



SUTRA

SUSTAINABLE TRANSPORT IN ADRIATIC COASTAL AREAS AND HINTERLAND

ANALYSIS OF END USERS
NEEDS ON
LOCAL
MULTIMODAL MOBILITY

PROJECT DURATION
01.01.2019.-30.06.2021.

ERDF
2.462.875,00 EUR

TOTAL BUDGET
2.897.500,00 EUR

The overall objective of SUTRA is to promote sustainable mobility on the Adriatic coast and its hinterland. By mainstreaming innovative mobility concepts for passenger transport, urban centres in the Programme area will be able to reduce traffic congestion, improve air quality and reduce CO2 emissions. The main outputs of SUTRA are: 10 new, eco-friendly multimodal transport services for passengers, 1 new maritime link between Italy and Croatia (relation Caorle – Poreč) and 1 jointly developed Crossborder Manual for smart design and integration of soft mobility solutions in coastal areas. The innovative mobility solutions that will be introduced will contribute to the quality of life of residents and non-residents, and improve tourist attractiveness of the area.

PROJECT PARTNERS



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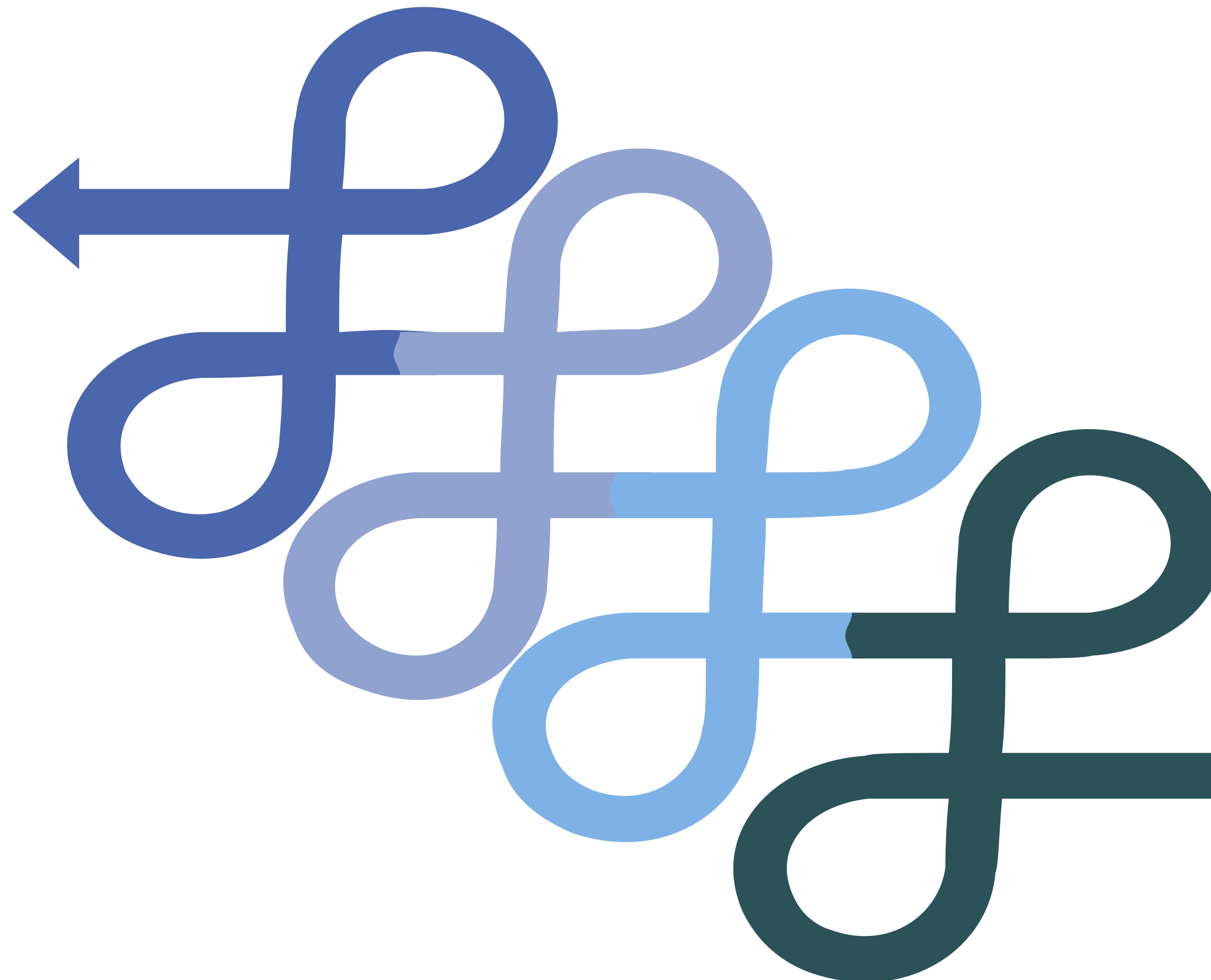
Introduction

The project “**Sustainable Transport in Adriatic Coastal Areas and Hinterland project**” (acronym: SUTRA), funded under the Interreg IPA CBC Italy-Croatia 2014-2020 programme, addresses the problem of the passenger transport especially road transport which dominates all other forms of transport. Road traffic is steadily increasing, causing major congestion and pollution, especially in the summer months. The emphasis is on environmentally friendly multimodal passenger transport.

The overall objective of SUTRA is to promote sustainable mobility on the Adriatic coast and its hinterland. By mainstreaming innovative mobility concepts for passenger transport, urban centres in the Programme area will be able to reduce traffic congestion, improve air quality and reduce CO2 emissions.

The main outputs of SUTRA are: 10 new eco-friendly multimodal transport services for passengers, 1 new maritime link between Italy and Croatia (relation Caorle – Poreč) and 1 jointly developed Crossborder Manual for smart design and integration of soft mobility solutions in coastal areas. The main outputs will provide benefits to tourists, residents coastal areas and the hinterland, local and regional public administrations and SME's.

The main aim of SUTRA WP3.1 - “Analysis of end users need regarding local multimodal mobility” is to outline common difficulties in urban centers on the Adriatic coast that hinder full implementation of sustainable multimodal links, and to suggest possible interventions that improve the status quo, including new (land, maritime, air) links.



To this end, the present analysis will summarise the main results of the research activities implemented in the first phase of the SUTRA project, coordinated by the Institute of International Sociology of Gorizia (ISIG) and implemented with the support of all Project Partners (PPs).

By means of an innovative participatory approach Local Authorities (LAs), transport stakeholders, residents and tourists have been involved in the identification of the main needs, challenges and possible actions concerning local and cross-border sustainable transport services as well as of the key factors that shape end-users' choices.

In this sense, an end-user-centered approach in the planning and design of interventions is key in increasing “the efficiency of environmental interventions...as interventions that spread across the whole population according to the “shotgun approach” have only limited chances to achieve behavioral change and thus may be seen as ineffective or wasteful from a policy perspective” . (Haustein, S., & Nielsen, T. A. S., 2016)

The results of the analysis will support local partners in planning efficient and sustainable transport actions and strategies, with a user-centred design principle.

Project Overview

The project “**Sustainable Transport in Adriatic Coastal Areas and Hinterland project**” (acronym: SUTRA), funded under the Interreg IPA CBC Italy-Croatia 2014-2020 programme, addresses the problem of the passenger transport, especially road transport which dominates all other forms of transport.

The emphasis is on environmentally friendly multimodal passenger transport.



Project Partners



Lead partner: Municipality of Caorle

Municipality of Chioggia



Municipality of Ravenna

Municipality of Pescara



Split and Dalmatia County

Town of Poreč – Parenzo

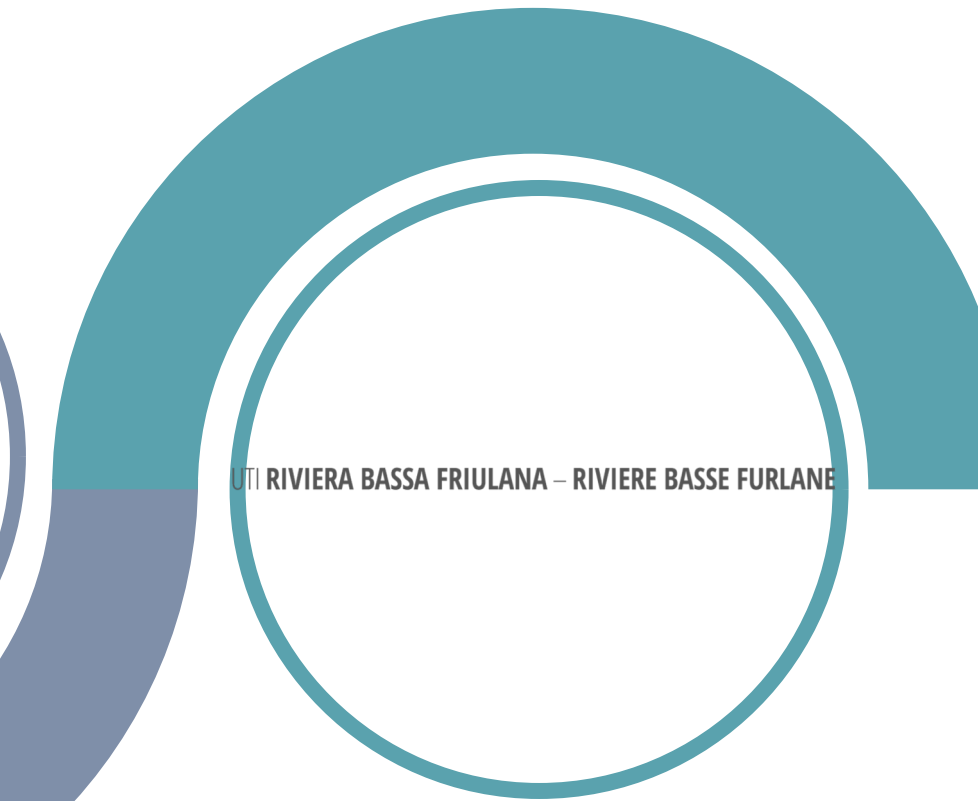
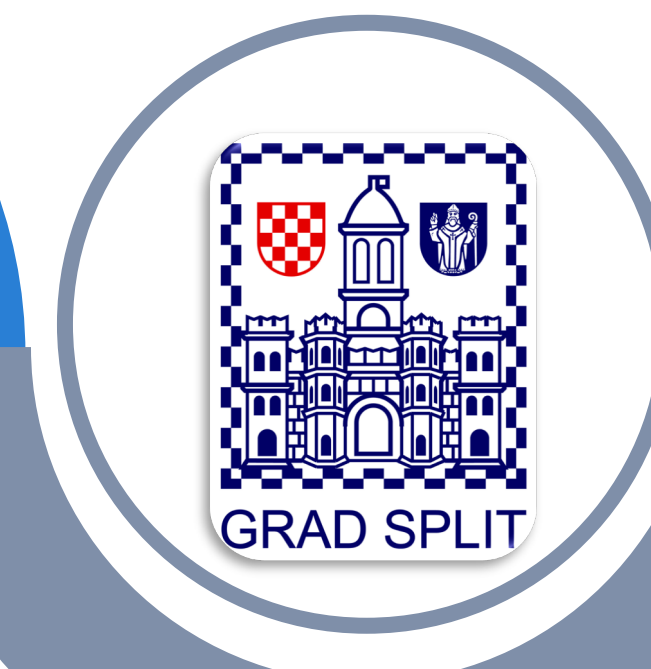


Institute of International Sociology of Gorizia



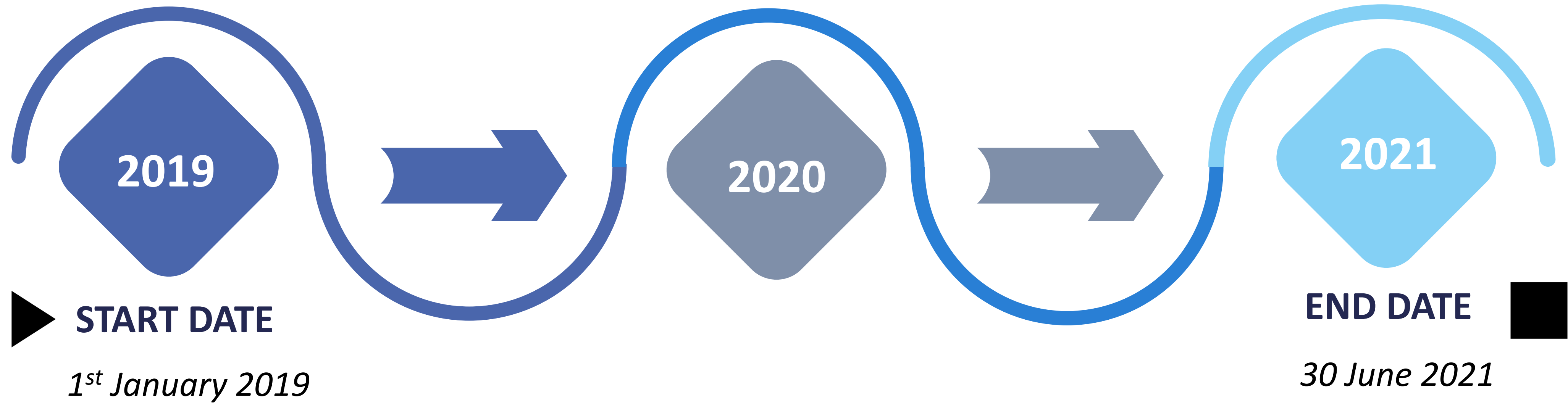
Municipality of Vodnjan - Dignano

City of Split



Intermunicipal Territorial Union Bassa Friulana

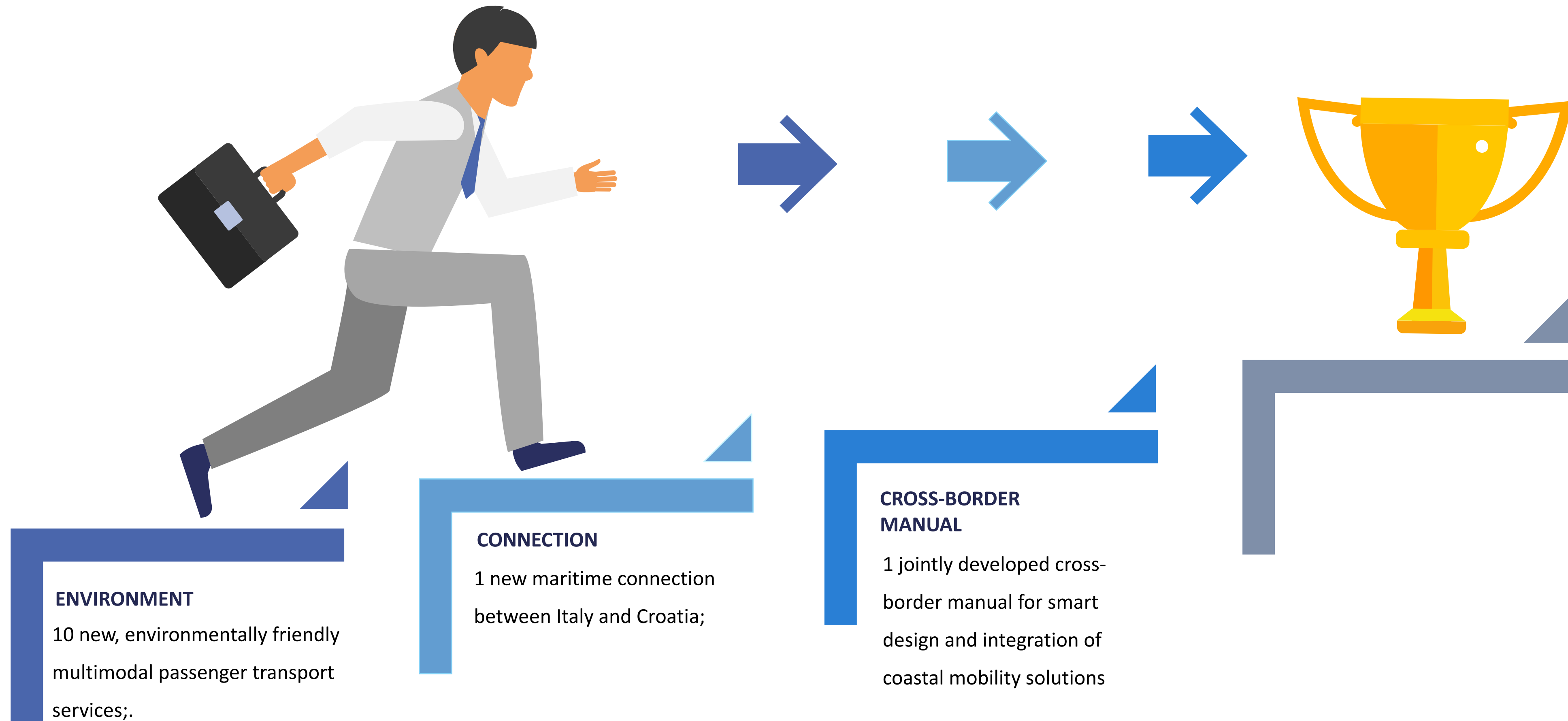
Project Duration and Budget



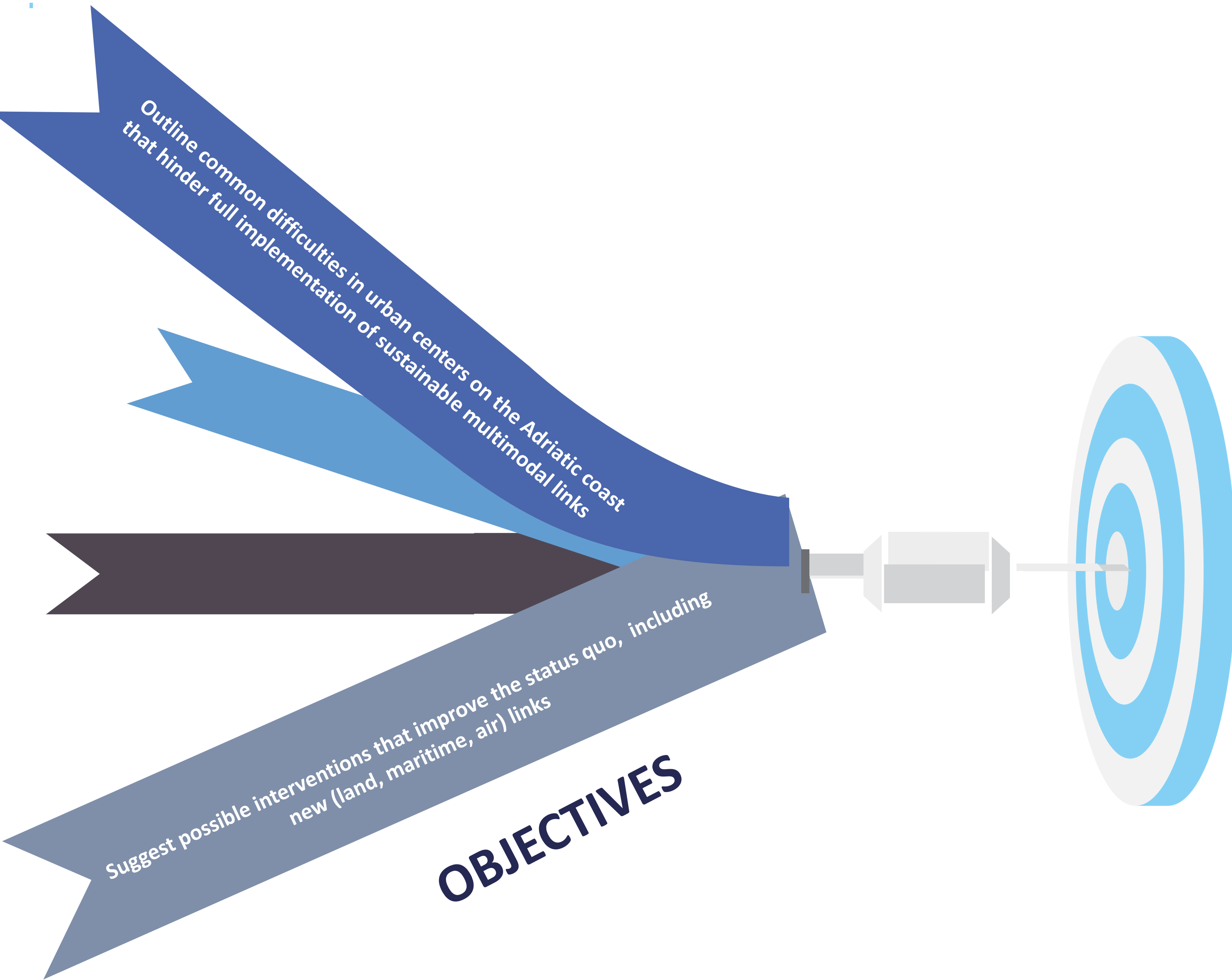
TOTAL BUDGET



Expected Results



Analysis of end users needs on local multimodal mobility



METHODOLOGY

Both qualitative (i.e. Focus Groups) and quantitative (i.e. Survey) data collection tools were developed in order to gather information from local stakeholders.

By means of an innovative participatory approach Local Authorities (LAs), transport stakeholders, residents and tourists have been involved in the identification of the main needs, challenges and possible actions concerning local and cross-border sustainable transport services as well as of the key factors that shape end-users' choices.

Focus Groups

The Focus Groups of the SUTRA project, organised by PP's were attended by two categories of stakeholder



TRANSPORT STAKEHOLDERS

- ❑ Local, regional authorities (active in relevant policy areas such as: transport and mobility, sustainability, urban planning, etc.);
- ❑ Transport service providers (air, land, maritime), and infrastructure owners both public and private;
- ❑ Organisations operating in the soft mobility transport (e.g. ecological public transport);
- ❑ Institutional border actors (e.g. border guard, coast guard, etc.);
- ❑ Other actors deemed relevant at the local level by the partners.



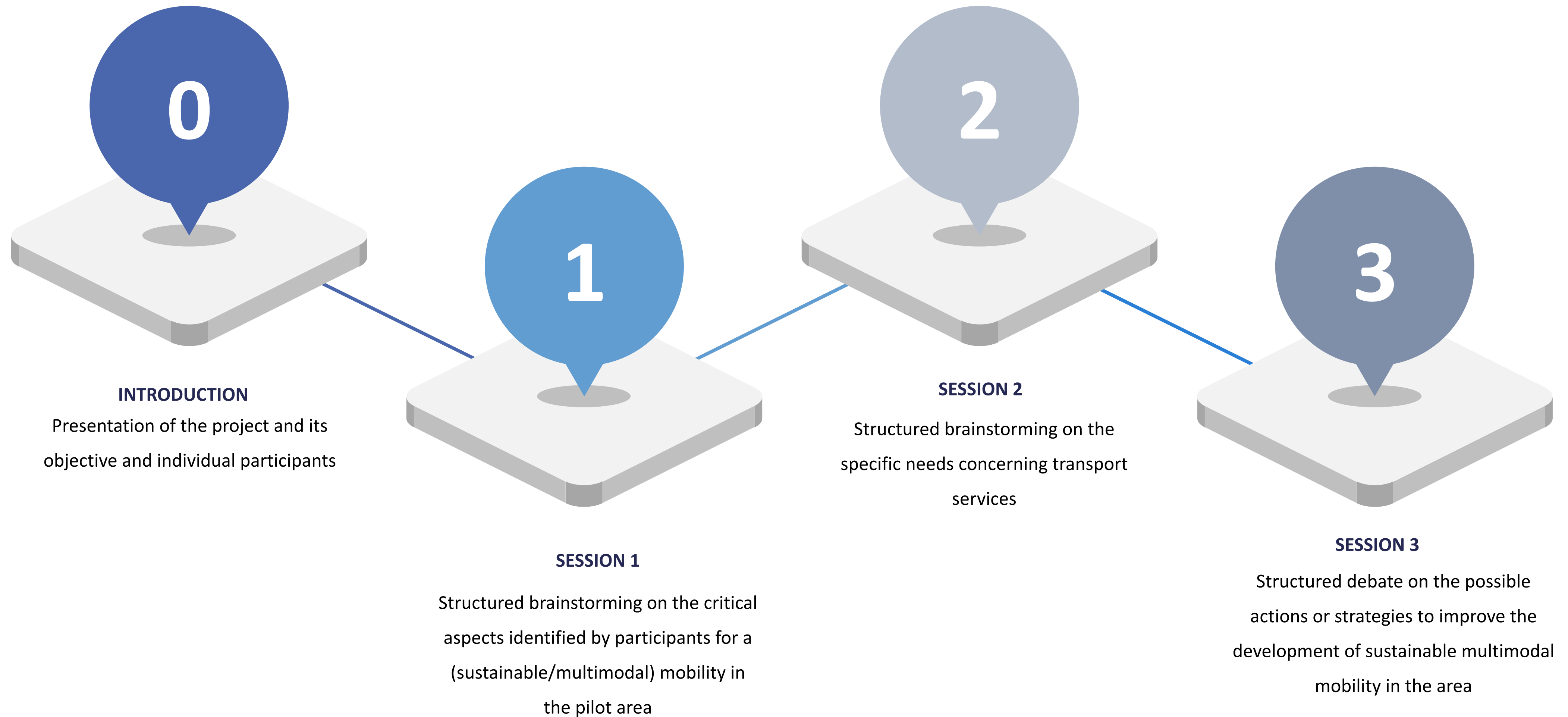
COMMUNITY STAKEHOLDERS

- ❑ Representatives of association of residents (e.g. neighbourhood association, property owner associations, etc.);
- ❑ Organisations and associations active in the environmental protection;
 - ❑ Economic operators and tourist associations;
 - ❑ Associations, organisations of local citizens/community (e.g. cultural associations, consumer associations, users of sustainable mobility, etc.).



