



HOTEL

How to analyse life quality

An accompanying measure within the EU Fifth Framework Programme
Keyaction "Improving the Socio Economic Knowledge Base"

Pilot Study Report

Kristianstad, June – October 2004

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**Kristianstad, June – October 2004
Pilot Study Report**

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Preface

HOTEL – How to analyse quality of life – is an accompanying measure in the key Action “Improving the socio-economic knowledge base” of the EC Fifth Framework Programme. Partners from five different countries are involved in the project:

- Co-ordinator: FACTUM OHG, Traffic- and Social Analysis, Ralf Risser, Austria
- Institut National de Recherche sur les Transports et leur Sécurité (INRETS)-Department d'évaluation et recherche en accidentologie, Stefan Petica, France
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The project HOTEL takes a starting point in a heuristic approach that focuses on different disciplines' practice in connection with the assessment and consideration of quality of life and underlying mobility and transport preconditions. The core concept is to find out, how aspects of life quality are taken care of in practice in the field of transport, mobility and city planning. With "practice" all kinds of activities are meant that set the scene for the living conditions of citizens. The responsible for these activities are politicians and decision makers, planners, implementers and administrators.

The project HOTEL is divided into eight work packages distributed over a life-span of 24 months. In WP 1 State of the Art we look for literature and empirical data concerning the meaning of quality of life in general. The central elements of our project are the workshops carried out in WP 2 and 3, to get an overview of quality of life-assessment in different countries, by different disciplines at different occasions, and the elements and indicators taken care of thereby, and the workshop in WP 5 that is carried out in order to improve frames for quality of life assessment and implementation of results. A toolbox for interdisciplinary use (WP 6) will result, and a pilot study to validate the toolbox is planned (WP 7).

WP 1 (State of the art) WP 2 and WP 3 represent the data collection phase. WP 5 to WP 7 reflect the phase where improvements of these procedures are elaborated on and tested. All workshops will be carried out under consideration of regions: Central, Eastern, Northern, Southern and Western Europe. In addition recommendations for a data-bank for quality of life assessment results by different disciplines, at different occasions, and in different regions will be worked out which makes information about procedures to measure quality of life and about their results easily available and accessible for both researchers and practical workers in the field. Dissemination of results (WP 8) will be done by electronic (Web-site) and print media (newspaper), and by oral communication, e.g. in the frame of congresses, expert conferences, etc., on the topic that nowadays take place at many different occasions.

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Summary

The pilot study presented here was carried out in the city of Kristianstad. There, two re-structured sites in the city centre were evaluated. The goal of the pilot study was to pilot-test two Kernel instruments of the HOTEL toolbox: The checklist and the questionnaire. The HOTEL **checklist** should allow to identify aspects and plans in papers and documents related to planned modifications that probably aim at improving QoL, even if this concept is not mentioned there in words. The application of the HOTEL **questionnaire** should allow to assess whether the envisaged changes according to person who are interviewed with its help are in fact related to QoL and will bring about positive results in this respect. Saving these results according to the **database**-concept of HOTEL would allow to build on the experiences of the HOTEL-project and show, whether results like those to be gathered in the HOTEL pilot study can be generalised. At the same time, every new experience of this type contributes to the further elaboration on the HOTEL-**guidelines**.

The questionnaire was applied in the frame of a pilot study carried out in the Swedish city of Kristianstad. It was administered by using a *vis-à-vis* technique in the frame of road-side interviews by trained interviewers. Birgitta Brännström-Fors of the municipality of Kristianstad selected and instructed the interviewers and supervised the whole process of data-collection. The strategy used to contact the interviewees was to address them at the road side, at random. In order to have a pertinent sample with respect to the studied topic, a selection criterion of *familiarity* with the place where the study was carried out was introduced. The final sample taken into consideration in the present study consists of 201 interviewed subjects, wherein 184 belong to the population and 17 were experts with knowledge concerning QoL, traffic and city planning, and familiar with the implementations in Kristianstad. The most important conclusions were:

Both experts and the representatives of the public assess the aspects that have been listed in the frame of the HOTEL work as very important by both, except for good conditions for car drivers. The changes achieved by the modifications at the two sites in Kristianstad are perceived as much more positive by the interviewed experts than by the representatives of the public. Correlations between QoL and other variables with respect to the question what is considered important, are generally low. Only between the importance of QoL and Beauty & aesthetics and Traffic safety somewhat stronger relationships could be found. On a more concrete level, namely when assessing the changes achieved by the modifications at the two analysed sites in Kristianstad, the results show that there are considerable correlations between perceived changes in QoL and perceived changes in all other variables measured in Kristianstad, except for Smooth car traffic flow and Ease and comfort for car drivers. Thus, the list of indicators that have been developed in the frame of HOTEL and that have been transformed into checklist items (HOTEL checklist) and questions (HOTEL questionnaire) are related to the concept of QoL according to the persons interviewed in Kristianstad. The preferred mode choice affects the perception of changes: Frequent car users state more strongly that QoL has improved after the interventions. This indicates that frequent car drivers identify improvements in QoL in spite of the fact that the situation for driving a car rather deteriorates when modifications like those in Kristianstad are implemented. Gender does not seem to play a key role on influencing the perceived changes, nor are there any larger differences between other groups that of relevance for the HOTEL research.

However, some of the findings could be interesting for the municipality of Kristianstad, for instance that the safety situation after restructuring is perceived much better on Östra Boulevard than on Nya Boulevard.

It is recommended to use the two mentioned HOTEL tools at other occasions. Saving these results according to the database-concept of HOTEL would allow to build on the experiences for Kristianstad and show, whether results like those in Kristianstad can be generalised.

At the same time, every new experience of this type contributes to the further elaboration on the HOTEL-guidelines.

1 Introduction

The goal of the pilot study in Kristianstad was to pilot-test two Kernel instruments of the HOTEL toolbox: The checklist and the questionnaire. The **checklist** should allow to identify aspects and plans in papers and documents related to planned modifications that probably aim at improving QoL, even if this concept is not mentioned there in words. The application of the HOTEL **questionnaire** should allow to assess whether the envisaged changes according to person who are interviewed with its help are in fact related to QoL and will bring about positive results in this respect.

Saving these results according to the **database**-concept of HOTEL would allow to build on the experiences of the HOTEL-project and show, whether results like those to be gathered in the HOTEL pilot study can be generalised. At the same time, every new experience of this type contributes to the further elaboration on the HOTEL-**guidelines**.

1.1 The sections of this report

The procedure and the strategies that were applied for the development of the questionnaire administered will be described shortly, as well as the sampling method adopted and the characteristic of the survey.

Thereafter, the strategy of data elaboration chosen for the analysis of the questionnaire administered in the frame of the pilot study in Kristianstad is divided in two parts: the Principal-Analysis results and the In-Depth-Analysis results.

The description of the results of these steps will be followed by the discussion of these results and after these discussion our main conclusions are presented. The questionnaire used in the study as well as the open-ended answers given by a part of the samples of the interviewees – the experts from Kristianstad – are added as an appendix to this report. Readers who would like to see the raw data of the standardised interview-questions may take contact with the Co-ordinator of the project and will receive a CD.

1.2 The questionnaire

The questionnaire that has been administered in at two sites in the Swedish city of Kristianstad (see 1.4) during the pilot study is the result of desk-top work and expert discussions within the consortium, carried out in WP6. The "raw materials" stemmed from the former stages of the HOTEL project; the State-of-the-art study (Risser et al., 2003), the "Analysis Workshops" in Lund and Paris (Ausserer et. al., 2003; Petica et al., 2004) and the Synthesis Workshop in Ferrara (Sardi et al. 2004). It was administered by trained interviewers. Birgitta Brännström-Forss of the municipality of Kristianstad selected and instructed the interviewers and supervised the whole process of data-collection. The strategy used to contact the interviewees was to address them at the road side, at random. In order to have a pertinent sample with respect to the studied topic, a selection criterion of *familiarity* with the place where the study was carried out was introduced.

The questionnaire was applied by using a *vis-à-vis* technique in the frame of road-side interviews by trained interviewers. It is divided into four parts:

- 1) In the first part the interviewees are asked to answer to a question about how important certain infrastructure characteristics are in relation with certain QoL-related issues. The principal aim of this question is to try to evaluate, according to the users characteristics, the importance of some possible interventions in order to rate them according to the subjective

point of view of the population. This rating process allows researchers to try to help decision makers to give priorities to the infrastructure interventions that are perceived by the population as most strongly affecting their QoL.

2) The second question the interviewed sample was asked to answer is about how the interventions realised at Östra Boulevard and Nya Boulevard affected some important aspects of everyday life that contribute to the general QoL level. This will allow researchers to analyse and evaluate the perceived changes in Kristianstad caused by the infrastructure modifications.

3) The third part of the questionnaire is dedicated to the socio-economic characteristics of the interviewed sample. This part allows researchers to analyse how different social characteristics as age, gender, preferred mode choice, etc., affect the subjective assessment of the QoL parameters.

4) The fourth part of the questionnaire analyses mobility habits of the interviewed sample, in order to compare how different strategies of mobility, like using public transport versus private car, etc., affect the opinion of the population concerning the infrastructure changes in Kristianstad.

The questionnaire contains in total 44 items and it took about 10 minutes in average to be administered. The pilot study showed that the length, the language form, the structure and nature of the questions and the administration time of the questionnaire were adequate and well tolerated by the interviewees, which by the way also had been assured in the frame of extensive pre-tests. During the main study, no complaints about any of the mentioned issues have been reported by the interviewers.

The questionnaire is added as an appendix to this report (appendix 1).

1.3 The sampling method

The strategy used to contact the interviewees was to address them at the road side, at random. In order to have a pertinent sample with respect to the studied topic, a selection criterion of *familiarity* with the place where the study was carried out was introduced, by asking about the *frequency* (how often) the subject usually visited the area he/she was going to be interviewed about, or how well he/she knew this area. The condition required to be considered "familiar" with the place of study, and therefore to be eligible for the interview, was to come to the place at least "once a month". Our assumption was that otherwise people would not be able to really assess any changes in the analysed environment.

The final sample taken into consideration in the present study consists of 201 interviewed subjects, wherein 184 belong to the population and 17 were experts with knowledge concerning QoL, traffic and city planning, and familiar with the implementations in Kristianstad.

1.4 Time and procedure

The interviews were carried out in April to June 2004 by in total four interviewers of the Municipality of Kristianstad .

The two sites in Kristianstad were in the city centre, separated from each other appr. 200 meters, and in general traffic-calming measures had been carried out there.

The written materials about these two sites had been studied by the HOTEL consortium according to the HOTEL checklist (see Deliverable 6 - Toolbox). For both sites the same goals and, at first sight, similar strategies had been envisaged and we considered them to be comparable, thus.

2 Results

The general data analysis consists in a first statistical analysis of the collected questionnaire data in order to have a general overview of the relation among variables, without yet going into interpretation of the causes beneath them.

The main goals of the principal analysis are the following:

- 1) to display frequencies
- 2) to compare the main results
- 3) to provide a general overview of the statistical characteristics of the variables
- 4) to identify the main differences among variables
- 5) to find out preliminary significant relations among variables

The in-depth analysis consists of a more detailed discussion of the main results found out during the principal analysis phase, and to try to find explanations for certain results, for instance to identify the causes for differences between sites, groups, answers, etc.

The main goals of the in depth analysis are the following:

- 1) to analyse the relationship among variables
- 2) to hypothesise the causes of those relationships that showed to be significant
- 3) to explain the nature of relationships
- 4) to show and to explain differences between sites, groups, and answers

After these analyses follows a discussion of the results that consists of the joint presentation of answers to standardised questions, of open answers formulated in their own words as given by the experts, and of the analysis of correlations between QoL and other variables asked for in the HOTEL questionnaire.

All analyses refer to the two main aspects that the questionnaire is touching: To the importance attributed to QoL and other variables that could be related to, or that could be constitutive elements of, QoL, and of the changes perceived with respect to all these changes after the modifications of two sites in Kristianstad.

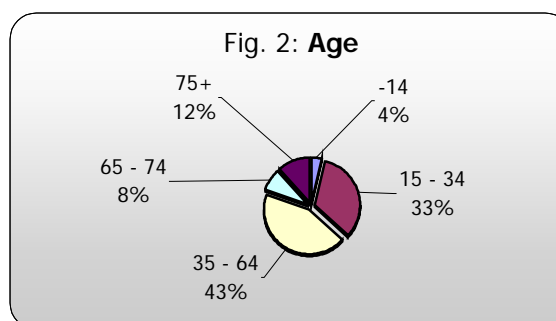
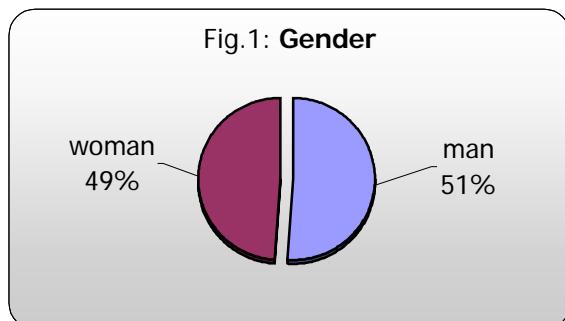
The constitutive elements of QoL, or key areas that reflect QoL, according to the findings of HOTEL, are as follows:

- Safety/Security (subjective safety)
- Spontaneous mobility, accessibility, usability, time-consumption
- Equity, Participation, equality of access
- Comfort, Quality of facilities
- Aesthetics
- Social communication/Urban development
- Environmental quality, Sustainability/environmental impact
- Costs aspects
- Others

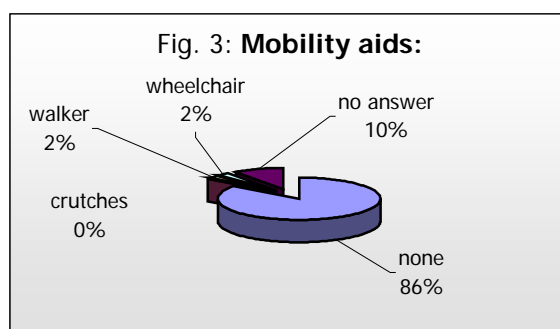
The discussion of results will follow these elements/areas in chapter 3, where they also are defined and specified.

2.1 The sample

The final sample taken into consideration in the present study consists of 201 people. The distribution by gender and age is displayed in the following graphs.

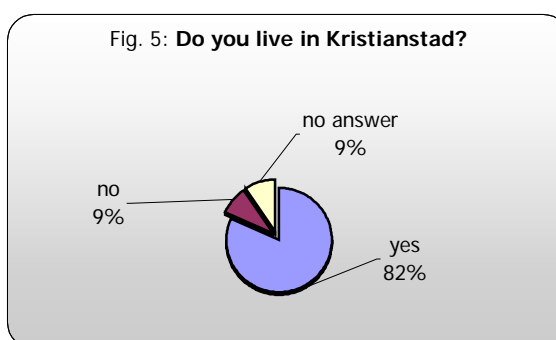
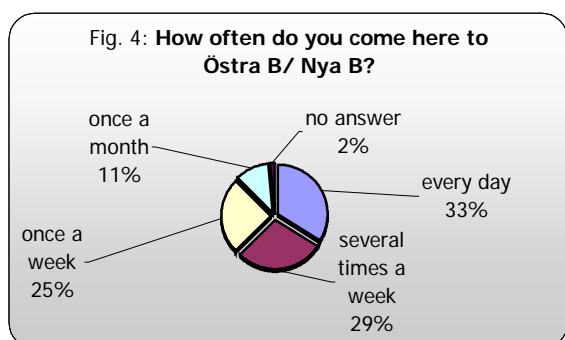


The questionnaire was also taking into consideration the mobility aids that the interviewed persons would use:



As the number of persons using mobility aids was so low ($n=4$ in the wheelchair and $n=4$ with a walker), this aspect will not be included in the further evaluation.

