Mobility Management for Business and Industrial Zones
MoMa.BIZ

Results of the Local Mobility Survey
of the BIZ of Asti

WP: 5

Document prepared by:

Valentina Cerigo
vcerigo@provincia.asti.it
tel. 0039 0141-433.315

Massimo Infunti
massimoi@impronta48.it

Ioanna Lepinioti
ioanna@impronta48.it

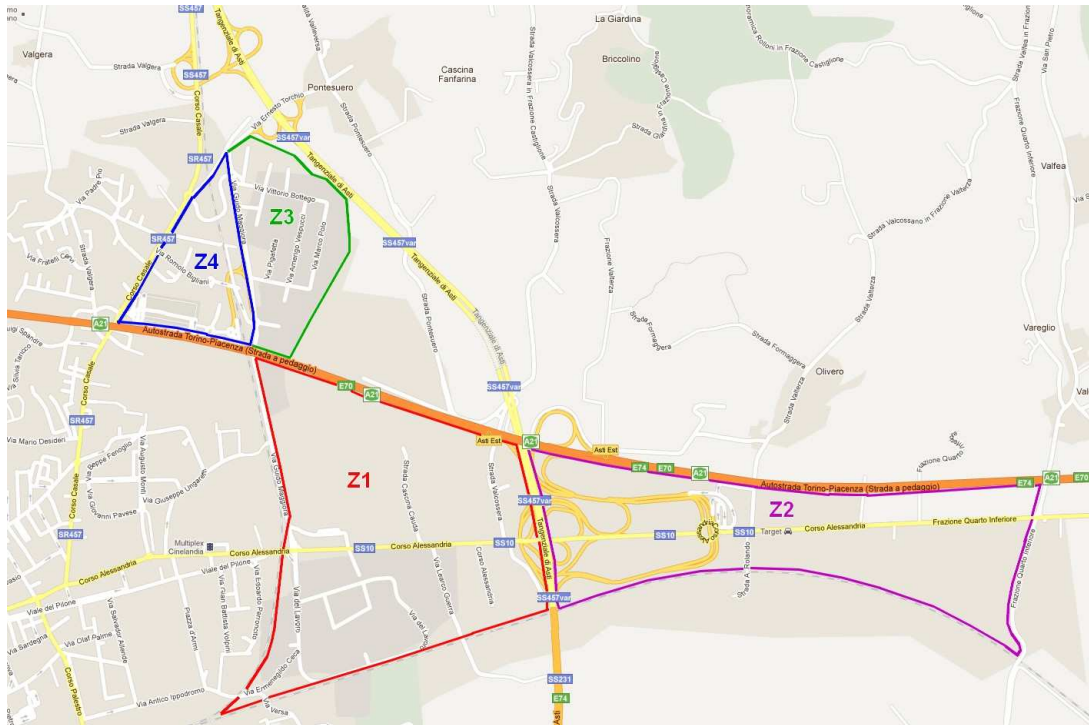**Date:** *April 2012*

Project website: http://moma.biz

INDEX

1. LOCAL MOBILITY SURVEY

1.1 INTRODUCTION

1.1.1 GENERAL INFORMATION

In Asti the MoMa.BIZ project is focusing on two areas of the BIZ, zones Z1 and Z3, where the majority of the companies are situated (see map below).

Map 1: Zoning of the BIZ of Asti

Zone Z1 has been the focus of MoMa.BIZ since the launch of the project, whereas zone Z3 was officially included in the project in autumn 2011. As a result the home-work mobility survey was carried out in two phases with a total duration of 4 months.

1. **Phase 1: Spring 2011**
    Duration of the Survey: 15 April – 5 June 2011
    Target Group: Companies and employees of the zone Z1 of the BIZ of Asti.
    Companies: 189
    Employees: 2105

2. **Phase 2: Autumn 2011**
    Duration of the Survey: 10 October – 20 December 2011
    Target Group: Companies and employees of the zones Z1 and Z3. Although the survey in zone Z1 was concluded in June 2011, it was considered a good opportunity to gather additional questionnaires while the survey was carried out in zone Z3, so as to increase the % of participation and obtain a more representative sample.
    Companies: 281
    Employees: 2616

There were six communication channels used:
- local mobility group
- face to face meetings
- telephone contacts
- email
- MoMa.BIZ website
- dissemination of printed materials

Local Mobility Group
There local partners collaborated with the members of the local mobility group for communicating with the employees of the BIZ and for the collection of the questionnaires.

Face to Face Meetings
In total there were 56 companies with which face to face meetings were carried out:
Z1: 6 companies
Z3: 50 companies

Due to the limited time in autumn 2011 it was considered best to visit directly the companies located in zone Z3 and inform them about the home-work mobility survey. Therefore, we had a lot more companies visited in zone Z3 than in zone Z1.

Telephone Contacts
In total 169 companies were contacted by phone, all of them located in Z1.

Email
Emails with information on the mobility survey were sent to companies that showed interest in the project and the mobility survey.

MoMa.BIZ Website
Information on the home-work mobility survey was available at the MoMa.BIZ website, including the link for the online survey and contact details for the local partners.

Dissemination of Printed Materials
Printed materials were distributed to all the companies of Z1 and Z3. They included: the local newsletter, leaflet on the mobility survey, a copy of the questionnaire and a copy of the voluntary agreement.

In order to ensure a high response rate, a draw for a mini ipod was organized among the participants of the mobility survey. This was communicated to all the companies and the employees together with the presentation of the survey and the questionnaire. The draw took place at the conclusion of the mobility survey during the Local Mobility Group Meeting on 20/12/2011.

1.1.3 MODE OF DATA COLLECTION

The survey was administered in two ways online and in hard copies.

Online
The Limesurvey Tool (http://www.moma.biz/limesurvey/admin/admin.php) was used for creating an online version of the survey.

In order to better control the data collection and to ensure a high quality of the data collected the local partner created two identical versions of the survey. One of them was dedicated to the 6 biggest companies of zone Z1 that account for 75% of the employees in Z1 and 60% of the entire BIZ.

The second version was open to the remaining employees.

The local partners provided advise and information to the companies interested in the online mobility survey.

Hard Copy
A hard copy of the questionnaire was also prepared for the companies that did not have the means to participate at the online survey. A copy of this was administered to all the companies of the BIZ together with information on how to submit the filled in questionnaires. Additional support was offered to the companies in order to ensure a high % of participation.

In addition, the local partners organised a "Mobility Survey Gazebo" on 10/05/2011 outside the biggest company of the BIZ. During this event the local partners had the opportunity to communicate directly with the local employees, disseminated and collected filled in questionnaires.

1.1.4 DATA COLLECTED

In total there were 271 questionnaires collected that correspond to employees from 28 different companies. This sample represents 10% of the employees and 10% of the companies present at the BIZ.
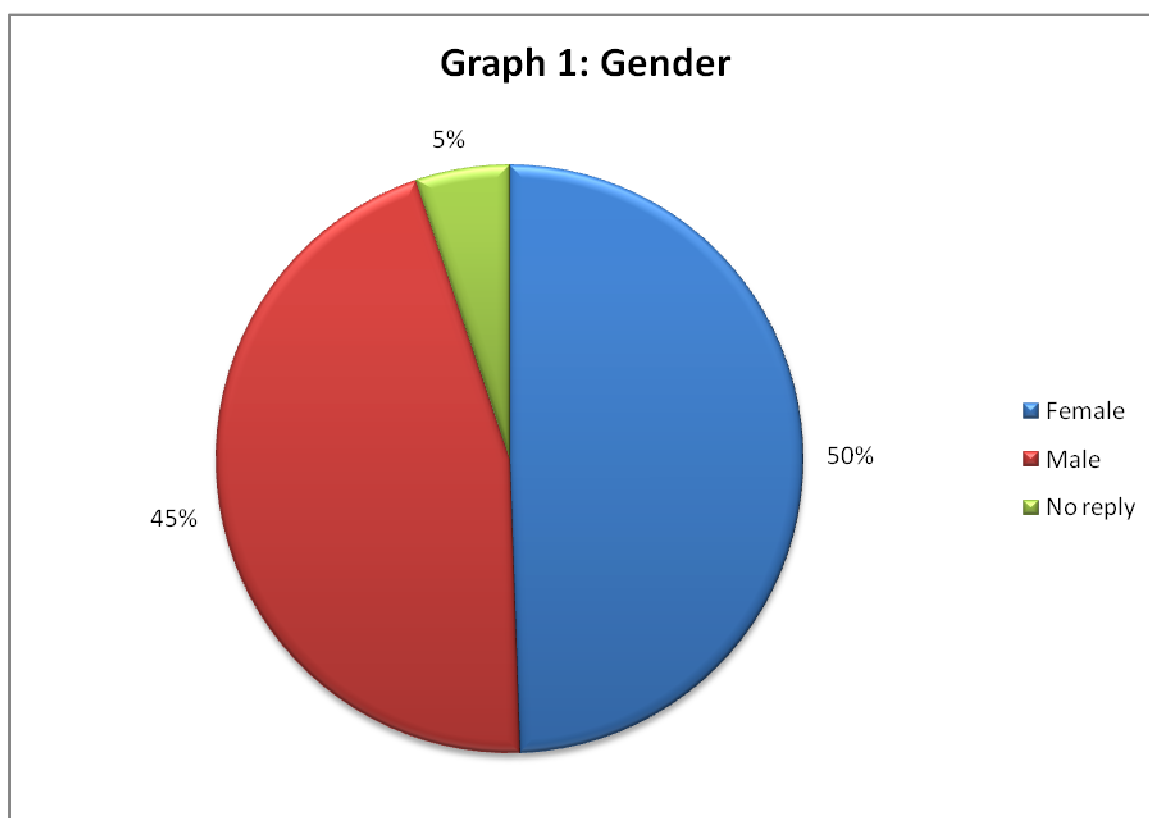
The local partners and the mobility group would wish to have a higher response rate to the mobility survey, nonetheless, the present sample is considered important and, therefore, the results of the survey were used for defining the mobility solutions to be adopted to the BIZ of Asti.
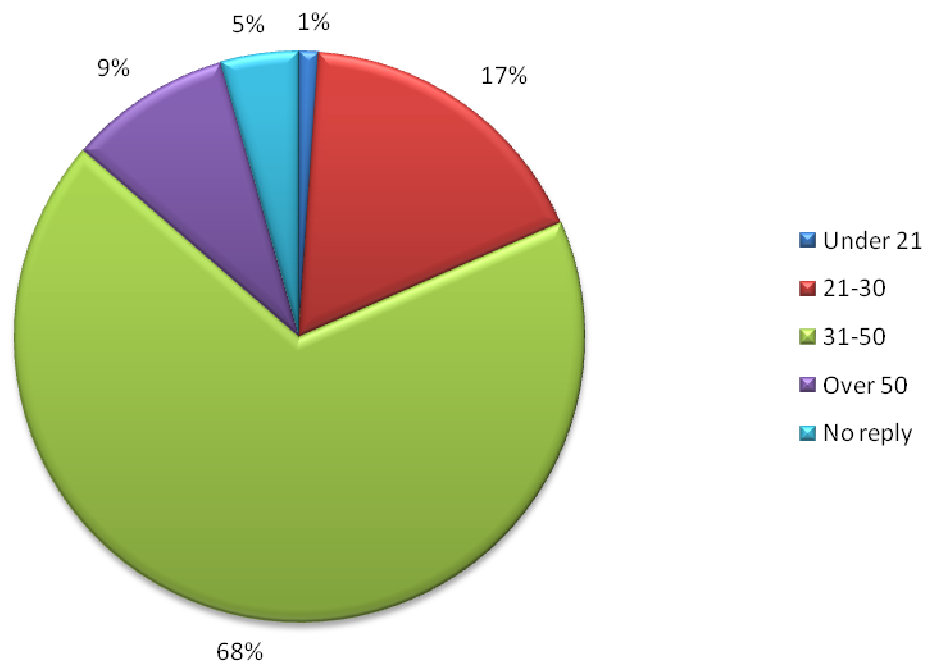
1.2 RESULTS OF THE MOBILITY SURVEY

