Results and Assessment of the Pilot Study

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Lucia Martincigh
Luca Urbani

Dipartimento di
PROGETTAZIONE E STUDIO DELL'ARCHITETTURA
P.zza della Repubblica, 10 – 00185 Roma – tel. +39.06.57067024/5 fax 06. 57067940
e.mail: martinci@uniroma3.it

FACTUM OHG, Verkehrs- und Sozialanalysen ● Ralf Risser ● Austria
Swedish National Road and Transport Research Institute ● Sonja Forward ● Sweden
University of Groningen, Department of Psychology ● Linda Steg ● The Netherlands
Di.P.S.A. – UNIROMATRE ● Lucia Martincigh ● Italy
Centrum Dopravního Výzkumu – Transport Research Centre ● Karel Schmeidler ● Czech Republic

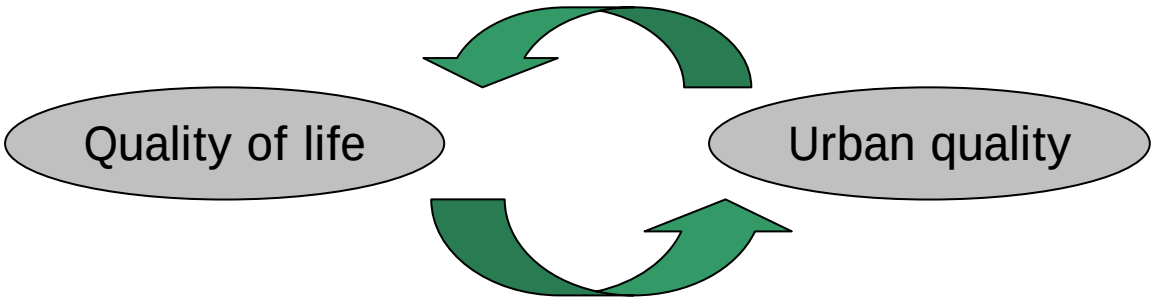
Premise

Various workpackages of ASI research took care of outlining Quality of Life related to mobility aspects since its definition is one of the ASI goals. The approach varied from the analysis of literature and researches summarised in the "State of the Art" to the results of the Qualitative Interviews , made to experts of LUTR cities, summarised in the Assessment of Life quality aspects and their consideration in practical work. Variables, criteria and parameters for the assessment of Life Quality, focused on the area of transport and mobility, from different perspectives, psychological and social science as well as technical, were reported in the former – Procedures actually applied for assessing Life Quality, problems detected and improvements wished by users, difference between users' and experts' perspective, difficulties in implementing appropriate solutions were reported in the latter. All the results of these working steps were discussed at an international workshop; they constitute a reference background for devising a toolbox apt to make possible assessments of Life Quality in connection with mobility and transport implementation become more systematic.

CHAP 1 THE THEORETICAL AND METHODOLOGICAL APPROACH

1.1 The relation between Quality of Life and Urban Quality

Quality of Life and Urban Quality have a mutual relation.
URBAN QUALITY is usually defined using a theoretical approach related to the architectural configuration of the urban spaces, to their aesthetical value and to their capability of signifying to the users.



An exigential approach to the design considers Urban Quality from two different points of view: the user's one, with his expectations, giving rise to the demand and the urban environment's one, with its propositions, giving rise to the offer.
The more these two perspectives match, the more an overall quality is reached

When the requirements of the users are not met by the existing environment, problems arise that have to be solved.
Technical and non technical solutions can be devised to offer the required performances but the choice of the measures has to be made not only on the base of the satisfaction of the user's demand, but also on the possibility of complying with the existing environment and, in the case at hand in which the focus is on transport modes, of being apt to meet sustainable mobility requirements.

The theoretical approach

Considering this premise and the main aim of the toolbox is to evaluate the influence of a mobility policy, strategy, plan or design on the quality of life of the involved users, two are the considerations at the basis of the successive choices related to its contents and procedures:

* Mobility assessment in relation to life quality is characterized by *objective* and *subjective* aspects.

The *objective aspects* can be assessed without a critical participation of the users, they are strictly connected to the environment in which people move, to its structure and organization, to the transport means and facilities at disposal. The subjective aspects are strictly connected to the perception that people have of the surrounding urban environment, and therefore of the objective reality, they are also connected to the behaviours, that people assume, more or less conditioned by such environment. The objective assessments are made by experts using scientific and technical procedures; they represent the typical approach that has been used for long time. People's perception behaviour to choices can be understood with the help of questionnaires, interviews, interactive workshops and so on, that help to detect the presence of perceived problems and wishes and their importance for the people. These are to a large degree social sciences' procedures, that in principle produce subjective assessments related to people's behaviours, problems and wishes.

The *subjective approach* is very important since it represents the quality of life that is perceived by the people moving in the urban environment and that eventually has to be improved. On the other hand technicians can mainly act on aspects of the real world, it is therefore important to have the possibility of correcting the objective parameters elaborated by experts by considering appropriately the possible relationships with the subjective perception of the users.

* The categories to be involved are of two types:

the experts are a multifaceted class; the categories that have to be focused on seem to be four: politicians and administrators, scientists and practitioners. The groups of users are even more diverse (or end users if we speak of the evaluation of a plan, design or action); therefore, different age groups, genders, choices of modes and specific needs are aspects that characterize the target groups that the research is interested in, and that can be possible variables for selection.

It would be appropriate to evaluate all the steps of the process for a maximum guarantee; experts and users have to be involved at the various steps. These are:

1. *the devising of a mobility design*
   (Is it taking into account people's opinions and wishes? Are the right indicators considered? Are they considered in the right importance ranking? Is the degree of change in agreement with the speed of adaptation of the dwellers?);

2. *the implementation of such a design*
   (Is the building site organized in such a way that life quality for the dwellers does not deteriorate? Is the time schedule fixed on the basis of people's capacity of bearing annoying conditions during the implementation phase?);
3. *the monitoring of the implementation*
   (Are the measures restrictive for the users? Are the measures effective? Is life quality improved for all, or for some? With respect to what aspects?);
4. *validation and/or revision of the measure.*

If we want to devise a toolbox that is not too time consuming and of agile use, it is better to reduce the number of times that it has to be used. It has been then decided to propose its use, and to test it, only in two of the listed steps, the ones that are considered basic: 1 and 3.

* The aspects that influence mobility assessments are many.

  It is of great importance then to choose *what* to measure or to enquire, *how* and *where* to measure or enquire, and finally *how* to analyse and how to interrelate the different results that are collected.

* The analyses are above all local.

  As mobility assessment is bound to the environment's characteristics, to people's perception of these characteristics and to their behaviour (that to some degree will be the results of preconditions), the analyses in the toolbox will have to be of local character, to start with. They can be different from place to place and from case to case. However, in the course of communication with local target groups, it will also be possible to identify items that can be more generally used for certain types of situations at different sites, and some aspects can be discussed therefore at a global level.

From the Qualitative Interviews some aspects seemed to assume a higher importance, they were:

Related to the possibility of choice in terms of diversification of the mobility facilities, tailored on users' needs, Intermodality and Accessibility.
The possibility of living in a quiet environment in term of absence of traffic congestions that are cause of stress. Finally a strategic aspect: possibility to receive answers in a short length of time.

A synthesis work has been done by grouping similar indicators that sometime were expressed in different ways; by grouping/summarising sparse indicators in the form of higher-level categories and by ranking the indicators considering their frequency, above all in the interviews. The result of this work has been a "cleaned" list of performance classes or dimensions

* **Accessibility (transport related aspects) (At)**
* **Accessibility (infrastructure related aspects) (Ai)**
* **Cleanliness (C)**
* **Wellbeing (W)**
* **Security (Se)**
* **Safety (Sa)**
* **Aesthetics (Ae)**
* **Services (Sr)**
* **Social Activities (So)**

CHAP 2 THE ENQUIRY FIELDS

The list of main fields of preconditions, that are seen to be related to the Quality of Life and that constitute, the enquiry fields to be faced in the Toolbox was defined on the basis of this list.
In each enquiry field, various dimensions are taken into consideration; the pertaining indicators can be grouped to form various interrelated scenarios, that all together depict the mobility environment. The enquiry fields contain inside all the already listed indicators (p.3), that are here indicated with their code, and are more specifically articulated. Each scenario depicts all the aspects that are useful, for example, to make the environment comfortable. The aim is then to use a holistic approach to the solution of the problem, therefore indicators proper of different dimensions, or requirement/performance classes, are present in one enquiry field/scenario. Each one of them will have a different relevance inside the toolbox depending on the type of strategy, plan or design that will be analyzed. The suggested enquiry fields are eight:

AN ACCESSIBLE ENVIRONMENT (At, Ai, Sa)

This field concerns accessibility related aspects that are connected with transport means and transport network use, such as vehicles accessibility, bus stops location, transport network efficiency and so on. It concerns also infrastructure related accessibility; this means the possibility of physically moving around without obstacles, and without too much effort, mainly as a pedestrian. Main reference indicator: Accessibility (transport related aspects), Accessibility (infrastructure related aspects).

A CLEAN ENVIRONMENT (C, Ae, W)

Ordinary public space maintenance activity, garbage management and collection are examples of aspects considered in this field. Main reference indicator: Cleanliness.

A COMFORTABLE ENVIRONMENT (W, Sa, Ai)

Conditions related to pollution as well as to noise and vibrations are considered here, together with other characteristics that enhance the feeling of comfort and easiness of use. Main reference indicator: Wellbeing.

A SECURE ENVIRONMENT (Se, W, Sr, So)

This field concerns personal security aspects (such as having to fear or not snatching, sexual harassments, etc.). It is related very much to lighting and presence of activities. Main reference indicator: Security.

A SAFE ENVIRONMENT (Sa, W)

This field concerns safety aspects related to the use of the infrastructure, such as accidents with cars (very often related to traffic speed and flow). Main reference indicator: Safety.

AN APPEALING ENVIRONMENT (Ae, W, Ai)

This field concerns the configuration of the outdoor public spaces and their capability of appeal. Parameters that can be considered are many, only some have been chosen: those that are related to the morphology of the itinerary and to its characteristics. Main reference indicator: Aesthetics.

A BUSY ENVIRONMENT (Sr, Se, So)

This field concerns the presence of various types of facilities (public services, private facilities, shops, equipment etc.) that make a place full of activity. Main reference indicator: Services.

A LIVELY ENVIRONMENT (So, W, Ae)

This field concerns all the activities that people perform in the outdoor public spaces by social exchange and relations with other people. Spaces and equipment needed for are therefore considered here. Main reference indicator: Social Activities.

1.3 The reference background

What to measure or to enquire, with the toolbox has been decided considering the achievements of the various research work packages already concluded, and in particular the ASI-State of the Art, as made in WP1, and to the results of the interviews with experts (WP3 and WP4). Also the results of the Brno Workshop debate and the Rome Consortium Meeting indications have been useful. The actual background offers in depth studies of Quality of Life a general level, but Quality of Life is not deepened enough at mobility level and indicators are not enough focused on. A set of problems and a set of related indicators was deduced as a basis on which to work for the definition of the fields to analyse, under the objective and subjective points of view, in the tool box to be tested in the Pilot Study.

The indicators coming out from the State of the Art and the ones coming out from the interviews some times overlap completely. In other cases they refer to similar fields, although they are not identical. Some of the indicators have been referred to by a large number of interviewees, others have only been mentioned by few or even only by one. Some of the indicators were very much related to mobility, some were of a very general character.

CHAP 3. ENQUIRY METHODS

3.1 Objective parameters to be measured and evaluated

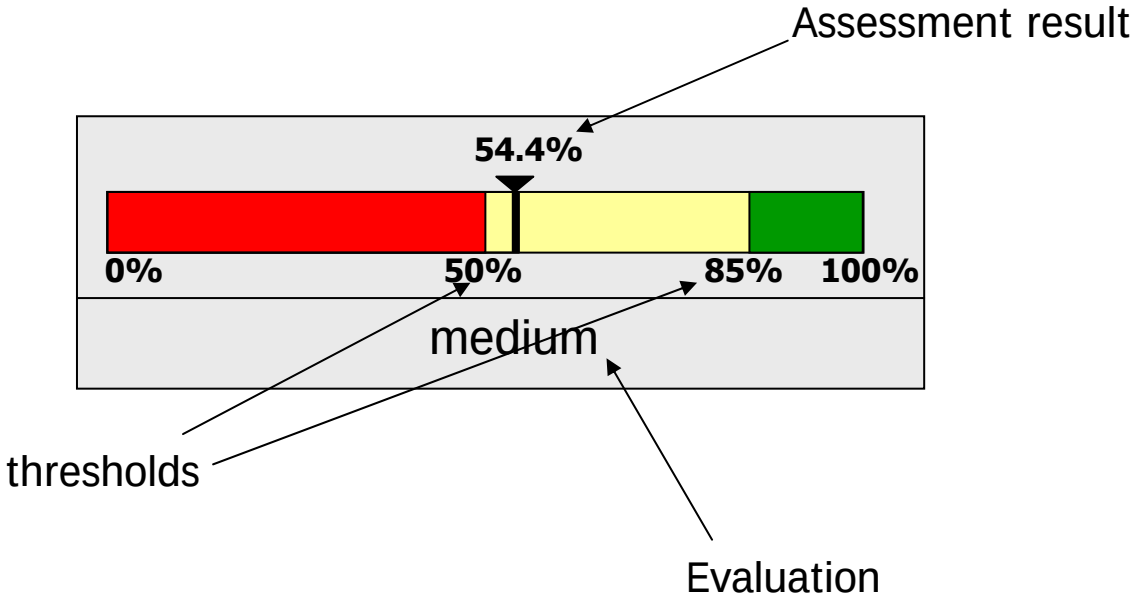
Evaluation of the objective measurement

Most of the characteristics of the environment can be scientifically analysed directly by means of data collection, of surveys, of counting, of measurements, of weighed evaluations and so on, indirect evaluations based on users' behaviour observations and short interviews on the spot are also possible and in some cases advisable; they are objective assessments that can be made by experts and that provide parameters to refer to for the design of the urban mobility environment. The way in which these operations are conducted, and most of all evaluated, show anyway the experts' point of view.
Each indicator will be enquired by data collection and analysis activities.
As far as possible parameters/indicators also need to be weighed, and not only to be detected. Giving such weights will enhance comparability between different sites.

- *Objective parameters are evaluated according different criteria depending on their characteristics. Criteria return a "performance" or "quality" indicator that could be "poor", "average", and "good".*
- *Analysis that return percentages, density, or absolute values may be evaluated simply comparing the result with reference values: threshold values.*
- *Threshold values are stated, as first draft, by the Uniroma3 research group, on the basis of literature, experiences achieved during the work within other research projects and common sense.*
- *Threshold values are not at hand yet for many of these issues. They need of course to be tuned at first by a wide research at international level and then ideally with the aid of the data stored in the data bank. (See chapter..)*
- *We suggest to define the thresholds using the levels of "bench mark" (usual practice), "best practice" and "excellence", to give a range value instead of a precise numerical value.*

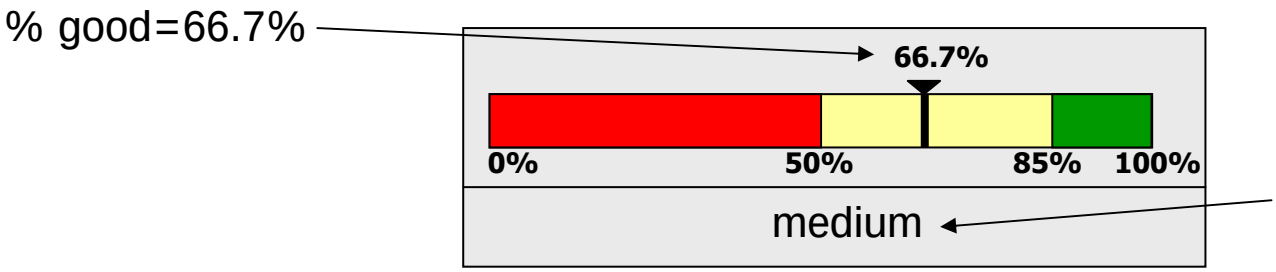
Simple threshold criterion

It is suitable for indicators that returns percentage, density and in some cases absolute values. It is based on the comparison of the obtained value with 1 or more thresholds (2 for having three quality levels as output).
Thresholds may, of course, vary among the different indicators, and maybe also according to different local condition



Two level criterion

It is suitable when it is important the "spreading" of something among the whole area. The area has to be divided in subzones to be studied separately (using simple threshold criteria). Then the percentage of satisfying subzones is evaluated again giving the overall quality level.



3.2 Subjective perception and evaluation of objective parameters

As already mentioned, in the toolbox, objective parameters, and the perception of them by the end users, are considered. For a long period psychosocial research worked assuming that social behaviour was due to individual attitudes and, above all, that it was coherent with them.
According to this theory, positive attitudes toward an object produce positive behaviour and vice versa.

Positive attitudes ⟹ Positive behaviour

i.e.

Positive Attitudes = Positive behaviour

But in 1969, Wicker, in a literature review showed that the mean correlation between attitude and behaviour was usually very low (about 0,15).

Actually, when we talk about concrete implementations, we think that it is more correct to use satisfaction parameter, their value expressed on scales or in similar ways. We do not draw any direct conclusion concerning behaviour then but, to start with, we can state that people are more or less happy with certain conditions. How the degree of satisfaction correlates with further behaviour is then object of further research. But the main assumption in ASI, developed on basis of communication theory (Watzlawik et al. 1988), is that if society provides preconditions that satisfy the citizens, their preparedness to co-operate will improve. This means that, whenever society needs the citizens' co-operation in order to reach, e.g., sustainability goals, the chance to get such co-operation will be better under the precondition of the satisfaction with what society usually provides for the citizens (see ASI project proposal).

Two hypotheses are presented for the methods to collect the subjective data: one for finding out individual opinions (for instance by carrying out interviews) and one for finding out collective shared ideas (for instance in the frame of workshops, focus group interviews, round-table discussions, etc.). The first hypothesis has been considered as more appropriate to the case at hand, and therefore a questionnaire to be used for individual interviews has been developed. Both the experts and users must be involved in this process in order to express their opinions.

Subjective questions that could point out the satisfaction with the actual situation, expressed both by the users and by the experts were considered. Furthermore, we added a value that could define the strength of the answers (= the weight).

We could define two degrees to analyse, assuming that:

Each **enquiry field**	*is characterized by*	several objective parameters
Each **objective parameter**	*fosters*	a certain satisfaction level
Each **satisfaction level**	*has*	a value

- For measuring the *Satisfaction* with each parameter, we would ask to the dwellers:

  Are you satisfied with this "objective parameter" in this area?

- For measuring the *Importance* attributed to each parameter, we would ask to the dwellers:

How important is this "objective parameter" for you?

The answers will be given by using a Likert Scale (5 points):

□ **very important** □ □ **medium** □ □ **no important**

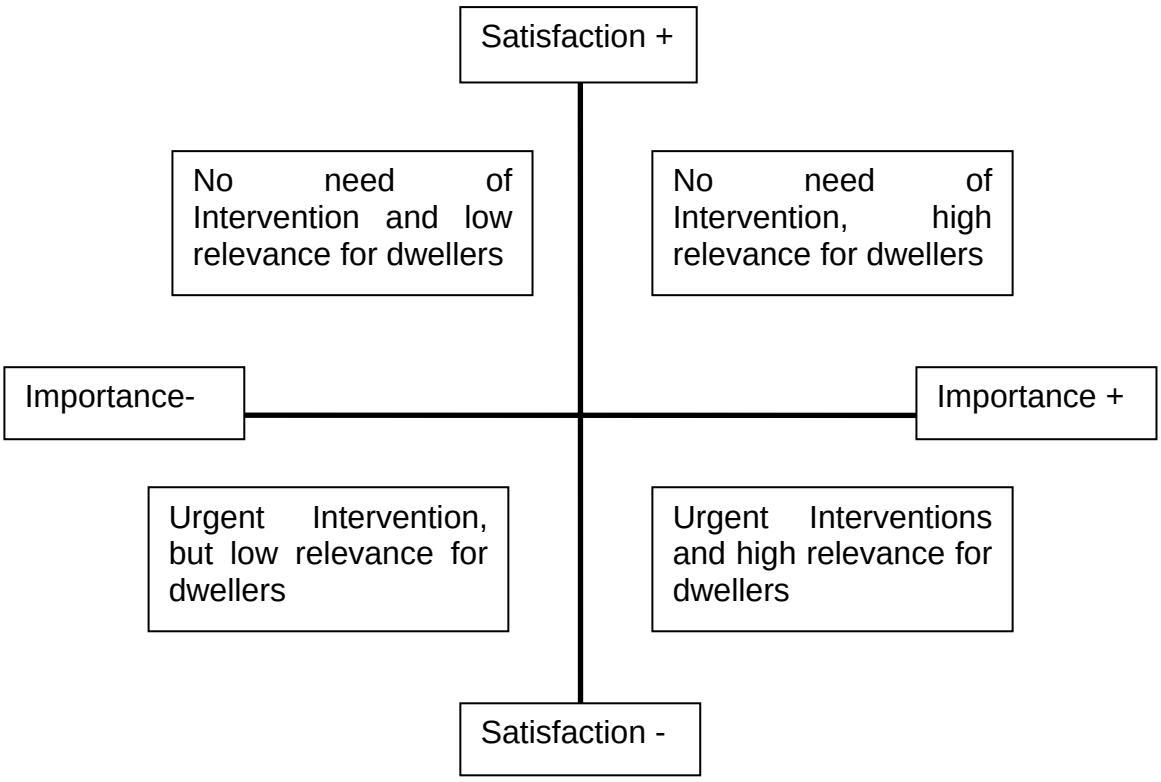
Thinking about a graphic layout of the data, we could organize the results as in a Carthesian Plane (see below), taking into consideration two different variables at the same time:

1. satisfaction level

2. importance level

This can help to understand at a first glance in which quadrant is more important to act, and which are the priorities of action.

The information collected during every application of the toolbox is precious because it can be the basis of a continuous progressive tuning process of the instrument. In particular it can help in removing redundant or useless parts from the data collection procedures, and in giving news on the effectiveness of possible measures and changes. In the first applications though, all the defined parameters will be kept, without any exclusion *a priori*.
The first application in the Pilot Study will be used to restate the toolbox, both as surveys' and questions' contents and articulation. The Pilot Study will help also to define the best guidelines for its application.



CHAP4 THE ENQUIRY INSTRUMENTS

4.1 The structure

For each enquiry field, some more important parameters have been proposed for the objective assessment, and some related questions for the subjective assessment. The relation between the two approaches is very important, because only in this way it is possible to compare the results of the experts' survey (= "objective") and of the users' opinions (= "subjective"). The survey, subjective and objective, must be strongly rooted in the local conditions.
In defining the final toolbox, the attempt is to keep small the number of operations to be made, keeping in mind the goal to obtain an instrument easy to be used by local authorities. The idea is also to leave free the user of the toolbox to choose, or use, those items that seem most appropriate to the type of project that has to be assessed. This would allow reducing the number of items even more. But of course there needs to be background instructions for this, so that no items, that are very important but, for instance, difficult to measure, or irrelevant according to the toolbox users' background and sensibility, are left out.
The proposal for the surveys and summaries that the experts should make for the environment characteristics and for the mobility/transport precondition are outlined some indications to be used by the team which makes survey and some reference values that could be used as thresholds are added. Some more precise ones are reported in the Pilot Project as explanation of the work done.
The section of the toolbox for assessing the subjective viewpoint has to be composed by two different questions on each parameter: **how satisfied one is with the considered aspect** and **how much such aspect is important** for the interviewee. The questions have been organized in a questionnaire; such questionnaire was elaborated taking into account the definition of each parameter. Since the aim is to consider always both the objective and subjective aspect, each question is strictly connected to an enquiry field, as already defined (p.10) The same questionnaire – with minor appropriate adjustments - will be used with experts and users. It contains, besides the specific issues related to the survey, also some general questions for considering the socio-economic status, the demographic variables of our sample and the habit about the use of transport modes. Inside this group also questions on the relation quality of life- mobility are taken the structure of the questionnaire contains also a section specifically dedicated to the type of implementation, to which one or two questions can be target. After the first tests in the Ante Operam Phase of the Pilot Study, the questionnaire has been re-elaborated in some points, in order to improve the comprehension of the interviewee and the elaboration of data, without mistakes due to a different mean given to some item.
The question about safety/security has been specified and divided in two different questions, one related with the traffic accidents and one related to personal security.
It was found useful add, to add also a question about the number of accidents known by the interviewees, and to compare these answers with the real number registered in the objective part of the survey.
Two other questions, about the traffic volume and presence of people, have to be investigated in depth asking the direction of the answers (too much vs. too little).
The questionnaire that was used in the Pilot Project is annexed at the Report (annex1).

The final assessment

Some aspects of the toolbox have not been faced yet: how to interface the objective and subjective data, the experts and the users opinions, and/or the various categories of users; finally how to define who are the end users of the toolbox and then how the indications that come out of the toolbox can be used by such end users. No suggestion has been given yet for the local fields that could be faced besides the global ones. One can assume that it will be easier to answer these questions and to make decisions when the exploration phase at the pilot site has started.

Enquiry fields

Accessibility (transport related aspects) (At)

This field concerns accessibility related aspects that are connected with transport means and transport network use, such as vehicles accessibility, bus stops location, transport network efficiency and so on.

Accessibility (infrastructure related aspects) (Ai)

Infrastructure related accessibility means the possibility of physically moving around (without obstacles), mainly as a pedestrian.

Cleanliness (C)

Ordinary public space maintenance activity, garbage management and collection are examples of aspect considered in this field.

Pollution (P)

Motorized transport implicates important externalities: air pollution as well as noise and vibration are here considered.

Security (Se)

This field concern personal security aspects (such as snatching, sexual harassments, etc.)

Safety (Sa)

This field concerns safety aspects that concern infrastructure use (such as incidents with cars)

Aesthetics (Ae)

This field concerns the configuration of the outdoor public spaces and their capability of appeal

Services (Sr)

This fields concerns the presence of various types of facilities (public services, private facilities, shops, equipment, etc.)

Social Activities (So)

This fields concerns all the activities that people performed in the out-door public spaces of exchange and relation whit other people

4.2 The articulation of the enquiry fields

Each enquiry field has been articulated to guide in a precise way the survey indicating the suggested lists of parameters that should be taken into consideration. To each one of them corresponds a question for finding out the correspondent subjective assessment. In some case they are related only to the directs observation of the people's behaviour, and not to questions.

An accessible environment:

% of residents with an access to the public transport network nearer than 500m [At]

*This parameter gives a rough indication concerning availability of the public transport network. Evaluation has to be made with the aid of **maps**.* *The number of residents, if not otherwise available can be estimated on the basis of the number of flats, or eventually, on the surface of the block and the number of floors.* *The measurement can be refined considering the efficiency of the bus stops, for instance by including number of buses/day.*	*1. Are you satisfied with the vicinity of the public transport network? (Do you think it is near enough?) (yes/no)* *2. How important is this aspect for you? (Likert Scale 5 points)*

% of access points to the public transport network with total accessibility [Ai]

*These parameters give an indication of the accessibility of the stops (in particular of the platform) for every user. Evaluation have to be done with **field surveys**. If necessary, different classes of users aspects to consider during the survey may be:* *1. Crossing points (does a legal path to the platform exist from all the directions?)* *2. Steps, barriers, narrow passages (does a continuous path exist from all the directions?)* *3. Quality of the surface (does a path with a surface suitable to all users exist from all the directions?).*	*1. Are you satisfied with the accessibility of bus stops (thinking about elements like steps, barriers, narrow passages and quality of the surface)(yes/no)* *2. How important is this aspect for you? (Likert Scale 5 points)*

% of public transport means with total accessibility [At]

This parameter refers to the possibility of getting on/of public transport means. *This parameter refers to the possibility of getting on/off public transport means. Accessibility of the mean depends on the combination of its own characteristics with those of the platform. As a consequence, proper evaluation can be tricky. As a guideline the percentage of accessible means can be at first evaluated for every bus stop (percentage of accessible bus/day) and then the average for the entire zone can be computed. The evaluation has to be made with* ***field surveys in order to gain information on the public transport fleet characteristics.***	1. *Are you satisfied with the accessiility of the public transport means? (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

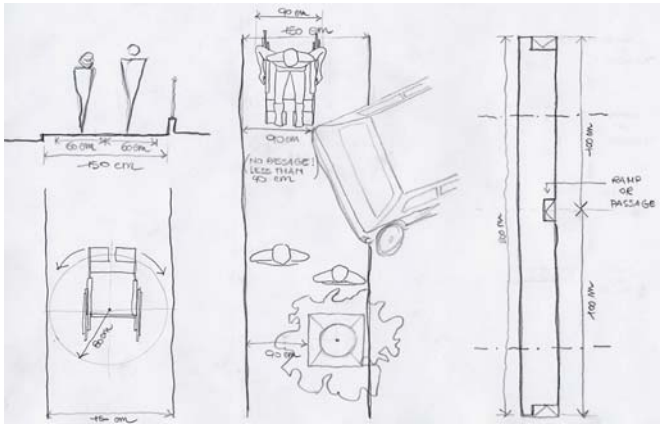
% of sidewalks with total accessibility [Ai, Sa]

These parameters give indications on the "basic" characteristics of sidewalks (walkability). Evaluation can be made with the help of a ***survey*** *taking in to account the aspects* 2 and 3 *of "% of access points to public transport with total accessibility". The last aspect is also related to safety of use (for example: falling down as a pedestrian):* *1. Steps, barriers, narrow passages (does a continuous path exist?)* *2. Quality of the surface (does a path with a surface suitable to all users exist from all directions?)*	1. *Are you satisfied with the accessibility of sidewalks in this area? (Thinking about elements like steps, barriers, narrow passages and quality of the surface) (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

% of pedestrians using sidewalks (in comparison with total longitudinal flow) [Sa,Ai]

This parameter indicates the consistency of provision and design of sidewalks. The evaluation can be made with the help of observations and countings of pedestrians in a street or on a street section. *Illegal behaviour may be caused by bad accessibility and results in unsafe conditions.*

How to recognize an accessible sidewalk



(Instruction for the survey)

A sidewalk is accessible if:

- it has a minimum width of 1.50 m along the 60% of its length
- it does not have any passage narrower than 0.90 m
- it has an access point (i.e. ramp) at the two ends and at least every 100 m
- it has an even surface

Sidewalk accessibility Reference Dimension

	Finland	France	D	Italy	Norway	CH	Slovenia	DK
Min. absolute	1,5 m	1,4 m	1,5 m	1,5 m	2,0 m	2,0 m	1,5-1,6 m	1,5 m
Normal	1,5 - 3,0 m	2,0 – 2,5 m	2,5 m	2,0 m	2,0 - 4,0 m	2,5 m		2,5 m
Main streets	2,5 – 4,0 m				4,0 – 5,0 m			

Cost C6 State of the Art Report

% of pedestrian crossings with total accessibility [Ai]

*These parameters give indication on the "basic" characteristics of crossing points. The most important aspect that must be considered is the **continuity of the paths**: steps, barriers. etc Evaluation can be made by direct **survey** taking in to account the aspects:*	1. *Are you satisfied with the crossing points? (thinking about the continuity of the paths and their accessibility) (yes/no)* 2. *How important is this aspect for you?* *(Likert Scale 5 points)*

in

(instruction for the survey)

A crossing point is accessible if:

- it has no (or nearly no) step
- it has no passage narrower than 0,9 m
- it is reachable (no narrow passage in the nearby)
- it is ruled by "priority to pedestrian" signs or by general traffic norm
- it is recognizable by blind people (they should be at least able of detecting the end of the sidewalk)
- if median refuges exist, they should have enough space to allow people using a wheelchair, or pushing with a pram, to turn back (minimum 1.5 m)

Travel time/distance ratio [At]

Long distance accessibility needs the aid of transport means possibly provided by public transport service. Bad service results in "time" barriers that probably have as strong an influence as physical ones. To evaluate the efficiency of public transport, interviews with people arriving at the stop can be done; information is needed about travel starting point (distance can be calculated by using the map and simply considering the "bee-line") and travel time. This kind of information is especially useful in order to evaluate results of interventions (before/after analysis).	1. *Are you satisfied with the time you need for reaching your destination (thinking about one of your daily trips)? (yes/no)* 2. *How important is this aspect for you?* *(Likert Scale 5 points)*

A safe environment:

Number of accidents [Sa]

This parameter gives a rough indication of the safety, and can highlight critical points (black spots). Data may be available from police stations or other public authorities. *Note: pedestrian fatalities are fortunately relatively rare. As a consequence it is often difficult to have a realistic statistic base. Moreover the access to reliable data is often not easy. Overall data for parts of the city, or whole towns and villages, have to be used as rough approaches.*	1. *Are you satisfied with the feeling of safety you have at present in this area? (yes/no)* 2. *How important is this aspect for you?* *(Likert Scale 5 points)*

% of streets in the network(considering their length) with 30 km/h (or lower) speed limit [Sa,P]

This parameter gives a rough idea of the physical quality of vehicle traffic flows, assuming that speed limits have a correspondence with actual vehicular speed. *Data can be improved by making.*	1. *Are you satisfied with the actual traffic speed in this area? (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

% of streets in the network (considering their length) with 30 km/h (or lower) V85 [Sa,P]

Speed is always connected with risk, and risk increases more than proportionally for speeds higher than 30 km/h. ***direct speed measurements****, if affordable, can be therefore useful. Reliable evaluation can be done considering the speed that is not exceeded by the 85% of non conditioned or "free" vehicles.*	1. *Are you satisfied with the respect of speed limits by private motorvehicles in this area? (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

A comfortable environment:

% of pedestrians using legal crossings (in comparison with the total crossing flow) [Sa,Ai]

This parameter indicates the consistency of crossing points location and design. *The evaluation can be made with observations and countings of crossing pedestrians in a street or on a street section*	

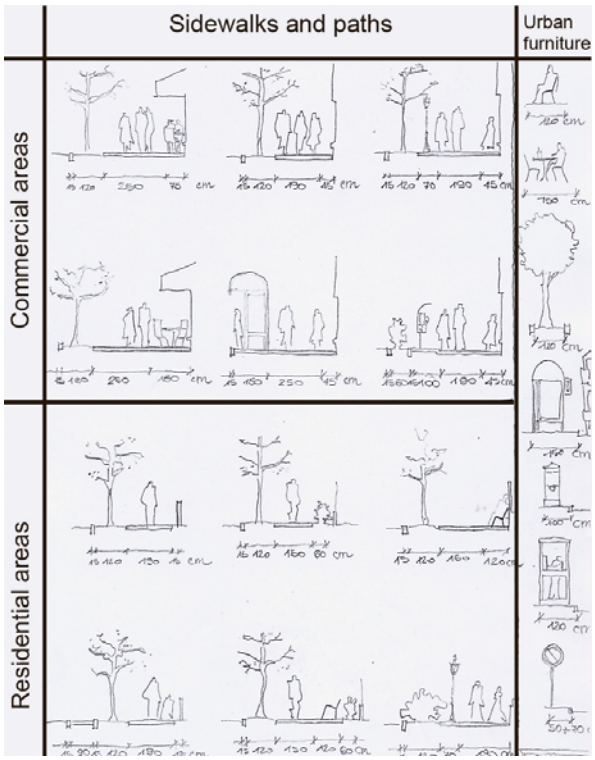
% of traffic lights with pedestrian red phase longer than x sec [Sa,Ai]

Too long red phases may be experienced by pedestrians as barriers, additionally and consequently, they may provoke illegal and dangerous behaviours.	
A too short yellow phase does not allow slow pedestrians to complete a crossing manoeuvre begun during the green phase, this may lead to very unsafe conditions. This may lead to very unsafe condition, and at the same time it will cause considerable stress (= reduce comfort)	1. *Are you satisfied with the length of the yellow phase of traffic light? (yes/not)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

% of streets with sidewalks wider than 3m Ai

This parameter gives an indication about the amount of space dedicated to pedestrians. Possibly a ratio that refers to the total width of the street may also be considered.	1. *Are you satisfied with the width of the sidewalks in this area? (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

Sidewalk width Reference Dimension



Portland pedestrian street design guidebook

% of streets with open-air noise > than 55 dBA [W]

This parameter gives an indication about the acoustic condition of a street (which is mainly conditioned by traffic flows). It requires special equipment to be measured and can be therefore expensive.	1. *Are you satisfied with the acoustic conditions in this area (is there much noise, is it loud?)? (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

The World Health Organization (WHO), has published a series of recommended maximum sound levels applicable to various situations. Some of the WHO criteria are listed in Table 1 (Berglund, B and Lindvall, T, 1995).

Descriptor	Limit	Situation or effect
LAeq,24	70 dBA	Negligible risk of hearing impairment
LAeq,8	75 dBA	Negligible risk of hearing impairment
LAeq	30 dBA	Excellent speech intelligibility
LAeq	55 dBA	Fairly good speech intelligibility
LAeq	30 dBA	No sleep disturbance (inside bedroom)
LAmax	45 dBA	No sleep disturbance (peaks inside bedroom)
LAeq	45 dBA	No sleep disturbance (outside bedroom)
LAeq,4	90 dBA	Discotheques and other ballrooms
LA	80 dBA	Toys (at the position of a child's ear)
LC,peak	130 dBC	Toys (at the position of a child's ear)
LAeq	35 dBA	Hospital room
LAmax	45 dBA	Hospital room (peaks)
LAeq	55 dBA	Residential areas, outdoors, daytime
LAeq	45 dBA	Residential areas, outdoors, night time

Noise levels recommended by the World Health Organization

The italian law limits are:

LAeq: 55 dBA II°class; residential area

LAeq: 60 dBA III° class; mixed use area

% of streets with in-house noise > than 65 dBA

This parameter gives an indication about the impact of traffic and transport on people at home. It requires special equipment to be measured and can be therefore expensive.	1. *If you live in this area, are you satisfied with the in-house acoustic conditions (e.g., how is noise caused by traffic?)? (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

Traffic flow volume and composition [W]

This parameter gives indirect information on vehicular impact on streets and houses. Data can be collected as total flow (all lanes all directions) or as flow per lane. Traffic volumes can be computed on daily basis (Annual Average Daily Traffic) or on hour basis (vehic./h). In this case information should be related to different times of the day. In order to better estimate traffic externalities, flow composition can be recorded as well. Possible vehicle categories are: cars/small vans, lorries, buses (non electrical), trams, electrical buses, motorcycles.	1. *Are you satisfied with the traffic volume in this area? (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

A secure environment:

Number of lights/square meter [W]

This parameter can give a rough indication on lighting conditions and can be simply evaluated with a ***survey****.*	1 *Are you satisfied with the number of street lights in this area? (yes/no)* 2 *How important is this aspect for you? (Likert Scale 5 points)*

Amount of light lumen/square meter [Se W]

*This parameter can give an indication on lighting conditions and can be evaluated with a **survey** and obtaining the **technical specification** of the used lamps.*	1. *Are you satisfied with the quality of the street lights in this area? (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

Number of open activities/m along the street (day/night) [Se,Sr,So]

Activities at ground floor can enhance safety feeling and conditions. Separate counting for day and night, related to the length of the street, may be used as a parameter.	1. *Are you satisfied with the number of activities open at night in this area? (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

Number of "eyes and ears" along the street (day/night) [Se, Sr]

*The presence of people enhances the security level, such as in streets that can be "seen" and heard by many people through the windows. Rough **counting** of "lively" windows (i.e. shops, offices during the day, private houses during the night) with a direct view on the street may be an effective indicator.*	1. *Are you satisfied with the presence of people living and working in this area? (yes/no)* 2. *Are you satisfied of your actual safety?* 3. *How important is this aspect for you? (Likert Scale 5 points)*

A clean environment:

% of overfilled garbage bins (just before the garbage collection) [C,Ae,W]

This parameter can give a measure of the efficiency of the garbage collection system. (it does not apply to garbage collection systems where bins do not exist and garbage is disposed at gathering point, according to a time table and collected just after, i.e. Zurich city centre)	1. *Are you satisfied with the efficiency of the garbage collection system in this area? (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

Number of wastes left on ground/m [C,Ae]

This parameter can be used to have an idea of the cleanliness of the environment. Wastes can be classified (and separately counted) in three categories: small (i.e. cigarettes), medium (paper, bottles, etc.), large (house appliances, mattresses, etc.).	1. *Are you satisfied with the cleanliness of the streets in this area? (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

An appealing environment:

Number of interesting views present of the path [Ae]

This parameter gives us information about the number of interesting views present on the path. Such attribute increase he level of appeal of the itinerary, making it seem shorter and easier to walk.	1. *Are you satisfied with the views present in this area? (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

Number of green elements per meter or % of green area per square meter [Ae W]

This parameter gives us information about the green elements in the area. This parameter gives us information about the green elements in the area. The presence of green besides increasing the level of appeal of a path, can improve also its comfort in summer and attract people to walk more, not only for duty but also for relax.	1. *Are you satisfied with the presence of green elements in this area? (trees, flowers etc.) (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

Number of landmarks and/or points of reference per meter [Ae Ai]

This parameter give us information about what people consider as point of reference in the case study area. The presence of monuments , landmarks, meeting points improve the attractiveness of a space or path, but increase also its accessibility thanks to their orientation value.	1. *Are you satisfied with the presence of green elements in this area? (trees, flowers etc.) (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

% of the rectilinear length of the path [Ae]

This parameter gives us information on how the path crosses the case study area; if it runs in a straight line or if it winds. Rectilinear path are not appealing for who moves on foot and are monotonous.	1. Are you satisfied with the kind of path running in a straight line or winding? *(yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

A busy environment:

Number of services per sub-areas (opening times : day/night) (Sr, Se)

This parameter has to be used together with the surveying of the opening and closing time (day and night) so to have a measure of the business degree.	1. *Are you satisfied with the number of services (i.e. post office, pharmacy, etc.) in this area? (yes/no)* 2. *Are you satisfied with the opening times of the services? (yes/no)* 3. *How important is this aspect for you? (Likert Scale 5 points)*

Number of shops per type: daily, weekly, per sub-areas, and opening times (day/night) (Sr, Se)

This parameter has to be used together with the surveying of the opening and closing time (day and night) so to have a measure of the activity degree.	1. *Are you satisfied with the number of shops in this area? (yes/no)* 2. *Are you satisfied with their opening times? (yes/no)* 3. *How important is this aspect for you? (Likert Scale 5 points)*

Number of facilities per sub-areas : bar, coffee shop, restaurants, kiosks, etc. (opening times: day/night) (S, Se, So)

This parameter gives us information about the number of bar, coffee shop, restaurants, kiosks, etc. in the case study area and has to be used together with the surveying of the opening and closing time (day and night).	1. *Are you satisfied with the number of facilities (bar, coffee shop, restaurants, kiosks, etc.) in this area? (yes/no)* 2. *Are you satisfied with their opening times? (yes/no)* 3. *How important is this aspect for you? (Likert Scale 5 points)*

A lively environment:

Number of proper and improper seats (benches, stools, sitting walls, balausters, rails, columns) (So, W)

This parameter gives us information about the number of seats and their usability in the case study area. Presence of appropriate seats, well located and related, can help very much the possibility of social relation.	1. *Are you satisfied with the number of seats (benches, stools, sitting walls, balustrades, rails, columns) in this area? (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

Number of squares, widenings (So, Ae)

This parameter gives us information about the number of squares and widenings in the case study area. The presence of appropriate spaces, where people can meet and can make free activities, makes a district full of liveliness.	1. *Are you satisfied with the number of squares, widenings in this area? (yes/no)* 3. *How important is this aspect for you? (Likert Scale 5 points)*

Number of elements of urban furniture per square meter

This parameter give us information about the type and quality of urban furniture in the case study area. The presence of various equipment improves the possibility of performing various activities in a good way.	1. *Are you satisfied with the urban furniture in this area? (tables, pooper-scooper, litterbins, toilets, etc.). (yes/no)* 2. *How important is this aspect for you? (Likert Scale 5 points)*

Number of elements of urban furniture per square meter

Number of elements of urban traffic signs and billboard / 100m along	1. *Are you satisfied with the road signals in this area? (yes/no)* 2. *Are you satisfied about the bill board in this area? (yes/no)* 3. *How important is this aspect for you? (Likert Scale 5 points)*

CHAP 5 GUIDELINES FOR USING THE TOOLBOX

5.1 The phases of application

As explained before, the toolbox is articulated in two parts: one organized for analysing the objective parameters and one for analysing the subjective aspects of these parameters. Moreover such enquiry is run at different steps of the design process in the actual existing situation, before any implementation, and in the situation that it forms after the implementation. Between these two steps that are enquired using the toolbox, there is a very important step: the implementation of the strategy, plan or design. The time that has to pass between the first and the second phase it changes depending on the type of implementation. It has to be long enough to let people use it and get used to it, so that they slowly perceive possible changes in their way of living, that improve it, as it is wished, or worsen it.