A screening question was asked in order to quantify the familiarity of the interviewee with the place he/she was going to be interviewed about; the graph below shows the percentages of the *frequency* with which the interviewed persons visit the study place and the percentage of the interviewed people living in Kristianstad.



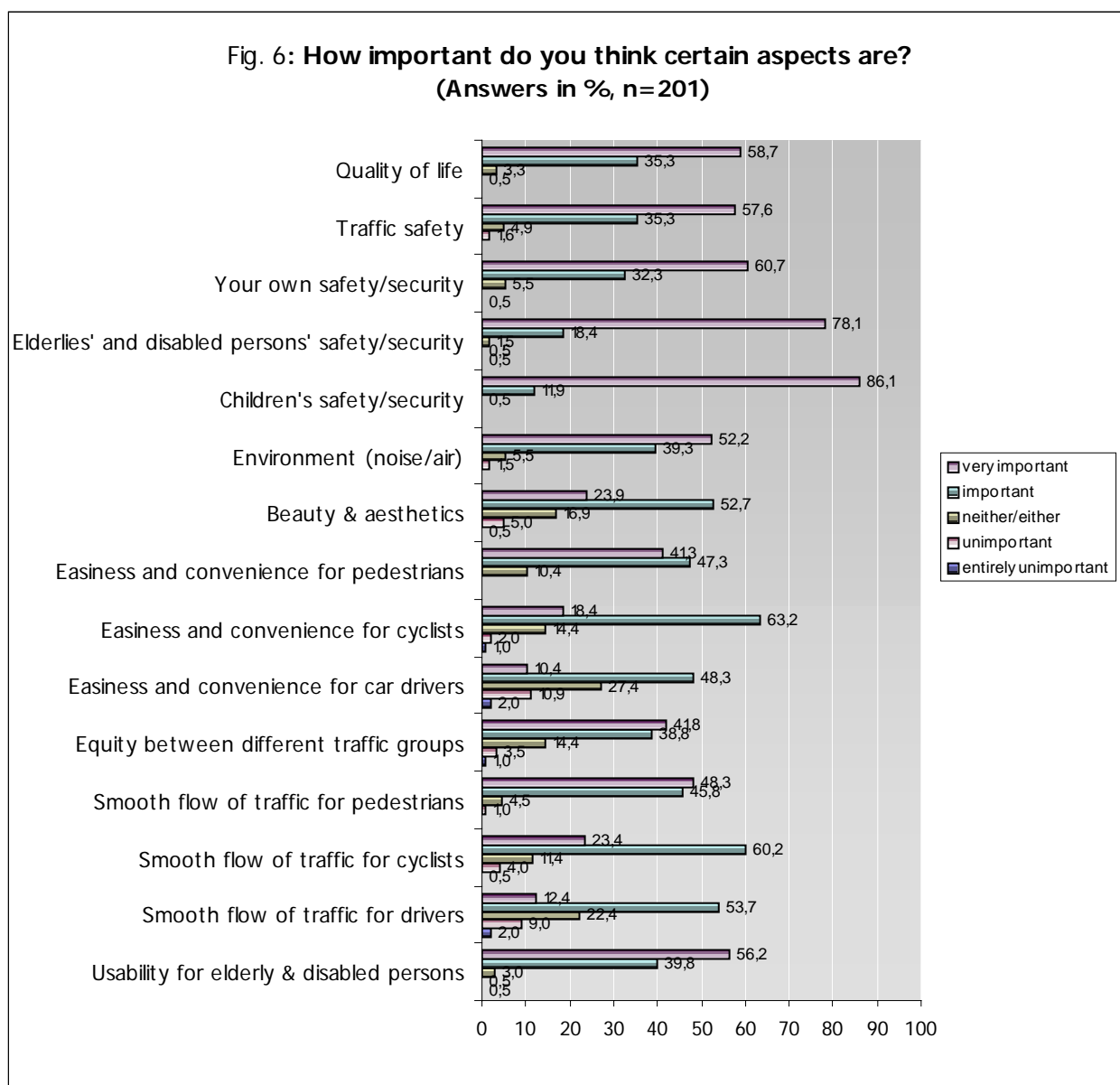
2.2 General analysis

The general analysis consists of a first statistical analysis of the collected data in order to have a general overview of the frequencies of answers. In this part of the report an overview of the results is provided by displaying the answers referring to the sample as a whole, not considering sub samples and specific correlations.

The aim of the question displayed below is to evaluate how important certain infrastructure characteristics in relation to transport issues are for the assessment of the general QoL.

2.2.1 Opinions about the importance of the HOTEL questionnaire variables

As it appears clearly in the figure below, the issue "safety" plays a key role for the interviewed persons, with the three best results falling into that category: In particular the children's safety takes the absolute lead in the rating scale of importance with more than 86 % of the sample considering this issue as most important.



Both QoL and Safety are labelled as being most important, according to the population. The consideration for the “environment”-factor is also quite high, with more than 50 % of the sample giving the highest importance to environment-related factors such as low level of noise and good air quality.

Considering the comparison of importance attributed to the “easiness” and “smooth flow” for different kinds of transport (car, bicycle and pedestrian) there is a preference of the interviewed sample for smooth bicycle flow, as more than 60 % of the sample consider it as “important” to provide infrastructures that make cycling easier.

2.2.2 Perceived changes with respect to the safety variables

The aim of the questions displayed in the following graphs was to investigate how the users evaluate the *consequences* of the interventions carried out with respect to the safety-related variables.

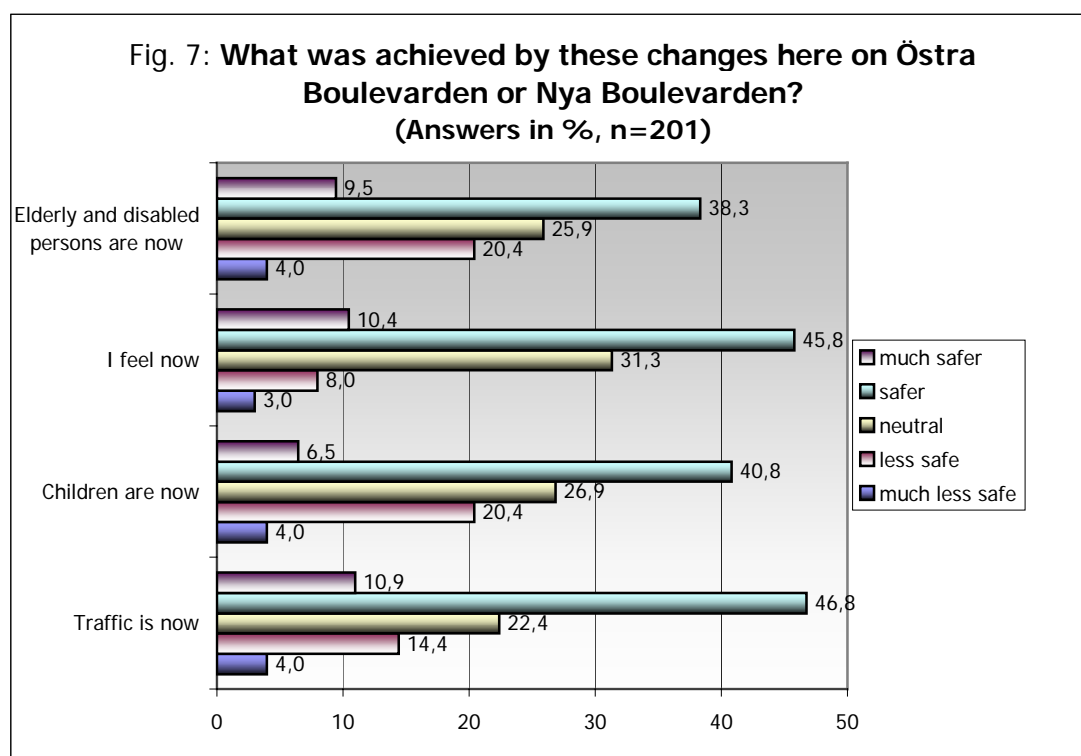
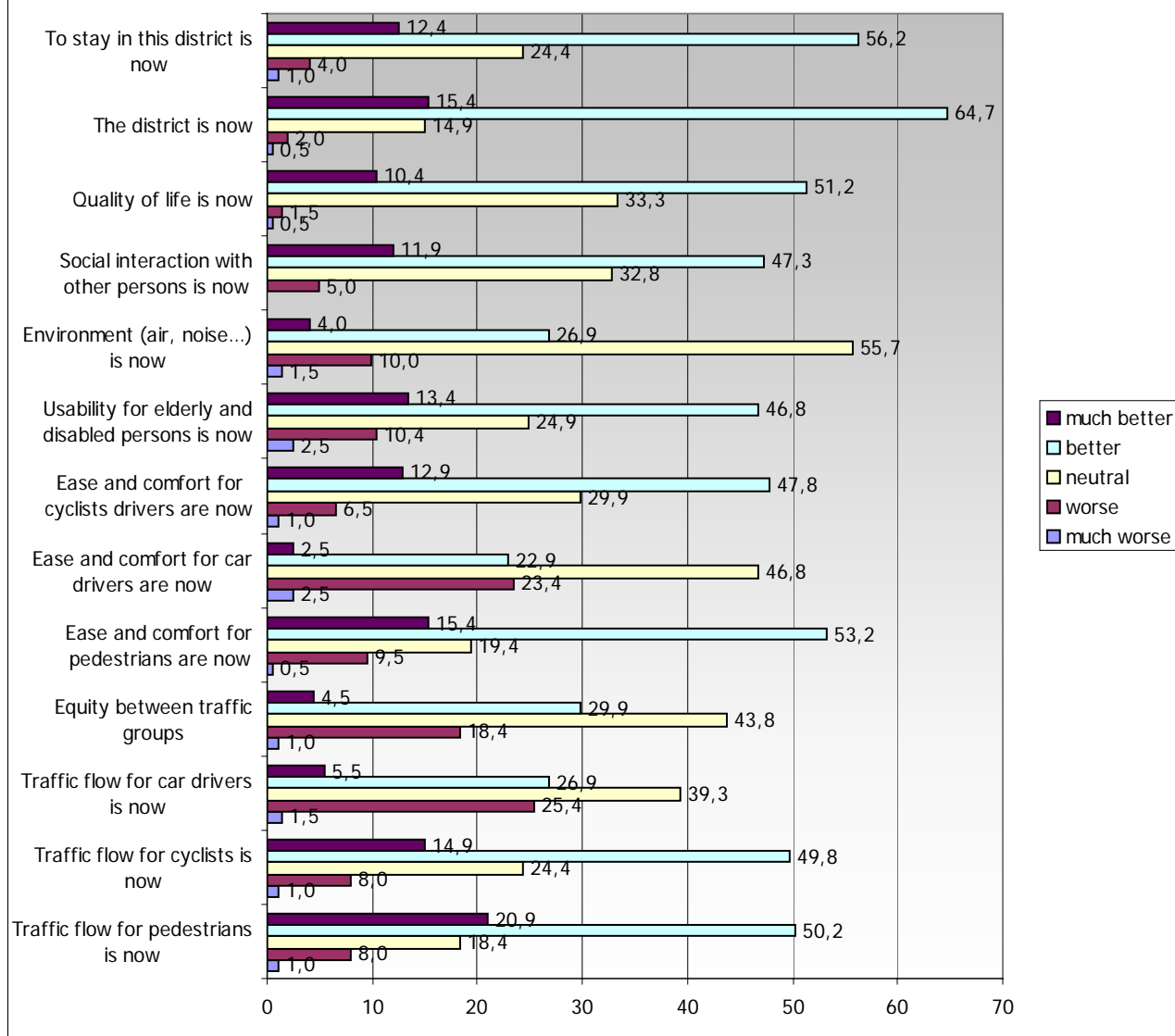


Figure 7 shows that there is a widespread agreement among the interviewed subjects about the effectiveness of the infrastructure interventions on enhancing the general level of safety, with high percentages of “safer” on all the issues investigated. In particular the interviewees assess the level of safety for traffic in general and for themselves (“I feel now”) in average higher than for the vulnerable users as children, elderly and disable persons.

The figure 8 below shows the percentage of answers that the interviewed sample provided in relation of the perceived *effects* of the interventions carried out in the areas taken into consideration by the present study.

The specific aim of this question was to assess how the population evaluate the *changes* that occurred in the area were the interventions were made, with respect to the aspects dealt with in the HOTEL questionnaire:

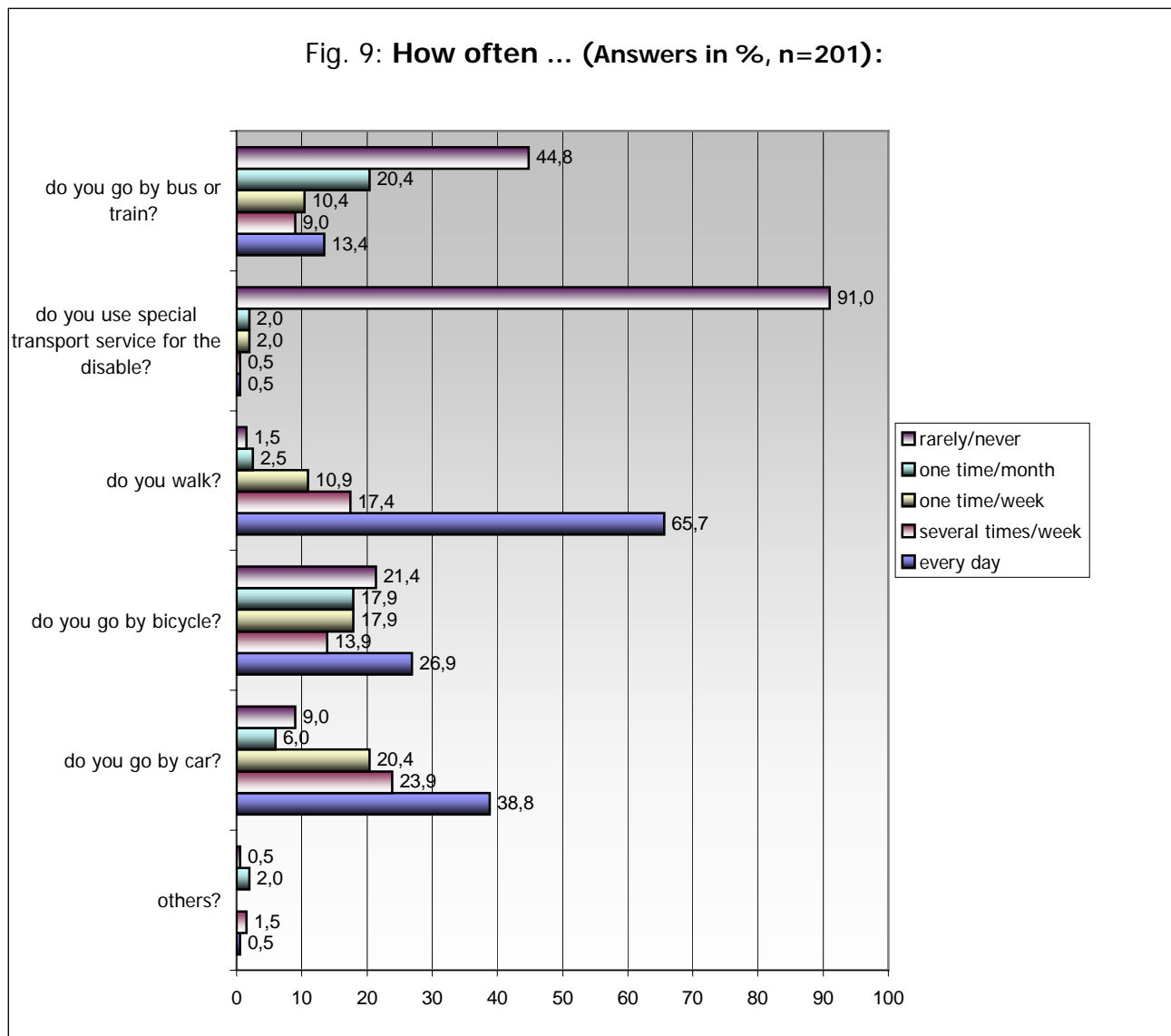
Fig. 8: What was achieved by these changes here on Östra Boulevarden or Nya Boulevarden? (Answers in %, n=201)



According to the showed percentages in the figure above, it can be affirmed that there is a general satisfaction with the measures carried out in the districts among the interviewed people. Many of the analysed issues are now assessed as "better" than before. For the purpose of the present study, it is interesting to note the high percentages of "neutral" detected in the topics related to the changes in the situation for car drivers. This high percentage of neutral answers corresponds to a significantly lower percentage of "better"-answers to the question related to the ease/comfort and traffic flow-questions for drivers, especially when compared with the percentages scored in the same questions for cyclists and pedestrians.