The results of the home-work mobility survey at the BIZ of Asti have confirmed the initial evaluation of the local partners regarding the modal split of the home-work trips and the main reasons that influence such behaviour. The survey results are presented in detail in the following paragraphs.
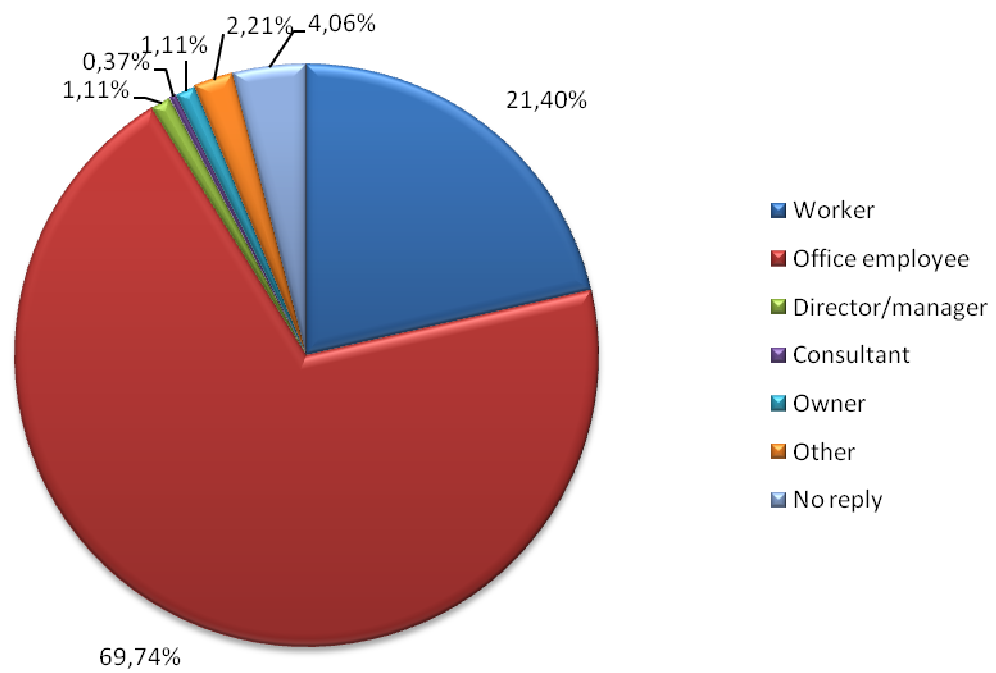
1.2.1 GENERAL INFORMATION REGARDING THE SAMPLE

The interviewed sample is made up of almost an equal number of women and men (graph 1). The majority of them are aged between 31-50 years (graph 2) and they work in an office (graph 3).

Graph 1: Gender

5%

50%

45%

■ Female
■ Male
■ No reply

Graph 2: Age

- Under 21
- 21-30
- 31-50
- Over 50
- No reply

1% Under 21
17% 21-30
68% 31-50
9% Over 50
5% No reply

Graph 3: Position at work

- Worker
- Office employee
- Director/manager
- Consultant
- Owner
- Other
- No reply

21,40% Worker
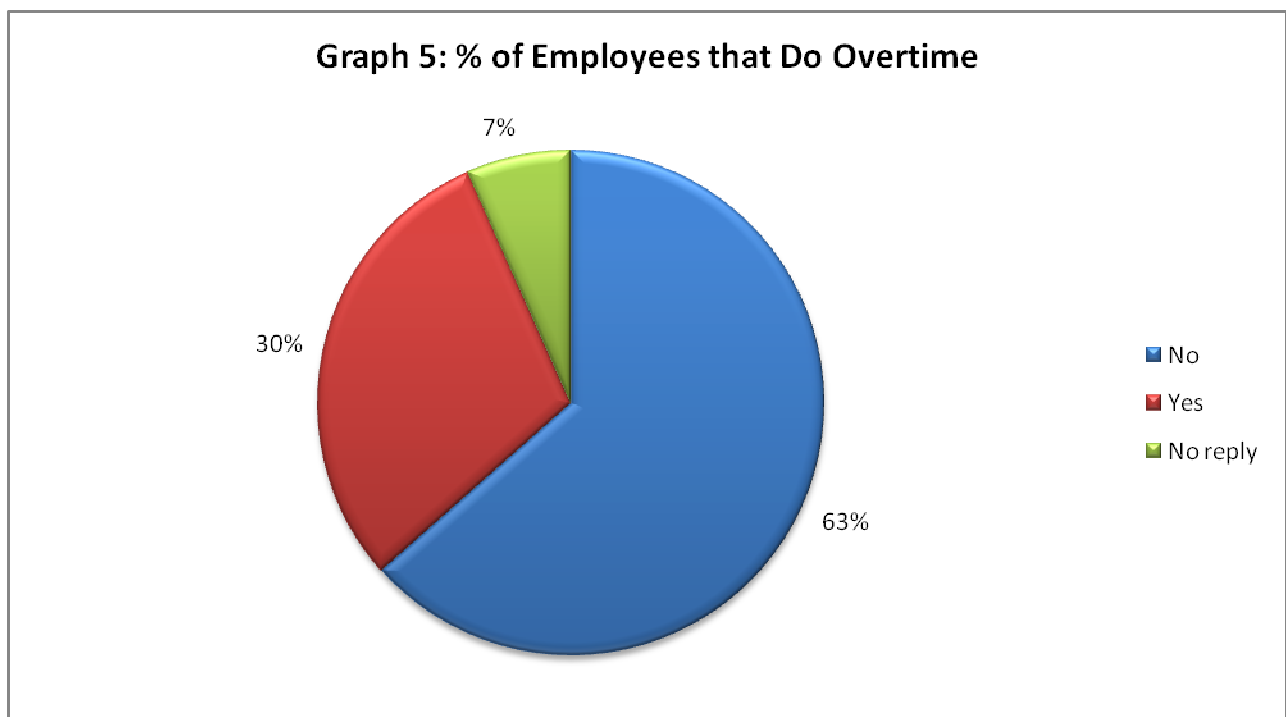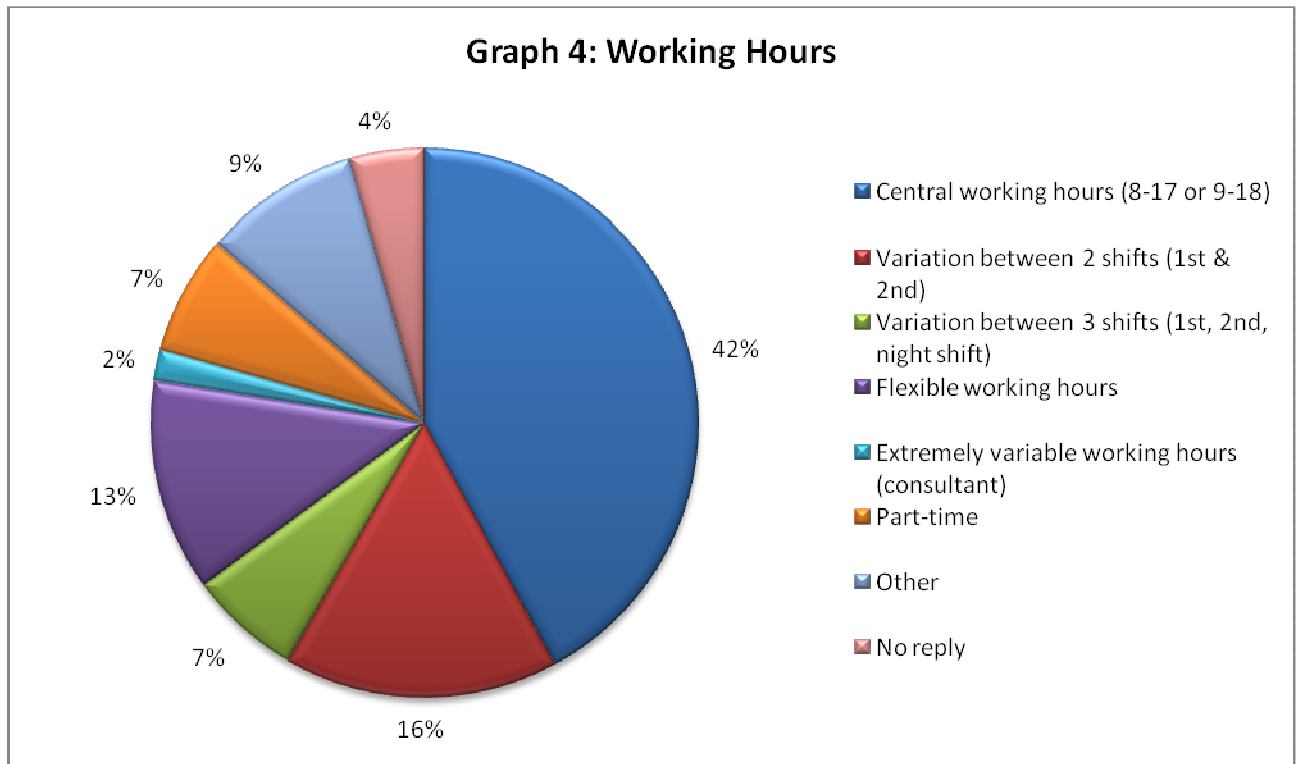69,74% Office employee
1,11% Director/manager
0,37% Consultant
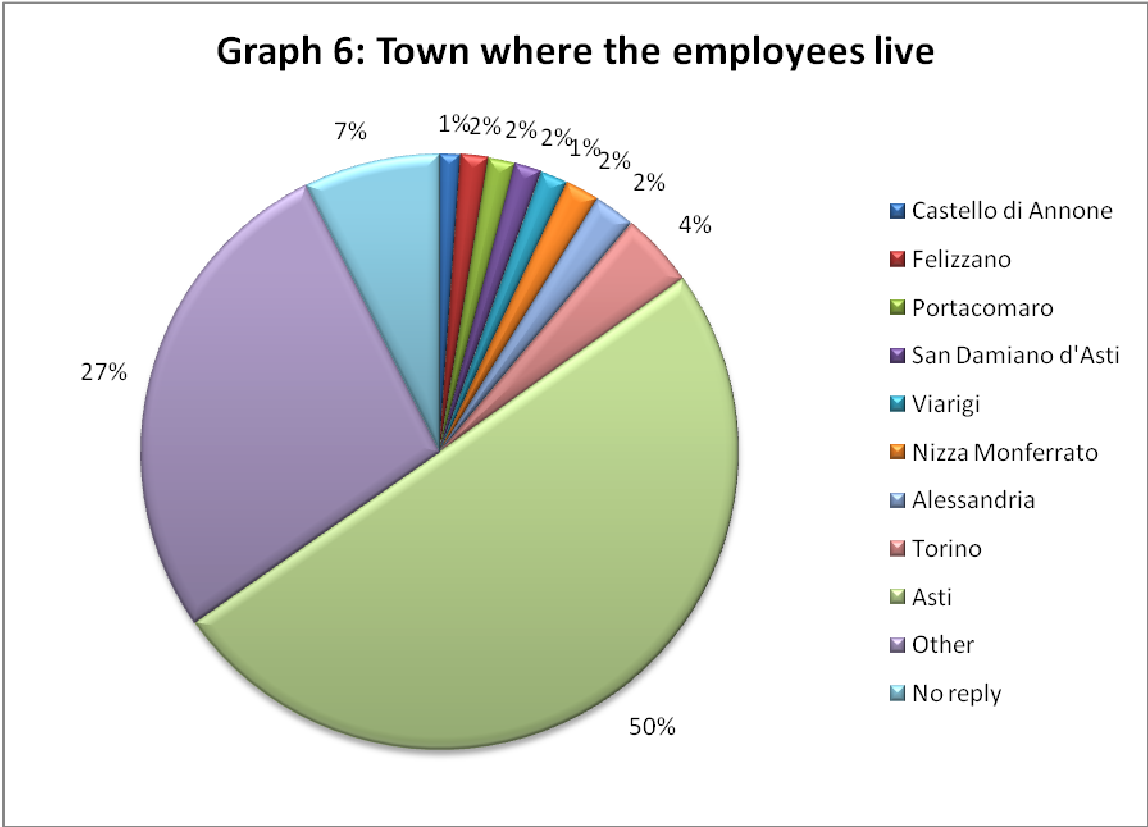1,11% Owner
2,21% Other
4,06% No reply

The working hours of the employees in the BIZ vary a lot and are mainly conditioned by the policy of each company. However, the majority of the sample (42%) has a central working shift starting work between 8 and 9 in the morning and finishing between 17 and 18 in the evening (graph 4). In addition, only 30% of the interviewed sample does overtime at work (graph 5).