Focus Groups' Structure

The Focus Groups were structured in 4 sessions



Results - Focus Groups

From May to December 2019, PPs organised 16 Focus Groups involving a total of **80** stakeholders

106

52

TRANSPORT STAKEHOLDERS



- Public authorities
- Transport service providers (public and private)
- Infrastructure owners (public and private)
- Organisations operating in the soft mobility transport

54

COMMUNITY STAKEHOLDERS



- Citizens/resident population
- Organisations and associations active in the environmental protection
 - Local Civil Society Organisations (CSOs)
 - Economic operators
 - Tourist associations



During the Focus Groups, stakeholders have been asked to present their ideas/suggestions on the following:

1. Challenges

- Concerning the implementation of sustainable multimodal links (Transport stakeholders) and to mobility in the pilot area (Community stakeholders)

2. Needs

- Concerning transport services

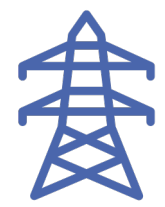
3. Proposals

- Actions/strategies regarding sustainable mobility

Key findings - Challenges according transport stakeholders

The ideas/suggestions on challenges, needs and proposals that emerged during the Focus Group were systematised into four main topics:

1. Infrastructures;
2. Transport/Mobility;
3. Tourism;
4. Connection/Multimodality.



INFRASTRUCTURES

- Improvement of port infrastructures
- Planning of actions and projects in the field of mobility



TRANSPORT/MOBILITY

- Management of maritime transport services
- Making public transportation free
- Development of public transport services
- Increasing transport service in the summertime
- Flexibility of the transport offer
- Improvement of intramodality
- Improvement of the public bike sharing system
- Improvement of the communication of mobility initiatives
- Possibility to get bikes on public urban buses



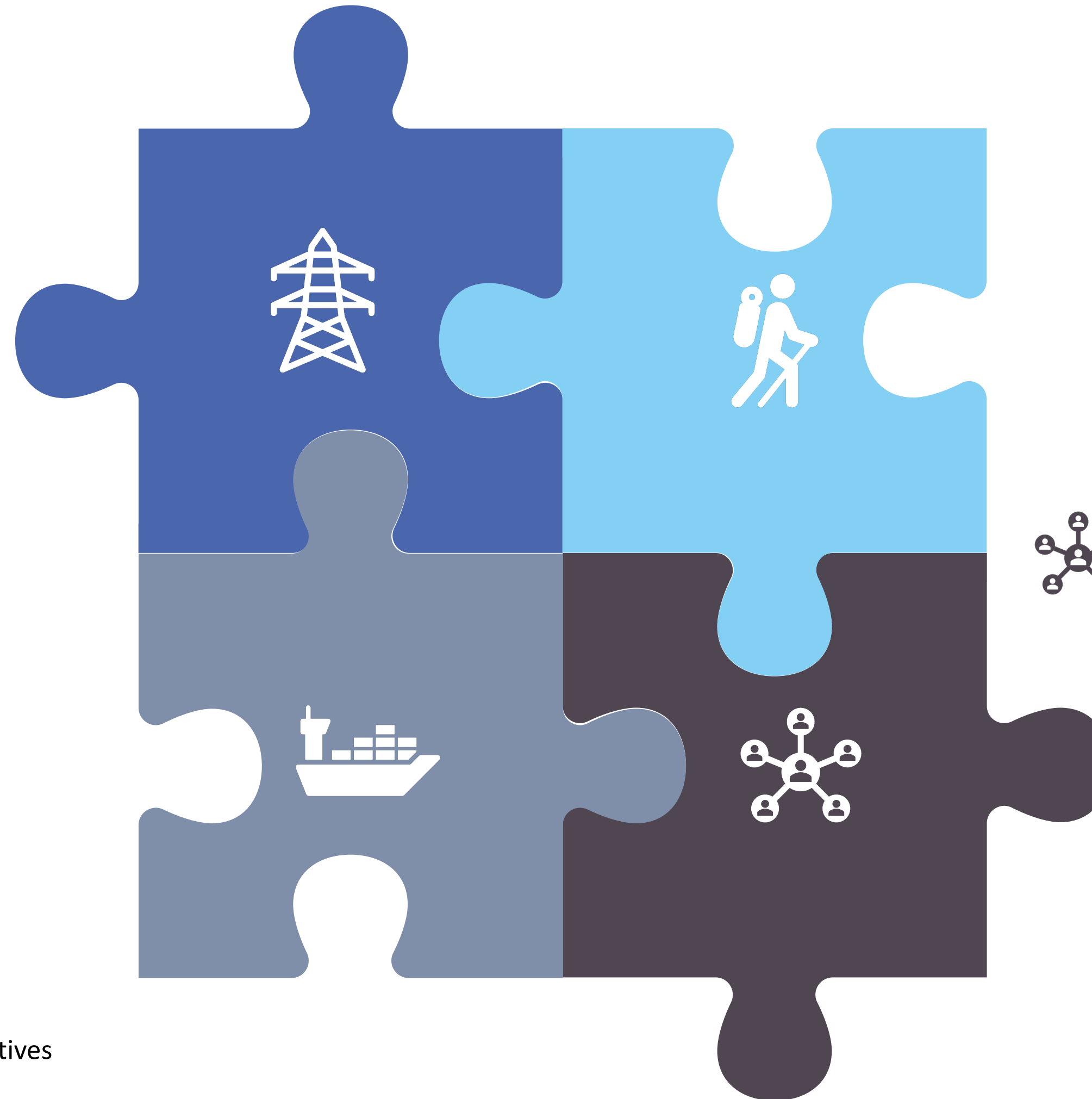
TOURISM

- Implementation of the touristic routes
- Implementation of activities and attractions for tourism

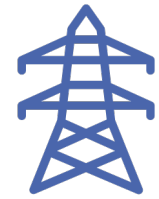


CONNECTIONS/MULTIMODALITY

- Improvement of urban connections by sustainable means
- Creation of a multimodal hubs for transport service
- Improvement of the connection between small districts
 - Improvement of multimodality
- Optimization of transport exchange hubs
 - Lack of intermodal ways of transport



Challenges according community stakeholders



INFRASTRUCTURES

- ❑ Absence of electric means and related infrastructures for electric charging (columns)
- ❑ Implementation and monitoring of infrastructures projects included in the investment plan



TRANSPORT/MOBILITY

- ❑ Improvement of the viability for cycles and cars
- ❑ Integration of mobility services (e.g. car-free zones, with car parks nearby)
- ❑ Lack of intermodal ways of transport
- ❑ Expansion of the public bike sharing system
- ❑ High costs of transportation for passengers as well as for transport providers



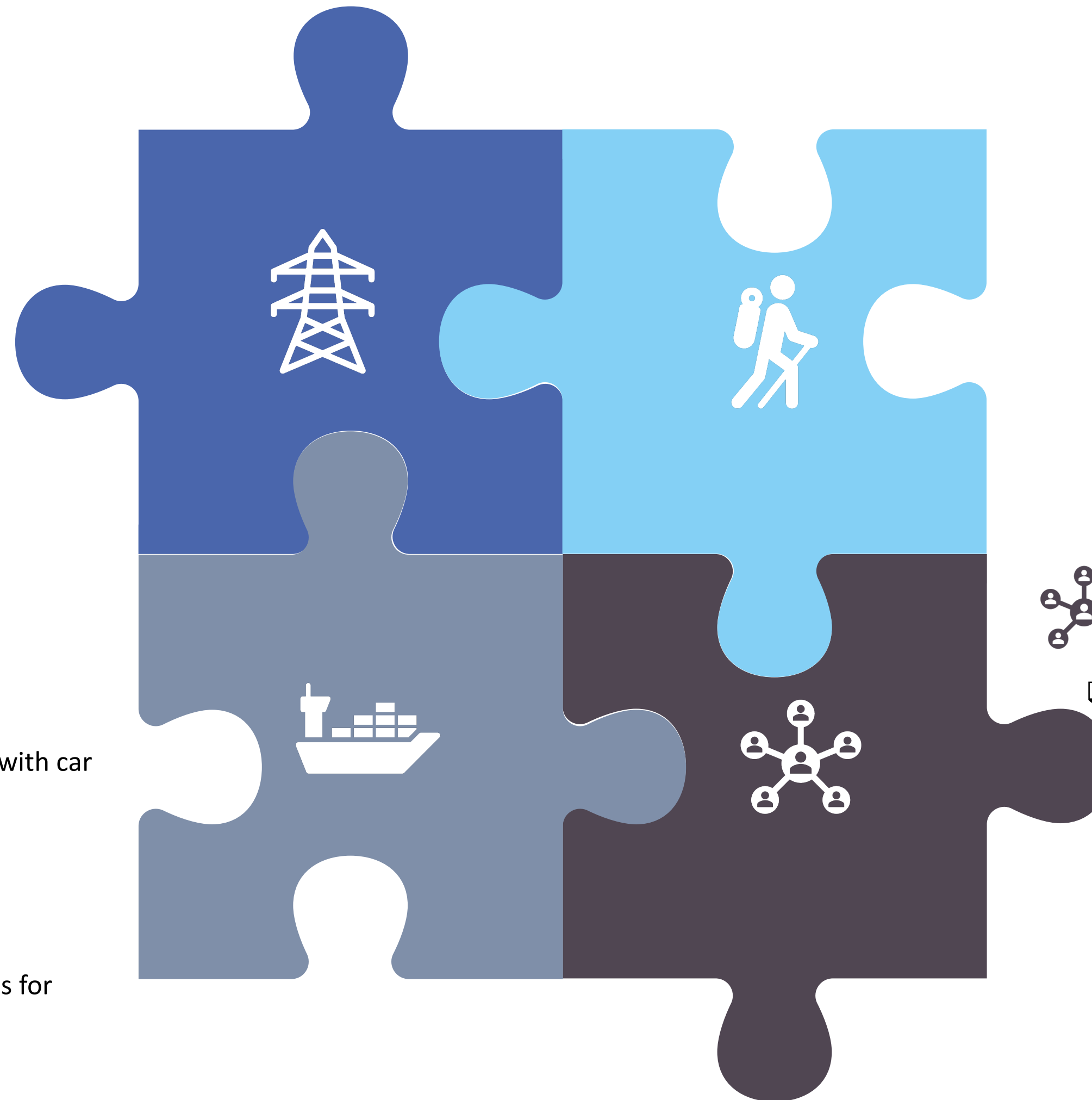
TOURISM

- ❑ Appropriate tourism promotion and information
- ❑ Introduction of new links and tourist offers

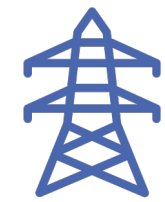


CONNECTIONS/MULTIMODALITY

- ❑ Coordination between the various means of multimodal transport (such as trains, buses and boats) reducing waiting times to a minimum
 - ❑ Vehicle traffic and connections
- ❑ Development of the links with hinterland and small districts.
 - ❑ Lack of intermodal ways of transport



Needs according transport stakeholders



INFRASTRUCTURES

- Evaluation of harbour development plans and inclusion of port planning



TRANSPORT/MOBILITY

- Implementation of the charging columns for electric boats and other means of transport
- Innovative models for stimulating public and sustainable transport
- Promotion of a culture of public transport
- Expansion of the existing public bike sharing system with new locations and equipment
- Establishment and expansion of e-vehicle charging stations



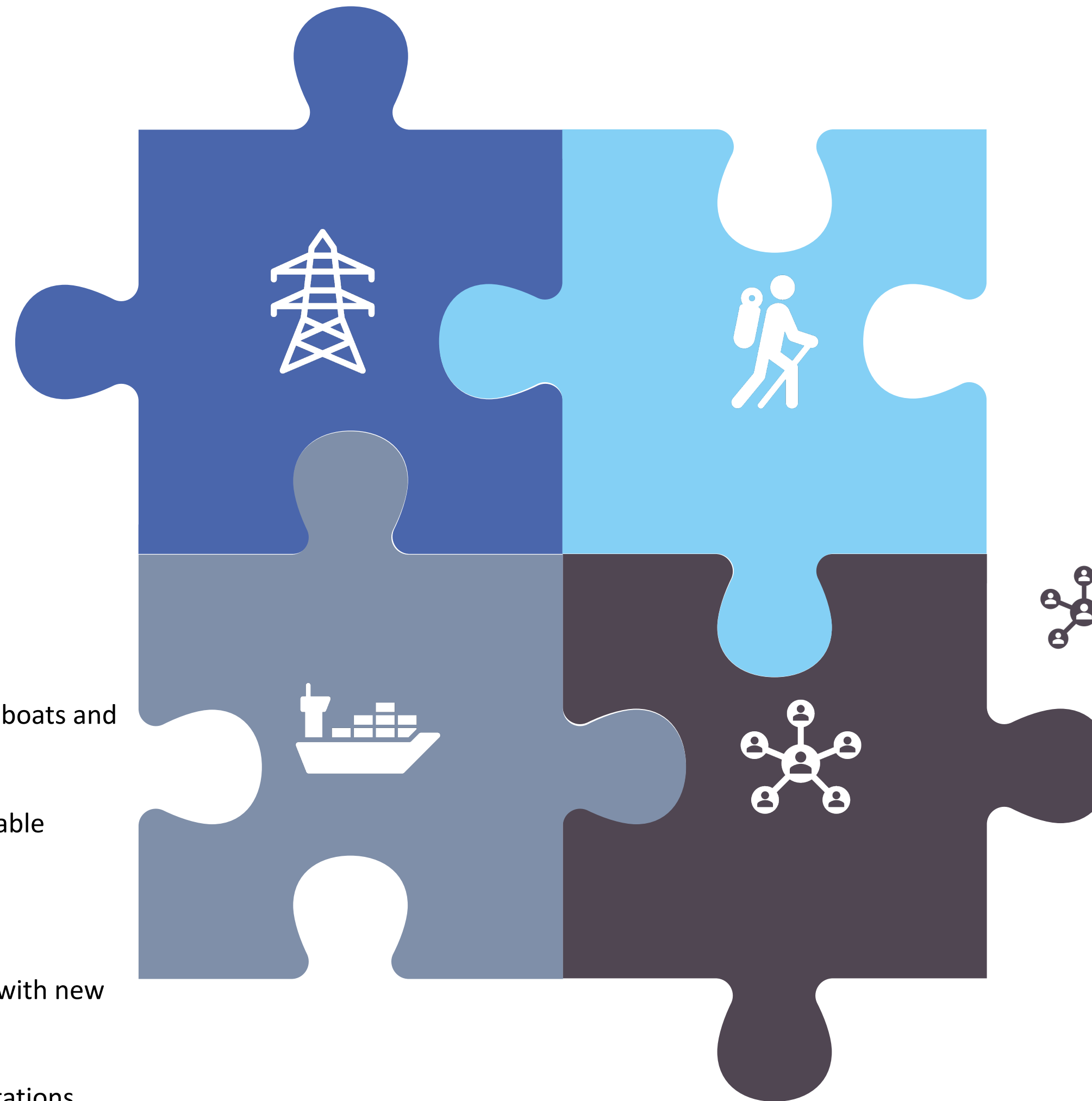
TOURISM

- Implementation of shuttle services via internal channels identifying the arrival points with parking facilities
- Guaranteeing low costs of the transport service for citizens and tourists

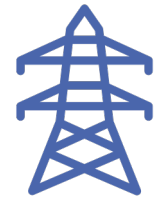


CONNECTIONS/MULTIMODALITY

- Set up tables of coordination between municipality, transport providers and users to monitor and adjust the implementation of pilot actions
- Development of connections between city and seashore
- Development of transport routes in order to make the city more visible on the tourist maps



Needs according community stakeholders



INFRASTRUCTURES

- ❑ Improvement of infrastructure connections (e.g. docking, runways, charging stations)



TOURISM

- ❑ Information point about the links and Web services.
 - ❑ Planning of new events for tourism
- ❑ Promotion of the use of sustainable mobility transport
- ❑ Connection with existing docks with tourist cycle circuits



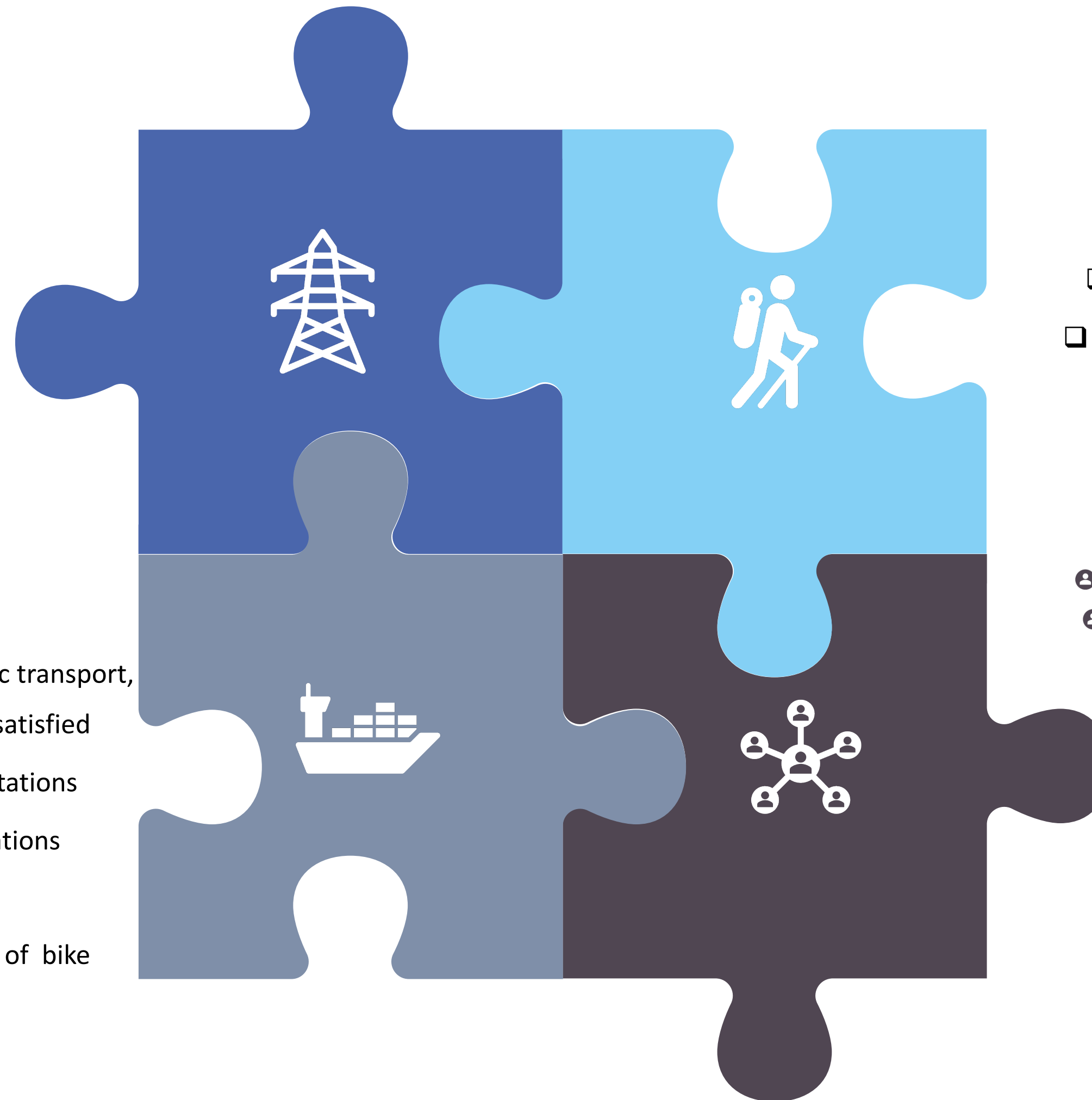
TRANSPORT/MOBILITY

- ❑ Guaranteeing low costs and effective routes of public transport, in order to maximize earnings and keep passengers satisfied
- ❑ Establishment and expansion of e-vehicle charging stations
- ❑ Establishment and expansion of e-boats charging stations
- ❑ Establishment of a public car sharing service
- ❑ Adequate advertising and communication campaign of bike sharing services



CONNECTIONS/MULTIMODALITY

- ❑ Improvement of connections between different areas of the city in order to reduce car dependency
- ❑ Improvement of connections between the city and the seashore in order to plan additional activities
 - ❑ Improvement of connections between various cultural sites located in the city



Proposals according transport stakeholders



INFRASTRUCTURES

Actions

- Development of transport infrastructure in order to improve the quality of road connections and address the overall issues of geographic isolation.
- Construction of new maritime infrastructures



TRANSPORT/MOBILITY

Actions

- Expansion of new cycling paths
- Expansion of the existing public bike sharing system
- Establishment and expansion of e-vehicle charging station.
- Establishment and expansion of e-boats charging stations
- Establishment of a public car sharing service

Strategies

- Organisation of meetings with stakeholders with the aim of analyzing existing problems and proposing solutions about sustainable mobility transport.



TOURISM

Strategies

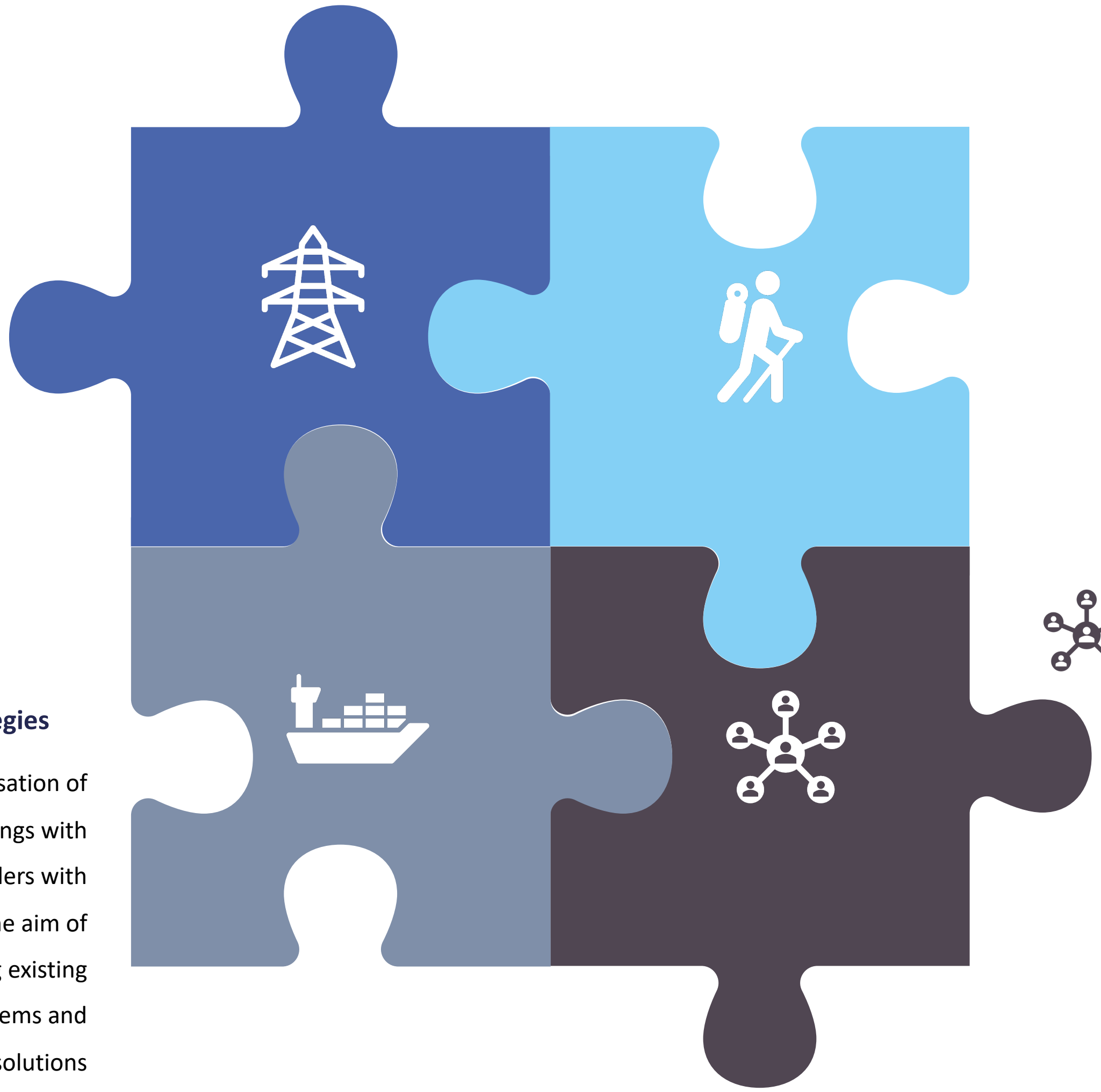
- Enhancing the cultural and patrimonial aspects to improve the tourism offer.



