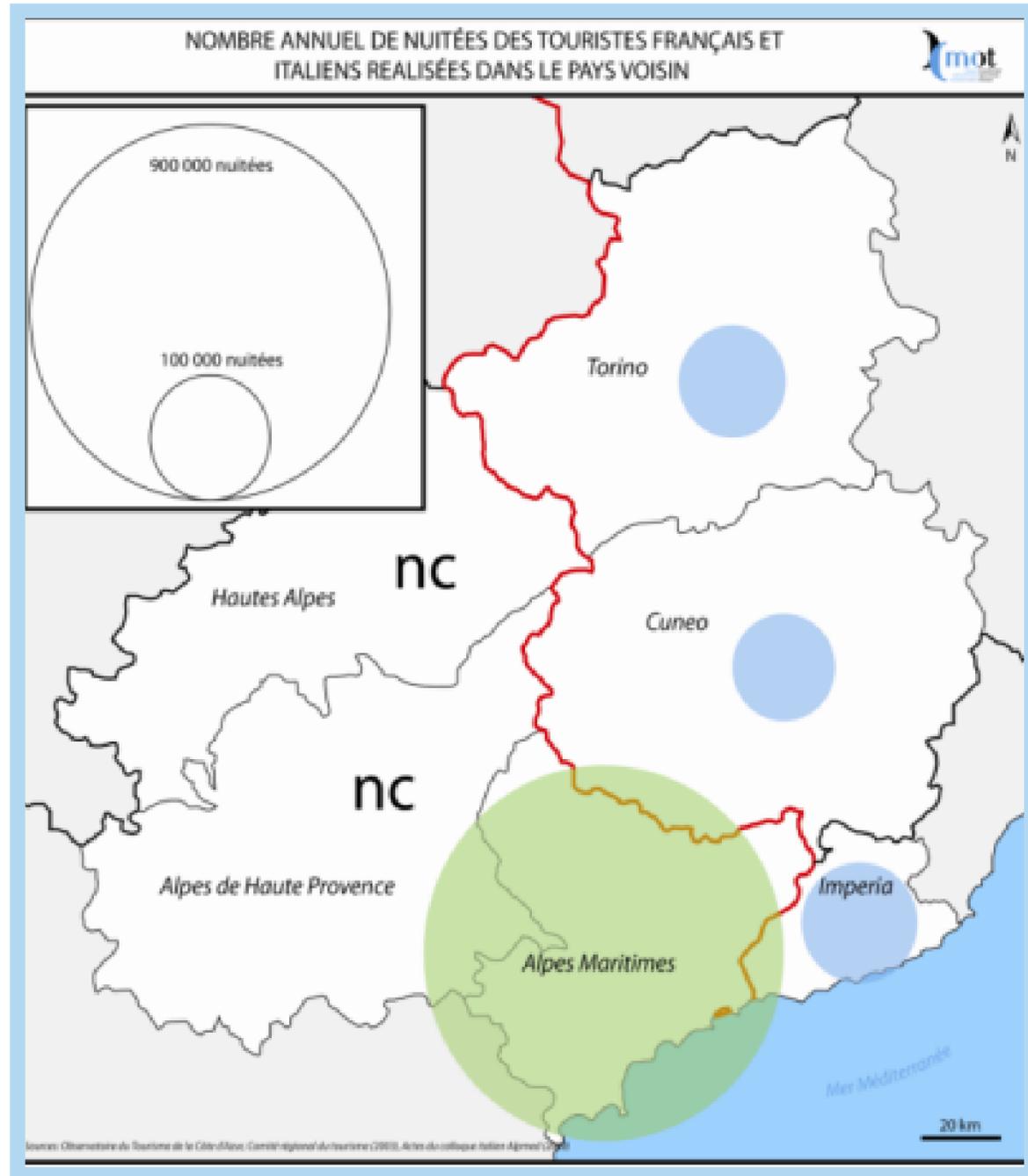


Employment in the region

- In the PACA (Provence-Alpes-Côte d'Azur) and Liguria regions, which heavily rely on tourism, the distribution of the active population by sectors of activity is relatively similar. Service activities, administration, and commerce account for 79% of total jobs in PACA and 78% in Liguria. The industrial and agricultural sectors are more prominent on the Italian side compared to the French side.
- Agriculture is less represented in all three regions due to the physical characteristics of the territory
- The construction sector has a similar share of employment (between 7% and 9%) across the three regions.
- On an interregional scale, the employment rate is higher on the Italian side compared to the French side, indicating better utilization of labor resources in the Italian economy. Border provinces like Torino, Cuneo, and Imperia have higher employment rates than other parts of their respective regions.