2.2.3 Transport modes

The following figure 9 reflects mode-choice characteristics of the interviewees. This question allows the present report to investigate how these habits correlate with the other variables analysed in this study.



Walking definitely is quite a widespread habit among the interviewed persons. Over 65 % of them declare to walk "every day". The second highest percentage of every-day use is connected to the car. But the percentage is quite a bit lower (38.8 %).

2.3 In depth analysis

In this part of the report we will analyse more in detail those variables that have shown to be important in the general analysis. This will be done with the help of a comparison between sub-samples, like the general population and the expert group, the two sites in Kristianstad that had been modified (Östra Boulevard and Nya Boulevard), the genders, different age groups, and mode choice.

2.3.1 The general population's and the experts' point of view

In the following tables 1 to 6 “very important” & “important” are added together to constitute one category of “important”, as well as “entirely unimportant” and “unimportant” are added together to one category of “unimportant”. The neutral answers are left out. One of the most interesting issues found in the former stages of HOTEL was the assumed differences between the users' and the experts' point of view about how the traffic situation influences the *general* QoL and related safety issues.

Table 1: What is generally important for QoL? (Population vs. Experts)

Importance of certain aspects	Population (n = 184)		Experts (n = 17)	
	Unimportant	important	unimportant	important
	%	%	%	%
Usability for elderly & disabled	1	95,6	0	100
Smooth flow of traffic for drivers	11,5	65,6	5,9	76,5
Smooth flow of traffic for cyclists	9,4	82,6	0	100
Smooth flow of traffic for pedestrians	1,1	93,9	0	100
Equity between different traffic groups (cyclists, drivers, pedestrians)	8,8	80,3	5,9	88,2
Easiness and convenience for car drivers	12,6	61,0	17,6	41,2
Easiness and convenience for cyclists	3,3	80,9	0	94,1
Easiness and convenience for Pedestrians	0	88,5	0	100
Beauty & aesthetics	6,0	75,2	0	100
Environment (noise/air)	1,7	92,2	0	100
Children's safety/ security	0	99,5	0	100
Elderlies' and disabled persons' safety/security.	1,0	97,3	0	100
Your own safety/security	5,4	94,5	0	88,2
Traffic safety	6,5	93,4	0	100
Quality of Life	3,8	96,2	0	100

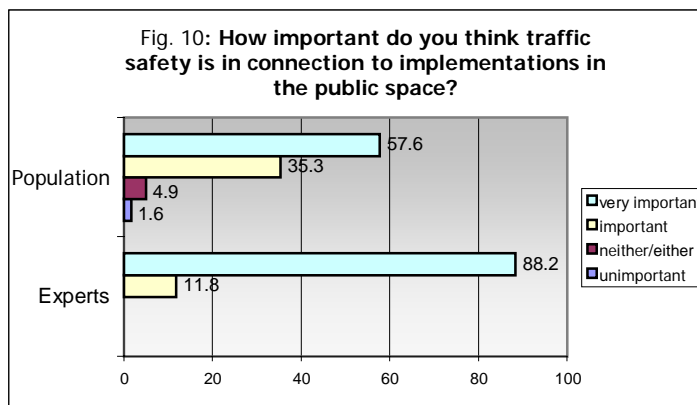
As mentioned above, the questionnaire was administered to both the members of the general population interviewed at the two sites Östra Boulevard and Nya Boulevard, and to a group of experts in the field of mobility, traffic and city planning, that are supposed to know the two sites and the changes that have taken place. The experts here interviewed have

partly been involved in the development and implementation of the measures. Thus, they know the two sites before and after the intervention and they are aware of the kinds of interventions that have taken place.

The group of experts is not a representative sample. Still we consider it useful to compare them with the road users, since this kind of confrontation provides a variety of results that are interesting for HOTEL. They have been an important discussion topic in the HOTEL workshops. E.g., results will be a source of hypotheses for future studies about the "distance" between the experts' and the population' assessment of QoL issues.

The experts assess all aspects listed in table 1 above as being more important than the general public, except for two: The representatives of the general public considers easiness and convenience for drivers as more important than experts do (although judgements are on a lower level than those for all other aspects), and they also consider their own safety as more important than the experts do with respect to **their** own safety.

As far as beauty and aesthetics are concerned, there is an extremely large difference between the experts (100 % consider beauty & aesthetics as being very important/important) and the interviewed representatives of the general public (75 %).



According to table 1, with respect to safety (figure 10 above) and QoL (figure 11 below), the experts attribute more importance to the role that certain infrastructure characteristics play as determinants.

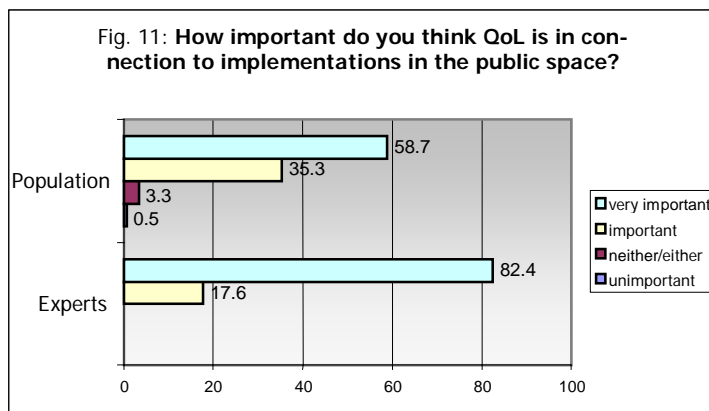


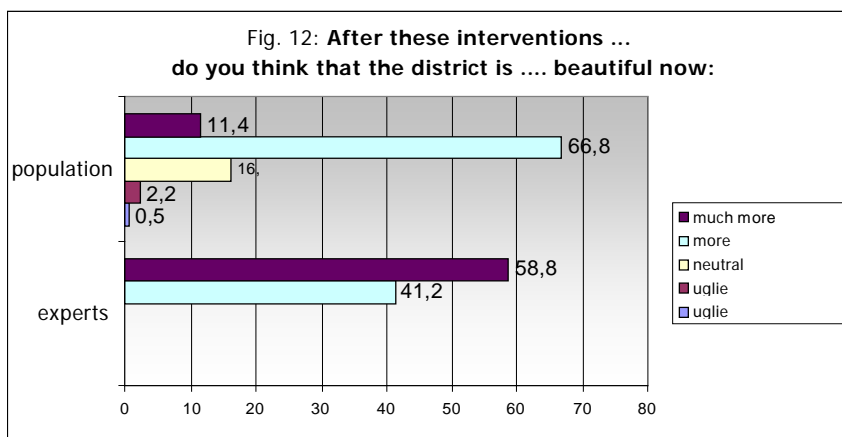
Table 2 below allows a comparison of the assessments given by the experts and by the representatives of the general public. It is obvious that all changes are assessed as (much)

more positive by the experts, except for two variables: Car traffic flow and the comfort of car drivers are assessed more negatively by the experts than by the general public.

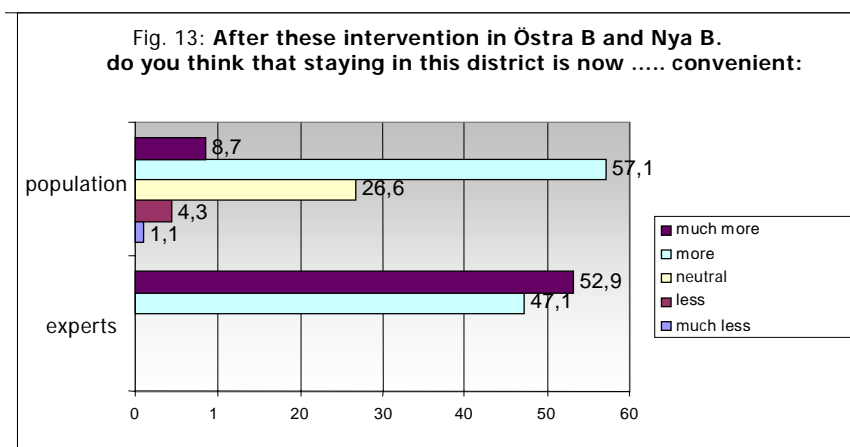
Table 2: Comparison between population and experts with respect to the implemented measures (neutral answers are left out).

Perceived changes	Population (n = 184)		Experts (n = 17)	
	less safe	Safer	less safe	safer
	%	%	%	%
Traffic is now	20,4	54,7	0	100
Children are now	27,1	43,1	0	100
I feel now	12,2	53,6	0	94,1
Elderly and disabled persons are now	27,1	44,2	0	100
	worse	Better	worse	better
Traffic flow for pedestrians is now	9,9	69,6	0	100
Traffic flow for cyclists is now	9,4	63,6	6,3	93,8
Traffic flow for car drivers is now	23,8	33,7	64,7	23,6
Equity between traffic groups	21,2	32,5	5,9	64,7
Ease and comfort for pedestrians are now	11,7	66,3	0	100
Ease and comfort for car drivers are now	22,8	37,2	64,7	11,8
Ease and comfort for cyclists are now	7,8	58,9	5,9	94,1
Usability for elderly and disabled persons is now	14,4	58,4	0	94,1
Environment (air, noise...) is now	12,2	28,3	5,9	64,7
Social interaction with other persons is now	5,6	58,3	0	93,3
Quality of life is now	2,2	60,6	0	100
	uglier	more beautiful	uglier	more beautiful
This district is now	2,8	80,4	0	100
	less convenient	more convenient	less convenient	more convenient
To stay in this district is now	5,6	67,2	0	100

The following figure 12 gives a more detailed comparison of the assessment of the aesthetic changes at the two analysed sites:

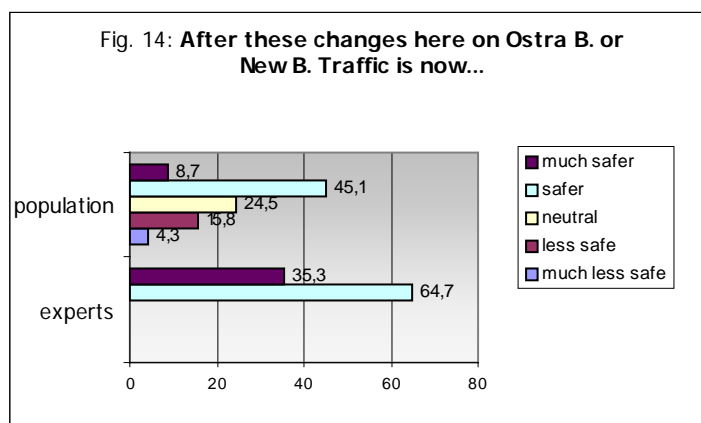


How have convenience and comfort been affected according to the experts and the general public? Figure 13 gives an overview:

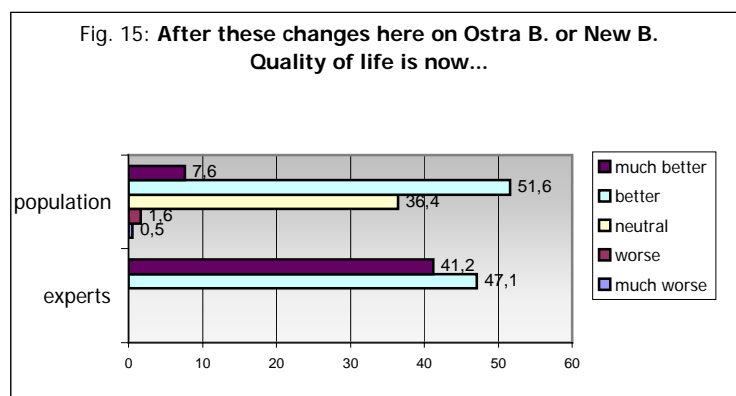


As we can see in the figures 12 and 13 above, the fact of being an experts in the field of mobility does play a role on determining the perception of the changes due to infrastructure intervention. Even if there is a similar positive tendency of the answers, the assessments of the experts are clearly much more positive.

The following figures 14 and 15 show changes that have been perceived with respect to safety and to QoL at the sites due to the infrastructure interventions, from the point of view both of the experts and of the interviewed road users. As we can see in the next figure, even if there is a general satisfaction with the safety changes, the experts that were somehow involved in the intervention assess the benefits better than the interviewed road users:

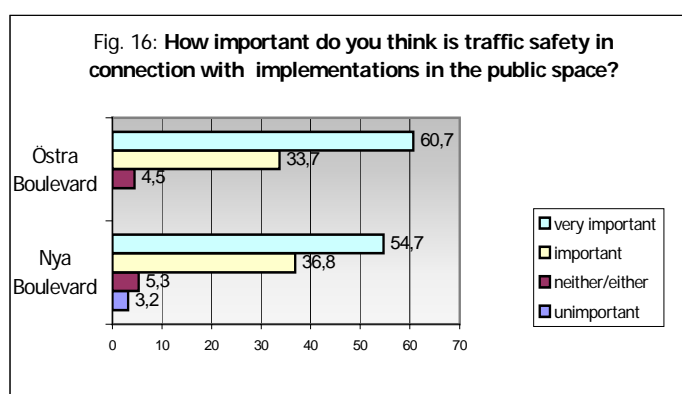


As far as QoL is concerned, more than half of the population consider QoL as "better" after the infrastructure intervention, but again the percentage of the experts considering QoL as "much better" after the changes is far away higher (see figure 15 below)



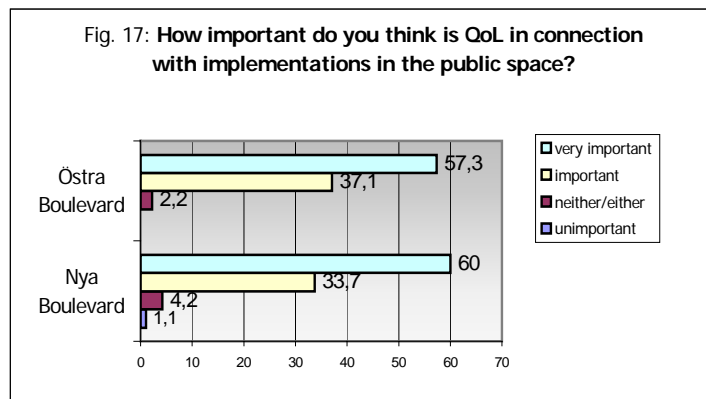
2.3.2 Comparison between Östra Boulevard and Nya Boulevard

Östra Boulevard and Nya Boulevard, the two sites that had been modified and that were analysed in the frame of the HOTEL pilot study, have been compared with respect to the assessments by the road users interviewed at both sites (Östra B. n= 98, Nya B. n = 103).