CONNECTIONS/MULTIMODALITY

Strategies

- Organisation of a table of coordination to monitor the implementation of pilot actions
- Implementation of a detailed action plan for urban mobility and sustainable energy and climate change
- Advocate network improvement



Proposals according community stakeholders



INFRASTRUCTURES

Actions

- Development of transportation infrastructure at cross-border level which will facilitate the transport of passengers & goods between cross-border countries
- Improvement of the infrastructure networks for roads and railways



TOURISM

- No actions/strategies identified



TRANSPORT/MOBILITY

Actions

- Definition of diversified public transport means (shuttle bus and public transport)

Strategies

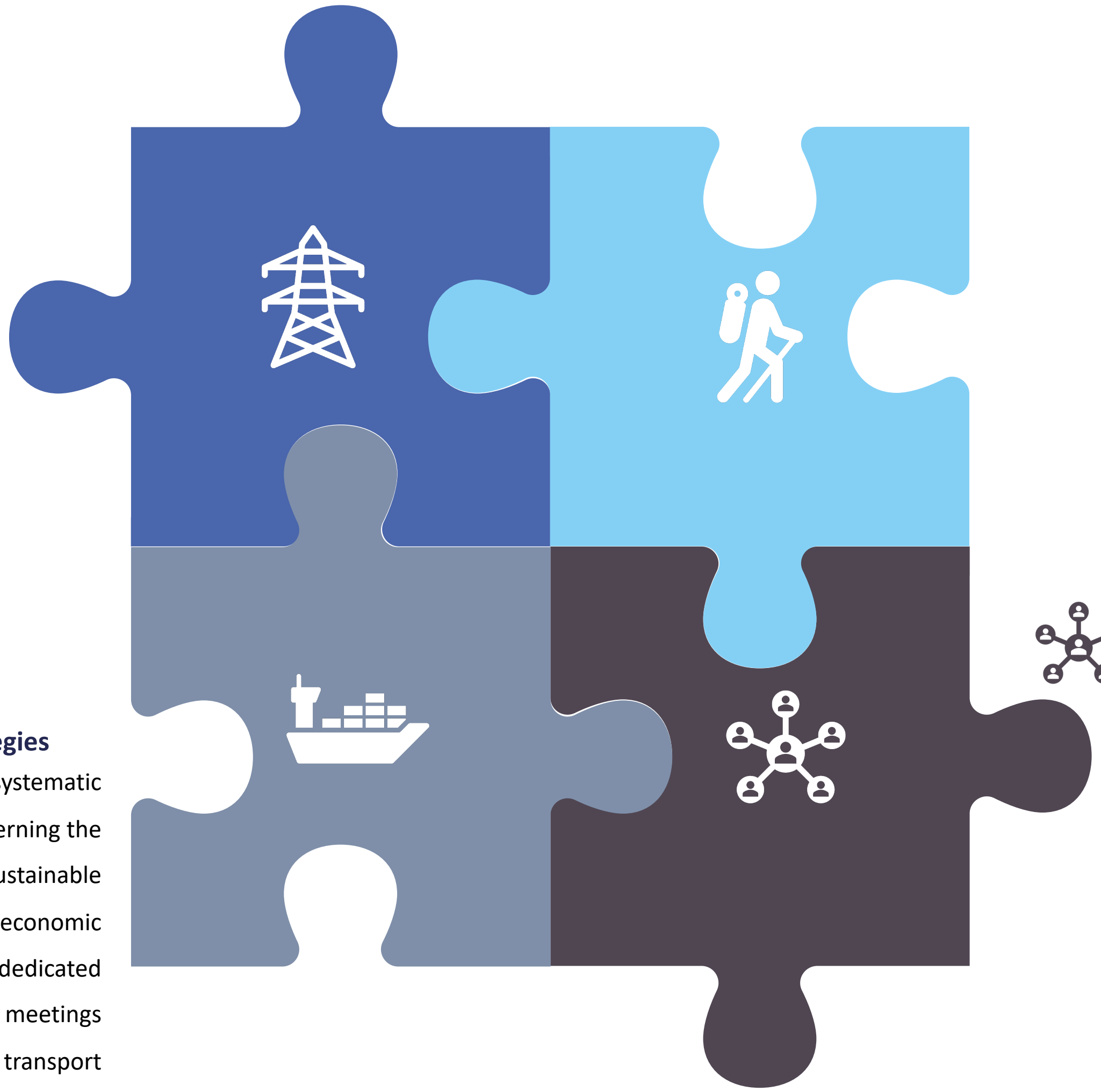
- Promotion of systematic initiatives concerning the development of sustainable mobility among economic operators through dedicated meetings
- Establishment of a transport network which is sustainable and energy efficient (e.g. electrical transport systems).



CONNECTIONS/MULTIMODALITY

Strategies

- Support the initiatives at the local and cross-border level regarding the use of new transport services



Survey



The preliminary results of the Focus Groups and a literature review on previous research and studies on transport and mobility implemented at the EU level, led to the elaboration of two questionnaires targeted to:



RESIDENTS in project areas

Aimed at identifying the means of transport used for the most frequent trip, the main drivers of travel choices, the level of satisfaction on local and cross-border sustainable mobility as well as proposals regarding local and cross-border sustainable mobility

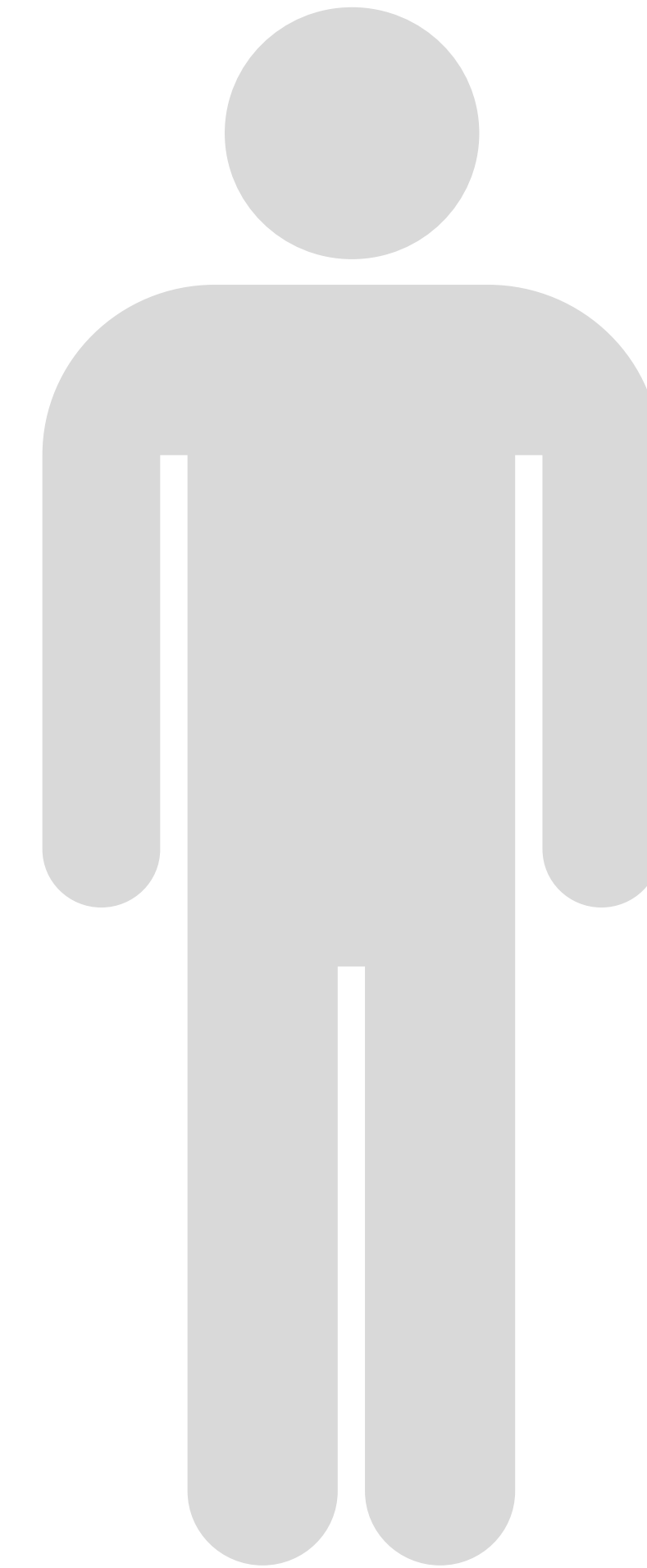


TOURISTS in project areas

Aimed at identifying the means of transport used to reach/to visit or move around the area, the main drivers of travel choices, the level of satisfaction on local and cross-border sustainable mobility as well as proposals regarding local and cross-border sustainable mobility

Residents

In total **902** respondents participated to the on-line survey

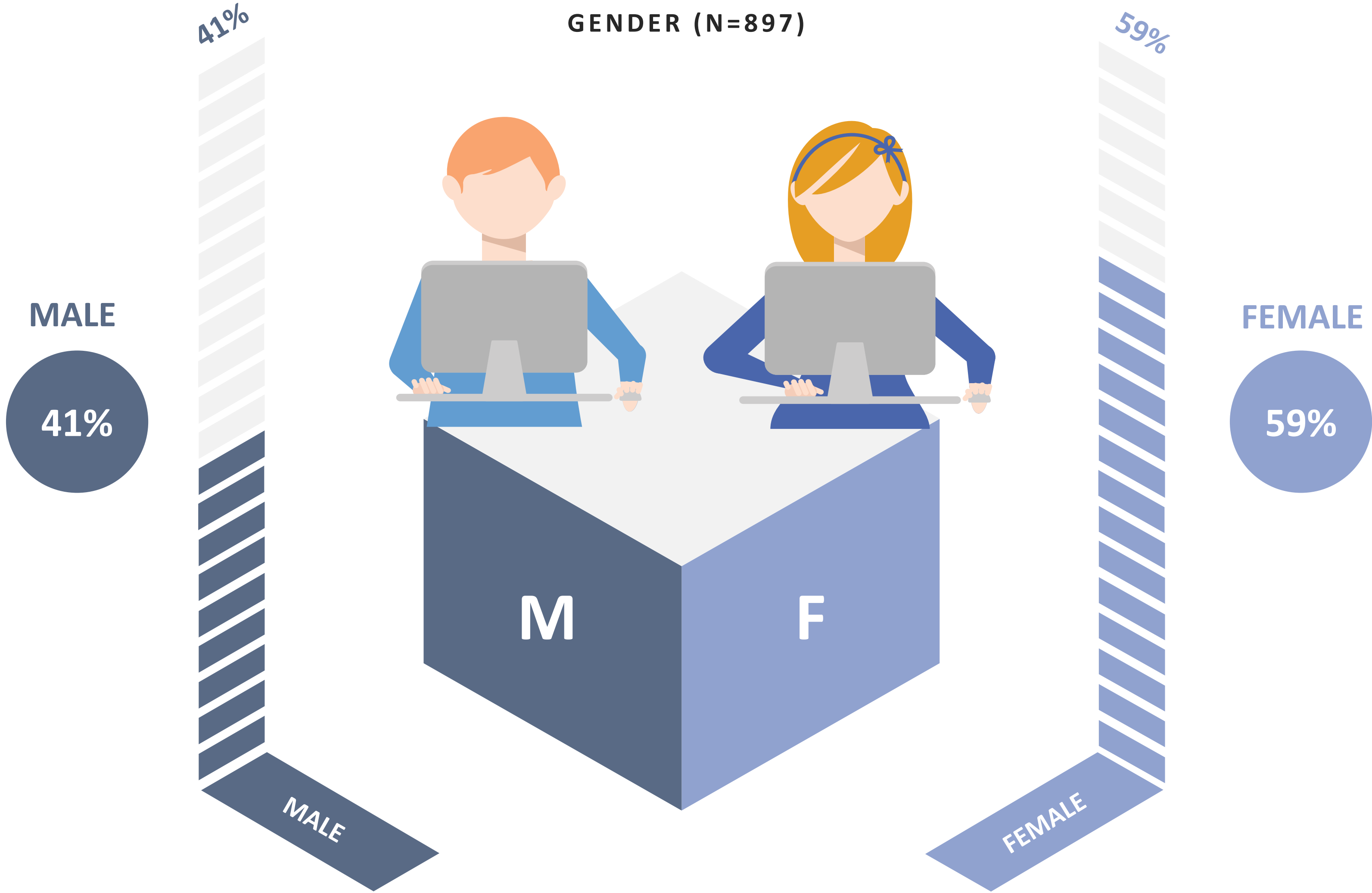


Socio-demographic data - Gender

The first part of the questionnaire was aimed the socio-demographic identification of respondents (1).

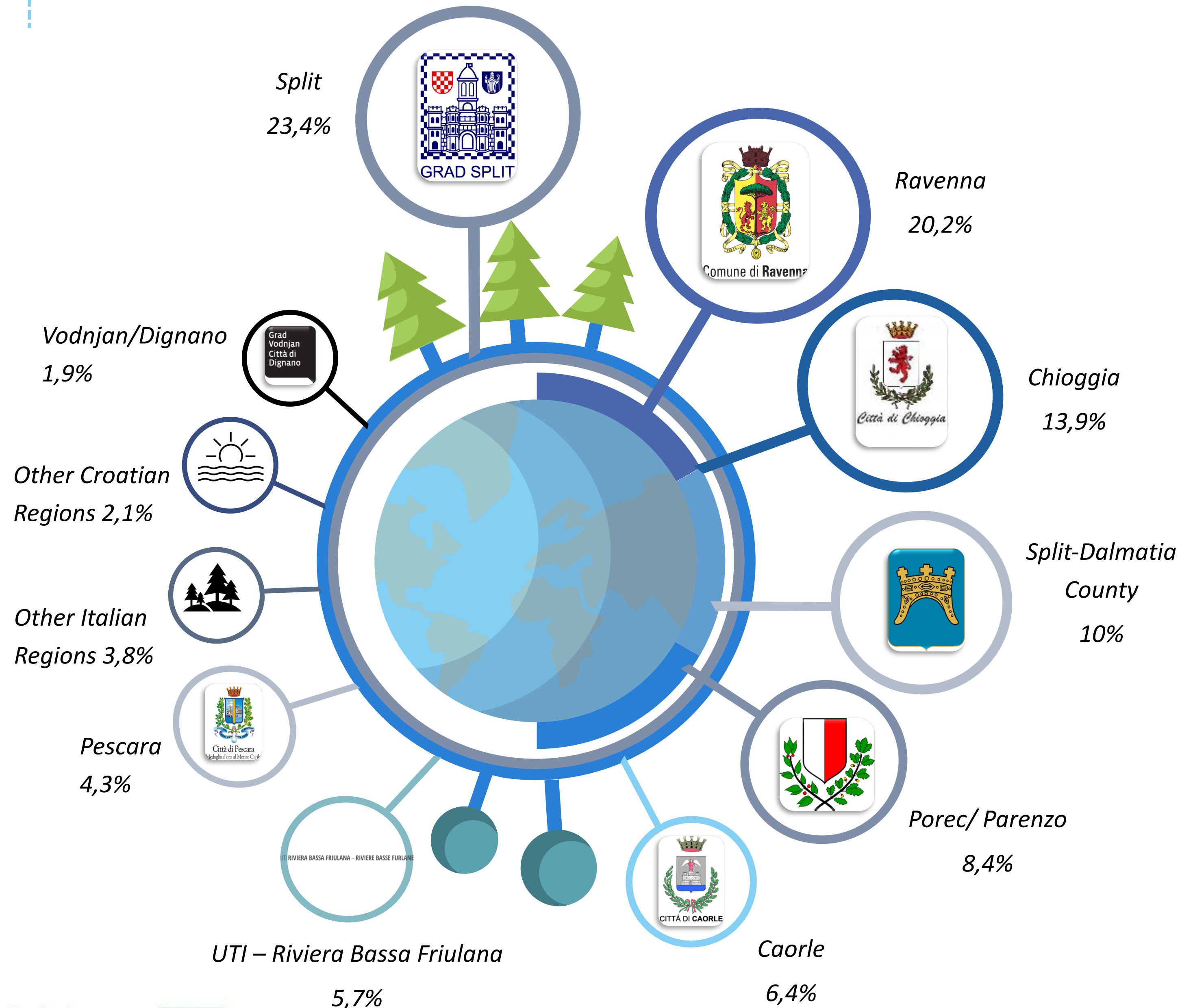
With regard to gender, the distribution of respondents, who provided an answer to this question, is balanced between males (41% of respondents) and females (59% of respondents).

The age of respondents is included between 14 and 78 years.



(1) Investigation on potential trends in answers by correlation with socio-economic aspects would allow to identify elements of choice/differentiation that might be gender, age, or education related. Statistically significant correlations will be indicated with the symbol (*).

Residence



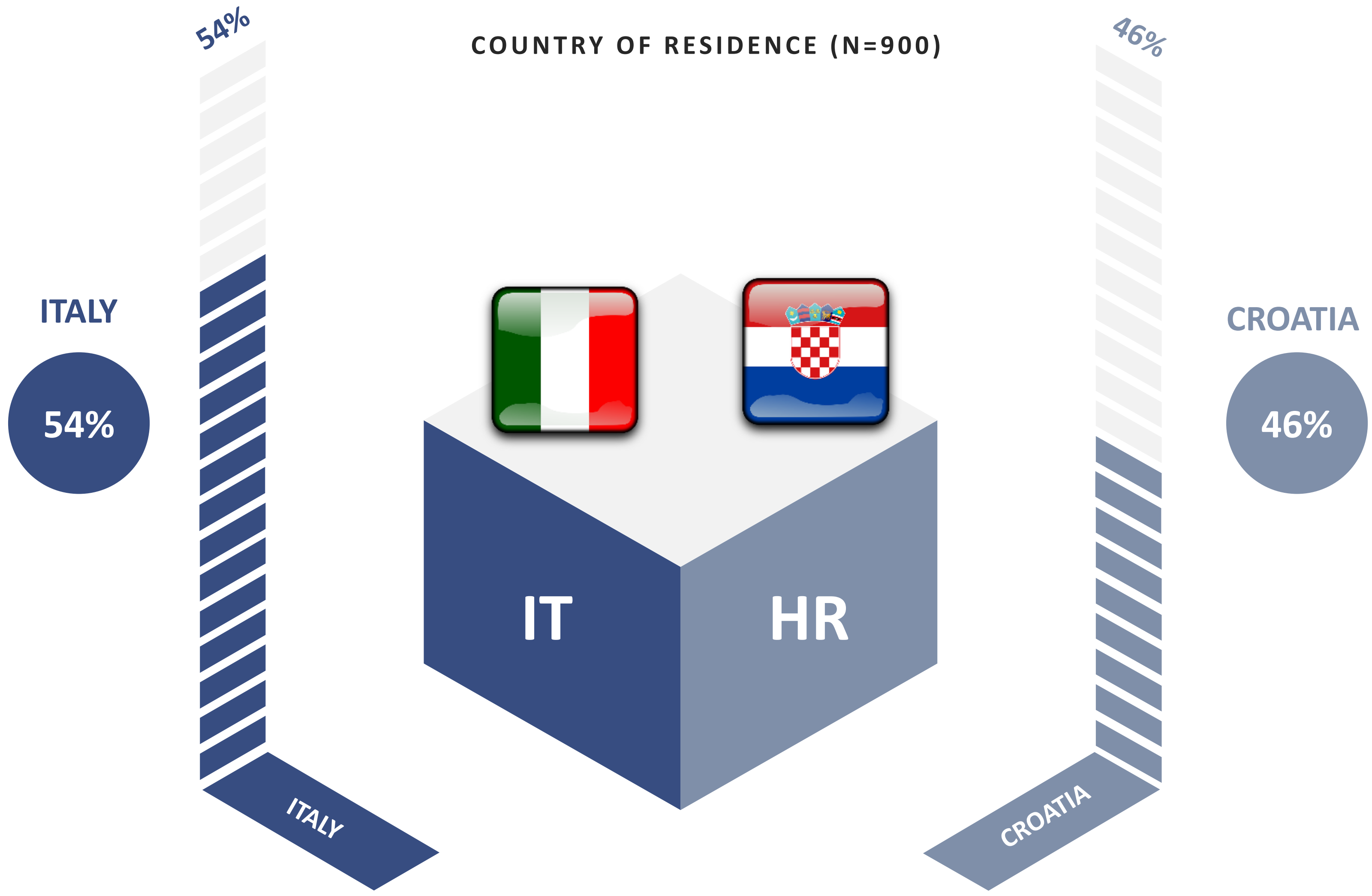
RESIDENCE (N=894)

Respondents were asked to indicate their city of residence.
The following frequencies have been registered:

- ☐ Split (23.4% of respondents);
 - ☐ Ravenna (20.2%);
 - ☐ Chioggia (13.9%);
- ☐ Split-Dalmatia County (10%);
 - ☐ Porec/Parenzo (8.4%);
 - ☐ Caorle (6.4%);
- ☐ UTI Riviera-Bassa Friulana (5.7%);
 - ☐ Pescara (4.3%);
- ☐ Other Italian Regions (3.8%);
- ☐ Other Croatian Regions (2.8%);
 - ☐ Vodnjan/Dignano (1.9%).

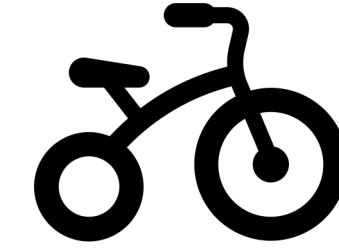
Country of residence

In terms of nationality, the distribution of respondents is balanced between Italian (54% of respondents) and Croatian (46% of respondents).