FIRST PART : TERRITORY ANALYSIS

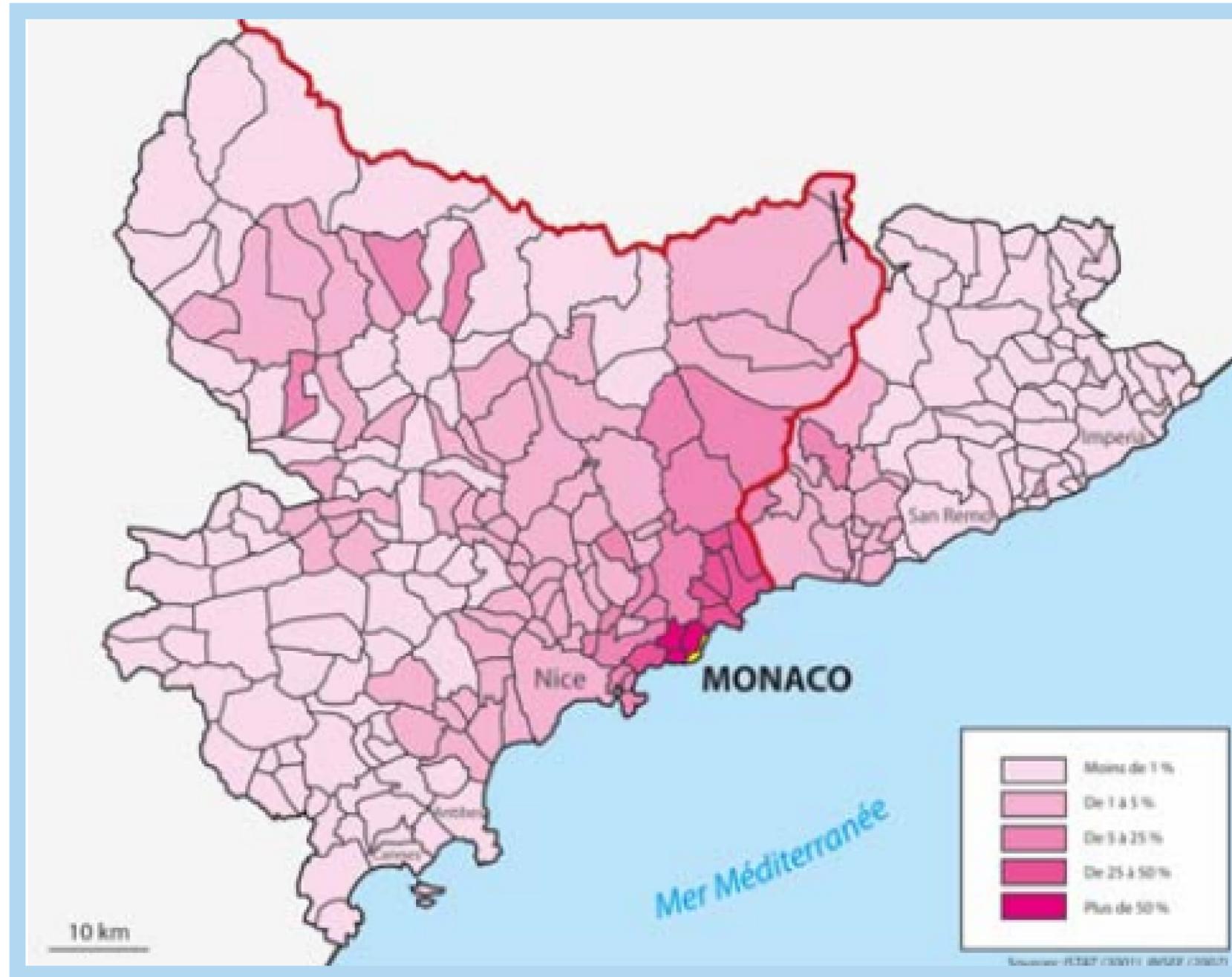
A. Territorial diagnosis



- Most cross-border workers between France and Italy are concentrated along the coastal strip, primarily from Italy to France.
- The majority of cross-border workers from Alpes-Maritimes to Italy are residents of Nice and Menton.
- In the province of Imperia, which has more workers commuting to France than the reverse direction
- The significant presence of Monaco, attracting thousands French and Italian cross-border workers daily

