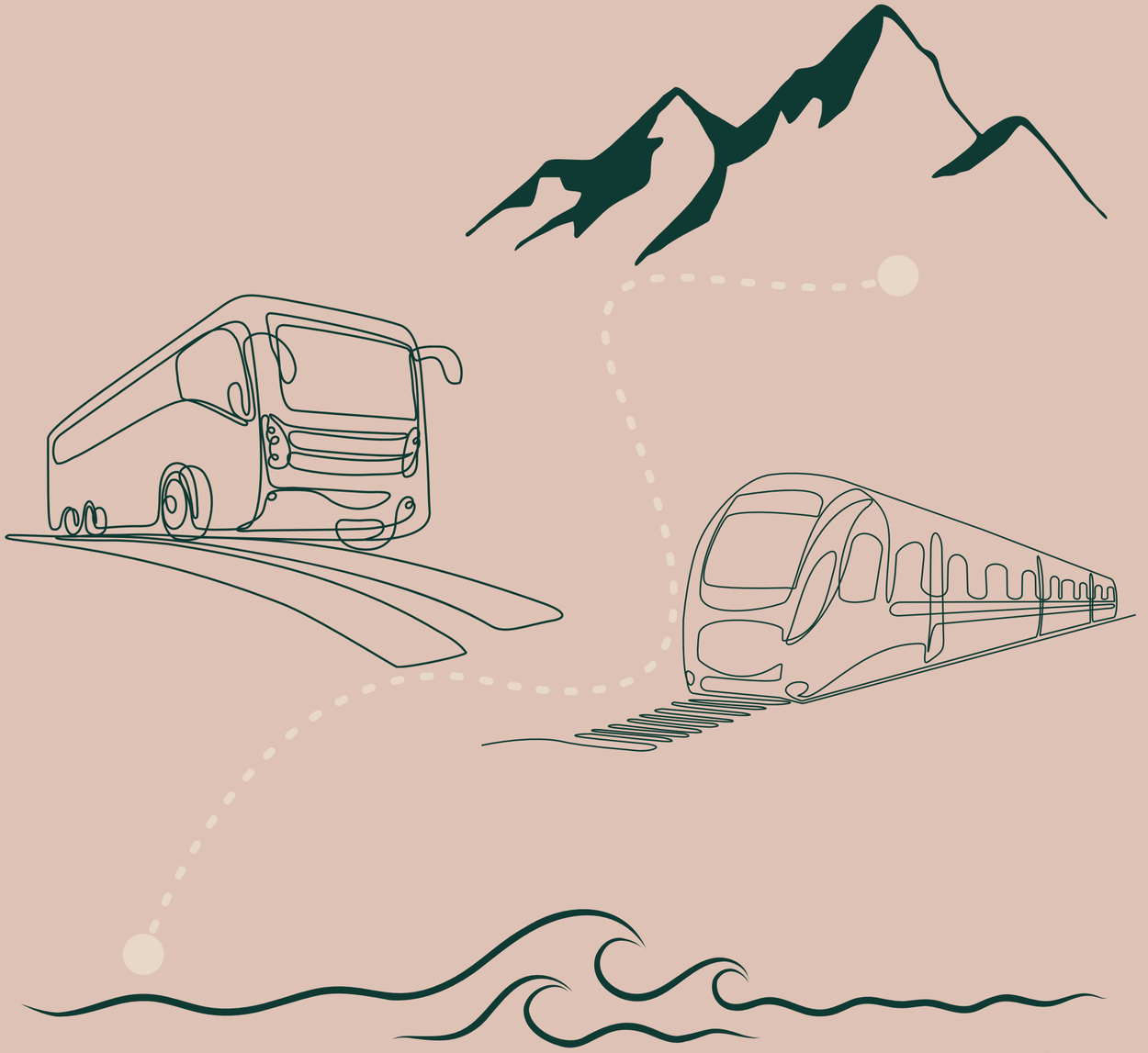
Università Iuav
di Venezia

REVIEW OF LOCAL PUBLIC TRANSPORT:

infrastructure, services, design and communication



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01 Introduction

01 Introduction

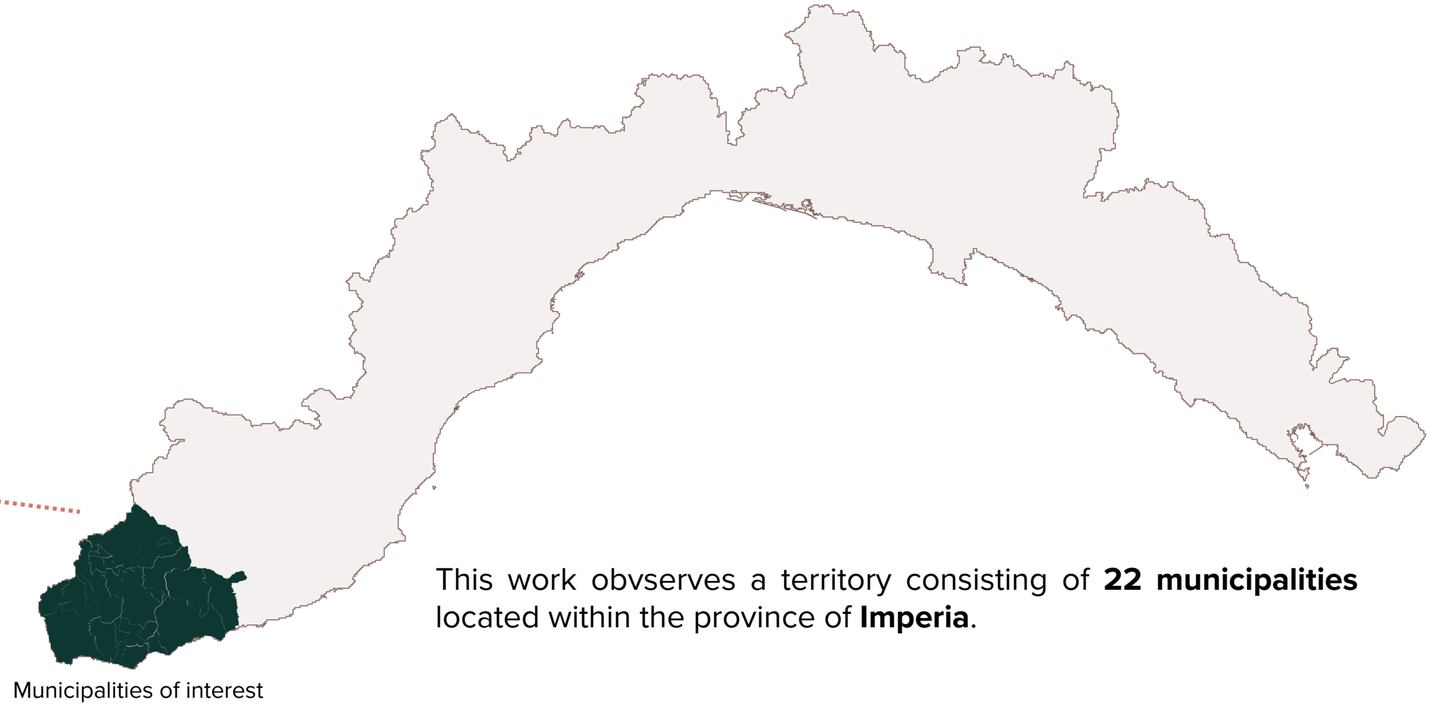
Site analyses

Liguria is a region in northwestern Italy.

Area: 5,420 square kilometers
Population: 1.5 million

The region's territory is administered by **4 provinces**:

- Savona,
- La Spezia,
- Imperia,
- Genoa



This work obvserves a territory consisting of **22 municipalities** located within the province of **Imperia**.