Graph 4: Working Hours

- Central working hours (8-17 or 9-18)
- Variation between 2 shifts (1st & 2nd)
- Variation between 3 shifts (1st, 2nd, night shift)
- Flexible working hours
- Extremely variable working hours (consultant)
- Part-time
- Other
- No reply

Graph 5: % of Employees that Do Overtime

- No
- Yes
- No reply

The town of residence for the majority of the interviewed employees is Asti (50%) followed by Torino (4%). However, the survey has showed a great dispersal of the employees in the villages and towns surrounding

Asti as the remaining 39% of the interviewed employees lives in 69 different locations. In particular, there are 50 villages and towns where just 1 employee lives and 12 additional ones where just 2 employees live, these are grouped under "Other" in Graph 6.

A list of all the villages and towns where the interviewed employees live is given in table 1 below.
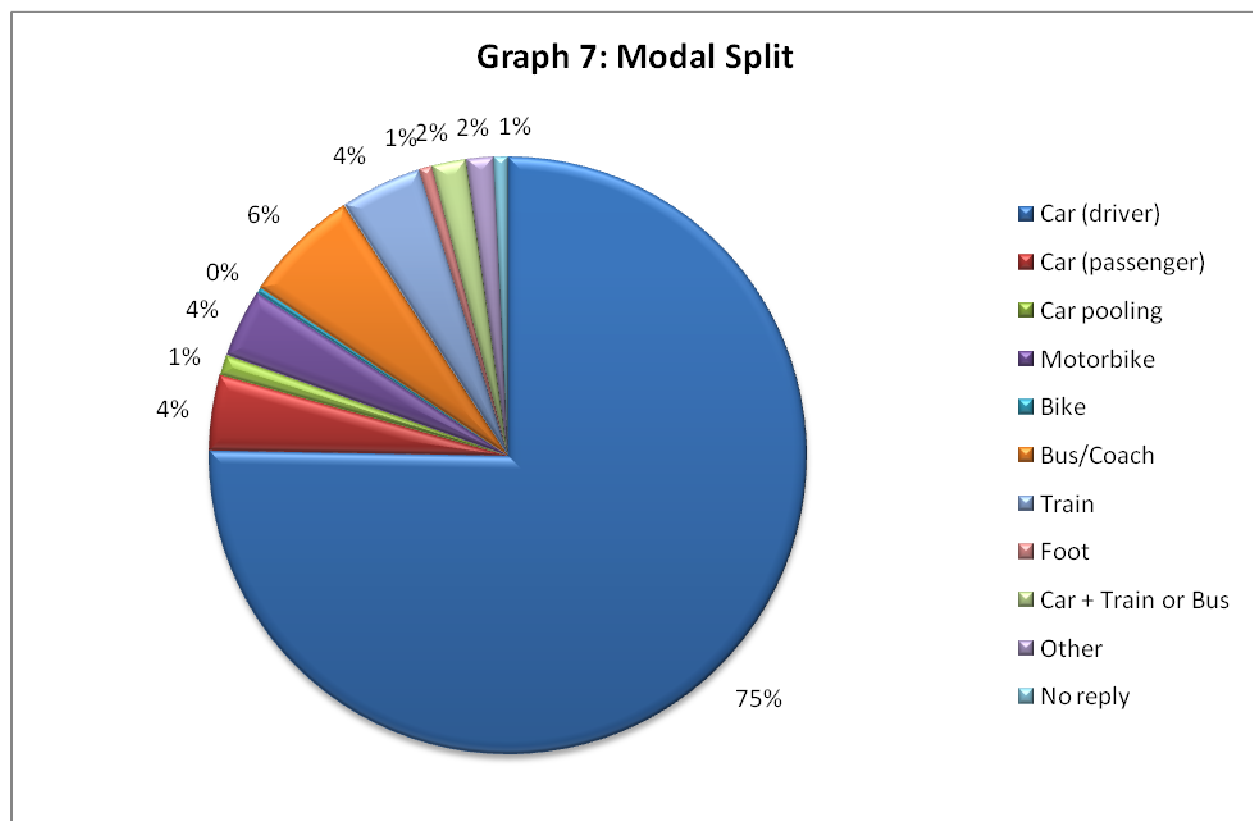
Graph 6: Town where the employees live

Legend:
- Castello di Annone
- Felizzano
- Portacomaro
- San Damiano d'Asti
- Viarigi
- Nizza Monferrato
- Alessandria
- Torino
- Asti
- Other
- No reply

Town where you live	Nr.	Town where you live	Nr.
Acqui Terme	1	Rivalta	1
Antignano (AT)	1	Rocca D'Arazzo	1
Baldichieri d'Asti	1	Rocchetta Tanaro	1
Belveglio	1	San Fedele	1
Bramairate (AT)	1	San Paolo Solbrito	1
Buttigliera d'Asti	1	Santa Vittoria d'Alba (CN)	1
Calamandrana (AT)	1	Settime d'Asti	1
Callianetto	1	Strevi (AL)	1
Calliano	1	Trofarello	1
Calosso	1	Valgera	1
Canelli	1	Valle Benedetta	1
Cantarana	1	Viale d'Asti	1
Carmagnola	1	Vigliano d'Asti	1
Casale Monferrato	1	Villaggio San Fedele	1
Castagnole Monferrato	1	Chieri	2
Castell'Alfero	1	Frinco	2
Castellero	1	Isola d'Asti	2
Castiglione	1	Moncalvo	2
Cerro Tanaro	1	Montegrosso d'Asti	2
Costigliole d'Asti	1	Montemagno	2
Dusino San Michele	1	Motta di Costigliole d'Asti	2
Frazione Casabianca	1	Quarto inferiore	2
Frazione Santo Stefano Montemagno	1	Revigiasco d'Asti	2
Frazione Serravalle - AT	1	Scurzolengo	2
Frazione Vaglierano Basso	1	Villafranca	2
Volpiano (To)	1	Villanova d'Asti	2
Milano	1	Castello di Annone	3
Monale	1	Felizzano	4
Mongardino	1	Portacomaro	4
Montaldo Scarampi	1	San Damiano d'Asti	4
Nichelino (Torino)	1	Viarigi	4
Ozzano Monferrato	1	Nizza Monferrato	5
Pavia - Linarolo	1	Alessandria	6
Quarto d'Asti	1	Torino	11
Refrancore (AT)	1	Asti	136
Revigliasco d'Asti	1		
No reply			20
Total			**271**

Table 1. Place of residence of the interviewed employees
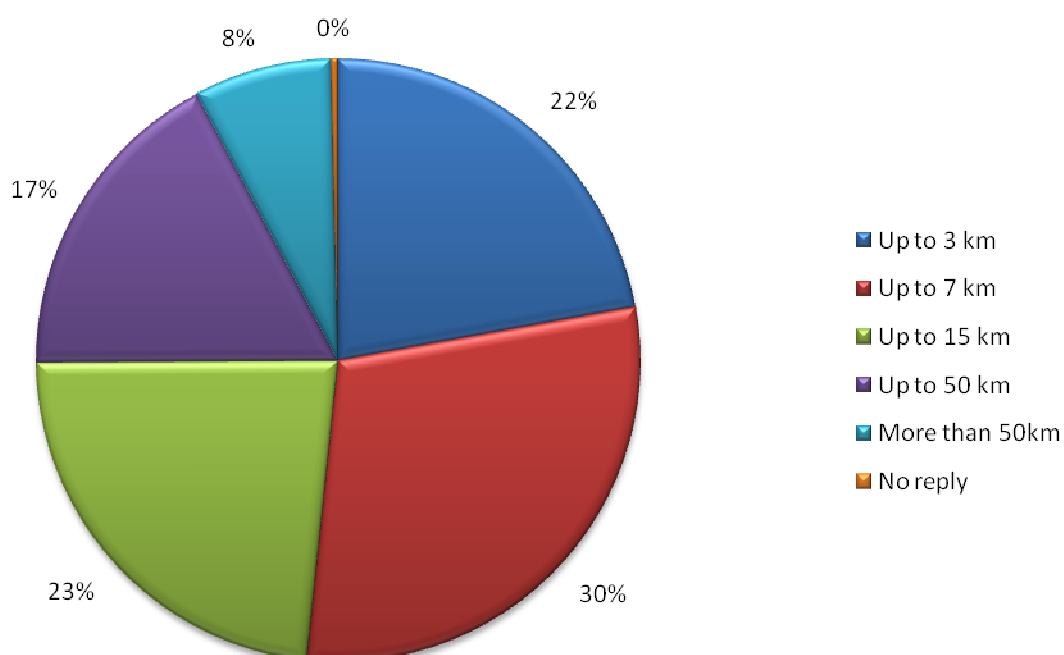
As it was expected the majority of the employees interviewed (75%) in the BIZ of Asti travel to work by car and only a small part (11%) uses sustainable modes of transport such as public transport, cycling or walking (graph 7). This is despite the fact that the majority of the sample (75%) covers a distance less than 15km to get to work, and 52% lives within a 7km radius from the BIZ (graph 8).
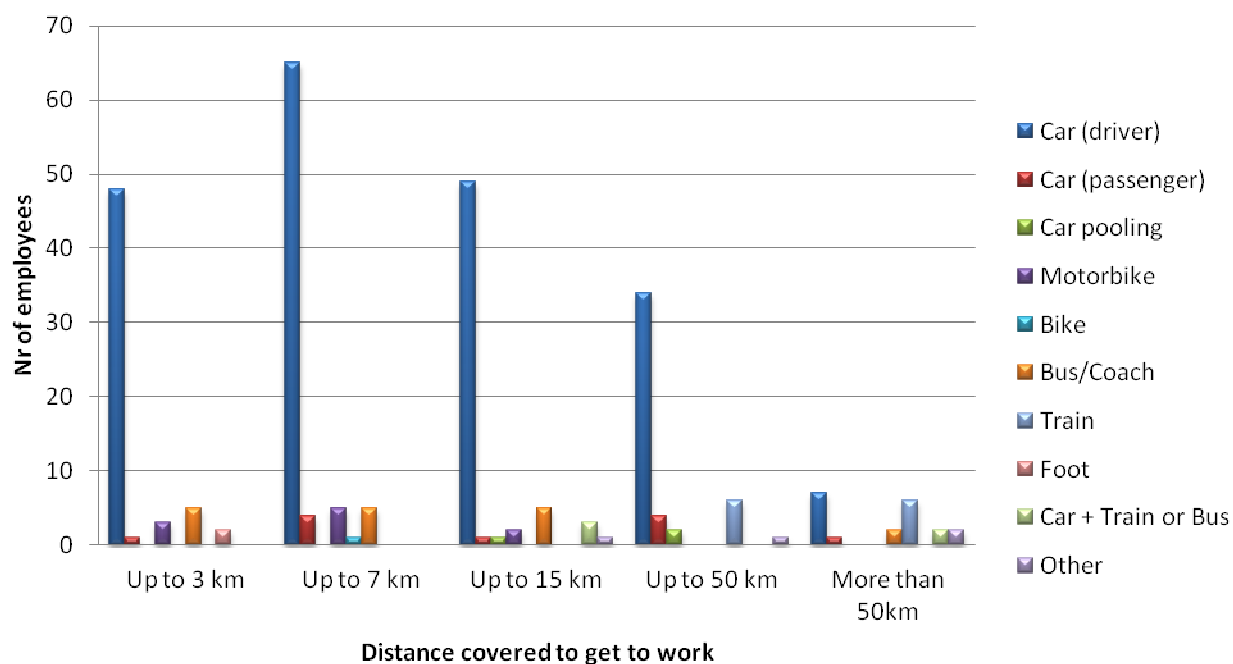
As the analysis has showed even when the distance covered is relatively small, up to 3km, and could easily be covered by bike or even on foot, the car is still the most popular mode of transport for the home-work trips (graph 9).