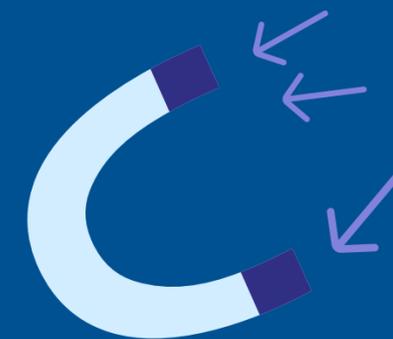
FIRST PART : TERRITORY ANALYSIS

A. Territorial diagnosis



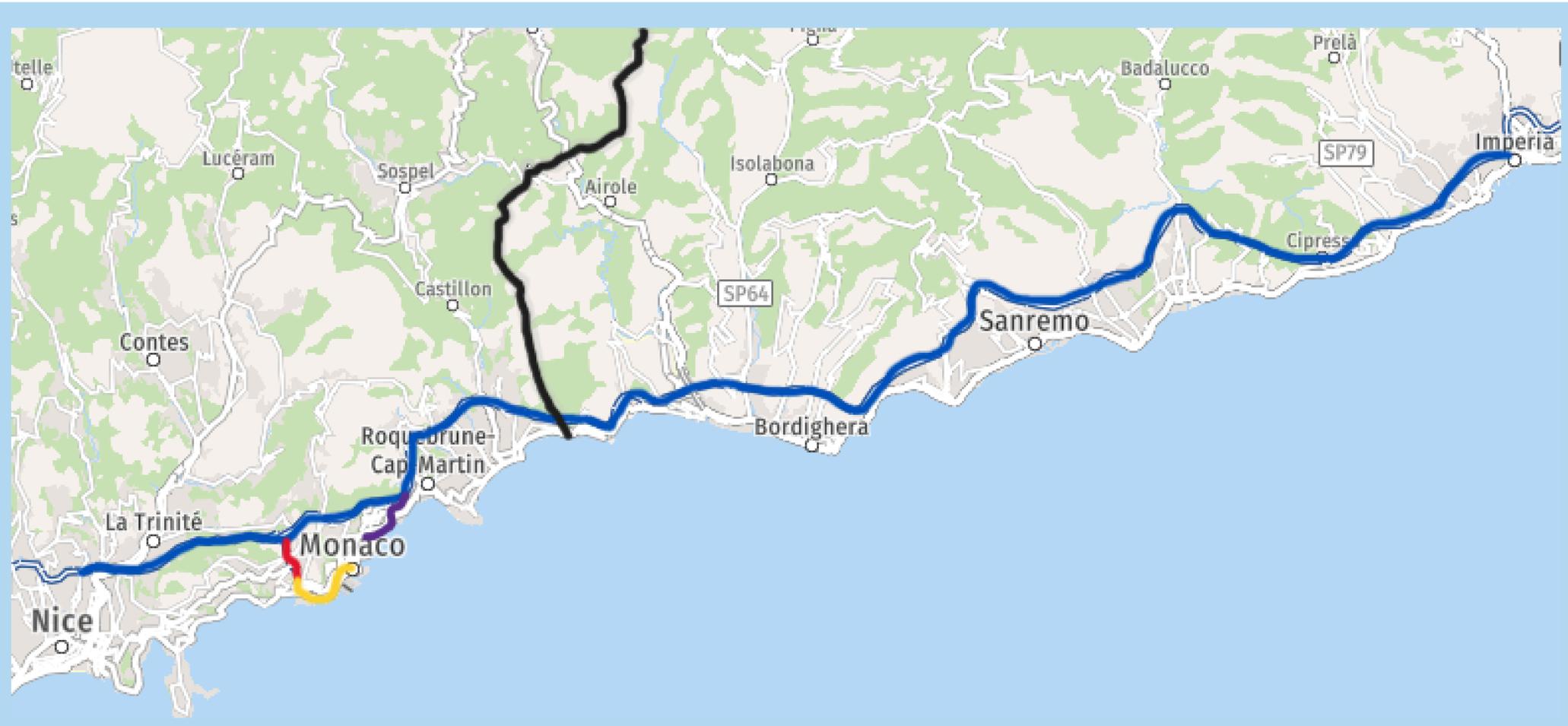
Monaco, attractive center

- Monaco is a major employment center with nearly 46,000 jobs, making it the second largest in the cross-border area after Nice.
- The majority of jobs in Monaco (38,426) are held by cross-border workers, with 90% from France (34,370) and 10% from Italy (3,696).
- Monaco's attractiveness is due to high salaries, favorable taxation, and quality job opportunities. Many workers commute daily from nearby areas in France and Italy because housing prices in Monaco are extremely high.



FIRST PART : TERRITORY ANALYSIS

B. Means of transport 1. Road infrastrucutre



- Nice - Monaco : A8 - A500 - D6007 - 30 minutes
- Nice - Impéria : A8/E80 - 1 hour 10 minutes
- Impéria - Monaco : E80 /A8 - D51/D6007 - 1 hour

- The main crossing points are concentrated along the coastline, where both major European highways and smaller local roads are located. It is here that cross-border flows are the most significant.
- In the Alpes-Maritimes, the private company Vinci Autoroutes - ESCOTA manages the A8, and A500 highways. In Italy, it's the operator Autostrade per l'Italia, a subsidiary of Atlantia, that manages the E80. Regarding the departmental roads present along the coast, it is the Alpes-Maritimes Departmental Council that manages them.
- These operators are responsible for the management and operation of the roads.

Reminder :

The E80 and the A8 are the same road, where "E" denotes European Route, meaning a road that traverses several European countries.



FIRST PART : TERRITORY ANALYSIS



B. Means of transport 2. Airport infrastructure

- The cross-border area benefits from the presence of a significant airport that serves both sides of the border. Indeed, Nice Airport is more attractive for residents of Liguria, in terms of service destinations and accessibility than Turino airport, which is the closest airport to the Liguria area.
- Nice Airport is a major gateway to the region, as well as an aerial gateway to Monaco, which is a 40-minute drive away.
- The Nice Airport is managed by the company Airport of the French Riviera (ACA), a French subsidiary of the Italian company Azzurra Aeroporti.

Buon Viaggio !



Comparative table of the two airports

	Nice Airport	Turin Airport
Geographical Location	In the city, by the sea	16km north of downtown Turin.
Offer / destination	120 direct flight destinations 44 pays	57 direct flights destinations 19 pays
Accessibility (from Imperia)	Personnal Véhicule : 1h30 Train : 2h30 - Gare TER Nice 10min walk away	Personnal Véhicule : 2h30 TC : 9h
Traffic passenger	12 million passagers / year	4,6 million in 2019

Reminder :

The main italian airport is located in Milan, but it's at 3h30 away from Ligurie.

FIRST PART : TERRITORY ANALYSIS

B. Means of transport 3. Maritime transport



- The port of Nice is well-connected to neighboring Italian ports such as Genoa (main port in Liguria). These ports serve as entry and exit points for goods traveling between France and Italy
- The Port of Nice is a multi-activity commercial port. Its main activities include yachting, boating, cruises, and freight. Its integrated position within the city is an asset for tourist attractiveness, urban and local economic development.
- The exchanges between Nice and the port of Genoa are primarily related to freight. In fact, the port of Genoa is the largest industrial and commercial port in Italy in terms of space and traffic (58.6 million tons).
- There is a certain form of complementarity between the two cities : Genoa benefits from the proximity of Nice Airport, and Nice benefits from the proximity of the port of Genoa.



FIRST PART : TERRITORY ANALYSIS

B. Means of transport

4. Buses



ZOOM : MAP OF THE ZOU NETWORK ON THE ITALIAN BORDER



HOW IS BUS TRANSPORT ORGANIZED ?