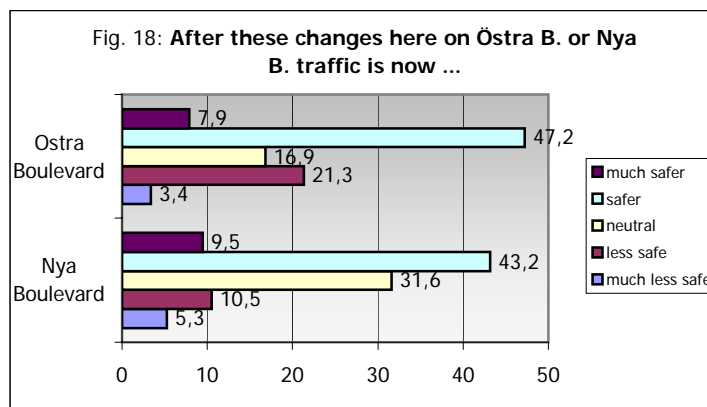


Let us again start with traffic safety and QoL, the latter being the main issue to be dealt with in this study: The two groups of people, the first one interviewed at Östra Boulevard and the second at Nya Boulevard, give only slightly different assessments as far as the importance of safety is concerned (see figure 16 above). Of the people interviewed at Östra Boulevard, 94 % considered safety as very important or important, at Nya Boulevard 91 % did so.

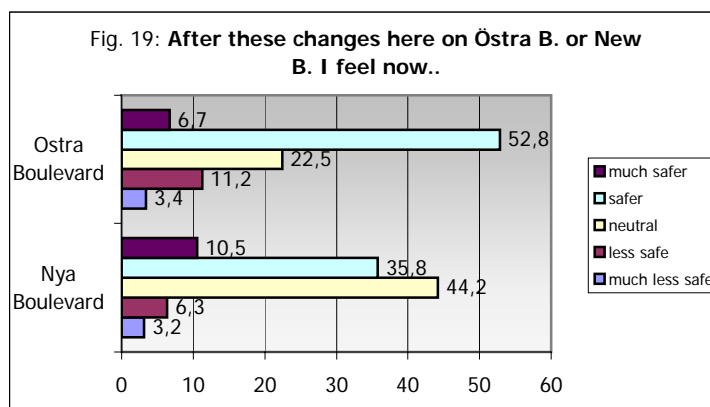
As we can see below (figure 17) both groups of interviewees at Östra Boulevard and Nya Boulevard also give in average similar importance to QoL. Of the persons interviewed at Östra Boulevard 94 % consider that QoL is (very) important, and at Nya Boulevard 94 % do so, as well.



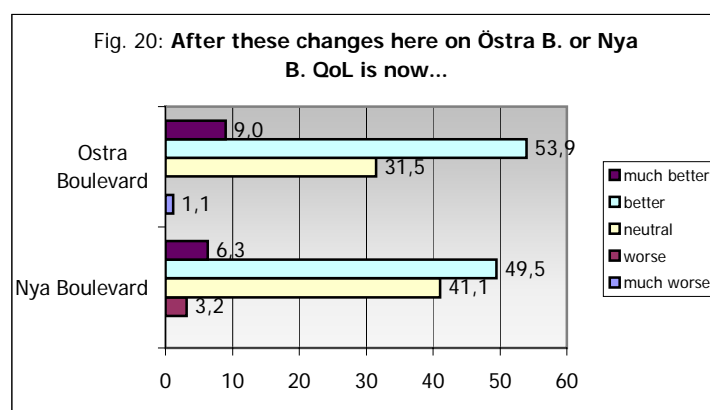
It is, consequently, interesting to check whether both groups also perceive the changes at both sites similarly (figure 18).



At Östra Boulevard 55 % think that traffic is safer now, at Nya Boulevard 53 % think so. However, 60 % state that they **feel** safer at Östra Boulevard, now, but only 46 % say so at the Nya Boulevard (figure 19).



How are changes in QoL perceived after the modifications at the two sites? At Östra Boulevard 63 % consider that QoL has improved (much) after the intervention. At Nya Boulevard 56 % do so (figure 20). Thus, improvements in QoL are experienced as being lower at Nya Boulevard. It appears that subjective safety and QoL correspond well.



2.3.3 Mode use

In this part of the report we will evaluate whether and how mode-choice characteristics affect the perception of the changes in QoL and safety issues in the interviewed sample.

In order to do so, the samples were asked how often they use different transport modes: Answers of the type "every day", "several times a week" or "once a week" reflect frequent use, according to our definition. Accordingly, answers of the type "once a month" and "hardly ever, never" reflect infrequent use. The following table 3 allows a comparison between those interviewed persons who use the car often and those who do so more infrequently, or never:

Table 3: Comparison between frequent car users (using car several times a week) and infrequent cars users (using car once a month or less) with respect to the importance attributed to certain aspects in the public space

Importance of certain variables	Frequent car users (n=113)		Infrequent car users (n=30)	
	Unimportant	important	unimportant	important
	%	%	%	%
Usability for elderly & disabled	0,9	97,3	100	86,7
Smooth flow of traffic for drivers	10,6	64,6	23,3	53,3
Smooth flow of traffic for cyclists	5,3	77,9	10	83,3
Smooth flow of traffic for pedestrians	0	94,7	3,3	90
Equity between different traffic groups (cyclists, drivers, pedestrians)	0,9	79,8	3,3	73,3
Easiness and convenience for car drivers	15,9	58,4	13,3	56,7
Easiness and convenience for cyclists	4,4	76,1	0	80
Easiness and convenience for Pedestrians	0	86,7	0	83,3
Beauty & aesthetics	6,2	75,2	10	70
Environment (noise/air)	1,8	93,7	3,3	90
Children's safety/ security	0	99,1	0	100
Elderlies' and disabled persons' safety/security.	0	98,2	0	96,6
Your own safety/security	0,9	97,7	0	96,7
Traffic safety	0,9	95,6	6,7	80
Quality of Life	0,9	97,4	0	90

There are only two larger differences between these two samples: Smooth traffic flow for car drivers is considered as being more important by those persons who drive a car frequently, and also traffic safety is clearly considered as being more important by frequent car drivers.

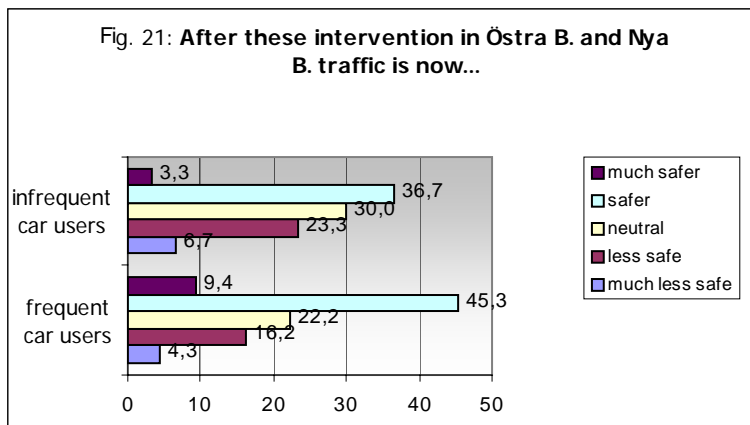
The next table (table 4) allows a comparison of frequent and infrequent car drivers with respect to the perceives changes in the HOTEL-variables after the modifications at the two analysed sites Östra Boulevard and Nya Boulevard:

Table 4: Comparison between frequent car users (using car several times a week) and infrequent cars users (using car once a month or less) in the assessment of the achieved changes

Changes effected	Frequent car users (n=113)		Infrequent car users (n=30)	
	less safe	safer	less safe	safer
	%	%	%	%
Traffic is now	21,2	55,7	30	40
Children are now	27,4	46,9	26,7	40
I feel now	10,6	55,7	16,7	46,7
Elderly and disabled persons are now	27,4	45,1	36,7	40
	worse	Better	worse	better
Traffic flow for pedestrians is now	8,8	70,8	20	60
Traffic flow for cyclists is now	11,5	63,7	10	53,4
Traffic flow for car drivers is now	25,7	35,4	16,7	36,7
Equity between traffic groups	26,8	36,9	16,7	26,7
Ease and comfort for pedestrians are now	12,4	65,5	16,7	70
Ease and comfort for car drivers are now	22,1	30,9	26,7	23,3
Ease and comfort for cyclists are now	8,8	60,2	6,7	63,3
Usability for elderly and disabled persons is now	15,9	58,4	26,7	53,3
Environment (air, noise...) is now	9,7	32,7	20,0	33,3
Social interaction with other persons is now	6,2	61,9	10,0	60,0
Quality of life is now	1,8	59,2	3,3	50,0
	Uglier	More beautiful	uglier	more beautiful
This district is now	1,8	81,3	3,3	70,0
	less convenient	More convenient	less convenient	more convenient
To stay in this district is now	5,3	74,3	13,3	40

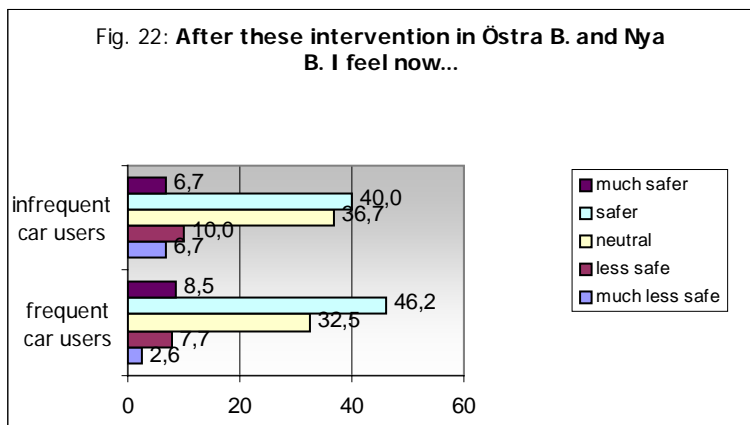
According to the table 4 above, frequent car drivers assess the situation after the infrastructure modifications at the analysed sites as much better in many respects: Traffic is in general considered safer by this group, more of them perceive their own safety/security as

having improved, more of them state that traffic flows for pedestrians and cyclists have become better and that equity between the modes has improved, more of them find that the modified districts are more beautiful now and that it is more convenient to stay there now; and last not least, clearly more of the frequent car drivers state that QoL in the modified areas is better now than infrequent car drivers, or those who do not drive a car do. Below follows a more detailed comparison of these aspects:

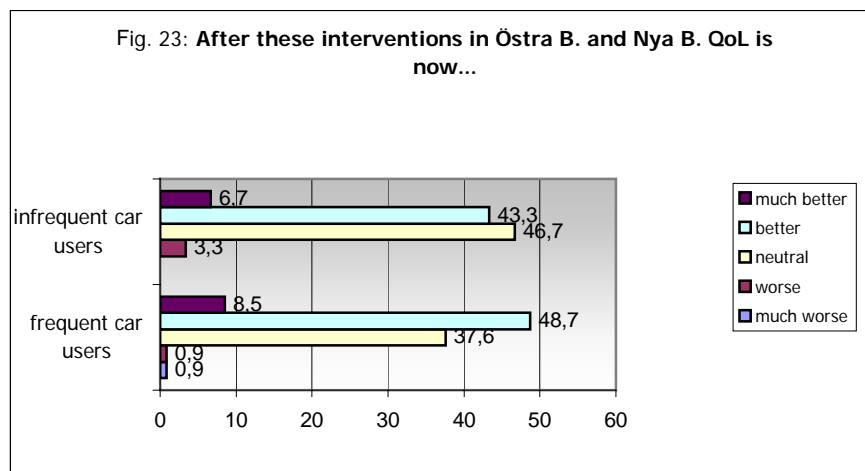


As we can see from the figure 21 above, people using the car often, in average assess the situation after the changes in the infrastructure as (much) safer (55 %) than people that use the car less frequently do (40 %).

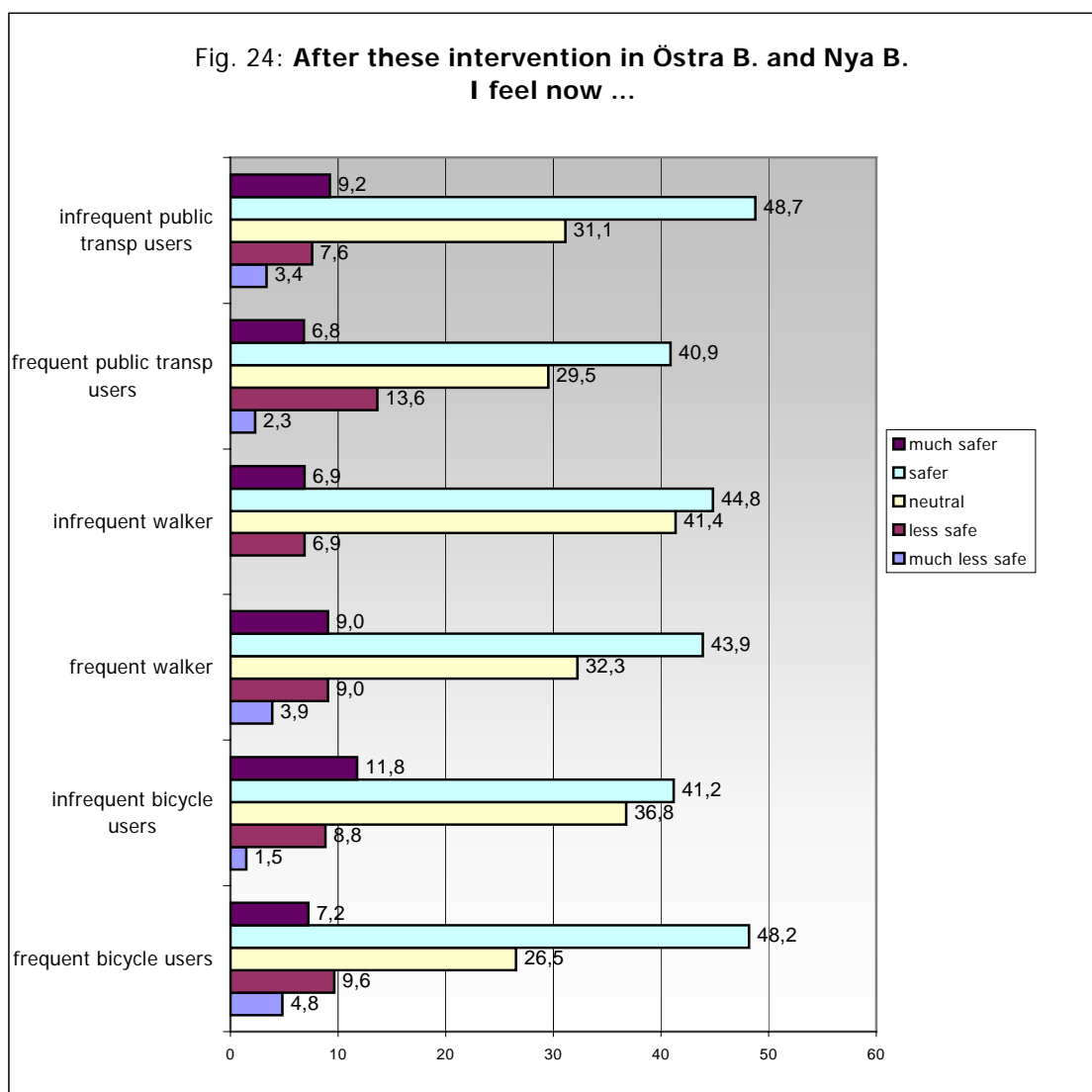
Results are similar with respect to perceived safety (figure 22): 55 % of the frequent car users declare to feel safer than before, while 47 % of the other group do so.