The first phase is the "Ante operam", that is an enquire of the situation before the new plan or design is realized. It studies the objective characteristics by the survey, and the subjective perception of such characteristics by the questionnaire. The third is the "Post operam", that is an enquire of the new situation, that exists after the implementation. It registers the objective characteristics by the survey, and the subjective perception of the changes due to such implementation, by the questionnaire.

The comparison among the Ante and Post operam phases points out the actual changes that occurred on the site and above all if and how these changes have affected, in some way, the general perception of the situation and thence the quality of life of the users.

1st phase: Evaluation of Ante operam

1. Interviewing the dwellers on their subjective point of view.
   Expected result: definition of the dwellers point of view.
2. Interviewing the experts involved in the process of decision making and implementation on their subjective point of view.
   Expected result: definition of the experts' point of view.
3. Data elaboration and comparison between the points of view of dwellers and experts. Expected result: chart for clustering the parameters in four different areas, depending on the positive or negative assessments of the parameters in the actual situation, and of their importance
4. Data collection and survey of objective parameters.

   Expected result: Collection of standardized data. A standardizing process seems necessary for comparing different parameters, but it could be possible to find out other easier methods.
5. Data elaboration and comparison between the subjective and objective assessments.

   Expected result: Focus on actual problems, highlight on similar and different viewpoints.

2nd phase: Implementation

This period concerns possible review of the design, the building site and the time in which people start to get used to the new devices.

3rd phase: Evaluation of Post operam

6. Interviewing the dwellers on their subjective point of view after the implementation of the project.
   Expected result: definition of the dwellers point of view after the implementation.
7. Data elaboration and comparison between the subjective data before and after the intervention.
   Expected result: verifying the shift of the parameters, target of the project, between different areas of the graphic.
8. Data collection and survey.
   Expected results: check of the relation between actual and perceived improvements.

If it is not possible to apply the toolbox completely, it is necessary to apply the third phase of it to the items contained in the quadrant of the "Urgent intervention, and high relevance for users" and possibly also to the items contained in the quadrant "Urgent intervention, but low relevance for users", as resulted by the first phase.

The toolbox can be applied in two ways. If it is applied before the revising of a design and its implementation can help to target them better. If it is applied before and after can confirm the appropriatness of the design and implementation: a declaration of success. If it is applied only afterwards, it can be used as validation of the prefixed goals.

5.2 Sample Selection Criteria

From the chosen theoretical and methodological approach and from the work already run in the other ASI WPs, it is evident that our target group has to be constituted not only by the dwellers but also by the experts with their viewpoint. In fact, both these categories are involved in the process of implementing interventions and projects for improving the Quality of Life.

The conclusion is that the toolbox has to be used with two different samples, when we want to verify the consequences of an intervention on the QoL. One sample is constituted by the users: the dwellers of the case area, who should be represented by a minimum of 30 persons, to be interviewed directly on the place where the implementation has to be realized. Better results, from the statistical point of view, can be achieved with at least 60 persons

All the experts involved in the process of decision making (politicians, councillors, technical offices members, municipality consultants, associations, pressure group, etc.), to be interviewed by appointment.

5.3 The toolbox team

The toolbox is aimed at being used by local administrations and practitioners. It must then not involve too many people. For its application on field and for assessingthe various perspectives.

The team has to be composed by two persons with different background (a technical and a psycho-sociological one), one for surveying and evaluating the objective parameters and one for interviewing and elaborating the subjective data.

It's not necessary a particular training for the interviewers.They have to know very well the text of the interview in order to make it very quickly and for not annoying the interviewees.They have to be kind and friendly.They have to recognize the "validity" of an interview, if the answers seem to be the real thoughts of people or hurried and superficial answers.The responsible of data entry and, then, of statistical analysis has to know, at least, the principal elements of statistics and their application on an excel file.

CHAP 6 THE CASE STUDY LOCATION

6.1 Toolbox application: the pilot study of Umbertide (i)

Umbertide is a small city located in the centre of Italy, in the region called Umbria, close to Perugia. The city is surrounded by a green hilly landscape. Inside the urban texture the main part of this system is the Parco Ranieri (230.000 sqm), a green lung equipped with services that is located in the new part of the town. The presence of the river Tiber makes possible some activities linked with the river: fishing, canoeing etc. The town stands at 250 m. above the waterline.
The whole municipal area has an extension of 200 square kilometres and a total amount of 15.400 inhabitants.

Umbria Region in the centre of Italy

Location of Umbertide in Umbria

Umbertide: a view of the town

Umbertide town centre

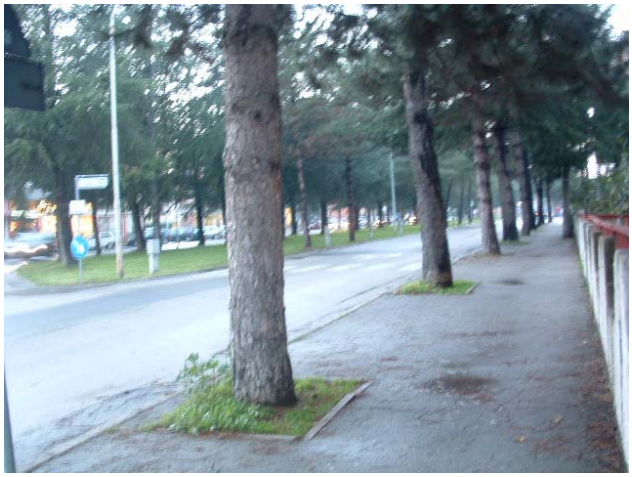
Umbertide: the map of the town

The toolbox has to be tested for the implementation of a new cycle path. For the application of the toolbox the participation of the local administration is essential. The idea of designing and implementing a new cycle path is related both to the possibility of organizing in a better way some central crucial points in the city's road system and to have the chance to apply measures for traffic calming. In the area, some works for improving the vehicular flows have been already made; the aim was to eliminate the congestion that was present, in some peak hours, also in this small town. Such intervention though has not solved the problems due to high speed.
The implementation of the cycle path can help to connect better the historical town centre to the new residential built areas, where some important public services are located; this should be a first step to create an alternative sustainable mobility system that fosters the choice of using the bike instead of the car for the short trips and therefore improves the environmental quality of the town. A first section of the cycle path has been recently implemented in a park along a stream; it is a pist shared with pedestrians. Now a second section is planned with the aim to make a third one, that links it to another cycle path, already existing along the railway. Such system is planned to be implemented without any heavy structural road work, but by sharing walkways or local roads, with little vehicular traffic and, where possible, by creating a separate cycle pist. The pist will be made evident by the use of a red paint and proper signs. Such implementation will lead also to the design of a round-about, having the goal to reduce the speed of the vehicles entering the urban texture, that will act also as one of the entrance gates to the town.

Umbertide cycle path

Towards the country side

Towards the town centre



CHAP 7 THE PILOT STUDY AT UMBERTIDE

Application of the questionnaire

Users' Interview: Ante Operam .

In the ante Operam phase 60 persons have been interviewed during two days (13-14 nov 2004): the sample was constitute by 23 males and 37 females. People were between 15 and 65 years old, it seems that no notable correlation exists between the age and the satisfaction level

The interviews have been made during the whole day (from the morning to the late afternoon),

to people walking in the area where the intervention should take place.

The weather was cloudy with some rain.,

The structure of the questionnaire considers the possibility of adding more specific question directly related to the type of implementation; in the pilot Study of Umbrtide. specific questions about cycle path have been added.
Some questions where added as explained in the chapter: the enquiry instruments, these have been made to a smaller sample of 30 persons.

EXPERTS' INTERVIEWS

- 11 experts have been interviewed on the 30th of December 2005, each interview last about 40 minutes, they were:
- 2 persons from Technical office of the Town Municipality
- 2 Councillors of the Town Municipality
- 1 member of the Town Council
- 2 Policemen from Provincial and Town Municipality stations
- 3 persons belonging to Associations (Disable People Relatives Association, Elderly People Association, Caritas)
- 1 Practitioner

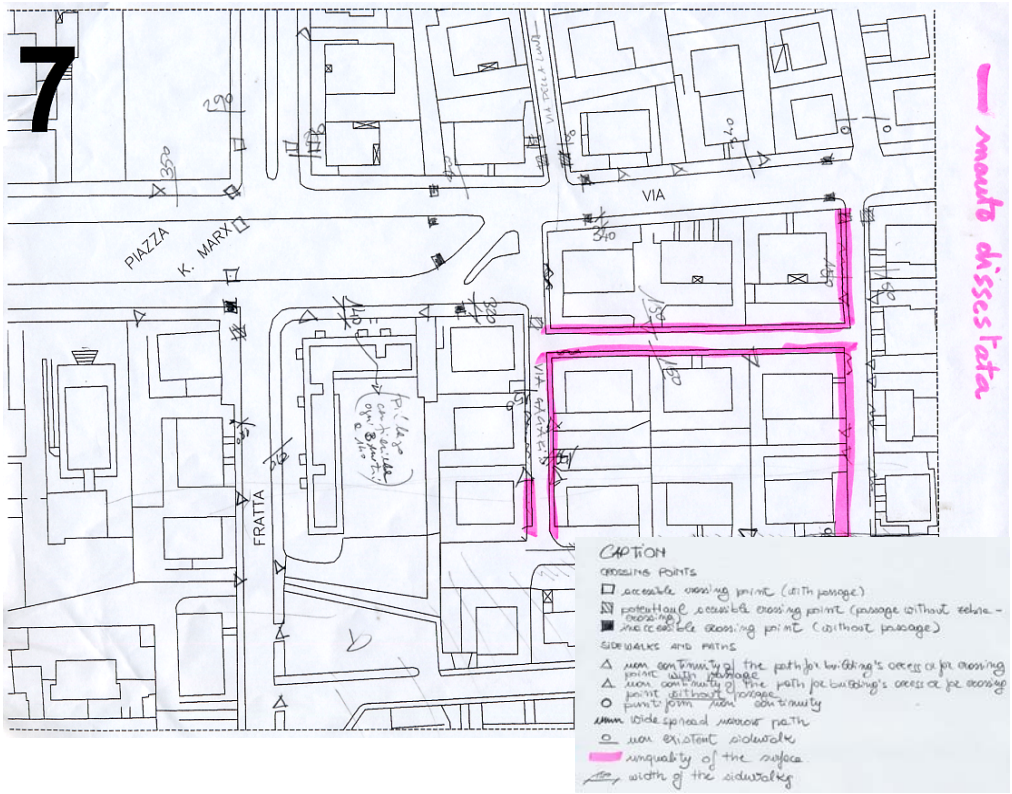
USERS' INTERVIEWS : POST OPERAM

- 62 persons have been interviewed during two days (4-18 may 2005). They where 27 Male and 35 female People were between 12 and 84 years old
- Interviews have been made during the whole day (form the morning to the late afternoon)
- To people walking in the area were the cycle pist was implemented.
- Weather was sunny on the first day and cloudy with some rain on the second

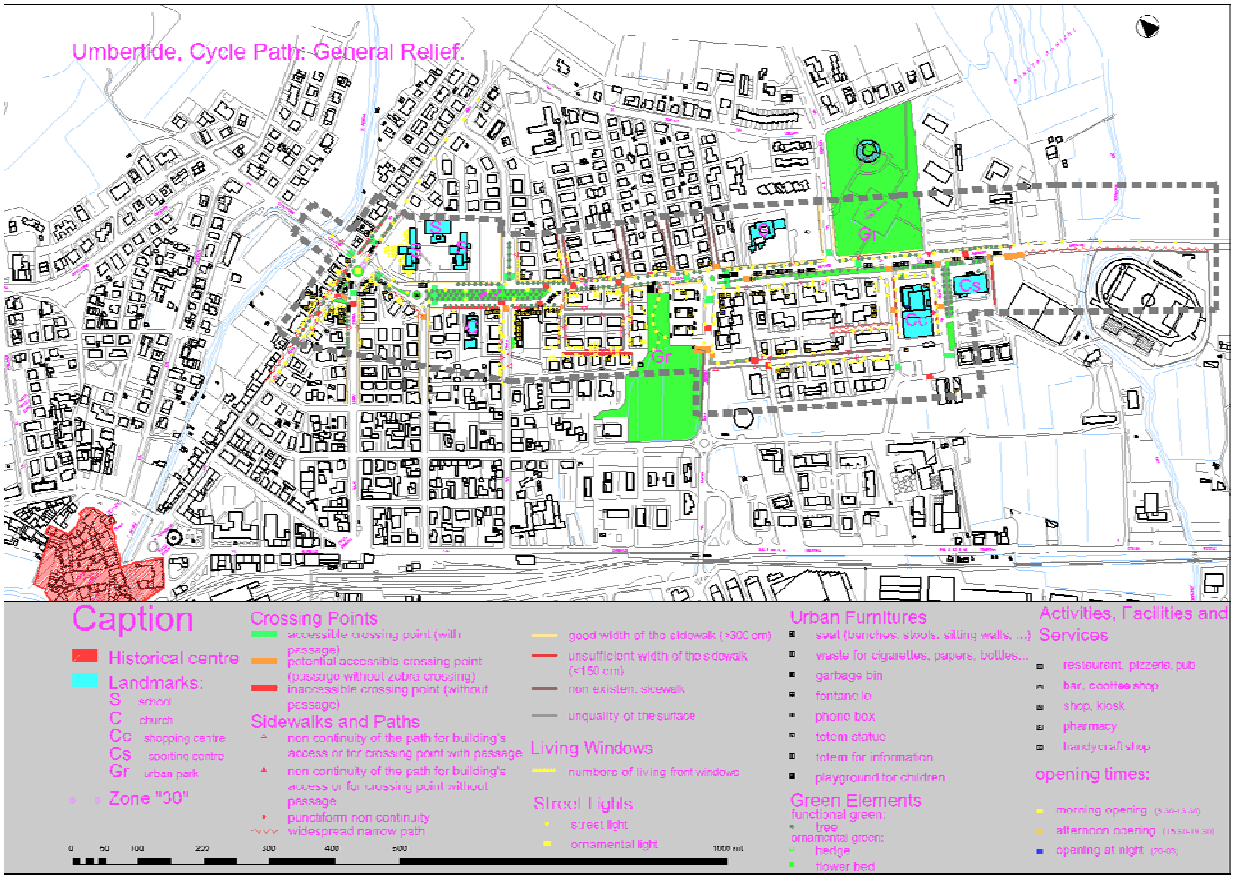
7.1 Survey

As indicated in the methodology of the toolbox, a survey has been made of the situation before and after the cycle pist implementation.
The guidelines for the data collection campaigns (interviews, surveys and measurements) need to be tuned making use of a test. This helps to define them with clear and univocal instructions.
The first application in Umbertide of the toolbox has been used as benchmark for the chosen approach, so that problems that arise can be faced with amendments or addictions.
Time and operations needed to complete every step of the process have also been monitored. These results are very useful for the Data Bank, as described in the last chapter.
The survey has been made in two different phases, ante and post operam, in various day, to be able to compare the collected data and to indicate any change in the situation. The different parts of the survey have been drawn using as a base the mapping given by the town Municipality of Umbertide.
Two maps have been inserted here to show how has been made the survey; the first map shows the notes that were taken by the surveyors on site; the second map shows how some symbols have been used to have the possibility of evaluating at a first glance the various performances offered by the analysed environment.
The final map is a classical relief indicating also the main infrastructural changes.

On site survey



Symbolic Mapping



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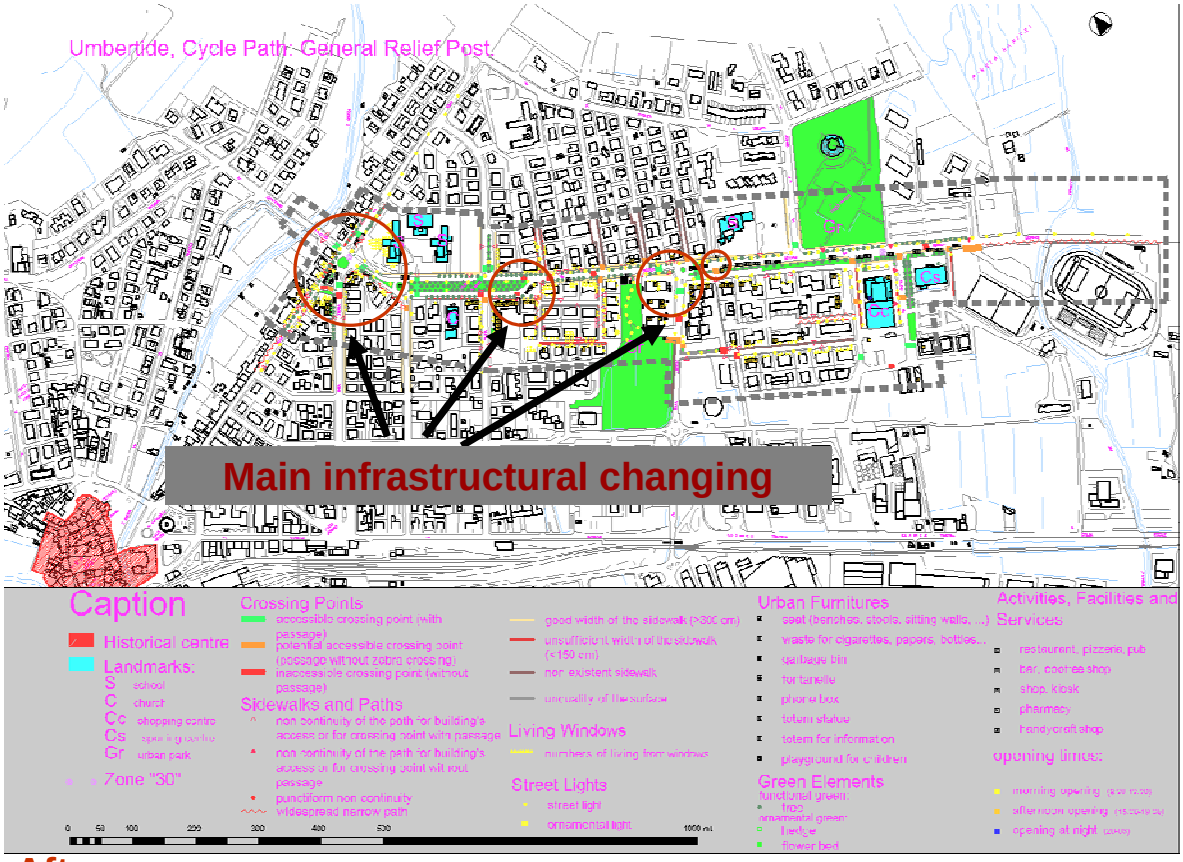


After

Main problems arose in gathering data that cannot directly and independently collected by the team in charge of the use of the toolbox.
Archive data, such as accidents and population, complex measurements as noise level and air pollution, resulted more difficult to be obtained than expected or not available at all.These problems may be very variable with the local contexts, and become probably less important when Town Councils use the toolbox by themselves.
Time needed for survey, mapping and elaboration resulted also considerably longer than expected, even if it cannot be considered as the actual necessary time. It is indeed still the time needed to refine the tool. The aim is to maintain the efforts required within acceptable limits.

7.2 Measurements and surveys: time needed

On the field work (survey, measurement, short interview, direct observations)

Ante: 12 man/ day (4person x 3 days)

Post: 8 man / day (4 prson x 2 days)

Archive data collection (accident, traffic flows, sound level...)

Ante: 4 man/days (but very long waiting time)

Post:-

Data Mapping and elaboration

Ante: 14man/days

Post/ 7 man/ days

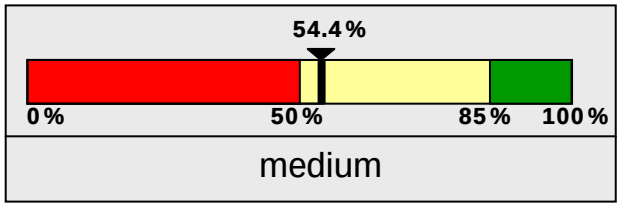
7.3 Subjective and objective enquire: comparison Ante and Post Operam evaluation

AN ACCESSIBLE ENVIRONMENT

Accessibility of sidewalks

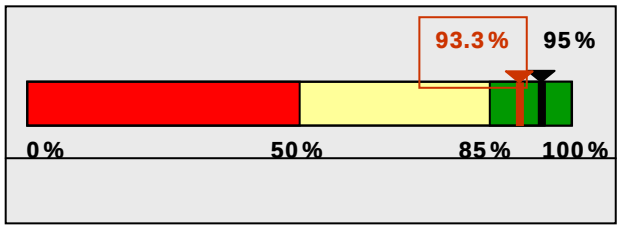
% of sidewalks with total accessibility [Ai]

These parameters give indications about the "basic" characteristics of sidewalks (walkability). Evaluation can be made with the help of a survey taking in to account the aspects 2 and 3 of "% of access points to public transport with total accessibility

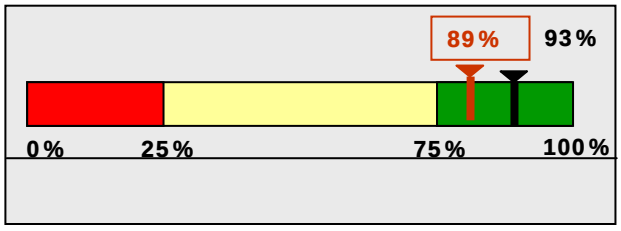


% of pedestrians using sidewalks (in comparison with total longitudinal flow) [Sa, Ai]

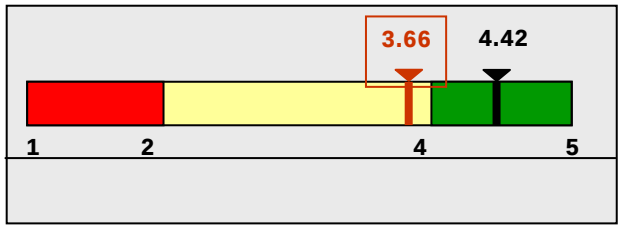
This parameter indicates the consistency of provision and design of sidewalks.

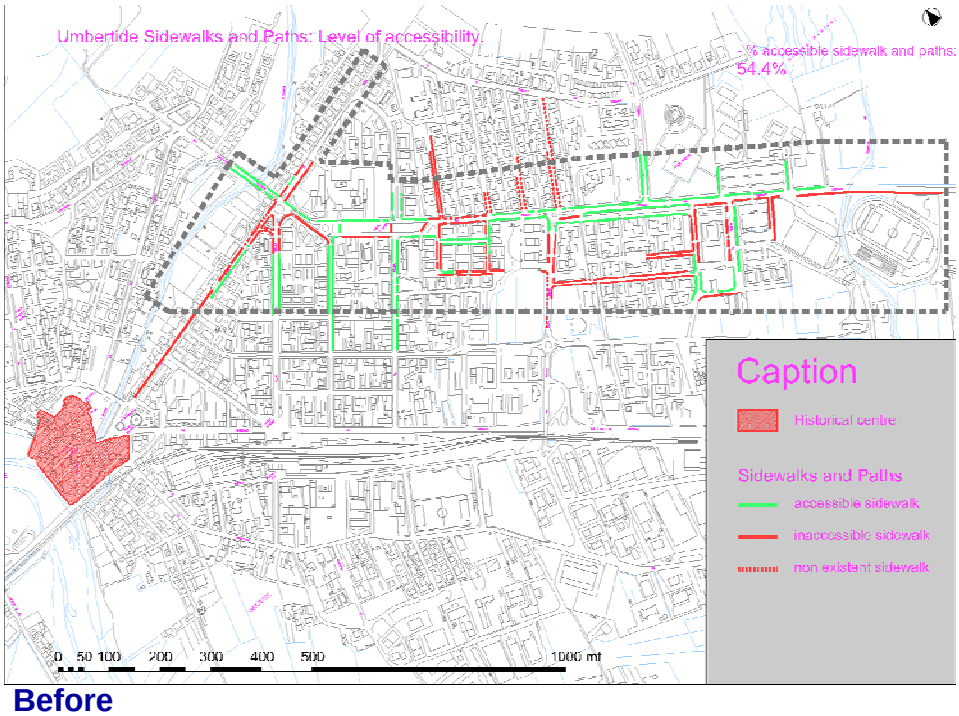


Are you satisfied with the accessibility of sidewalks in this area? (Thinking about elements like steps, barriers, narrow passages and quality of the surface)



How important is this aspect for you? (Likert scale 1-5)





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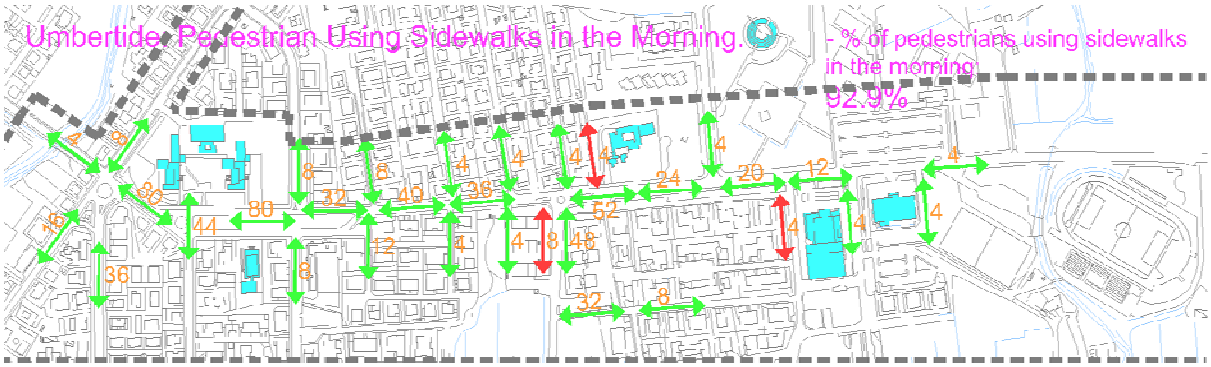

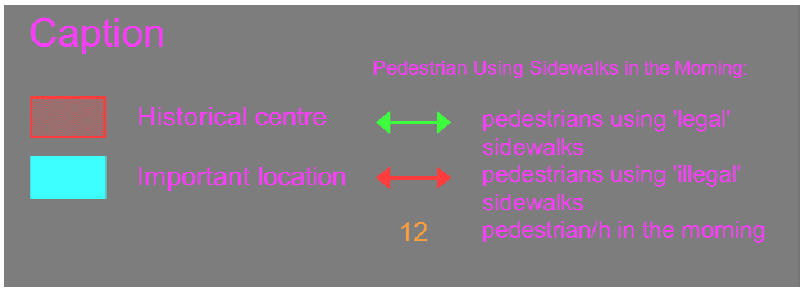

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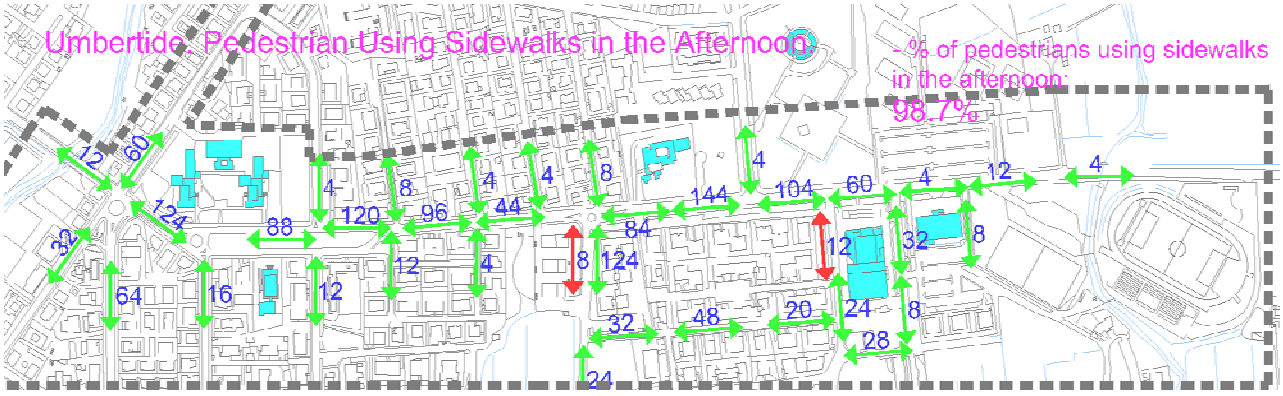

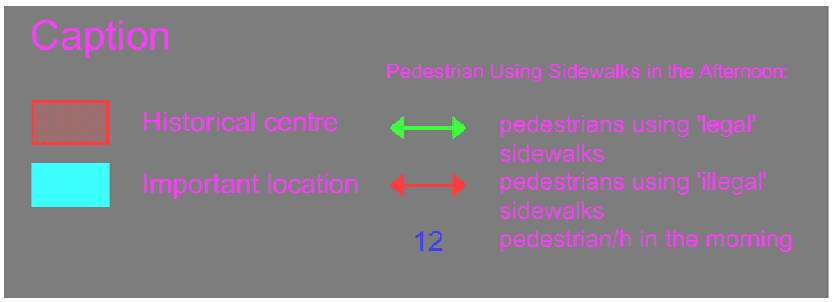

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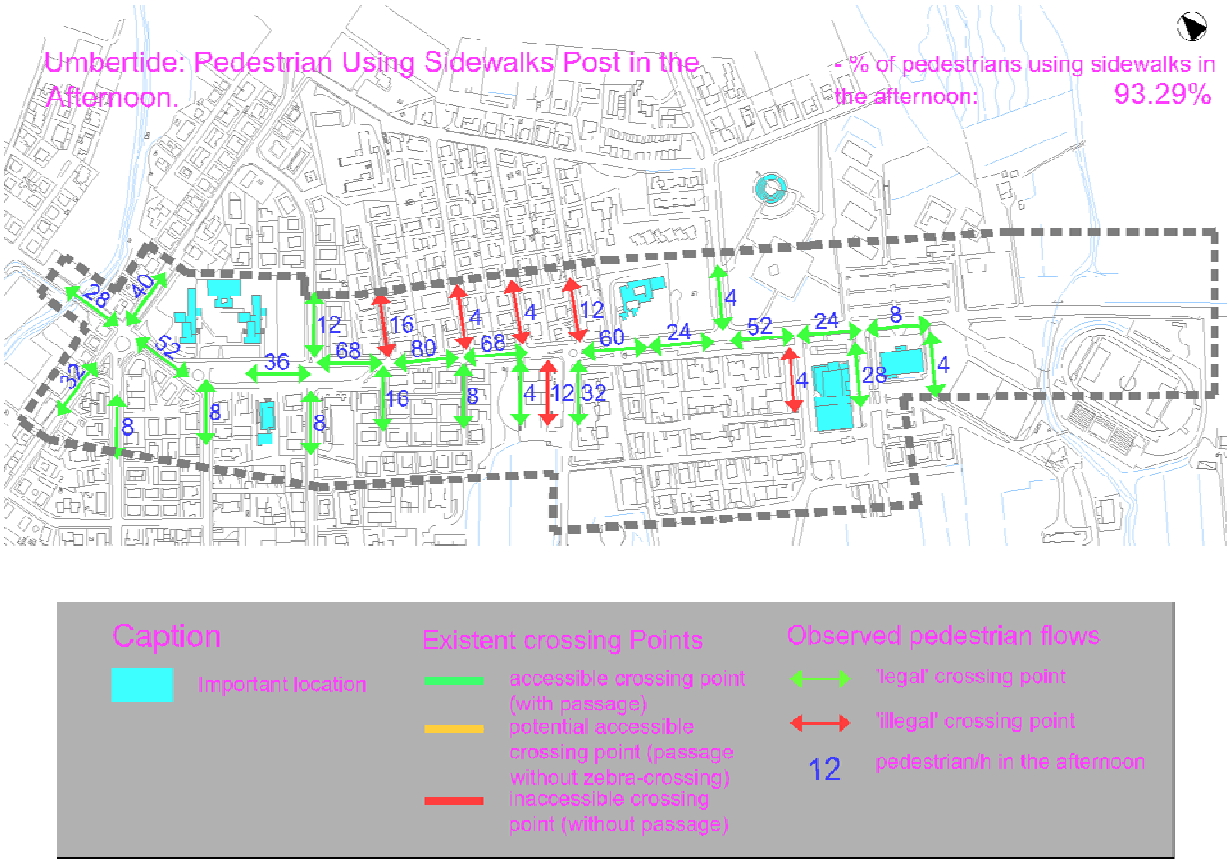
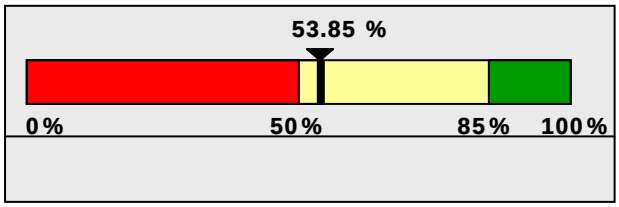

Umbertide: Pedestrian Using Sidewalks Post in the Afternoon.
% of pedestrians using sidewalks in the afternoon:
93.29%
28
40
52
12
16
4
4
12
68
80
68
60
24
4
52
24
8
36
68
16
8
4
12
32
4
28
4
8
8
8
Caption
Important location
Existent crossing Points
accessible crossing point (with passage)
potential accessible crossing point (passage without zebra-crossing)
inaccessible crossing point (without passage)
Observed pedestrian flows
'legal' crossing point
'illegal' crossing point
12
pedestrian/h in the afternoon

After

Crossing points

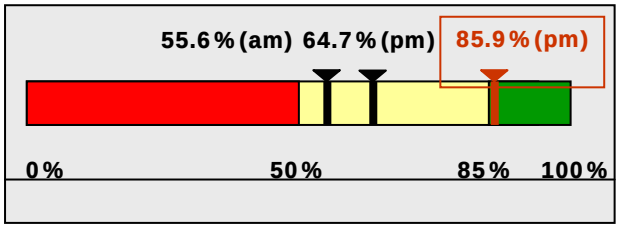
% of pedestrian crossings with total accessibility [Ai]

These parameters give indications about the "basic" characteristics of crossing points. The most important aspect that must be considered is the continuity of the paths: steps barriers, etc.

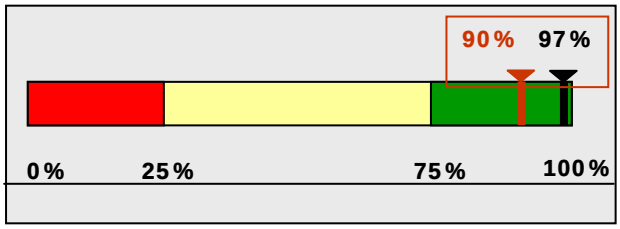


% of pedestrians using legal crossings (in comparison with the total crossing flow) [Sa, Ai]

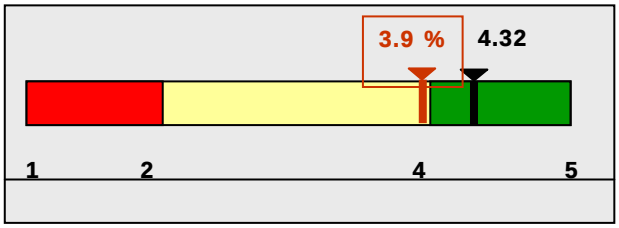
This parameter indicates the consistency of crossing-points' placement and design.