Graph 7: Modal Split

- Car (driver)
- Car (passenger)
- Car pooling
- Motorbike
- Bike
- Bus/Coach
- Train
- Foot
- Car + Train or Bus
- Other
- No reply

75%, 4%, 1%, 4%, 0%, 6%, 4%, 1%, 2%, 2%, 1%

Graph 8: Distance Covered in Km (one way)

Pie chart legend:
- Up to 3 km
- Up to 7 km
- Up to 15 km
- Up to 50 km
- More than 50km
- No reply

Percentages shown: 22%, 30%, 23%, 17%, 8%, 0%

Graph 9: Correlation between the mode of transport used and the distance covered to get to work

Y-axis: Nr of employees (0 to 70)
X-axis: Distance covered to get to work (Up to 3 km, Up to 7 km, Up to 15 km, Up to 50 km, More than 50km)

Bar chart legend:
- Car (driver)
- Car (passenger)
- Car pooling
- Motorbike
- Bike
- Bus/Coach
- Train
- Foot
- Car + Train or Bus
- Other

As it was expected the length of the home-work trip for the majority of the sample is up to 30mins with only 16% travelling for more than 30mins (graph 10).
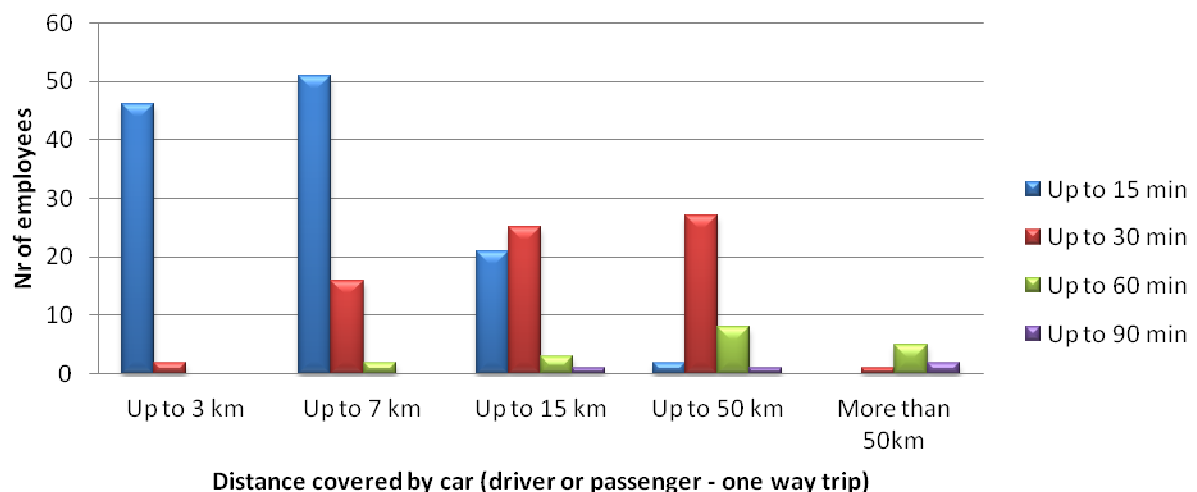
By carrying out a correlation between the distance covered and the length of the trip for the interviewees that use the car (graph 11) we notice that there is a great variance in the length of the trip between people that cover the same distance with the same mode of transport. For example, for a distance of 15km a high number of employees has declared that the length of their trip is up to 15mins whereas an equally high number has declared that it lasts up to 30mins.

This variance could be due to the characteristics of the different trips, e.g. road conditions, traffic lights, presence of traffic etc., however, it is also an indication that the perception of time is relative to each individual and could be influenced by numerous factors.
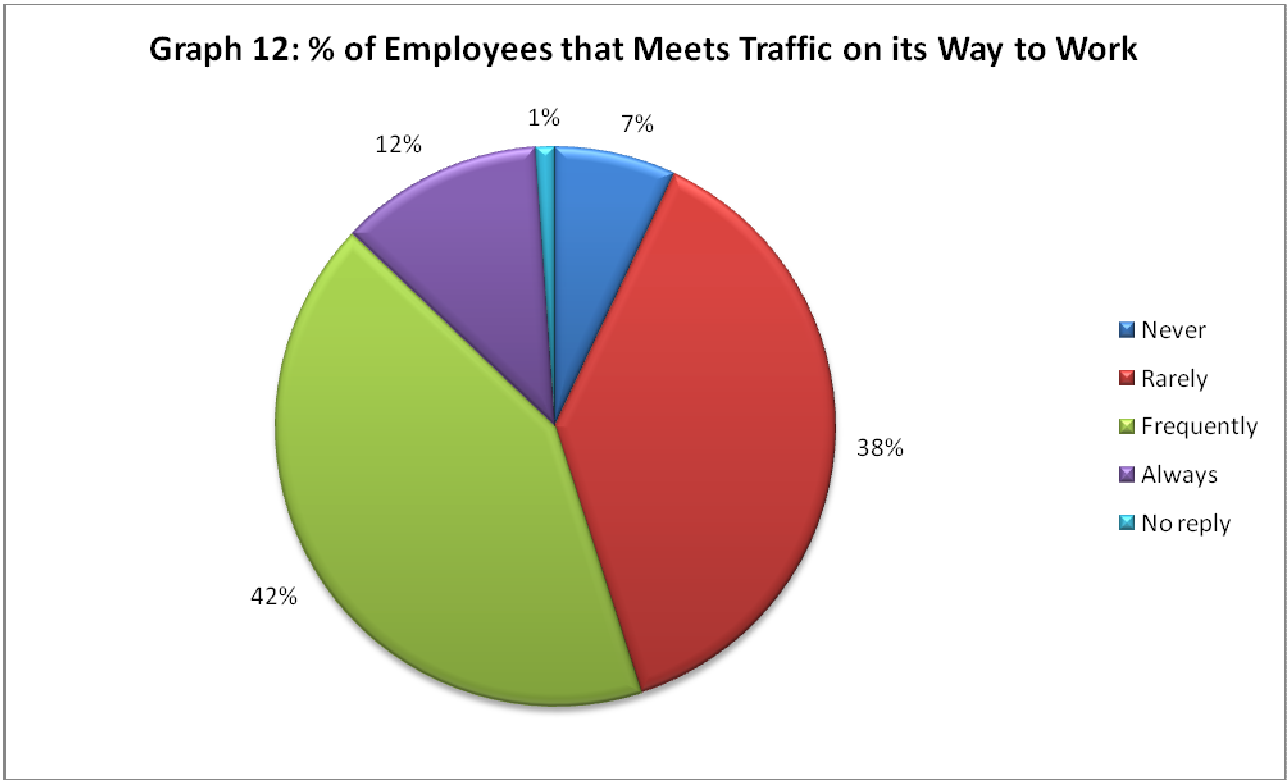
Graph 10: Length of the Home-Work Trip in Minutes

- Up to 15 min — 50%
- Up to 30 min — 34%
- Up to 60 min — 8%
- Up to 90 min — 6%
- More than 90min — 2%
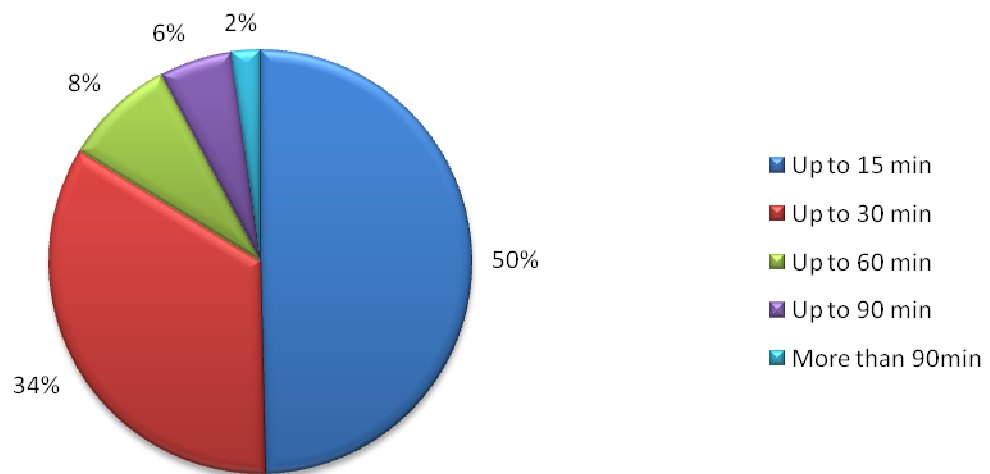
Graph 11: Correlation of Distance with Time (Car)

Nr of employees (y-axis, 0 to 60)

Distance covered by car (driver or passenger - one way trip)

Legend:
- Up to 15 min
- Up to 30 min
- Up to 60 min
- Up to 90 min

As regards the presence of traffic, the majority of the interviewed employees (42%) declared that they frequently meet road traffic during their home-work trips and an additional 12% has declared that they always meet traffic (graph 12).

Graph 12: % of Employees that Meets Traffic on its Way to Work

Legend	
Never	7%
Rarely	38%
Frequently	42%
Always	12%
No reply	1%

The majority of the sample (69%) is carrying out at least one intermediate stop during the home-work trip. However, there is a considerable part (31%) that does not carry out any intermediate stops.

From the intermediate stops carried out the most popular one is at the market/supermarket followed by accompanying children to school (graph 13).

A correlation between the mode of transport used and the intermediate stops has showed that even employees that do not use the car for their home-work trip carry out intermediate stops (graph 14).

Graph 13: Intermediate Stops When Travelling To or From Work

Graph 14: Correlation Between Mode of Transport and Intermediate Stops
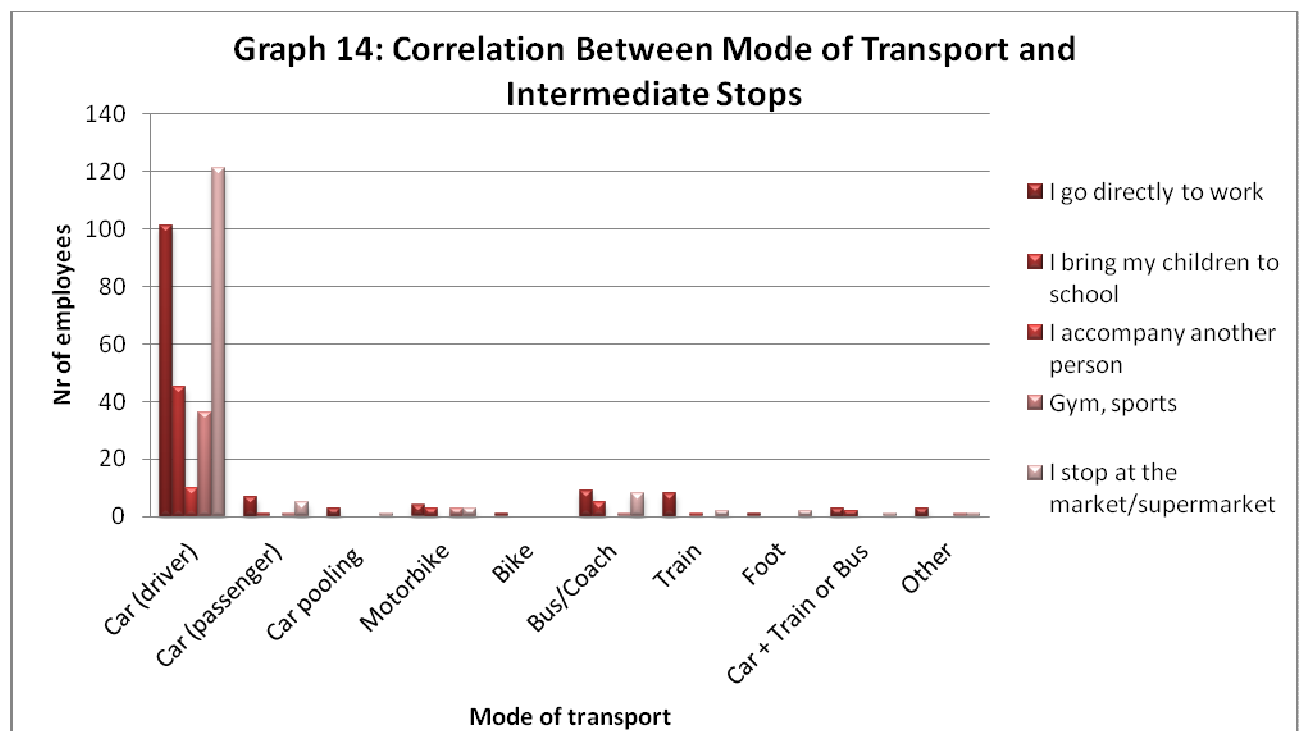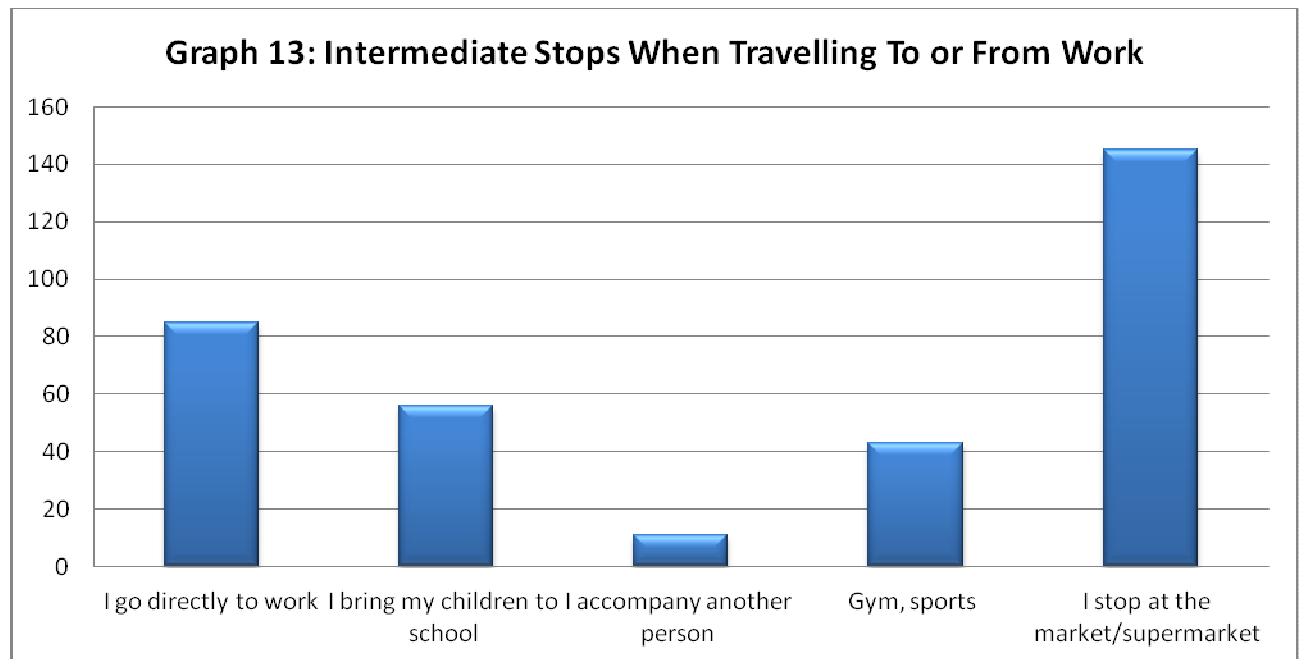
There appears to be a great variance in the amount money that the employees spent for their monthly home-work trips. Nonetheless, travelling to work costs a considerable amount of money to many of the employees as 44% of the sample spends more than 50€/month and an additional 25% spends up to 50€/month (graph 15).