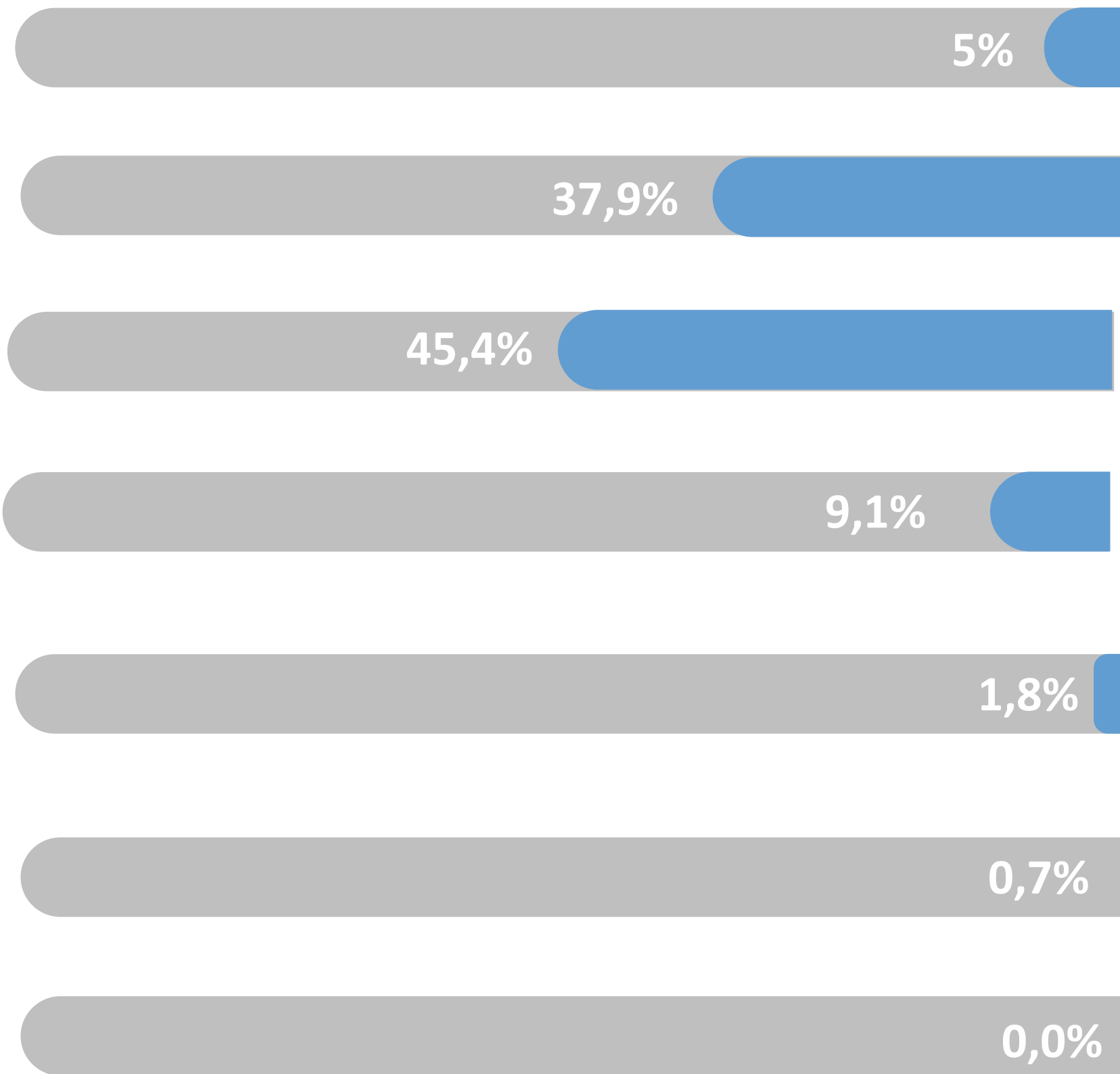


Transport profile

The second section of the questionnaire was aimed at the identification of the respondents' transport profile, in terms of number of car and bicycles per household, means of transport used for the longest distance for the most frequent trip and main drivers of travel choices

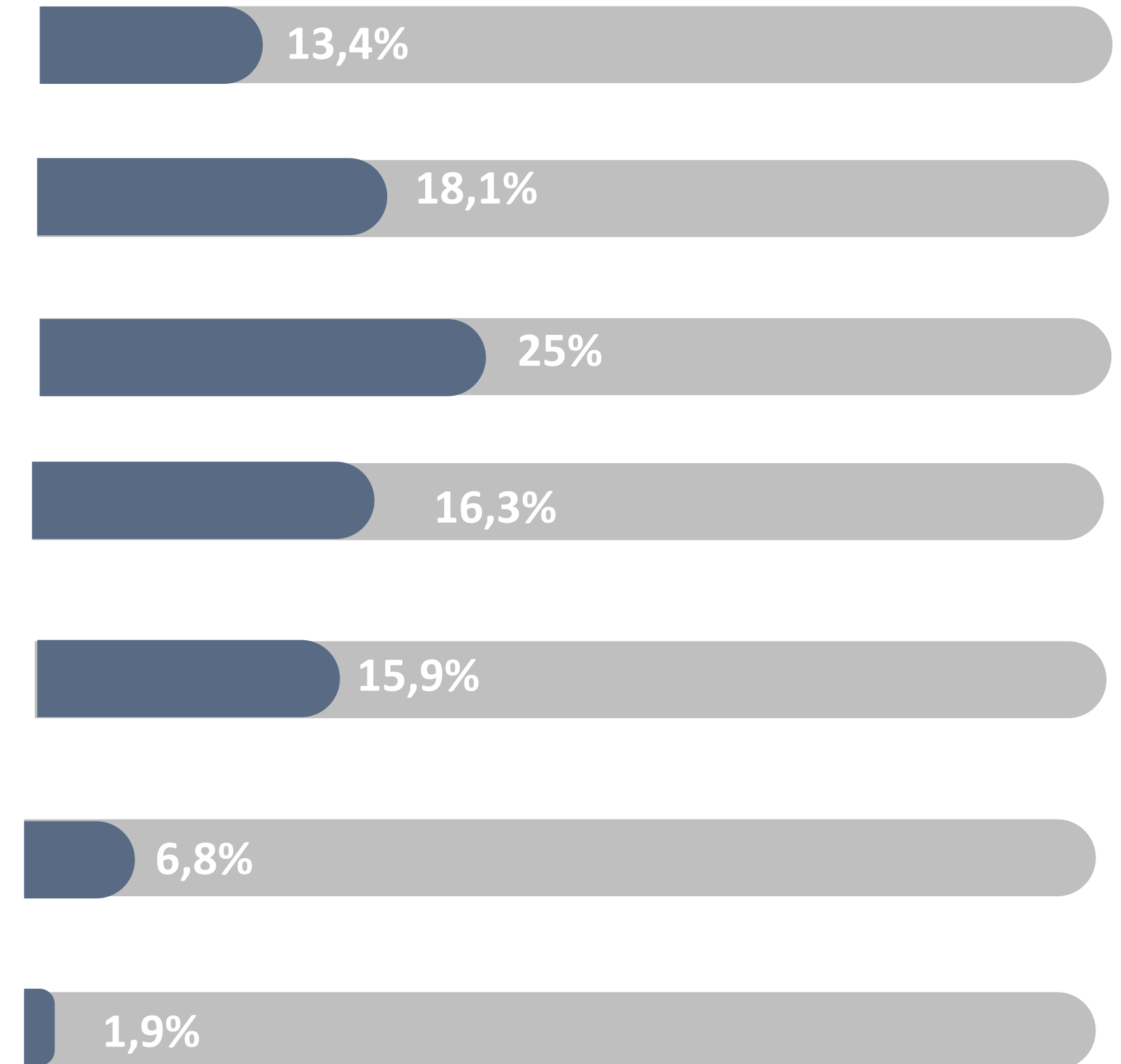


NUMBER OF CARS PER HOUSEHOLD (N=897)



- 0
- 1
- 2
- 3
- 4
- 5
- 6

NUMBER OF BICYCLE PER HOUSEHOLD (N=893)

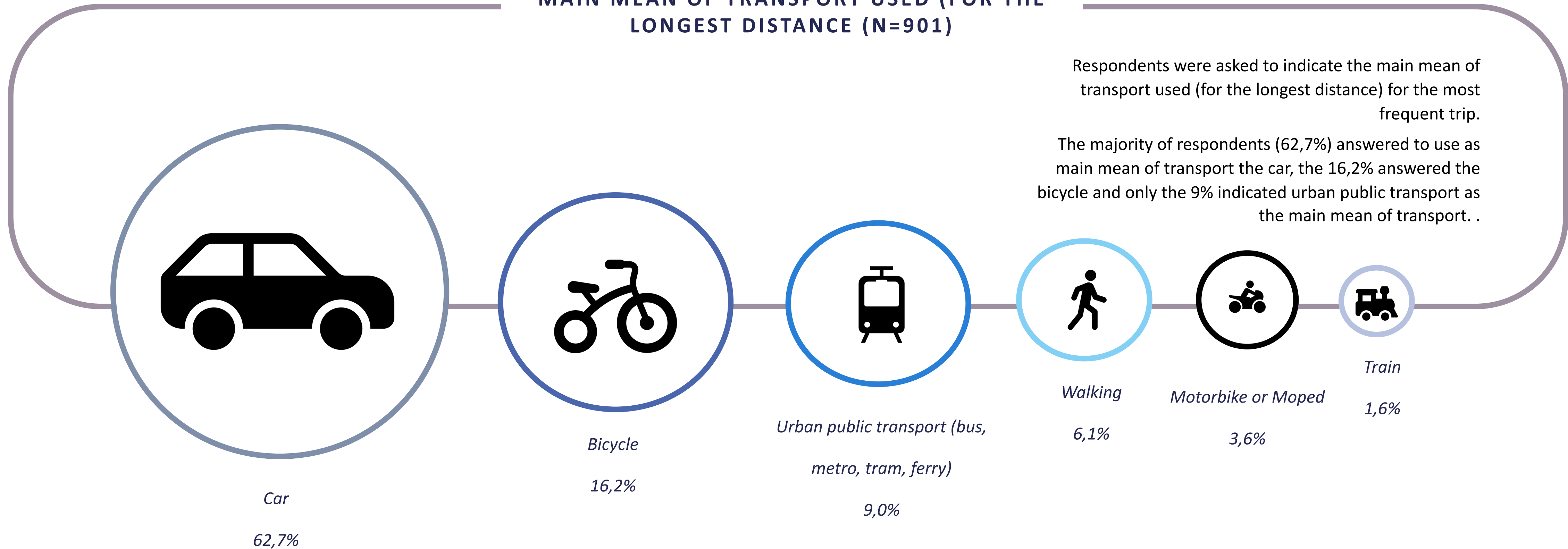


Main mean of transport used (for the longest distance)

MAIN MEAN OF TRANSPORT USED (FOR THE LONGEST DISTANCE (N=901))

Respondents were asked to indicate the main mean of transport used (for the longest distance) for the most frequent trip.

The majority of respondents (62,7%) answered to use as main mean of transport the car, the 16,2% answered the bicycle and only the 9% indicated urban public transport as the main mean of transport. .



Main mean of transport used (per country of residence/per gender)

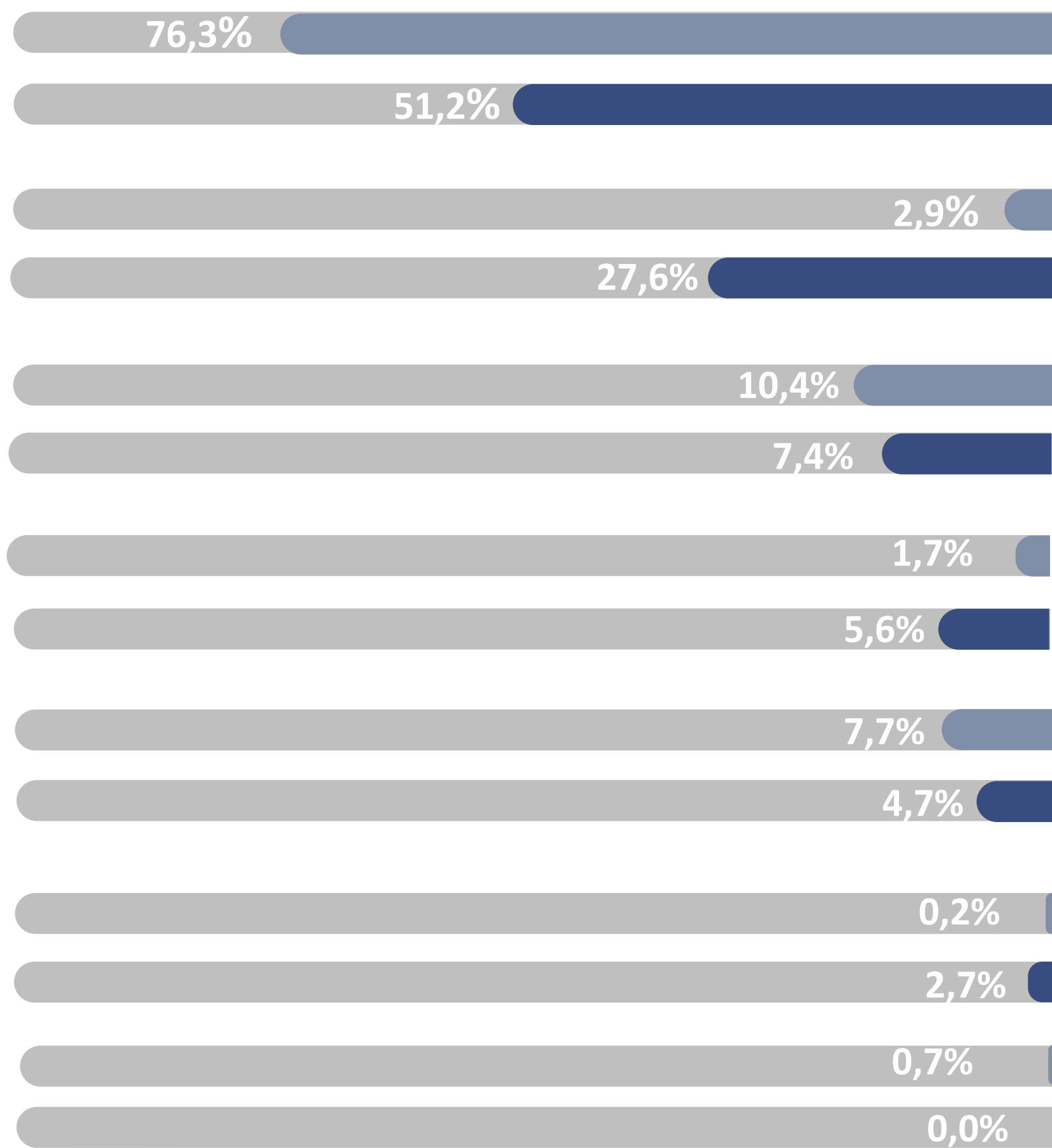
The car is used in particular by:

- ❑ Croatian respondents (76,3% vs 52.2% of Italian respondents);
- ❑ Male respondents (69% vs 58.3% of female respondents).

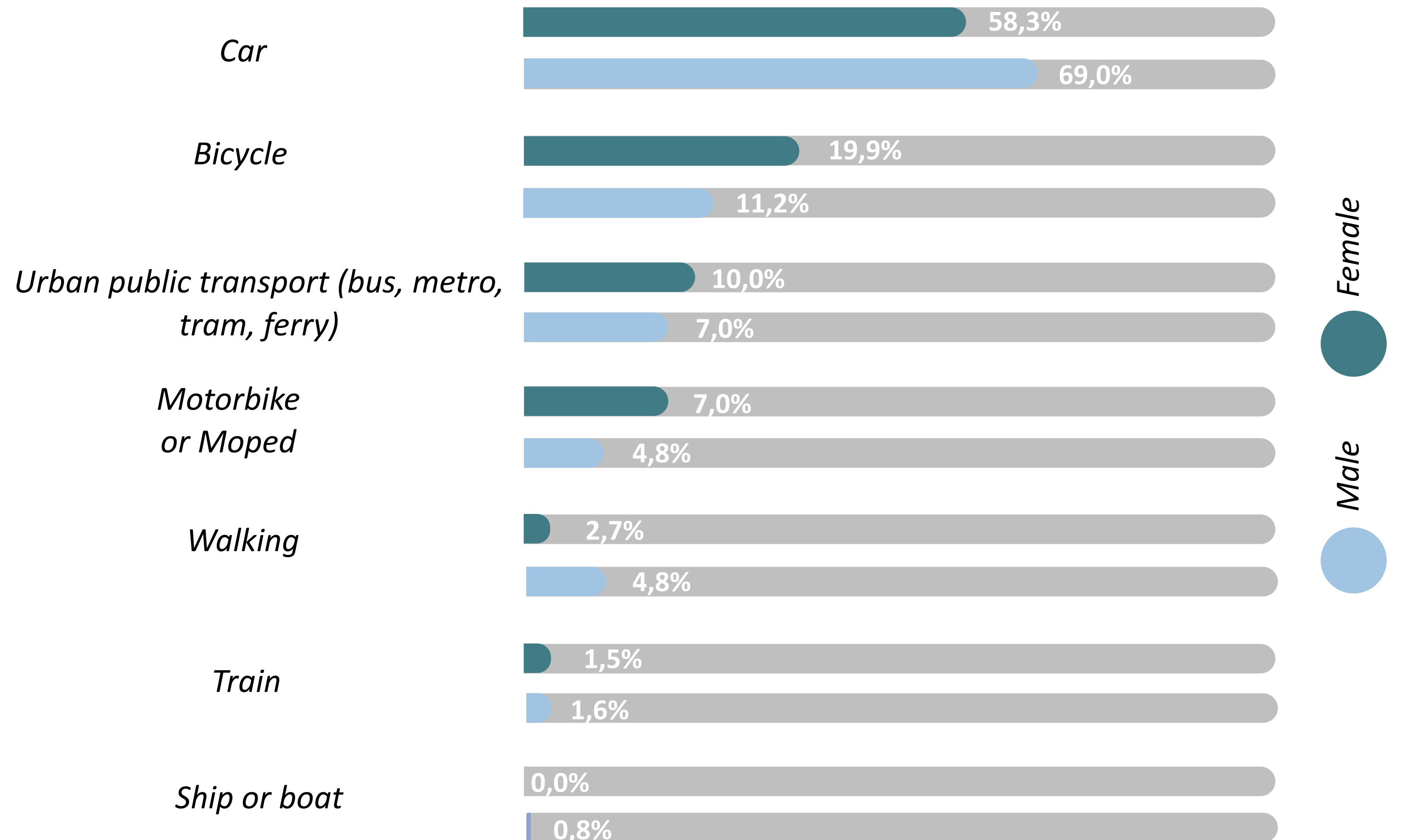
The bicycle is used in particular by:

- ❑ Italian respondents (27.6% vs 2,9% of Croatian respondents);
- ❑ Female respondents (19.9% vs 11.2% of male respondents).

MAIN MEAN OF TRANSPORT USED
(PER COUNTRY OF RESIDENCE)



MAIN MEAN OF TRANSPORT USED
(PER GENDER)

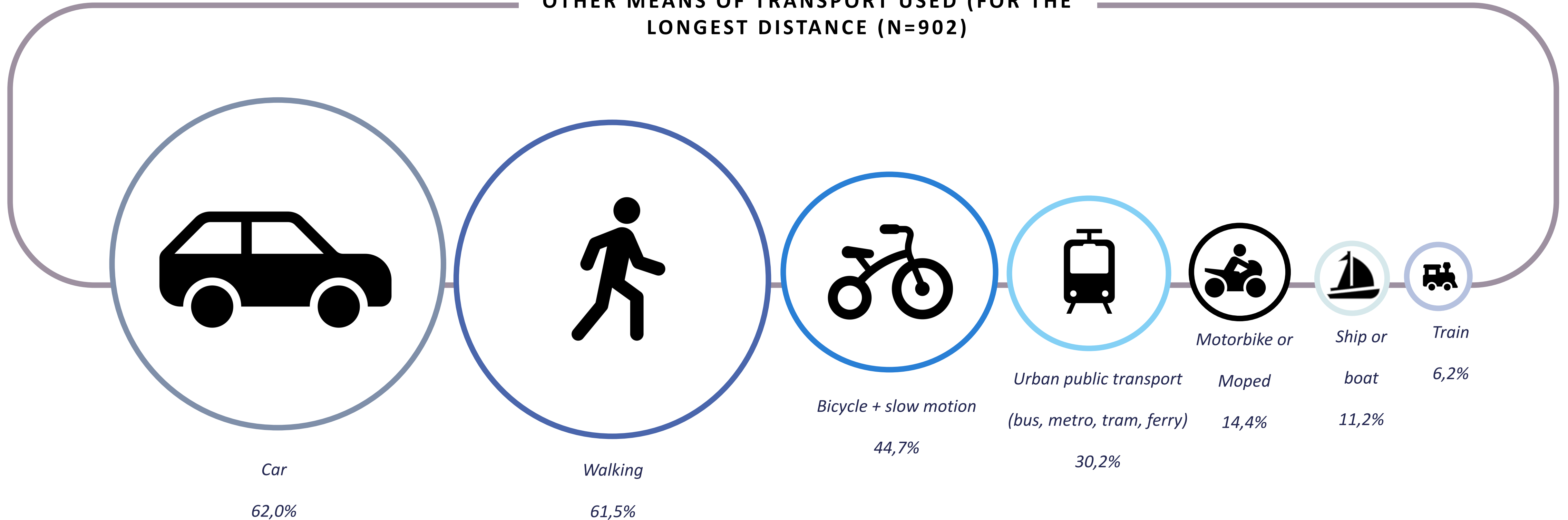


Other means of transport used (for the longest distance)

Respondents were also asked to indicate the other means of transport used (for the longest distance) for the most frequent trip. The following frequencies have been registered:

- Car (62% of respondents);
- Walking (61.5%);
- Bicycle + slow motion (44.7%);
- Urban public transport (30.2%);
- Motorbike or moped (14.4%);
- Ship or boat (11.2%);
- Train (6.2%).

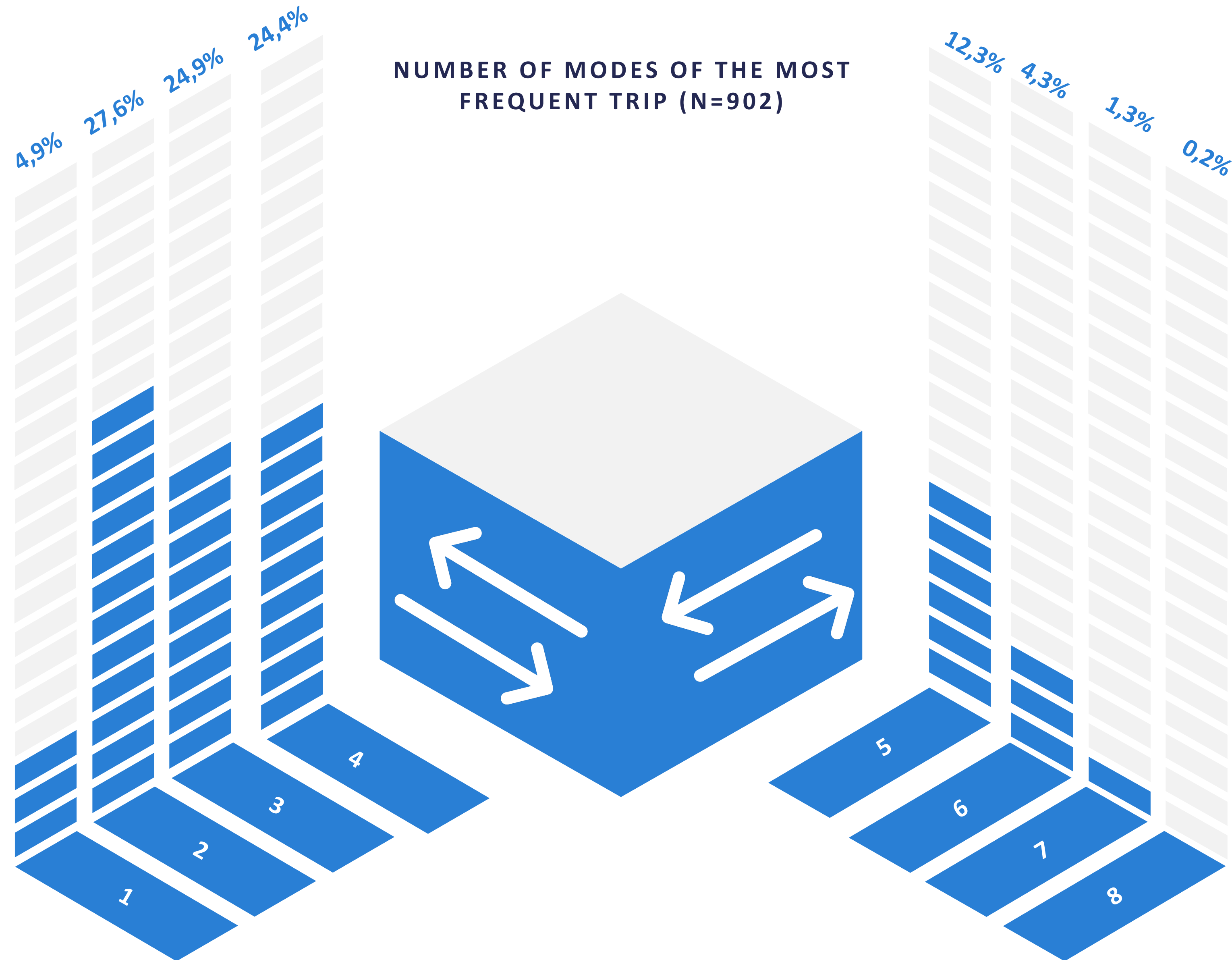
OTHER MEANS OF TRANSPORT USED (FOR THE LONGEST DISTANCE (N=902))



Number of modes of the most frequent trip

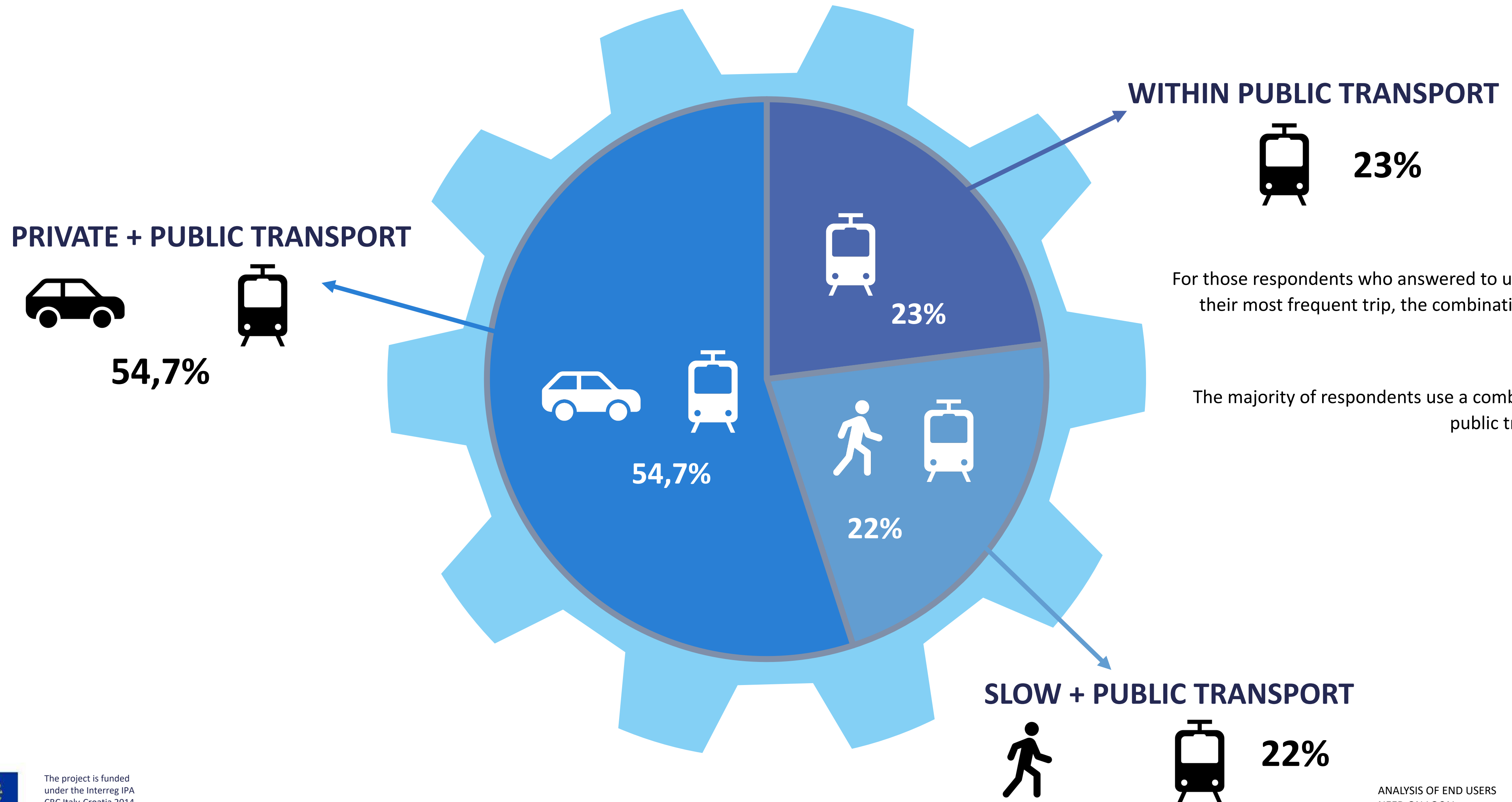
In general, respondents, for their most frequent trip tend to use:

- 2 means of transport (27.6% of respondents);
- 3 means of transport (24.9%);
- 4 means of transport (24.4%).