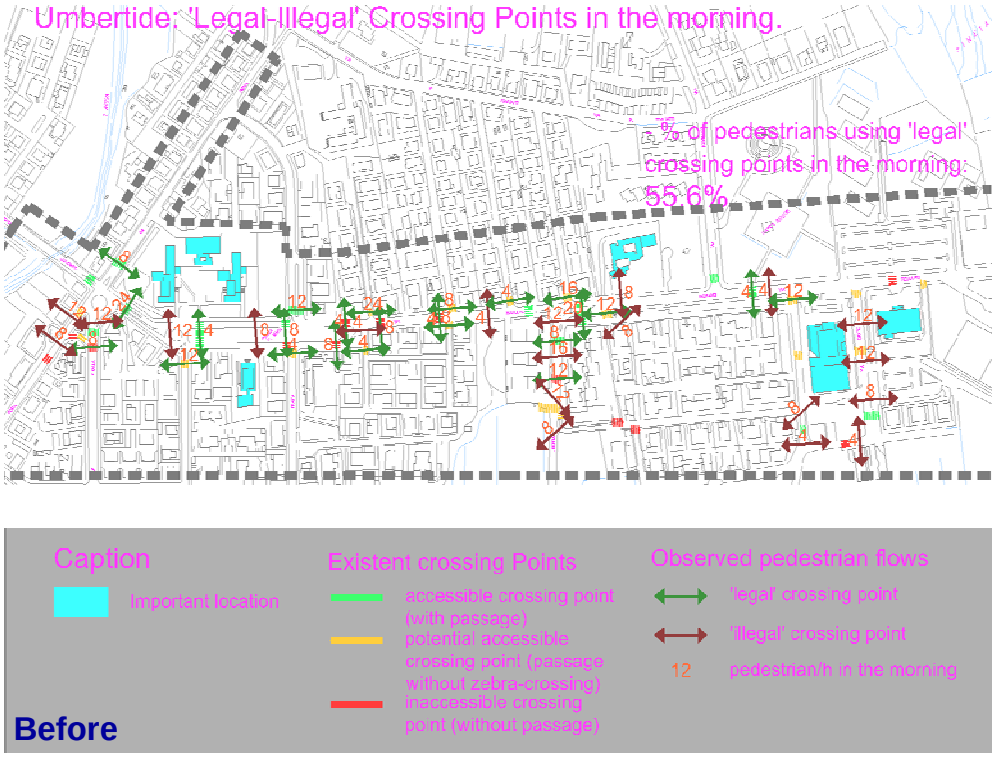


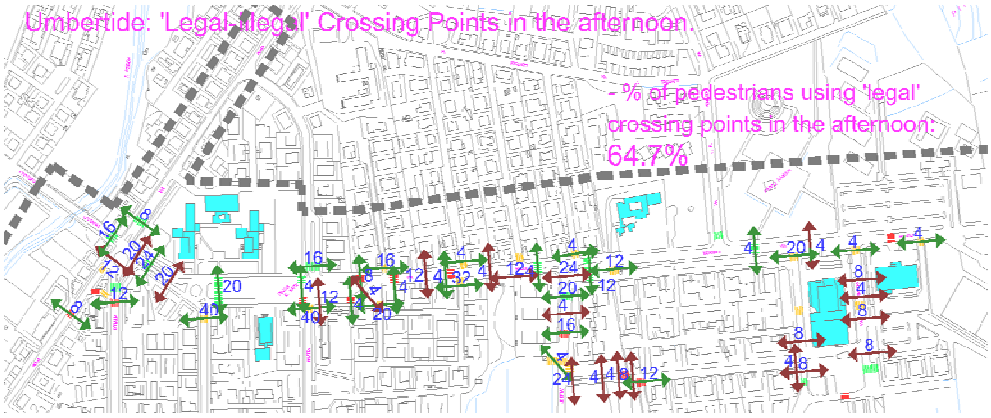
Are you satisfied with the accessibility of sidewalks in this area? (thinking about the continuity of the paths and their accessibility)



How important is this aspect for you? (Likert scale 1-5)







Caption

Important location

Existent crossing Points

accessible crossing point (with passage)

potential accessible crossing point (passage without zebra-crossing)

inaccessible crossing point (without passage)

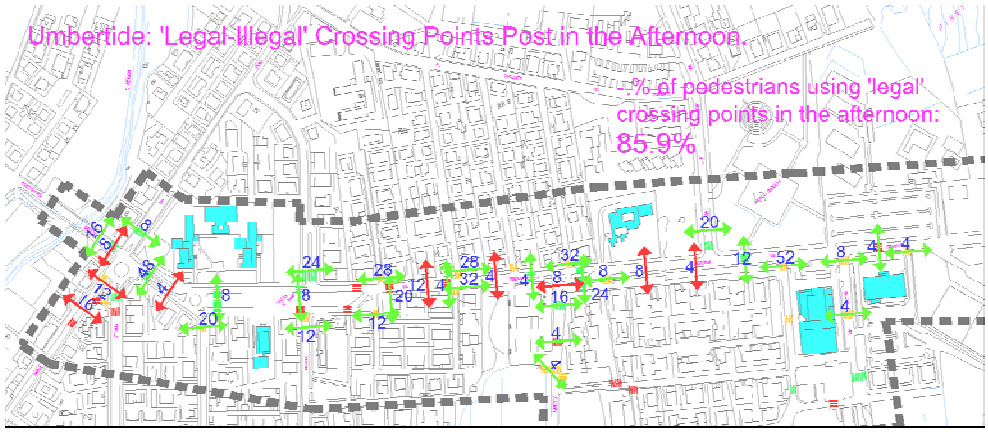
Observed pedestrian flows

'legal' crossing point

'illegal' crossing point

12 pedestrian/h in the afternoon

Before



Caption

Important location

Existent crossing Points

accessible crossing point (with passage)

potential accessible crossing point (passage without zebra-crossing)

inaccessible crossing point (without passage)

Observed pedestrian flows

'legal' crossing point

'illegal' crossing point

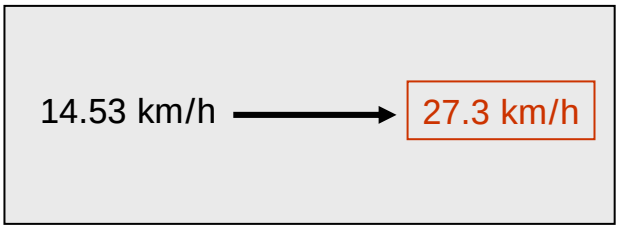
12 pedestrian/h in the afternoon

After

Time for reaching the destination

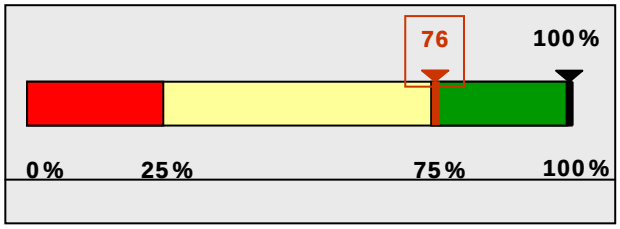
Distance/Travel time ratio [At]

Long distance accessibility needs the aid of transport means possibly provided by public transport service. Bad service results in "time" barriers that probably have as strong an influence as physical ones.

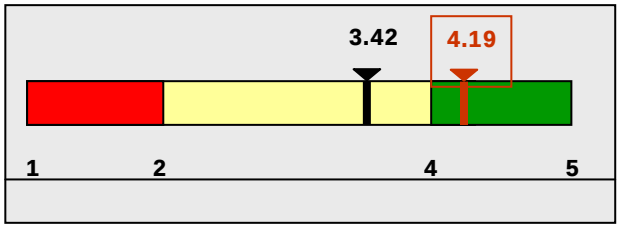


Are you satisfied with the time you need for reaching your destination

(thinking about one of your daily trips)?



How important is this aspect for you? (Likert scale 1-5)



Observation on the spot brief interview for measuring the distance/travel time ratio

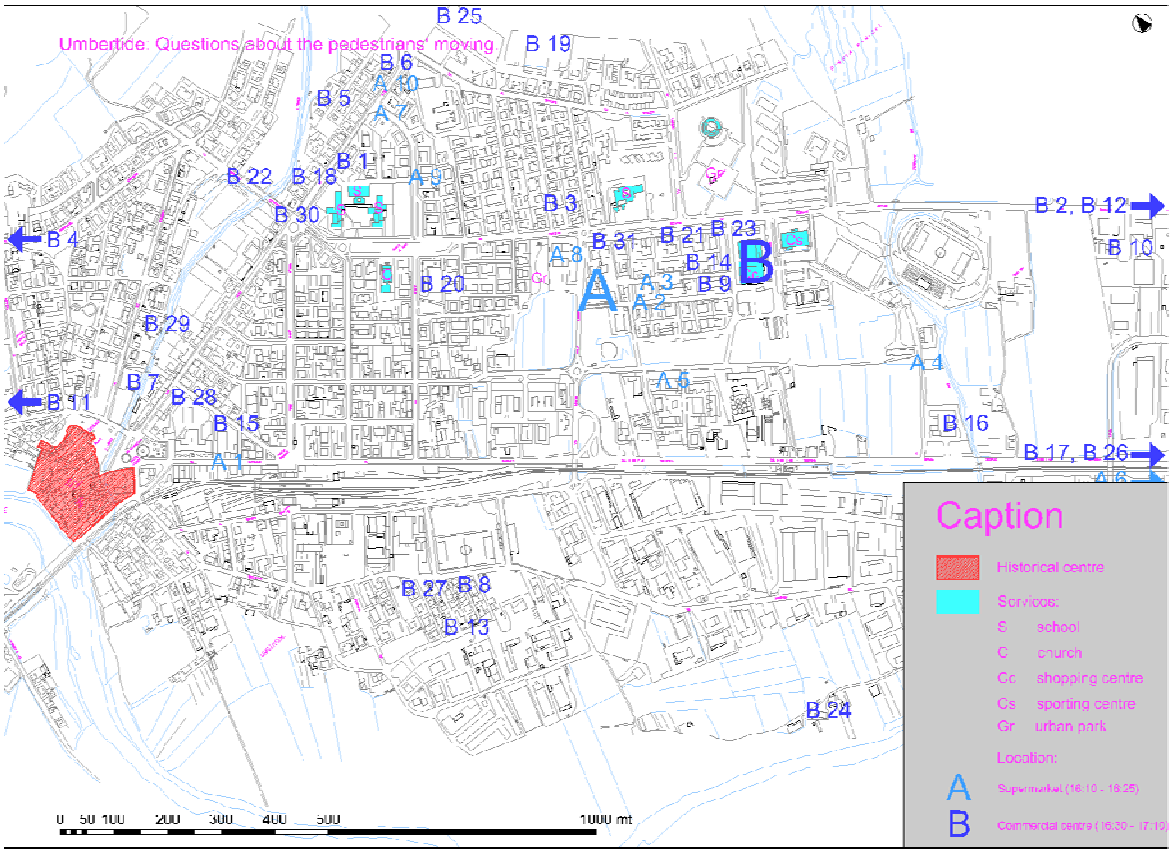
Roma Tre

Travel time/distance ratio (AT)

Position **A**

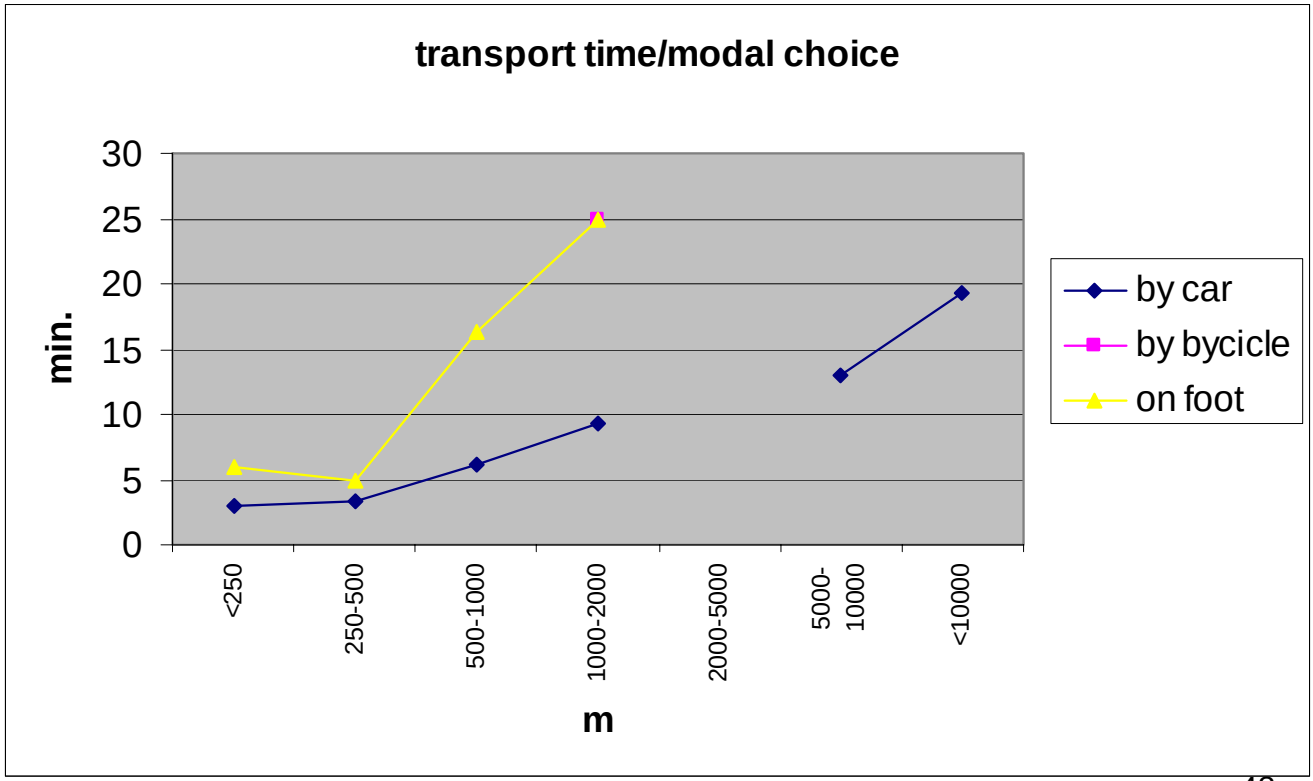
Interviews made the 22th - December - 2004
Time 16:10-16:25
Wheather: Sunny **Temperature: +5°C**

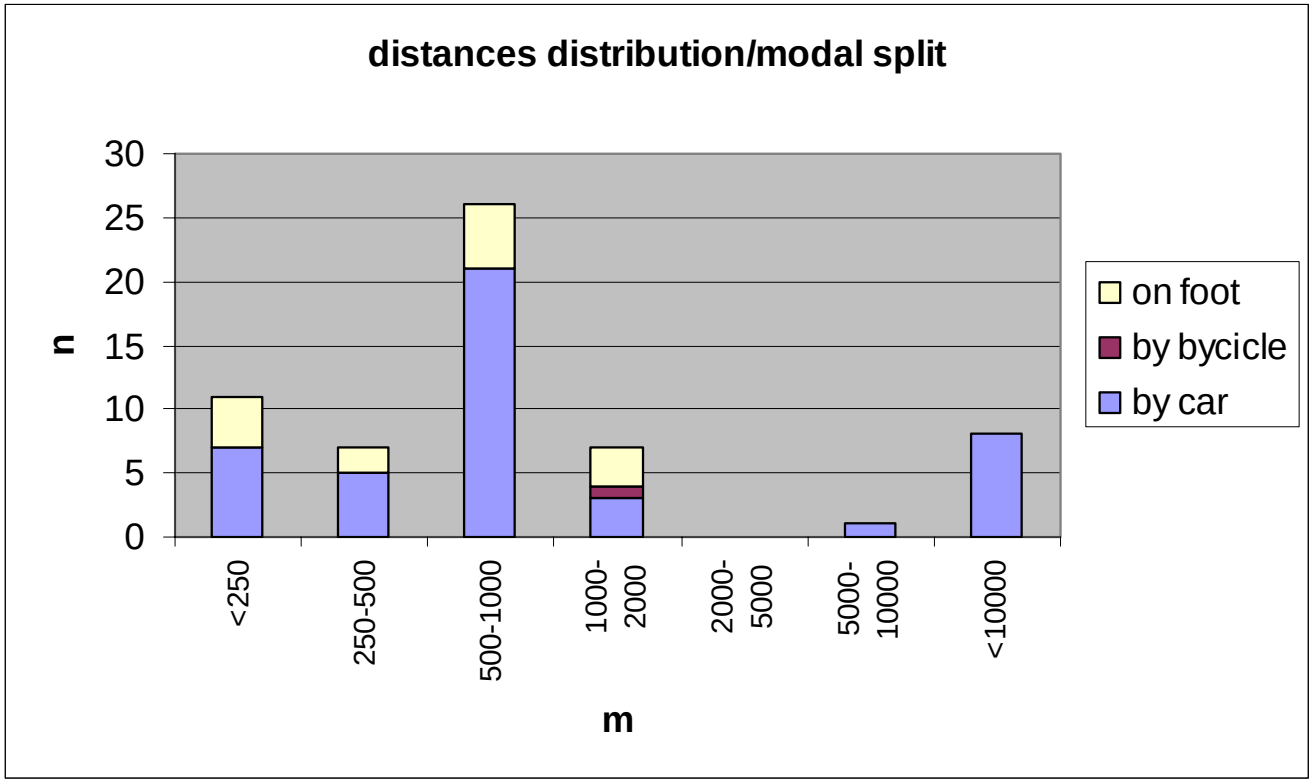
	Sex	Age	Where do you come from?	Transport mode	Time (minute)	Place of origin	Distance (mt)	Distance/Time (Km/h)
1	F	62	Umbertide	by car	10	A 1	750	4.5
2	F	53	Umbertide	by car	2	A 2	120	3.6
3	M	61	Umbertide	by car	2	A 3	120	3.6
4	M	45	Umbertide	by car	5	A 4	650	7.8
5	M	59	Umbertide	on foot	10	A 5	240	1
6	F	6	Umbertide	on foot				
7	M	51	Umbertide	by bicycle	25	A 6	1250	3
8	M	58	Umbertide	by car	3	A 7	500	10
9	F	52	Umbertide	by car				
10	M	46	Umbertide	by car	3	A 8	75	1.5
11	M	43	Umbertide	by car	3	A 9	350	7
12	F	41	Umbertide	by car				
13	F	53	Umbertide	by car	6	A 10	530	5.3



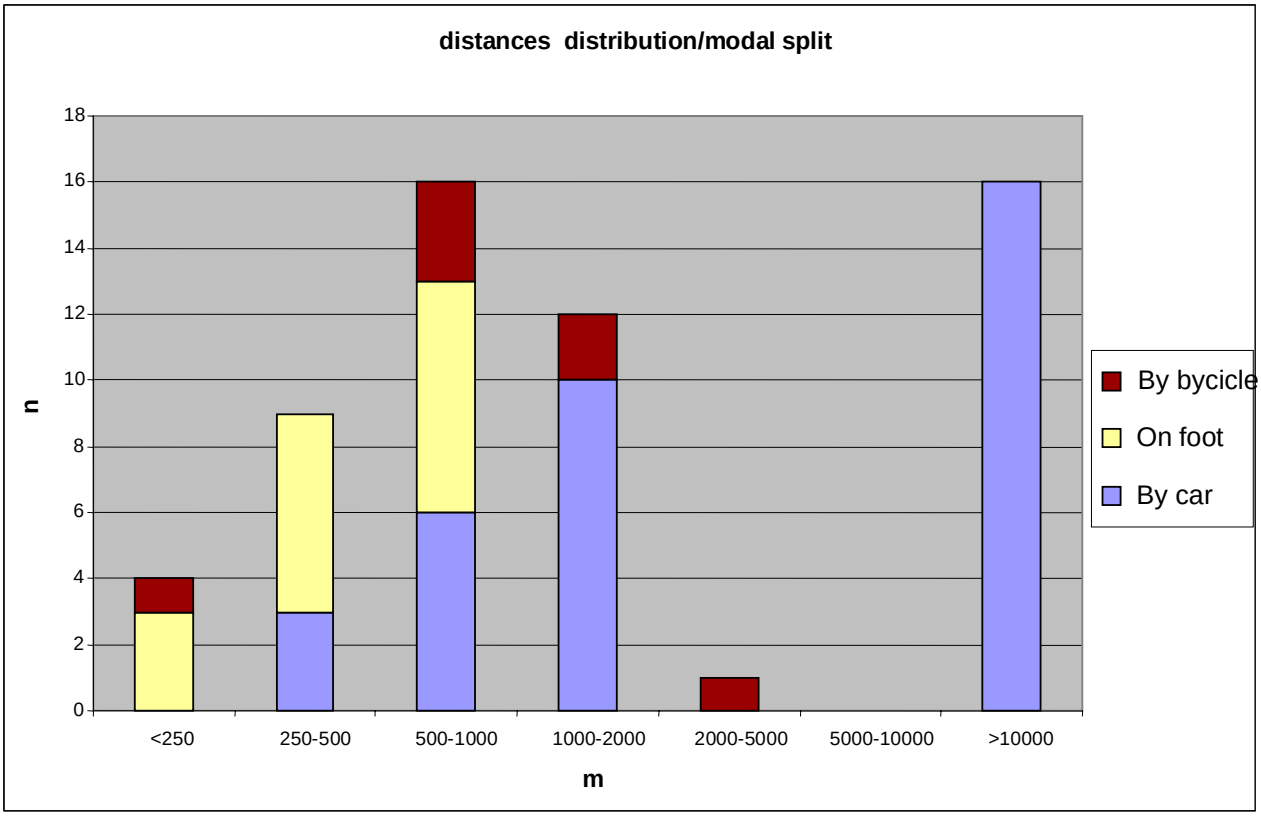
Before

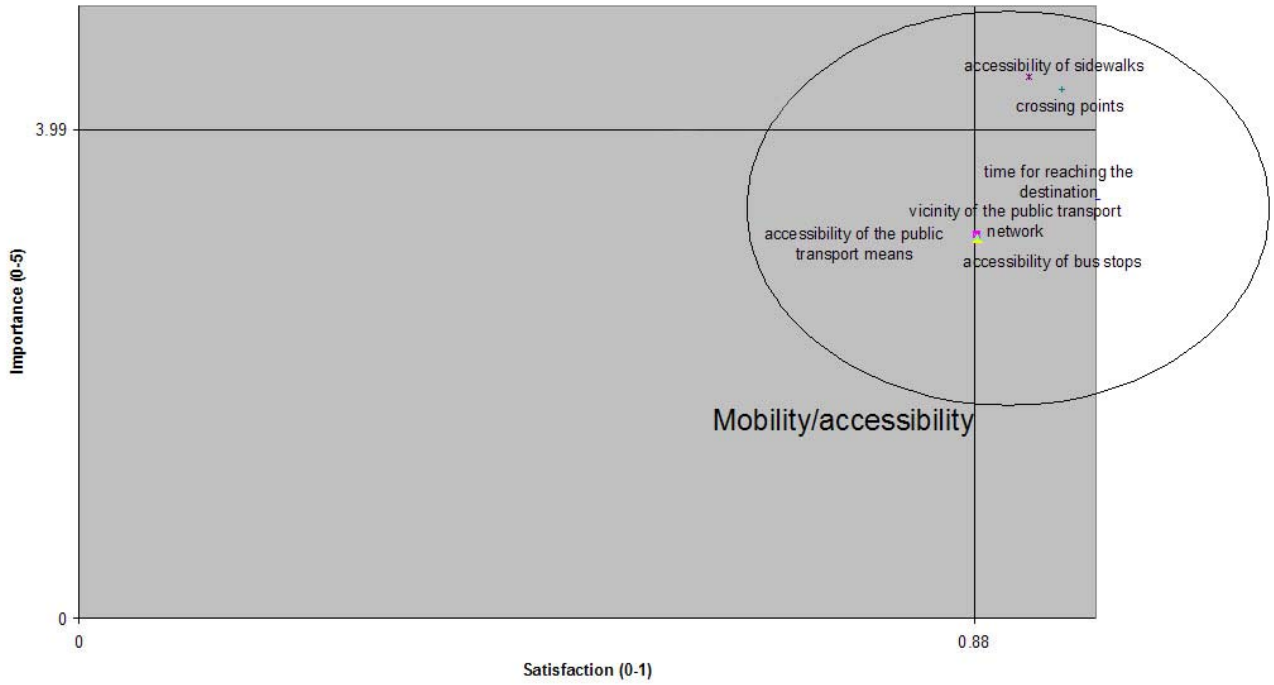
Ante Operam ***(U 99)*** ***(S 71)***




distances distribution/modal split
30
25
20
15
10
5
0
n
<250
250-500
500-1000
1000-2000
2000-5000
5000-10000
<10000
m
on foot
by bycicle
by car

Post Operam


distances distribution/modal split
18
16
14
12
10
8
6
4
2
0
n
<250
250-500
500-1000
1000-2000
2000-5000
5000-10000
>10000
m
By bycicle
On foot
By car



A SAVE ENVIRONMENT

9 Perception of safety

Number of accidents (considering all the possible combinations Cars/motorbikes/bicycles/pedestrians) [Sa]

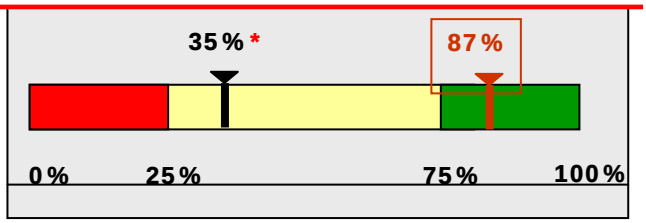
This parameter gives a rough indication of the safety, and can highlight critical points (black spots).

Only 3.3% of people were witnessed a road accident.

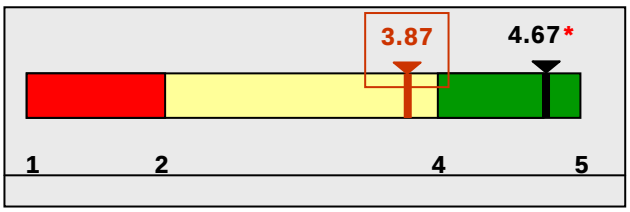
Umbertide	Single vehicle accidents	Cars accidents	Pedestrian accidents	Cycle accidents	Other accidents	TOTAL
Mapping of police reported traffic accidents 1998-2002	3	8	1	4		16

9.87 average of accidents involving pedestrians (PROMPT)
76.6 average of accidents (PROMPT)

Are you satisfied with the perception (preconditions?) of safety you have in this area?



How important is this aspect for you? (Likert scale 1-5)



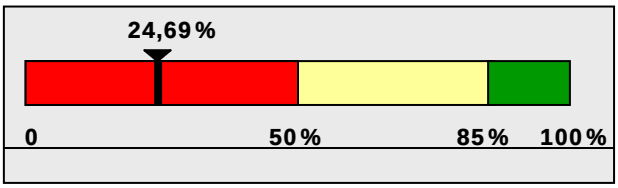
*** The italian translation of the english question was not clear and has been interprated, by the interviewer and the users, as both safety (traffic) and security***

* ***The number is possibly higher since this reports only the accidents involving injured people***

10 Actual traffic speed

% of street-km in the network with 30 km/h (or lower) speed limit [Sa, P]

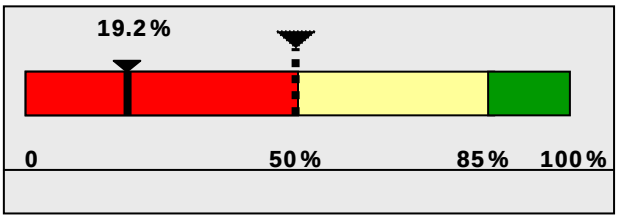
This parameter gives a rough idea of the physical quality of the vehicle-traffic flows assuming that speed limits have a correspondence with actual vehicular speed



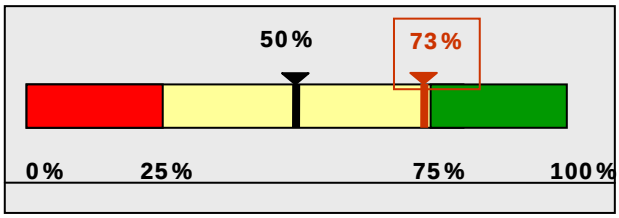
50 % (average of Prompt case areas)

% of street-km in the network with 30 km/h (or lower) V85 [Sa, P]

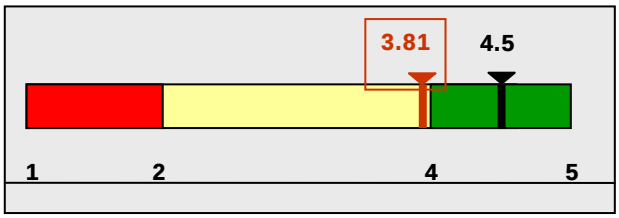
Speed is always connected with risk, and risk increases more than proportionally for speeds higher than 30 km/h.

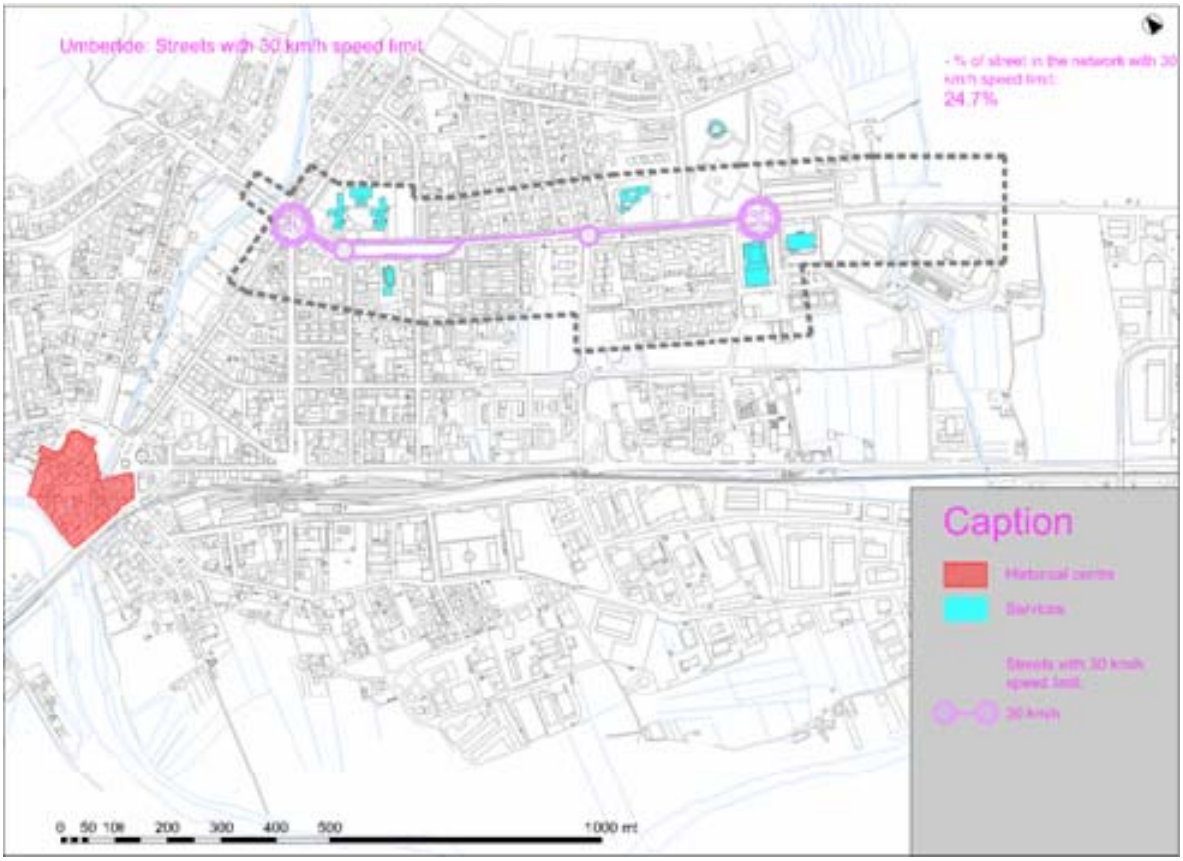


Are you satisfied with the actual traffic speed in this area?



How important is this aspect for you? (Likert scale 1-5)

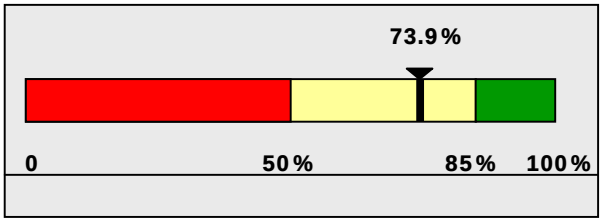



Umbertide: Streets with 30 km/h speed limit
- % of street in the network with 30 km/h speed limit:
24.7%
Caption
Historical centre
Services
Streets with 30 km/h speed limit
30 km/h
0 50 100 200 300 400 500 1000 mt

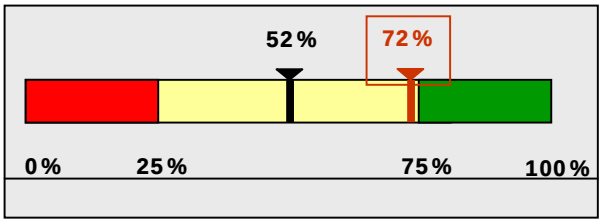
Bifore

11 Respected speed limit

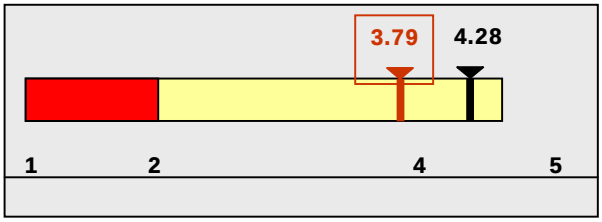
% of street-km in the network with respected speed limit*



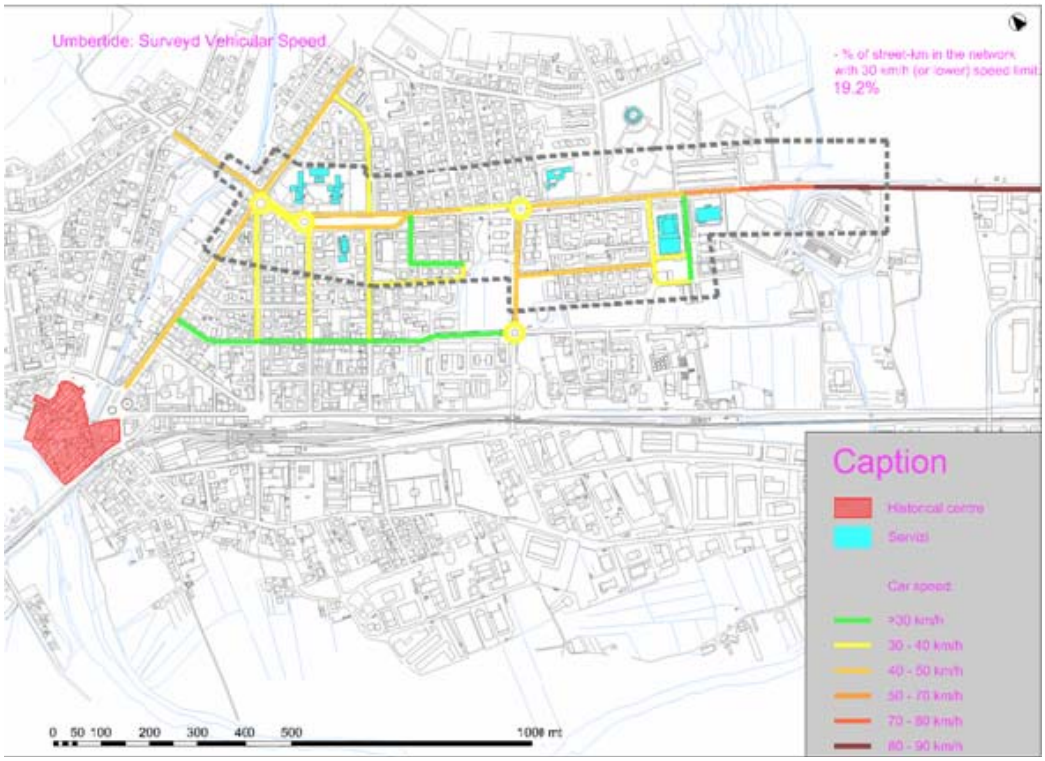
Are you satisfied with the respect of speed limits by private motor vehicles in this area?



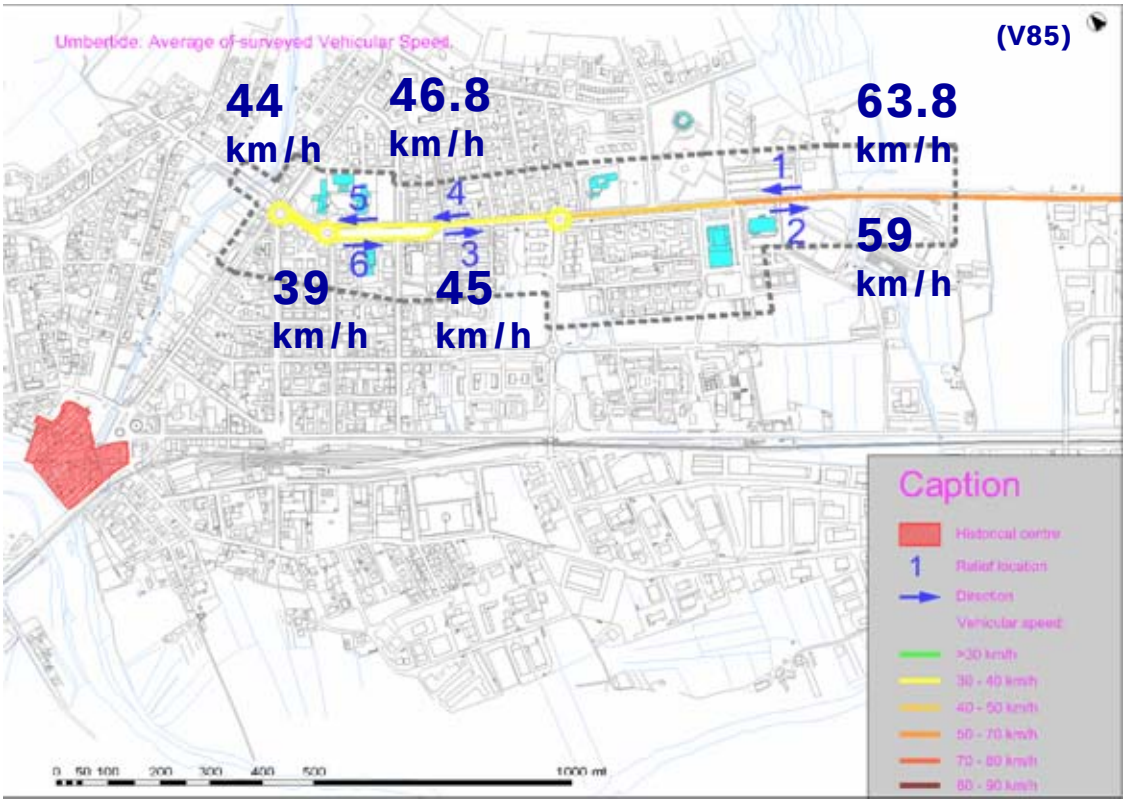
How important is this aspect for you? (Likert scale 1-5)



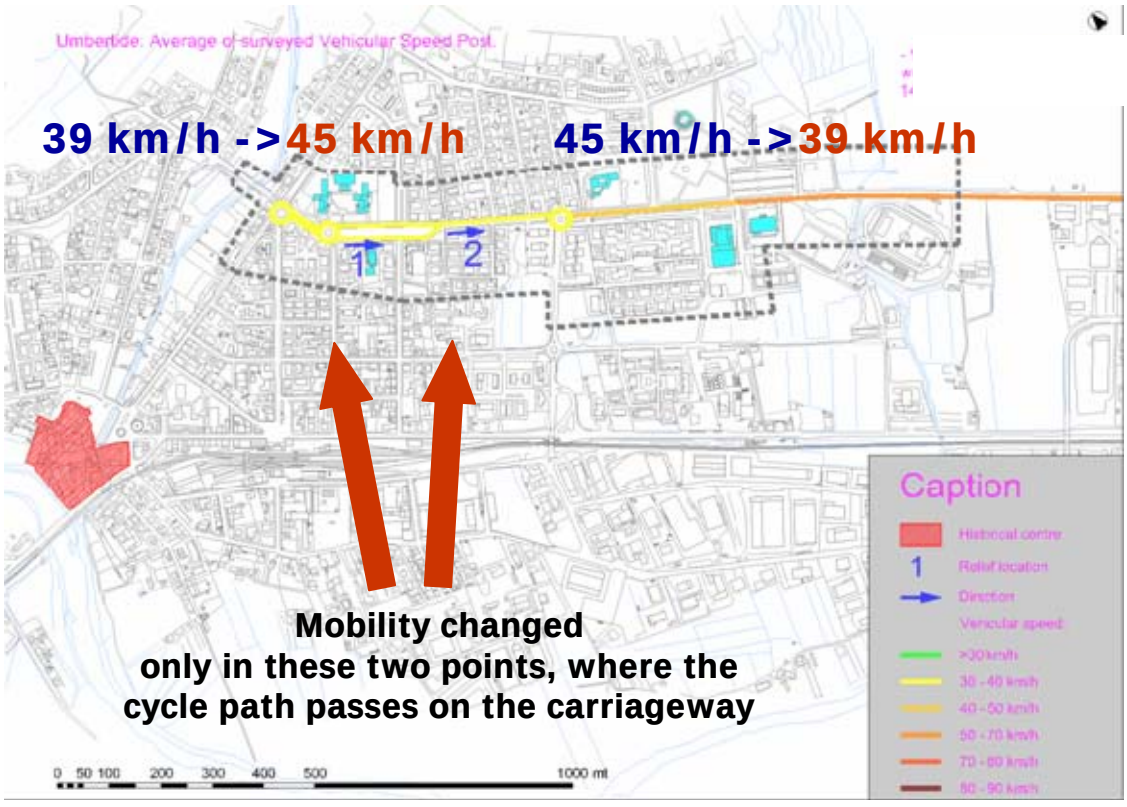
*** Newly added***



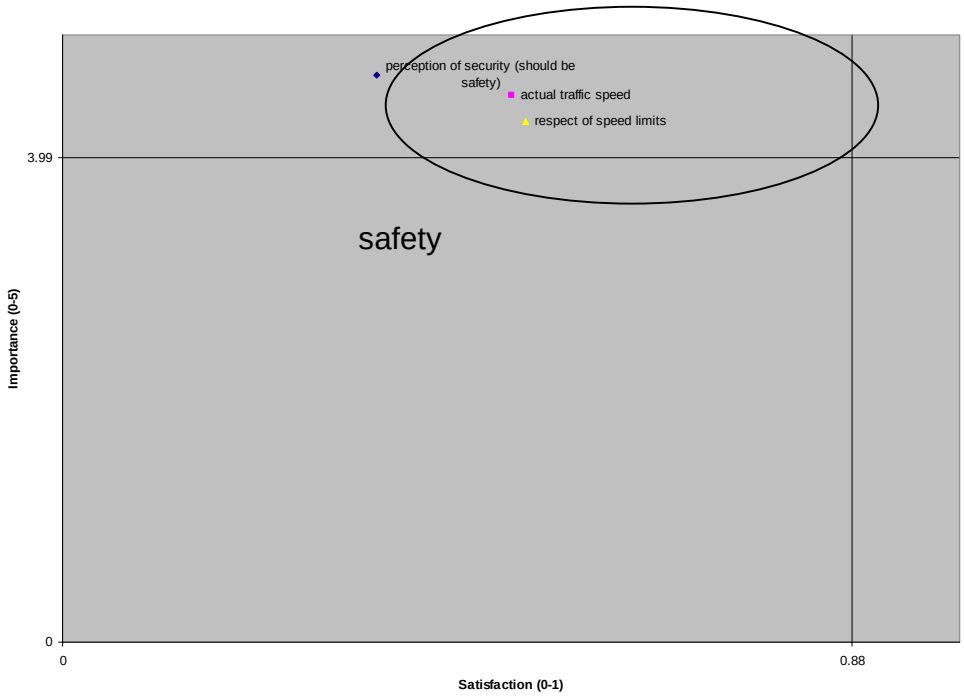
Before



Before



After

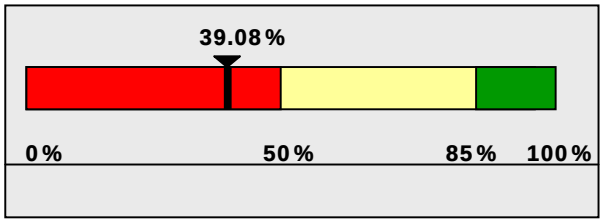


A CONFORTABLE ENVIRONMENT

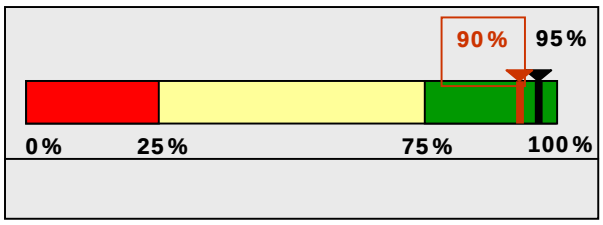
Width of the sidewalks

% of streets with sidewalks wider than 3m [Ai]

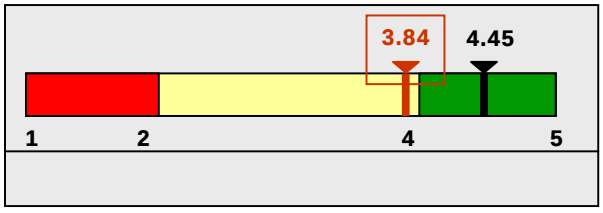
This parameter gives an indication about the amount of space dedicated to pedestrians. Possibly a ratio that refers to the total width of the street may also be considered.