Graph 15: Cost of Travelling to Work per Month in €/month
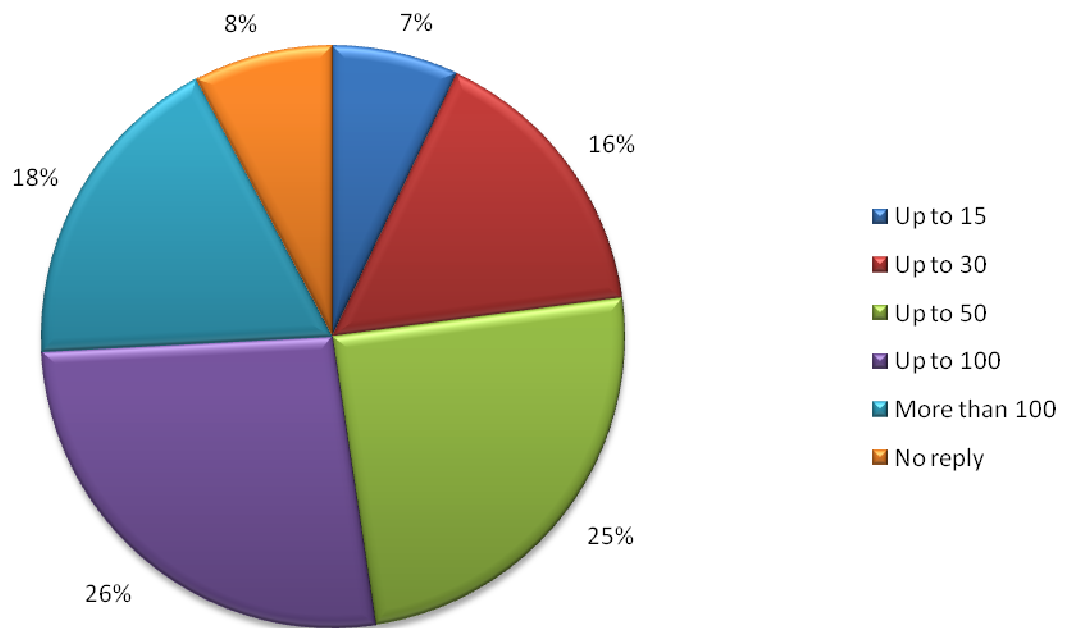
An interesting finding of the survey is that the majority of the sample (54%) is not aware of the public transport that serves the industrial area and in particular zone Z1 (graph 16).

In addition, the majority of the interviewees (46%) has evaluated the existing services as bad, a 15% as sufficient and only a 5% as good or excellent (graph 17).

A correlation between the awareness of the public transport service and its evaluation, has shown that the majority of the employees that does not know the existing bus line that serves zone Z1 has evaluated it as bad (graph 18).

The existing service has also been evaluated as bad by the majority of the employees that are aware of it.

This is an indicator of two facts regarding the existing public transport service:

1. it has a bad image among the public;
2. it does not meet the needs of the employees of the BIZ.

In fact only 8% of the employees has declared that the existing public transport timetable meets the needs of their work schedule whereas 52% have declared that it does not (graph 19). Another interesting finding is that 29% of the employees do not know if the existing bus line is suitable for them or not.
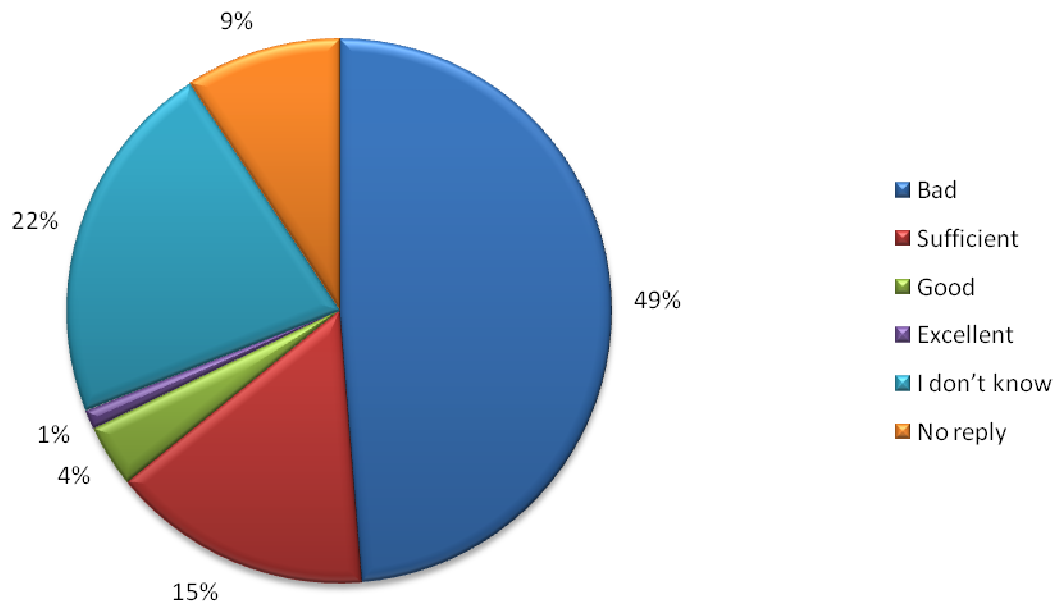
Therefore, there appear to be two main fields of improvement of the public transport service:

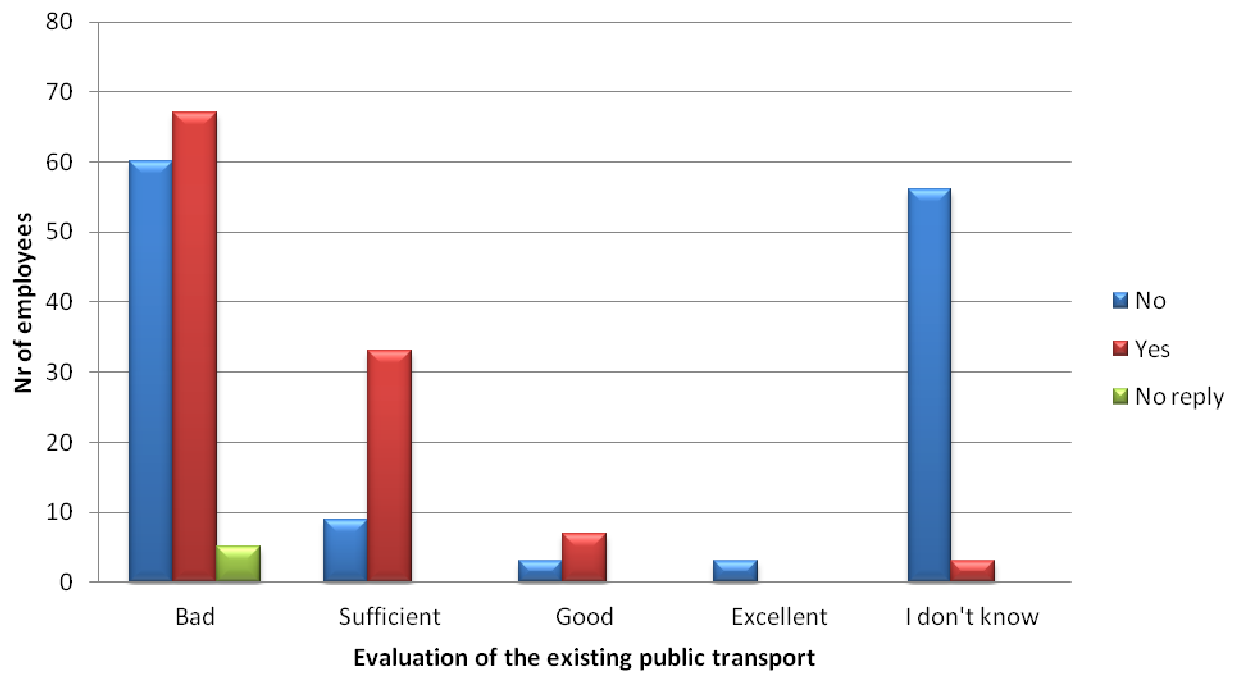1. timetable and frequency;
2. awareness and communication.