Combination of modes

COMBINATION OF MODES (N=190)



For those respondents who answered to use public transport for their most frequent trip, the combination of modes has been analysed.

The majority of respondents use a combination of private and public transportation (54.7%).

For my frequent trip, I choose to travel by ... because

FOR MY MOST FREQUENT TRIP, I CHOOSE TO TRAVEL BY ... BECAUSE



- 8,11 It is time-efficient
- 6,86 It is the most relaxing means of travel
- 6,28 It is safe
- 5,93 It is economically convenient
- 5,86 There is no alternative
- 4,99 It is environmentally friendly
- 3,68 It allows me to do my sport activity
- 3,59 It allows to socialize with other people
- 3,56 It allows me to do some work while travelling

Another question was aimed at investigating the reason for respondents' travel choices, by asking them to express their level of agreement (from 1 to 10, where 1 means "not agree at all" and 10 "totally agree") with a series of statements.

Respondents expressed their agreement, in particular, with the following statements (with an average score above 6):

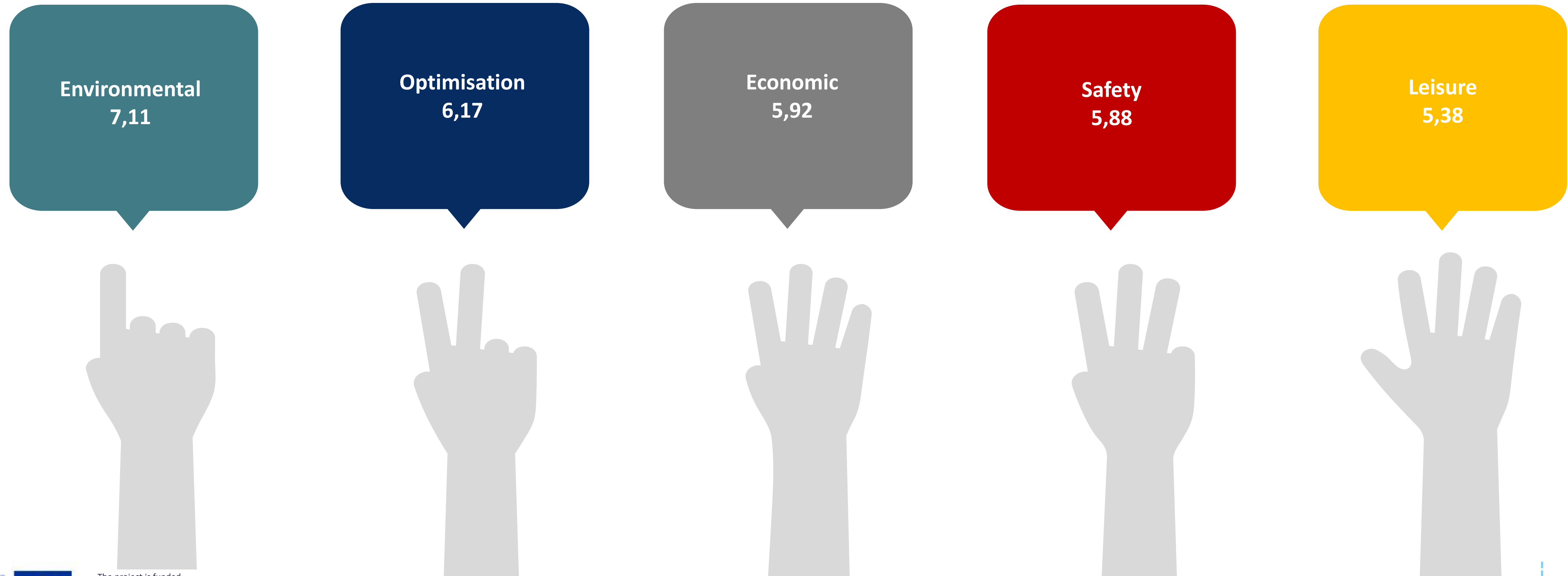
- It is time efficient (average score 8.11);
- It is the most relaxing means of travel (average score 6.86);
- It is safe (average score 6.28).

Profiles average scores

PROFILES AVERAGE SCORES

The last question of this section was aimed at a definition of the profile of respondents. Respondents were asked to express their level agreement (from 1 to 10, where 1 means “not agree at all” and 10 “totally agree”) with several statements linked to their preferences in term of transport (each one related to a different conceptual profile). In order to define travelers’ profiles, the statements pertaining to the same conceptual profile have been aggregated into a single variable. The profiles have been labelled as follows: environmental awareness profile (**green**); leisure profile (**yellow**); economic profile (**grey**); optimisation profile (**blue**); safety profile (**red**).

The environmental profile has the highest average score (7.11) followed by the optimisation profile (6,17).

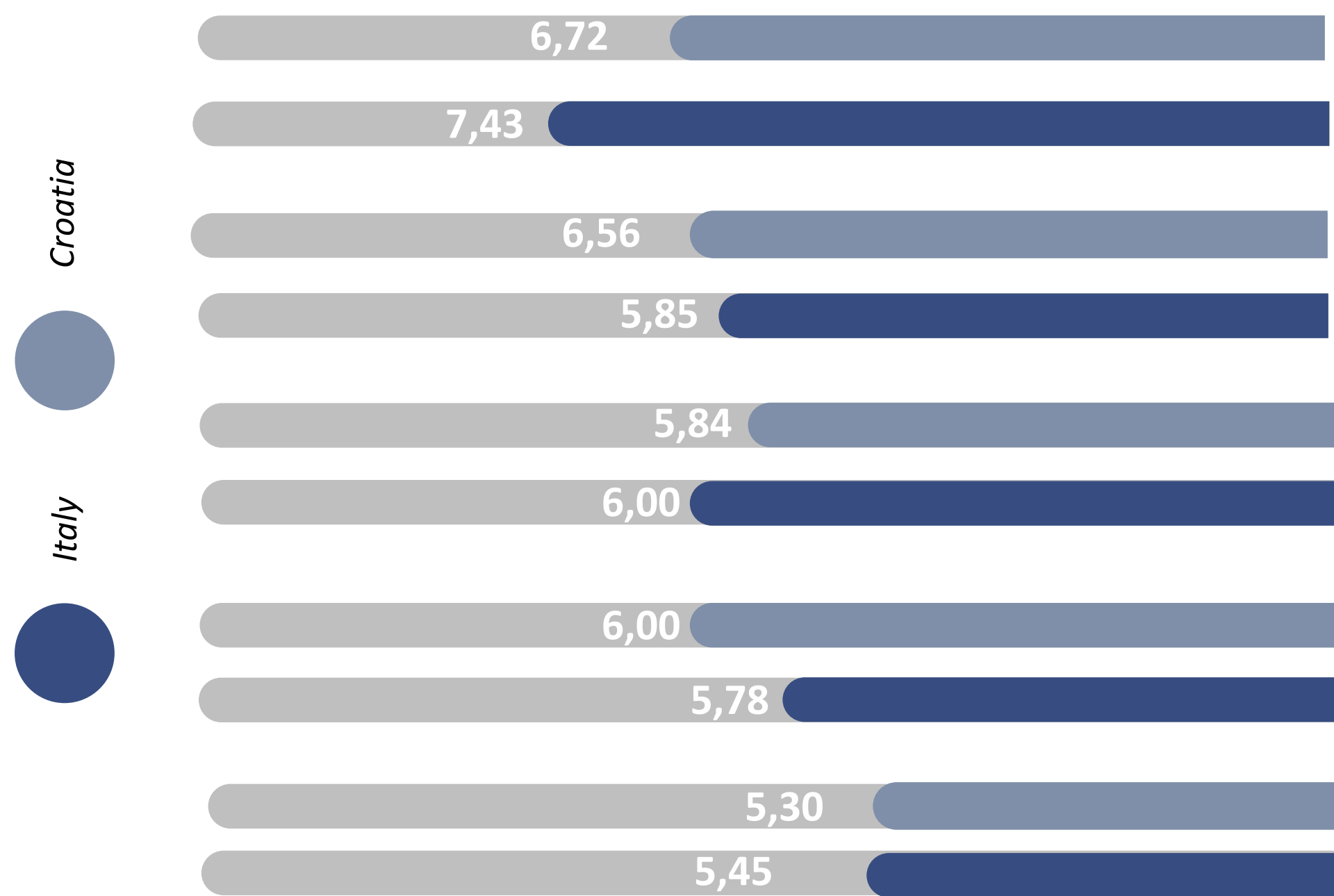


Profile average score (country/gender)

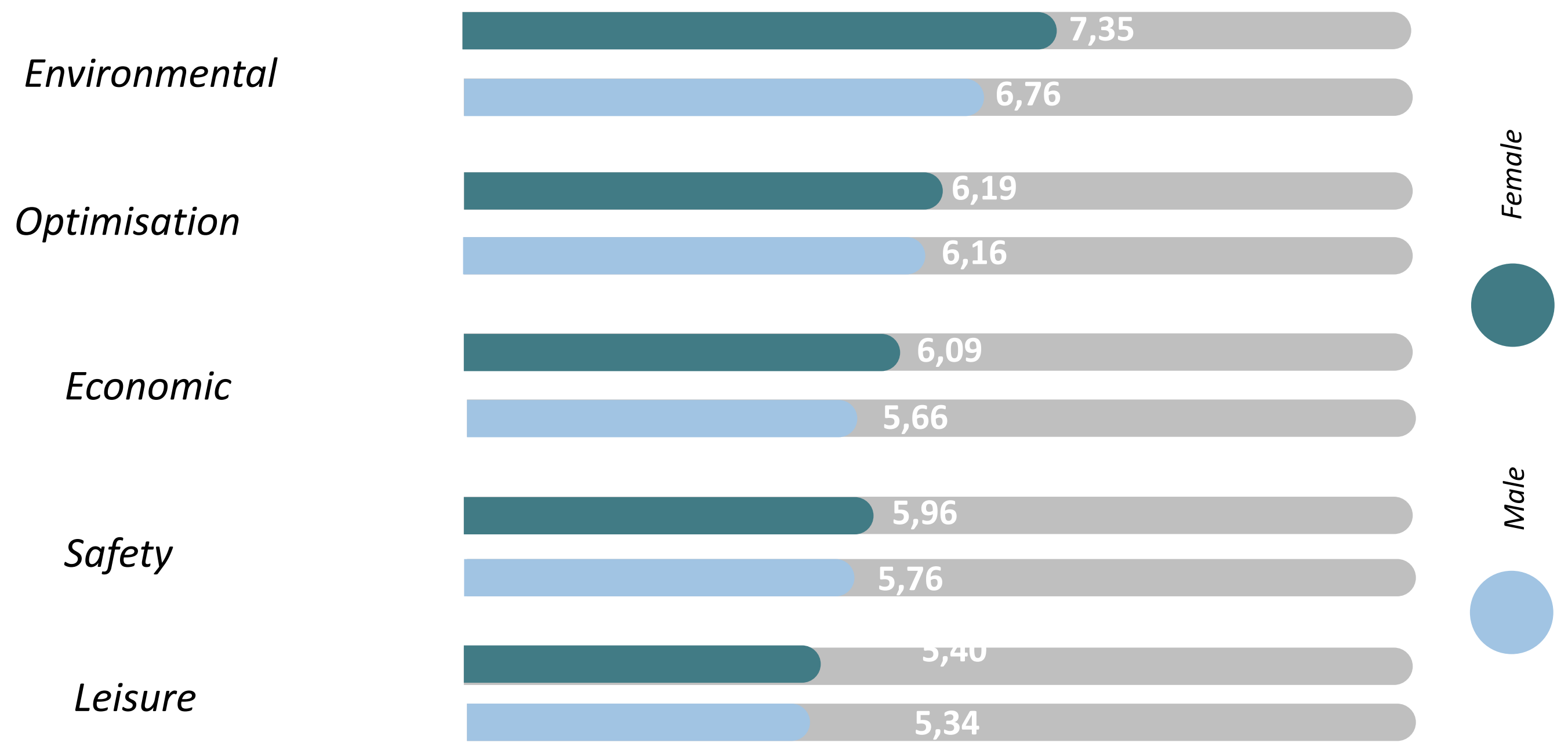
Answers have been analysed by crossing the travelers' profile per gender and country of residence. In general:

- ❑ Female respondents present a higher average score, with respect to male respondents, in the environmental profile (7.35 vs 6.76);
- ❑ Italian respondents present a higher average score, with respect to Croatian respondents, in the environmental profile (7.43 vs 6.72);
- ❑ Croatian respondents present a higher average score, with respect to Italian respondents, in the optimization profile (6.56 vs 5.85).

PROFILE AVERAGE SCORE (COUNTRY)



PROFILE AVERAGE SCORE (GENDER)



Dimensions for end-users (residents' preferences)

Factor Analysis (2) has been used to identify possible dimensions to be interpreted and labelled. Factor Analysis of all the answers used for defining respondents' preferences and reasons for actual choices, allowed for the identification, interpretation and labelling of six dimensions. The following table gives a summary presentation of the dimensions, together with the variables (questions) whose sense and saturation coefficient contributed to the interpretation.

LABEL	DIMENSIONS FOR END-USERS' (RESIDENTS PREFERENCES)	MOST IMPORTANT DEFINING VARIABLES
<p>Propensity to public transport - choice depends on the possibility to use public transport as way to do other thing, also reducing the environmental impact of the travel</p>		<ul style="list-style-type: none"> <input type="checkbox"/> Travel by train/bus to able to do other things along the way (,852) <input type="checkbox"/> Travel by train/bus to be able to read, listen to music, relax (,845) <ul style="list-style-type: none"> <input type="checkbox"/> Travel by train/bus to meet other people (,689) <input type="checkbox"/> Choose public transport to reduce the environmental impact of my travelling (,580)
<p>Car dependency - choice depends on the fastest option, as well as on the pleasantness of the travel</p>		<ul style="list-style-type: none"> <input type="checkbox"/> Choose public transport, it is the safest option (,573) <ul style="list-style-type: none"> <input type="checkbox"/> Drive to save time (,758) <input type="checkbox"/> Drive my own car, I would feel safer that way (,743) <ul style="list-style-type: none"> <input type="checkbox"/> Drive to enjoy the driving (,723) <input type="checkbox"/> Choose the fastest traveling option (,603)
<p>Perceived impact - choice depends on the perceived "low" impact of travel (environmental, economic and in terms of time)</p>		<ul style="list-style-type: none"> <input type="checkbox"/> It is environmentally friendly (,892) <input type="checkbox"/> It is economically convenient (,812) <input type="checkbox"/> It allows me to do my sport activity (,788)
<p>Slow mobility - choice depends on a slow solution, that allows to do physical activity, reducing the environmental impact of the travel, in a safe way.</p>		<ul style="list-style-type: none"> <input type="checkbox"/> Choose an option that would allow me to do some physical activity (walking or biking) (,853)
<p>Multitasking - choice depends on the possibility to do more things along the way, among which socializing with other people.</p>		<ul style="list-style-type: none"> <input type="checkbox"/> Walk or bike to my destination, it is the safest way (,774) <input type="checkbox"/> Choose the most environmentally friendly solution (,692) <ul style="list-style-type: none"> <input type="checkbox"/> It allows me to do some work while travelling (,790)
<p>Economic rationality - choice depends on the cheapest travelling option</p>		<ul style="list-style-type: none"> <input type="checkbox"/> It allows to socialise with other people (,727) <input type="checkbox"/> Choose the cheapest travelling option (,660) <input type="checkbox"/> Choose public transport to save money (,539)

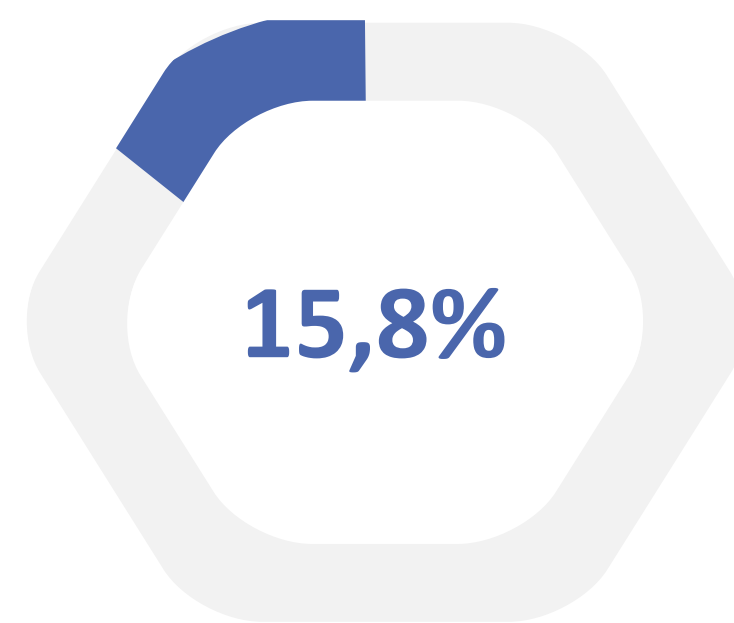
Local and cross-border multimodality – Considering public transport services, the area where you live is

The third section of the questionnaire was focused on local and cross-border multimodal mobility, in terms of level of use of local transport, level of satisfaction of local transport services and actions that could encourage the use of local public transport services and services for cyclists.

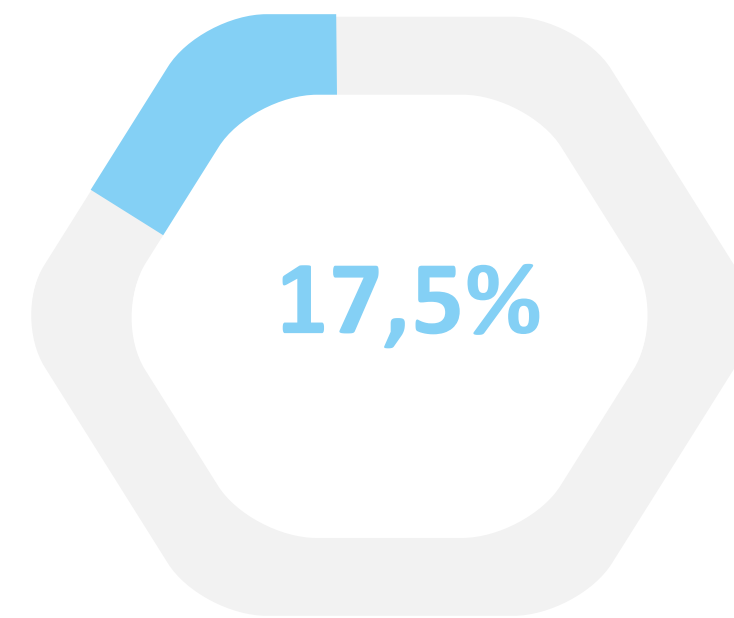
Respondents were asked to express their opinion on how well served by public transport service is the area where they live:

- ❑ 40.3% of respondents answered that the area where they live is quite served by public transport;
- ❑ 26.4% that is difficult to reach by public transport;
- ❑ 17.5% that is well served by public transport;
- ❑ 15.8% that is not served by public transport

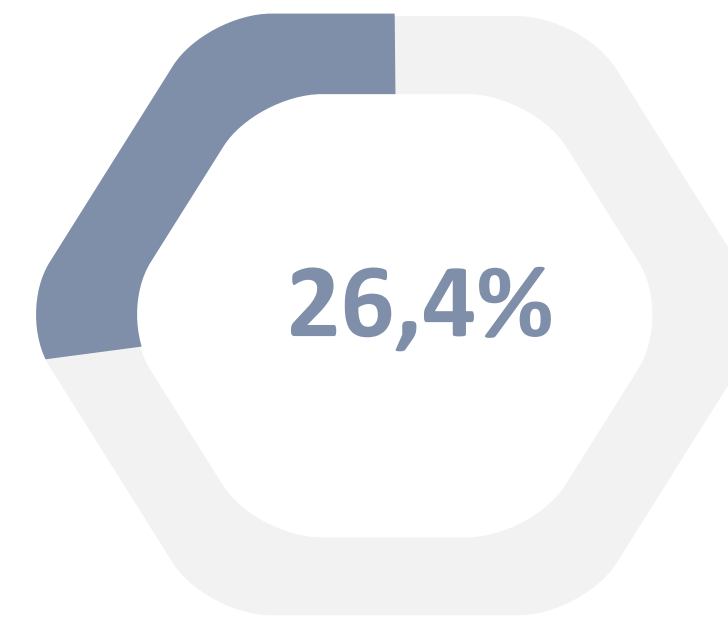
CONSIDERING PUBLIC TRANSPORT SERVICES, THE AREA WHERE YOU LIVE IS: (N=789)



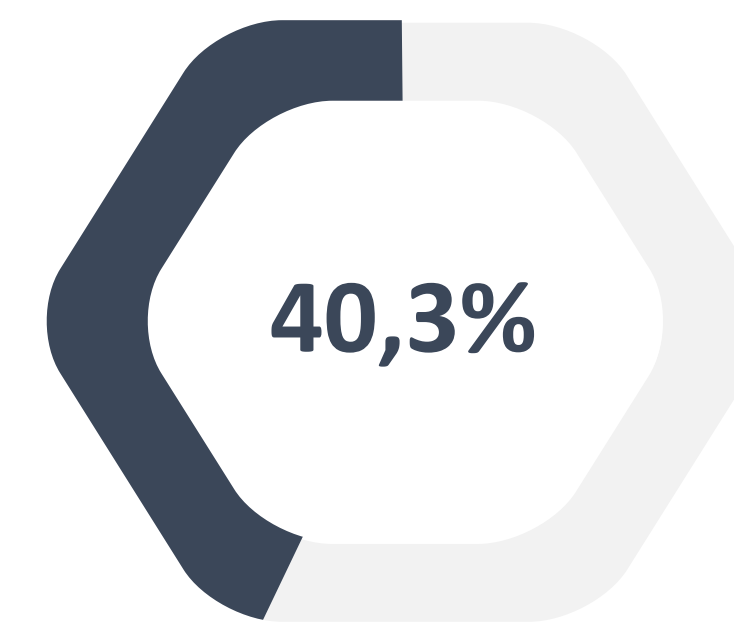
Not served by public transport



Well served by public transport



Difficult to reach by public transport



Quite served by public transport

By crossing data per country of residence, it is interesting to note that, in general, Croatian respondents consider the area where they live less served by public transport services, with respect to Italian respondents.