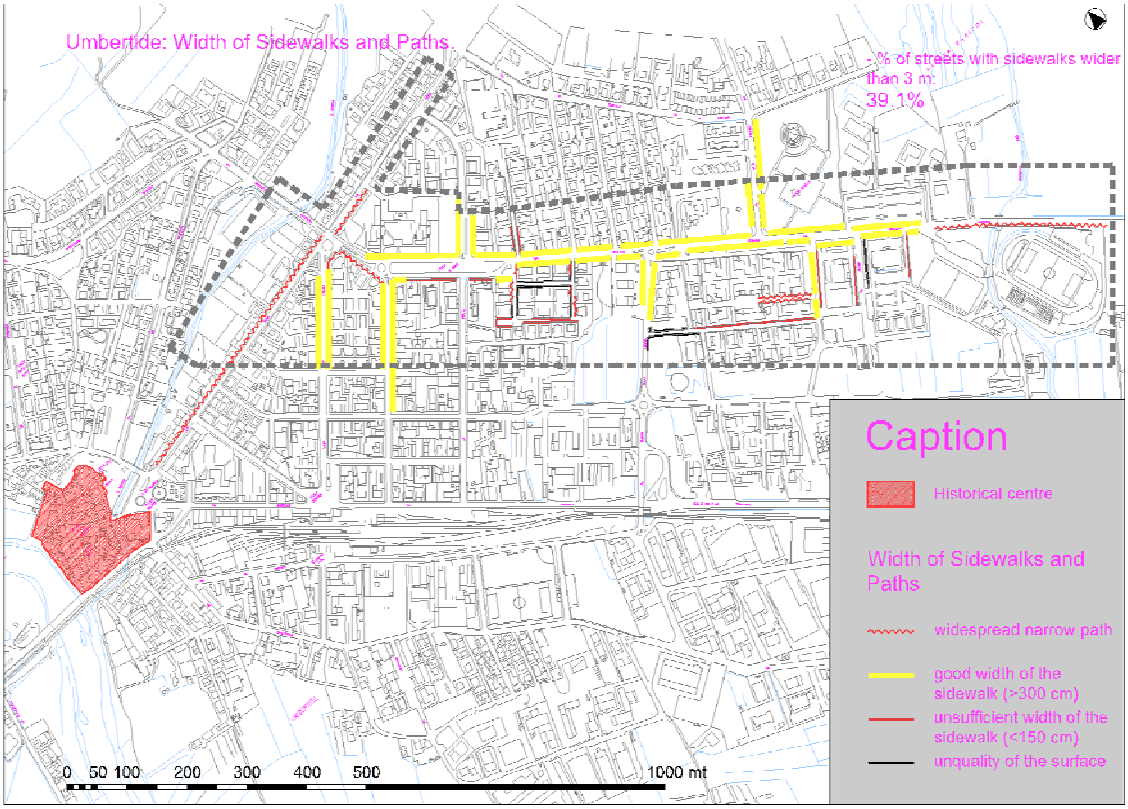


Are you satisfied with the width of sidewalks in this area? (Thinking about elements like steps, barriers, narrow passages and quality of the surface)



How important is this aspect for you? (Likert scale 1-5)



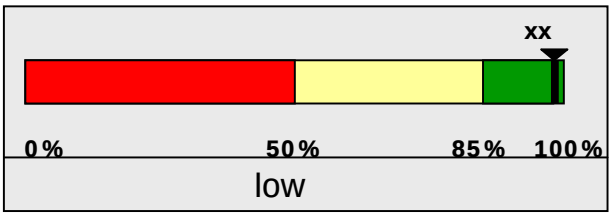


Before

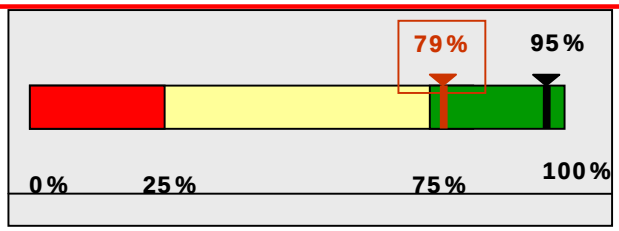
In-house acoustic condition

% of streets with in-house noise > than 65 dBA [P]

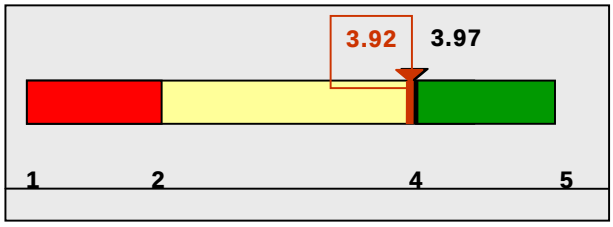
This parameter gives an indication about the impact of traffic and transport on people at home.



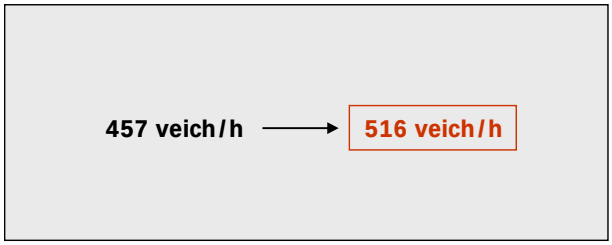
Are you satisfied with the traffic volume in this area?[P]



How important is this aspect for you? (Likert scale 1-5)

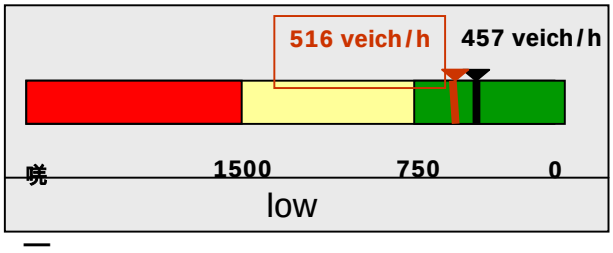


Traffic volume

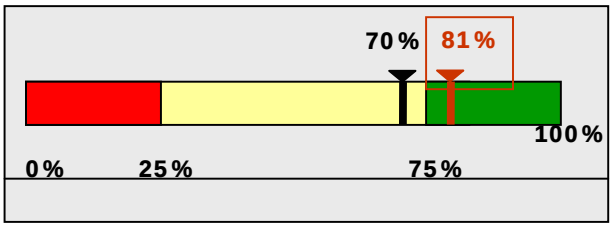


Traffic flow volume and composition [P]

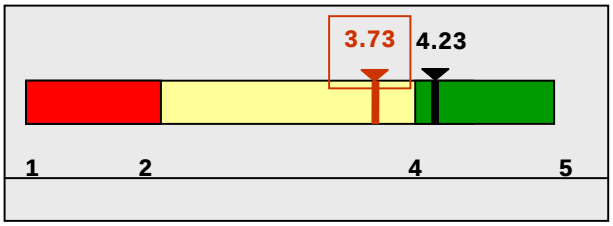
This parameter gives indirect information on vehicular impact on streets and houses.

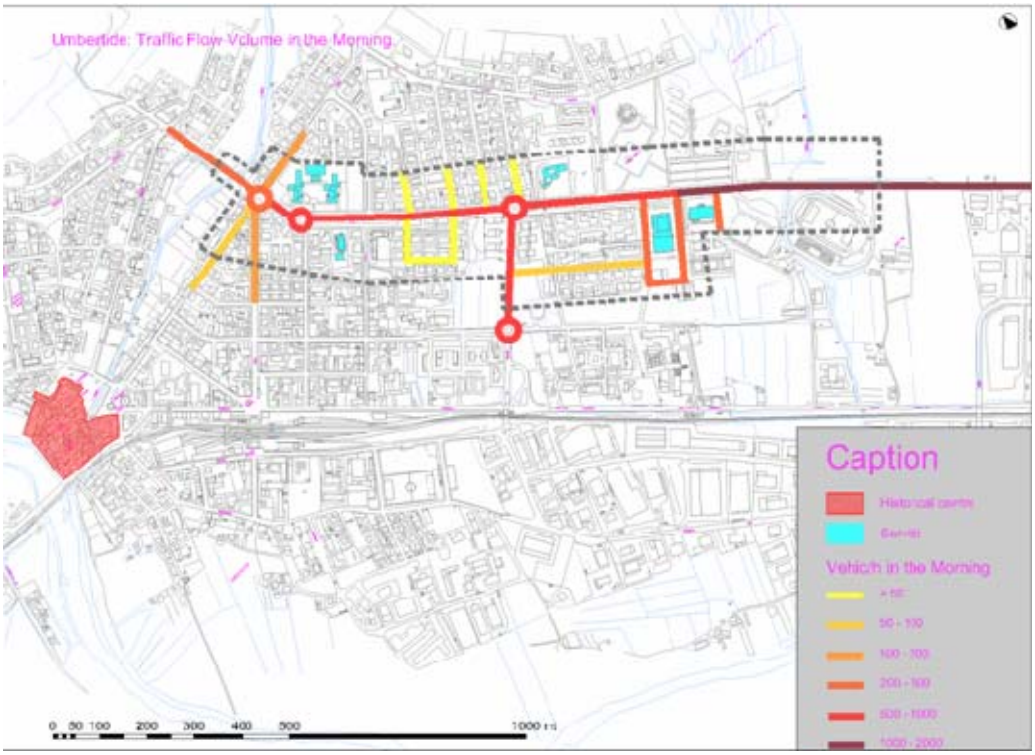


Are you satisfied with the traffic volume in this area?[P]

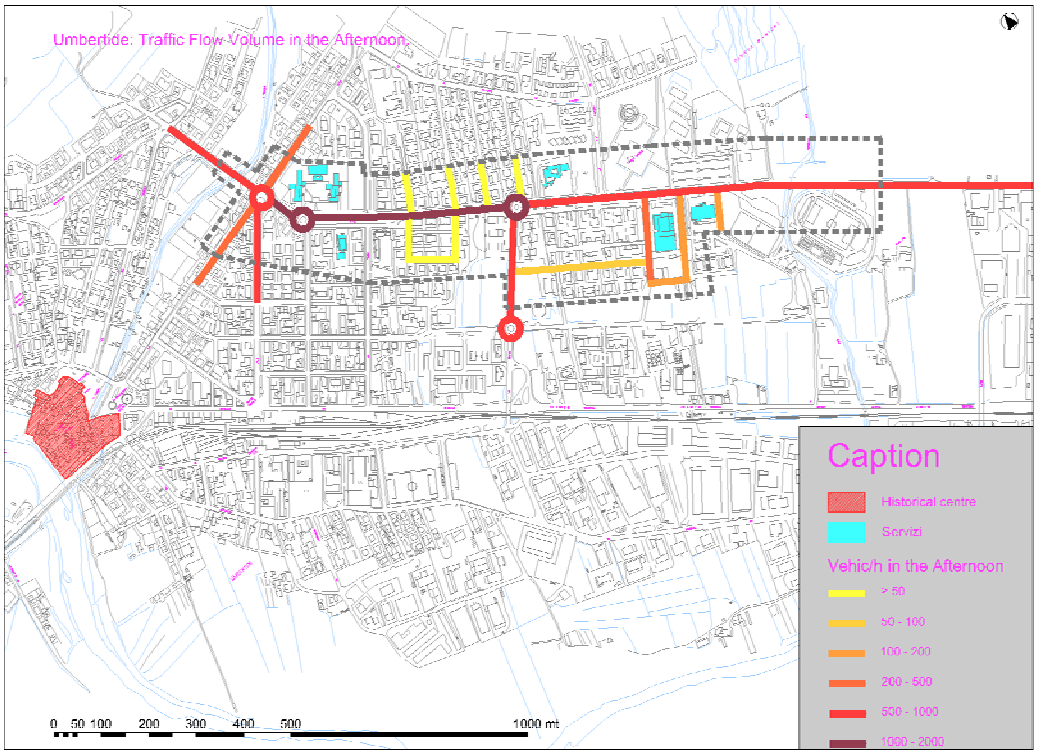


How important is this aspect for you? (Likert scale 1-5)

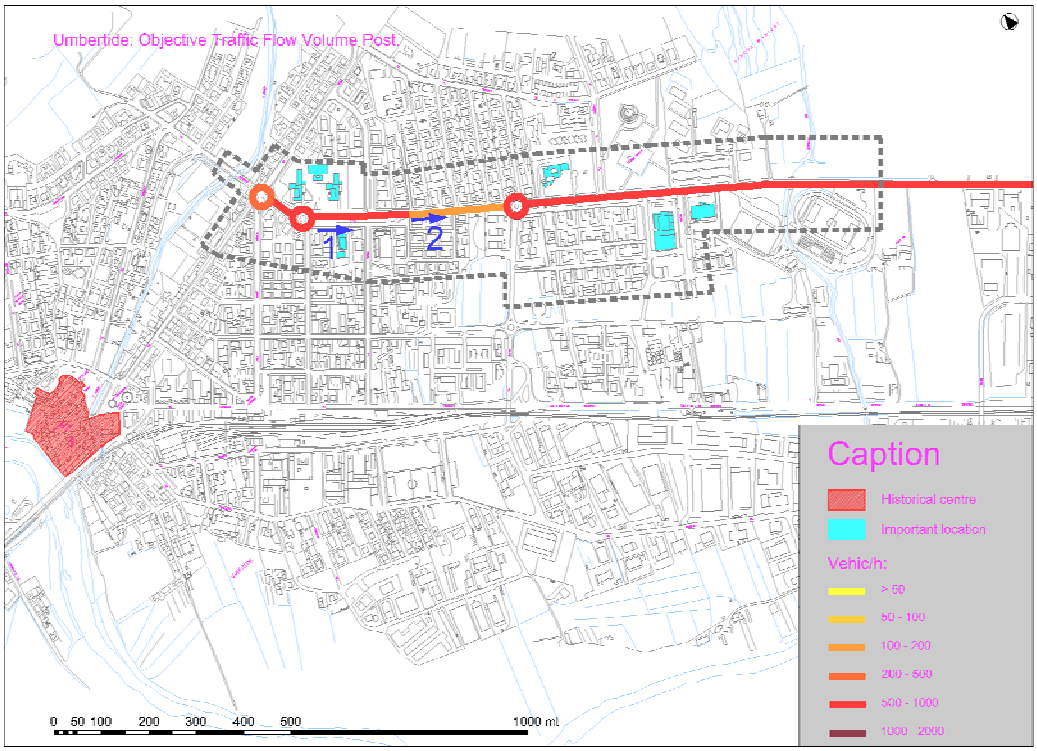




Before



Before


Umbertide: Objective Traffic Flow Volume Post.
1
2
Caption
Historical centre
Important location
Vehic/h:
> 50
50 - 100
100 - 200
200 - 500
500 - 1000
1000 - 2000
0 50 100 200 300 400 500 1000 mt

After


width of the sidewalks
traffic volume
in-house acoustic condition
acoustic conditions
3.99
0
0
0.88
Importance (0-5)
Satisfaction (0-1)

A SECURE ENVIRONMENT

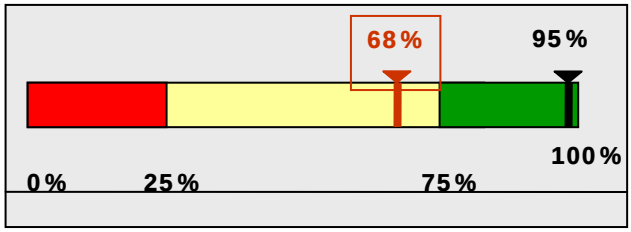
Number of streets lights

Number of lights/ meter [S]

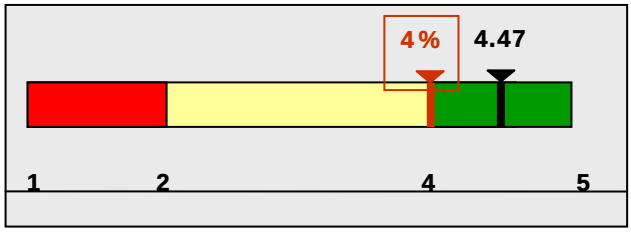
This parameter can give a rough indication on lighting conditions and can be simply evaluated with a survey.

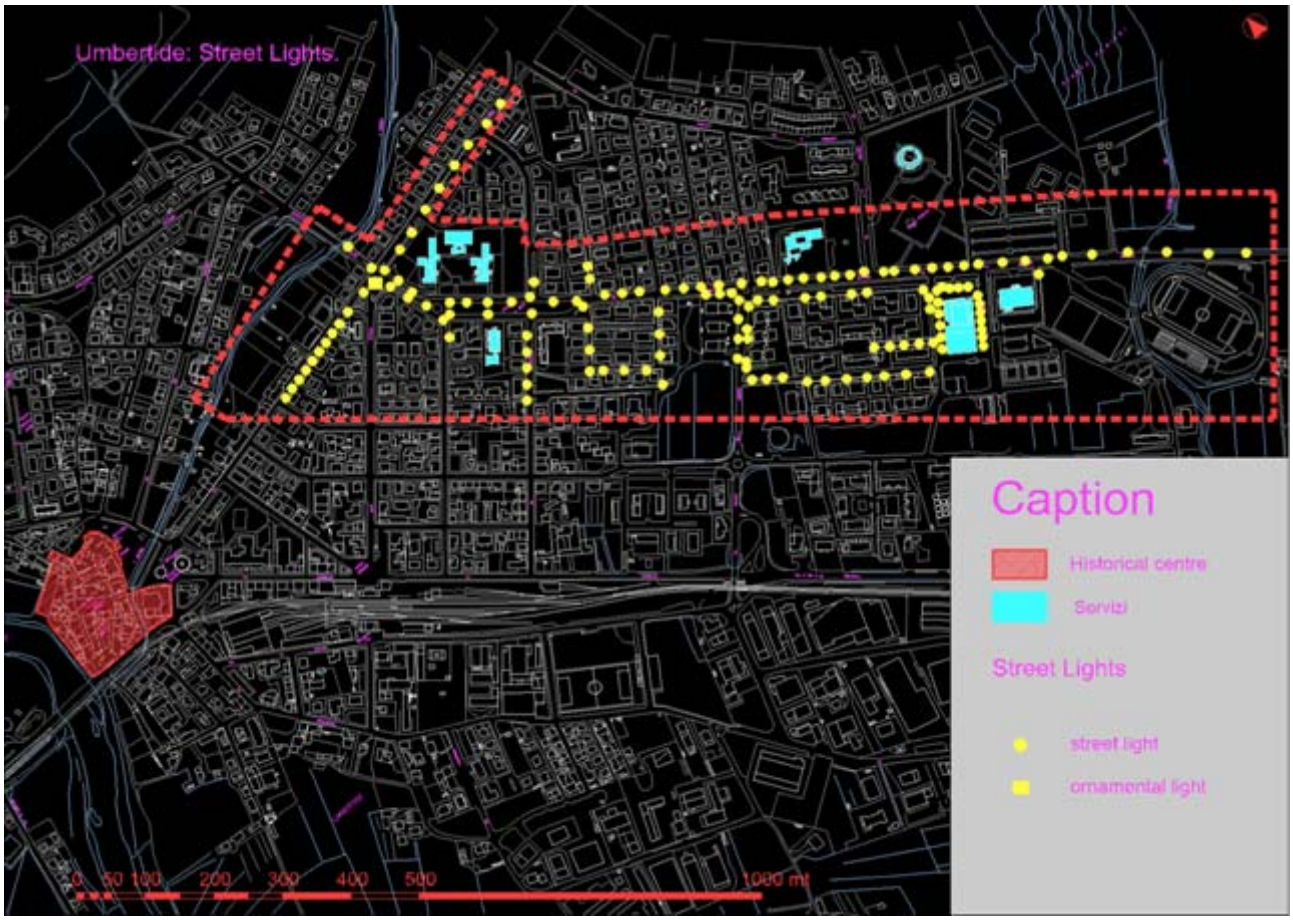
3.4 lamps/100 m (1 lamp every 30 m)

Are you satisfied with the number of street lights in this area?



How important is this aspect for you? (Likert scale 1-5)

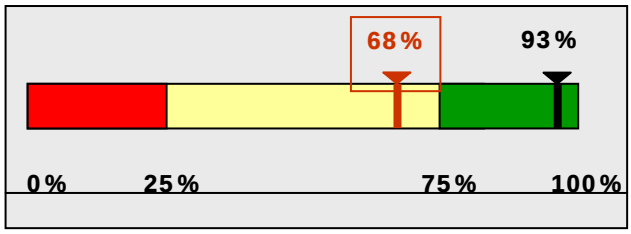




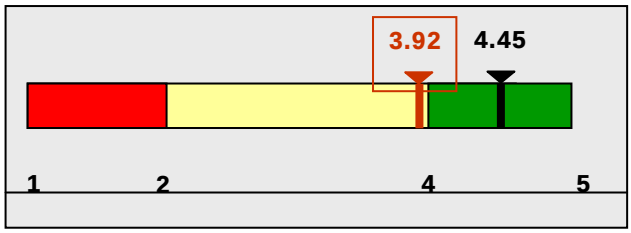
Before

18 Quality of the streets lights

Are you satisfied with the number of street lights in this area?



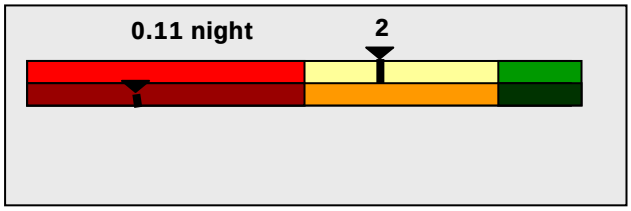
How important is this aspect for you? (Likert scale 1-5)



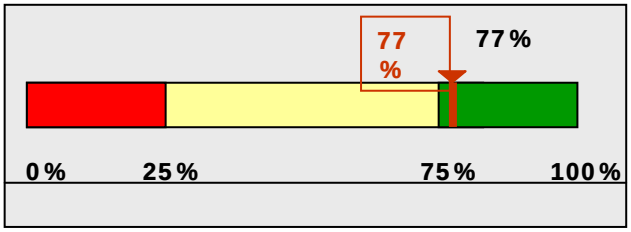
19 Number of activities

Number of open activities/100 m along the street (day/night) [S, Sr, So]

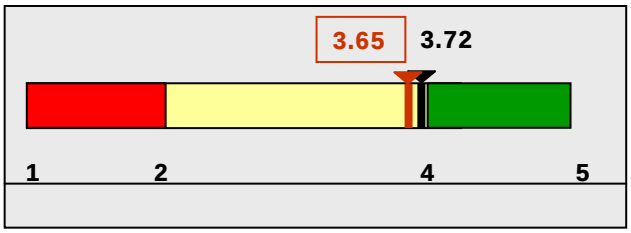
Activities in ground floors can enhance safety feeling and conditions. Separate counting for day and night, related to the length of the street may be used as a parameter.

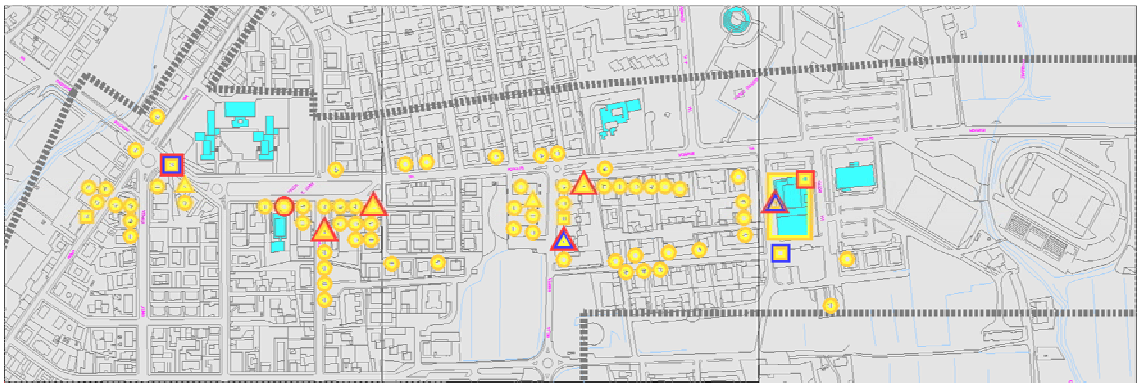


Are you satisfied with the number of activities opened at night?

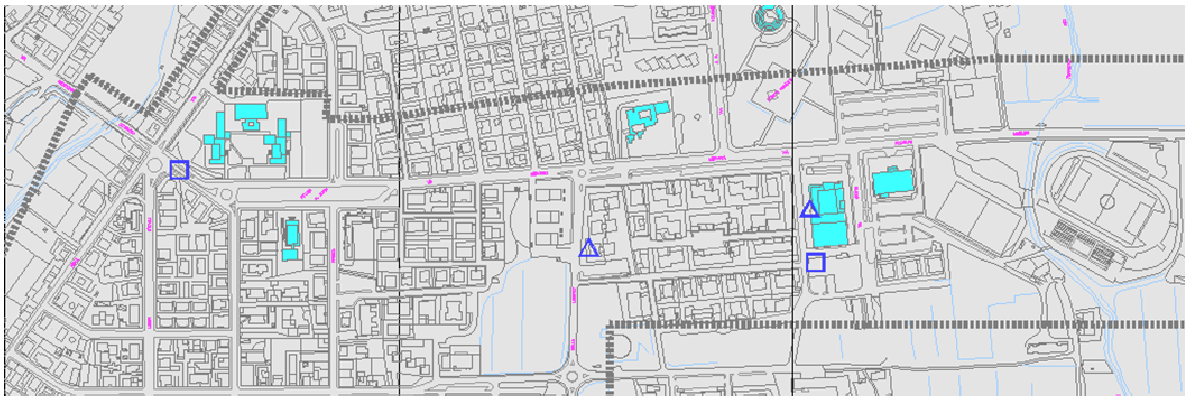


How important is this aspect for you? (Likert scale 1-5)





Before



Before

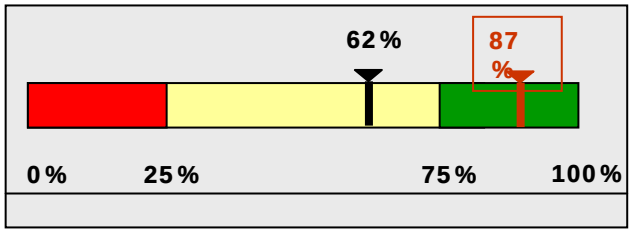
20 Presence of people

Number of "eyes and ears" along the street (open windows/100 m)

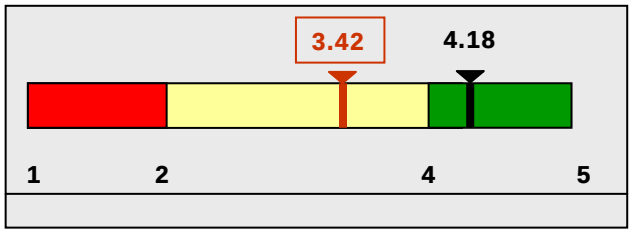
The presence of people enhances the security level, such as in streets that can be seen and "eared" by many people through the windows. Rough counting of "lively" windows (i.e. offices during the day, private houses during the night) with a direct view on the street may be an effective indicator.

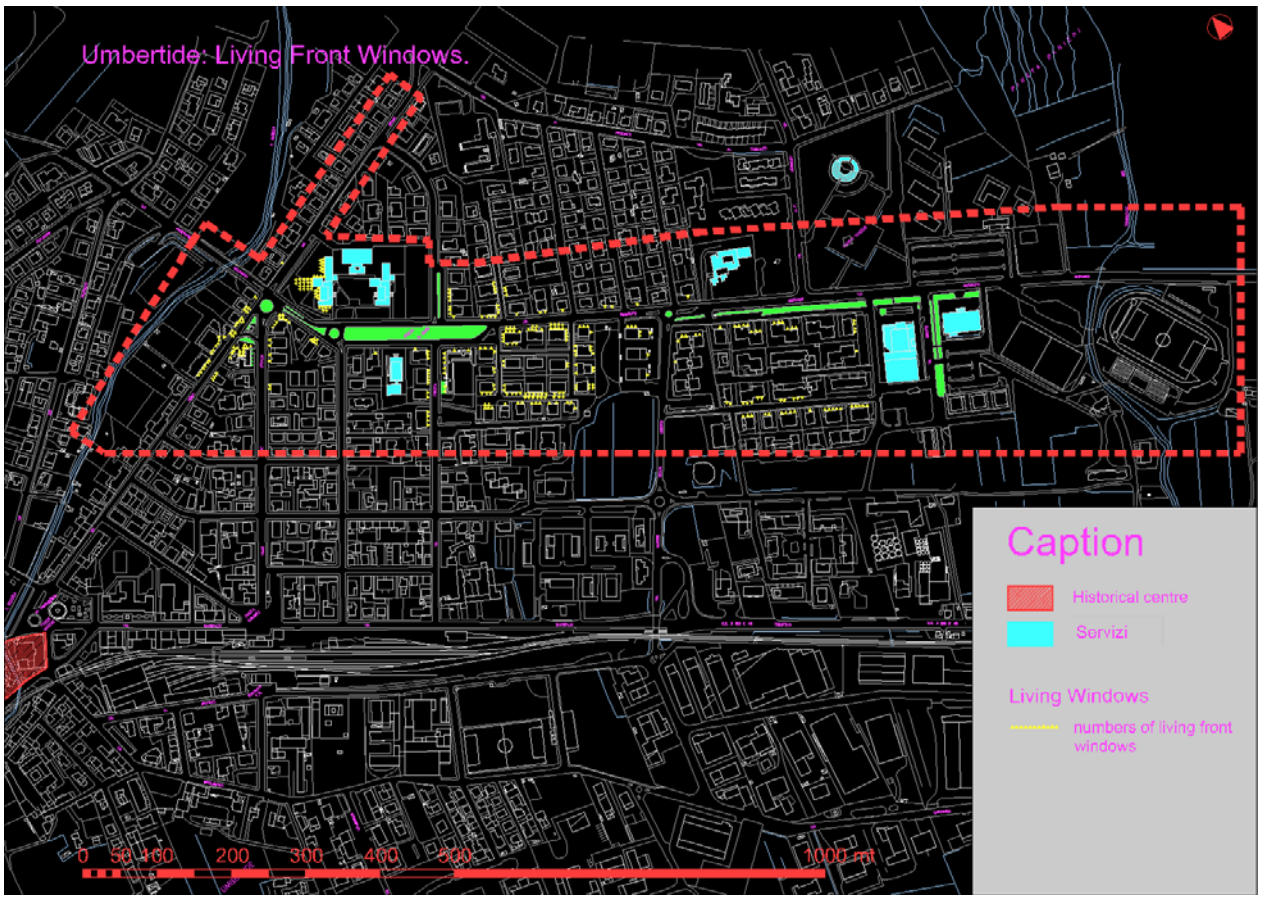
8.14

Are you satisfied with the presence of people, living and working in the area

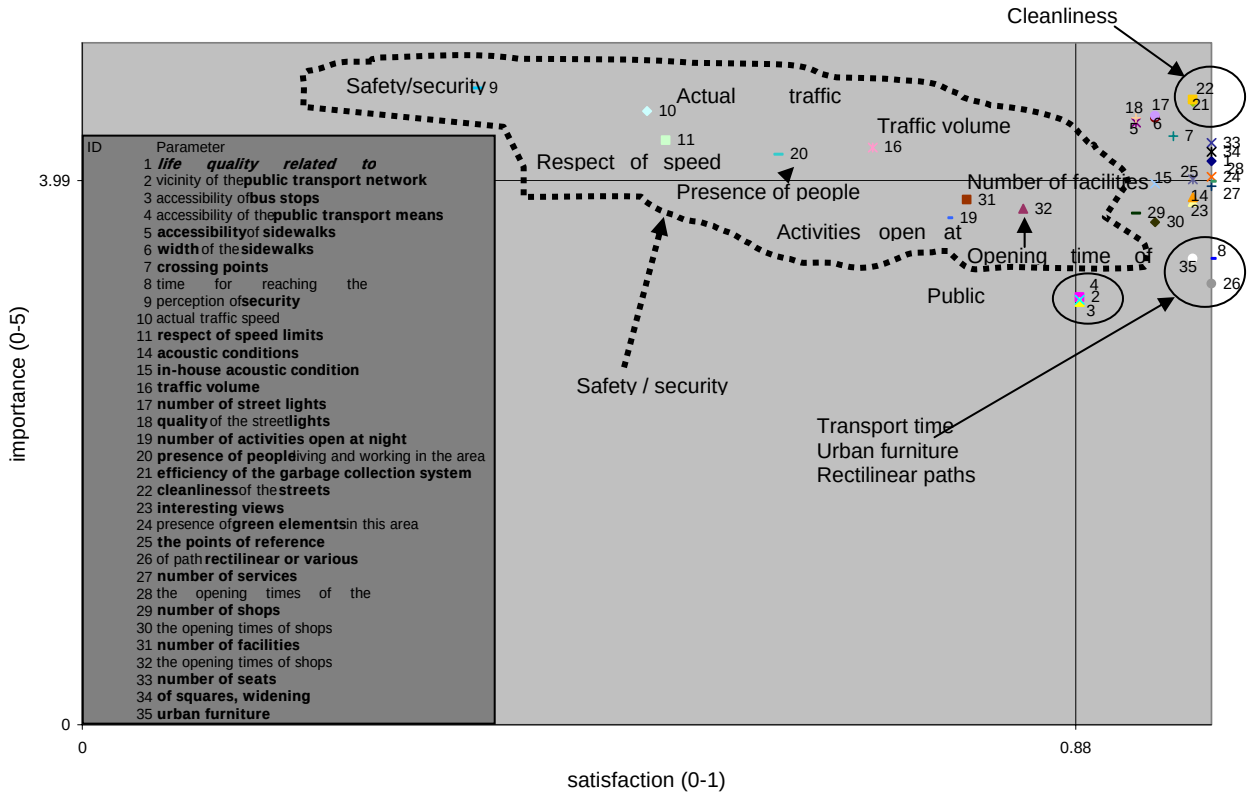


How important is this aspect for you? (Likert scale 1-5)





Before



A CLEAN ENVIRONMENT

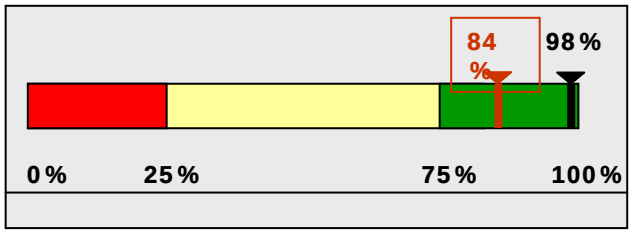
21 Efficiency of the garbage collection system

% of overfilled garbage bins (just before the garbage collection) [C, Ae]

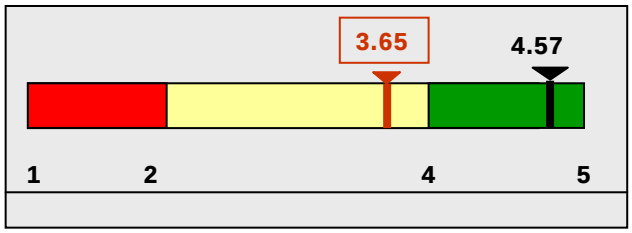
This parameter can give a measure of the efficiency of the garbage collection system.

0

Are you satisfied with the garbage collection system?



How important is this aspect for you? (Likert scale 1-5)



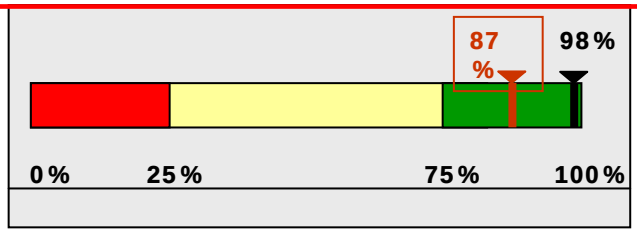
22 Cleanliness of the streets

Number of wastes left on the ground/m [C, Ae]

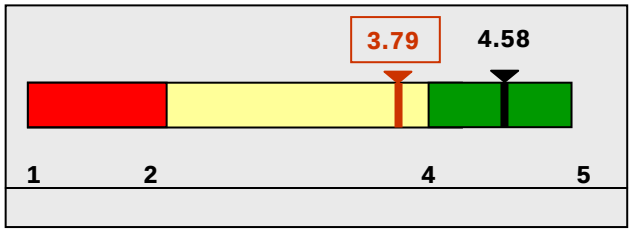
This parameters can be used to have an idea of the cleanliness of the environment, wastes can be classified (and separately counted) in three categories: small (i.e. cigarettes), medium (paper, bottles, etc.), large (house appliances, mattresses, etc.).

Nearly 0

Are you satisfied with the cleanliness of the street?



How important is this aspect for you? (Likert scale 1-5)

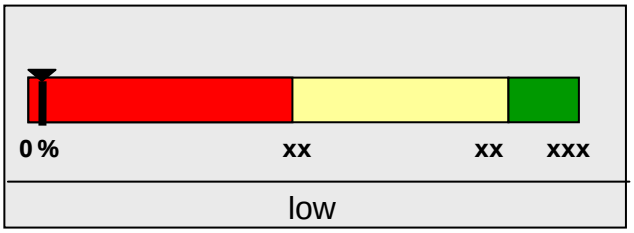


AN APPEALING ENVIRONMENT

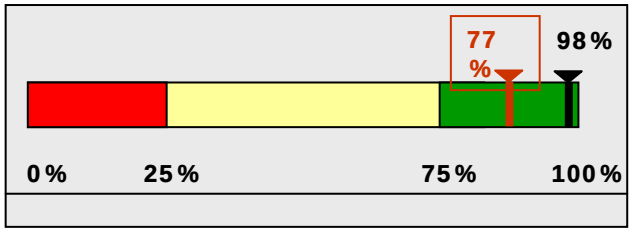
23 Interesting views

Number of interesting views present on the street

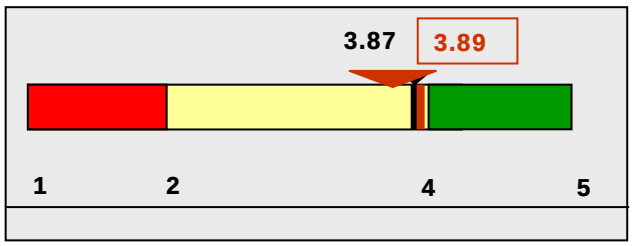
This parameter gives information about the number of interesting views present on the path.