The following elaboration has as its main objective the **review of local public transport** in the western part of the Province of Imperia, on the border with France. The most relevant municipalities are:

- Bordighera,
- Dolceacqua,
- Sanremo,
- Seborga,
- Ventimiglia,
- Taggia

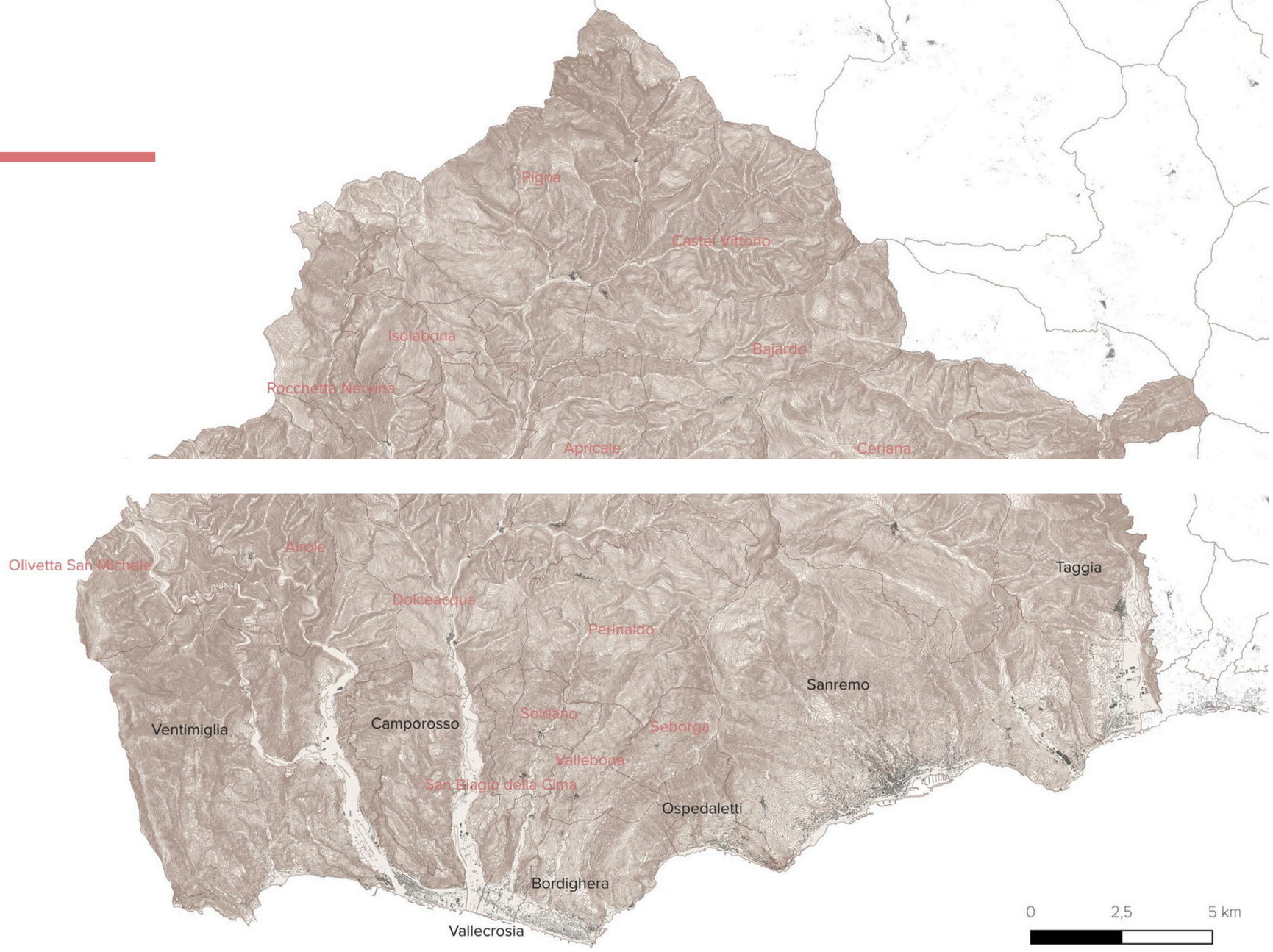
01 Introduction

Morphology of the territory

The territory has been categorised into two parts:

- the **mountain territory** (from 106 metres to 900 meters),
- the **coastal territory** (below 106 meters),

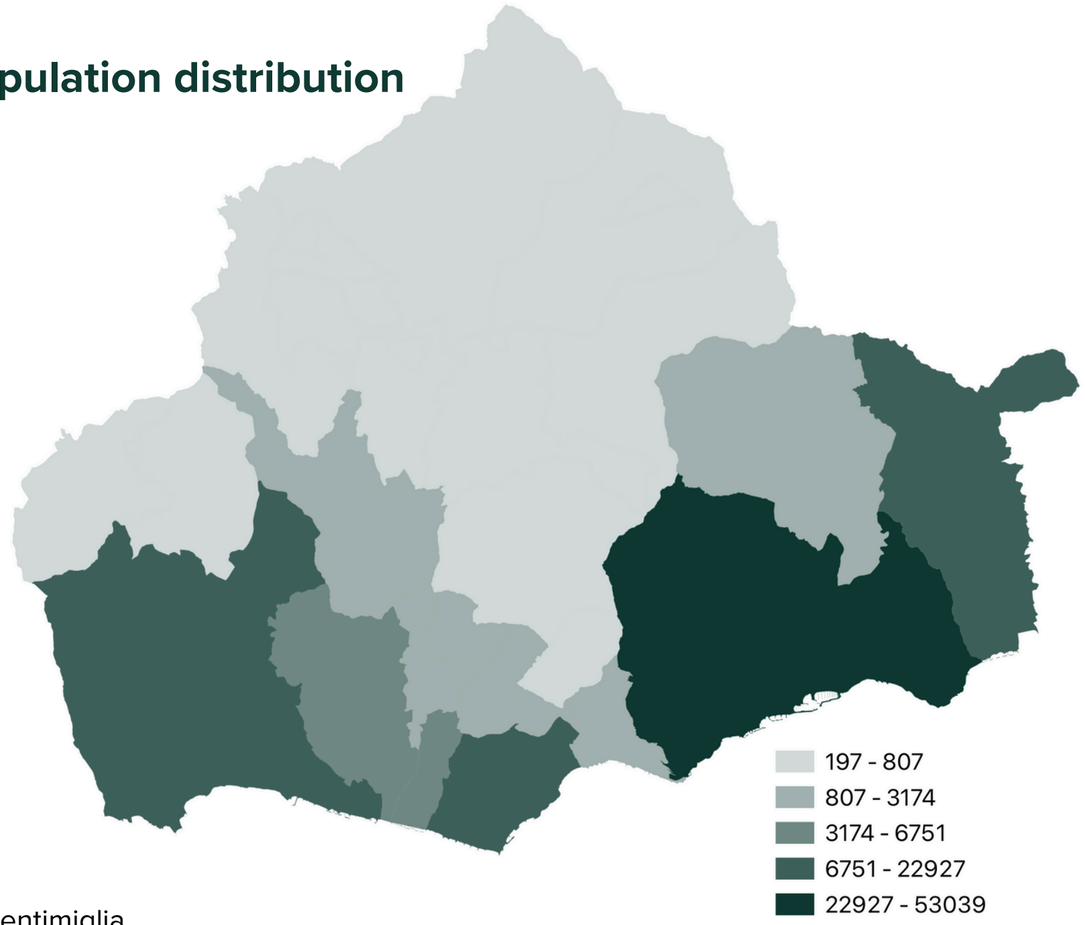
It can be seen that most urban settlements have developed along the coastline, highlighting the great difference in urbanisation between the mountain and coastal areas.