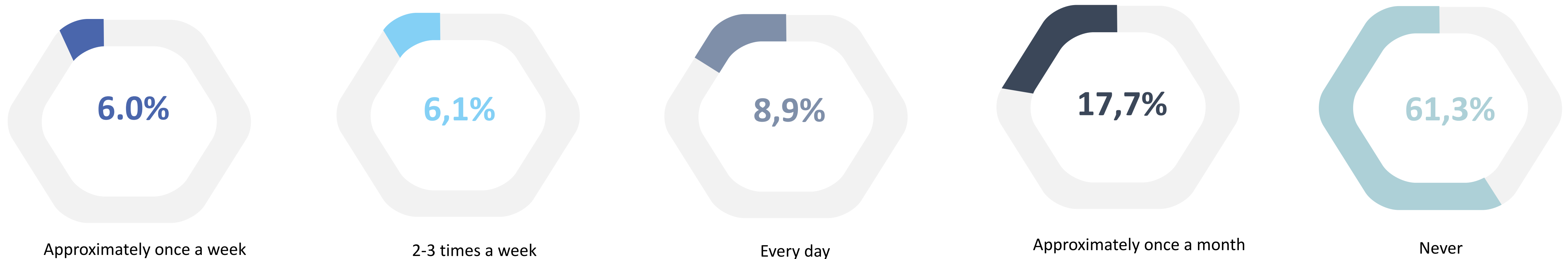
How often do you use public transport services?

Respondents were asked how often do they use public transport services. The 61.3% of respondents answered never and the 17.7% approximately once a month.

The main reason for not (or not often) using public transport services are the followings:

- Waiting times are long (38.2% of respondents);
- Travel time is long (30.9%);
- Public transport service is not available (22.6%) – this aspect was stressed in particular by Croatian respondents;
- The cost is high (22.4%);
- Stops/stations are far and difficult to reach (21%).

HOW OFTEN DO YOU USE PUBLIC TRANSPORT SERVICES? (N=789)



By analyzing data per country of residence, it is interesting to note that, in general Italian respondents tend to use less public transport services, with respect to Croatian respondents (63.9% of Italian respondents answered never vs 58.7 of Croatian), even though the area seems to be better served.

How often do you use the bicycle?

The bicycle is in general more used than the public transport, in fact, the 26.5% of respondents use the bicycle every day. However, the 30.2% use the bike only in the warm season and the 26.6% never.

Respondents that not often use the bicycle (i.e. 2-3 times per month, only in the warm season; never) indicated as the main reasons:

- There are no cycle paths (42.2% of respondents)
- I can't ride a bike (20.4%);
- It is not safe (18.4%) - this answer was given in particular by Croatian respondents. .

HOW OFTEN DO YOU USE THE BICYCLE? (N=771)



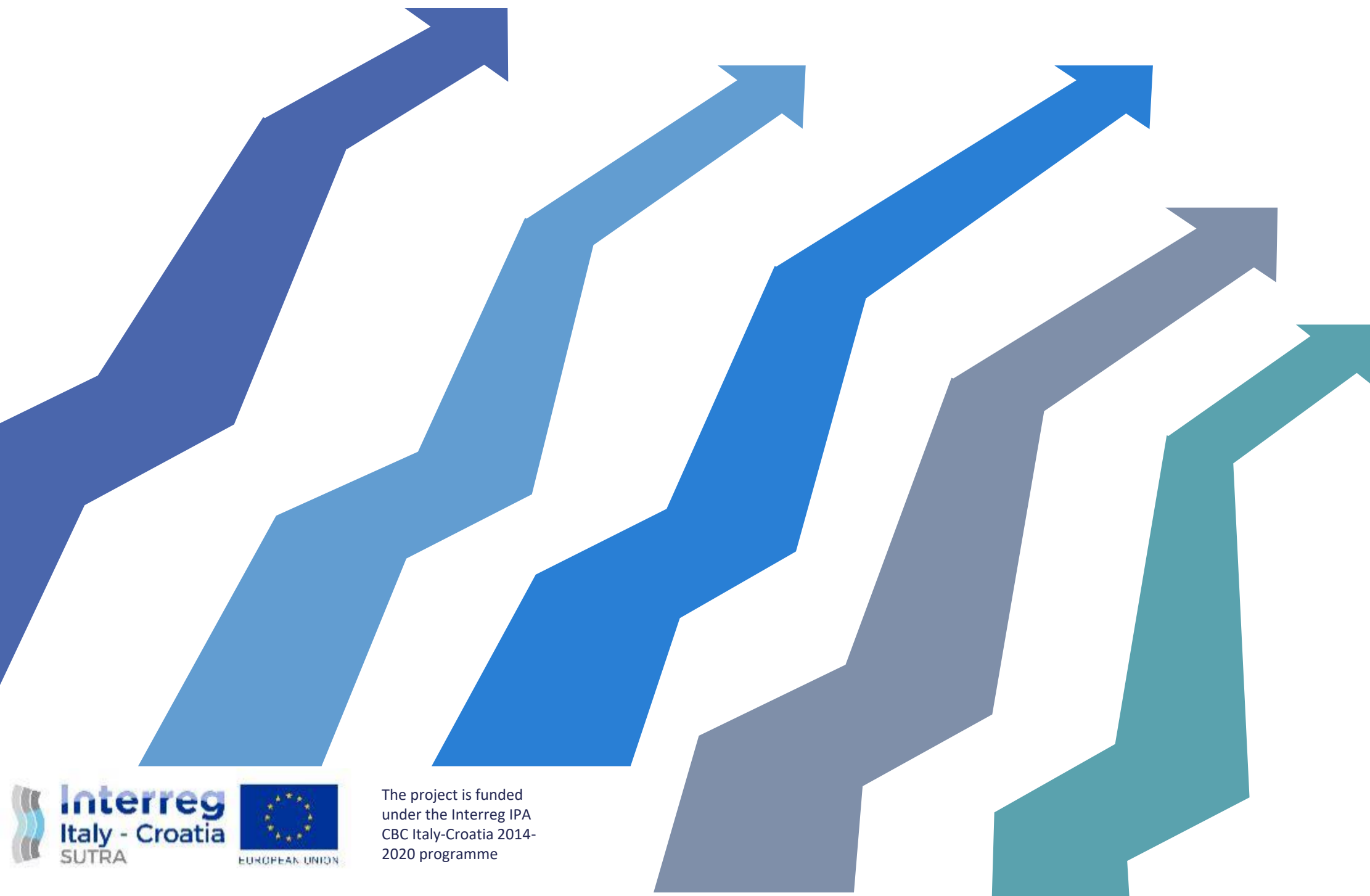
Proposals for the improvement of local and cross-border intermodal transport

The last section of the questionnaire was focused on proposals for the improvement of local and cross-border intermodal transport.

Respondents were asked to give a priority to several actions to be implemented at the local level, by giving them a score from 1 to 10 (where 1 “not a priority” and 10 “high priority”).

The following actions obtained the higher average score:

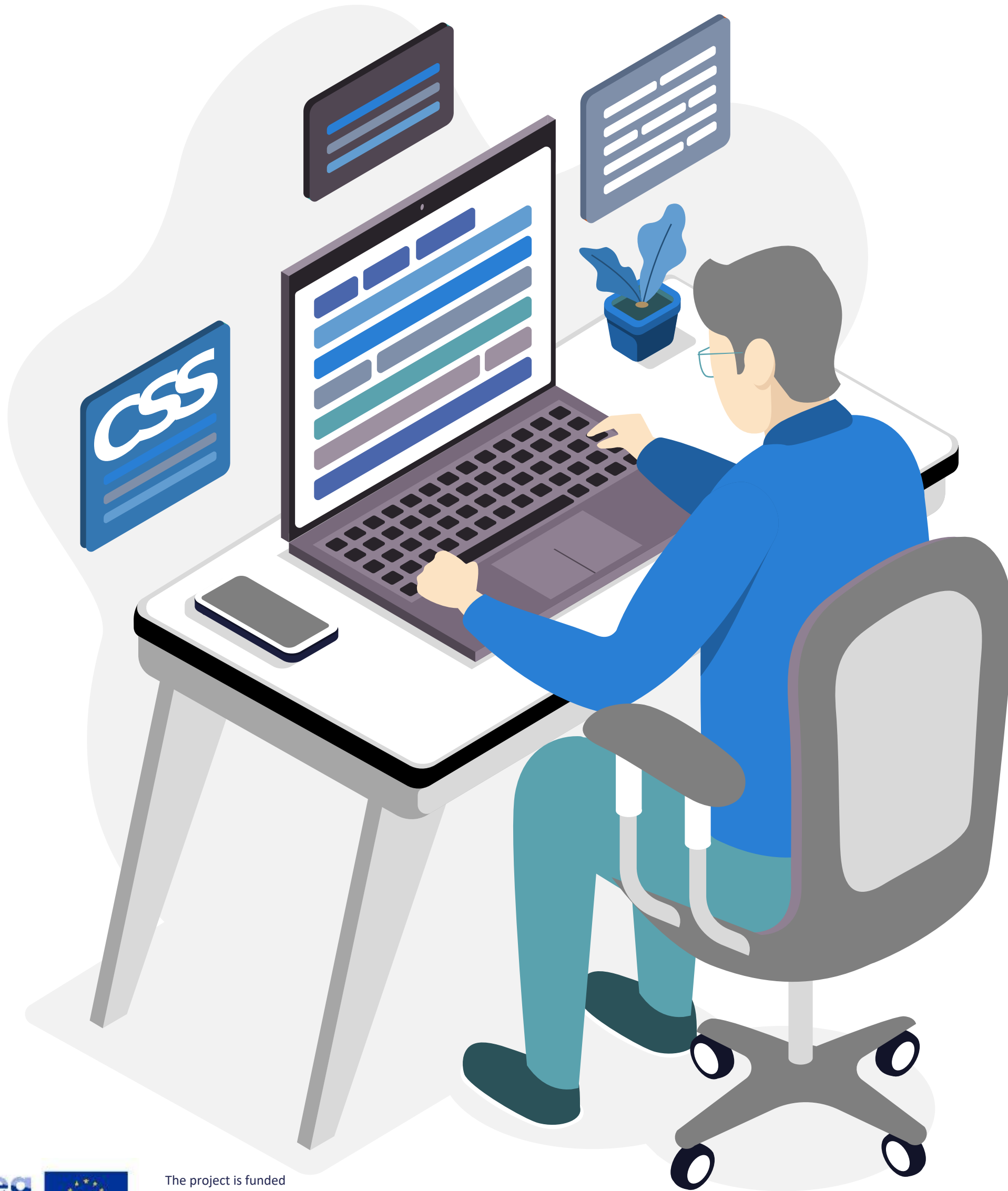
- Improvement of the cycle path system (average score 8.60);
- Establishment/increasing parking for car-public transport interchange (average score 8.09);
- Improvement of the intermodal transport system between different means of transport (average score 7.84);
- Activation/improvement of an integrated ticketing system (average score 7.70);
- Improvement of cross-border seas connections between Italy and Croatia (average score 7.43);
- Establishment/improvement of a bike-sharing system (average score 7.14).



IF YOU WERE A LOCAL DECISION MAKER OF YOUR TOWN/CITY, WHAT PRIORITY WOULD YOU GIVE TO THE FOLLOWING ACTIONS?

- 8,60 Improvement of the cycle path system
- 8,09 Establishment/increasing parking for car-public transport interchange
- 7,84 Improvement of the intermodal transport system between different means of transport
- 7,70 Activation improvement of an integrated ticketing system
- 7,43 Improvement of cross-border seas connections between Italy and Croatia
- 7,14 Establishment/improvement of a bike sharing system
- 6,84 Activation/improvement of a high flexible public transport service (e.g. bus on call)
- 6,51 Improvement of cross-border rail connections between Italy and Croatia
- 6,22 Improvement of cross-border air connections between Italy and Croatia
- 5,80 Establishment/improvement of a scooter sharing system
- 5,79 Establishment/improvement of a system for sharing private cars (car-pooling)

Key findings



In general, residents who participated to this survey tend to travel more with their car, this is particularly relevant for male respondents (*) and Croatian respondents (*). The bicycle is used in particular by female respondents (*) and Italian respondents (*). Few respondents use urban public transport as main mean of transport or in combination with other modes.

The predominant “transport profile” among residents is the environmental one, if residents could plan freely (with no constraints) their most frequent trip, they would choose the most environmentally friendly solution and public transport.

However, actual choices seem to be more influenced by efficiency (for saving time) and safety reasons. In this sense, the poor use of public transport services (more than half of respondents never use public transport services) is mainly linked to efficiency reasons (i.e. long waiting and travel times), to the unavailability of public services or to economic reasons (i.e. high costs).

Factor Analysis allowed to define six possible dimensions influencing respondents’ preferences and actual choices:

1. **Propensity to public transport** - choice depends on the possibility to use public transport as way to do other thing, also reducing the environmental impact of the travel.
2. **Car dependency** - choice depends on the fastest option, as well as on the pleasantness of the travel.
3. **Perceived impact** - choice depends on the perceived “low” impact of travel (environmental, economic and in terms of time).
4. **Slow mobility** - choice depends on a slow solution, that allows to do physical activity, reducing the environmental impact of the travel, in a safe way.
5. **Multitasking** - choice depends on the possibility to do more things along the way, among which socializing with other people.
6. **Economic rationality** - choice depends on the cheapest travelling option.

According to respondents, possible actions for improving local and cross-border multimodal transport are mainly linked to the improvement of sustainable and multimodal services and links, thus reducing costs and travel times.

Tourists

In total 148 respondents participated to the survey

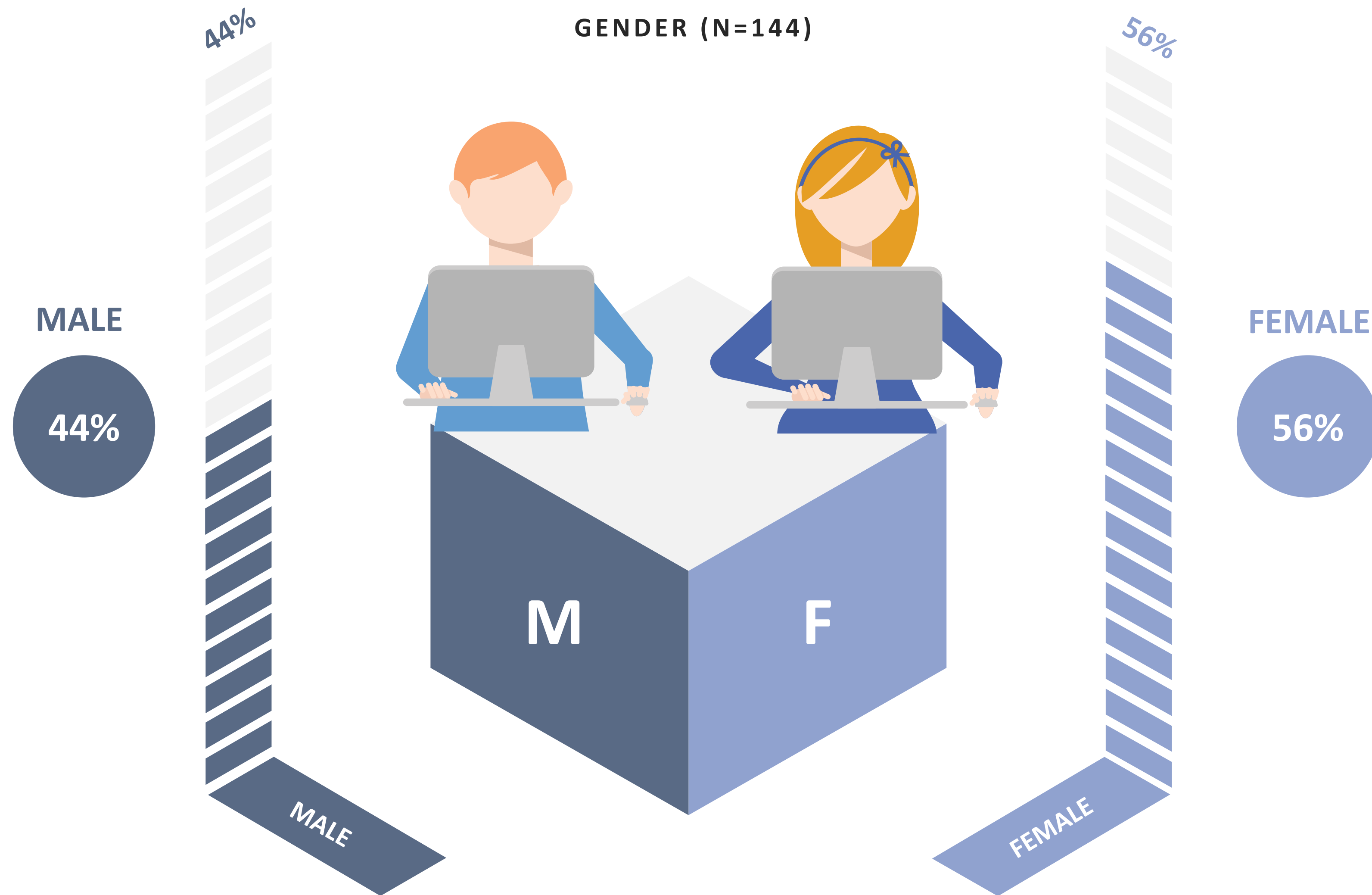


Socio-demographic data - Gender

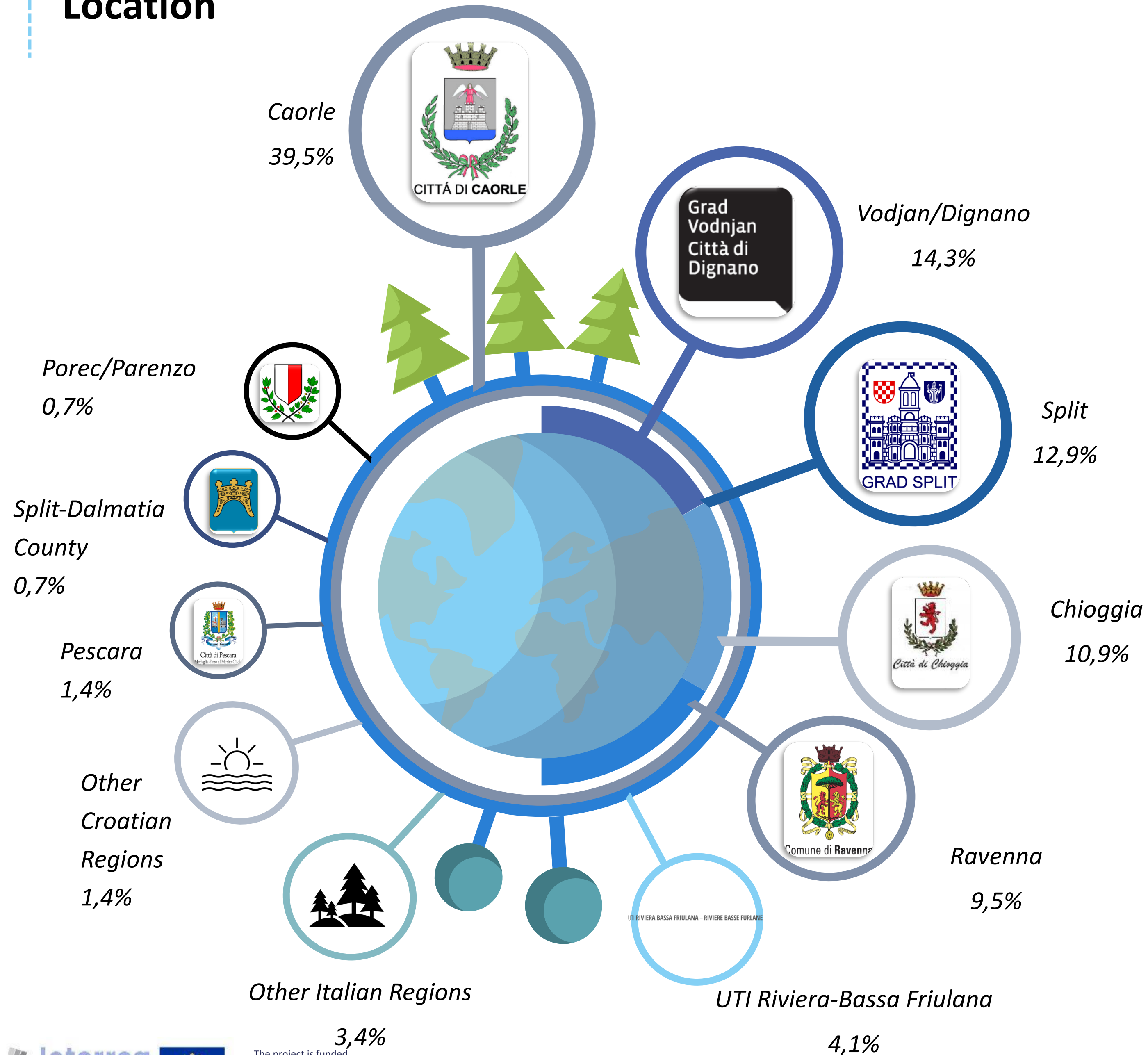
The first part of the questionnaire was aimed the socio-demographic identification of respondents.

With regard to gender, the distribution of respondents, who provided an answer to this question, is balanced between males (44% of respondents) and females (56% of respondents).

The age of respondents is included between 14 and 82 years.



Location



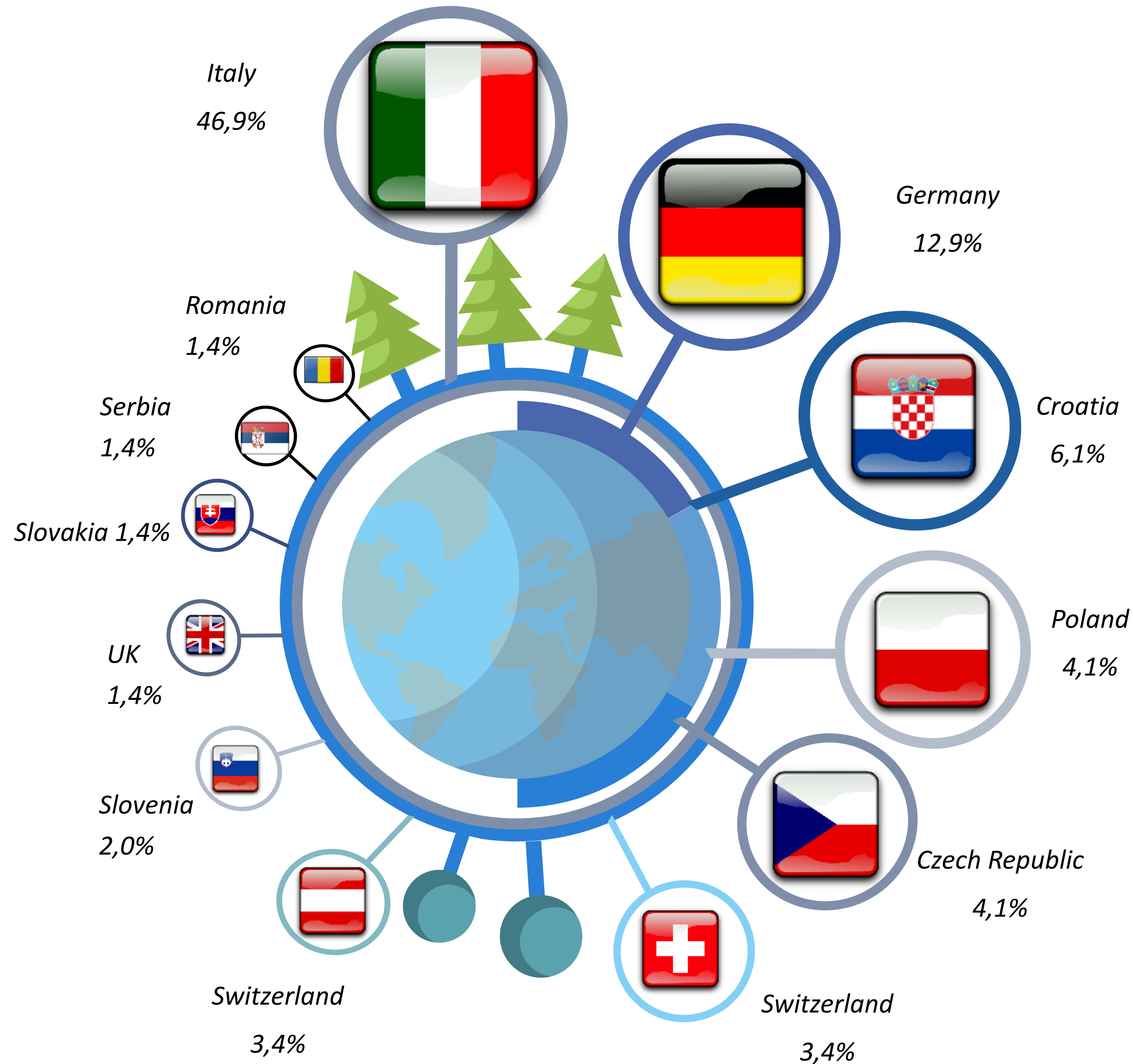
LOCATION (N=147)

Respondents were asked to indicate the location in which they were filling-in the questionnaire.