These answers of the infrequent car users, or non-users, find a confirmation in the answers related to the general QoL (figure 23): 57 % of frequent car users find that the interventions carried out have improved QoL, but only 50 % of the infrequent users, or non-users do so.

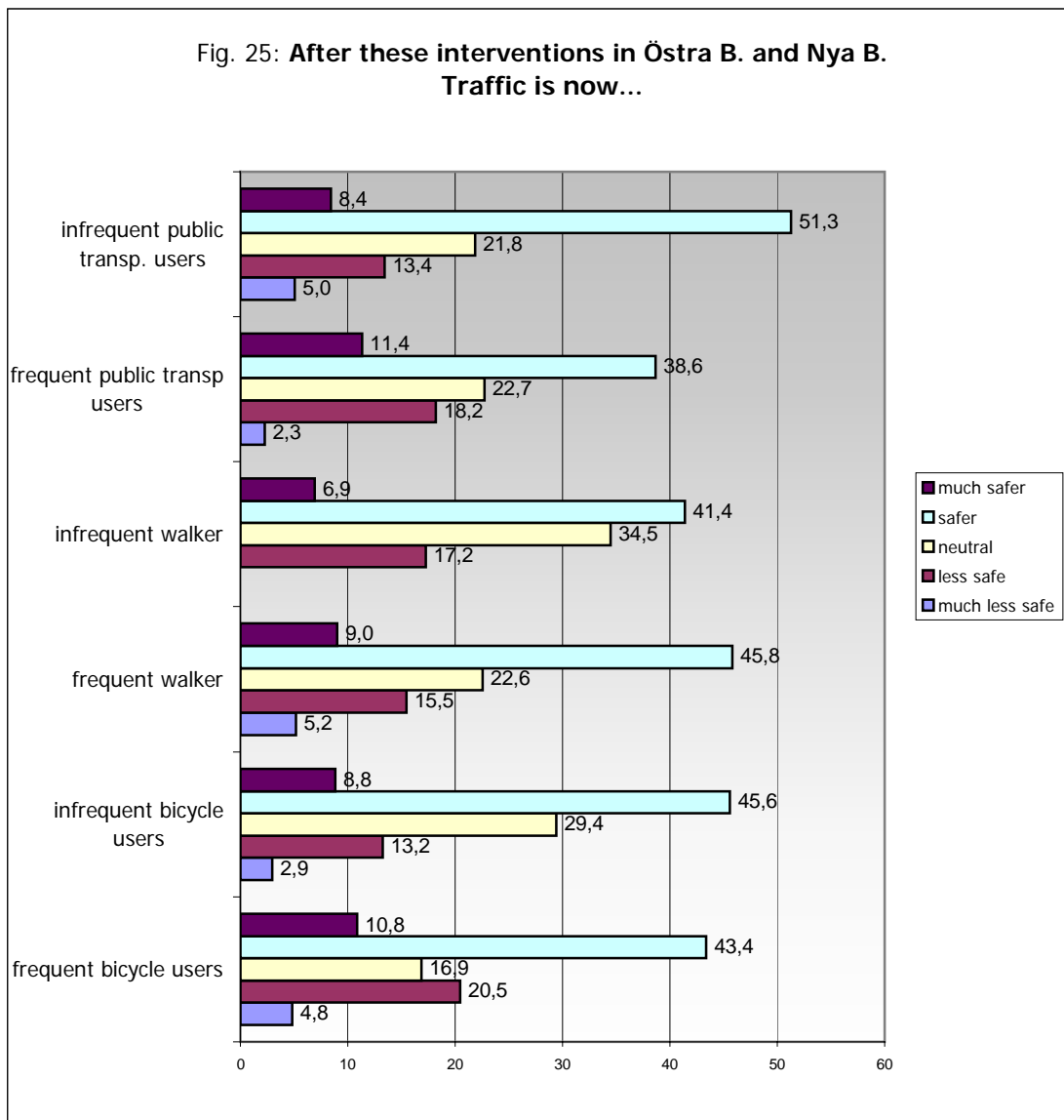


How are the assessments of the modifications if one compares groups with respect to their preferred mode choice (figure 24)?



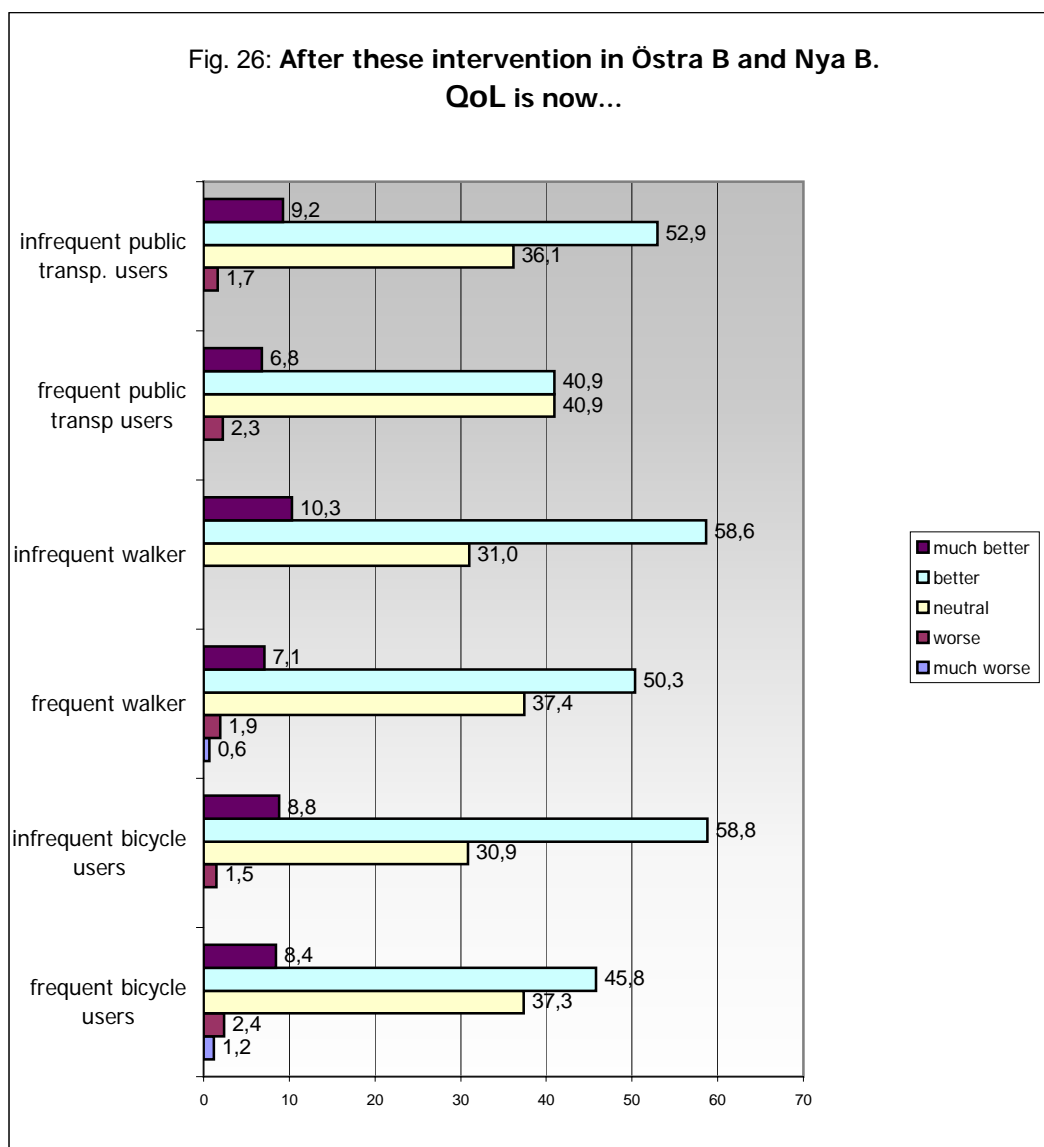
As we can see in the figure 24 above, people using public transport frequently declare less often than the others that they feel safer after the modifications.

Let us now have a look at the general traffic safety situation and how it has changed after the implementations according to different mode-choice groups (figure 25 below).



It is interesting to note that more than 20 % of all those interviewees who frequently are in the role of "weaker" road users (i.e., pedestrians, cyclists, and the users of public transport which often implies that one has to walk or cycle to/from the stops and stations), declare that the traffic situation is now "less safe"; 21 % in all three mentioned groups say so.

Considering the changes of QoL, we can see in the figure 26 below that all groups are more satisfied now: 48 % up to over 60 % think that QoL has improved. Frequent public transport users are least satisfied, people who rarely walk or cycle are most satisfied (68.9 % viz. 68.6 %).



2.3.4 Gender

Table 5 allows a comparison of how the genders look at the issues related to traffic and QoL, both with respect to the importance attributed to different aspects, and with respect to the question how these aspects have changed after the infrastructure modifications.

Table 5: Comparison between male and female, importance in general (sample without experts)

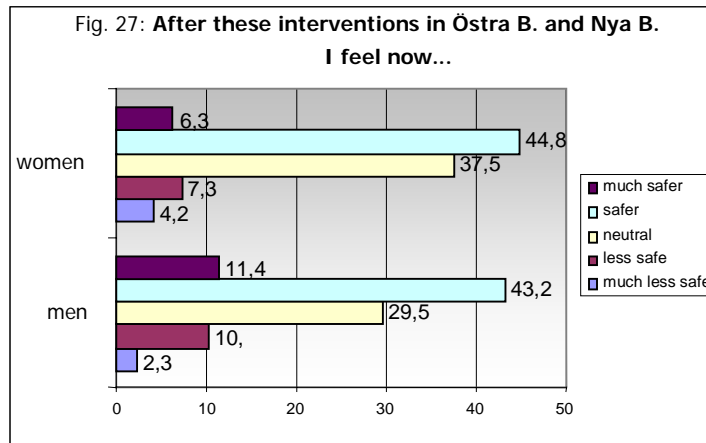
Importance of certain aspects	Male (n = 96)		Female (n = 87)	
	unimportant	important	unimportant	Important
	%	%	%	%
Usability for elderly & disabled	0	69,9	2,3	94,2
Smooth flow of traffic for drivers	8,3	70,9	14,9	59,8
Smooth flow of traffic for cyclists	4,2	82.30	5,7	82,8
Smooth flow of traffic for pedestrians	0	94.8	2,3	93,1
Equity between different traffic groups (cyclists, drivers, pedestrians)	4,2	78.2	4,6	82,8
Easiness and convenience for car drivers	11,5	65.60	14,9	55,2
Easiness and convenience for cyclists	1	83.30	5,7	79,3
Easiness and convenience for Pedestrians	0	90,6	0	86
Beauty & aesthetics	2,1	77,1	10,5	73,3
Environment (noise/air)	0	92,6	3,5	91,9
Children's safety/ security	0	100	0	98,8
Elderlies' and disabled persons' safety/security.	0	98,9	2,3	95,4
Your own safety/security	0	97,9	1,2	90,7
Traffic safety	1	96,9	2,3	89,5
Quality of Life	0	97,9	1,2	95,4

Between what is considered important by man and women with respect to the issues dealt with in this report there is basically no big difference, except for the category Usability for elderly & disabled which is clearly more important for women, and Smooth flow of traffic for drivers and Easiness and convenience for car drivers which are more important for men (see table 5 above).

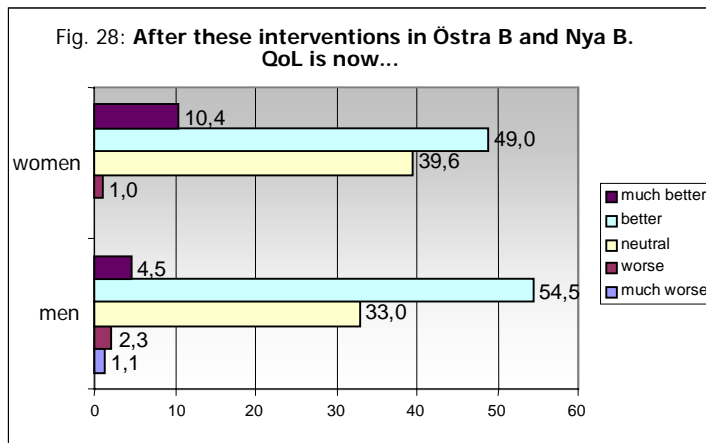
Table 6: Comparison between male and female (perceived changes of the population)

Changes effected	Male		Female	
	less safe	Safer	less safe	Safer
	%	%	%	%
Traffic is now	22,9	54,2	17,6	55,3
Children are now	28,1	37,5	25,9	49,4
I feel now	11,5	51,1	12,9	56,5
Elderly and disabled persons are now	29,2	41,7	24,7	47
	worse	Better	worse	Better
Traffic flow for pedestrians is now	12,5	69,8	7,1	69,4
Traffic flow for cyclists is now	6,3	65,6	12,9	61,2
Traffic flow for car drivers is now	21,9	39,6	25,9	27,9
Equity between traffic groups	16,8	32,6	26,2	32,2
Ease and comfort for pedestrians are now	15,6	66,7	6	67,9
Ease and comfort for car drivers are now	21,9	28,1	23,8	26,2
Ease and comfort for cyclists are now	6,3	61,4	9,5	55,9
Usability for elderly and disabled persons is now	14,6	58,3	14,3	58,3
Environment (air, noise...) is now	6,3	28,2	19	28,6
Social interaction with other persons is now	4,2	59,4	7,1	57,1
Quality of life is now	1,0	59,4	3,6	61,9
	uglier	more beautiful	uglier	more beautiful
This district is now	1	83,4	4,8	77,1
	less convenient	more convenient	less convenient	more convenient
To stay in this district is now	4,2	67,7	7,1	66,7

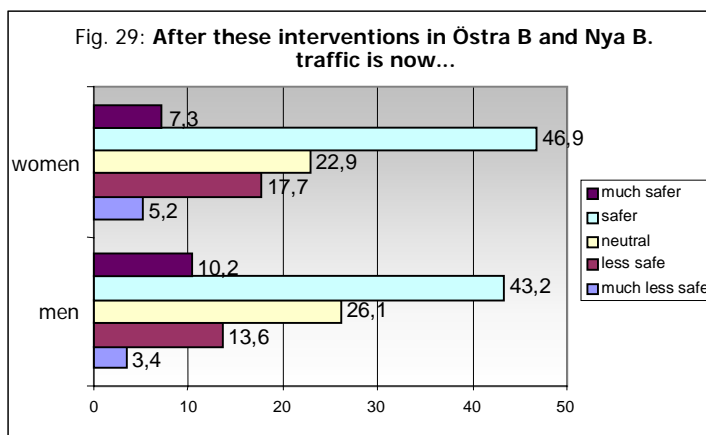
The table shows that women assess children's safety better and their own perception of safety as somewhat better than men, after the infrastructure changes at Östra Boulevard and Nya Boulevard. More men think that traffic flow for car drivers is better after the implementations, than women do.