01 Introduction

Demography

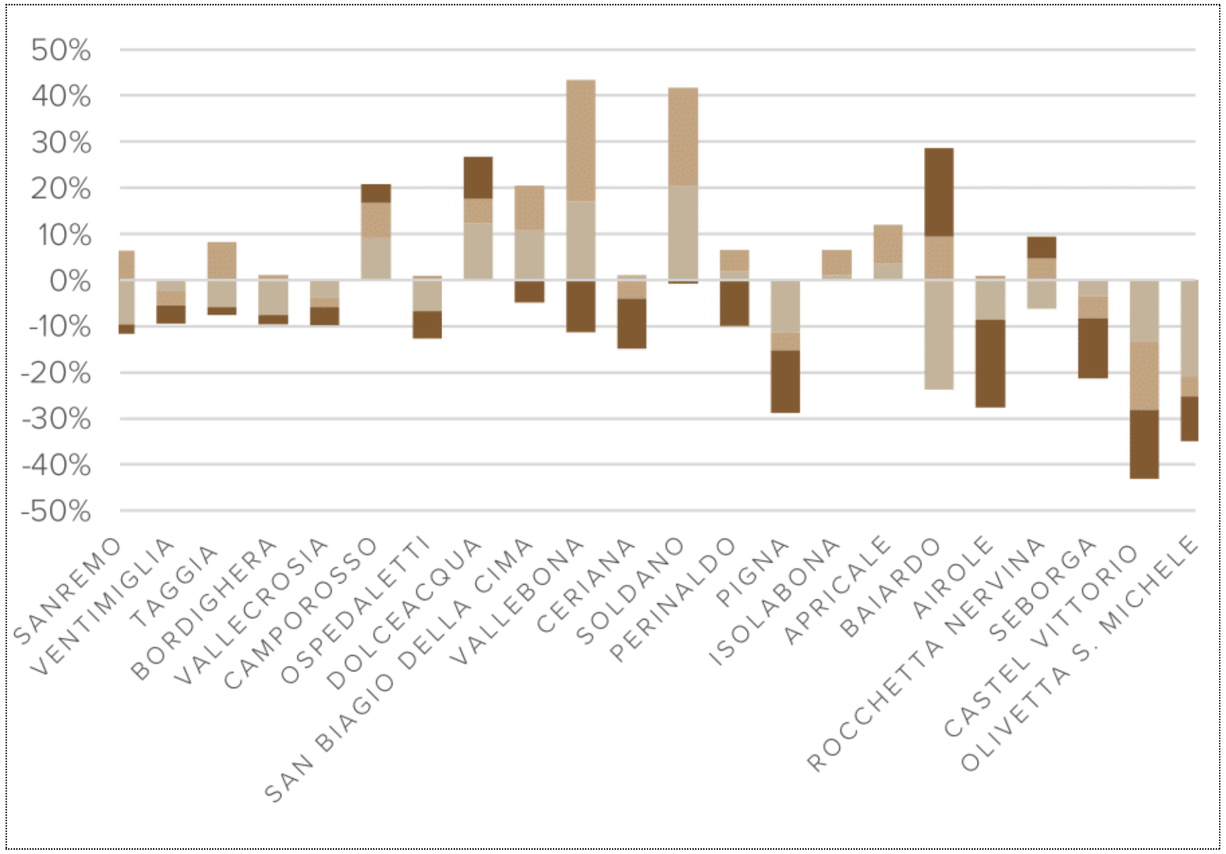
Population distribution



Ventimiglia
Bordighera
Sanremo
Taggia
} high residentiality

mountain municipalities } low residentiality

Demografic variation



02

Supply and demand for transport

02 Supply and demand of transport

Main infrastructures

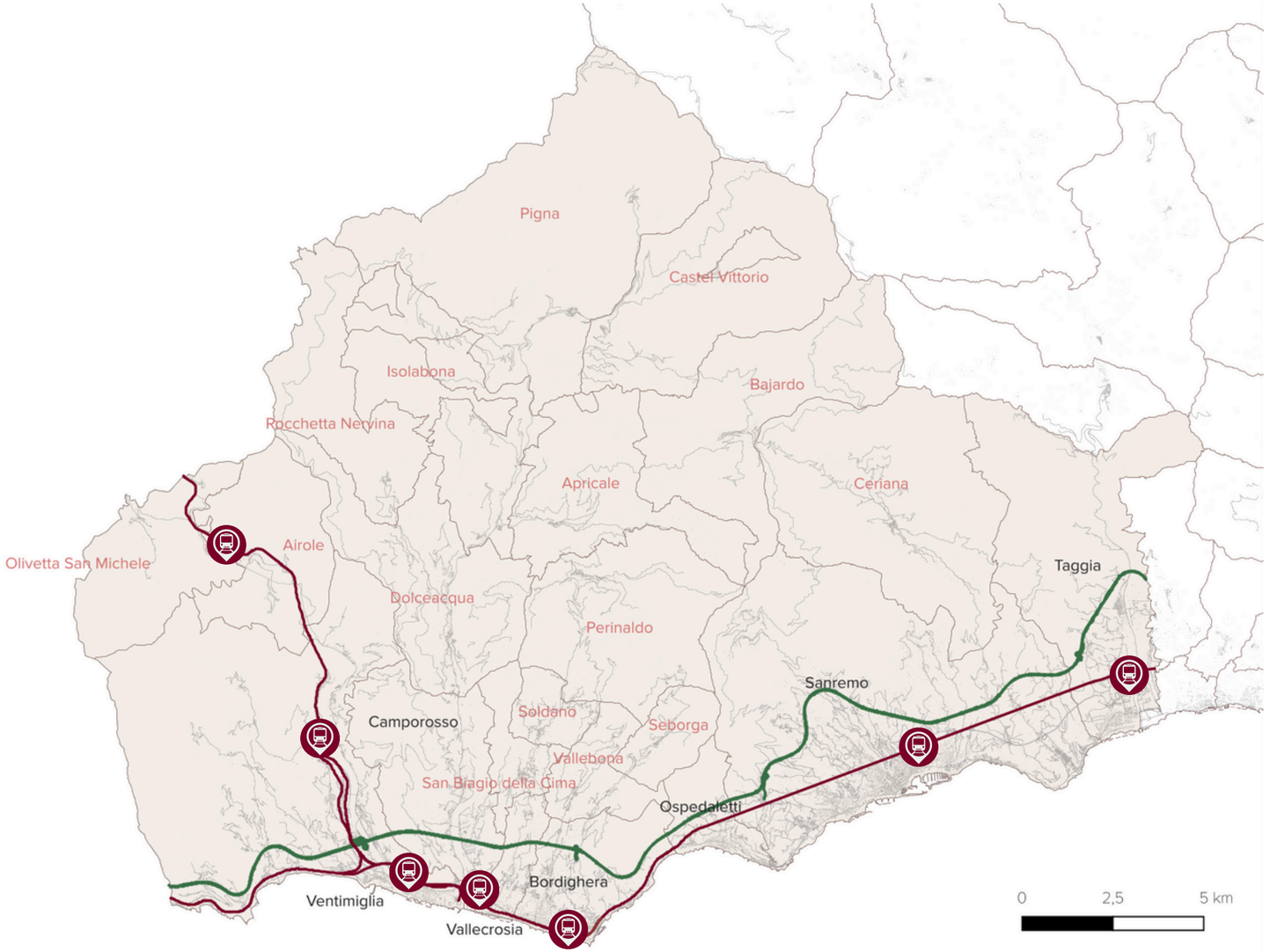
The analysed territory is served by some main infrastructures:

A10 motorway

- It is part of the European route E80, which continues into French territory.
- It connects Genoa to Ventimiglia

1- Genoa - Ventimiglia railway line
2- Wonderland railway line

1. It runs from the regional capital, Genoa, to the French border. It is one of the main Italian railway lines, and passes through three provinces: Genoa, Savona and Imperia. Ventimiglia. serves as a border station, where Italian and French trains terminate.
2. An international railway line that connects Cuneo to Ventimiglia by crossing into France before passing through the Italia border again.