The following frequencies have been registered:

- ☐ Caorle (39.5 % of respondents);
- ☐ Vodnjan/Dignano (14.3 %);
- ☐ Split (12.9% of respondents);
- ☐ Chioggia (10.9%);
- ☐ Ravenna (9.5%);
- ☐ UTI Riviers-Bassa Friulana (4.1%);
- ☐ Other Italian Regions (3.4%);
- ☐ Other (1.4%);
- ☐ Other Croatian Regions (1.4%);
- ☐ Pescara (1.4%);
- ☐ Split-Dalmatia County (0.7%).

Country of residence



COUNTRY OF RESIDENCE (N=147)

In terms of nationality, the 46.9% of respondents is Italian, the 12.9% German and the 6.1% Croatian.

As per the living area of respondents:

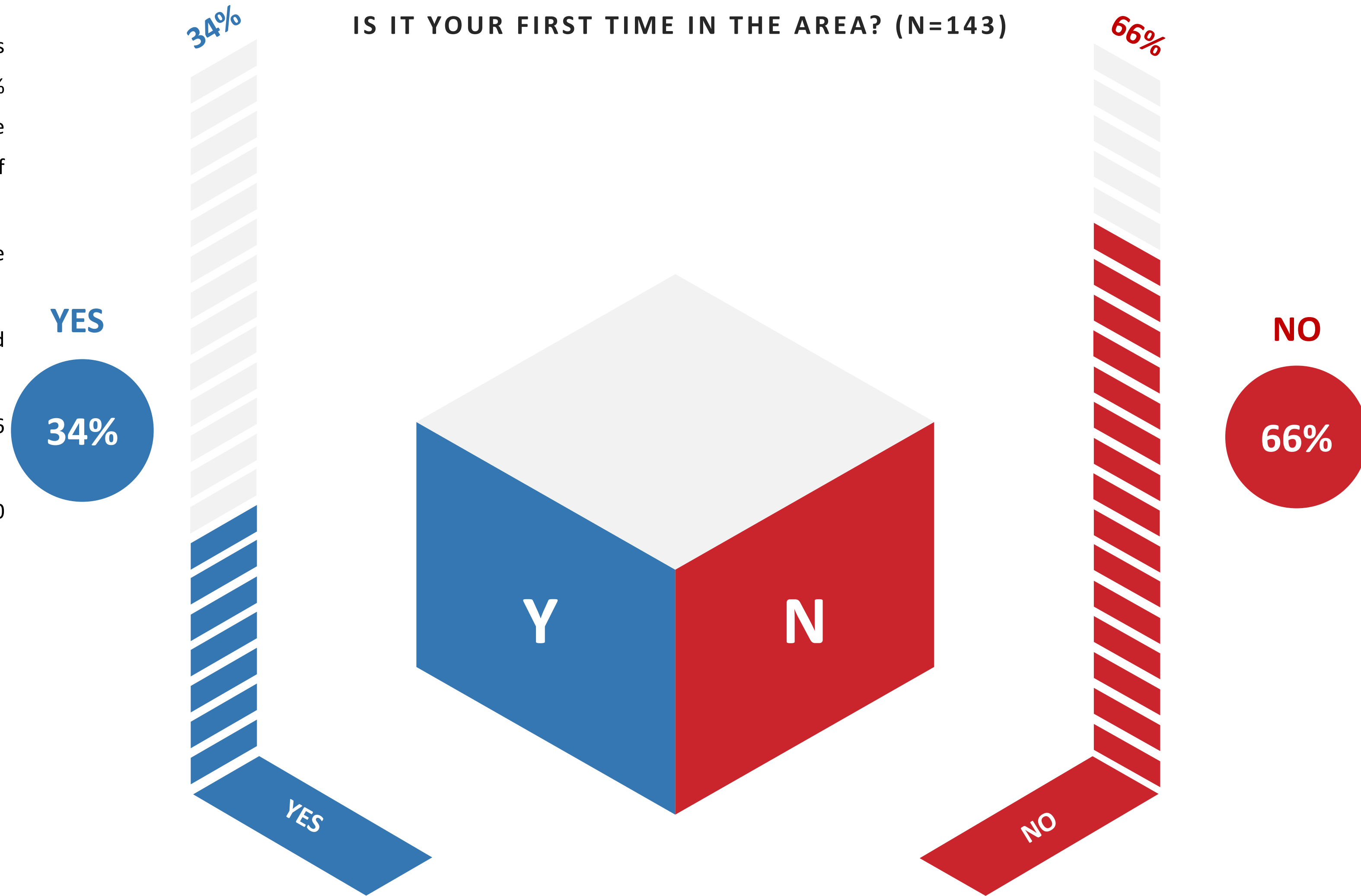
- ☐ 41.1% live in a small or medium town;
 - ☐ 34.8% live in a large city;
 - ☐ 17.7% live in a rural area;
 - ☐ 6.4% live in a metropolitan area.

Is it your first time in the area?

Respondents were asked whether this was their first time in the area: the 66% answered that this was not the first time in the area, while for the 34% of respondents this was the first time.

Considering the period of stay in the area:

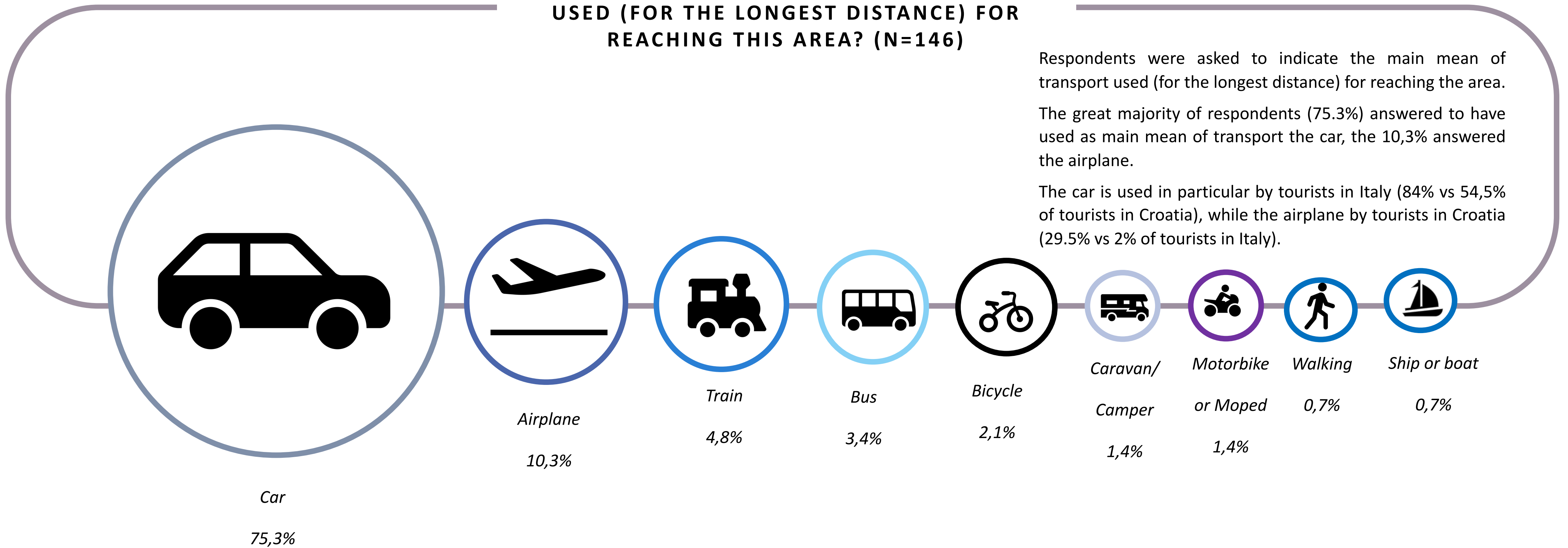
- 32.2% of respondents answered more than 10 days;
- 28% answered between 3 and 6 days;
- 17.5% answered between 6 and 10 days;
- 16.8% between 1 and 2 days;
- 5.6% over the day.



Transport profile – What is the main mean of transport you used (for the longest distance) for reaching this area?

The second section of the questionnaire was aimed at the identification of the respondents' transport profile, in terms means of transport used for the longest distance for reaching the area and for visiting/moving around the area, as well as the main drivers of travel choices

WHAT IS THE MAIN MEAN OF TRANSPORT YOU USED (FOR THE LONGEST DISTANCE) FOR REACHING THIS AREA? (N=146)



Respondents were asked to indicate the main mean of transport used (for the longest distance) for reaching the area. The great majority of respondents (75.3%) answered to have used as main mean of transport the car, the 10,3% answered the airplane.

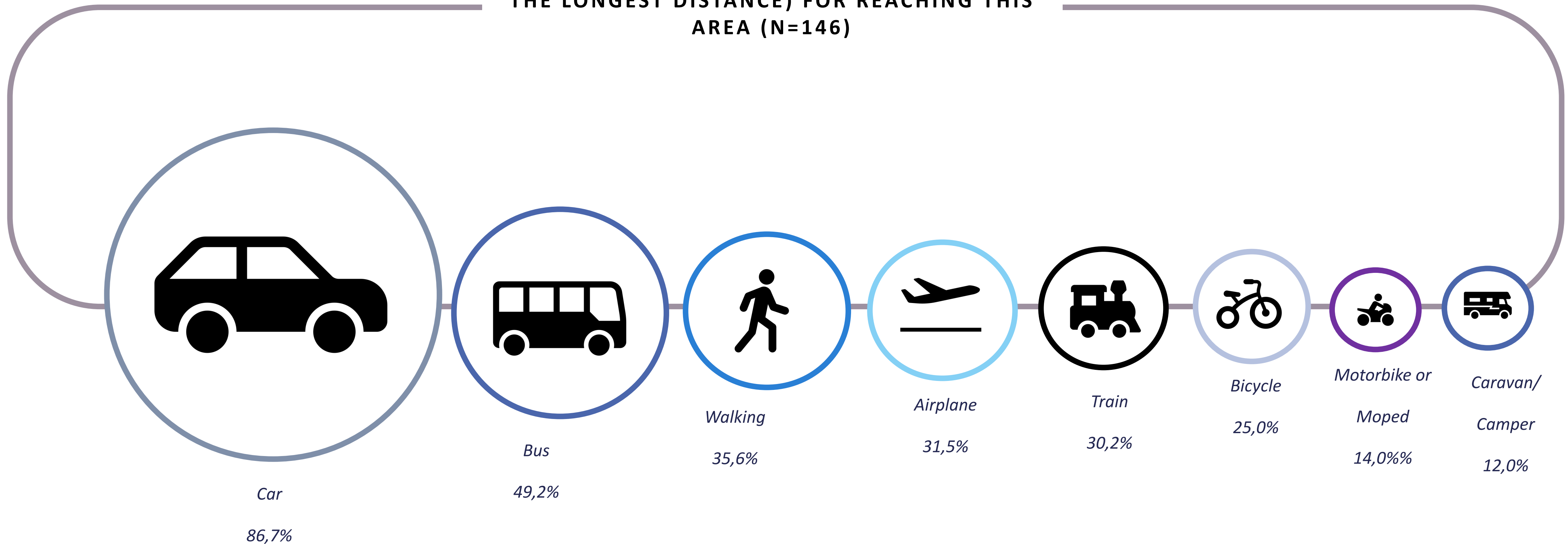
The car is used in particular by tourists in Italy (84% vs 54,5% of tourists in Croatia), while the airplane by tourists in Croatia (29.5% vs 2% of tourists in Italy).

Other means of transport you used (for the longest distance) for reaching this area

Respondents were also asked to indicate other means of transport used (for the longest distance) for reaching the area. The following frequencies have been registered:

- Car (86.7% of respondents);
- Bus (49.2%);
- Walking (35.6%);
- Airplane (31.5%);
- Train (30.2%);
- Bicycle (25%);
- Motorbike or moped (14%);
- Caravan/camper van (12%).

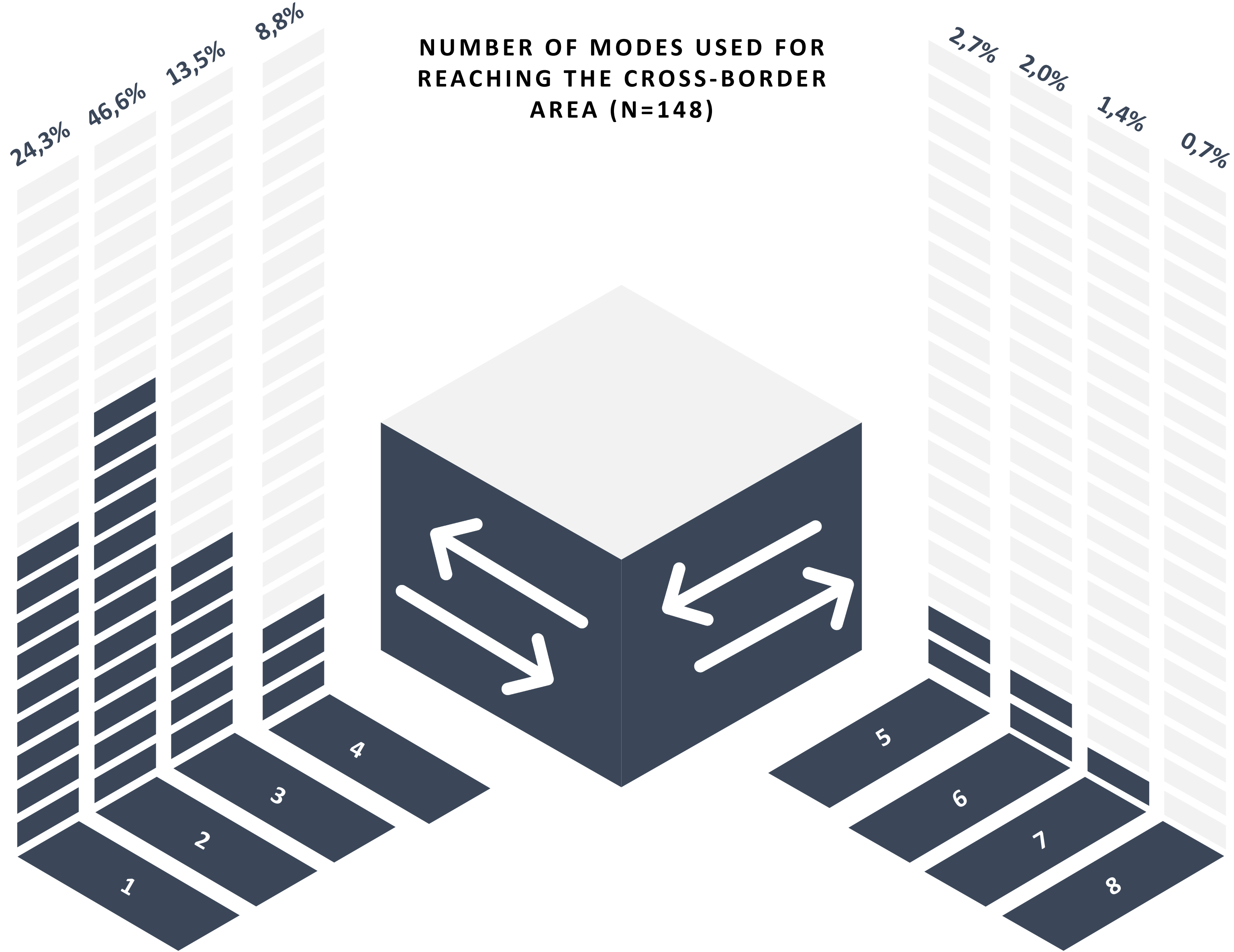
OTHER MEANS OF TRANSPORT YOU USED (FOR THE LONGEST DISTANCE) FOR REACHING THIS AREA (N=146)



Number of modes used for reaching the cross-border area

In general, respondents, for reaching the cross-border area tend to use:

- 2 means of transport (46.6% of respondents);
- 1 mean of transport (24.3% of respondents);
- 3 means of transport (13.5% of respondents);
- 4 means of transport (8.8% of respondents).



For my most frequent trip, I choose to travel by ... because



FOR MY MOST FREQUENT TRIP, I CHOOSE TO TRAVEL BY ... BECAUSE

- 7,96 It is time-efficient
- 7,13 It is safe
- 7,08 It is the most relaxing means of travel
- 6,85 It is economically convenient
- 5,77 There is no alternative
- 4,86 It is environmentally friendly
- 4,66 It allows to socialize with other people
- 4,17 It allows me to do some work while travelling
- 2,79 It allows me to do my sport activity

Respondents were then asked to indicate the reasons for their travel choices, by giving a score from 1 to 10 to several statements.

The higher average (above 6) scores have been registered for the following statements:

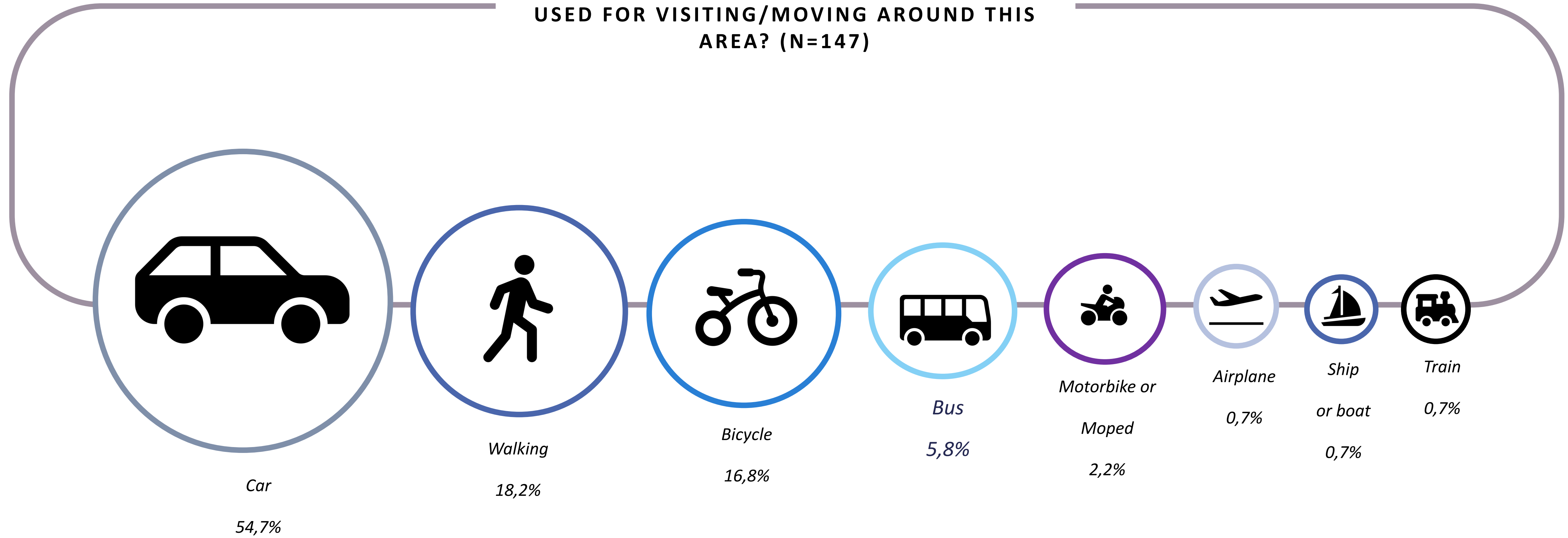
- It is time efficient (average score 7.96);
- It is safe (average score 7.13);
- It is the most relaxing means of travel (average score 6.86);
- It is economically convenient (average score 6.85).

What is the main mean of transport you used for visiting/moving around this area?

Tourists were then asked to indicate the main mean of transport used for moving around the area. The following frequencies have been registered:

- Car (54.7%);
- Walking (18.2%);
- Bicycle (16.8%);
- Bus (5.8%).

WHAT IS THE MAIN MEAN OF TRANSPORT YOU USED FOR VISITING/MOVING AROUND THIS AREA? (N=147)

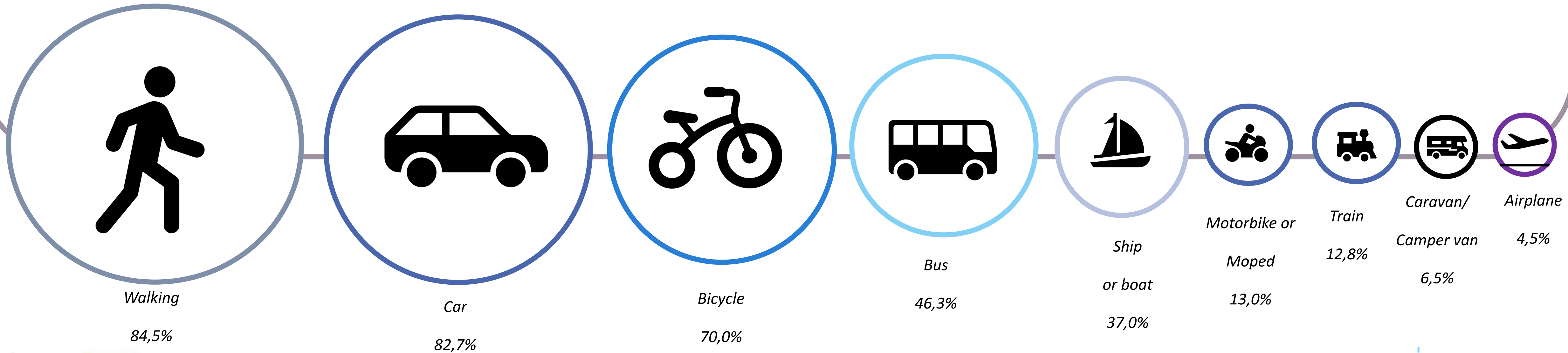


What are the other means of transport you used for visiting/moving around this area?

As other means of transport used for visiting/moving around the area, tourists indicated:

- Walking (84.5% of respondents);
- Car (82.5%);
- Bicycle (70%);
- Bus (46%);
- Ship or boat (37%);
- Motorbike or moped (13%);
- Train (13%);
- Caravan/camper van (6.5%).