- public network : 
- 2 main axes. The first links France to Monaco and the second links France to Italy.
- Bus travel between France and Italy is mainly used for long-distance international tourism. The lines France <-> Italy sometimes connect other European countries.
- There are 8 lines connecting France to Monaco.
- The 10 lines connecting France to Italy are lines All lines except line 25 are long-distance coach lines with a tourist vocation.

To go futher ...



FLIXBUS

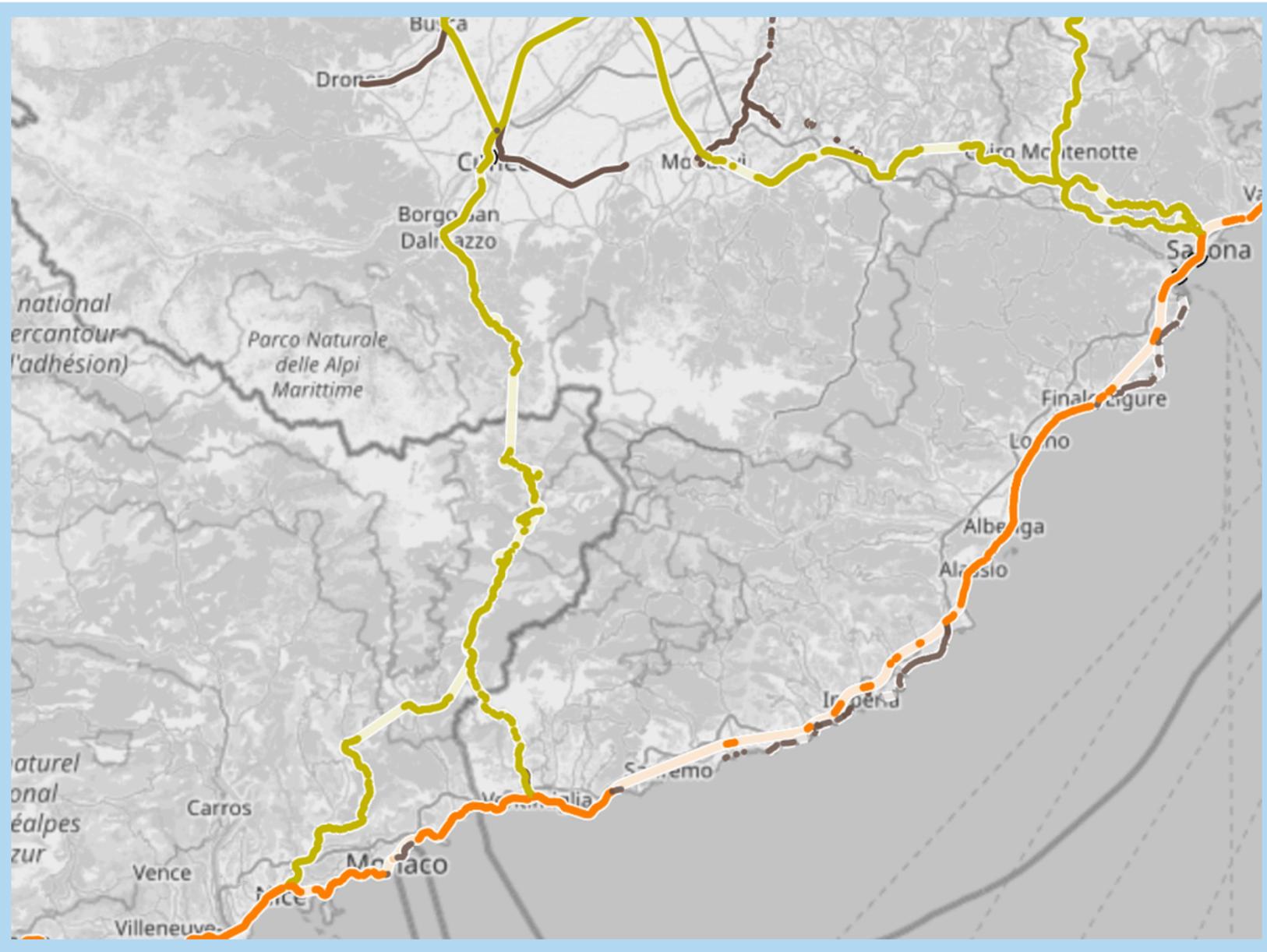
- In the Cross-border zone, there are only 3 stops: Nice, Genoa and Savona. In the French side, the Nice stop shows the importance of Nice and its metropolis compared to Monaco and Menton.
- The number of connections passing through this border shows its importance in the European area.



- Line 25 is a cross-border line connecting Menton to Tende with a stop in Ventimiglia in Italy.
- It connects Menton, Ventimiglia, Breil-sur-Roya, Saorge, Fontan, la Brigue and Tende.
- This non-scheduled line is operated by Keolis and is part of the Zest network.
- This line is organized by the Agglomeration of the French Riviera. It's a French MOA.