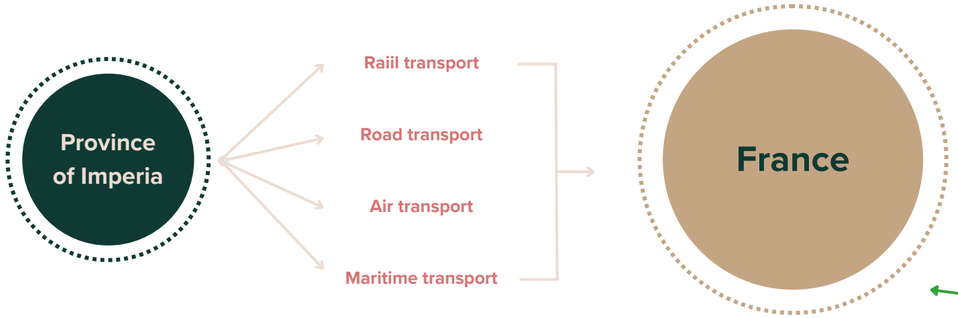


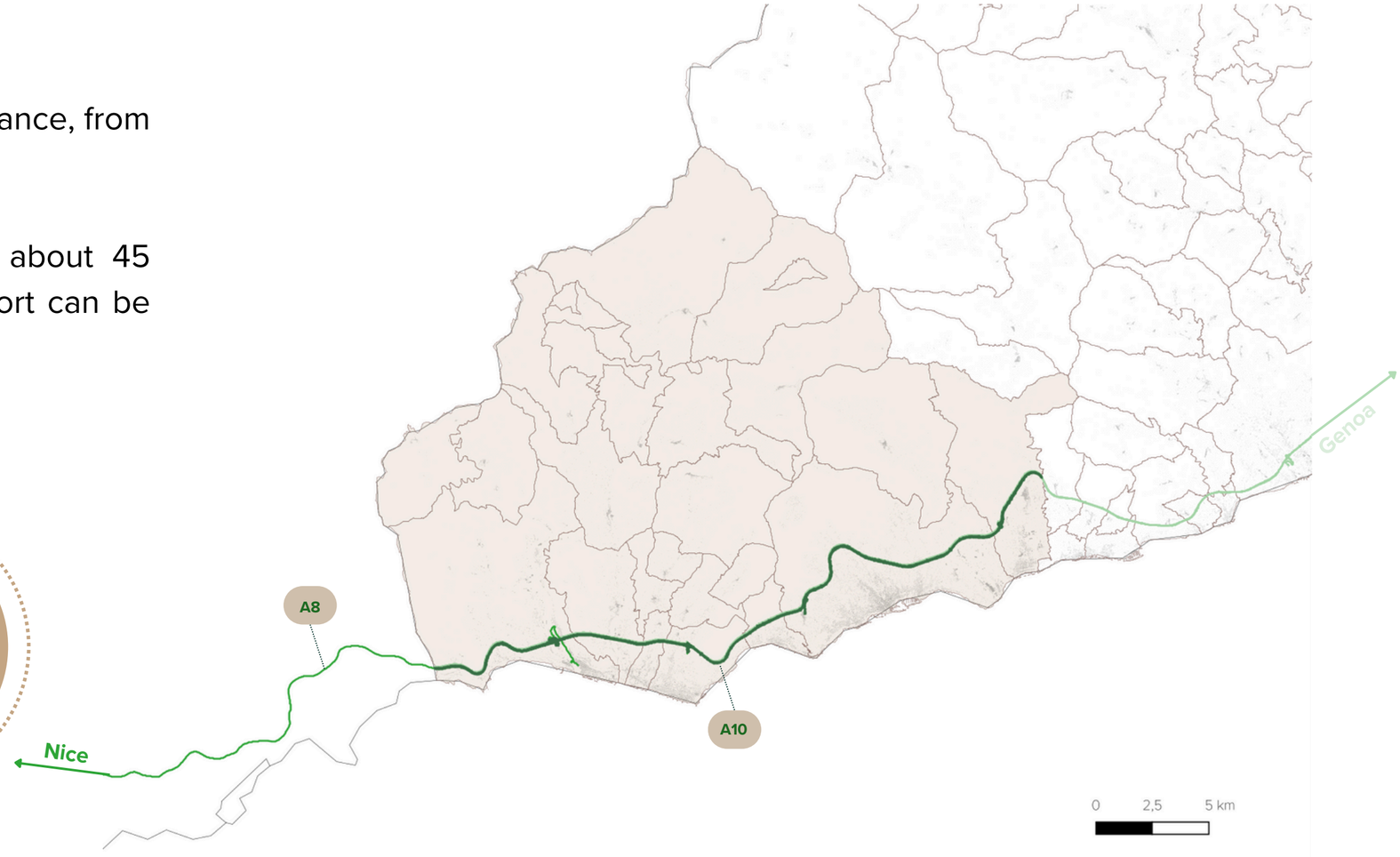
02 Supply and demand of transport

Main infrastructures

The motorway connects the province of Imperia with France, from Ventimiglia the motorway changes from A10 to A8.

From Arma di Taggia to France, the travel time is about 45 minutes using the motorway. In addition, other transport can be used to reach France, such as:
- rail transport
- maritime transport
- air transport