Graph 16: Employees Aware of the Public Transport Present in the BIZ
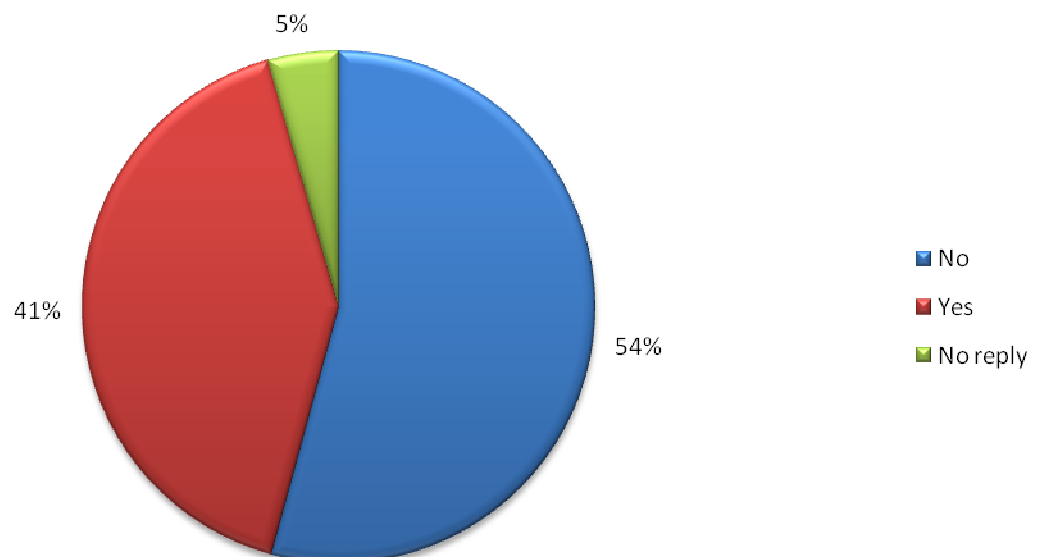
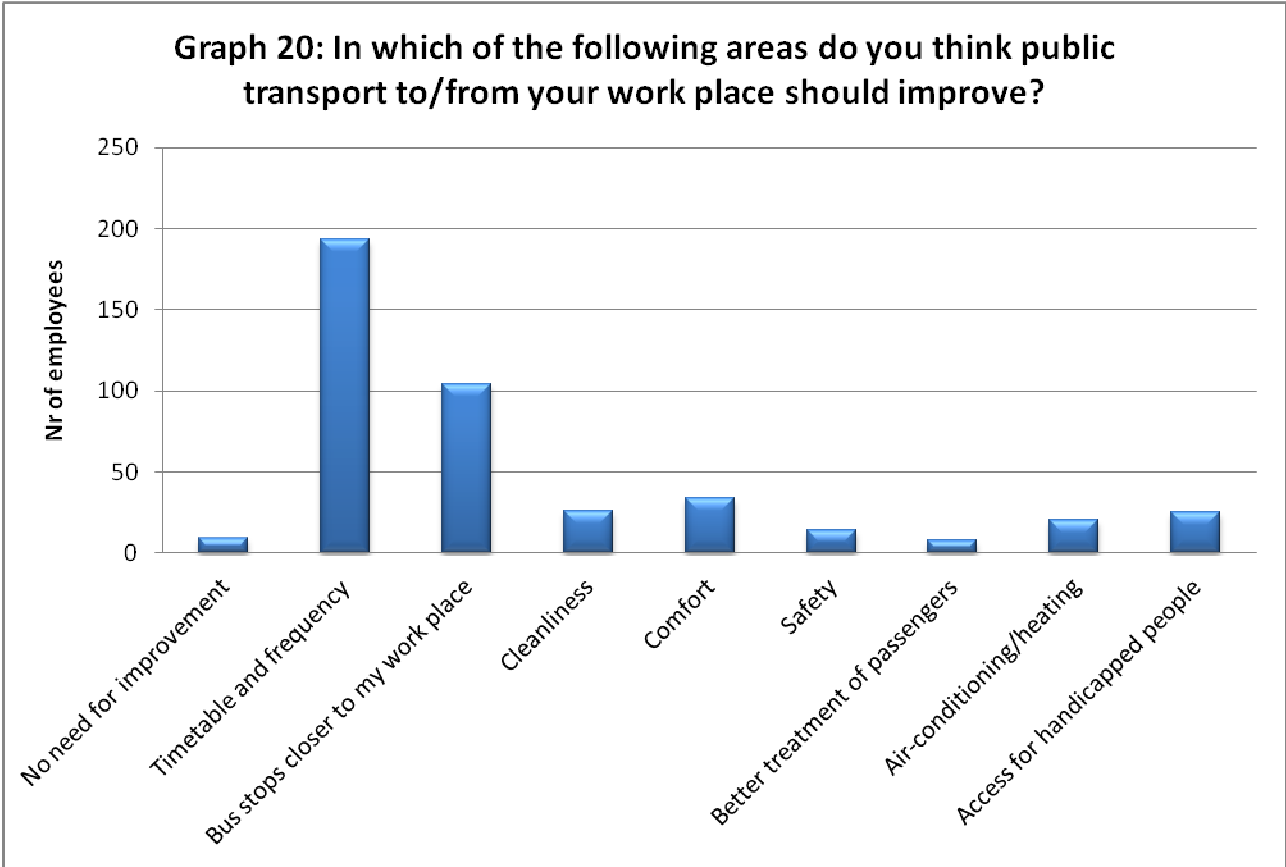# Graph 17: Evaluation of the Existing Public Transport

9%

22%

49%

1%

4%

15%

- Bad
- Sufficient
- Good
- Excellent
- I don't know
- No reply

Graph 18: Correlation Between the Awareness of the Employees and their Evaluation of the Existing Public Transport Service

Nr of employees

80

70

60

50

40

30

20

10

0

Bad   Sufficient   Good   Excellent   I don't know

Evaluation of the existing public transport

- No
- Yes
- No reply

Graph 19: Is the Public Transport Timetable Suitable for your Work Schedule?

- **No** — 52%
- **Yes** — 8%
- **I don't know** — 29%
- **No reply** — 11%
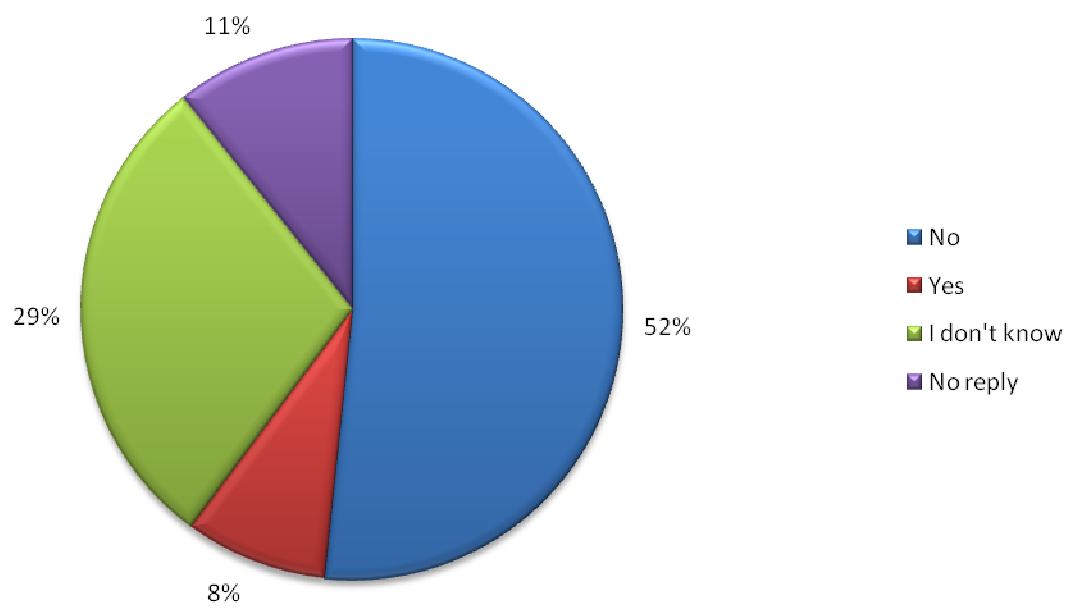
When the local employees were asked in which areas they thought that the existing public transport should be improved the majority of them indicated the timetable and frequency of the buses, which is in accordance with the previous analysis. Another big part of the sample indicated the bus stops should be closer to the place work (see graph 20).


Graph 20: In which of the following areas do you think public transport to/from your work place should improve?

In this section a closer look to the mobility behaviour of the employees is going to be carried out in order to better understand the factors that influence it. This will allow to identify the most suitable solutions in order to improve the mobility situation of the BIZ and change the mobility behaviour of the employees to a more sustainable one.
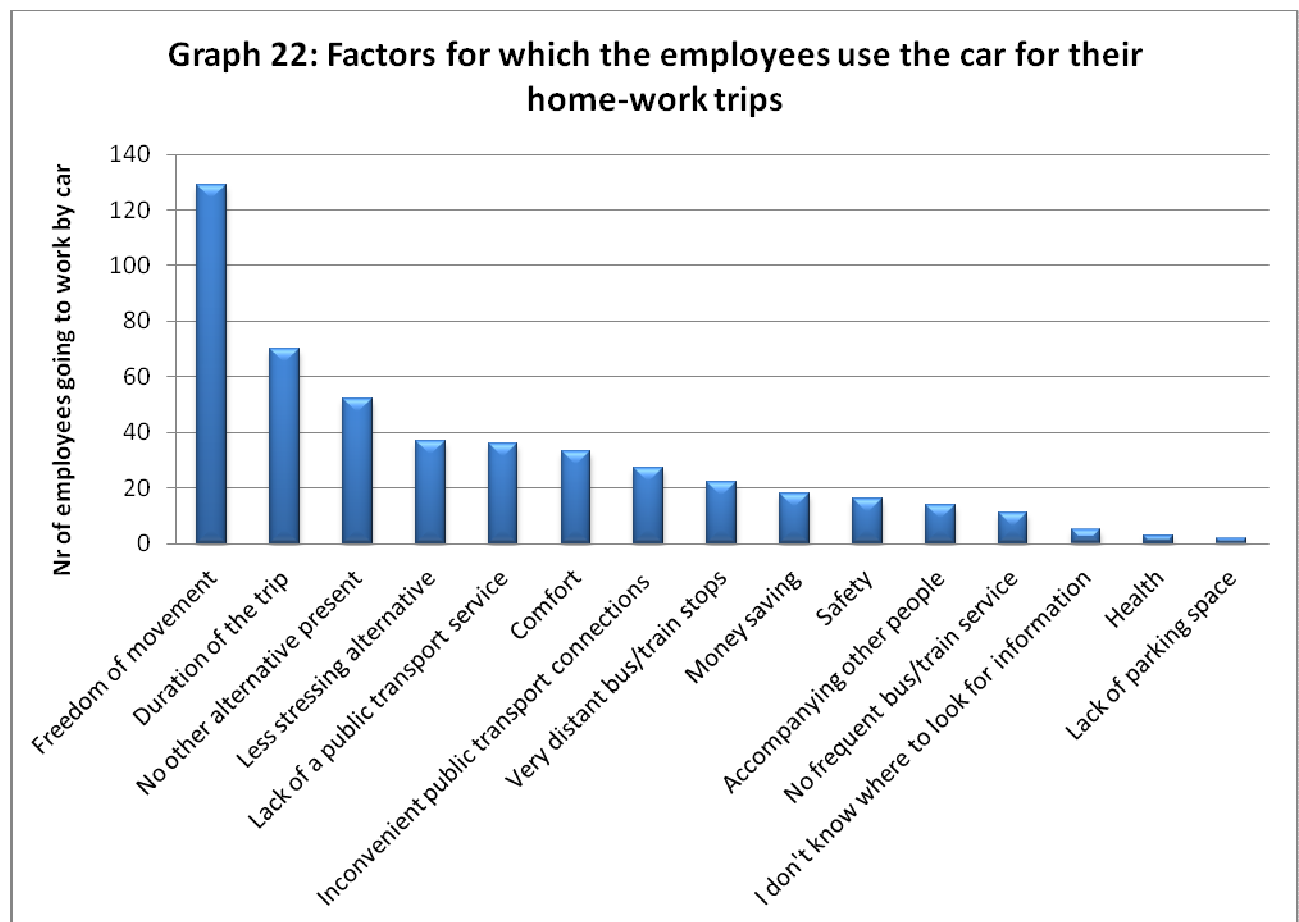
The mobility behaviour of a person is largely influenced by time and cost. When the employees of the BIZ of Asti where asked to point out the factors that affect their choice of the mode of transport for their home-work trips the factor time (duration of the trip) was the second most indicated whereas the factor cost (money saving) was fifth (graph 21). The main factor influencing the majority of the employees appears to be the freedom of movement. The lack of other alternatives is also an important factor.

Here it has to be noted that the employees could only indicate three factors and it was not possible to indicate the importance of each factor indicated.