Are you satisfied with the views present in this area

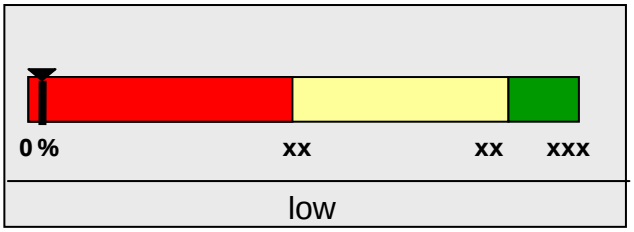


How important is this aspect for you? (Likert scale 1-5)

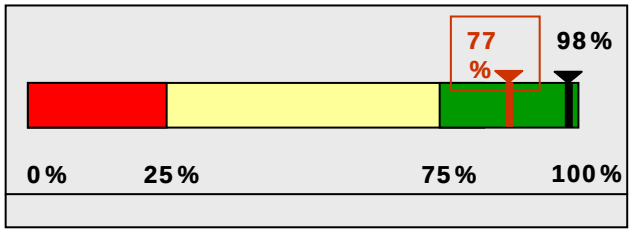


Number of interesting views present on the street

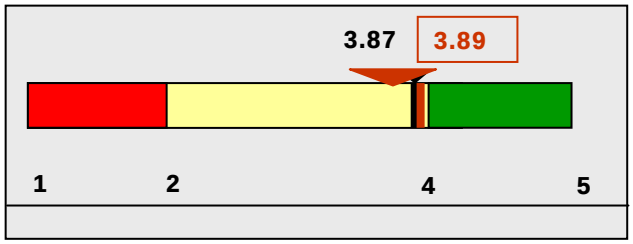
This parameter gives information about the number of interesting views present on the path.



Are you satisfied with the views present in this area



How important is this aspect for you? (Likert scale 1-5)



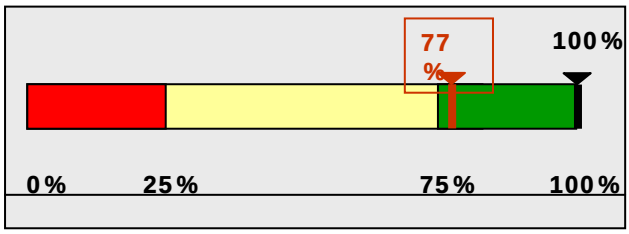
24 Presence of green elements in this area

Number of green elements per meter or % of green area per square meter

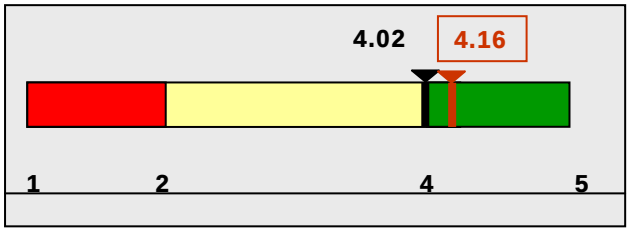
This parameter give us information about the green elements in the area.

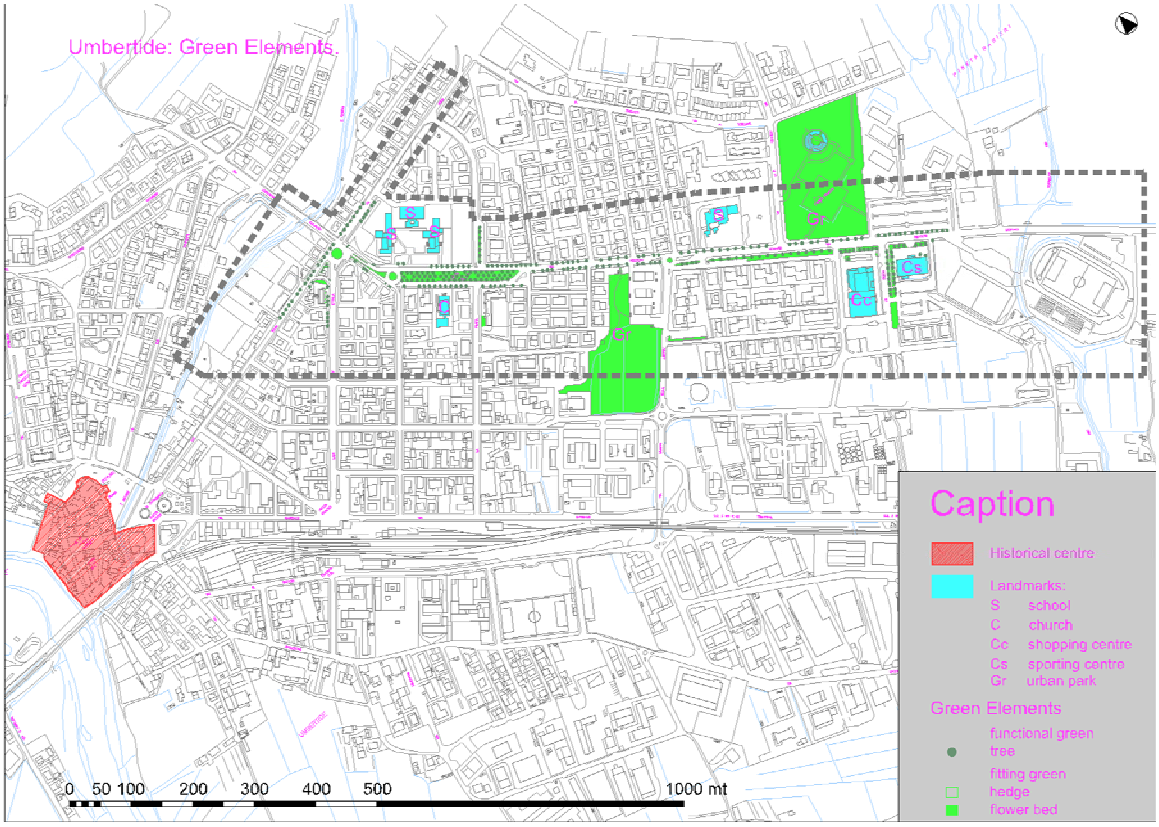
7.81

Are you satisfied with the presence of green elements in this area?



How important is this aspect for you? (Likert scale 1-5)

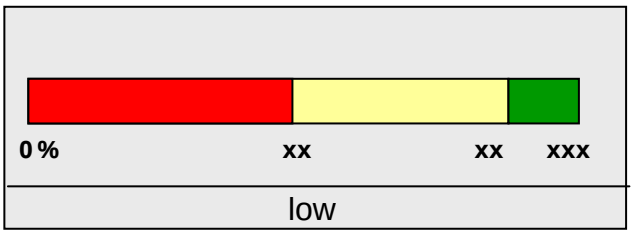




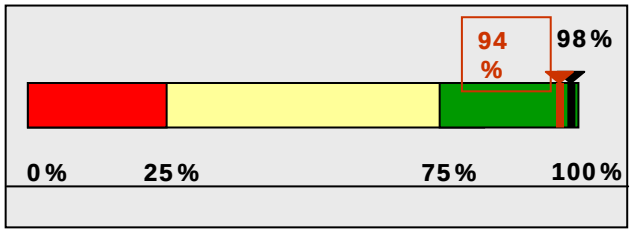
Before

25.The points of reference

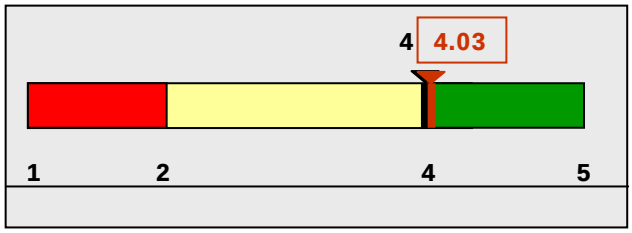
Number of landmarks and/or point of reference per square of 500x500 mt
Activities in ground floors can enhance safety feeling and conditions. Separate counting for day and night, related to the length of the street may be used as a parameter.



Are you satisfied with the points of reference in this area *(monuments, particular buildings, etc.)?*



How important is this aspect for you? (Likert scale 1-5)

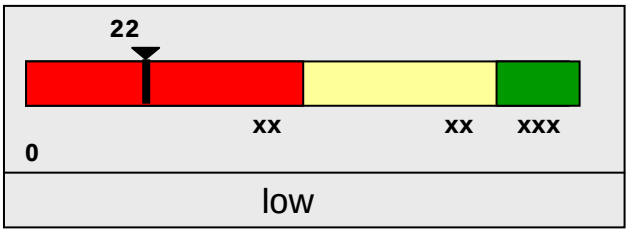


S school
C church
Cc shopping centre
Cs sporting centre
Gr urban park

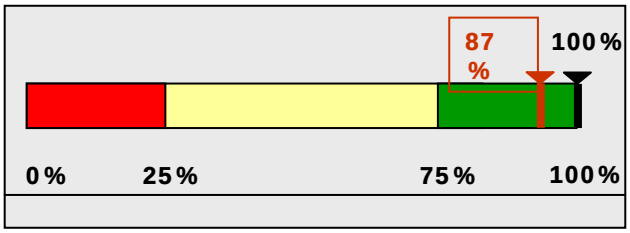
26 Path rectilinear or various

% of non rectilinear length of the path

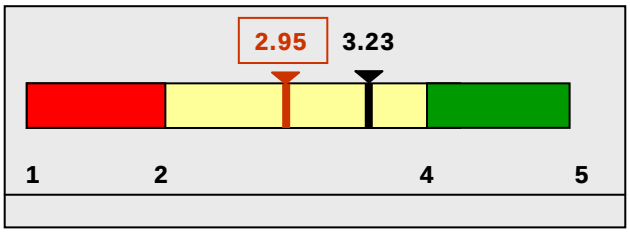
This parameter give us information about path without interruption in the case study area.

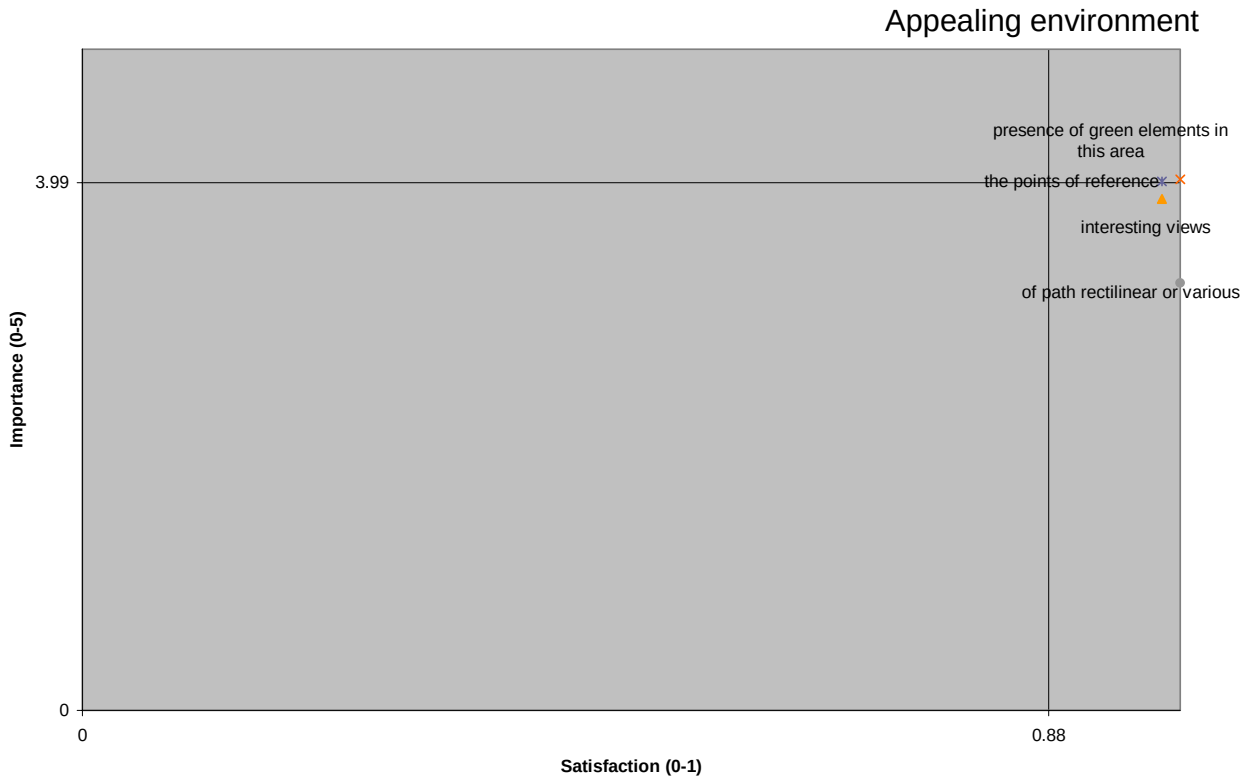


Are you satisfied with the kind of path rectilinear or various?



How important is this aspect for you? (Likert scale 1-5)



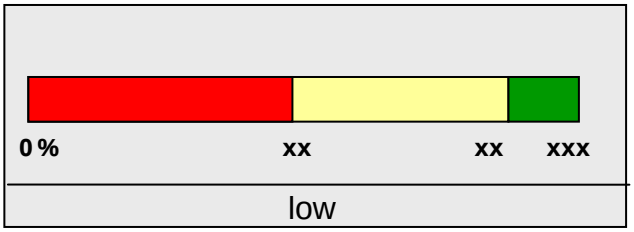


A BUSY ENVIRONMENT

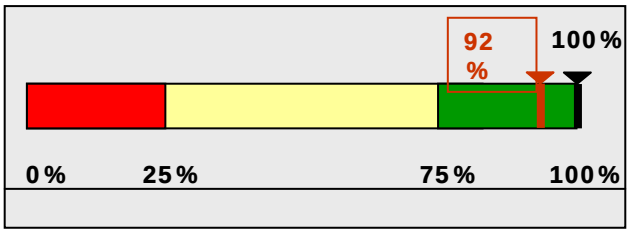
27 Number of services

Number of services/per square of 500x500 mt (opening time: day/night)

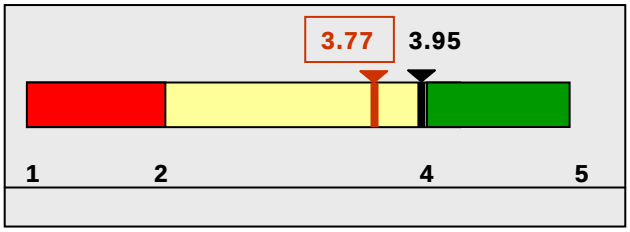
This parameter has to be used together with the surveying of the opening and closing time (day and night) so to have a measure of the "business" degree.

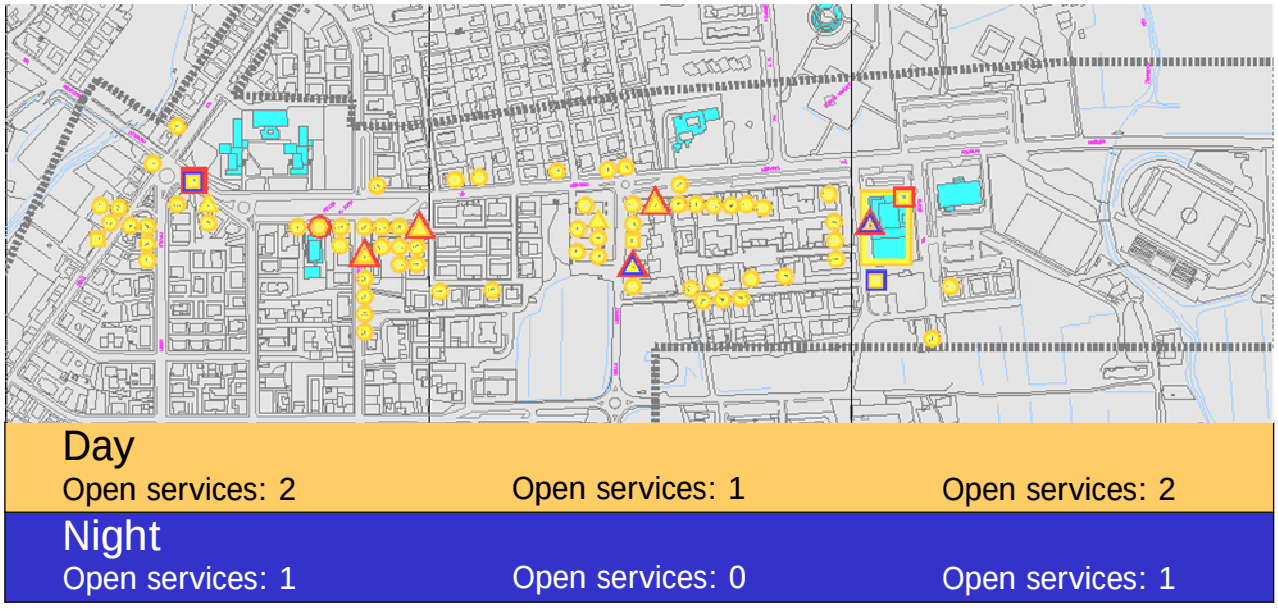


Are you satisfied with the number of services?



How important is this aspect for you? (Likert scale 1-5)

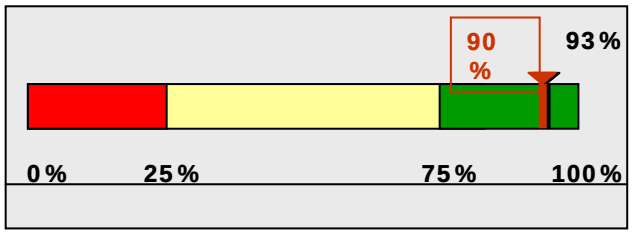


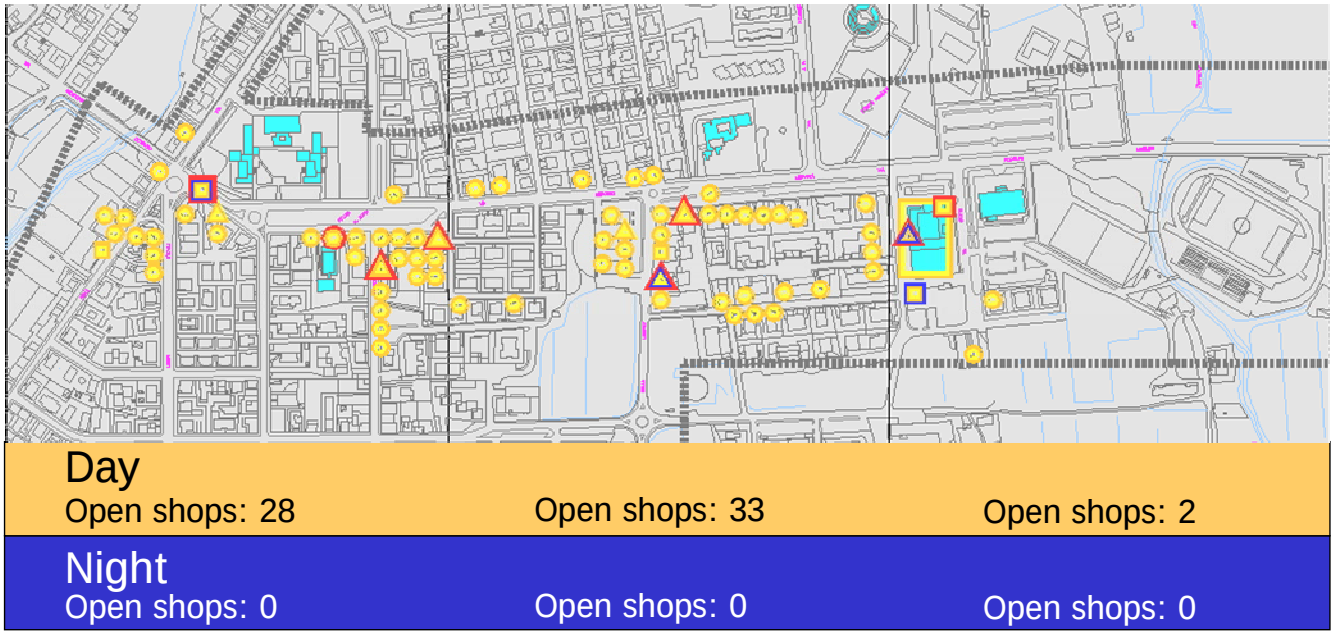


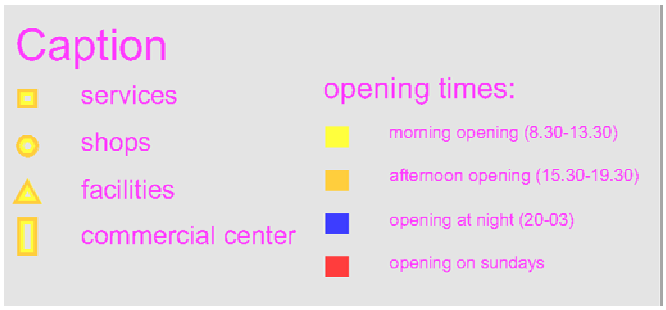
29 Number of shops

Number of shops per type: daily, weekly/per square of 500x500 mt, and opening time (day/night)

Are you satisfied with the number of shops?



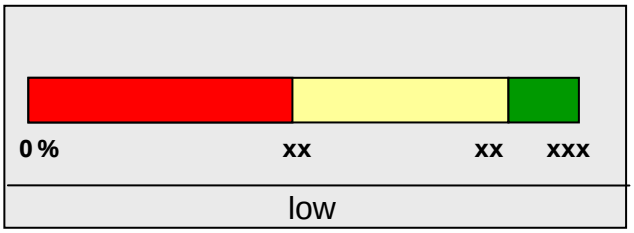




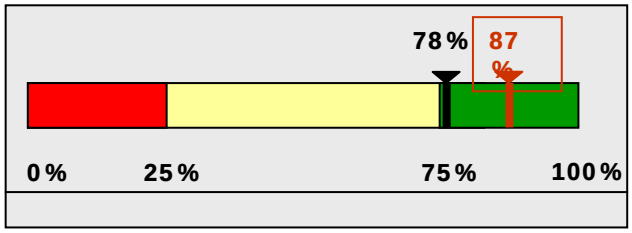
Before

31 Number of facilities

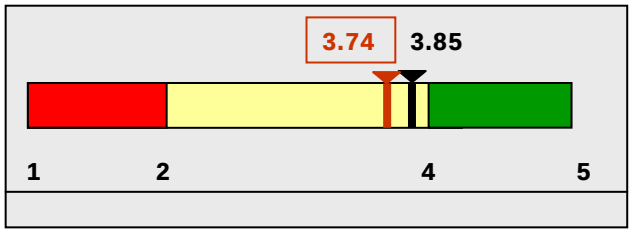
Number of facilities (bar, coffee shop, restaurants, kiosks, etc)/square of 500x500 mt, and opening time (day/night)

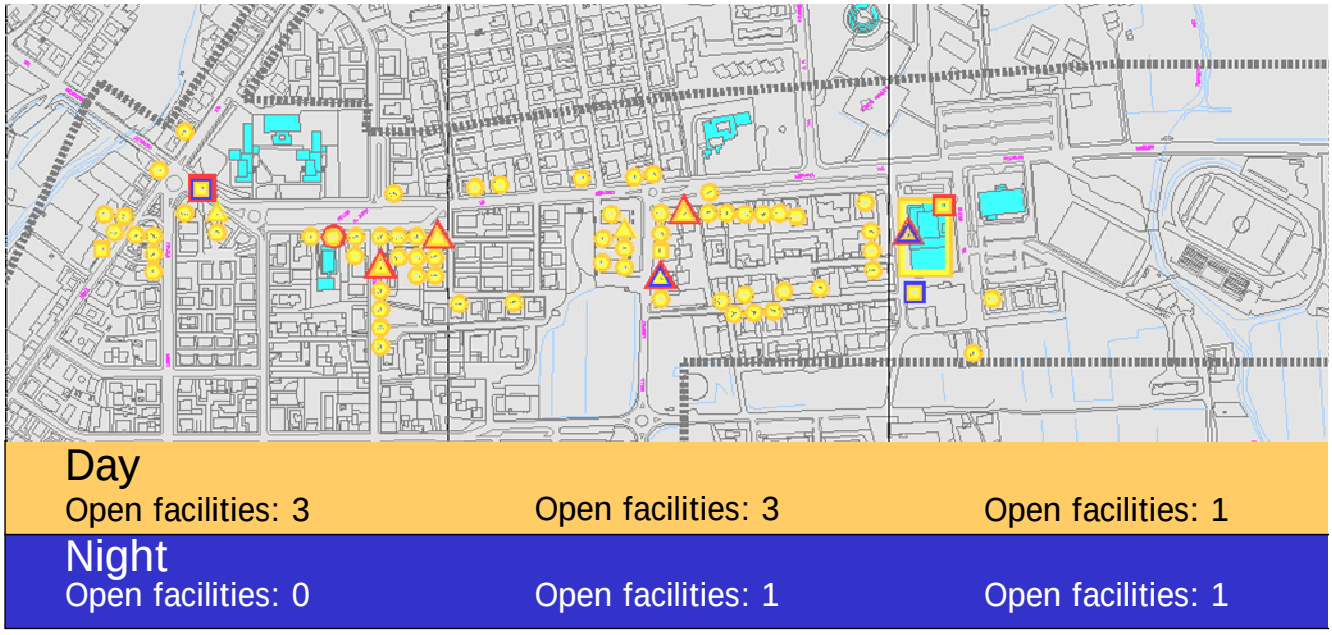


Are you satisfied with the number of facilities?



How important is this aspect for you? (Likert scale 1-5)



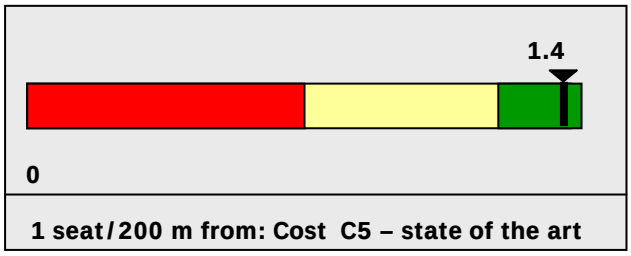


busy environment

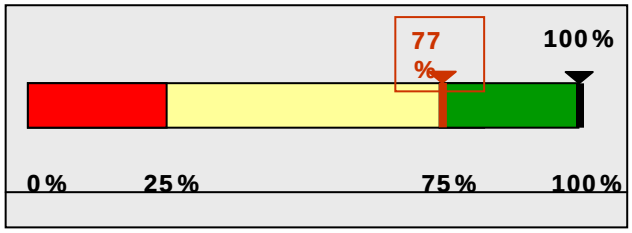
A LIVELY ENVIRONMENT

Number of seats

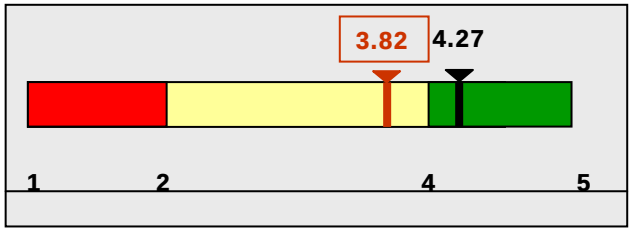
Number of proper and improper seats/100 m (benches, stools, sitting walls, balustrades, rails, columns)
This parameter give us information about the number of seats and their usability in the case study area.

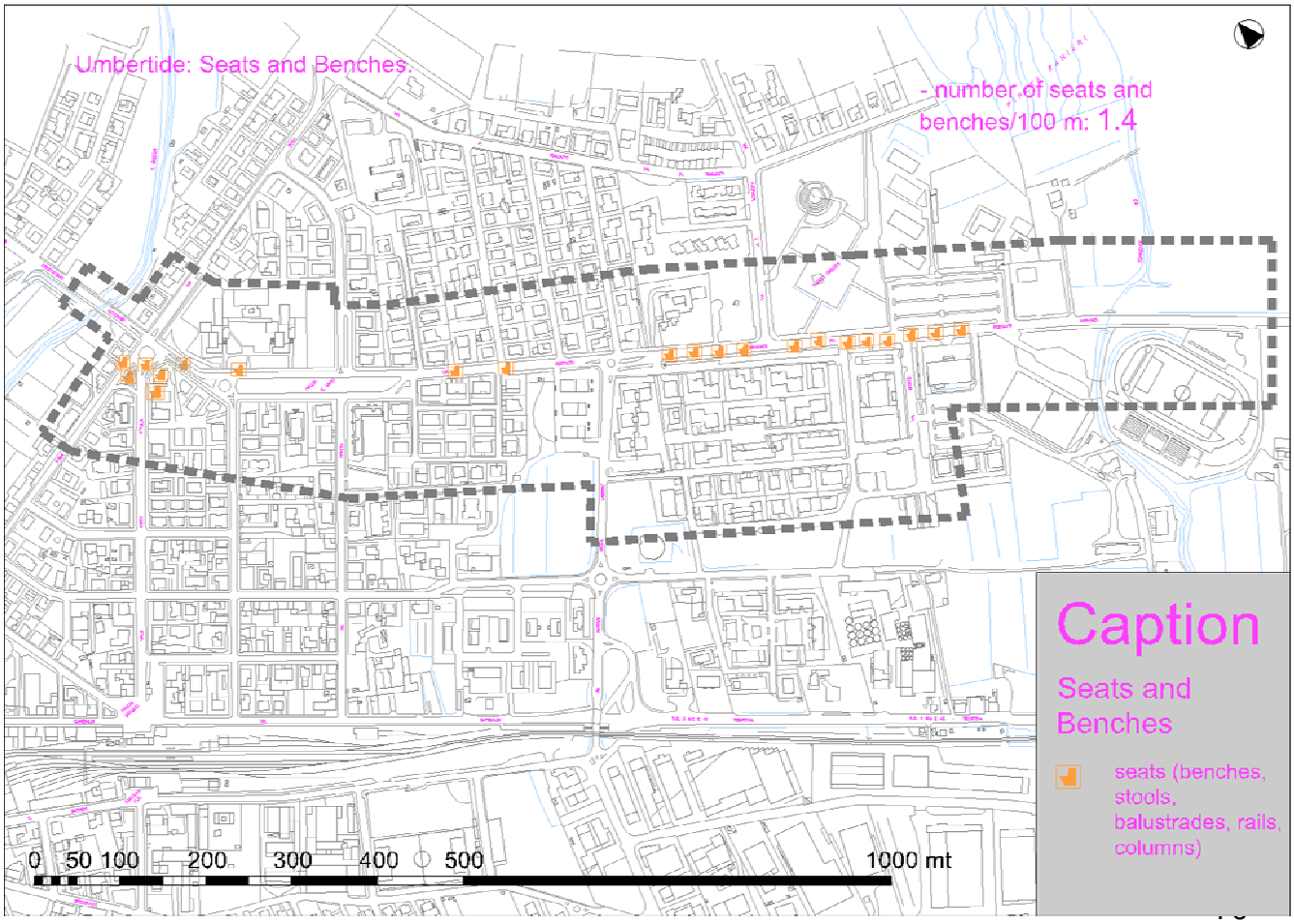


Are you satisfied with the number of seats?



How important is this aspect for you? (Likert scale 1-5)

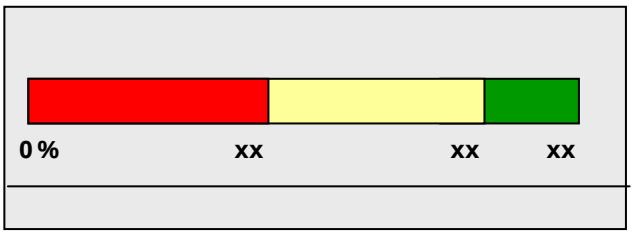




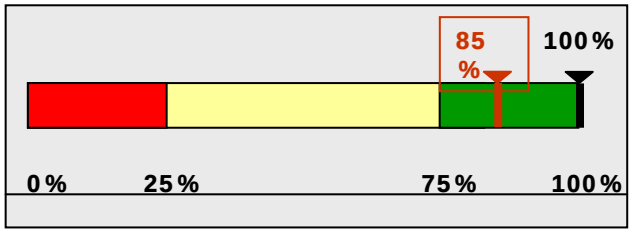
Before

Number of squares, widenings

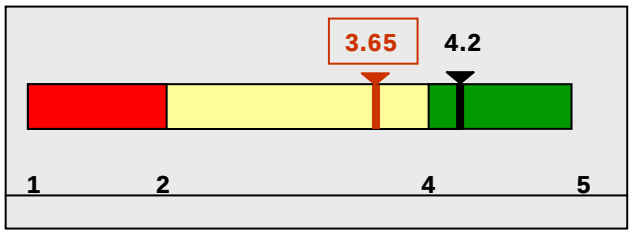
Number of squares, widenings
This parameter give us information about the number of squares and widening in the case study area.

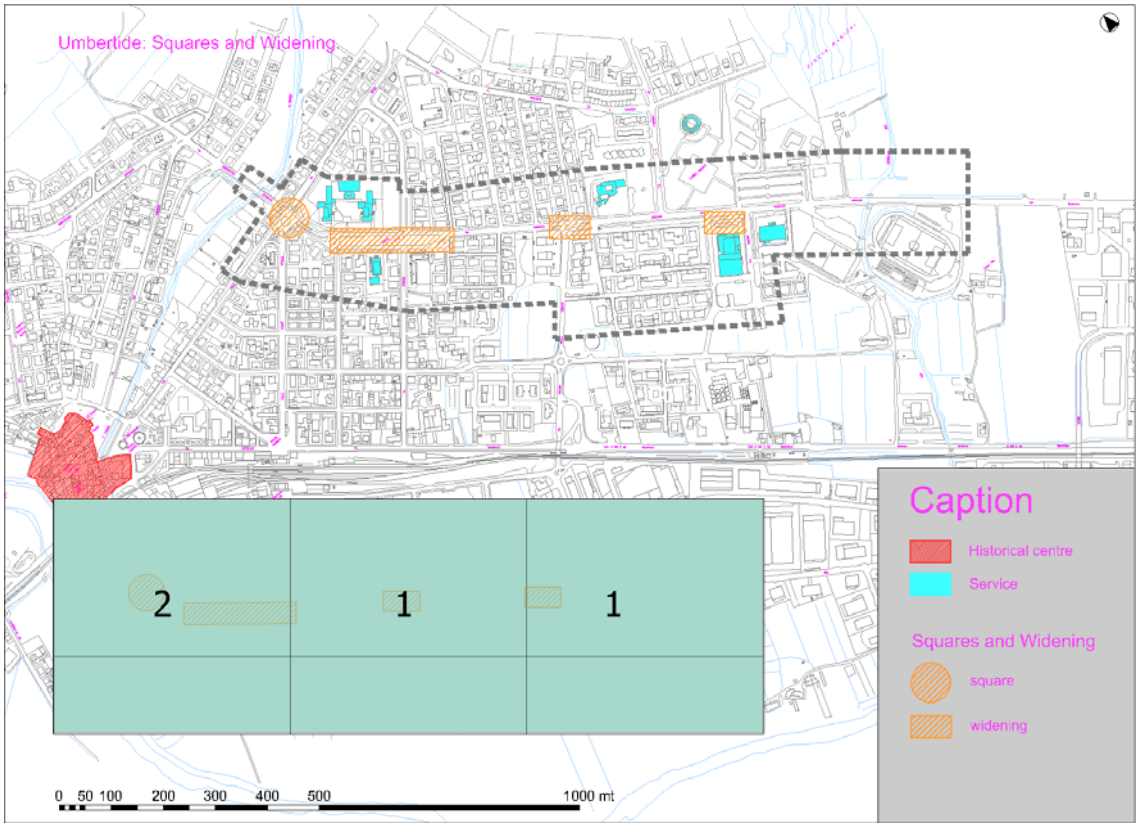


Are you satisfied with the number of squares, widening, etc.



How important is this aspect for you? (Likert scale 1-5)

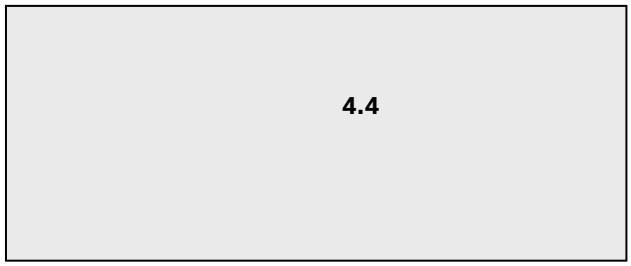




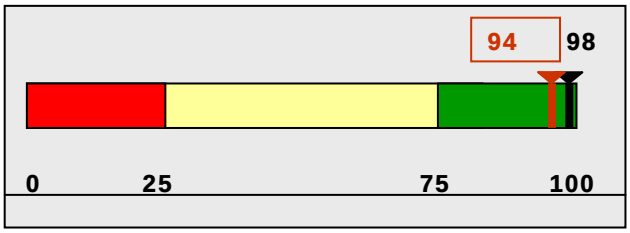
Before

35 Number of urban furniture

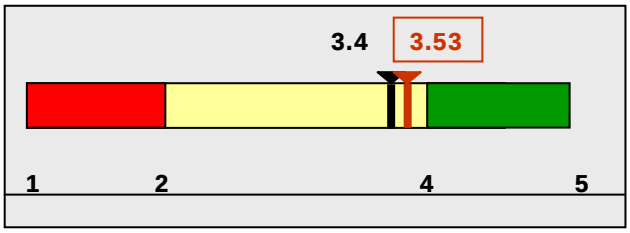
Number of elements of urban furniture /100 m

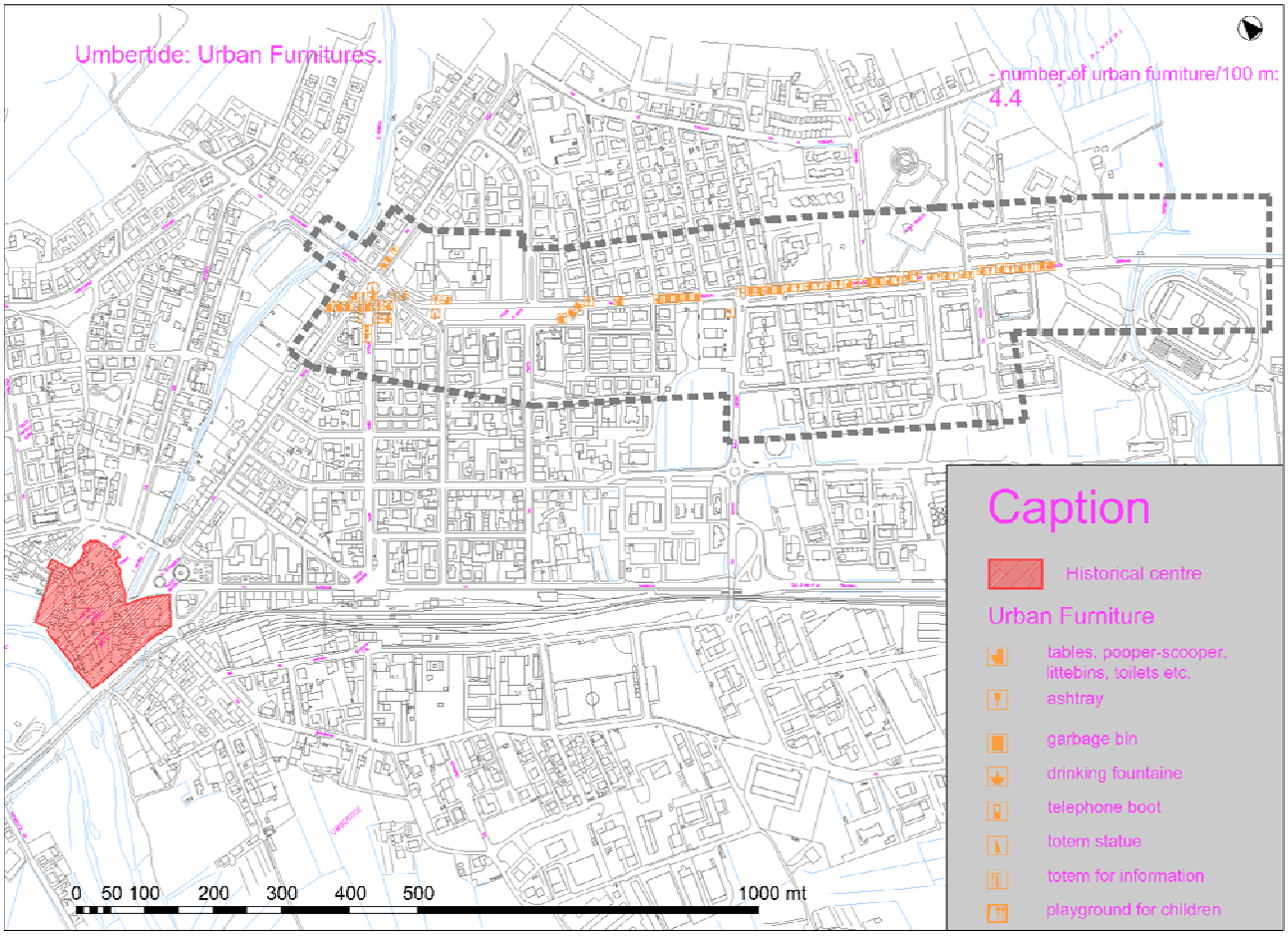


Are you satisfied with the number of uraban furniture?