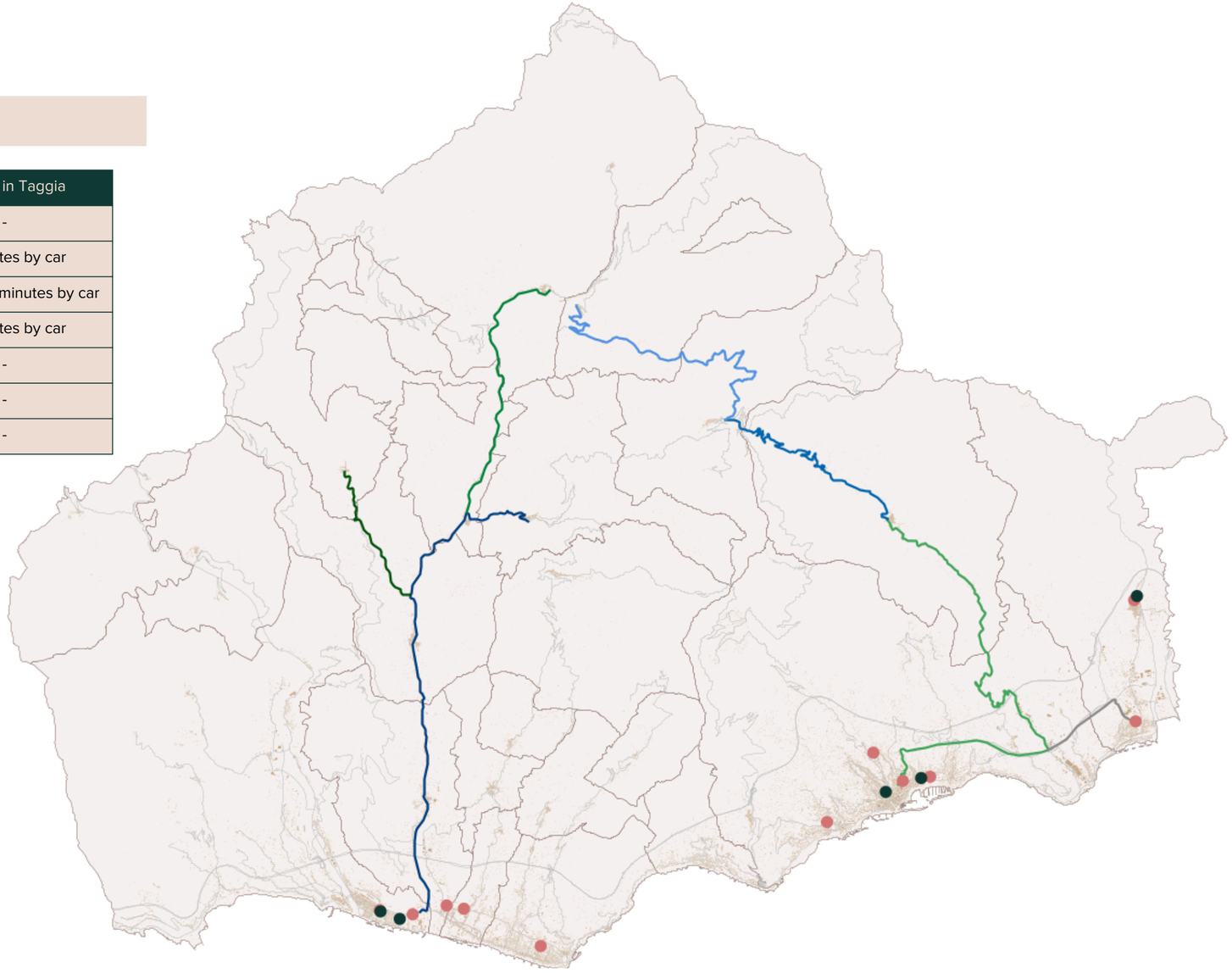


02 Supply and demand of transport

Access to essential services

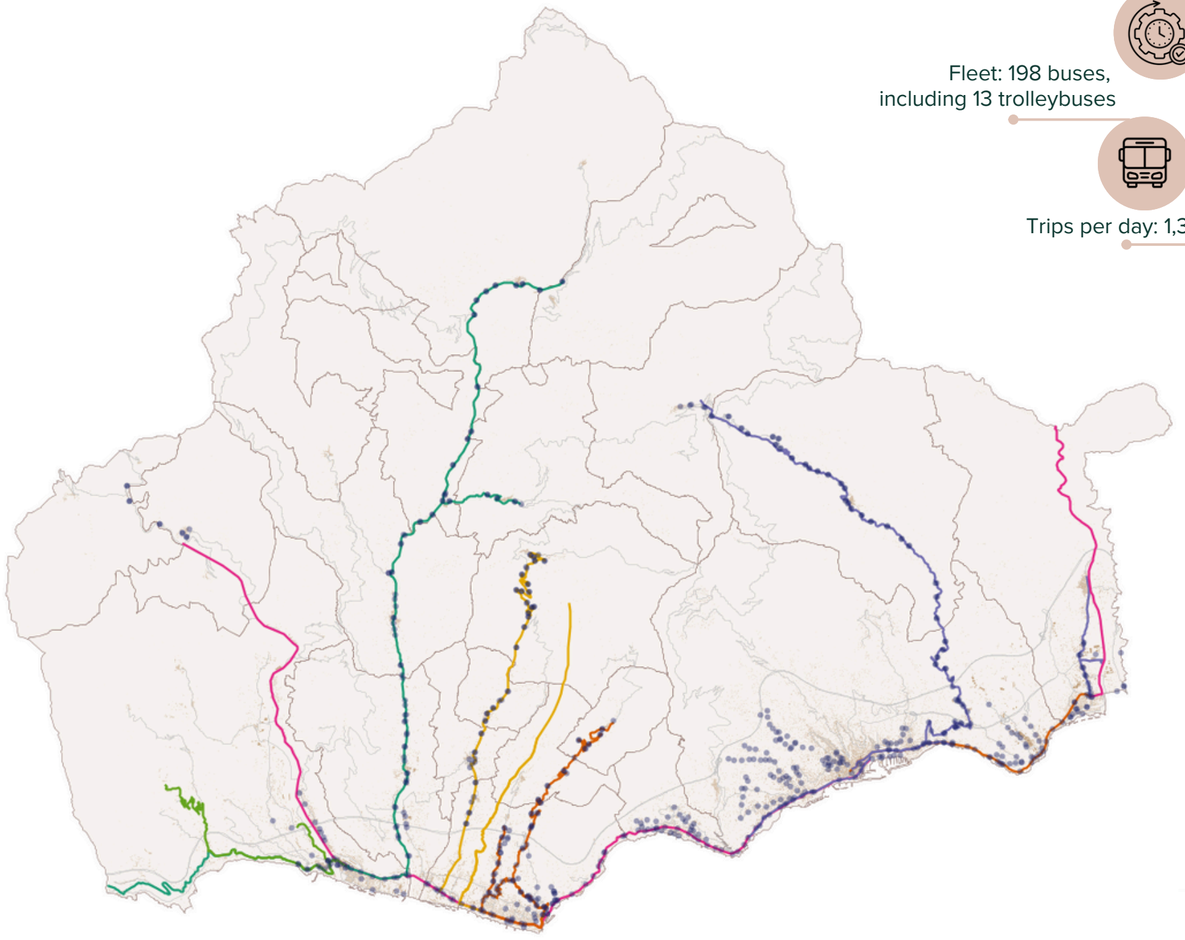
Time taken to reach schools from mountain municipalities

Mountain municipalities	Schools in Ventimiglia	Schools in Sanremo	Schools in Taggia
Apricale	32 minutes by car	-	-
Bajardo	-	42 minutes by car	42 minutes by car
Castelvittorio	-	1 hour and 6 minutes by car	1 hour and 6 minutes by car
Ceriana	-	26 minutes by car	24 minutes by car
Isolabona	27 minutes by car	-	-
Pigna	38 minutes by car	-	-
Rocchetta Nervina	30 minutes by car	-	-



02 Supply and demand of transport

Local Public Transport



Total kilometers run yearly: 6,059,286

Area served in km^2: 1.155

Hours of service per year: 230,491

Network extension: 860 km

Fleet: 198 buses, including 13 trolleybuses

Riviera Trasporti S.p.A.