FIRST PART : TERRITORY ANALYSIS

B. Means of transport 5. Trains



Several railway lines cover the territory

- Two major railway lines connect France and Italy through the coast : the Genova - Ventimiglia line and the Marseille - Vintimille line.
- Two smaller railway lines crossing the Alps : the Coni - Ventimiglia line and the Brel-sur-Roya - Nice line.
- Built during the 19th and 20th centuries, these lines have a major role in the cross border mobility



FIRST PART : TERRITORY ANALYSIS

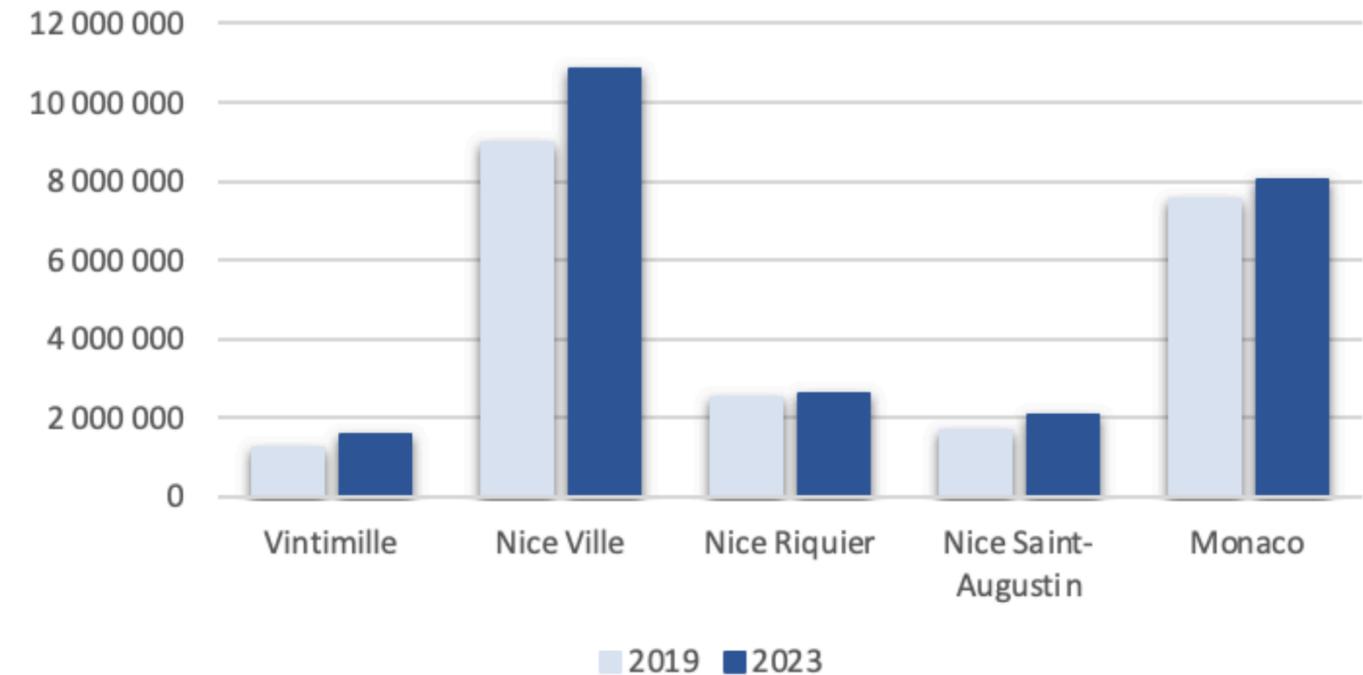
B. Means of transports

5. Trains



Marseille - Vintimille line

Train Stations attendance



On the French side, the Marseille - Vintimille line is the biggest railway line of the region.

94,5% of the railway traffic around Nice comes from the Grasse - Vintimille services. It is one of the 3 biggest TER services in France, with more than 95 trains a day (with only 65 of them crossing the border).

Though Monaco is the major attractive point of the line, Vintimille is still an important station with more than 1.5 million passenger transported in 2023.



FIRST PART : TERRITORY ANALYSIS

C. Mobilities

5. Trains



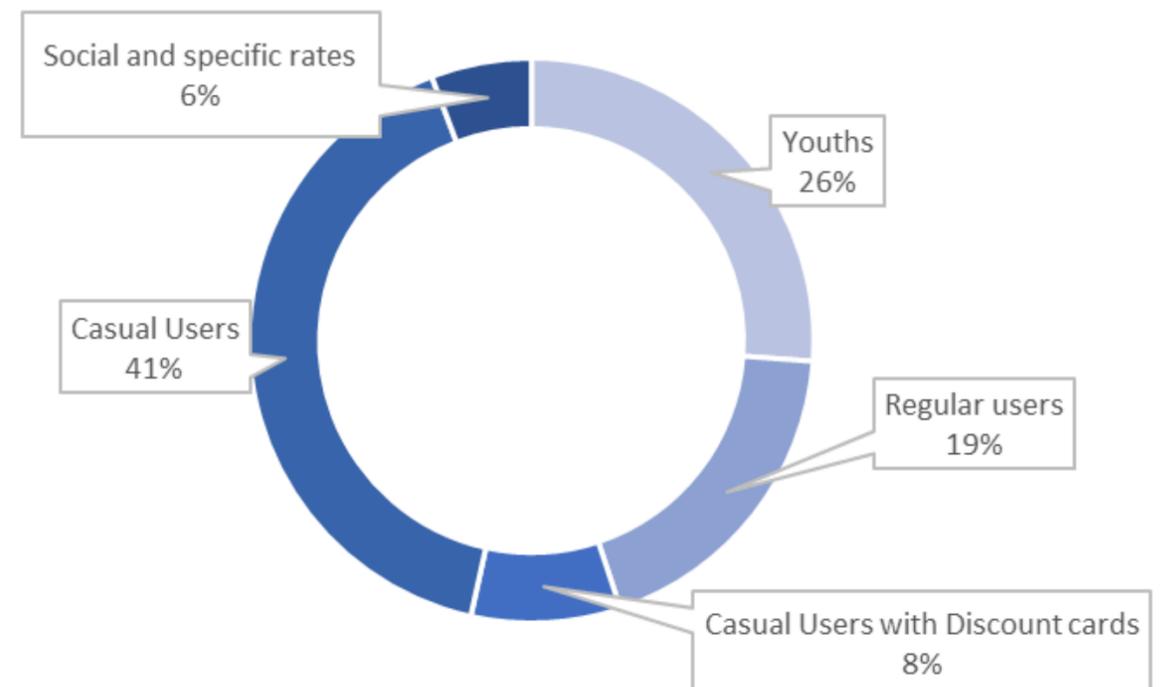
Coni - Ventimiglia and Nice - Breil lines

An interesting line from a political and geopolitical point of view !