How important is this aspect for you? (Likert scale 1-5)

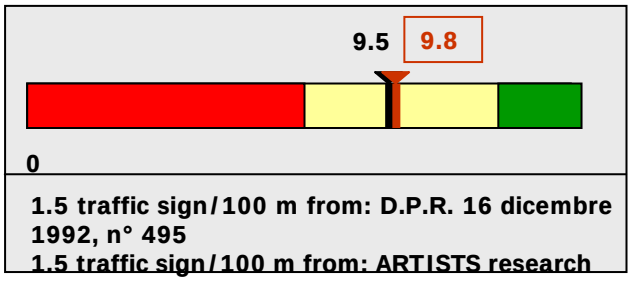




Before

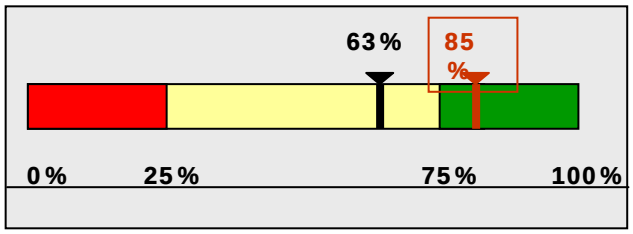
36 Number of urban traffic signs

Number of elements of urban traffic signs /100 m along the street

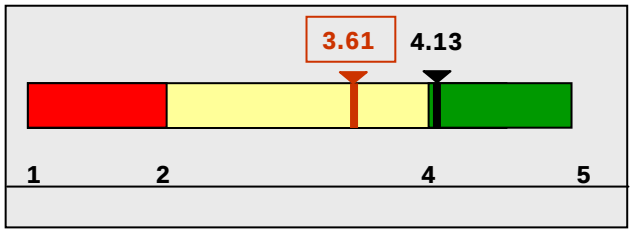


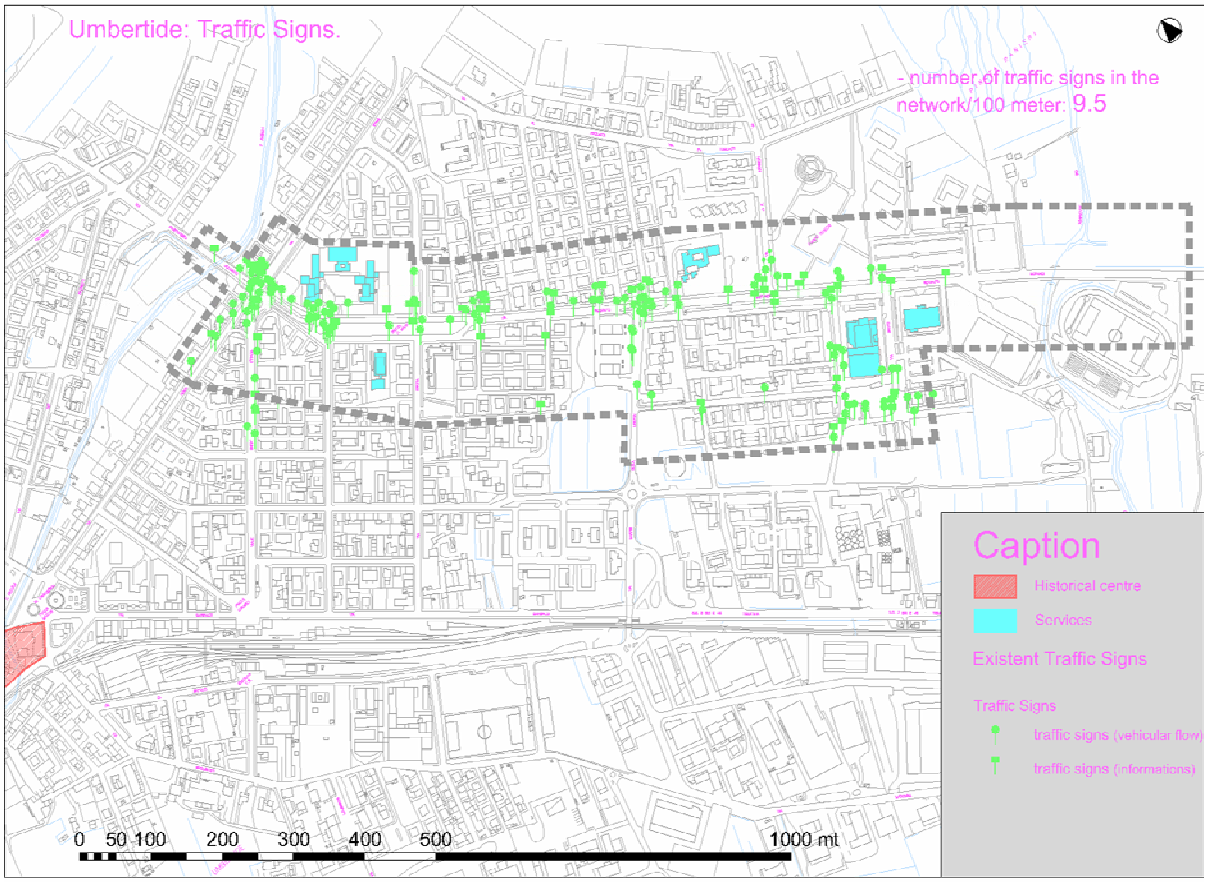
- **1.5 traffic sign/100 m (Italy)**
- **1.5 traffic sign/100 m (Europe)**

Are you satisfied with the number of urban furniture?

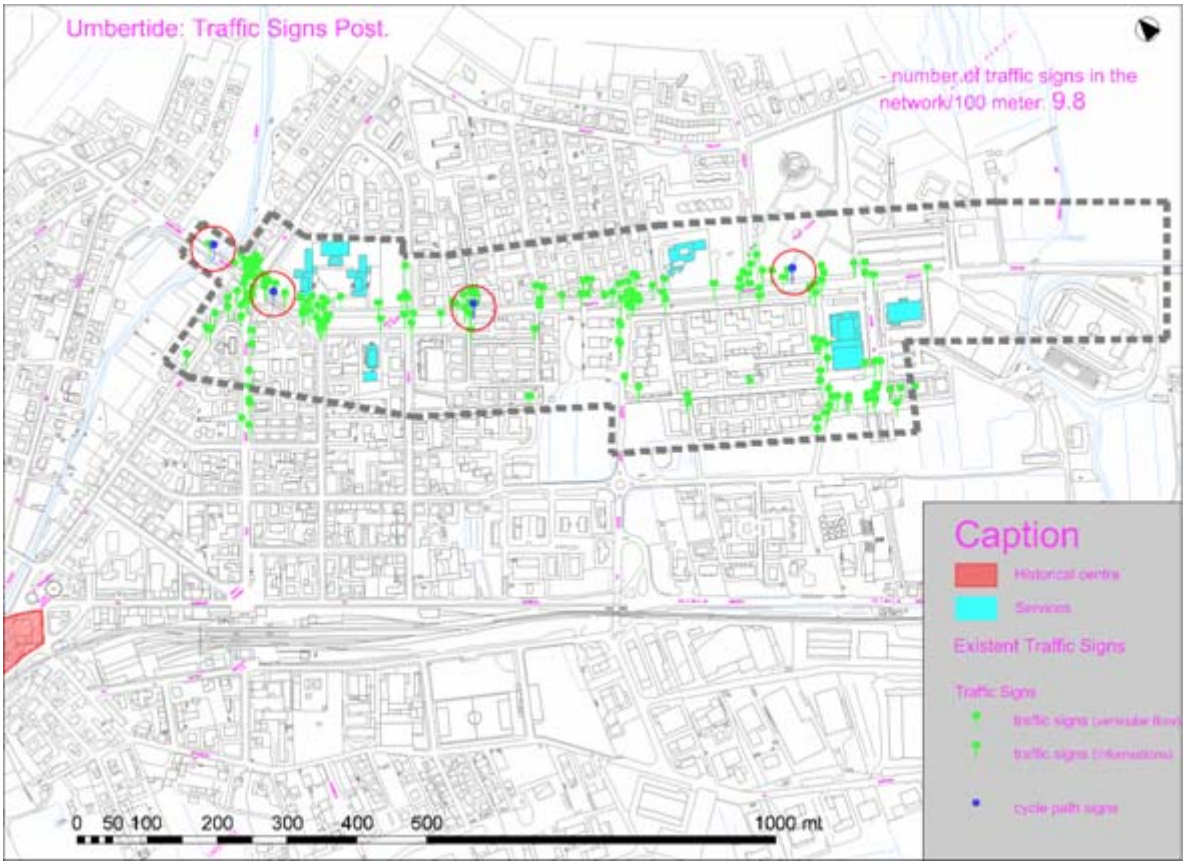


How important is this aspect for you? (Likert scale 1-5)





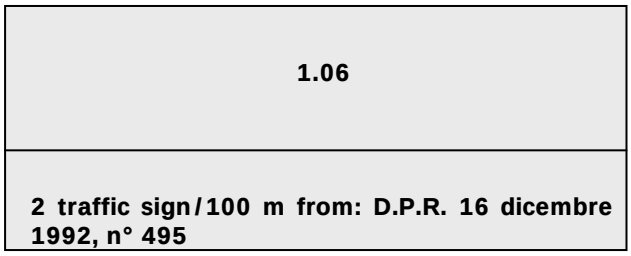
Before



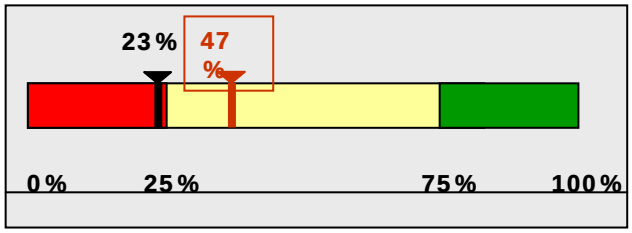
After

Number of billboards

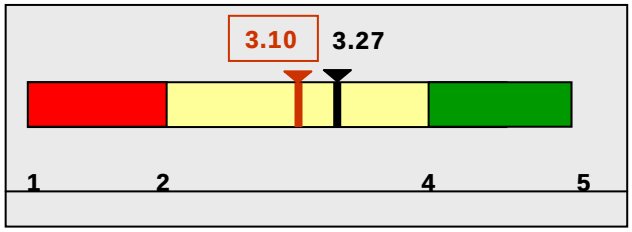
Number of billboards/100 m along the street

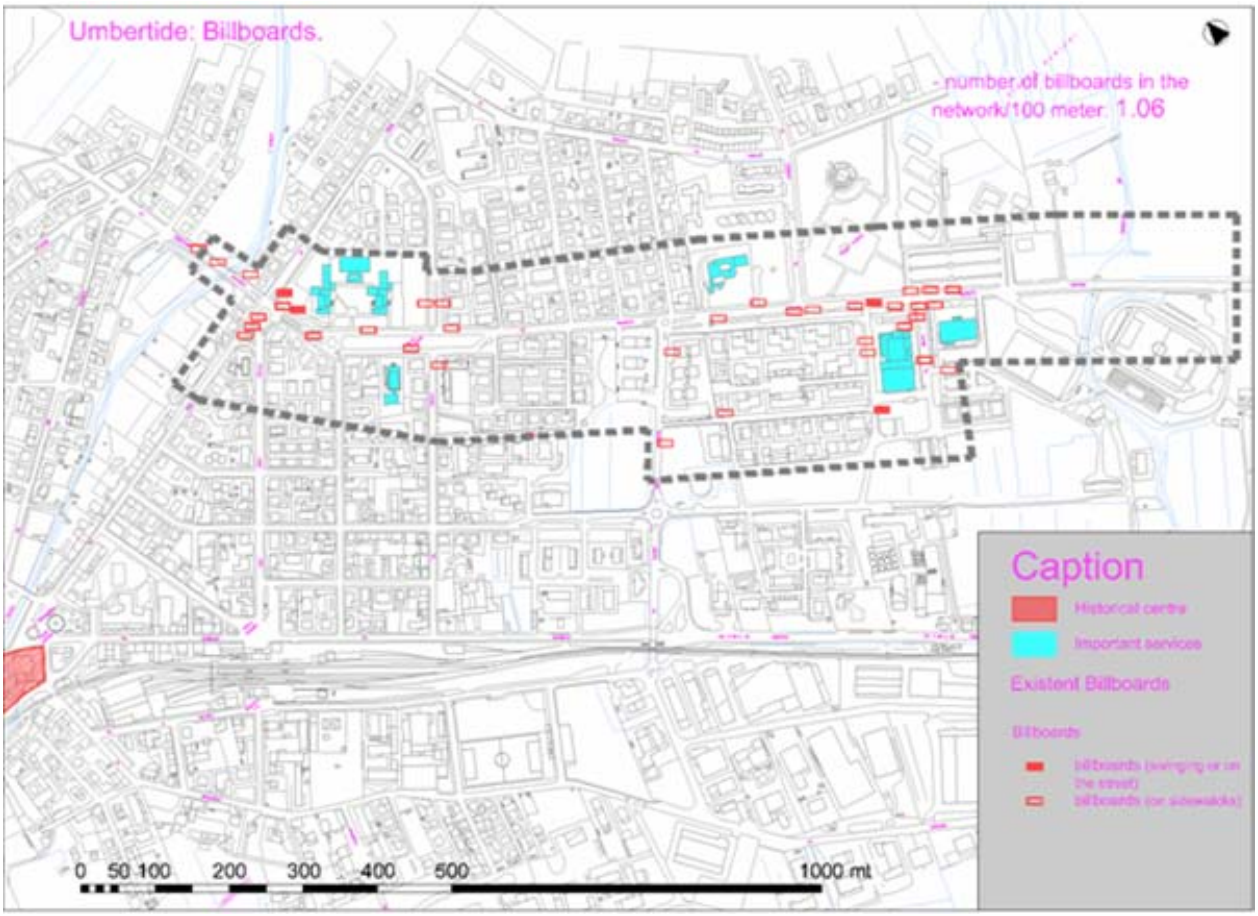


Are you satisfied with the number of uraban furniture?



How important is this aspect for you? (Likert scale 1-5)





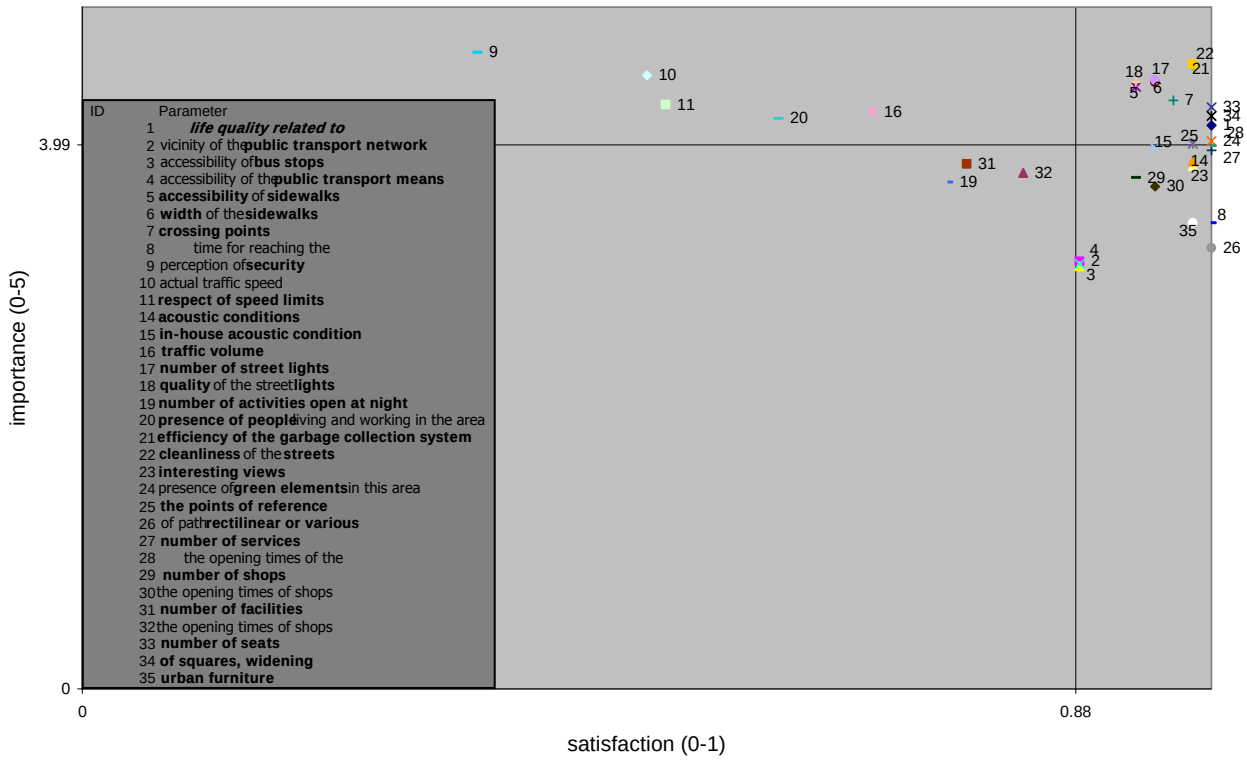
Before

CHAP.8 IN DEPTH ANALYSIS OF THE RESULTS

General assessment of the result

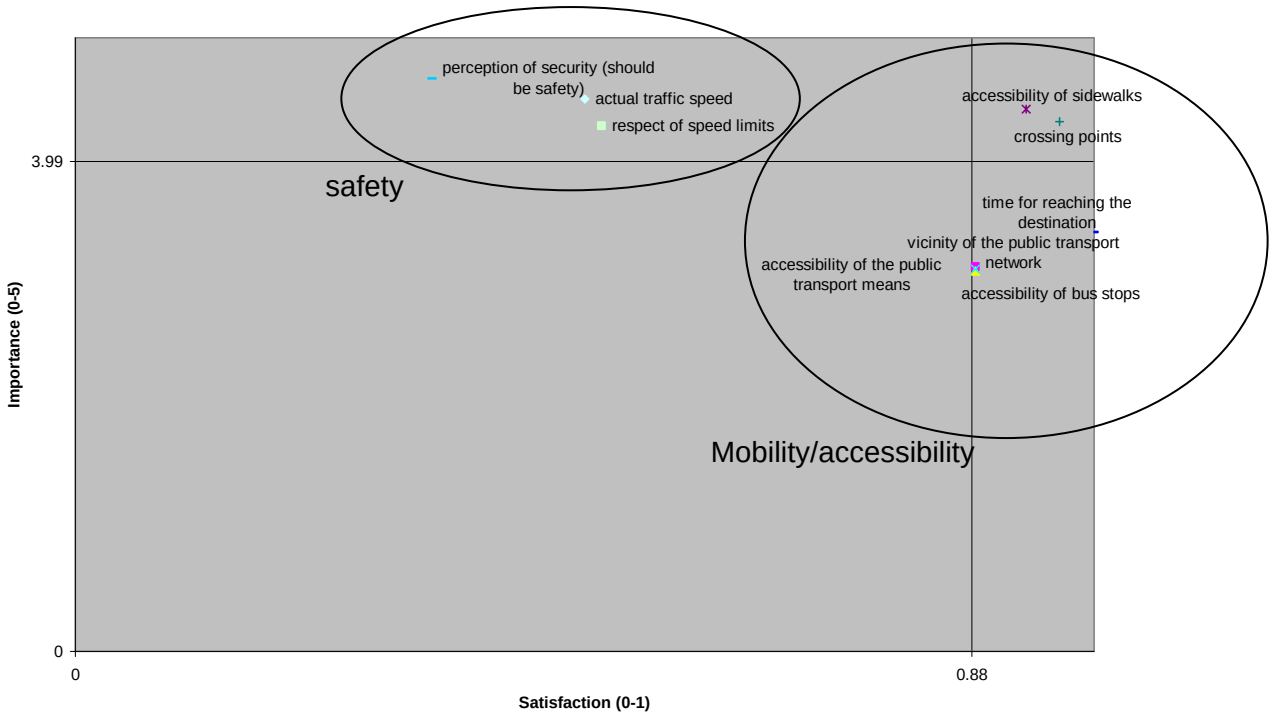
Subjective evaluation: Users' Interview result

- *The overall impression of the zone given by users is very positive*
- *Users are unsatisfied about safety and security conditions*
- *Cleanliness is very important*
- *Mobility/accessibility aspects (time and space) are not regarded as very important (this may be very different in large cities, especially with regard to time)*
- *Quality aspects, as the appeal, are not regarded as not very important*
- *People name that they are satisfied with QoL related to mobility, nevertheless they don't think that this is very important*
- *Young people think that there is a lack of meeting point*



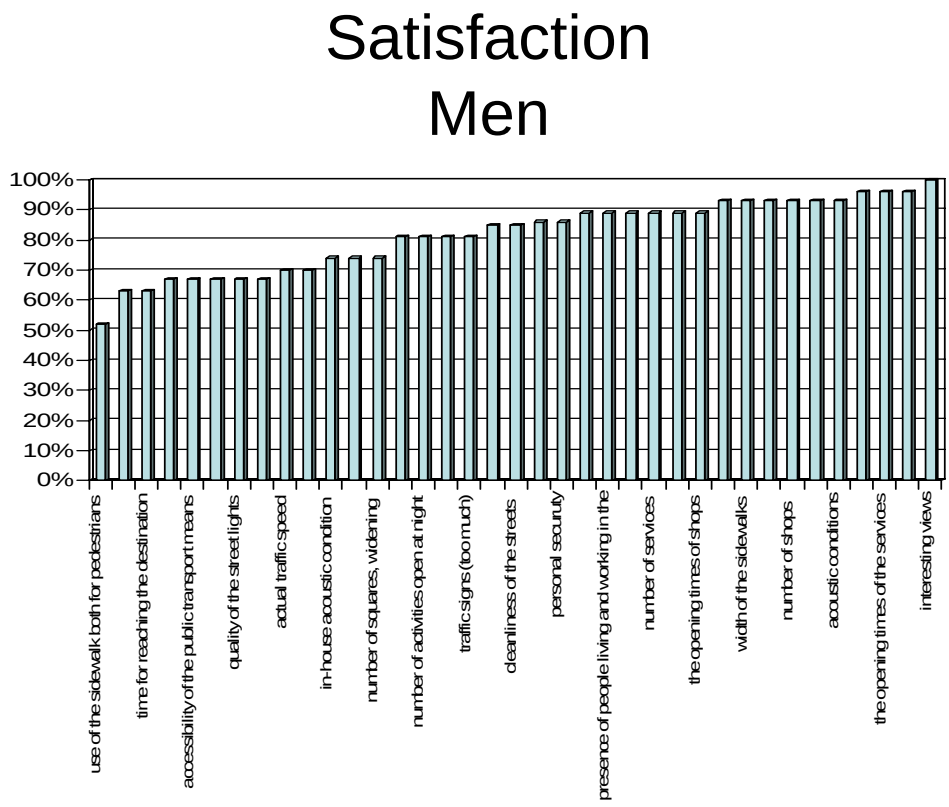
Before

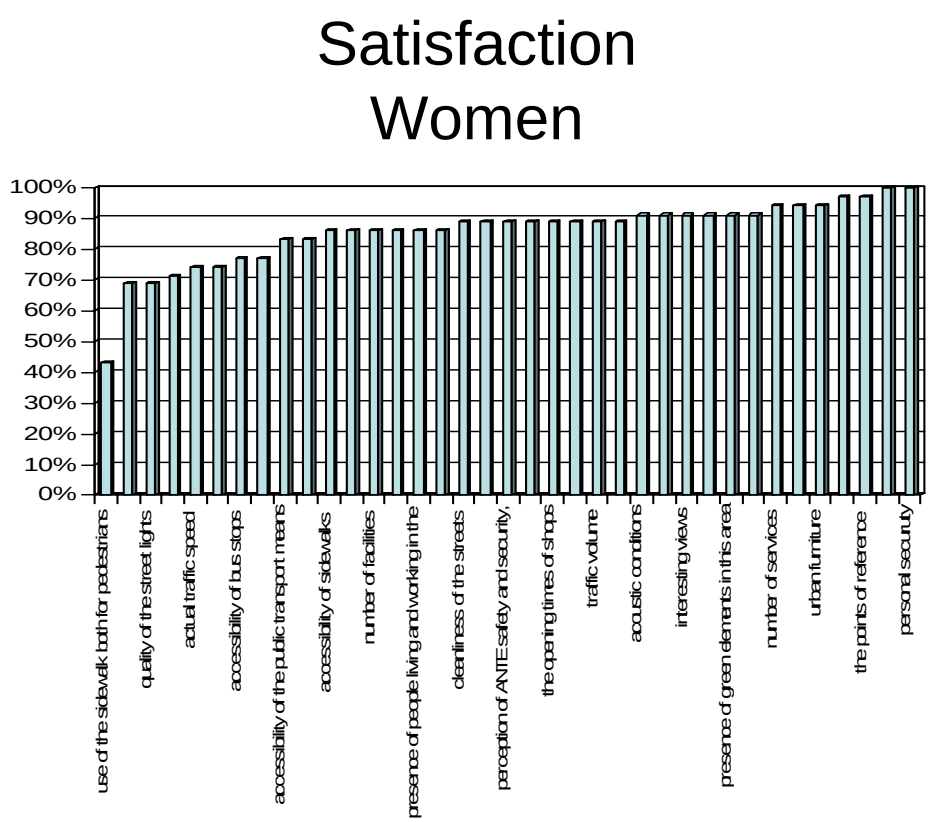
Satisfaction-Importance chart for users, focus on safety and accessibility fields.



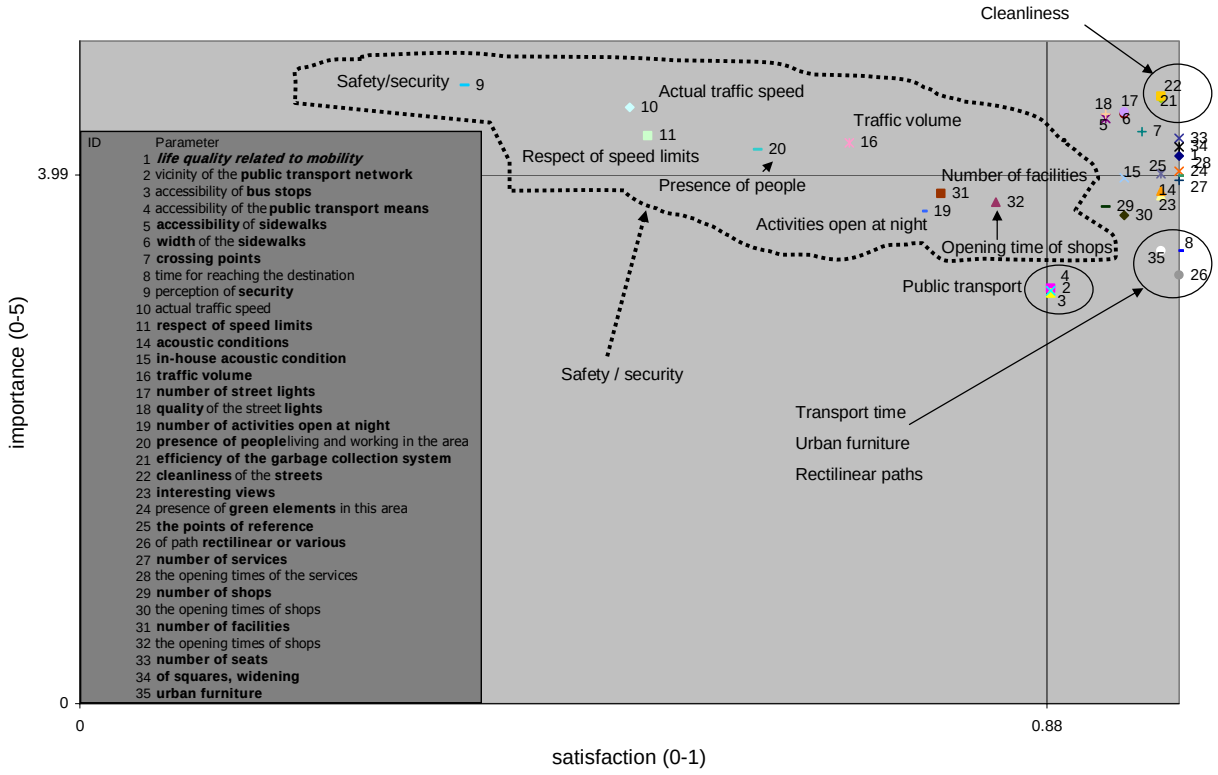
Before

Women are satisfied with appealing and living fields as with the points of reference, urban furniture or number of squares; moreover all of them declare they are satisfied with personal security and (as we will) with the offer of cycle path. Men pay more attention to busy and appealing fields, in particular they are satisfied with interesting ciews, green elements in the area and opening time of shops and services, while they are usatisfied with mobility field.

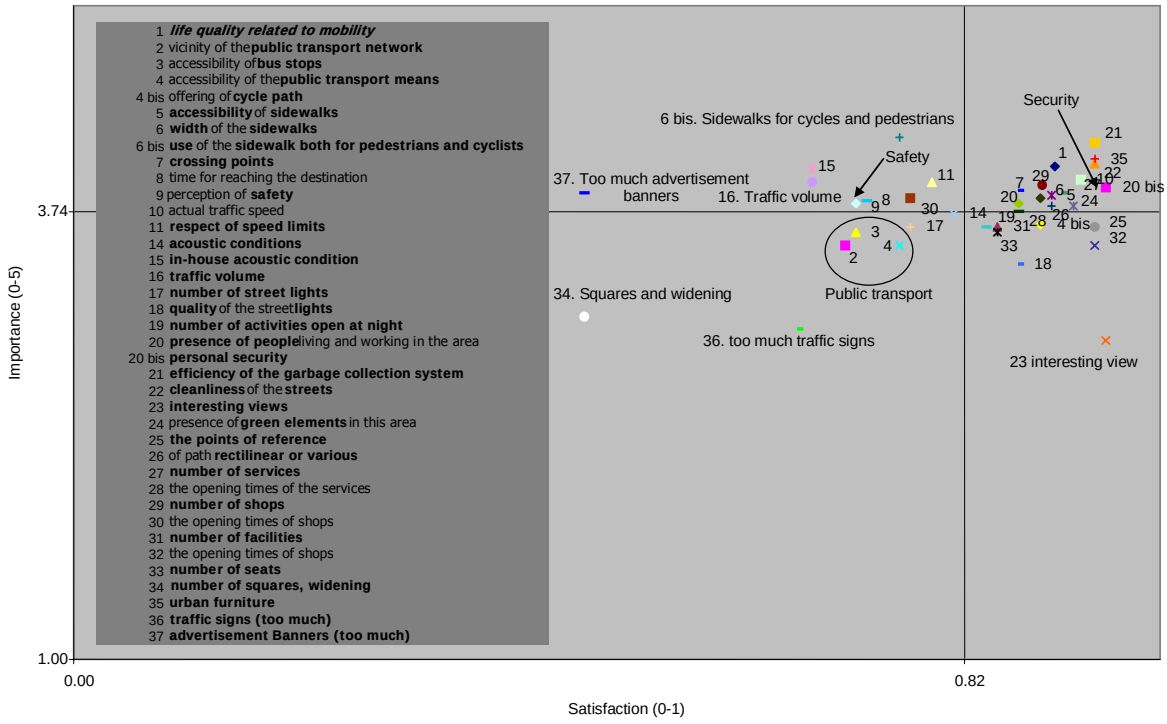




Satisfaction-Importance chart for users, highlight on notable fields

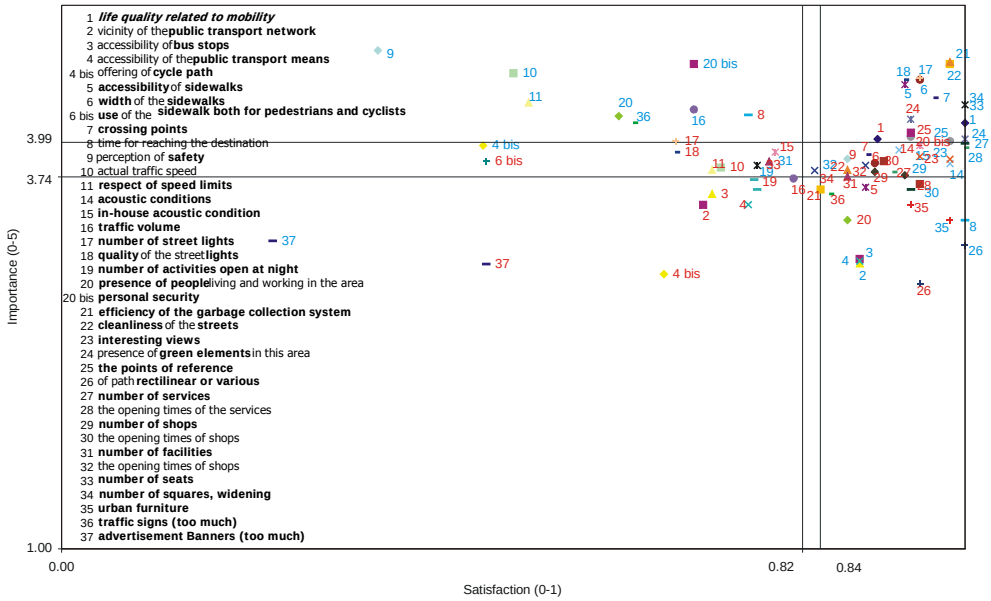


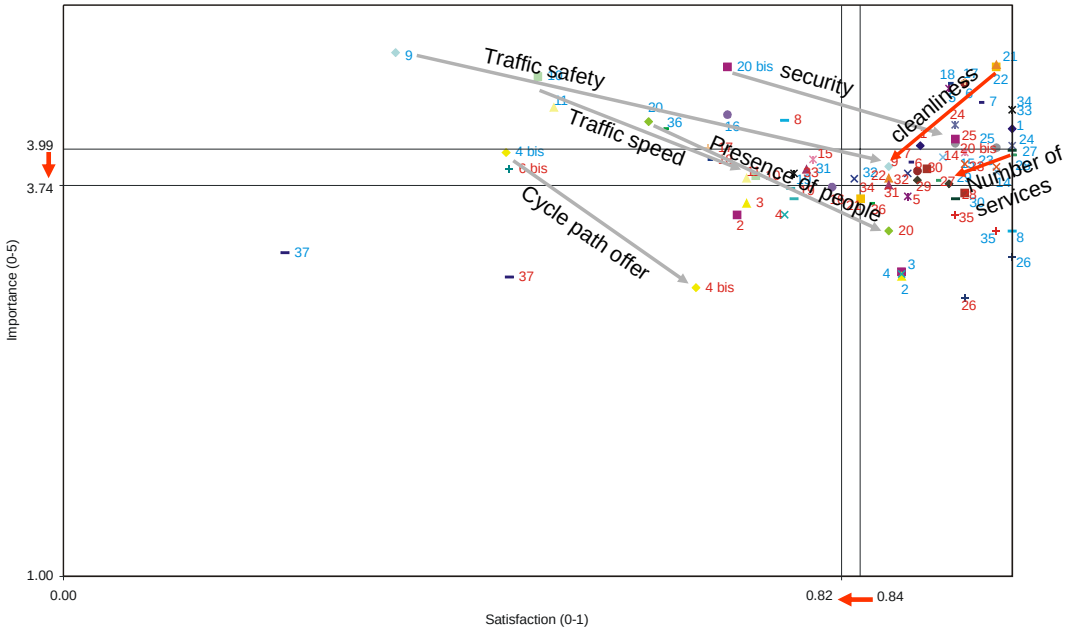
Before



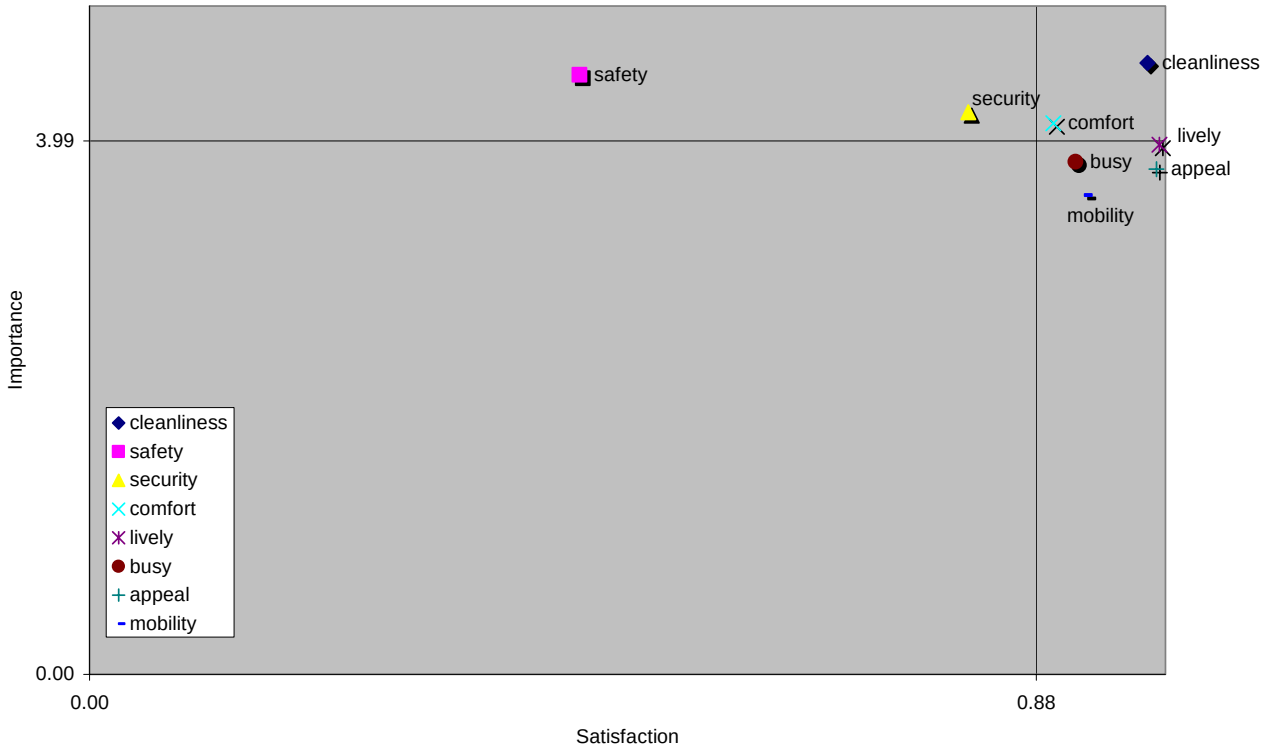
After

Satisfaction – Importance chart for Users, comparison before (blue) –after (red)



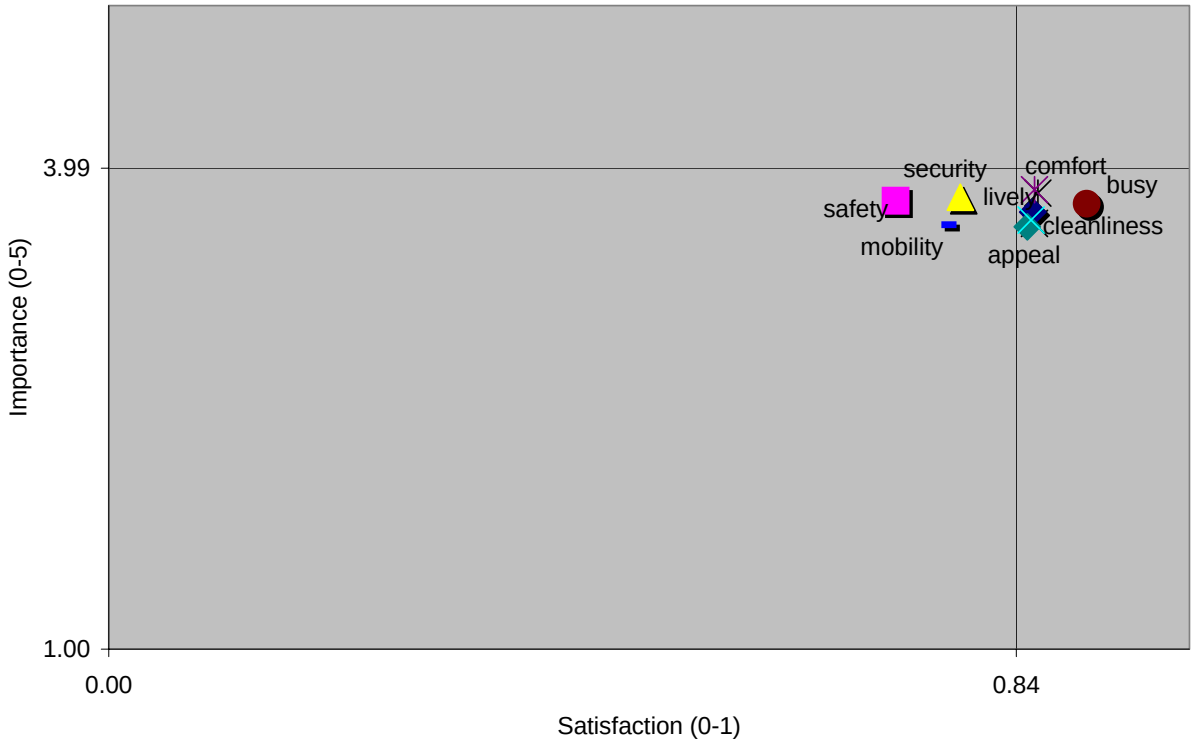


Satisfaction – Importance chart for Users, aggregated values



Before

Satisfaction – Importance chart for Users, aggregated values (after)



After

8.1 Before-After Comparison

Objective and subjective measurements have been repeated after the realisation of the implementation. About 60 users moving around in the pilot study area have been interviewed during two days, the used questionnaire was slightly amended with respect to the before study to keep into considerations the indications resulted from the experience already made .
This time, objective measures were made only for indicators that were expected to change due to the implementation. To this aim a rough overview of the project has been conducted at first, on this basis a list of possibly changed indicators has been made and the corresponding surveys have been made. Because of this the "after" objective survey resulted notably shorter than the "before" one.
Infrastructural changes were relatively few, and so the registered changes in objective conditions:

- On the majority of the sidewalks along the cycle path the pedestrian exclusive space decreased as sidewalks had to be shared by pedestrians and cyclists (i.e., the cycle path was realised on stretches that used to be sidewalks);
- Some junctions have been partly reorganized, this probably influenced the share of pedestrians crossing streets at signed points increased.
- Although a reduction of car speed was expected because of the narrowing of the carriageway in some points, no changes in car speed were actually observed.