Service Charter

Number of lines: 69

Trips per day: 1,300

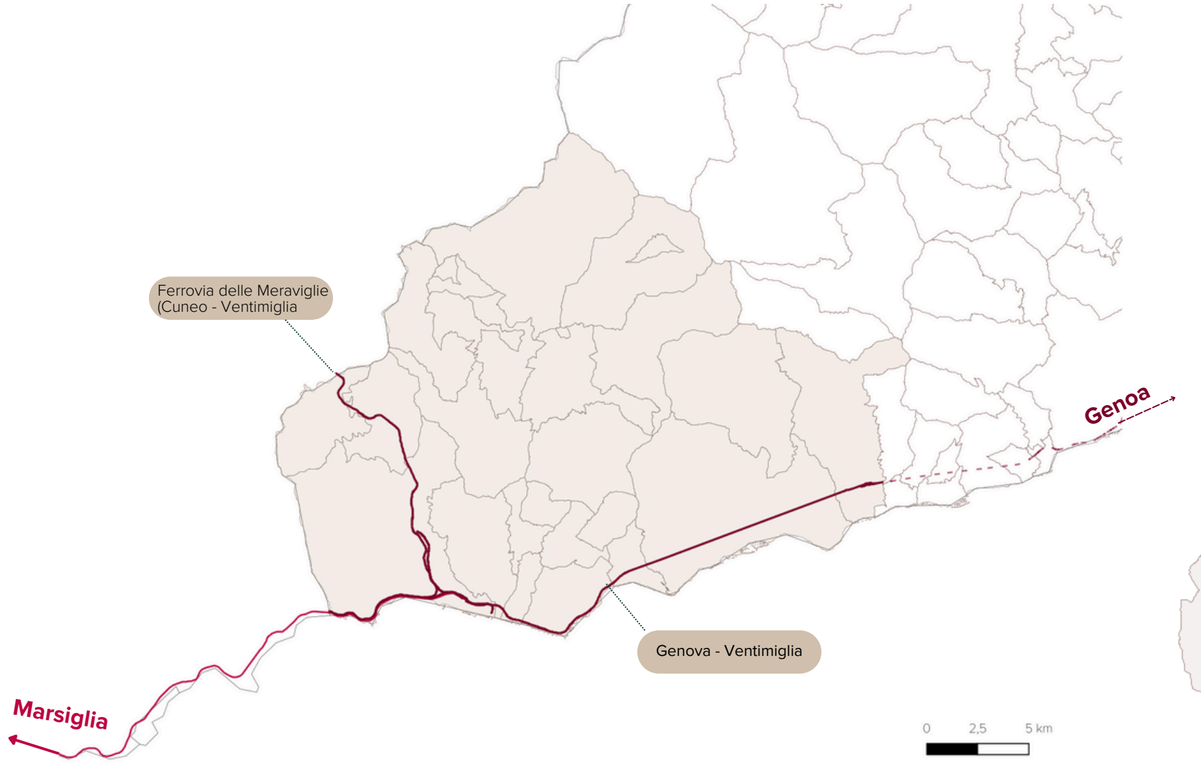
Races per year: 474,500

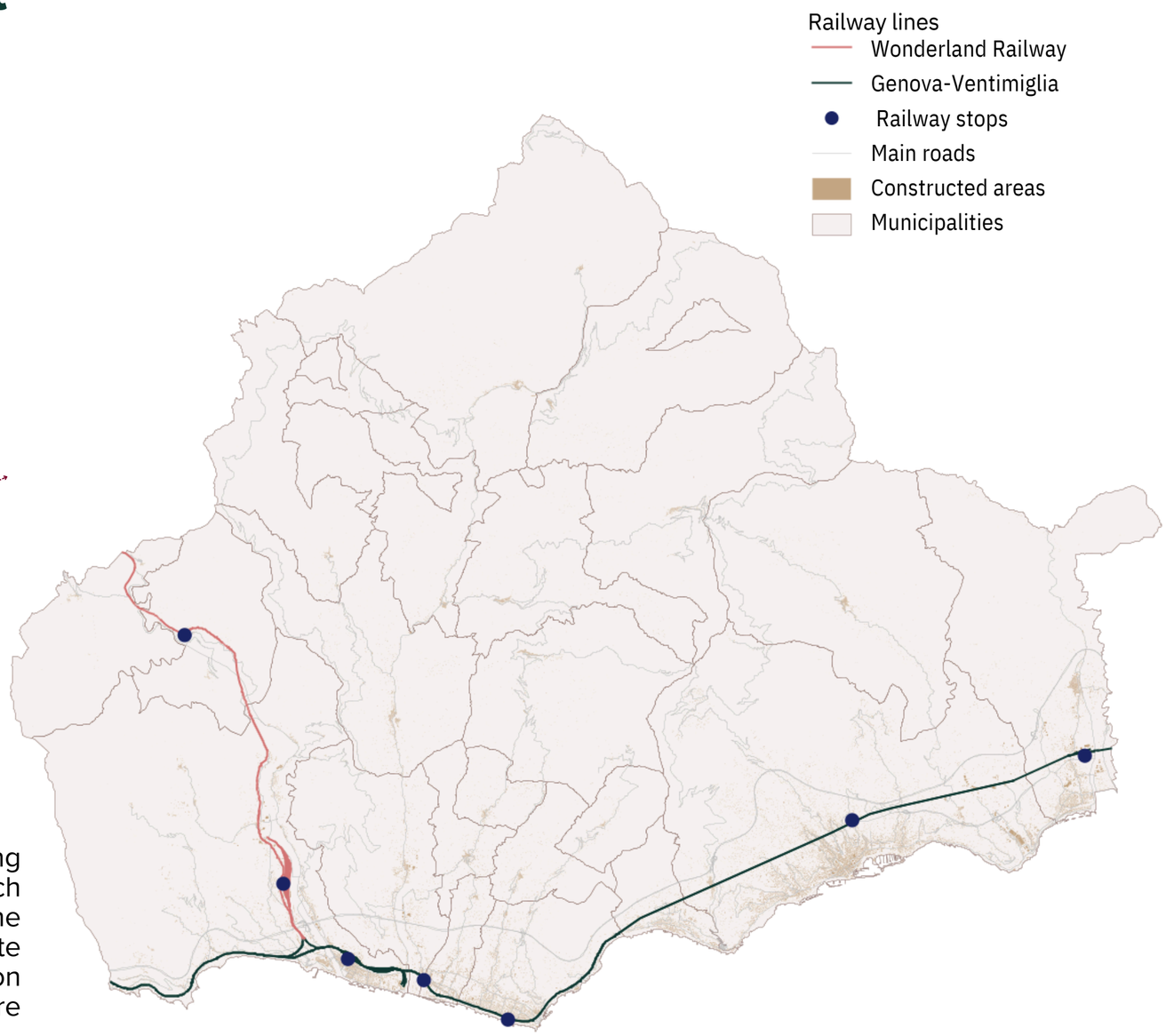
- Linea 1 Ventimiglia-Ponte San Luigi
- LINEA 2 : VENTIMIGLIA - BORDIGHERA - OSPEDALETTI - SANREMO
- LINEA 3 : VENTIMIGLIA - TRUCCO - AIROLE - OLIVETTA SAN MICHELE
- LINEA 4 : VENTIMIGLIA - LATTE - SEALZA
- LINEA 6 : VENTIMIGLIA - FRATI MARISTI - TORRI
- LINEA 7 : VENTIMIGLIA - DOLCEACQUA - ISOLABONA - PIGNA - CASTELVITTORIO
- LINEA 8 : VENTIMIGLIA - SAN BIAGIO - SOLDANO - PERINALDO
- LINEA 9 : VENTIMIGLIA - BORDIGHERA - VALLEBONA
- LINEA 10 : VENTIMIGLIA - BORDIGHERA - SASSO - SEBORGA
- LINEA 11 : SERVIZIO URBANO DEL COMUNE DI BORDIGHERA
- LINEA 12 : SANREMO - IMPERIA - ANDORA
- LINEA 13 : SANREMO Autostazione - BUSSANA - ARMA di TAGGIA - TAGGIA
- LINEA 14 : SERVIZIO URBANO DI SANREMO
- LINEA 15 : SANREMO - CERIANA - BAIARDO
- LINEA 16 : SANREMO - TAGGIA - BADALUCCO - TRIORA - MONTALTO - CARPASIO
- Fermate Autobus
- Viabilità principale
- Edificato
- Comuni

Lines	Number of rides	First race	Last race	Frequency
Line 1	8	06.25	19.30	**1 hour and 50 minutes**
Line 2	17	05.50	09.15	**10 minutes**
Line 3	10	06.20	19.00	**1 hour and 20 minutes**
Line 4	3	06.25	17.45	**5 hours and 40 minutes**
Line 5	4	06.45	18.00	**3 hours and 45 minutes**
Line 6	9	06.55	19.30	**1 hour and 35 minutes**
Line 7	14	04.50	19.10	**54 minutes**
Line 8	8	05.25	19.00	**2 hours**
Line 9	15	06.15	20.00	**50 minutes**
Line 10	9	06.30	20.25	**1 hour and 40 minutes**
Line 11	16	06.15	20.00	**50 minutes**
Line 12	19	06.15	10.15	**15 minutes**
Line 13	14	04.50	09.00	**18 minutes**
Line 14	22	05.48	10.30	**10 minutes**
Line 15	9	05.30	18.40	**1 hour and 45 minutes**
Line 16	11	05.20	18.00	**1 hour and 35 minutes**

02 Supply and demand of transport

Railway

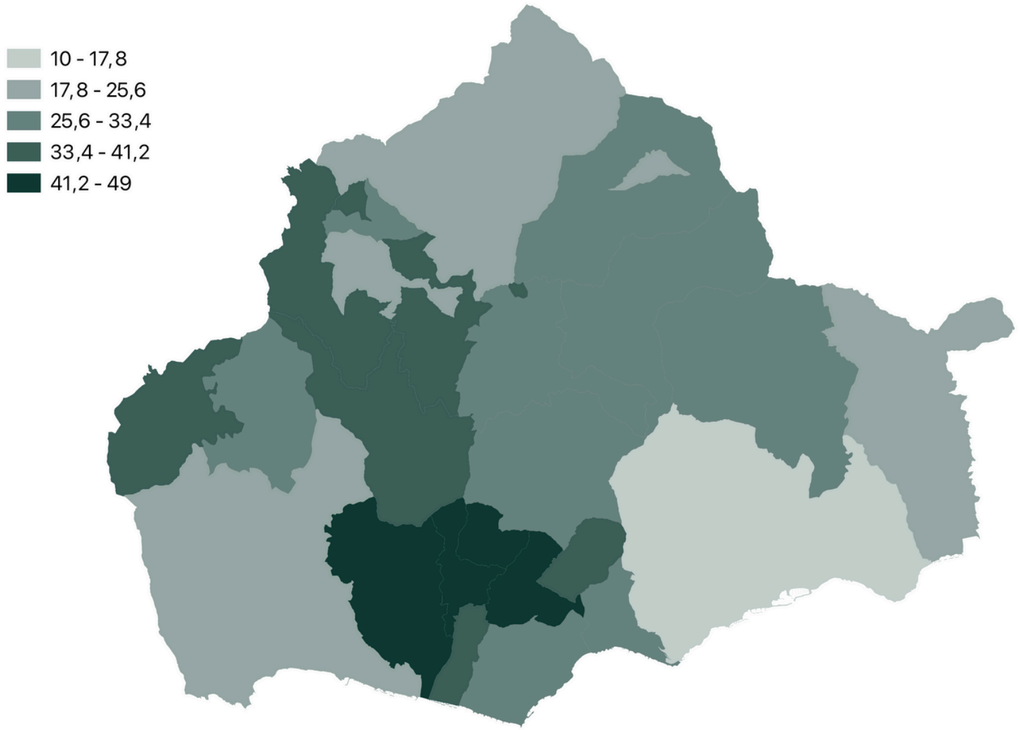




The Genoa-Ventimiglia railway line is the main coastal route in Liguria, providing connections both with the main cities of the Ligurian Riviera and the French Riviera. From Ventimiglia, there are many French regional trains operated by the SNCF company that allow frequent connections with some cities on the Côte d'Azur with a journey time that varies between 15 and 45 minutes depending on the city where you arrive. Italian and French trains are frequent enough to ensure connections every 30 minutes.