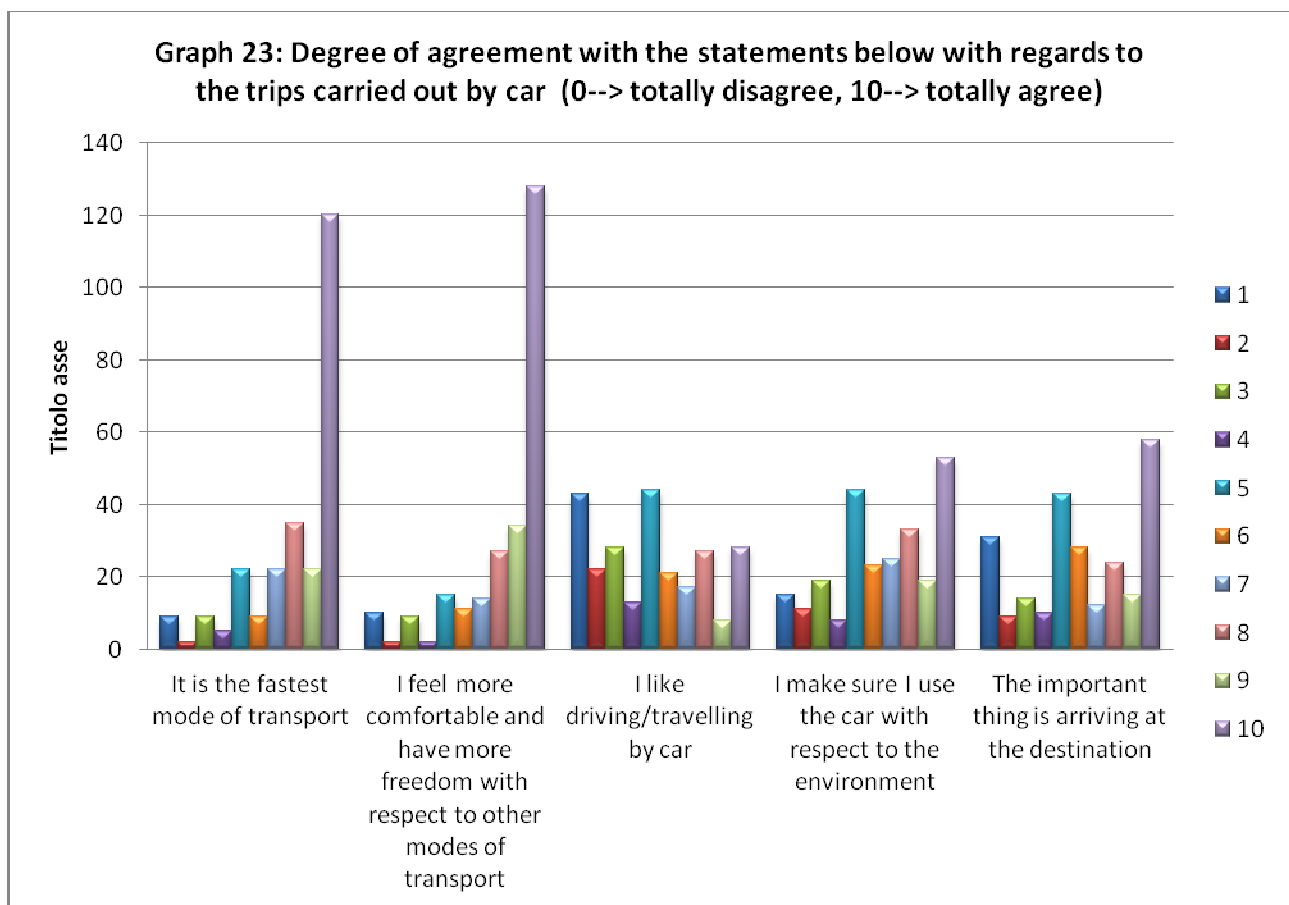Graph 21: Factors that Influence the Choice of Mode of Transport
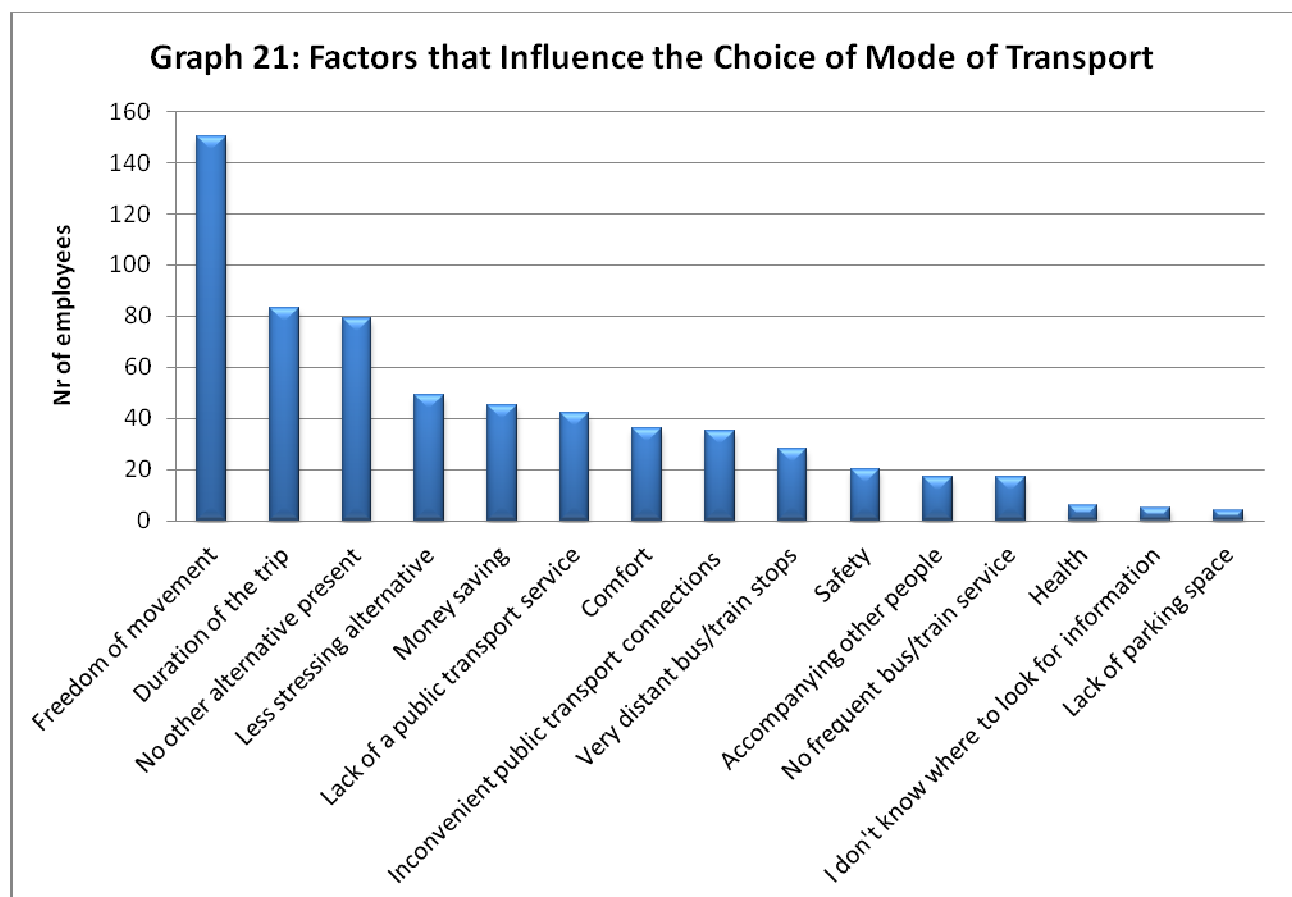
Analysing the factors that influence the choice of the employees that travel to work by car we see that the main three ones remain the freedom of movement, the duration of the trip and the presence of no other alternative (graph 22).

The freedom of movement indicates the need to carry out intermediate stops whereas the lack of another alternative could mean that either there are no alternatives to the private car for the employees of the BIZ or that the employees have not really evaluated the idea of not using their car. The second hypothesis is confirmed by the number of employees who indicated the lack of public transport.

Graph 22: Factors for which the employees use the car for their home-work trips

The mobility behaviour of a person is also influenced by his/hers habitual actions that determine his/hers belief of the best mobility solution without necessarily having considered all the alternatives. With the present survey it was possible to assess such a habitual behaviour by asking the interviewees to consider a number of statements and decide whether they agree or disagree with them (graph 23), or choose the ones that reflect their way of thinking (graph 24).

Looking at graph 23 it is clear that the employees interviewed do not use the car because they enjoy driving but because it is fast and guarantees the flexibility to plan their various trips.

Graph 23: Degree of agreement with the statements below with regards to the trips carried out by car (0--> totally disagree, 10--> totally agree)

As the focus of the survey has been the home-work trips it is clear why the interviewees have declared that they consider important to arrive in time for appointments (table 2 and graph 24). This statement determines also the importance of being able to move without unexpected delays in order to arrive at the destination within the time set by the working activity. Equally important is that the trips are short: the second most popular choice was "*The important thing is arrive at the destination as quickly as possible*".

These are followed by the factor of safety and comfort that confirm the lack of a convenient and efficient alternative mode of transport. The safety factor in this survey is related to personal safety and reflects the need to improve the quality of the industrial area of Asti.

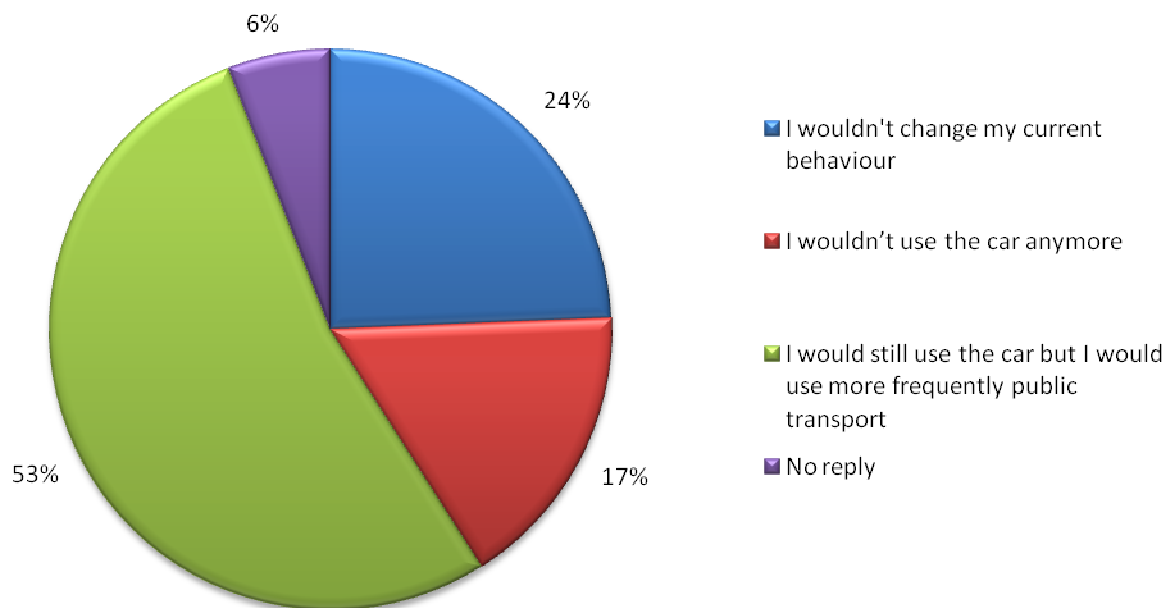| Choose 3 of the following statements that reflect your way of thinking		
Code	Statement	Nr of Employees
1	I can't stand arriving late at an appointment	134
2	The important thing is arrive at the destination as quickly as possible	101
3	I like to feel safe when I travel	88
4	I want to be comfortable when I travel	85
5	I like to travel relaxed	40
6	I make trips only when necessary	37
7	I like to travel with calm so that I can admire the landscape	34
8	I like to move in search of new places	29
9	I like travelling for reaching destinations I know	23
10	I always try to use the time spent on travelling for doing things (i.e. reading, working, etc.)	21
11	I like the feeling I get when I drive	20