Despite of these results, the interviews with users revealed some notable change in users' perception. The comparison of the importance – relevance charts show that the feelings registered after the implementations are less "scattered", satisfaction or importance peaks (positive as well as negative) are fewer and values are more concentrated around the averages. The averages shows a slight decrease of the levels of both satisfaction and importance, this little difference doesn't seem nevertheless significant.
More interesting appear the observations of some specific indicators:

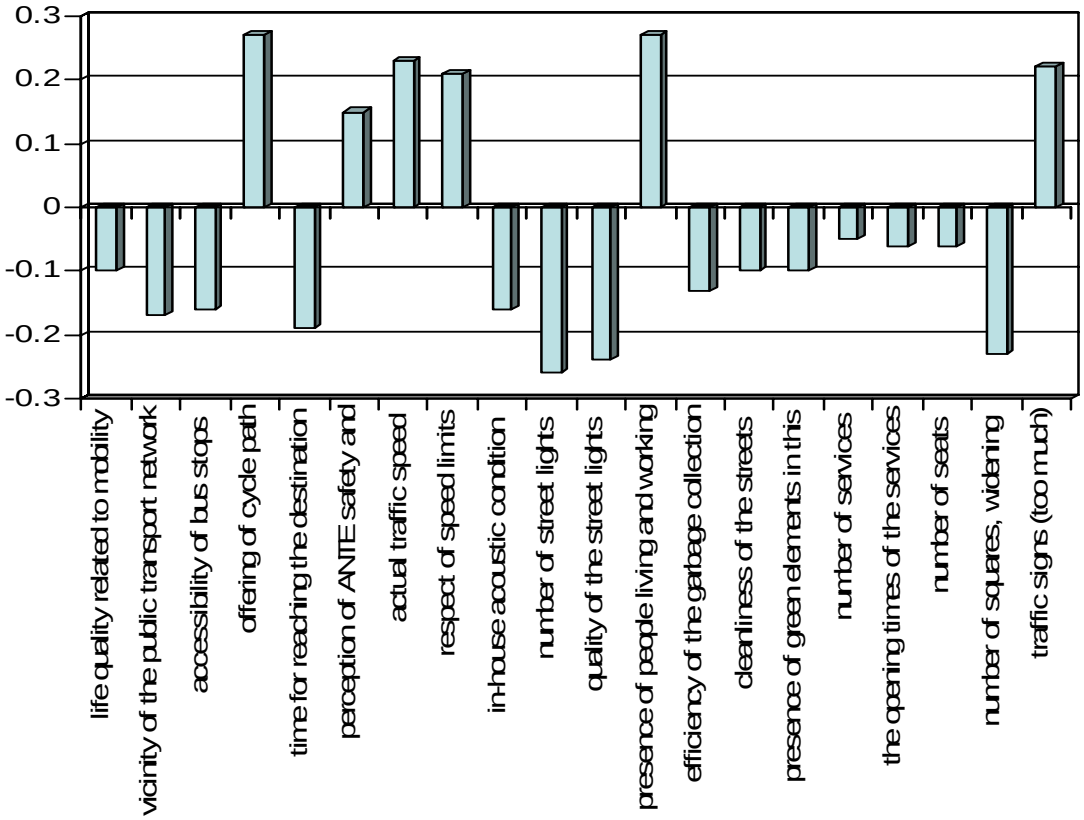
- The space sharing among pedestrians and cyclists is regarded as not satisfying by many users.
- Users' satisfaction with regard to cycle paths offer is notably increased after the implementation of the project, nevertheless the value remain relatively low. This indicate the need of developing more organic plans.
- The feeling of moving in a safe environment is dramatically improved by the implementation of the project. The result is clear despite no big changing have been recorded by objective measurements. This can be possibly explained by the positive feeling given by a Town Municipality that shows an interest for vulnerable road users implementing specific projects.
- Again, in the same league as above, users show grater satisfaction with regard to cars' speed even if no actual change has been measured.
- Notables improvements have been also measured with regard to the feeling of security.
- The impression about the cleanliness is instead decreased, possibly because of the problems that may occur during the construction phase.

The pilot project showed how the relation between reality and feelings can be unpredictable or at least not linear. Small changes in reality may produce big changing in perception (and vice versa). Results underline therefore how important is a comprehensive tools, like the one that have been developed within the ASI project, that allow planners and designer to consider both the aspects at the same time.

For trying to explain the differences between ante and post operam, we evaluate the significance of the differences in answers ante and post operam with the t-test and we consider only differences with $\alpha \leq 0.10$. As we expected, people are satisfied with the offer of cycle path and the traffic field; but, at the same time, people are unsatisfied with things that thay think are necessary but on which no improvement has been made.

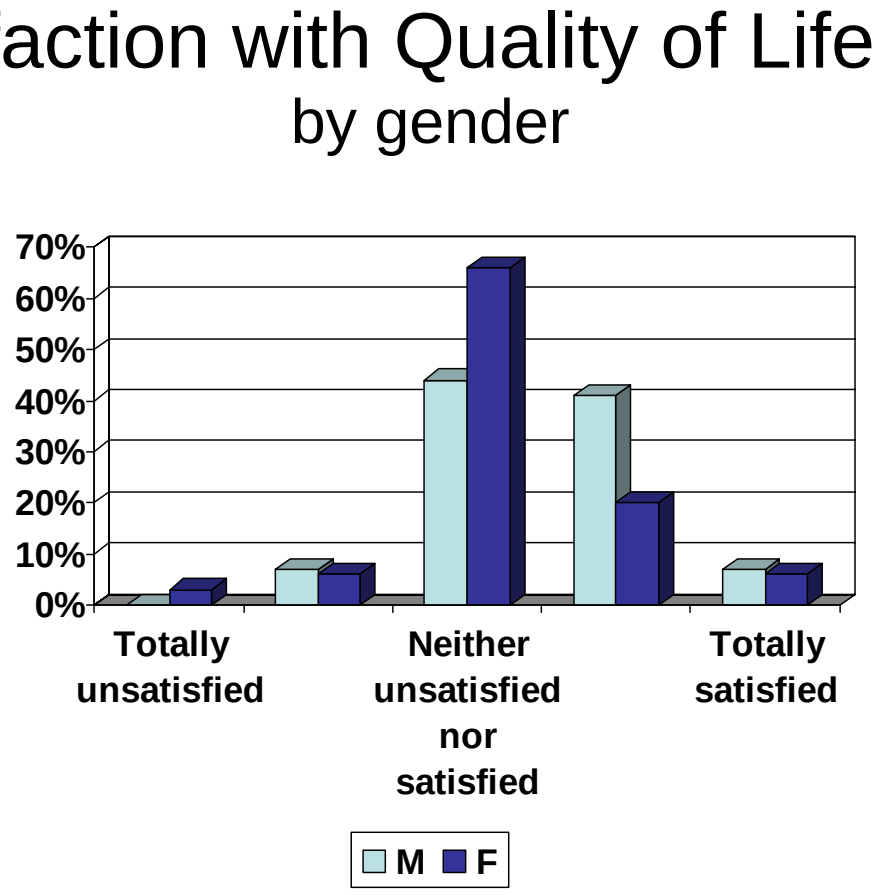
Satisfaction

Differences between *ante* and *post operam*



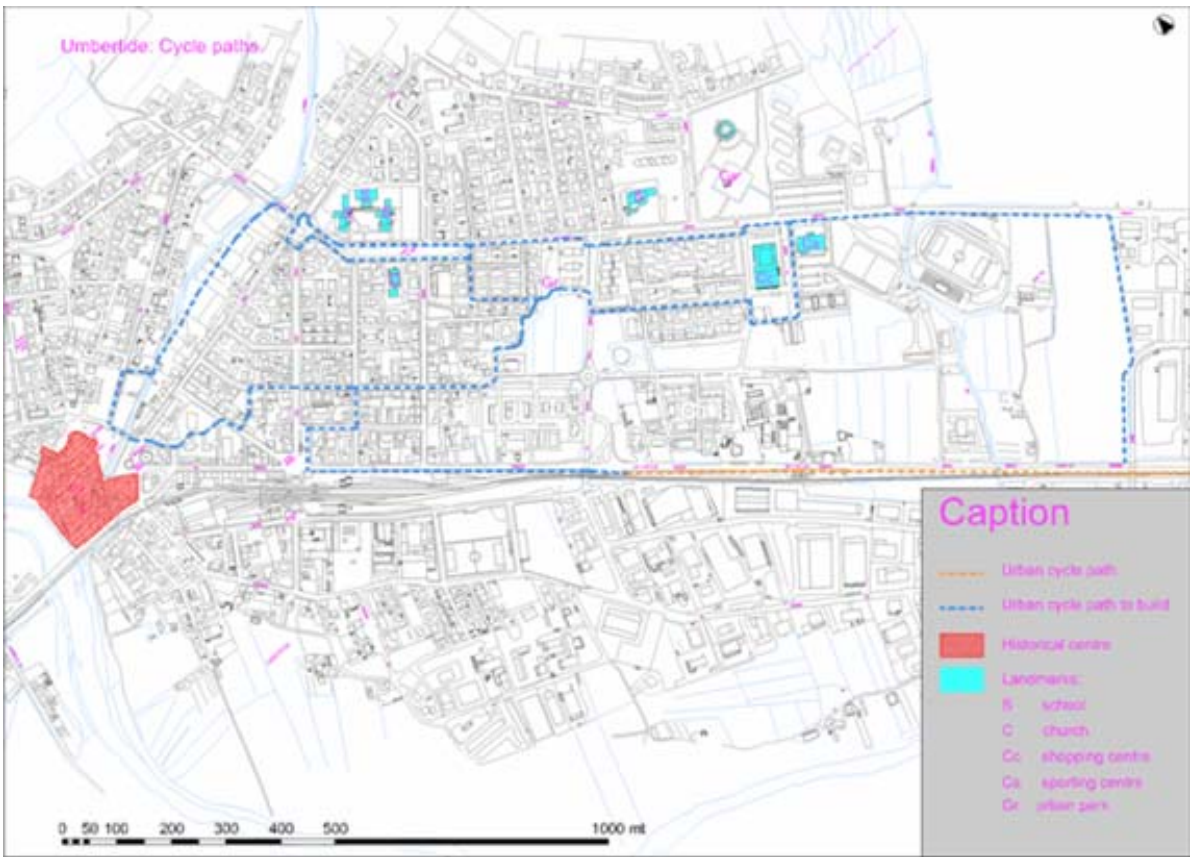
Satisfaction with Quality of life

The data collected by the general questions put at the beginning of the questionnaire analyse satisfaction of people in respect to quality of life. For example, it is possible to make such analyses regard a few socio-demographic variables. Considering the post operam data we can evaluate the percentage of people asserting to be satisfied with quality of life (QoL) by gender (then we focus on the utilisation of cycle path and explaining different answers between ante and post operam). Women are more unsatisfied than men; more that 60% of women assert they are neither satisfied nor unsatisfied, while only the 40% of men choose this answer. The 50% of men assert they are satisfied enough o a lot and nobody assert to be totally unsatisfied.

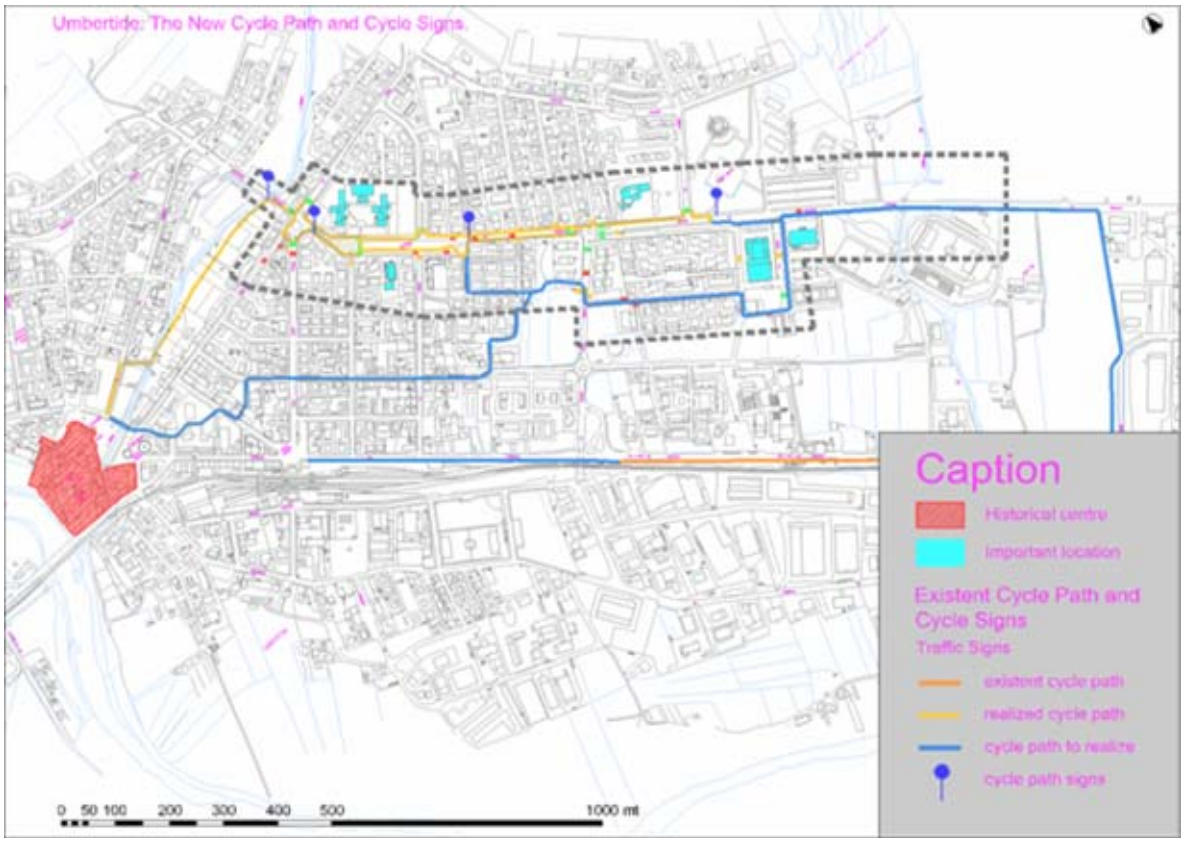


Focus on the implementation: the cycle path

The cycle path design



The cycle path implementation



The cycle path

Users' interview result

% of cyclists using cycle path (in comparison with total longitudinal flow) [Sa, Ai]

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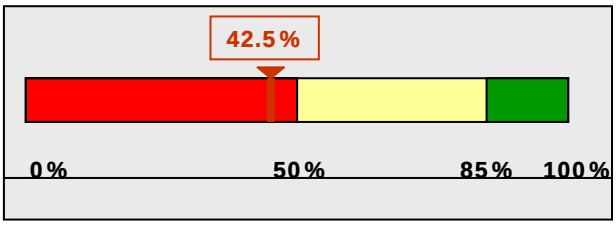
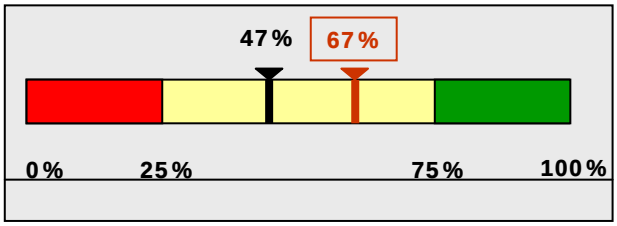
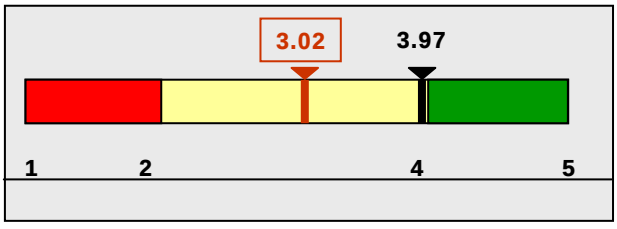
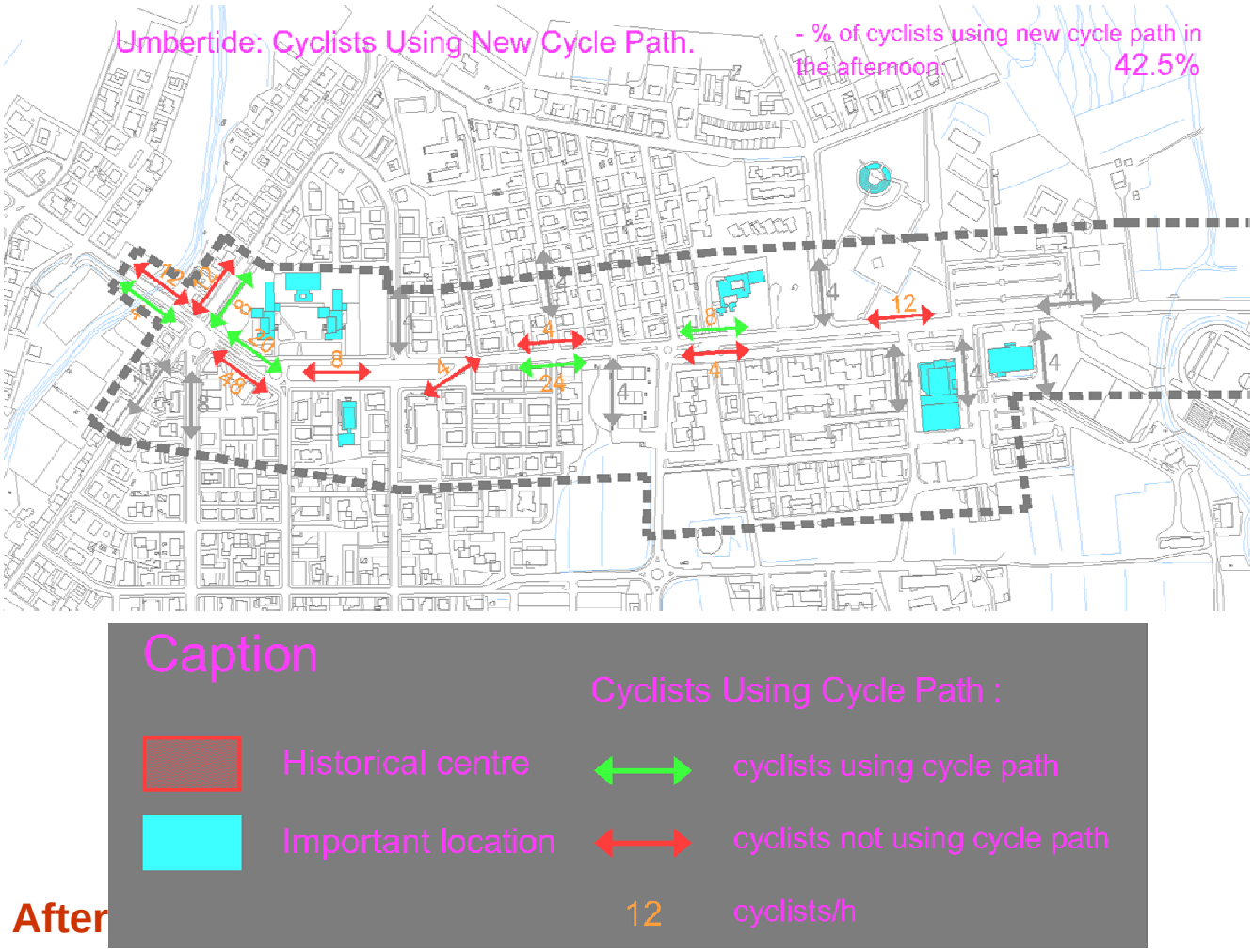


Are you satisfied with the offering of cycle path in this area?



How important is this aspect for you? (Likert scale 1-5)

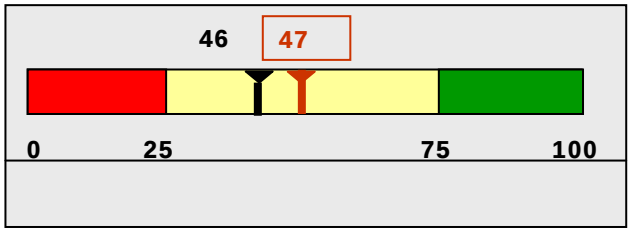




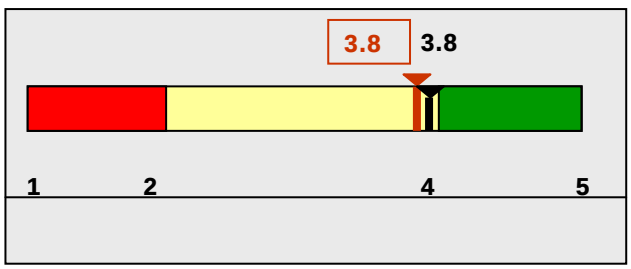
After

Use of sidewalks for both pedestrians and cyclists

Are you satisfied with the use of sidewalks both for pedestrians than cyclists?

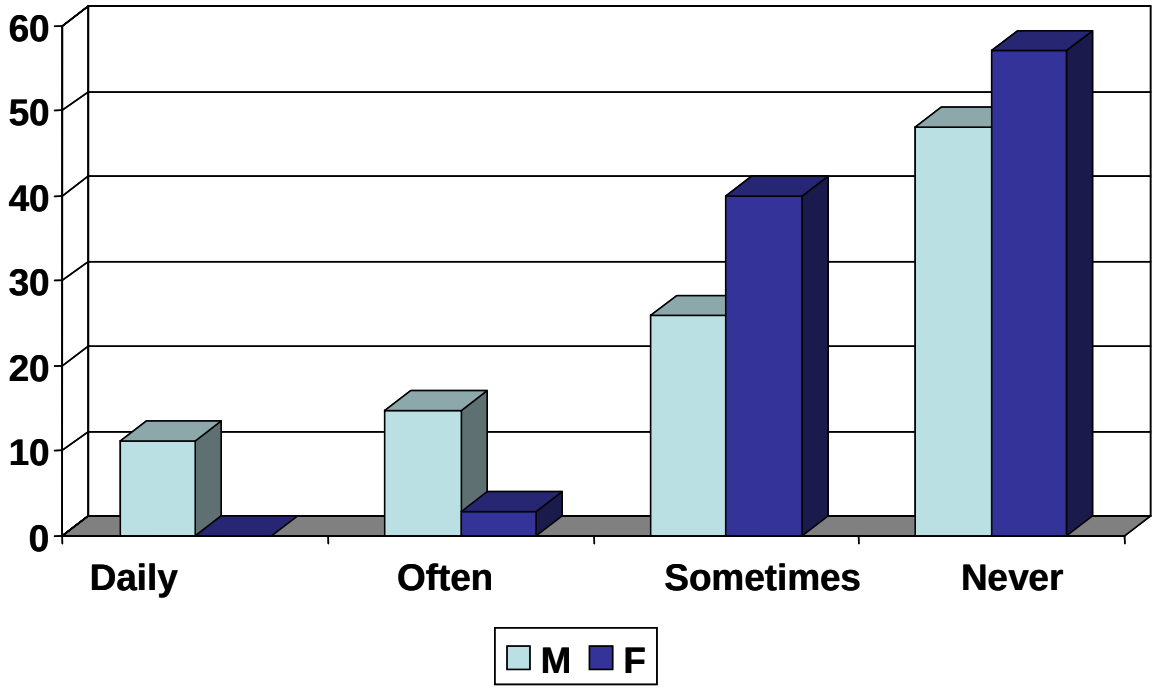


How important is this aspect for you? (Likert scale 1-5)

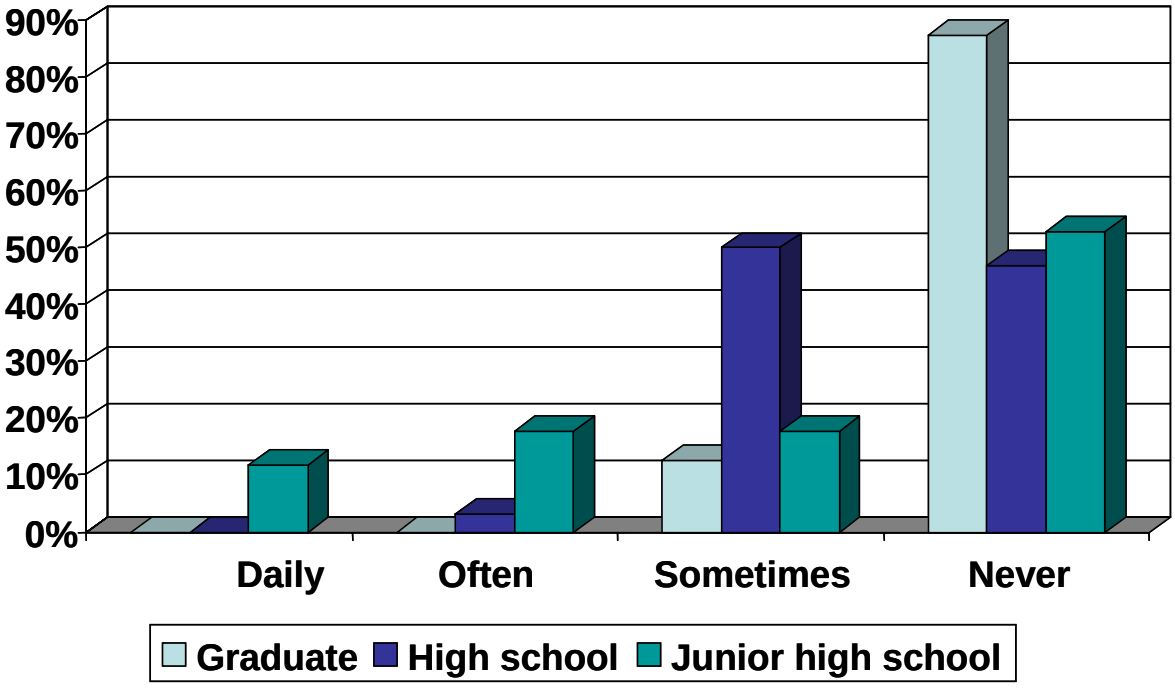


The data collected by the specific questions on the implementation of the cycle path can be used to make some consideration. People use cycle path for fun , relax or to make a sport (more than 60% of people who use it); only few of them use it to go to work/ school. Moreover, it seems that men use very often cycle path and, surely, they use it more than women; the utilisation of cycle path seems, also, to be related to educational status, we can suppose that people with higher educational status (and probably with higher life status) may have less time to spend to make sport or to relax themselves and they can afford the costs related to the use of the cars, so they use cycle path less than other people.

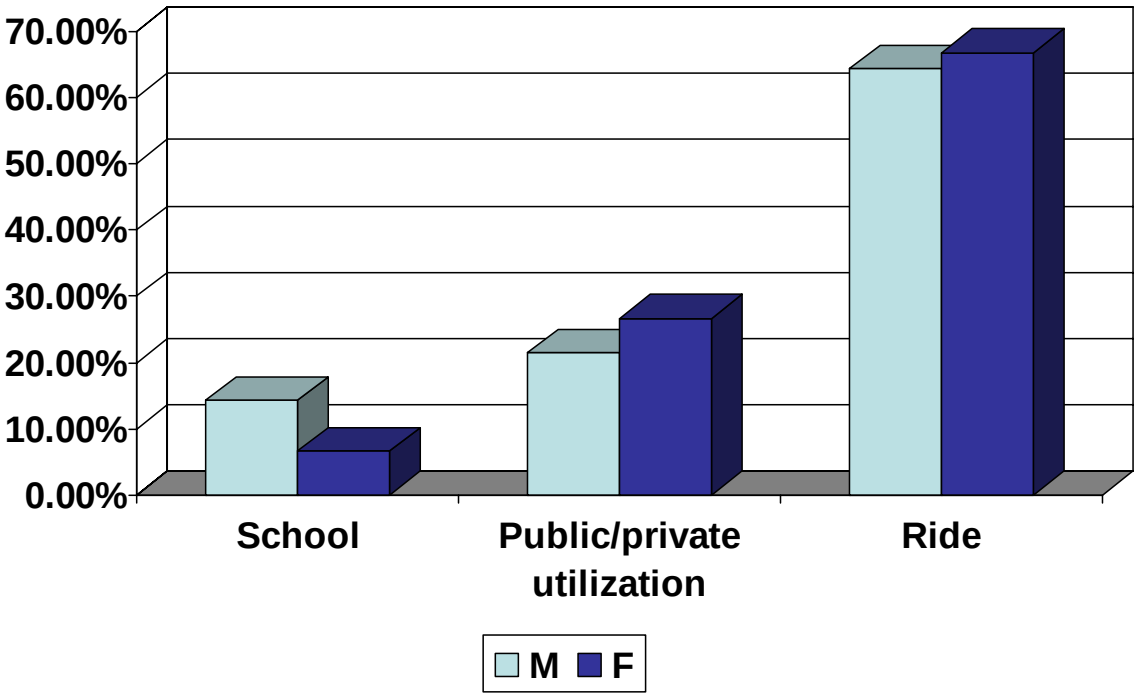
Cycle path utilization by gender



Cycle path utilization by educational status



Cycle path utilization by aim



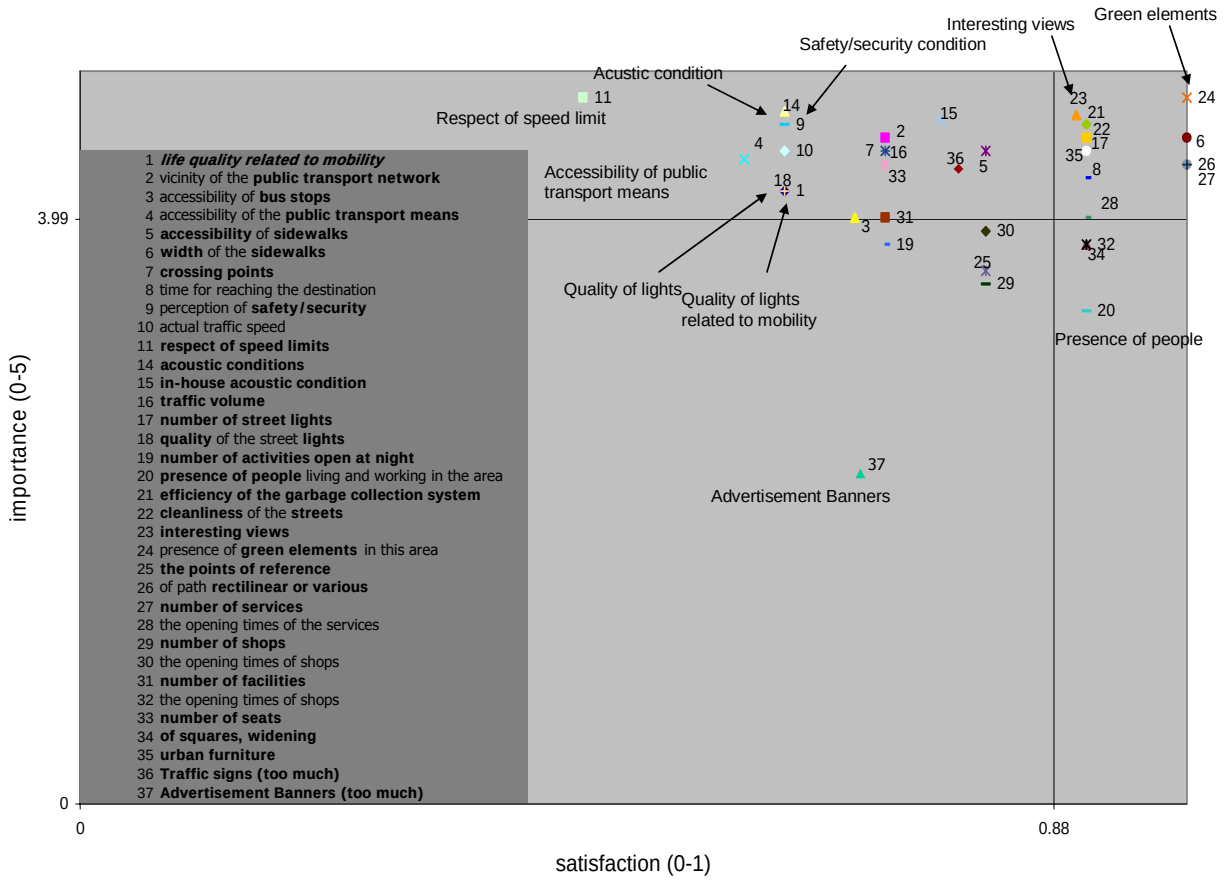
8.2 General assessment of the expert

Subjective evaluation: Experts' Interview results

The interviewers were friendly and very open-minded to talk. It came out that: they often use cars, even if they hope in a bigger use of bicycles thanks to the realization of the new cycle path and they expect that cycle path will improve QoL and promote social relations; They expect that cycle path will improve ecological aspect.

Expert are very unsatisfied about the respect of speed limits, that is seen as the main cause of traffic insecurity. The presence of people living and working in the area is considered one of the less important factor for QoL. The number of advertisement banners is seen, by far, as the less relevant factor to the determination of QoL

Satisfaction – Importance chart for Experts

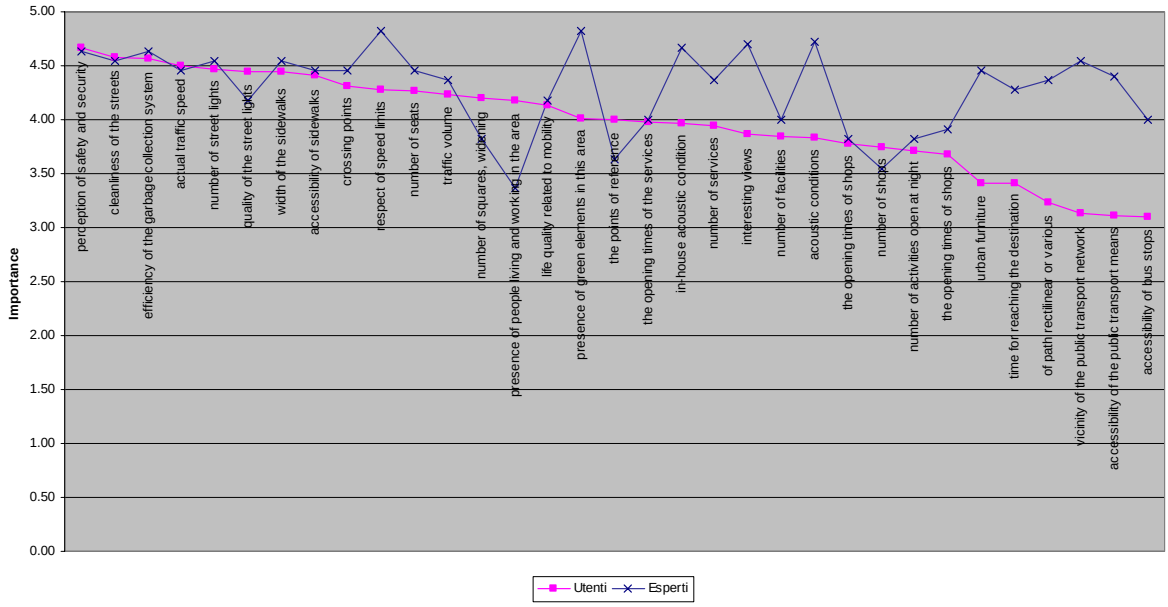


Before

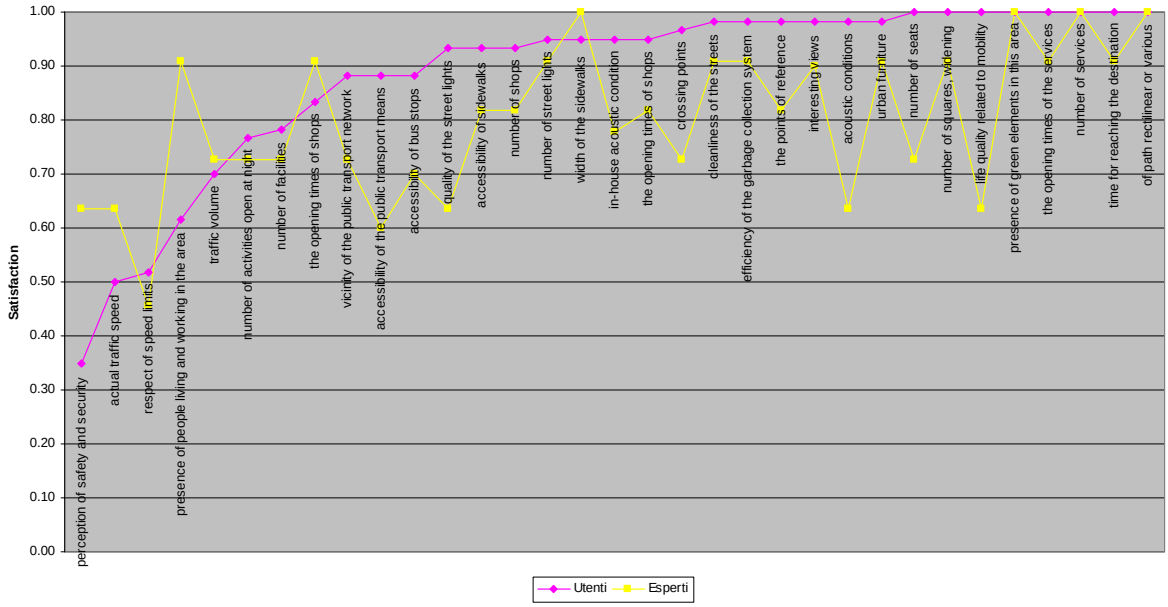
Subjective evaluetion: Experts' Users' of the interview result

Ante operam

Importance comparison



Satisfaction level comparison



	Users		Experts				
	Satisfaction	**Importance**	**Satisfaction**	**Importance**	*Dist. Sat.*	*Dist Imp.*	*Dist. Tot*
mobility	0.92	3.58	0.75	4.35	0.18	0.77	**0.24**
lively	0.99	3.96	0.85	4.24	0.15	0.28	**0.16**
comfort	0.90	4.12	0.79	4.58	0.11	0.45	**0.14**
appeal	0.99	3.78	0.93	4.38	0.06	0.60	**0.14**
safety	0.46	4.48	0.58	4.64	0.12	0.15	**0.12**
cleanliness	0.98	4.58	0.91	4.59	0.07	0.02	**0.07**
busy	0.92	3.83	0.86	3.94	0.05	0.11	**0.06**
security	0.82	4.20	0.80	3.98	0.02	0.23	**0.05**

Objective evaluation:

The overall impression about the area is that it is really "average", not too bad, not too good; the quality of infrastructures is rather good (but again not very good) especially along the main axis, while secondary streets appears often as wastelands. Vehicular speed can be very high, nevertheless the number of recorded accident seem to be very low.
Number of meeting points, services and facilities (especially during the night) is rather low.

CHAP 9 The Databank

Information contained

The databank can be structured as a relational database containing all the relevant information concerning the toolbox applications. It can be constituted by elements that describe the context of the project and by the data that come out from the toolbox application. As a first draft the following structure can be foreseen:

General information:

- project reference name
- city/location of application
    - name/State
    - population density
    - geographical zone (i.e. North Europe, Central Europe, Mediterranean Countries, etc. zones that have more or less homogeneous socio cultural characteristics)
    - economic growth index (or other economical wellbeing index)
- short description of the project
- main aspects involved (within the "enquiry fields list" defined in the toolbox).