02 Supply and demand of transport

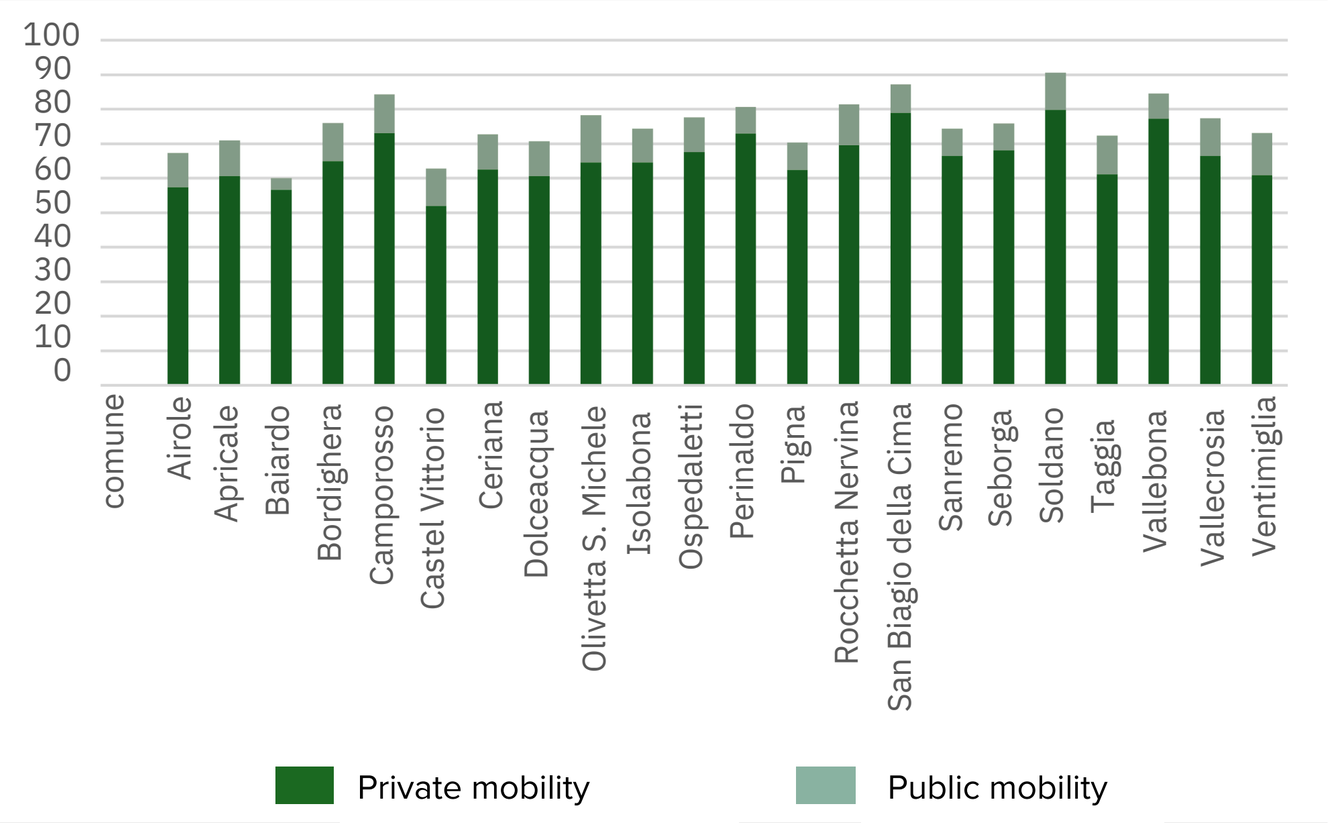
People mobility



Commuting population (%*)

*Over the total workers and students

Public and private shares in mobility



02 Supply and demand of transport

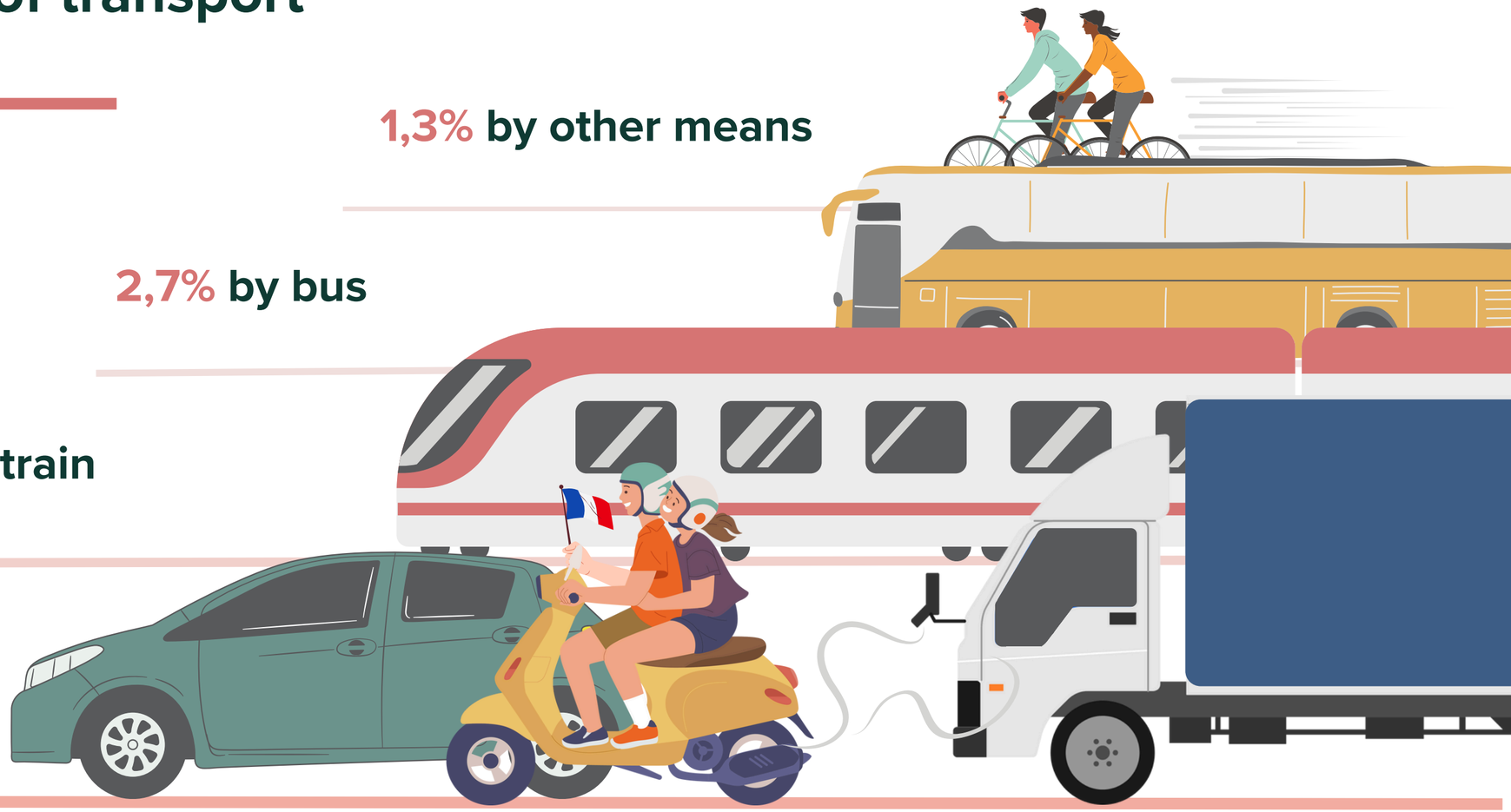
People mobility

1,3% by other means

2,7% by bus

21% by train

75% by private means



4000 CROSS-BORDER COMMUTERS

1653 TO FRANCE; **2347** TO MONACO

02 Supply and demand of transport

Diagnosis phase

Concerns

1. **Mountain areas are isolated**:
    a. Public transport is sporadic, with wait times of over an hour at least, reaching even 3 hours and more.
    b. Residents in areas like Rocchetta Nervina lack immediate access to public transport.
    c. Long travel times to essential services (e.g., schools, hospitals).
2. **Low demand**: it barely reaches 10% of mobility across municipalities, even in coastal areas.
3. **Frequent service disruption**: Students are particularly affected, often without alternative travel options.

Solutions

1. To increase the frequencies of the bus lines to a 1h standard and to increase the frequency on the existing railway line with trains every 30 minutes
2. To expand the bus lines to isolated municipalities
3. Action is needed to enhance public transport through more efficient vehicles, communication and digital services

03

Project

03 Project

Objectives, strategies, actions

ENCOURAGING THE USE OF PUBLIC TRANSPORT

O S A

1 Increase the frequency of public transport based on travel analysis

- **1.1 Increase the frequency of the line of the bus 1, 4, 7, 8, 9, 11, 15, 16**
- **1.2 Increase the frequency of the rail line Genoa-Ventimiglia to every 30 minutes**

2 Redesigning infrastructure and renewing the fleet

- 2.1 Buy new buses accordingly with sustainability objectives
- 2.2 Expand the railway network capacity with enhancement works
- **2.3 Enhance the capacity of interchange points to handle a larger number of passengers.**
- **2.4 Making the road infrastructure fit to host different transport categories, adding reserved lanes for PT**
- **2.5 Improving public transport's performance towards primary services (schools, hospitals), specially for the inland population.**

3 Making the fare price more accessible

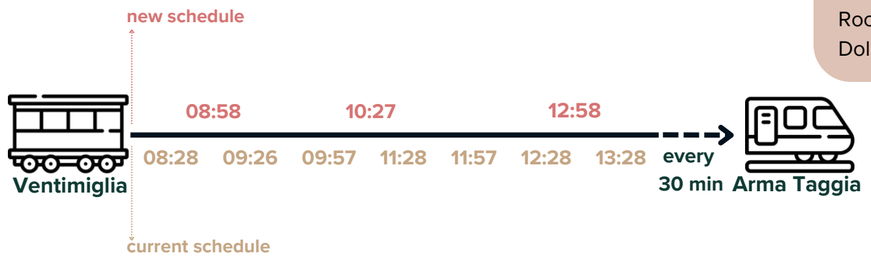
- **3.1 Offer an integrated fare between public transport on road and on rail**
- 3.2 Free of charge for children under 14 years (case study Genoa)