Very few services a day on these lines, and under used for cross-border trips. The line could connect Nice and Turin in around 3h30, but multiples changes are required today.

Nowadays, it is mostly used in the French part by youths, workers and tourists

Nice-Breil-Tende line's users



A very political line



2ND PART : PROBLEMS RELATED TO MOBILITY

A. A relief territory



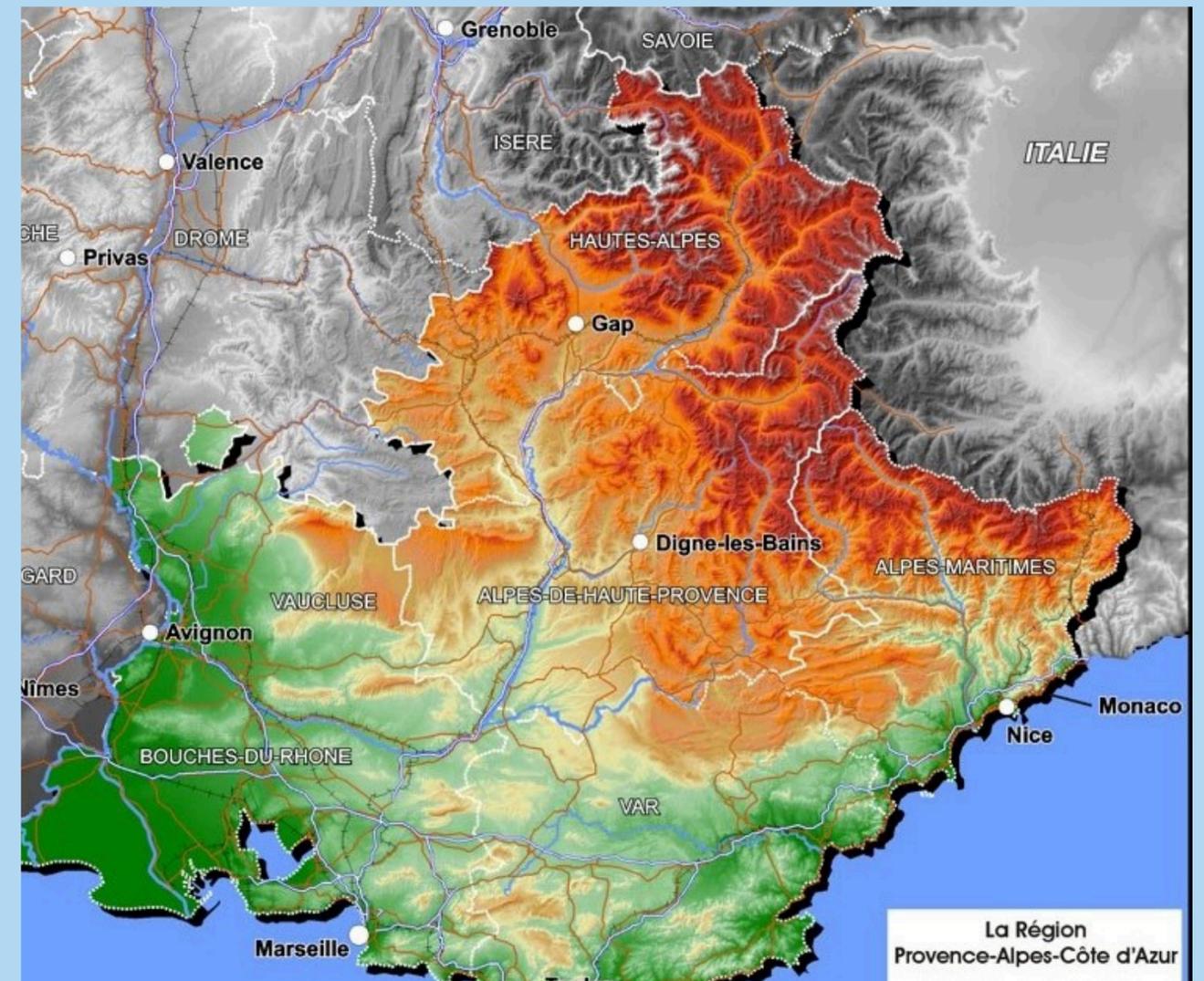
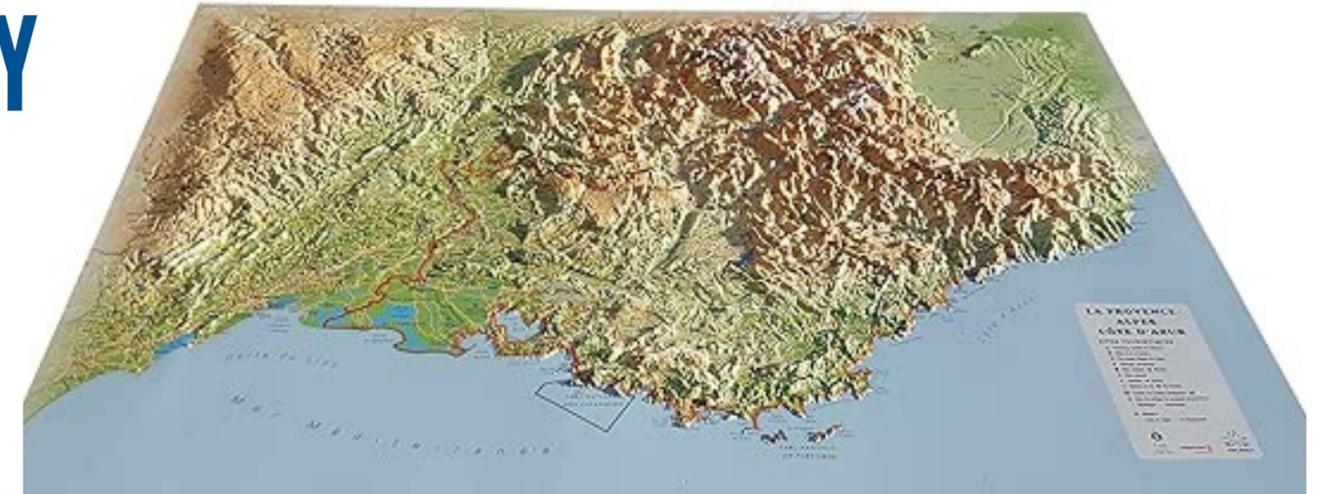
B. Traffic congestion