TOOLBOX APPLICATION:

- number and profile of the interviewed experts
- number and main personal data of the interviewed dwellers (i.e. gender, age, etc.)
- interviews with expert and dwellers: numerical results and synthesis charts (as defined in the toolbox, before and after the intervention if existing)
- objective parameters measuring numerical results of campaigns (before and after the intervention if available)
- relevant application problems that occurred (short description).

Possible Uses

In the future, when the Databank will contain the results of a good amount of cases, the historical data can be, for instance, used to:

- highlight aspects that are always seen as important (or not important) and that can be therefore removed from the toolbox application to make it quicker to be used (it is not necessary to ask if a parameter is relevant if it is already known that it is so, and it is not worth to investigate parameters that are for sure not

relevant). If the case, correlation with the location characteristics can be found (a parameter can be important/not important, given some local characteristics);

- individuate relationship levels between subjective and objective measures. When a good relationship exists one of the two measurements can be removed from the toolbox; parameters that show very bad relationship should be further analyzed to understand better the character of the relationship; this would improve predictability. An added value could be achieved by such a procedure. If the case correlation with the location characteristics can be found and considered.
- The ratio “perceived improvement/objective changes” can be investigated; results can be used to choose the most cost effective way of solving a problem (i.e. objective parameters whose small changes result in large perceived improvement, or whose changes result in improvement in many fields).

The good of the Data Bank, once put into service, is to reduce to a minimum the operations to be made with the toolbox application.

It is obvious then that, to this first Pilot Study, should follow a campaign for the application of the toolbox to many other cases dealing with different implementations and with various European countries.

ASsess Implementations

Working Package 7 – Pilot Project

I Rilievi svolti

Laura Carella

A seguito della stesura del Toolbox di ASI si sono eseguiti una serie di rilievi per avere modo di comparare i dati riportati prima e dopo la realizzazione del Pilot Project, ossia della pista ciclabile, e poterne confrontare la validità.

I rilievi eseguiti si sono svolti ad Umbertide, all'interno di due fasi distinte ed in più giornate.

Fase ante-operam:

03/12/2004 (4 uomini-giorno) sulla base della cartografia fornita dal Comune di Umbertide è stata rilevata una serie di dati riguardanti il sistema della mobilità/accessibilità, la pulizia, l'inquinamento e la qualità dell'ambiente, la sicurezza, l'estetica, i servizi e le attività sociali. Si è quindi riusciti a rilevare: i marciapiedi (la loro accessibilità, le interruzioni ed i restringimenti diffusi), gli attraversamenti pedonali (con rampa d'accesso o senza), le finestre abitate (solo quelle dal piano terra al secondo), le sedute, proprie ed improprie, l'arredo urbano (comprensivo di cestini portarifiuti, fontanelle, cabine telefoniche, elementi informativi e giochi per bambini), gli elementi verdi (alberi, siepi, aiuole), le fonti luminose, l'orario delle attività aperte (ristoranti, pizzerie, pub, bar, negozi ed edicole, farmacie, e botteghe artigiane) ed o giorni della settimana, gli scorci interessanti ed i punti notevoli, le velocità soggettive, ossia rilevate tramite la macchina sulle varie strade limitrofe l'area in questione.

13/12/2004 (1 uomo-giorno) sono stati intervistati n. 60 utenti della strada utilizzando il Questionario ASI elaborato dagli psicologi. La decisione della numerosità del campione consente di valutare i risultati come statisticamente significativi (in quanto n>30), utilizzando quei punti cruciali per la vita di questa area, vicina alla futura pista ciclabile.

22/12/2004 (4 uomini-giorno) sulla base della cartografia fornita dal Comune di Umbertide è stata rilevata una serie di dati riguardanti il sistema della mobilità/accessibilità, la sicurezza, l'estetica. Si è rilevato: i flussi pedonali degli utenti (sia degli utenti abituali che dei ragazzi all'uscita di scuola) in orari separati, i flussi veicolari (sia delle biciclette che delle moto, delle macchine e dei camion) in orari separati. Inoltre abbiamo iniziato la parte di interviste agli utenti, ossia quella riguardante il rapporto tra il tempo impiegato e la distanza percorsa nell'ambito di uno spostamento degli stessi (il rilievo minimo è di 30 intervistati, noi siamo riusciti a realizzarne 60).

30/12/2004 (1 uomo-giorno) sono stati intervistati n. 11 esperti dell'amministrazione locale e provinciale, utilizzando il Questionario ASI elaborato dagli psicologi.

09/02/2005 (3 uomini-giorno) sulla base della cartografia fornita dal Comune di Umbertide è stata rilevata una serie di dati riguardanti il sistema della mobilità/accessibilità, la sicurezza, l'estetica. Si è rilevato: la cartellonistica stradale, le velocità oggettive tramite l'autovelox (fornito dai vigili urbani del Comune di Umbertide) sulle strade dell'area in questione, i cartelloni pubblicitari. Inoltre abbiamo continuato la parte di interviste agli utenti, ossia quella riguardante il grado di soddisfazione degli stessi (il rilievo minimo è di 30 intervistati, noi siamo riusciti a realizzarne 60), e la loro percezione sulla sicurezza dell'area nei confronti degli incidenti stradali e ad eventi di piccola criminalità (il rilievo minimo è di 30 intervistati, noi siamo riusciti a realizzarne 30).

Fase post-operam:

20/04/2005 (4 uomini-giorno) sulla base della cartografia fornita dal Comune di Umbertide è stata rilevata una serie di dati riguardanti il sistema della mobilità/accessibilità, la pulizia, l'inquinamento e la qualità dell'ambiente, la sicurezza, l'estetica, i servizi e le attività sociali. Si è quindi rilevato a seguito della realizzazione del progetto della pista ciclabile: i marciapiedi (la loro accessibilità, le interruzioni ed i restringimenti diffusi), gli attraversamenti pedonali (con rampa d'accesso o senza), l'arredo urbano (comprensivo di cestini porta rifiuti, fontanelle, cabine telefoniche, elementi informativi e giochi per bambini), gli elementi verdi (alberi, siepi, aiuole), la cartellonistica stradale, le velocità oggettive tramite l'autovelox (fornito dai vigili urbani del Comune di Umbertide) sulle strade dell'area in questione, i cartelloni pubblicitari. Inoltre abbiamo continuato la parte di interviste agli utenti, ossia quella riguardante il rapporto tra il tempo impiegato e la distanza percorsa nell'ambito di uno spostamento degli stessi per poter avere un confronto diretto con le interviste svolte prima della realizzazione della pista ciclabile (il rilievo minimo è di 30 intervistati, noi siamo riusciti a realizzarne 60).

04/05/2005 (2 uomini-giorno) sono stati intervistati n. 45 utenti della strada con il Questionario ASI elaborato dagli psicologi. La decisione della numerosità del campione, che dovrà arrivare a n. 60 utenti, consente di valutare i risultati come statisticamente significativi (in quanto n>30), utilizzando quei punti cruciali per la vita di questa area, vicina alla futura pista ciclabile.

18/05/2005 (2 uomini-giorno) sono stati intervistati i n. 15 utenti della strada (i 15 rimanenti rispetto ai 60 intervistati in precedenza, il 13/12/2004) con il Questionario ASI elaborato dagli psicologi. Inoltre abbiamo finito lo studio svolto in precedenza rilevando i flussi pedonali, gli attraversamenti "legal and illegal" e analizzando per la prima volta l'appetibilità e l'uso della nuova pista ciclabile.

INDICAZIONI PER IL RAPPORTO
Utenti della strada - Umbertide

ID
Sono stati intervistati n. 60 utenti della strada. La decisione della numerosità del campione consente di valutare i risultati come statisticamente significativi (in quanto n>30).

DATA
Le interviste sono state condotte in due giornate (13/14 novembre 2004).

ORA
Le interviste sono state condotte lungo tutto l'arco della giornata al fine di evitare bias nei risultati dovuti a questa variabile.

CLIMA
Tutte le interviste sono state condotte con un clima variabile nuvoloso/pioggia. Nei momenti di pioggia le interviste sono state condotte al riparo sotto pensiline o all'ingresso di bar di fronte alla scuola.

LUOGO
Le interviste sono state condotte lungo il tracciato previsto per la nuova pista ciclabile o negli immediati dintorni di questa (da verificare con Luca).

SESSO
Sono stati intervistati n. 23 maschi e n. 37 femmine. Si ritiene pertanto che, data tale distribuzione anche questa variabile sia utile al fine di verificare eventuali differenze di genere nei risultati emersi.

TIPO DI PEDONE
….

FREQUENZA USO DEI MEZZI DI TRASPORTO
….

SCOPO
….

ETÀ
L'età non sembra influenzare in alcun modo i risultati relativi alla ***soddisfazione***; il campione si divide circa a metà fra coloro che sono soddisfatti e coloro che non lo sono con nessuna tendenza significativa della variabile età.

Sotto la media delle medie	età	Sopra la media delle medie	
0,82	15	0,94	15
0,76	16	0,91	16
0,79	16	1,00	16
0,79	16	1,00	17
0,85	16	0,97	18
0,73	17	0,88	20
0,76	18	0,97	23
0,82	20	0,91	28
0,85	25	0,94	28
0,85	35	0,88	30
0,79	37	0,94	30
0,85	42	0,97	35
0,85	42	1,00	35
0,76	45	1,00	35
0,82	45	0,88	38
0,85	45	0,94	38
0,85	45	0,88	40

0,85	46	0,94	40
0,85	48	0,94	40
0,76	50	0,91	42
0,85	50	1,03	42
0,85	50	0,97	43
0,85	50	0,94	45
0,85	58	0,97	45
0,82	60	0,97	48
0,85	60	0,91	50
0,82	62	0,94	50
0,85	65	0,88	60
		0,91	60
		0,97	60
		0,94	63
		0,91	65

Anche per l'***importanza*** attribuita ad ogni item non sono rilevabili tendenze sistematiche nei risultati imputabili dovute all'età.

Sotto la media delle medie	**età**	**Sopra la media delle medie**	**età**
3,73	15	4,03	16
3,88	15	4,06	16
3,79	16	4,21	16
3,79	16	4,00	18
3,91	16	4,09	18
3,82	17	4,03	20
3,97	17	4,06	20
3,76	25	4,42	23
3,97	28	4,24	28
3,88	30	4,15	35
3,91	30	4,15	35
3,79	35	4,03	38
3,82	35	4,03	40
3,94	37	4,18	42
3,73	38	4,00	45
3,85	40	4,15	45
3,94	40	4,15	45
3,73	42	4,24	45
3,82	42	4,30	45
3,88	42	4,00	50
3,85	43	4,15	50
3,82	45	4,21	50
3,67	46	4,24	50
3,88	48	4,27	58
3,97	48	4,09	60
3,82	50	4,15	60
3,85	50	4,21	60
3,79	60	4,06	62
3,82	60	4,03	65
3,94	63		
3,91	65		

Nota: il campione intervistato ha un'età compresa fra i 15 e i 65 anni, sono assenti gli anziani (dato da verificare con Mariantonia).

ISTRUZIONE
(richiede ulteriore analisi)

REDDITO
(da verificare: dato non verosimile; (richiede ulteriore analisi).

VARIABILI TOOLBOX
Nel grafico sotto riportato sono visibili le variabili considerate per ciascun item dell'intervista. Ogni item è posizionato sulla base delle coordinate Soddisfazione e Livello di importanza dell'oggetto.
Per una lettura ulteriore del grafico, prendendo in considerazione un modello matematico che ci consenta di discriminare fra le variabili possiamo suddividere il piano cartesiano in quattro quadranti sezionando laddove intersecano gli assi le medie delle due variabili.
Considerata quindi per l'asse delle x (soddisfazione) la media pari a mx=0,88 e per l'asse delle y (livello di importanza) la media pari a my=3,99 possiamo suddividere le variabili come mostrato nell'allegato A.

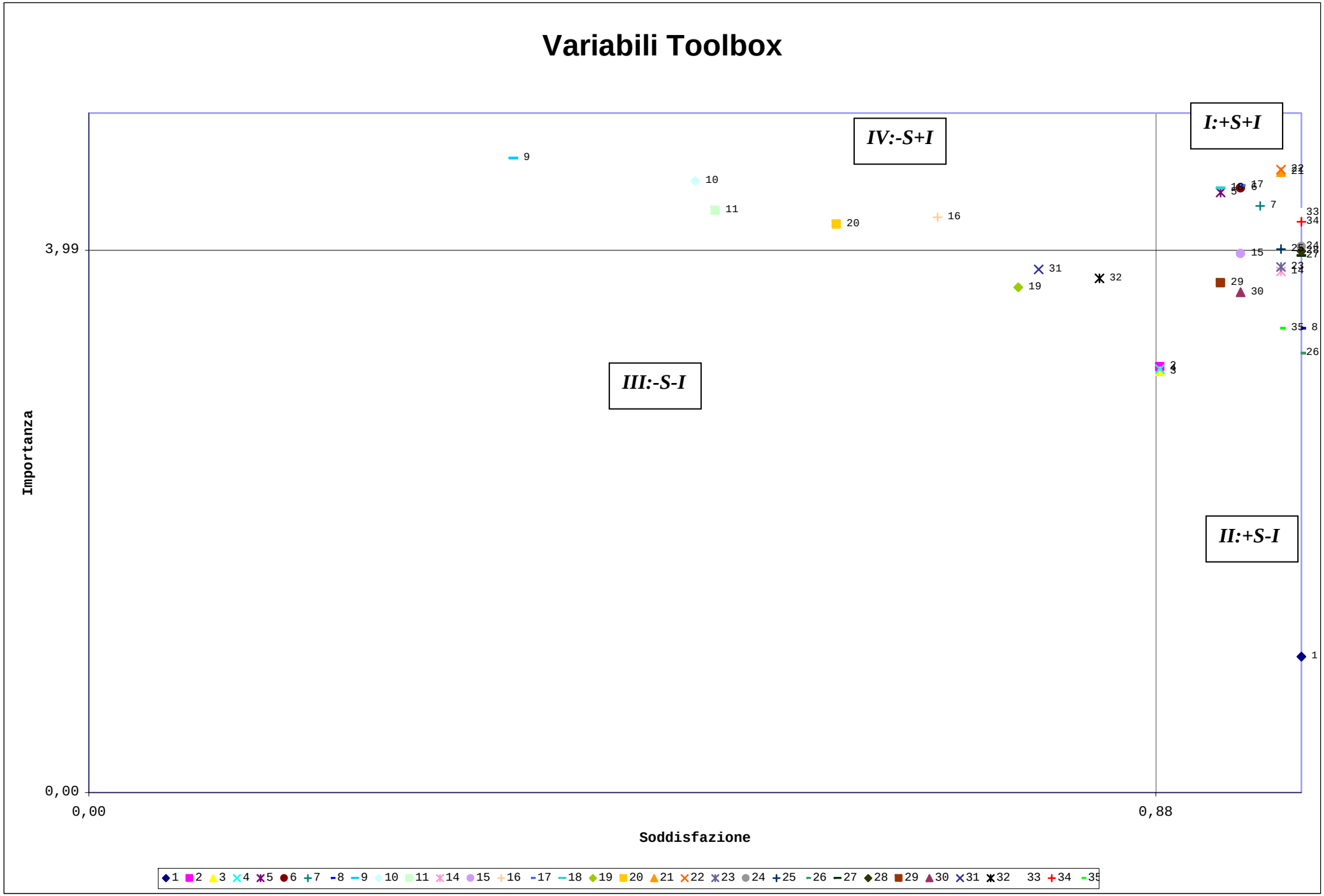
Quadrante I
Item per i quali si esprime soddisfazione e che si ritengono molto importanti.
Quadrante II
Item per i quali si esprime soddisfazione ma che si ritengono poco importanti.
Quadrante III
Item per i quali si esprime insoddisfazione e che si ritengono poco importanti.
Quadrante IV
Item per i quali si esprime insoddisfazione ma che si ritengono molto importanti.

Le variabili 12 e 13 non sono rilevabili in quanto nella città di Umbertide non sono presenti impianti semaforici.

ANNOTAZIONI
È importante sottolineare come dai risultati emerge comunque una valutazione altamente positiva e soddisfacente dell'ambiente circostante, fatta eccezione per la sensazione di sicurezza per la quale si raccomanda quindi particolare attenzione.
Ulteriore attenzione va prestata ai risultati dell'item 1 per il quale si rileva che gli abitanti di Umbertide si dicono soddisfatti della qualità della vita in relazione alla mobilità, ma che questa paradossalmente, non è un elemento che la condiziona/erebbe. Tale risultato sembrerebbe quindi provare che a livello razionale le persone non ritengano la Qualità della loro Vita connessa con i temi della mobilità, o almeno ciò è quanto emerge dalle risposte date dagli abitanti di Umbertide.

Commenti dell'intervistatore

- ✓ non utilizzano i mezzi pubblici perché esistono solo poche corse: per il cimitero ecc;
- ✓ le domande 12 e 13 sono senza risposta perché ad Umbertine non esistono i semafori, ci sono solo le rotatorie;
- ✓ la gente del posto fondamentalmente per quanto riguarda la mobilità in relazione alla qualità della vita si sente soddisfatta, tranne che per la condizione di sicurezza della zona a causa di troppi extracomunitari. (*Si sente poco sicura per uscire, non è più come una volta affermano*). Questa insoddisfazione si nota in persone tra i **45 e 60 anni.** (domanda 9)
- ✓ mentre **i giovani** affermano una insoddisfazione per quanto riguarda i luoghi di ritrovo presenti nel paese, affermano che per divertirsi devono spostarsi nei paesi limitrofi, che sono molto più grandi!!


Variabili Toolbox
I:+S+I
IV:-S+I
III:-S-I
II:+S-I
3,99
0,00
0,00
0,88
Importanza
Soddisfazione
1 2 3 4 5 6 7 8 9 10 11 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

ALLEGATO A

ITEM		QUADRANTE
1.	***la qualità della Sua vita*** in relazione alla mobilità	**II**
2.	***la vicinanza della rete di trasporto pubblico***	**II**
3.	***accessibilità delle fermate dell'autobus***	**II**
4.	***accessibilità dei mezzi del trasporto pubblico***	**II**
5.	***accessibilità dei marciapiedi***	**I**
6.	***larghezza dei marciapiedi***	**I**
7.	***attraversamenti pedonali***	**I**
8.	***tempo necessario per raggiungere la Sua destinazione***	**II**
9.	***condizione di sicurezza***	**IV**
10.	***velocità del traffico***	**IV**
11.	***rispetto dei limiti di velocità***	**IV**
12.	***durata del verde semaforico***	**Non rilevabili**
13.	***durata del giallo dei semafori***	**Non rilevabili**
14.	***condizione acustica***	**II**
15.	***condizione acustica in casa***	**II**
16.	***Intensità del traffico***	**IV**
17.	***numero di luci***	**I**
18.	***qualità delle luci***	**I**
19.	***attività aperte di sera***	**III**
20.	***presenza delle persone***	**IV**
21.	***efficienza del sistema di raccolta dei rifiuti***	**I**

22.	***pulizia delle strade***	**I**
23.	***aspetto (panorama) della zona***	**II**
24.	***Verde***	**I**
25.	***punti di riferimento***	**I**
26.	***percorsi rettilinei o vari***	**II**
27.	***numero di servizi***	**II**
28.	***orari di apertura di*** tali ***servizi***?	**II**
29.	***numero dei negozi***	**II**
30.	***orari di apertura di*** tali ***negozi***	**II**
31.	***luoghi di ritrovo***	**III**
32.	***orario di apertura dei luoghi di ritrovo***	**III**
33.	***numero delle sedute***	**I**
34.	***numero di piazze***	**I**
35.	***attrezzature urbane***	**II**

Le interviste, con ciascun esperto, sono durate all'incirca 40 minuti.
Queste sono state condotte nell'Ufficio Tecnico del Palazzo Comunale di Umbertide, in un ambiente comodo, illuminato dalla luce del giorno, esente da rumorosità; tutti elementi, questi, che hanno contribuito a far trovare a proprio agio l'intervistato e a favorire uno scambio verbale in una situazione dinamica.
Durante le interviste ho potuto notare la completa disponibilità degli esperti a trattare i temi e gli argomenti dell'intervista attraverso una comunicazione semplice e valorizzata.
Gli esperti di Umbertide hanno dichiarato di muoversi più frequentemente in auto, anche se sperano, con la realizzazione della pista ciclabile, in un recupero dell'utilizzo della bicicletta per migliorare l'aspetto ecologico della cittadina, elemento, quest'ultimo, che viene richiamato frequentemente nelle interviste.
Tutti gli esperti sembrano soddisfatti della qualità della propria vita in relazione alla mobilità. Solo un esperto, il cui figlio è portatore di handicap, si è lamentato di tale aspetto specie per ciò che riguarda l'accessibilità dei marciapiedi.
Eppure, stando a quanto hanno riferito alcuni esperti, il Comune di Umbertide è sempre stato un comune di "eccellenza" ed ha lavorato molto sull'accessibilità dei marciapiedi!
Inoltre tutti i rispondenti considerano la cartellonistica pubblicitaria un elemento disturbante. In questo senso ho avuto l'impressione che sebbene ad Umbertide ci siano pochi cartelloni pubblicitari, se non ci fossero per niente sarebbe meglio.
Un elemento, che credo preoccupi molto gli esperti di Umbertide, è rappresentato dalla sicurezza stradale. Questo aspetto è stato in parte migliorato attraverso la realizzazione di rotonde per bloccare il traffico.
Altro elemento su cui gli esperti puntano molto riguarda i rapporti sociali.
A questo proposito, quasi tutti gli intervistati mi hanno parlato dell'opportunità della realizzazione della pista ciclabile come "recupero dei rapporti sociali".
In questo senso mi viene da pensare che, in una realtà verdeggiante e silenziosa qual è Umbertide, gli esperti abbiano riposto troppa attenzione all'aspetto (panorama) della cittadina, trascurando attività e punti di incontro che favoriscono un maggior coinvolgimento sociale.
Forse anche da questo scaturisce l'idea di un "pista ciclabile " come strumento per sviluppare e migliorare i rapporti sociali.

Assess implementations in the frame of the Cities-of-Tomorrow programme

Project n. EVG33-2002-00508
ENERGY, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT – PROGRAMME
Key Action 4: Cities of Tomorrow and Cultural Heritage
Thematic priority. 7.3: Socio-Economic aspects of Environmental Change in the Perspective of Sustainable Development

Questionario per la valutazione della qualità della vita da un punto di vista soggettivo

DA RIEMPIRE A CURA DELL'INTERVISTATORE

Data dell'intervista: _____	**Ora dell'intervista:** _____	**Clima:** _____

Luogo dell'intervista:	**I. Sesso dell'intervistato:**	**M**	**F**	
1 – Parco	**II. Tipo pedone:**			
2 – Scuola	1 – Pedone	5 – In motorino		9 – Con pesi (borse, ingombri)
3 - Zona residenziale	2 – In bicicletta	6 – Con un deambulatore		10 – Con un bastone
4 – Supermercato	3 – In carrozzina	7 – Con le stampelle		11 – Altro _____
5 - Attrezzature sportive	4 – Su pattini o skateboard	8 – Con sedia a rotelle		

INIZIO DEL QUESTIONARIO

III. Desidereremmo sapere quanto spesso utilizza i seguenti mezzi di trasporto?

	meno di 1 volta a settimana	almeno 1 volta a settimana	da 2 a 4 volte a settimana	quasi ogni giorno	ogni giorno
A piedi	1	2	3	4	5
In bicicletta	1	2	3	4	5
Trasporto pubblico	1	2	3	4	5
Mezzo privato (macchina, moto)	1	2	3	4	5

IV. Quale è il principale scopo del Suo spostamento?

1. per lavoro	6. per servizi privati e/o pubblici
2. per la scuola	7. per attività di svago
3. per accompagnare i bambini	8. per visite
4. per la spesa quotidiana	9. per una passeggiata
5. per altri acquisti	10. altro _____

UNIVERSITA' DEGLI STUDI ROMA TRE
DIPARTIMENTO DI PROGETTAZIONE E STUDIO DELL'ARCHITETTURA
Piazza della Repubblica, 10 – 00185 Roma – tel. +39.06. 57067924/25 martinci@uniroma3.it
Prof. Arch. Lucia Martincigh: responsabile scientifico italiano

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IVbis. Lei utilizza la pista ciclabile?	Ogni giorno	Spesso	A volte	No, mai

IVter. Se la utilizza, per quale scopo la utilizza principalmente?		
1. per lavoro	5. per altri acquisti	9. per una passeggiata
2. per la scuola	6. per servizi privati e/o pubblici	10. altro _____
3. per accompagnare i bambini	7. per attività di svago	
4. per la spesa quotidiana	8. per visite	

	DOMANDE			***In una scala da 1 a 5 dove 1 corrisponde a "per niente importante" e 5 a "molto importante", quanto è importante la qualità della Sua mobilità per la qualità della Sua vita?***						
1.	Lei è soddisfatto/a del***la qualità della Sua vita*** in relazione alla mobilità?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
				In una scala da 1 a 5 dove 1 corrisponde a "per niente importante" e 5 a "molto importante", quanto è importante questo aspetto per Lei?						
2.	Lei è soddisfatto/a del***la vicinanza della rete di trasporto pubblico***? (Ritiene sia abbastanza vicina)?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
3.	Lei è soddisfatto/a della ***accessibilità delle fermate dell'autobus***? (riguardo a gradini, barriere, passaggi stretti)?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante

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4.	Lei è soddisfatto/a della ***accessibilità dei mezzi del trasporto pubblico***? (se no, perché: gradini troppo alti, altro _____)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
4 b	Lei è soddisfatto/a dell'attuale offerta di piste ciclabili?	SI	NO	Per niente Importante	1	2	3	4	5	Molto importante
5.	Lei è soddisfatto/a della ***accessibilità dei marciapiedi*** in questa zona? (c'è facilità di passaggio o presenza di gradini, scivoli, altro)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
6.	Lei è soddisfatto/a della ***larghezza dei marciapiedi*** in questa zona?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
6 bis	Lei è soddisfatto che vadano insieme pedoni e ciclisti?	SI	NO	Per niente importante	1	2	3	4	5	Molto importante
7.	Lei è soddisfatto/a degli ***attraversamenti pedonali***? (riguardo il percorso e la loro accessibilità)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
8.	Lei è soddisfatto/a del ***tempo necessario per raggiungere la Sua destinazione***? (in riferimento al suo spostamento attuale)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
9.	Lei è soddisfatto/a dell'attuale sensazione di "sicurezza al rischio di incidenti stradali"?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
10.	Lei è soddisfatto/a della effettiva ***velocità del traffico*** in questa zona?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
11.	Lei è soddisfatto/a del ***rispetto dei limiti di velocità*** da parte dei mezzi di trasporto privati in questa zona?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
12.	Lei è soddisfatto/a della ***durata del verde semaforico***?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
13.	Lei è soddisfatto/a della ***durata del giallo dei semafori***?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
14.	Lei è soddisfatto/a della ***condizione acustica*** della zona? (ritiene il rumore sopportabile? È troppo?)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
15.	Se Lei vive in questa zona, è soddisfatto/a della ***condizione acustica in casa***? (rumore del traffico, dalla strada)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante

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16.	Lei è soddisfatto/a dell'***intensità del traffico*** in questa zona? è troppo o troppo poco?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
17.	Lei è soddisfatto/a del ***numero di luci*** nelle strade in questa zona?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
18.	Lei è soddisfatto/a della ***qualità delle luci*** delle strade in questa zona? (intensità, colore, ecc.)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
19.	Lei è soddisfatto/a delle ***attività aperte di sera*** in questa zona?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
20.	Lei è soddisfatto/a della ***presenza delle persone*** che vivono e lavorano in questa zona? (sono troppe o troppo poche)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
20 b	Lei è soddisfatto/a dell'attuale condizione di "***sicurezza personale***"?	SI	NO	Per niente Importante	1	2	3	4	5	Molto importante
21.	Lei è soddisfatto/a dell'***efficienza del sistema di raccolta dei rifiuti*** in questa zona?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
22.	Lei è soddisfatto/a della ***pulizia delle strade*** in questa zona?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
23.	Lei è soddisfatto/a dell'aspetto (panorama) della zona?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
24.	Lei è soddisfatto/a del ***verde*** presente in questa zona? (parchi, alberi, giardini, aiuole)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
25.	Lei è soddisfatto/a dei ***punti di riferimento*** della zona? (ci sono, e sono visibili e/o riconoscibili: monumenti, edifici storici, ecc.)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
26.	Lei è soddisfatto/a delle strade (percorsi rettilinei o di vario tipo)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
27.	Lei è soddisfatto/a del ***numero di servizi*** presenti in questa zona? (posta, farmacia, ecc.)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
28.	Lei è soddisfatto/a degli ***orari di apertura di*** tali ***servizi***?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante

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Assess implementations in the frame of the Cities-of-Tomorrow programme

Project n. EVG33-2002-00508
ENERGY, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT – PROGRAMME
Key Action 4: Cities of Tomorrow and Cultural Heritage
Thematic priority. 7.3: Socio-Economic aspects of Environmental Change in the Perspective of Sustainable Development

29.	Lei è soddisfatto/a del ***numero dei negozi*** in questa zona?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
30.	Lei è soddisfatto/a degli ***orari di apertura di*** tali ***negozi***?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
31.	Lei è soddisfatto/a dei ***luoghi di ritrovo*** presenti in questa zona (bar, caffetterie, ristoranti)? (ci sono e sono sufficienti)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
32.	Lei è soddisfatto/a dell'***orario di apertura dei luoghi di ritrovo***?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
33.	Lei è soddisfatto/a del ***numero delle sedute*** in questa zona? (panchine, muretti, altro)	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
34.	Lei è soddisfatto/a del ***numero di piazze*** in questa zona?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
35.	Lei è soddisfatto/a delle attrezzature urbane in questa zona?	Sì	No	Per niente importante	1	2	3	4	5	Molto importante
36.	Lei è soddisfatto/a della ***segnaletica stradale*** presente in questa zona?	SI	NO	Per niente importante	1	2	3	4	5	Molto importante
37.	Lei è disturbato/a della ***cartellonistica pubblicitaria*** in questa zona ? (le crea disorientamento)	SI	NO	Per niente Importante	1	2	3	4	5	Molto importante

N.B. Nell'ultima domanda il "NO" va considerato come 1, ed il SI come 0. per considerare sempre il livello di "soddisfazione"

DESIDEREREI ANCORA POCHE INFORMAZIONI

V. Qual è la Sua età:	**VI. Quale è il suo livello di istruzione:** (elementare, media, superiore, università)**?**	**VII. Livello di reddito:**
_____	_____	1. meno di 1000 euro 2. da 1000 a 2000 euro 3. più di 2000 e fino a 3000 euro 4. più di 3000 e fino a 4000 euro 5. più di 5000 euro

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INDICE DI QUALITÀ DELLA VITA

Le riporto cinque affermazioni con le quali si troverà d'accordo o meno. Le chiedo, utilizzando una scala di 1 a 7 di indicarmi il Suo grado di accordo.

		Fortemente in disaccordo	***In disaccordo***	***Un po' in disaccordo***	***Né d'accordo né in disaccordo***	***Un po' d'accordo***	***D'accordo***	***Completamente d'accordo***
1.	Per molti aspetti la mia vita è vicina al mio ideale.	1	2	3	4	5	6	7
2.	Le condizioni della mia vita sono eccellenti.	1	2	3	4	5	6	7
3.	Sono soddisfatto/a della mia vita.	1	2	3	4	5	6	7
4.	Ho ottenuto le cose importanti che desideravo per la mia vita.	1	2	3	4	5	6	7
5.	Se potessi rinascere, rifarei quasi tutto.	1	2	3	4	5	6	7

Dom. Aperta. Come pensa che sia cambiata la ***Qualità della vita*** delle persone dopo la realizzazione della pista ciclabile?

_____

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Metodologia applicata per il rilevamento di Umbertide

Modello di applicazione da usare come base per il pilot study

Luca Urbani
Laura Carella

Percorso:\\Server22\martincigh\disco d\H\ASI\Wp7 pilot project\Spiegazione metodo usato nel Toolbox\Asi_spiegazione metodo.doc

1 Il Progetto ASI

Il progetto "Valutare le applicazioni nel quadro del programma '*Cities of Tomorrow'* (ASI)", finanziato dalla Commissione Europea, è portato avanti da vari ricercatori in Austria, nella Repubblica Ceca, in Italia, nei Paesi Bassi e in Svezia. La ricerca si occupa delle tematiche legate alla qualità della vita e di come queste vengono affrontate nei progetti finalizzati a promuovere modi di trasporto sostenibili. In generale questi aspetti tendono ad essere tralasciati dai ricercatori, dal momento che è difficile misurarli o quantificarli. L'obiettivo prioritario di ASI quindi è esaminare, passando in rassegna i programmi politici e le realizzazioni nelle città che hanno partecipato al programma "*Cities of Tomorrow*", se e come i politici tengono in considerazione gli effetti delle loro scelte sulla qualità della vita quando applicano le **politiche di trasporto**. Partendo da ciò, il gruppo di ricerca elaborerà uno strumento che permetterà ai responsabili delle decisioni di affrontare meglio le questioni legate alla qualità della vita all'interno dei progetti per la mobilità, in modo da **promuovere interventi che tengano in considerazione i bisogni e le necessità emergenti dalla popolazione anche attraverso cambiamenti nel comportamento dell'utenza**.

Questi strumenti vogliono semplificare il lavoro di ricerca e produrre, se usati regolarmente, un impatto positivo nella pianificazione a scala urbana della mobilità sostenibile, fornendo un contributo attivo al miglioramento della qualità della vita dei cittadini europei.

Gli interrogativi della ricerca

Questo progetto risponderà ai seguenti quesiti:

1. Come i pianificatori e i politici **determinano** gli effetti delle loro politiche di trasporto sulla qualità della vita?
2. Fino a che punto le politiche di trasporto **influiscono** sulla qualità della vita di varie classi di utenti?
3. Come possono essere meglio **valutati** gli effetti sulla qualità della vita delle politiche di trasporto, in modo da promuovere cambiamenti nei comportamenti della popolazione e da favorire sistemi di mobilità sostenibile?

Metodologia

5 città europee, che hanno già dato la loro adesione a ricerche sulla mobilità sostenibile raggruppate in LUTR-Land Use and Transport, sono state invitate a partecipare alle varie fasi della ricerca, per spiegare come si occupano e come valutano gli aspetti della qualità della vita nelle aree urbane.

Esperti delle città partecipanti sono stati intervistati, così da stabilire metodi e variabili; alcuni di essi sono stati invitati, a carico del progetto ASI, ad un Workshop di 2 giorni in cui si sono incontrati 30 esperti di tutte le località partecipanti, del progetto di ricerca europeo LUTR e della Commissione Europea. In tale occasione sono stati presentati i risultati delle interviste svolte e sono state tratte le conclusioni preliminari della ricerca, che costituiscono la base per preparare gli strumenti e le linee guida da validare in un progetto pilota, svolto in una delle città partecipanti.

Il risultato finale sarà uno **strumentario**, con relative linee guida per l'utilizzazione, e una **banca dati**, finalizzati alla valutazione della qualità della vita in relazione all'area della mobilità e dei trasporti. L'oggetto principale di questa fase lavorativa è quindi la realizzazione di un toolbox operativo, che possa essere testato tramite un progetto pilota, e la definizione delle linee guida per una sua implementazione definitiva.

Il Progetto Pilota

Il progetto pilota previsto dalla ricerca si svolge nel Comune di Umbertide, e applicando gli strumenti predisposti al caso del **progetto di una pista ciclabile** che colleghi il centro storico della città alla nuova espansione urbana, viene così proposto un sistema di mobilità alternativa sostenibile.

2 IL RILIEVO

I Tempi:

Il rilievo si svolge in due tempi distinti: la prima è la fase **ante operam** della pista ciclabile, in cui si studia lo stato di fatto e si misurano le caratteristiche oggettive (tramite il rilievo stesso) e soggettive (tramite questionari posti agli utenti ed agli esperti), la seconda è la fase **post operam** della pista ciclabile in cui si misurano i cambiamenti apportati dalla stessa sia al sito che alla qualità della vita degli utenti, in modo da evidenziare i cambiamenti sia nella percezione generale che si ha dell'area che nella situazione attuale della stessa.

Come:

A) Esempio del modo di rilevare "in situ".

Base del rilievo

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B) Esempio del modo di graficizzare il rilievo svolto.

Graficizzazione del rilievo

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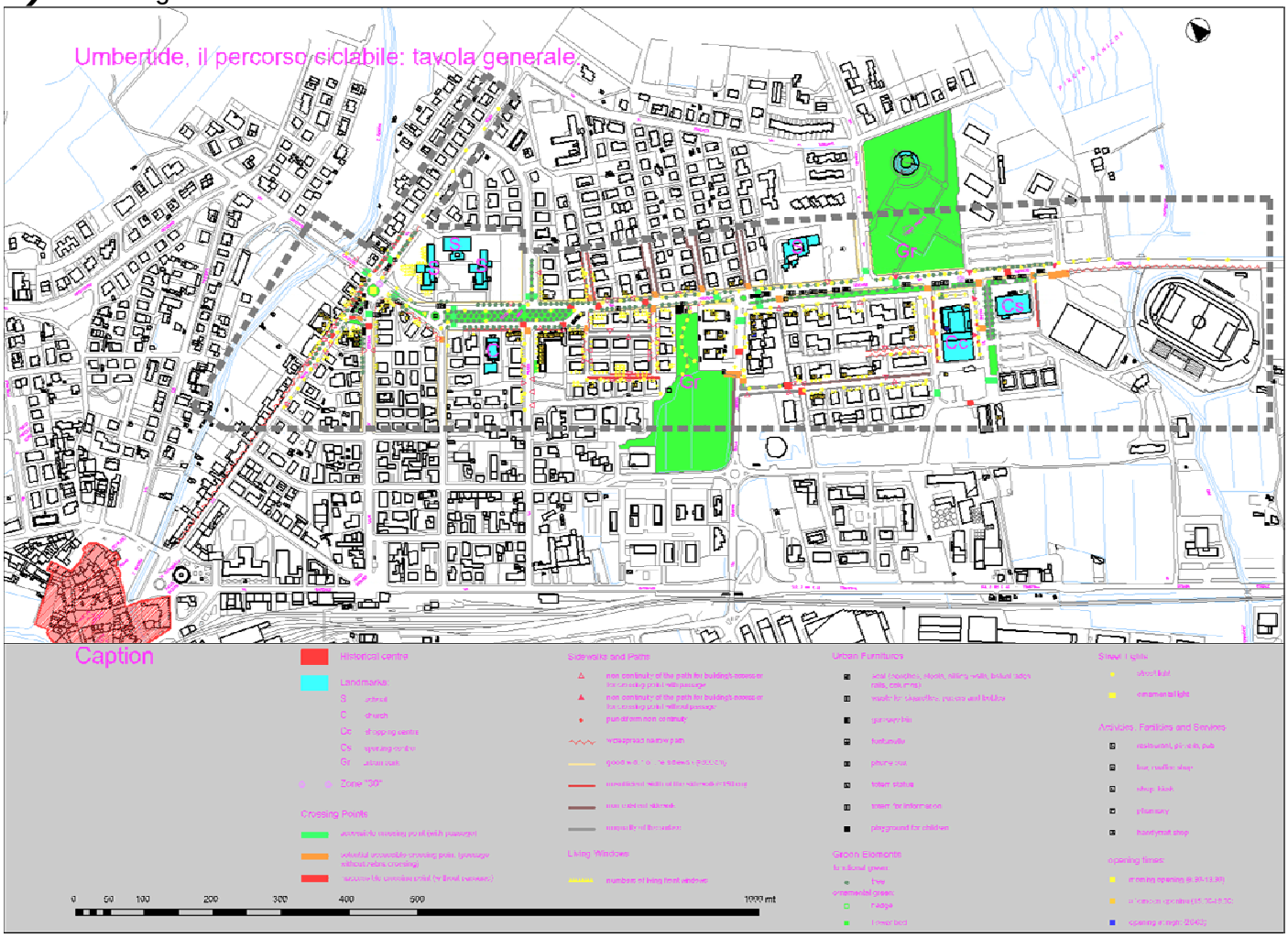
C) Il rilievo generale.



Valutare il Rilievo:

A) Valutare il rilievo oggettivo.

- I parametri oggettivi sono valutati secondo differenti criteri che dipendono dalle loro caratteristiche.
- I criteri divengono indicatori di “performance” o “qualità” che possono essere “poco”, “nella media”, “buono”.
- Le analisi che forniscono percentuali, densità, o valori assoluti possono essere valutati semplicemente comparando il risultato con valori certi: le Threshold values.
- Le Threshold values sono state ricavate dal gruppo di ricerca Uniroma3, sulla base della letteratura, delle esperienze raccolte anche in altri ambiti di ricerca e dal senso comune.

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