Table 2. Table related to graph 24

Graph 24: Statements that reflect the way of thinking of the employees
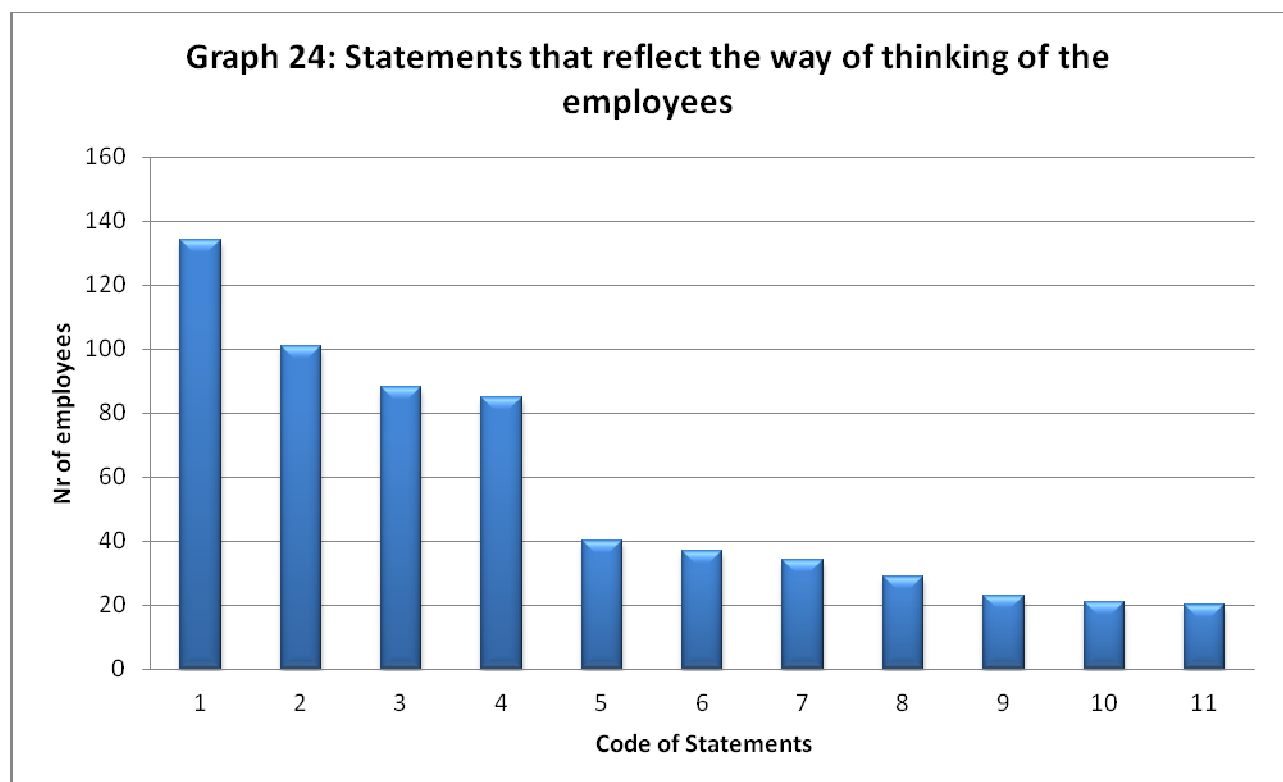
When the sample was presented with the possibility of a free public transport the majority of them (53%) declared that they would still use the car but would use more frequently public transport (graph 25). There was also a 24% that declared that they wouldn't change their current behaviour. This is a clear indication that the cost of the existing public transport is not an important issue and confirms that the existing service is not considered efficient and probably does not meet the needs of the sample.

The above hypothesis is also confirmed by the graph 26 that shows that in order for the employees, currently travelling by car, to switch to public transport it is necessary to revise the existing timetable in a way that is better synchronised with their working schedule.

Graph 25: If public transport was free how would you behave?

6%

24%

■ I wouldn't change my current behaviour

■ I wouldn't use the car anymore

53%

17%

■ I would still use the car but I would use more frequently public transport

■ No reply

Graph 26 shows the willingness of the employees currently travelling to work by car and motorbike to switch to public transport. It is clear that the majority of them (68%) would switch to public transport under certain conditions such as the improvement of the timetable (47%). Here again we have an indication that the existing public service does not meet the needs of the local employees.

Graph 26: Employees Willing to Switch to Public Transport for the Home-Work Trips
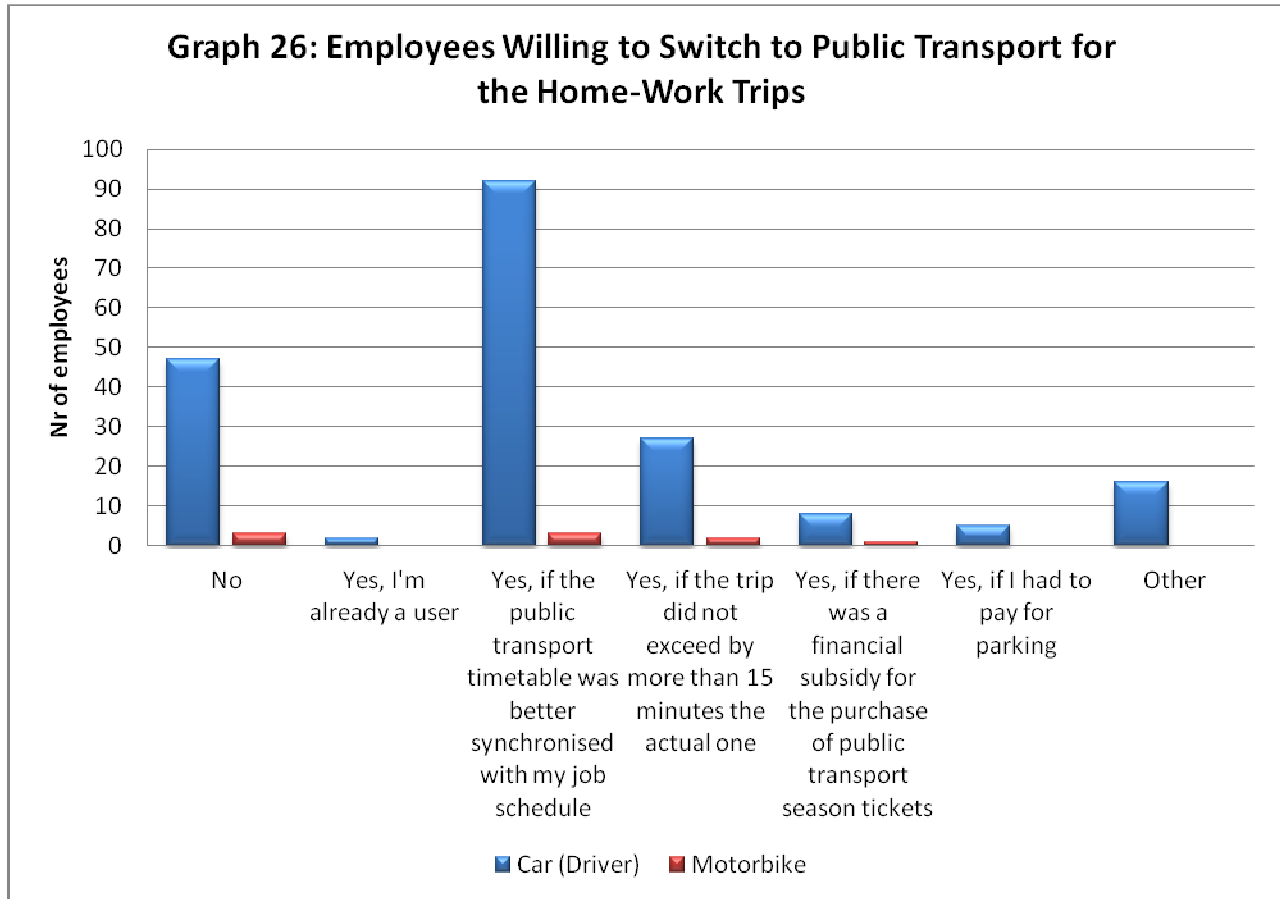
Although the majority of the interviewees (41%), currently using the car for their home-work trips, has declared that they are not willing to switch to car pooling the total number of those that gave a positive reply (system for organising the groups, economic advantages, reserved parking space, etc.) represents 58% of the sample.

Considering the data presented earlier regarding the working hours and number of employees that carry out overtime, it appears that car pooling could be a possible more sustainable solution to the private car for the employees of the BIZ. The geographical dispersal of the employees could present an obstacle, however, the car pooling could only be carried out for part of the journey and not for the entire home-work trip. It is, however, necessary that a system for organising the car pooling groups is made available to the employees.

Graph 27: Employees Willing to Switch to Car Pooling
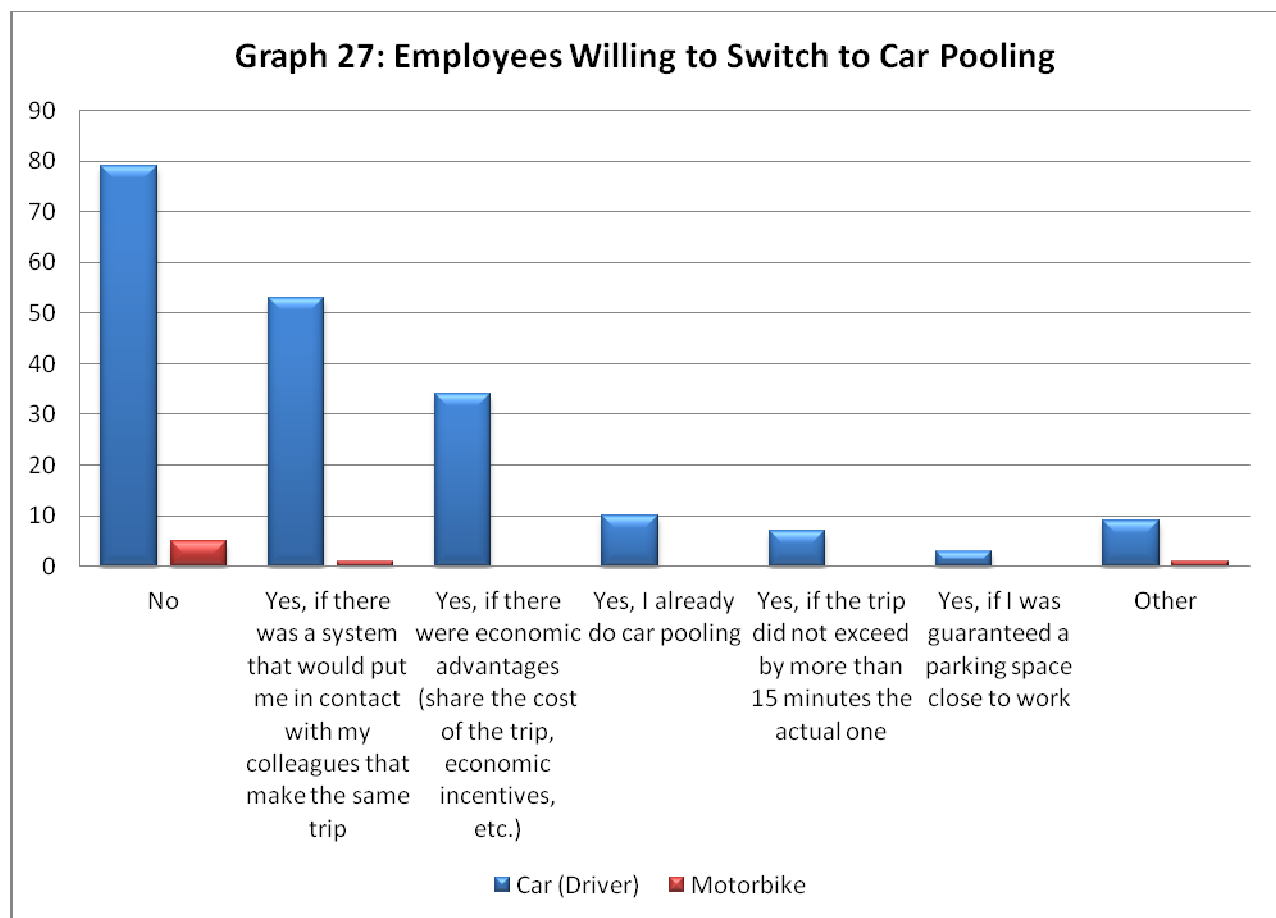
Finally, cycling appears to be the least popular mobility solution among the employees that use their car for the home-work trip. Almost 60% of them declared that are not willing to switch to cycling. Among the 36% that are willing to switch to cycling the majority considers necessary the presence of more and safer bikes lanes.

Graph 28: Employees Willing to Switch to Cycling