2ND PART : PROBLEMS RELATED TO MOBILITY

A. A relief territory

- The PACA region, particularly the Alps acting as a natural barrier with Italy, significantly hinders cross-border mobility and trade.
- Roads must navigate around mountains, increasing travel complexity and lengthening routes, despite efforts like tunnels and railways aimed at connecting both sides of the Alps.
- Limited available land near the border in the French coasts and Roya valley (on both French and Italian sides) constrains city expansion due to relief and protected natural areas.
- Urbanization is constrained by the scarcity of available land, leading to tensions between housing needs for locals, retirees settling in the area, and tourism, with expansion restricted by protected natural park areas.



2ND PART : PROBLEMS RELATED TO MOBILITY

B. Traffic congestion



TRAFFIC CONGESTION...

- In this geographical area, travel primarily occurs from East to West, from Italy towards Monaco and the Alpes-Maritimes.
- This trend results in significant traffic congestion along the coastline, especially during cross-border trips to Monaco. This congestion can be attributed to several factors, including :
 - Infrastructure problem, caused by the heavily concentrated urbanization along the coastline,
 - the distance between residential and daily work locations,
 - the growth of tourism. In fact, 53% of tourist arrive by road.

ONE CONSEQUENCE...

- The bus is a slower mode than the car and the train.
 - A train takes 36 minutes to connect Nice to Menton while a bus takes 1.5 hours.
- Traffic extension extends bus travel times.
 - This congestion being significant consequence on the travel time on the lines passing by the motorway increase or even barely doubles.
 - For example, line 80 (Nice Airport < > Menton) goes from a journey time of 50 minutes to more than an hour (or even an hour and a half).

2ND PART : PROBLEMS RELATED TO MOBILITY

B. Traffic congestion...also for trains



With most of the roads having traffic jam, lot of people chose the trains for their trips.

Cannes <> Nice <> Vintimille line carries more than 60 000 passengers per day (+20% vs 2019). Most of the trains are overcrowded, and trains congestion becomes a subject.

In 2025, services are going to increase a lot on this line, with more than 125 trains per day (+35%). However, there won't be more cross-border services due to the infrastructure capacity.

To increase capacity in the future, a European projet : the ERTMS. It will allow more trains to run, with reduced safety distances between trains, and more interoperability !

FINAL PART : SUGGESTED SOLUTIONS



A. Maritime shuttle



B. Reintroduction of cross-border services



FINAL PART : SUGGESTED SOLUTIONS

A. Maritime shuttle **ZOU!**



Why create maritime shuttles ?

- Road congestion
- An overcrowded rail network, which cannot meet demand alone
- A dependence on a main mode : the train
- A territorial asset: access to the sea
- Port infrastructure already present



FINAL PART : SUGGESTED SOLUTIONS

A. Maritime shuttle **ZOU!**

Integration into the regional network already exists : ZOU

- Allow intermodality
- More choice for users

Better quality of service :

- Less dependence on a single mode of transport
- A panoramic view



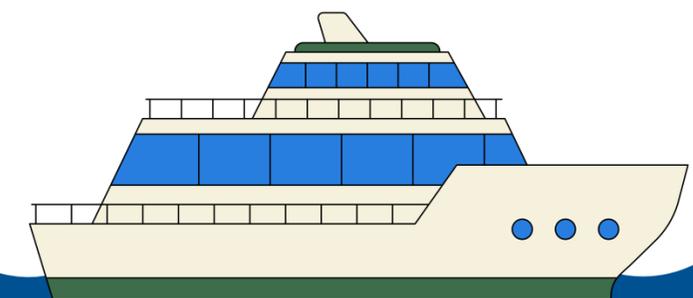
A PROMISING PROJECT

A low-carbon mode of transport :

- Use of shuttle with hybrid engine

An increase in supply :

- A new mode
- A frequency adapted to workers but also for tourism



FINAL PART : SUGGESTED SOLUTIONS

A. Maritime shuttle **ZOU!**



Creation of four maritime shuttles:

-  Cannes - Nice - Monaco
-  Antibes - Nice - Monaco
-  Nice - Menton - Ventimiglia
-  Monaco - Menton - Ventimiglia

Line frequency :

- A shuttle every 30 minutes
- A shuttle every 20 minutes during morning rush hour (towards Nice and Monaco)
- A shuttle every 20 minutes during rush hour in the evening (from Nice and Monaco)

Maritime shuttles integrated into the ZOU network.