As we can see in figure 27 above there is a common positive assessment of the changes with respect to the perceived safety.



The percentages in both groups that provide a negative judgement to the changes concerning QoL are very low, both groups consider QoL to have improved (figure 28 above). The results are much the same as far as traffic safety is concerned (figure 29). In sum, there are no relevant differences between the assessment of the new situation between the genders.



2.3.5 Age

The following table 7 compares how important different age groups consider the different issues of our study to be. It has to be considered, however, that the sub-group sizes are quite different, and three of the age-groups are very small in number:

Table 7: Comparison between age groups (population)

Importance of certain aspects	Age N=7 <15		Age n=66 15-34		Age n=69 35-64		Age n=16 65-74		Age n=23 >75	
	(-)	(+)	(-)	(+)	(-)	(+)	(-)	(+)	(-)	(+)
	%	%	%	%	%	%	%	%	%	%
Usability for elderly & disabled	0	100	3	95,5	0	98,5	0	87,5	0	91,3
Smooth flow of traffic for drivers	0	85,7	7,6	63,6	14,5	62,3	18,8	68,8	13	69,6
Smooth flow of traffic for cyclists	0	71,4	3	81,9	5,8	82,6	6,3	93,8	8,7	78,2
Smooth flow of traffic for pedestrians	14,3	85,8	0	95,5	4,3	91,3	37,5	62,5	0	100
Equity between different traffic groups (cyclists, drivers, pedestrians)	0	100	6,1	75,8	21,7	81,1	6,3	81,3	0	82,6
Easiness and convenience for car drivers	0	85,7	9,1	56	2,9	53,6	6,3	68,8	8,7	78,2
Easiness and convenience for cyclists	0	85,7	6,1	80,3	0	79,7	0	87,5	0	82,6
Easiness and convenience for Pedestrians	0	85,7	0	87,9	4,3	84	0	93,8	0	100
Beauty & aesthetics	14,3	71,5	10,6	71,2	1,4	75,3	0	81,3	0	82,6
Environment (noise/air)	0	100	3,1	89,2	0	92,7	0	93,8	0	95,7
Children's safety/security	0	100	0	98,5	0	100	0	100	0	100
Elderlies' and disabled persons' safety/security	0	85,7	3	95,5	0	100	0	100	0	95,7
Your own safety/security	0	100	0	92,4	0	95,6	6,3	87,5	0	100
Traffic safety	14,3	85,7	0	95,5	1,4	97,1	0	87,6	4,3	82,6
Quality of Life	0	85,7	1,5	93,9	0	98,5	0	100	0	100,0

Without interpreting this too strongly it can be observed that the youngest group up to 15 years (n=7) consider equity between road user groups as much more important than all other groups do (still, values are very high there, as well: 77 % and above). They consider QoL as least important: 86 % compared to between 94 and 100 % by all other groups.

Strangely, usability by elderly and disabled is considered least important by the groups of the older interviewees (88/91 or 90 % if one takes both groups with $n = 16 + 23 = 39$ together). Another result is that interviewees between 65 and 74 consider smooth flow for pedestrians as far less important than all other age groups do.

Table 8: Comparison between age groups (population)

	Age <15 n=7		Age 15-34 n=66		Age 35-64 n=69		Age 65-74 n=16		Age >75 n=23	
	less safe	safer	(-)	(+)	(-)	(+)	(-)	(+)	(-)	(+)
Changes effected	%	%	%	%	%	%	%	%	%	%
Traffic is now	0	42,9	16,7	59,1	30,4	49,2	6,3	75,1	17,4	47,8
Children are now	0	85,7	24,2	42,4	36,2	42	25	43,8	17,4	34,7
I feel now	0	71,4	9,1	50,0	17,4	50,7	12,5	68,8	8,1	56,5
Elderly and disabled persons are now	28,6	57,2	19,7	53,1	39,1	40,6	12,5	37,6	21,7	30,4
	worse	Better	(-)	(+)	(-)	(+)	(-)	(+)	(-)	(+)
Traffic flow for pedestrians is now	14,3	57,2	9,1	69,7	11,6	71	0	93,8	13	52,1
Traffic flow for cyclists is now	0	71,4	13,6	63,6	10,1	60,9	6,3	81,3	0	56,5
Traffic flow for car drivers is now	14,3	71,4	24,2	33,4	33,3	23,2	6,3	81,3	8,7	39,1
Equity between traffic groups	14,3	57,2	9,1	34,8	35,3	29,4	18,8	37,5	18,2	22,7
Ease and comfort for pedestrians are now	14,3	71,4	7,6	74,2	14,5	63,8	6,3	75,0	13,6	50,0
Ease and comfort for car drivers are now	14,3	28,6	21,2	27,2	34,8	23,1	6,3	50,1	4,5	22,7
Ease and comfort for cyclists are now	14,3	57,2	6,1	59,1	11,6	62,3	6,3	56,3	0	50,0
Usability for elderly and disabled persons is now	0	42,9	12,1	62,1	28,8	63,8	18,8	50	18,2	40,9
Environment (air, noise...) is now	0	42,9	16,7	34,8	10,1	27,5	0	25,1	4,5	9,0
Social interaction with other persons is now	0	71,4	4,5	57,6	7,2	59,4	6,3	56,3	9,1	54,5
Quality of life is now	0	71,4	0	68,2	2,9	55,1	6,3	56,3	4,5	54,5
	Uglier	more beautiful	(-)	(+)	(-)	(+)	(+)	(+)	(-)	(+)
This district is now	0	85,7	3	81,8	2,9	80,9	6,3	81,3	0	72,7
	Less conven.	more conven.	(-)	(+)	(-)	(+)	(-)	(+)	(-)	(+)
To stay in this district is now	0	85,7	4,5	62,1	5,8	71,0	6,3	62,5	9,1	68,1

Again, the results in table 8 should be seen only as an incentive to analyse some questions more thoroughly in the future. In can be seen that the "children" themselves (<15, n=7) consider safety for children as safer now (86 %), while 35 to 42, % of the other groups assess changes in this respect as positive. Moreover, the interviewees between 65 and 74 consider traffic as being safer (75 %) more then the other groups do (between 43 and 59 %).

Otherwise, there is a trend that the oldest groups assess several aspects that can be seen as related to age, least frequently as having improved: They are less frequently than the others satisfied with traffic flow for pedestrians (52 % compared to 70 to 94 among the groups between 15 and 74 years); they are less often satisfied with ease and comfort for pedestrians (50 % compared to 64 to 75 % among the others); they consider improvements with respect to Usability for elderly and disabled persons as satisfying only to a low degree (41 % compared to 50 to 62 % among the other interviewees between 15 and 74 years); only a very low percentage of them considers the environment as better now (9 % compared to 25 to 34 % of the interviewees between 15 and 74 years); and they find least frequently that the modified districts are now more beautiful (73 % compared to 81 to 86 by all the others).

2.4 Open comments by the experts in Kristianstad

Seventeen experts that in some or the other way had been involved in the modifications of the two sites in Kristianstad were approached with the same instrument as the general public in the road-side survey. The only difference was that the experts also were asked an open question as an introduction to the standardised questioning. The text of this open question, as a translation from Swedish to English, was "Can you comment in your own words how you assess the changes here?"

The answers have been written down word by word, of course, in Swedish, and then they were translated to English. Thereafter they were summarised in English, according to the relevant categories of the HOTEL Checklist (see deliverable D8 about the HOTEL Toolbox, and the following headlines 4.1 to 4.9). The translation of the original Swedish answers to English is added to this deliverable as appendices 2 and 3. The open answers have been categorised according to the following key areas, that correspond to the key areas identified in the frame of HOTEL:

- Safety/Security (subjective safety)
- Spontaneous mobility, accessibility, usability, time-consumption
- Equity, Participation, equality of access
- Comfort, Quality of facilities
- Aesthetics
- Social communication/Urban development
- Environmental quality, Sustainability/environmental impact
- Costs aspects
- Others

2.5 What variables are related to QoL?

In order to at least touch the question what the indicators for QoL are on basis of a quasi-quantitative analysis, we have had a look at correlations between the general assessment of QoL and of other variables that we have asked for in the pilot-study questionnaire. When calculating the relationships with respect to different variables, we found that there are rather low correlations between the importance attributed to QoL and the relevance of most other variables. When looking at the changes perceived it turned out that the correlations between variables were much higher. When talking about perceived changes of different variables and their relationship to QoL, there are several correlations that explain more than

10 %¹ of the common variance between QoL and other variables, i.e. we are talking of correlations of 0.32 and above, some that explain 15 % and more of the common variance ($r \geq .39$) and there are also some that explain more than 20 % of the common variance, i.e. where the correlation is 0.45 or above. In the following we have table 9 displaying the correlations between the importance attributed to QoL and the importance attributed to other variables:

Table 9: Importance attributed to different variables

ITEM	Correlations of importance attributed to different variables with importance attributed to QoL (Var 15)	r
Var1	Usability for elderly & disabled	.21
Var2	Smooth flow of traffic for drivers	.18
Var3	Smooth traffic flow cyclists	.13
Var4	Smooth flow of traffic for pedestrians	.24
Var5	Equity between different traffic groups	.12
Var6	Easiness and convenience for car drivers	.19
Var7	Easiness and convenience for cyclists	.11
Var8	Easiness and convenience Pedestrians	.14
Var9	Beauty & aesthetics	.32
Var10	Environment (noise/air)	.10
Var11	Children's safety/	.21
Var12	Elderlies' and disabled persons' safety	.27
Var13	Your own perceived safety/security	.20
Var14	Traffic safety	.38

When talking about the importance attributed to variables as compared to the importance attributed to QoL (table 9 above) there are two with rather high correlations to QoL, explaining between 10 % and 15 % of the common variance: Both of them are variables that reflect more general concepts. One is referring to the importance of beauty and aesthetics: this rather broad and general variable correlates with the importance attributed to QoL with $r=0.32$, i.e. 10 % of the common variance are explained. The other one is the importance attributed to traffic safety quite generally. This is another rather broad concept that correlates with the importance attributed to QoL with $r=0.38$, which explains 14 , % of the common variance.

When looking at the perceived changes (see table 10 on page 38), the results show many correlations between perceived changes in QoL and perceived changes in other variables that explain 20 % of the common variance and more (i.e. $r \geq 0.45$): Ease and comfort for pedestrians clearly shows the highest relationship, with a correlation to perceived improvements of QoL of $r = 0.50$, followed by Usability for elderly and disabled ($r = 0.48$), changes in the Perceived safety and in the Social interaction ($r = 0.47$) and the assumptions about changes in traffic safety in general ($r = 0.45$). There are some more variables with correlations from 0.40 and 0.44 that explain between 15 % and 20 % of the common variance with perceived changes in QoL: Children's safety and smooth traffic flow for pedestrians ($r = 0.44$), beauty and aesthetics of the quarters after the modifications ($r = 0.43$), the perceived

¹ Common variance of two variables a and b, their overlap, or their Commuality, is the square of their correlation, r_{ab}^2

quality of "being there" after the changes ($r = 0.42$) and the safety for elderly and disabled ($r = 0.40$). Finally, the following variables explain between 10 and 15 % of the common variance with QoL: Equity between road users, Good environmental quality (both $r = 0.38$), Smooth flow for cyclists ($r = 0.36$) and Ease and comfort for cyclist ($r = 0.34$). In the end, the only two variables that do not correlate to the improvements of QoL are smooth traffic flow and Ease and comfort for car drivers.

Table 10: Correlations between perceived changes

ITEM	Has improved:	Var1 Traffic safety	Var2 Childr. safety	Var3 Feeling safe	Var4 Usabil. Eld&dis	Var5 smooth f pedestr	Var6 smooth f cyclists	Var7 smooth f car driv.	Var8 Equity b.r.users	Var9 eas/com. pedestr.	Var10 eas/com. car driv.s	Var11 eas/com. cyclists	Var12 Safety eld&dis	Var13 environ. air/noise	Var14 soc.inter action	Var15 QoL	Var16Dis trict beautif.	Var17 Nice to be here
Var1	Traffic safety	1,00																
Var2	Children's safety	0,73	1,00															
Var3	Feeling safe	0,96	0,65	1,00														
Var4	Usability f elderly &disabled persons	0,69	0,75	0,62	1,00													
Var5	Smooth traffic flow pedestrians	0,52	0,44	0,42	0,52	1,00												
Var6	Smooth traffic flow for cyclists	0,41	0,44	0,32	0,44	0,48	1,00											
Var7	Smooth traffic flow car drivers	0,10	0,80	0,15	0,05	0,05	0,18	1,00										
Var8	Equity between traffic groups	0,45	0,48	0,39	0,45	0,40	0,37	0,25	1,00									
Var9	Ease and comfort for pedestrians	0,51	0,50	0,47	0,52	0,60	0,40	0,32	0,41	1,00								
Var10	Ease and comfort for car drivers	0,97	0,03	0,13	-0,01	0,00	0,13	0,76	0,25	-0,01	1,00							
Var11	Ease and comfort for cyclists	0,33	0,40	0,30	0,39	0,42	0,68	0,26	0,47	0,43	0,31	1,00						
Var12	Safety of elderly &disabled persons	0,47	0,46	0,41	0,61	0,48	0,45	0,06	0,35	0,59	0,06	0,50	1,00					
Var13	Environment (air, noise...)	0,31	0,35	0,28	0,40	0,28	0,29	0,30	0,32	0,38	-0,07	0,23	0,28	1,00				
Var14	Social interaction with other persons	0,35	0,31	0,28	0,26	0,30	0,26	-0,20	0,27	0,34	-0,11	0,23	0,22	0,36	1,00			
Var15	Quality of life	0,45	0,44	0,47	0,48	0,44	0,36	0,15	0,38	0,50	0,02	0,34	0,40	0,38	0,47	1,00		
Var16	District is more beautiful now	0,43	0,39	0,37	0,44	0,34	0,42	0,38	0,29	0,37	0,42	0,41	0,41	0,32	0,29	0,43	1,00	
Var17	It is nicer to be here now	0,41	0,35	0,38	0,4	0,47	0,36	0,6	0,37	0,41	0,05	0,41	0,44	0,34	0,29	0,42	0,7	1,00

3 Discussion of the results

In this last chapter we will shortly repeat and more extensively discuss the results of this study, consisting of answers to standardised road-side interviews by citizens at two sites in Kristianstad that had been modified shortly before, and of the answers to the same standardised questions plus an open answer in their own words by experts (n = 17) who in some way had been involved in the modification of the mentioned sites.