4 Review the design and communication of public transport

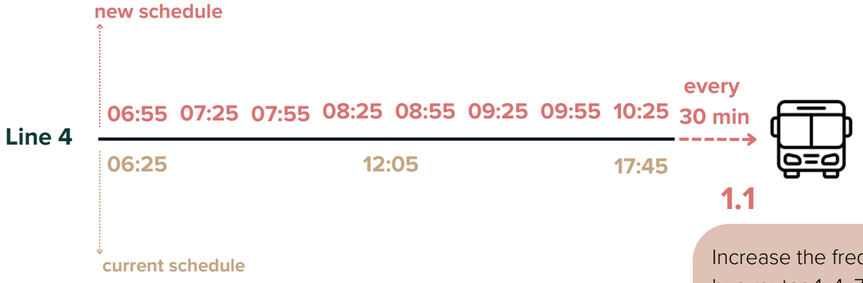
- **4.1 Creation of new signage for bus stops**
- **4.2 Activate a mobile application to buy tickets and to research routes**
- 4.3 Creating a coherent visual identity for public transport in order to render strong image and easily identifiable

03 Project
Masterplan

Increase the frequency of the railway line Genova - Ventimiglia every 30 minutes



Increase the frequency of the bus routes 1, 4, 7, 8, 9, 11, 15, 16



2.5

New bus line Connecting Castelvecchio with Bajardo

2.5

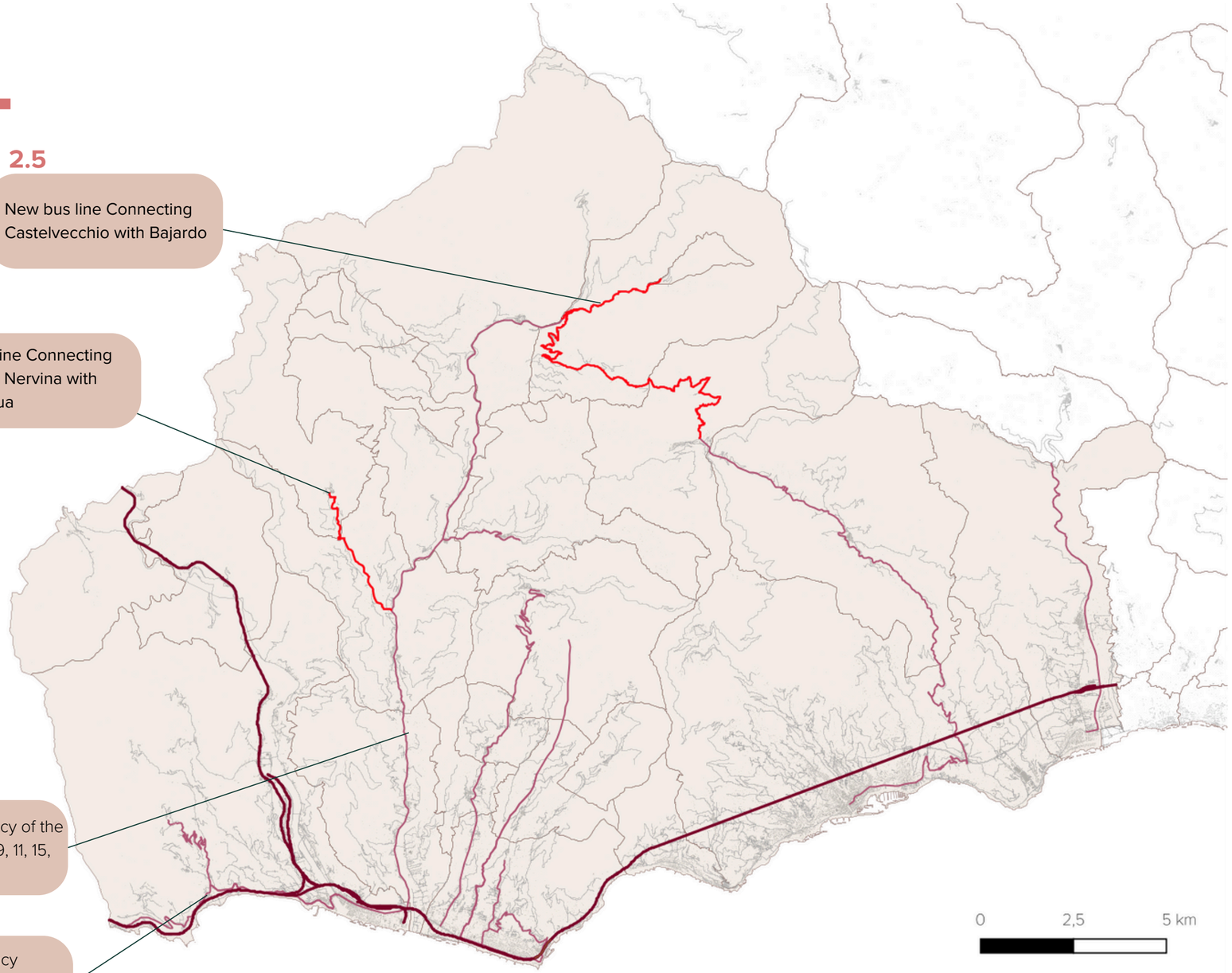
New bus line Connecting Rocchetta Nervina with Dolceacqua

1.1

Increase the frequency of the bus routes 1, 4, 7, 8, 9, 11, 15, 16

1.2

Increase the frequency of the railway line Genova - Ventimiglia every 30 minutes



03 Project
Masterplan

2.3

Make interchange points more attractive, such as bus stops

Current bus stops

Example of a bus stops project

2.4

Action on the road infrastructure, facilitating the tpl's by inserting them the reserved lanes.

Current street section

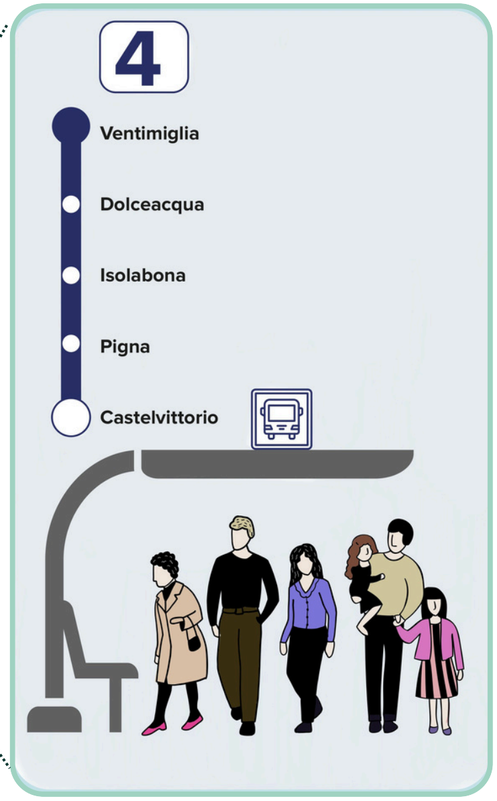
Example of a road section with a lane dedicated to public transport

03 Project

Masterplan

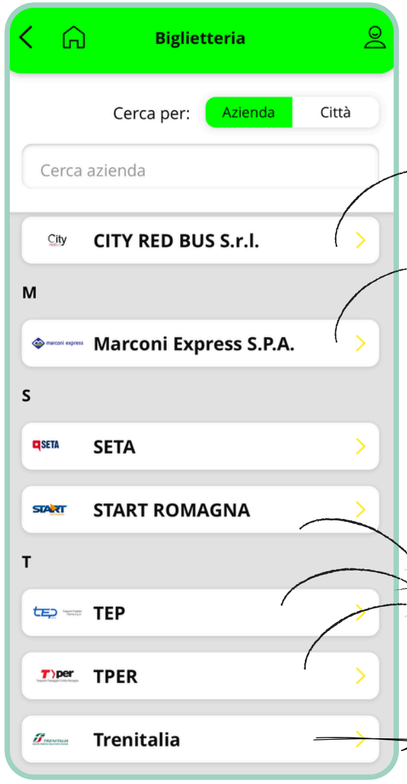
4.1

Creation of new signage at bus stop



4.2

Activate a mobile application to buy securities travel and carrying out research on tpl



Touristic transport

Airport connection

Local Public Transport

National Railways

Thanks for your attention