ISN'T THE PERFECT VIEW TO START A DAY ?

FINAL PART : SUGGESTED SOLUTIONS

B. Reintroduction of cross-border services

147/148 EC Thello		Marsiglia St Charles	159/160 EC Thello
15:30	Marseille St Charles		22:29
16:14	Toulon	Tolone	21:47
16:55	Les Arcs	Les Arcs	21:07
17:11	St Raphaël	St Raphaël	20:51
17:37	Cannes	Cannes	20:26
17:47	Antibes	Antibes	20:14
18:09	Nice Ville	Nizza Ville	19:55
18:24	Monaco	Monte Carlo	19:38
18:35	Menton	Mentone	19:28
18:47	Vintimille <small>arrivée</small>	Ventimiglia <small>partenza</small>	19:16
19:02	Vintimille <small>départ</small>	Ventimiglia <small>arrivo</small>	19:01
19:15	San Remo	San Remo	18:47
19:31	Imperia P. Maurizio	Imperia P. Maurizio	18:33
19:38	Diano Marina	Diano Marina	18:25
19:51	Alassio	Alassio	18:11
20:03	Albenga	Albenga	17:57
20:17	Finale Ligure	Finale Ligure	17:42
20:32	Savone	Savona	17:29
21:05	Gênes P. Principe <small>arrivée</small>	Genova P. Principe <small>part.</small>	16:56
21:21	Gênes P. Principe <small>départ</small>	Genova P. Principe <small>arrivo</small>	16:40
22:08	Voghera	Voghera	15:51
22:25	Pavia	Pavia	15:35
22:50	Milan Centrale	Milano Centrale	15:10



OUR PROPOSITIONS

- Prolongation to Monaco of the Savona <> Ventimiglia services, to facilitate the access for workers.
- Relaunch of the Nice <> Milan line, to improve connection between Côte d'Azur, Imperia Liguria and Lombardia.
- Offer new direct services between Nice and Turin, via Breil-sur-Roya, Tende and Cuneo, with regional trains. These services could be a cooperation between Piemonte and PACA regions.

FINAL PART : SUGGESTED SOLUTIONS

B. Reintroduction of cross-border services

Several financing difficulties :

- Need for an agreement between the regions
- Need for a strong political support

Facilitated international connections :

- No connection needed
- Competitive travel times compared to the road

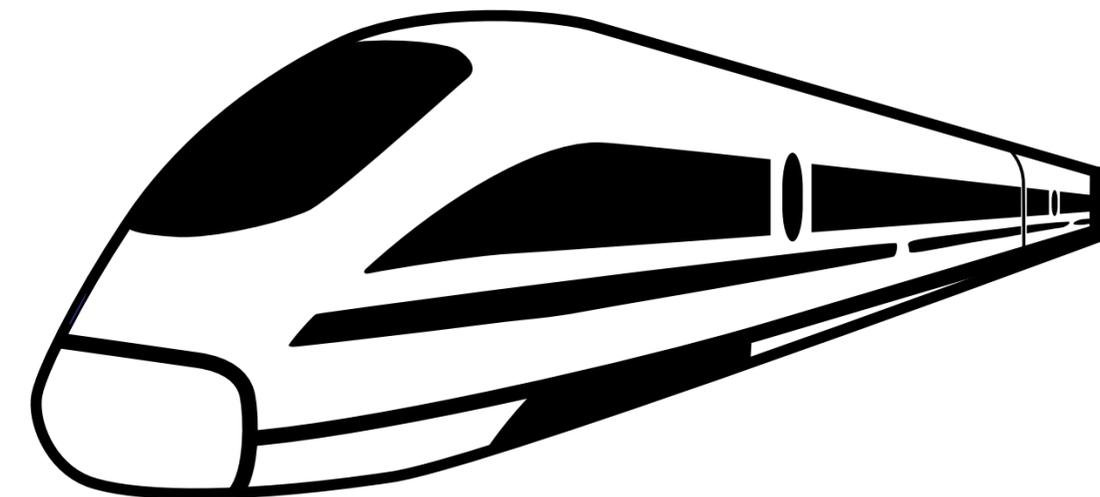
A PROJECT WITH MULTIPLE CHALLENGES AND OPPORTUNITIES

An ecological project :

- By offering people alternative solutions to cars

An opportunity to connect territories :

- With new direct services to the metropolis
- An increased attractivity
- A way to make European transport a reality



CONCLUSION



RECHERCHE

CHOIX DE VOYAGE

DONNÉES ET PAIEMENT

Prix total
0,00€

Imperia → Nice Riquier
24 Avr. 13:00 • 1 Adulte

Modifier

Trier par



ATTENTION

Nous n'avons trouvé aucune solution, essayez de modifier les paramètres de recherche.

Aller : Nice - Turin

Mercredi 24 avril, à partir de 14:00

2 correspondances

17:40 Nice Ville
22:28 Torino Lingotto

Non réservable

-

-

2 correspondances

17:48 Nice Ville
23:27 Torino Lingotto

Non réservable

-

-

2 correspondances

17:48 Nice Ville
23:33 Torino Lingotto

Non réservable

-

-

1 correspondance

An easy first step to improve connections between Alpes-Maritimes and Imperia Liguria :

- Sell the trips on both SNCF and Trenitalia websites
- Improve existing connections to offer quick and safe trips from Nice to Turin and Milan

These solutions don't need a lot of money and could be developed quickly !

SOURCES

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