The discussion will follow the key areas related to QoL with respect to transport, mobility and the public space, according to the findings in HOTEL:

- Safety/Security (subjective safety)
- Spontaneous mobility, accessibility, usability, time-consumption
- Equity, Participation, equality of access
- Comfort, Quality of facilities
- Aesthetics
- Social communication/Urban development
- Environmental quality, Sustainability/environmental impact
- Costs aspects
- Others

Neither the category "costs" of the HOTEL checklist, nor the category "others" of the HOTEL checklist were included among the standardised questions: We could not find any questions referring to costs that could be asked and answered in a standardised form in the given context. However, these categories are reflected in the open answers of the experts. The question "others" is senseless if one does not want to write down open answers, which we could not do as far as representatives of the general public are concerned. Thus even in this respect only the open answers of the experts are used for commenting on the costs-aspect.

We were furthermore not able to transform issues belonging to the category "Social communication/Urban development" into questions to be answered in a standardised form as far as the importance of Social communication was concerned. But we asked the interviewees how interaction was perceived after the infrastructure modifications, and how it was "to stay here now".

One of the most interesting issues found in the former stages of HOTEL was the assumed *differences* between the users' and the experts' point of view about how the traffic situation influences the general QoL and related safety issues. The results have to be seen in the light of the fact, though, that the group of experts is rather small. Therefore, results in this respect can only be seen as hints. However, results will be a source of hypotheses for future studies about the "distance" between the experts' and the population' assessment of QoL issues.

3.1 General aspects

When trying to interpret the results it is maybe important that walking definitely is quite a widespread habit among the interviewed persons, including the experts. Over 65 % of them declare to walk "every day". The second highest percentage of every-day use is connected to the car. But the percentage is quite a bit lower (39 %).

According to the received answers it can be affirmed that there is a general satisfaction with the measures carried out in the districts among the interviewed people. Many of the analysed issues are to-day assessed as "better" than before. At the same time, neutral and negative answers concerning the situation for car drivers have increased. That means that a general "improvement" of the situation goes hand in hand with some deterioration for the car drivers, and more so according to the experts answers.

Both with respect to safety and QoL, the experts attribute more importance to the role that certain infrastructure characteristics play as determinants. This result may also be explained by the fact that the issues here analysed play a key role in the everyday practice of the interviewed experts. One may consider it as natural that they attribute high importance to them **in words**.

In the following it will be discussed how the aspects included in the HOTEL checklist as constitutive elements for QoL are assessed both by the interviewees who represent the public (road side interviews), and the experts that we have interviewed. Firstly, these aspects are defined, and thereafter the comments of the interviewees are discussed. Thereby we always start with the standardised answering-results and after that the open comments of the experts concerning each aspect are summarised.

3.2 Quality of life

Quality of Life (QoL) is according to our assumption the overall criterion that we deal with in this study. All other aspects, according to this assumption, contribute to QoL, either positively or negatively.

3.2.1 Definition

The results that are directly connected to the QoL-concept have not been categorised by us on the basis of a definition, but simply on the basis of answers to a direct question concerning QoL, without defining the concept. The definition should result from our work. One goal of our work is in fact to check, whether this definition that results from our work fits to the definition and specification that we have arrived at with the other HOTEL work.

3.2.2 Discussion of the results

The results generally tell us that both QoL and Safety are most important things, according both to the interviewees representing the general public and to the interviewed experts. The ratings of the experts are higher, though.

As far as the implementations are concerned, experts are much more positive: Most of the experts, but only somewhat more than half of the population consider QoL as "better" after the infrastructure intervention. And especially the percentage of the experts considering QoL as "much better" after the changes is by far higher. It is interesting, that experts assess improvements in all aspects as much higher than the public, except for the conditions for car-drivers: They are assessed clearly more negatively by the experts than by the others, but even the public perceives some deterioration, there. However, in spite of the slight deterioration for car drives, frequent car users do not assess changes in QoL worse than the others, but rather the contrary is the case: 57 % of frequent car users find that the interventions carried out have improved QoL, but only 50 % of the infrequent users, or non-users do so. Maybe the deteriorations for the car have not been enough, leaving non-users less satisfied; and maybe the experts overestimate the deteriorations for car drivers.

Both groups of interviewees at Östra Boulevard and Nya Boulevard attribute in average similar importance to QoL. As far as changes due to the infrastructure modifications at the

two sites are concerned, however, there are some considerable differences between the two sites: At Östra Boulevard 63 % consider that QoL has improved (much) after the intervention. At Nya Boulevard 56 % do so. Thus, improvements in QoL are experienced as being lower at Nya Boulevard, and the same is valid for the people's feeling of safety 60 % vs. 46 %. In this respect, subjective safety (i.e. feeling safe) and QoL correspond well.

Between what is considered important for QoL by men and women with respect to the issues dealt with in this report there is basically no big difference. It is interesting to note, however, that women are clearly more positive in their assessment of the improvement of QoL due to the implementations.

As far as age is concerned, the members of youngest group (up to 15 years) consider QoL as least important: 85.7% compared to between 94 and 100 % by all other groups. But as the group of the youngest interviewees is so small (n=7) no significant conclusion can be drawn. There is a trend that the oldest groups assess several aspects that can be seen as related to QoL least frequently as having improved: They are less frequently than the others satisfied with traffic flow for pedestrians (52 % compared to 70 to 94 % among the groups between 15 and 74 years); they are less often satisfied with ease and comfort for pedestrians (50 % compared to 64 to 75 % among the others); they consider improvements with respect to usability for elderly and disabled persons as satisfying only to a low degree (41 % compared to 50 to 62 % among the other interviewees between 15 and 74 years); only a very low percentage of them considers the environment as better now (9 % compared to 25 to 34 % of the interviewees between 15 and 74 years); and they find least frequently that the modified districts are now more beautiful (73 % compared to 81 to 86 by all the others).

Over 50 % of the total sample states that QoL is "better" now, but at the same time the conditions for driving are seen as having deteriorated, while conditions for all other modes have improved considerably. It seems, thus, that both deteriorations for car drivers and interventions in favour of sustainable mobility, like the ones for cyclists and pedestrians, do contribute to QoL.

3.2.3 What variables are correlated to QoL

In order to at least touch the question what the indicators for QoL are on basis of a quasi-quantitative analysis, we have had a look at correlations between the general assessment of QoL and of other variables that we have asked for in the pilot-study questionnaire. When calculating the relationships between different variables, we found that there are rather low correlations between the importance attributed to QoL and the relevance of several other variables. When looking at the changes perceived it turned out that the correlations between variables were much higher.

The latter may be explained with the fact that in connection with the importance we there are talking rather abstractly about categories like QoL and other variables, where QoL is a holistic concept much more than the other variables measured. Throughout the work in HOTEL it was postulated that QoL is the function of a holistic process: In the deliverable of the Workshop III in Ferrara, the Public report of Work Package No. 5, it was put in the following way by Sardi et al. (2004): "It is clear that the social practice in the field of the operationalisation of life quality remains quite particular and heterogeneous; and all the difficulties in trying to measure this kind of topic, emerged from the work carried out so far, make the HOTEL project an even more engaging challenge: basically all the experts, from all three workshops, pointed out that there are no validated standards, nor structured methodologies not even clear definitions to which one can refer to. This is undoubtedly partly inherent to the studied field and to the concept itself, because the factors that the concept should take into consideration are numerous (policies, economic, social...), and it is certainly a difficult

task to develop adequate models to formalise them in a holistic way, and comprehensively, at the same time."

Thus, our suggested explanation for these results in general is the following: When thinking about the importance of certain variables for QoL, relationships are not so clear, while when experiencing changes in the field, single variables do obviously play a rather prominent role.

Let us look at the result in more detail: When talking about the importance attributed to variables as compared to the importance attributed to QoL there are two with rather high correlations to QoL, explaining between 10 % and 15 % of the common variance: Both of them are variables that reflect more general concepts. One is referring to the importance of **beauty and aesthetics**, and the other one is the importance attributed to **general traffic safety**.

When looking at the perceived changes, the results show many correlations between perceived changes in QoL and perceived changes in other variables that explain 20 % of the common variance and more (i.e. $r \geq 0.45$): **Ease and comfort for pedestrians** shows the highest relationship ($r = 0.50$), followed by **Usability for elderly and disabled** ($r = 0.48$), changes in the **Perceived safety** and in the **Social interaction** ($r = 0.47$) and the assumptions about changes in **Traffic safety** ($r = 0.45$). There are some more variables with correlations from 0.40 and 0.44 that explain between 15 % and 20 % of the common variance with perceived changes in QoL: **Children's safety** and **Smooth traffic flow for pedestrians** ($r = 0.44$), **Beauty and aesthetics**, again, of the quarters after the modifications ($r = 0.43$), the perceived quality of "Being there" after the changes ($r = 0.42$) and the **Safety for elderly and disabled** ($r = 0.40$).

3.3 Safety/Security

The definitions for all the following categories that are discussed one by one are derived from the preceding HOTEL workshops, starting from Safety/security and ending with "other aspects".

3.3.1 Definition

Safety/Security (also "subjective safety") includes: Fewer accidents, fatalities and injured person, safer cycling, fewer conflicts with pedestrians and bicyclists, fewer conflicts between pedestrians and bicyclists, reduced car speeds, fewer cars, lighting, safe cycle parking, broad sidewalks, better walking facilities, subjective feeling of safety

3.3.2 Discussion of the results

All safety and security aspects are considered as extremely important by as well experts as citizens: All of them were scaled as important or very important by clearly above 90 % of all respondent groups. The safety of children was thereby the most important aspect for all. The changes achieved by the new implementations were seen as extremely positive in all respects by the experts. The experts that were somehow involved in the changes at the two sites in Kristianstad assess the benefits better than the interviewed road users: Practically all of them considered that safety had improved, while only between 43 % and 55 % of the people asked in the frame of road side interviews felt that safety had improved. According to 12 % to 27 % safety aspects had in fact deteriorated. Most scepticism is expressed with respect to children's safety.

The last comment can probably be generalised: The interviewees assess the improvement in safety due to the intervention as less favourable for vulnerable road users like children, elderly and disabled. At the same time, the interviewed persons attributed the importance to be

given to these categories as significantly higher than the importance to be given to their own safety/security.

At Östra Boulevard 55 % think that traffic is safer now, at Nya Boulevard 53 % think so. However, 59.5 % state that they feel safer at Östra Boulevard, now, but only 46.3 % say so at the Nya Boulevard. Thus, improvements in feeling safe at Nya Boulevard are lower. It would be interesting to analyse more in-depth why such a difference is not reflected by the results with respect to the general concept of "safety". Anyway, subjective safety and QoL correspond well.

Women assess children's safety clearly better and their own perception of safety as somewhat better than men. They are more satisfied with the changes than men. "Children" themselves (age <15, n=7) consider safety for children as better now (86 %), while only 35 to 42 % of the other groups assess changes in this respect as positive.

57 % of the frequent car users declare to feel safer than before, while 46.7 % of those do who do not use a car (frequently). But even for those who only rarely use the car the situation has improved with respect to perceived safety, and in fact to a somewhat higher degree than they estimate the general safety to have improved.

People using public transport frequently have somehow a lower esteem of the improvements achieved by the infrastructure interventions. Especially, their perceived safety seems to be influenced less positively than the one of other groups.

One important issue that should be analysed more in detail is the result related to the frequent bicycle users; a relatively high percentage of bikers that use this mean of transport often noted a decrease in the traffic safety, with more than 20 % of the sample declaring that the traffic situation is now "less safe".

3.3.3 Experts' comments to the open-ended question in the questionnaire

The modified sites are now areas where people can meet, it is safer for pedestrians and cyclists. There is a connection between the lower decks for car parking and the open space is more transparent, one is not so isolated there any more. Nowadays you dare to park in the lower decks. Busses stop in such a way that cars cannot overtake which leads to a more quiet traffic rhythm by reducing speeds. By this accidents are reduced, as well. It is a more secure environment nowadays.

The negative aspects of the changes in Kristianstad with respect to safety and security refer to the following conditions: Cars and pedestrians have to share the same areas, cyclists use one-way paths in both directions, pedestrians have to cross tight car-streams. There is a possibly misleading interpretation of the right-of-way situation. Interaction rules are not clear. Car traffic still too fast (even 30 is too fast under the prevailing conditions). There are visual impairments by sculptures, and right-angle problems between cyclists and pedestrians. Some miss pedestrian crossings, the protection of vulnerable road users should become even clearer by the infrastructure. Bus drivers and bus companies complain that they have to drive so slowly. But in densely inhabited areas with many vulnerable road users this is necessary, 21-22 km/h is today's speeds, 26 km/h are planned but considered to be too fast at critical points with many interactions between vehicles and vulnerable road users. Some are sceptical with respect to vulnerable road users' safety at roundabouts and at large intersections. Car drivers consider the larger boulevards as main roads for car traffic which they should in fact not be.

3.4 Spontaneous mobility, accessibility, usability, time-consumption

3.4.1 Definition

Better fluidity of pedestrian traffic, access to public transport; access to different destinations; length and size of different networks, to go should be possible, integer networks, short ways, easiness for pedestrians; access to different destinations, usability for elderly and disabled, etc.

3.4.2 Discussion of the results

Many of the analysed issues that are related to this category "Spontaneous mobility, accessibility, usability and time consumption" are now assessed as better than before. They are reflected by the questionnaire questions referring to usability for elderly and disabled and to the smoothness of traffic flows for different modes.

It can be seen that except for the car traffic flow and the comfort of car drivers, that are assessed more negatively by the experts than by the general public, all achieved changes are assessed (much) more positively by the experts, and the general public shows more scepticism, there.

Smooth traffic flow for car drivers was considered as least important by both experts and the public, while usability of the infrastructure for elderly and disabled, and smooth flow for cyclists and for pedestrians were given higher priority. Experts rated all of these aspects higher (88 to 100 %) than the interviewees from the general public (80 to 96 %). Strangely, usability by elderly and disabled is considered least important by the groups of the older interviewees themselves (88/91 % or 90 % if one takes both groups with $n=16+23=39$ together).

Smooth flow of traffic for drivers and Easiness and convenience for car drivers are rated as being more important by men than by women.

Practically all experts consider that the usability of the infrastructure by elderly and disabled is better after the modifications at the two sites, while only 58 % of the interviewed representatives of the public think so. Most of the experts think that traffic flows for cyclists and pedestrians have improved, but only 64 % (for cyclists) viz. 70 % (for pedestrians) of the representatives of the public think so. The oldest groups (65+) consider improvements with respect to Usability for elderly and disabled persons as satisfying only to a low degree (41 % compared to 50 to 62 % among the other interviewees between 15 and 74 years).

Interestingly, experts seem to think that car flows have been impaired efficiently: only 24 % of the experts (34 % of the "public") say that car flows are better now, while 65 % of the experts (24 % of the public) think that things have become worse for the car flows.