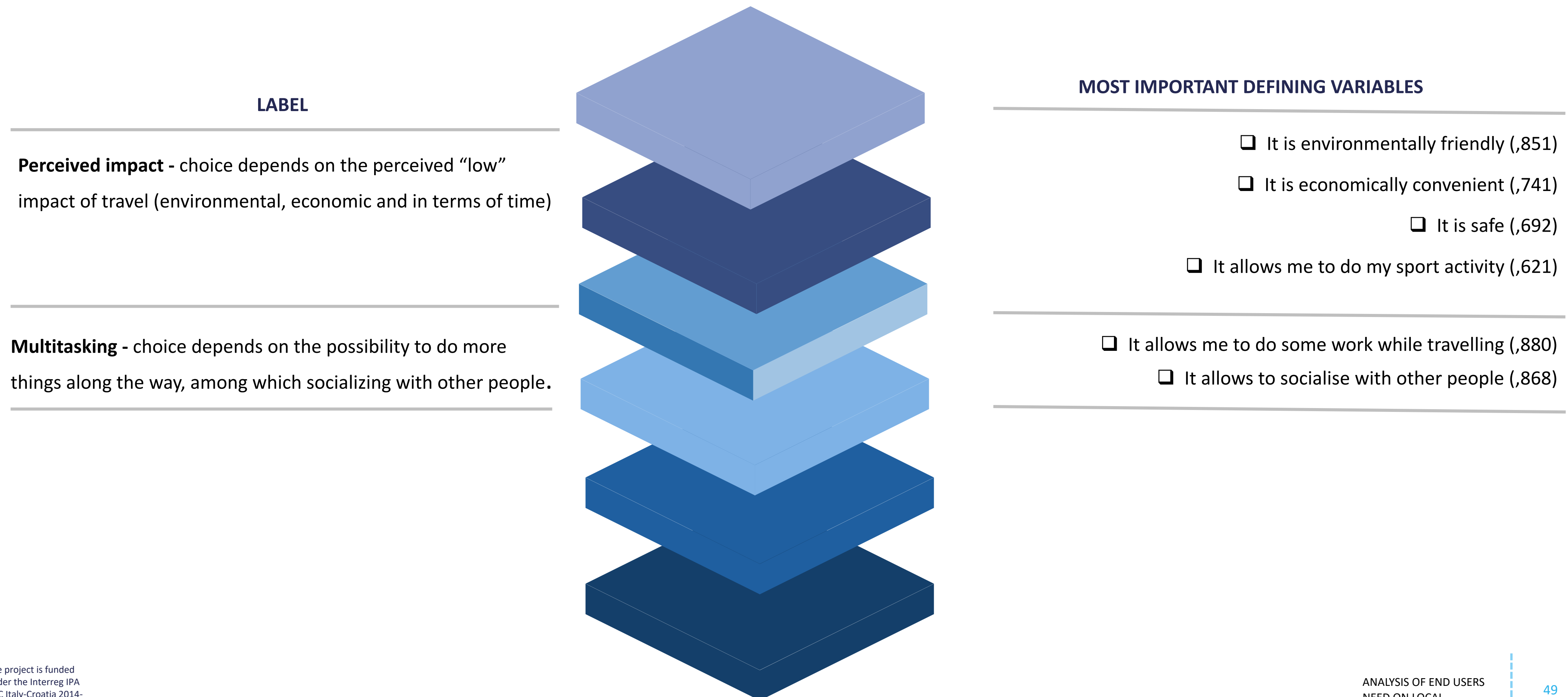
WHAT ARE THE OTHER MEANS OF TRANSPORT YOU USED FOR VISITING/MOVING AROUND THIS AREA?



Dimensions for end-users' preferences (tourists)

Factor Analysis (3) has been used to identify possible dimensions to be interpreted and labelled. Factor Analysis of the answers used for defining reasons for actual choices, allowed for the identification, interpretation and labelling of two dimensions. The following table gives a summary presentation of the dimensions, together with the variables (questions) whose sense and saturation coefficient contributed to the interpretation.

DIMENSIONS FOR END-USERS' PREFERENCES (TOURISTS)



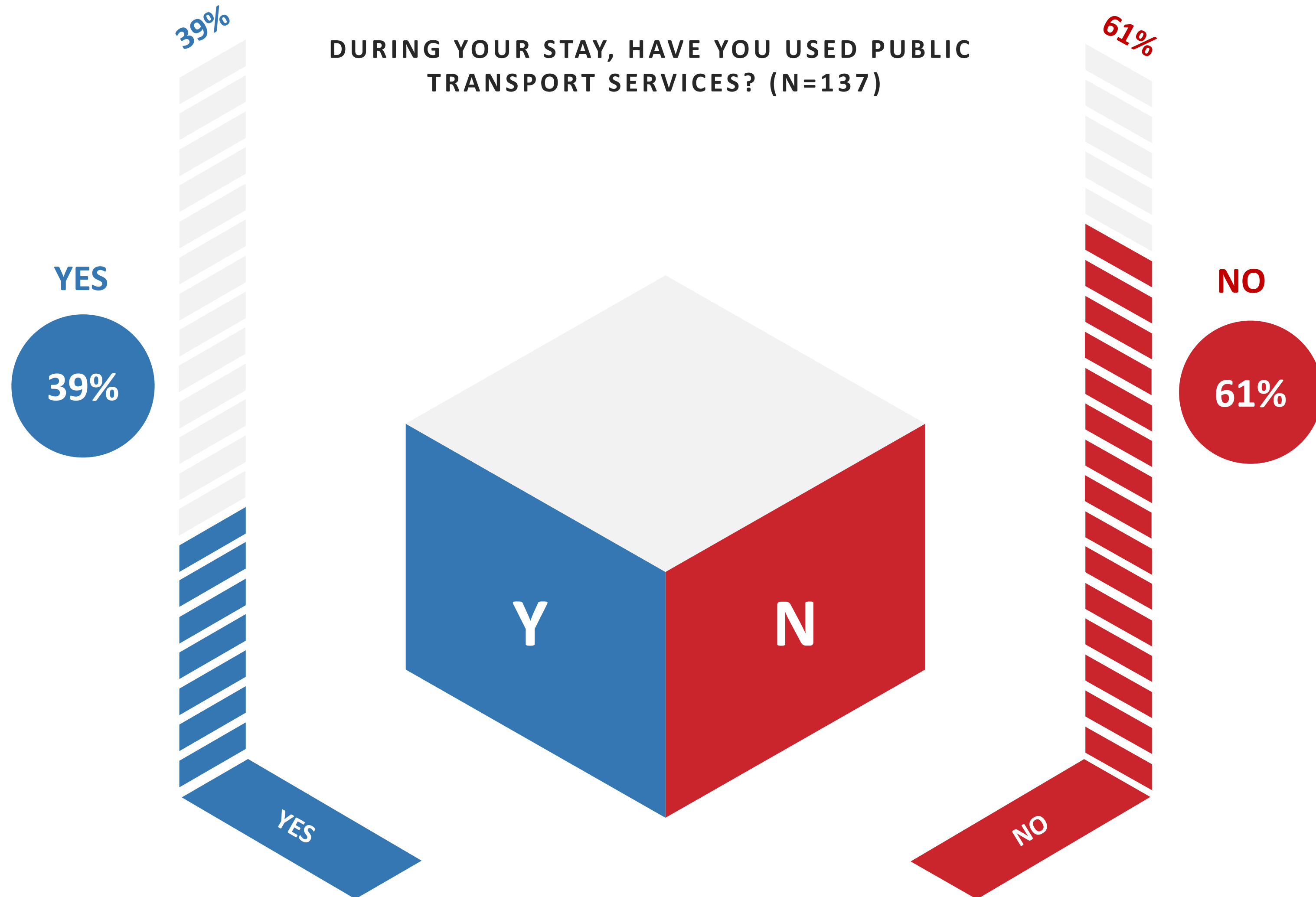
(3)Extraction method: Principal component analysis; Rotation method: Varimax with Kaiser Normalization; Maximum iterations for convergence: 25.

Local and cross-border multimodal modality

The third section of the questionnaire was focused on local and cross-border multimodal mobility, in terms of level of use of local transport, level of satisfaction of local transport services and actions that could encourage the use of local public transport services and services for cyclists.

Respondents were asked whether, during they stay, they had used public transport services.

The majority of respondents answered that during their stay they did not use public transport services (61%), while the 39% of respondents used public transport services.



For those who answered “no” to this question was asked which actions could encourage the use of public transport services. The following frequencies have been registered:

- More frequent services (93% of respondents);
- Availability of accurate information on public transport services (90.6%);
- Reduced travel time (86.2%);
- Reduced costs (82.9%);
- More punctual services (82.8%);
- Presence of an exchange system between different means of transport (76.9%).

For those tourists who did use public transport services during their stay, was asked their level of satisfaction with reference to some aspects of public transport. The higher average scores (above 6) have been registered for the following aspects:

- Travel time (6.88);
- Punctuality of services (6.71);
- Frequency of services (6.35);
- Costs (6.90).

Lower average scores (below 6) have been registered for:

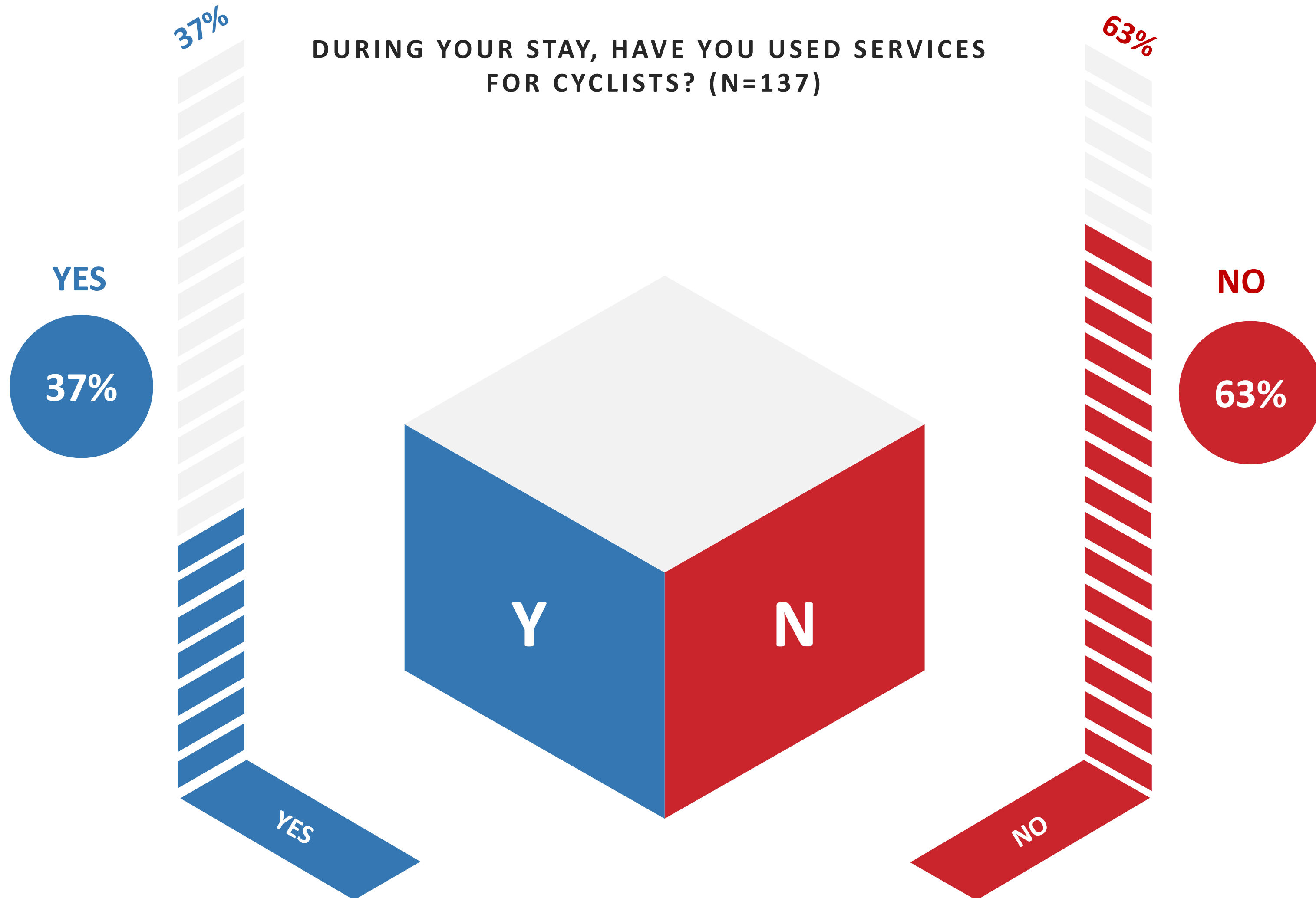
- Availability of accurate information on public transport services and schedule;
- Exchange system between different means of transport.

During your stay, have you used services for cyclists?

Respondents were asked whether during their stay they had used services for cyclists. The 63% of tourists answered “no” and the 37% “yes”.

For those who answered “no” to this question was asked which actions could encourage the use of public transport services for cyclists. The following frequencies have been registered:

- Cycle paths availability (94% of respondents);
- Greater security of cycle paths (87.8%);
- Availability of bike parking racks (84.4%);
- Availability of bike-sharing services (83.9%);
- Availability of covered and protected parking areas at railways stations and bus/tram stops (73.5%);
- Possibility to bring bicycles on public transports (72.7%).



For those tourists who did use services for cyclists during their stay, was asked their level of satisfaction with reference to some aspects of the service. The higher average scores have been registered for the following aspects:

- Availability of cycle paths (6.63);
- Availability of bike-sharing services (6.10);
- Safety of cycle paths (6.09).

Lower average scores (below 6) have been registered for:

- Possibility to bring bicycles on public transport (5.92);
- Availability of bike parking racks (5.55);
- Roads/cycle path signs (5.50);
- Availability of covered and protected parking areas in the place of study/work (5.11);
- Availability of covered and protected parking areas at railways stations and bus/tram stops.

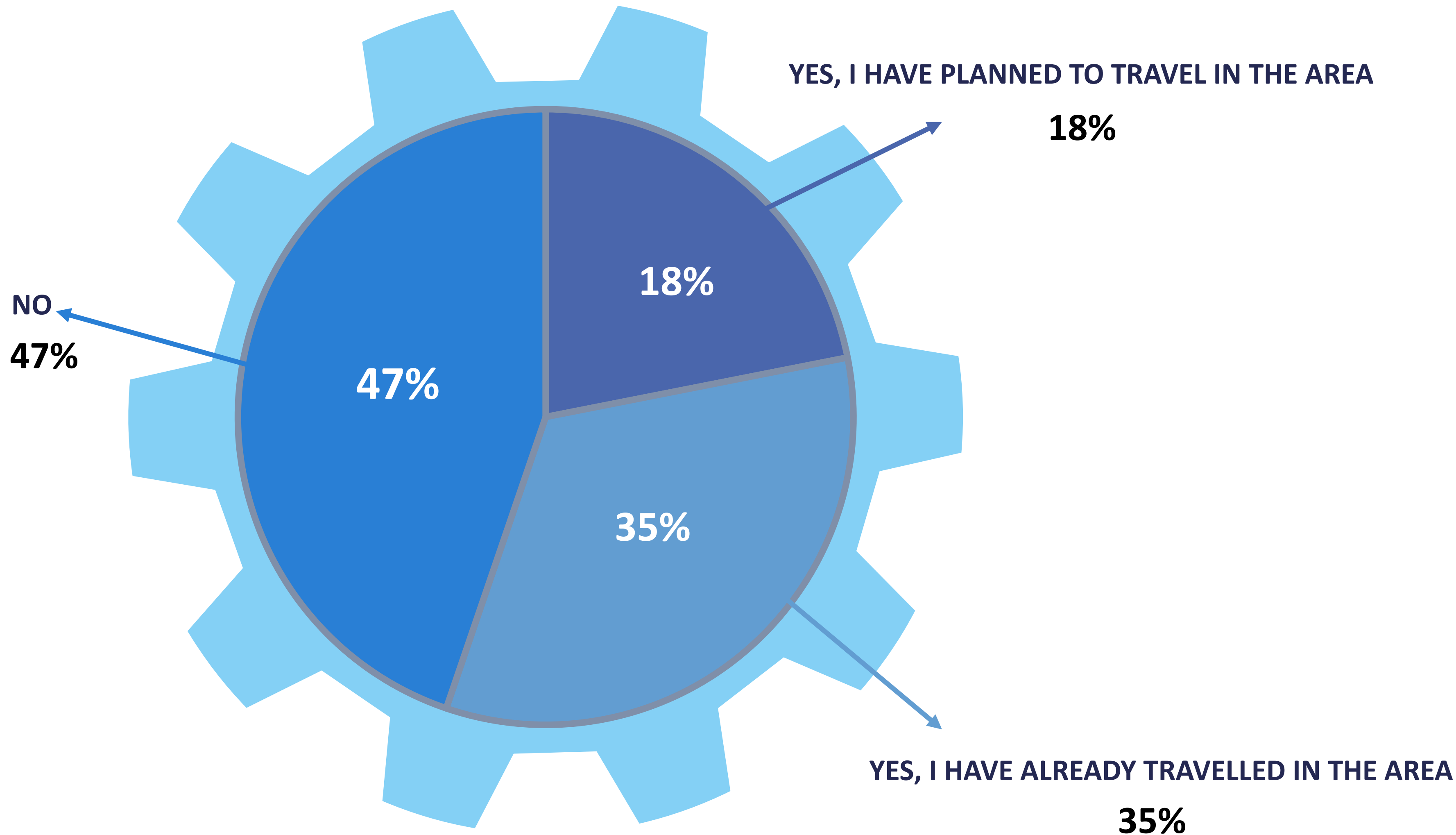
During your stay, have you travelled/do you plan to travel in the cross-border area between Italy and Croatia (both by land and/or border)?

DURING YOUR STAY, HAVE YOU TRAVELLED/DO YOU PLAN TO TRAVEL IN THE CROSS-BORDER AREA BETWEEN ITALY AND CROATIA (BOTH BY LAND AND/OR BORDER)? (N=132)

Finally, tourists were asked whether, during their stay, they had planned to travel in the cross-border area between Italy and Croatia (both by land or border):

- ❑ 47% of respondents answered “no”;
- ❑ 35% of respondents answered “yes, I have already travelled in the area”;
- ❑ 18% of respondents answered “yes, I have planned to travel in the area”.

Those respondents who answered yes, were asked to indicate the main mean of transport they used (or they planned to) for travelling in the cross-border area. The great majority of respondents indicated the car (74.3%).



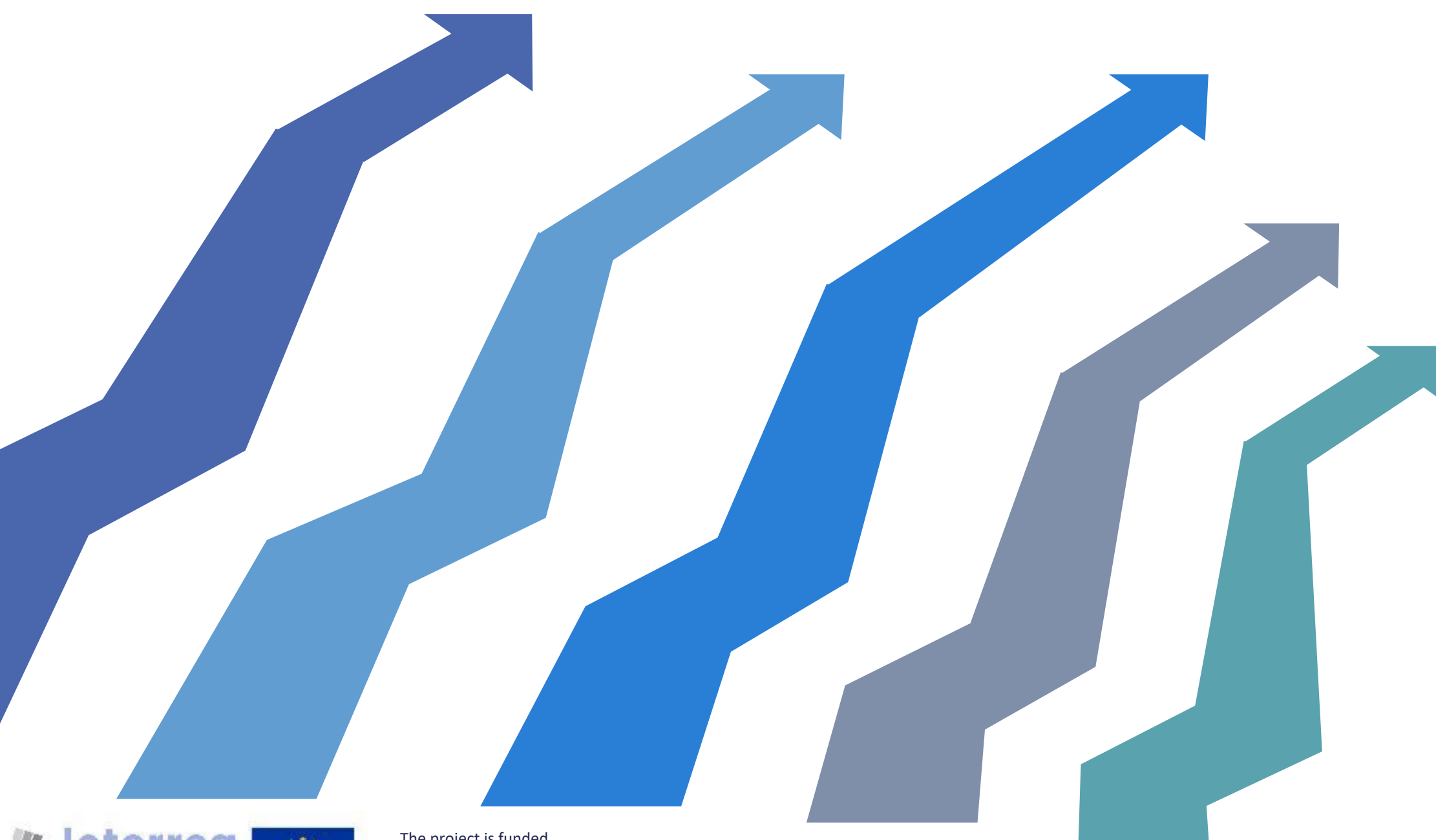
Thinking of potential improvements of the transport system in the cross-border area, what priority would you give to the following actions?

The last section of the questionnaire was focused on proposals for the improvement of local and cross-border intermodal transport.

Respondents were asked to give a priority to several actions to be potentially implemented at the local level for the improvement of the transport system in the cross-border area, by giving them a score from 1 to 10.

The following actions obtained the higher average score:

- Improvement of cross-border seas connections between Italy and Croatia (average score 8.41);
- Improvement of cross-border air connections between Italy and Croatia (7.81);
- Improvement of cross-border rail connections between Italy and Croatia (7.72);
- Activation/improvement of an integrated ticketing system (average score 7.50);
- Establishment/increasing parking for car-public transport interchange (average score 7.43);
- Activation/improvement of a bike-sharing system (average score 7.06).



THINKING OF POTENTIAL IMPROVEMENTS OF THE TRANSPORT SYSTEM IN THE CROSS-BORDER AREA, WHAT PRIORITY WOULD YOU GIVE TO THE FOLLOWING ACTIONS?

- 8,41 Improvement of cross-border sea connections between Italy and Croatia
- 7,81 Improvement of cross-border air connections between Italy and Croatia
- 7,72 Improvement of cross-border rail connections between Italy and Croatia
- 7,50 Activation/improvement of an integrated ticketing system
- 7,43 Activation/increasing parking for car-public transport interchange
- 7,06 Activation/improvement of a bike sharing system
- 6,94 Activation/improvement of a high flexible public transport service (e.g. bus on call)
- 6,86 Improvement of the cycle path system
- 6,25 Activation/improvement of a system for sharing private cars (car-pooling)
- 6,22 Activation/improvement of a scooter sharing system

Key findings



The great majority of tourists who participated to this survey use their car both for reaching and for moving around/visiting the cross-border area. Their travel choices seem to be influenced mainly by efficiency (for saving time), safety, economic reasons and as well as by the lack of alternatives.

Factor Analysis allowed to define two possible dimensions influencing respondents' preferences and actual choices:

- Perceived impact** - choice depends on the perceived “low” impact of travel (environmental, economic and in terms of time);
- Multitasking** - choice depends on the possibility to do more things along the way, among which socializing with other people.

The majority of tourists (more than 60%) did not use public transport services nor services for cyclists during their stay. For what concerns public transport services, reduced costs and travel time, more frequent and punctual services, the presence of accurate information and of an exchange system between different means of transport could encourage the use of those services.

For what concerns the services for cyclists, cycle paths availability and security, the availability of bike parking racks, bike-sharing services and of covered and protected parking areas at railways stations and bus/rail stops, and the possibility to bring bicycles on public transports could encourage the use of the bicycle in the cross-border area.

According to respondents, possible actions for improving the transport system in the cross-border area are mainly linked to the improvement of cross-border connections (sea, air, rail) between Italy and Croatia and to the presence of a multimodal and integrated transport system.



SUTRA

SUSTAINABLE TRANSPORT IN ADRIATIC COASTAL AREAS AND HINTERLAND

ANALYSIS OF END USERS NEEDS ON LOCAL MULTIMODAL MOBILITY

PROJECT DURATION
01.01.2019.-30.06.2021.

ERDF
2.462.875,00 EUR

TOTAL BUDGET
2.897.500,00 EUR

The overall objective of SUTRA is to promote sustainable mobility on the Adriatic coast and its hinterland. By mainstreaming innovative mobility concepts for passenger transport, urban centres in the Programme area will be able to reduce traffic congestion, improve air quality and reduce CO2 emissions. The main outputs of SUTRA are: 10 new, eco-friendly multimodal transport services for passengers, 1 new maritime link between Italy and Croatia (relation Caorle - Poreč) and 1 jointly developed Crossborder Manual for smart design and integration of soft mobility solutions in coastal areas. The innovative mobility solutions that will be introduced will contribute to the quality of life of residents and non-residents, and improve tourist attractiveness of the area.

PROJECT PARTNERS