3.4.3 Experts' comments to the open-ended question in the questionnaire

Car traffic is still there but it has been reduced. Cars drive under conditions that put needs and interests of unprotected road users in the first place. It was good to combine walking and cycling and at the same time to indicate clearly what area "belongs" to whom (indicated by different paving and special signs). Places for parking cycles have been introduced, now one knows where to put the cycle. If there is no place there, one can park the cycle in the pedestrian areas. A reduction of car traffic has made crossing the street by pedestrians much easier. Cycle paths on both sides of the street are "clever". An easy crossing for pedestrians from the pedestrianised street to the boardwalk on the other side of the larger road (Nya Boulevard) by raising the level for car traffic (while the level remains constant for pedestri

ans) is also good and has two effects: Easiness for pedestrians is improved and car speeds are at the same time reduced. Cycling becomes easier by the implemented solutions, while safety improves and walking and cycling in the city centre are enhanced, at the same time. Cyclists do not have to ride together with the cars any longer. Curbs that usually are barriers for impaired persons and in principle obstacles for all kinds of road users have been eliminated. The rather small cobble stones that have been used to surface the road make it rather difficult for cars to drive especially fast.

Accessibility questions have had an extra weight, not least because Kristianstad is a city that takes very much care of impaired persons. There is a National grammar school for impaired persons there. Accessibility for impaired person has improved, surfaces are continuous without curbs, it is easy now to move with wheelchairs and rollators. The bus stops have been moved in such a way that busses do not take away the space of others. At the moment we think about taking the bus stops totally away and place them in other roads with fewer people moving around.

There are some problems for the impaired, however. Certain paths and directions, including pedestrian crossings, are badly marked or not marked at all; elevated intersections should improve communication between vehicles and vulnerable road users, but bus-drivers feel they cannot keep their times. Not least therefore vehicle traffic is prioritised, which is a clear disadvantage. (But 30km/h-limits in the whole centre are planned, which is necessary). The new cycle paths are not good enough (breadth, rough surface). Especially cyclists should be prioritised even more. At the moment they have dangerous interactions with vehicle traffic. To move around freely is impaired by such things. There are still too many cars in the centre. This is not least due to the fact that Stora Torg (The Grand Square) was not changed and functions as a car-parking space. The square should invite to urban activities, but due to cars parking there this could not work. This is a miss also for the impaired. Stora Torg could provide nice preconditions for moving around for them, but it does not. Car drivers do not "behave", especially with respect to parking rules. This is not acceptable. For vehicle traffic the main disadvantage are the queues.

3.5 Equity, participation, equality of access

3.5.1 Definition

Accessibility for people with reduced mobility; budget for the different mobility modes; Consideration of the needs of different target groups (handicapped, elderly, children, etc.), participation; equality of access.

3.5.2 Discussion of the results

Equity between different road user groups (drivers, cyclists, pedestrians) is considered as important by both representatives of the public, and by the experts, where the experts rate the equity aspect as somewhat more important (88 % vs. 80 %).

Without interpreting too much it can be observed that the youngest group up to 15 years (n=7) consider equity between road user groups much more important than all other groups do.

3.5.3 Experts' comments to the open-ended question in the questionnaire

At the moment there is a mixture of cars and vulnerable road users, but it works well, the principle is that all traffic has to be organised according to the needs of weaker groups, which generally is the function of a calmed area. Until now, car traffic was generally pri

oritisied to the disadvantage of other modes, now car drivers have to subordinate their behaviour. At the moment there are discussions what can be won if car traffic is taken away totally from those areas. Generally, the new environment functions well for all road-user types. Maybe one could consider that cyclists are the winners who earlier had to share the space with rather heavy car traffic.

There are difficulties with the historically grown infrastructure that originally heavily prioritised cars; the new solutions did not fully succeed in providing equal mobility conditions for impaired persons, it is difficult to find a balance between conflicting interests of different groups. Conflicts of interests arise when different types of road users have to share the same areas. This is often a difficult situation for weaker groups.

3.6 Comfort, Quality of facilities

3.6.1 Definition

Absence of stress; Square meters of green areas; Square meters of space for pedestrians, comfort for pedestrians, restaurants, cycle parking facilities

3.6.2 Discussion of the results

While easiness and convenience for car drivers were considered as important less often by the experts (41 %) and by the representatives of the public (61 %), easiness and convenience of cyclists (94 % viz. 81 %) and the one of pedestrians (100 viz. 89 %) were labelled as important very often by both groups.

The oldest groups assess several aspects that can be seen as related to Comfort least frequently as having improved. For instance, they are least often satisfied with ease and comfort for pedestrians (50 % compared to 64 to 75 % among the others).

One difference between groups should maybe be mentioned: Easiness and convenience for car drivers are more often important for men than for women.

3.6.3 Experts' comments to the open-ended question in the questionnaire

Before, standard was low, there was fast going car traffic and no areas for walking and cycling. The situation was bad for functionally impaired people, there were no seating facilities, etc. Now, the areas "function" well, e.g., for impaired persons. Walking and cycling is more easy, there are seating facilities around the trees. The street North of Domus has become an integer walk-way where much has really improved for pedestrians. The fact that the surface of the street is continuously at the same level improves the situation especially for impaired persons, which is one of the most important goals. For entries/exist to shops and other places special materials have been used. Board walks are now 2.8 m broad, as impaired groups' associations wanted to have them.

The project has been published in several journals all over Europe, in Sweden it is considered a very good example for dealing with traffic in the city, where it is tried to create a climate for mutual consideration, based on individual decisions and not steered by rules and regulations only. In the 1960es and 70es the philosophy was that all should be regulated and framed by norms. Now, many decisions have been transferred to the individuals, how one should communicate. The position of the vulnerable road users has become much stronger.

As far as the cobble stones and other surface materials are concerned, we have used "second hand" material that has been in use before and smoothed by the use. In between these used materials very smooth granite stones have been placed.

Cobble stones are difficult for pedestrians (or some of them), and especially for wheelchairs; mini-roundabouts would have slowed down car speeds, reducing stress of vulnerable road users. But they were not implemented. The new solutions have been criticised partly by physically impaired persons.

For car drivers, it has become less comfortable to move around. For instance cars cannot overtake busses at stops. Improvements for pedestrians means deterioration for motor vehicles.

3.7 Aesthetics

3.7.1 Definition

Esthetical design, changes should lead to a more beautiful environment, plants, nicer materials, nice environment, cobble stones that look nice

3.7.2 Discussion of the results

As far as aesthetics are concerned, there is quite a large difference between experts and the representatives of the public: 100 % of the experts consider that this aspect is important or very important, while only 75 % of the representatives of the public do so. Almost all experts find that the area is more beautiful now, the representatives also do so to a somewhat lower degree, where the members of the oldest group find least frequently that the modified districts are now more beautiful (73 % compared to 81 to 86 by the other groups).

3.7.3 Experts' comments to the open-ended question in the questionnaire

Surfaces are very nice, flowers and decorations improve the whole picture; everything is more beautiful and more convenient now. The rock-like objects that can be used as seating facilities look very nice. Also the blue lights are "different" and very attractive; the signs for the public toilets are quite nice as well. One may say that the whole street and its environment have become more beautiful. It is also a demonstration project for the stone-working industry and for architects. There was co-operation between artists (sculptors) and environmental architects. All the work was done under consideration of the historically grown elements, that should be integrated in the overall design. For instance, the character of the Boulevards as "boulevards", with a longitudinal function, should be maintained, which was among other things achieved with the help of alley trees.

The sculptures are nice but impair vision, cobblestones are beautiful but have disadvantages from a usability point-of view. We have discussed mini-roundabouts, but they are "swelling" in a rectangular town (Kristianstad is considered as such).

3.8 Social communication/Urban development

3.8.1 Definition

More communication between road users, meetings to inform the population, publications; number of participation activities, cultural events in the public space

3.8.2 Discussion of the results

There was no question in the questionnaire concerning how important social communication and urban development were considered. The reason was that no easy way was found to ask the public for this aspect theoretically. But in the question where the interviewees were asked to assess the changes in the modified parts of the city centre, we asked both how social interaction was perceived now and how it was "to be here", which we interpreted as having to do with the headline topic. With regard to social interaction it can be stated that it correlates rather strongly with QoL, as far as the perceived changes after the infrastructure modifications are concerned, while there is no difference between different groups in this respect. It can thus be seen as a variable that is relevant for the QoL for all groups.

The question how it is "to stay here" at one of the two sites after the implementation is answered positively much more frequently by those who use the car frequently than by the others. Generally speaking, the answer that "it is much nicer to be here now", i.e. after the modifications, correlates considerably high ($r = 0.42$) with the QoL as assessed in connection with the infrastructure changes.

3.8.3 Experts comments to the open-ended question in the questionnaire

There are now banks where you can sit and look at people, places have become more "public", more people are out, areas are used much more and more intensively. Restaurants with service in the street space have increased in frequency, earlier it was difficult to introduce such places. The equipment of the public space has become very nice. There are now more shops, the environment is much better now in this respect. Important spaces have been interconnected. Before the areas that have been redesigned were asphalt driving-digs with curbs and signalised places where one could cross. Now there is an integer area where one can freely move in all directions. Speeds of the vehicle traffic that still is there will be further reduced, down to 6 km/h (= walking speed). So nowadays people sit outside in the sun on the long stone benches, you see people who meet and talk.

It was made clear from the beginning that a better urban environment was the goal, where different kinds of interest have to be combined. Seen from this perspective, cars respect the priority of pedestrians much better today.

The special markings for visually impaired are appreciated by them, but a more general strategy of how such markings should be implemented is missing; there were more far going plans with respect to the large areas (squares etc.) so that the whole areas could have been used differently, in a more homogeneous and at the same time flexible way in order to improve social communication

3.9 Environmental quality, sustainability/environmental impact

3.9.1 Definition

Traffic calming areas, decrease of car traffic and an increase of cycle, public transport and pedestrian traffic, noise and air pollution parameters should improve

3.9.2 Discussion of the results

The environmental quality was assessed as being important or very important by a large percentage of both representatives of the general public and the experts (92 % viz. 100 %). The consideration for the "environment"-factor is also quite high, with more than 50 % of

the sample giving the highest importance to environment-related factors such as low level of noise and good air quality.

One point that needs a closer look is the high percentage of "neutral" on the achievements related to the environment. If we consider the evaluation "neutral" as a lack of effectiveness (seen as an absence of consequences either positive or negative), the question arises why all the perceived improvements in the other issues did not cause any benefits on the environment. A preliminary explanation could be found in the former deliverables of the HOTEL project, where it is clear that the positive consequences on the environment of infrastructure changes that reduce car use goes under "long term benefits". Improvements are probably not detected, or perceived, as quickly as other aspects that draw the attention of the population and of the road users more clearly.

The interviewed persons above 74 are most sceptical with respect to improvements concerning the environment; only a very low percentage of them considers the environment as better now (9 % compared to 25 % to 34 % of the interviewees between 15 and 74 years).

3.9.3 Experts comments to the open-ended question in the questionnaire

Access to the park house has been improved, the old stairs were a kind of open toilets. It is important that everything is clean and nice, that there are plants.

As a principle, it is not necessary that everything is free from car traffic. There should not be much car traffic and it should be slow. Car drivers are going slowly and obviously they do not disturb the other people moving around. Earlier, there were 9 to 10 thousand vehicles per day, constituting a strong barrier to all other activities. Now only 1500 are left. But still, we are going on in this direction and all car traffic will be excluded testwise for two months. It is probable that afterwards this solution will remain.

One most important issue was to implement cycle paths. For this, the space for vehicles had to be reduced. Now the urban environment is very good for pedestrians and cyclists, but there is some – necessary - deterioration for car traffic.

Certain intersections are not nice to be used by vulnerable road users. There is also still too much through-going traffic, and more trees should also be nice in order to provide an agreeable environment.

3.10 Costs aspects

3.10.1 Definition

"Costs" refers to a mixture of real monetary costs and the "felt" costs. E.g., when calculating costs for the use of the car, people tend not to calculate the costs of the car-purchase itself, which makes that the costs for using the car are felt as being lower than costs for, e.g., public transport. But even the perceived public costs are included. Thus, it might happen that people who do not use the bicycle consider costs for a cycle path as being high.

3.10.2 Discussion of the results

The category "costs" of the HOTEL checklist was not included among the standardised questions: We could not find any questions referring to costs that could be asked and answered in a standardised form in the given context. The category is reflected in the open answers of the experts, but only rather marginally.

It is commented that in order to eliminate some of the short comings that have been mentioned above the municipality would have had to spend much more money.

3.11 Other aspects

3.11.1 Definition

"Other aspects" refers to categories or aspects that we did not/could not think of before hand, viz. that were not mentioned in our questionnaire materials.

3.11.2 Discussion of results

The category "others" was not included among the standardised questions because the question for "other" aspects is senseless if one does not want to write down open answers, which we could not do as far as representatives of the general public are concerned. Thus even in this respect only the open answers of the experts are used for commenting on this aspect.

3.11.3 Experts comments to the open-ended question

There is high satisfaction of citizens with facilities and services, which contributes to health. The new design is very convenient that gives a "good life". It improved in all respects and has become more "human".

Some people do not respect rules, especially not new rules in areas like those in Kristianstad that have been modified. All changes have the potential to lead to some disadvantages. It is difficult to find a balance between different needs, or between needs of different groups. Changes like those in Kristianstad should be carried out from a holistic perspective, but this is always difficult.

4 Conclusions

In the following, the most important conclusions are summarised, but before that it has to be underlined that this study was of explorative character, at a very special site, with rather small samples of groups and subgroups to be compared, without possibilities to go for representativeness, etc. But this was a pilot study and according to our plans it should allow to test some assumptions in order to give impulses for further research and for work in practice. Under this perspective the following can be stated:

4.1 What was achieved according to the experts?

It was made clear from the beginning that a better urban environment was the goal, where different kinds of interest have to be combined. All traffic has to be organised according to the needs of weaker groups, which generally is the function of a calmed area: Following this principle the sites are now safer for both pedestrians and cyclists. Car traffic has been considerably reduced and slowed down almost to walking speed. This has been done with the help of measures such as raising the road surface level for cars, while keeping the level for pedestrians and using small cobble stones to surface the road. This makes it rather difficult for cars to drive especially fast. These infrastructure measures as well as the reduction of the car traffic have made crossing the streets much easier for pedestrians. The fact that the surface of the street is continuously at the same level also improves the situation for impaired person. Accessibility questions have had an extra weight, not least because Kristianstad is a city that takes very much care of impaired persons – it is now easy to move with wheelchairs and rollators. Curbs - barriers and obstacles for all road users - have been eliminated. The bus stops have been moved in such a way that busses do not take away the space of others. Busses stop in such a way that cars cannot overtake which leads to a more quiet traffic rhythm by reducing speeds – and this has also reduced accidents. Concerning the aesthetic aspects the whole street and its environment have improved: Board walks are now broad, surfaces are both convenient and pretty, flowers and decorations improve the whole picture. The seating facilities have been designed in co-operation between artists and environmental architects. All the work was done under consideration of the historically grown elements, which were integrated in the overall design – for example alley trees maintain the character of the boulevards with their longitudinal function. The modified sites has improved so much that nowadays the sites have become areas where people can meet. Places have become more "public", more people are out, areas are used much more and more intensively, also by gastronomy. There is high satisfaction of citizens with facilities and services. The sites have improved in all respects and have become more "human".

4.2 Some conclusions in more detail

1. The achieved changes are maybe not optimum for the weaker road users, as they have to interact more than hitherto with car traffic. This affects in principle all aspects that are relevant for QoL according to our key-area list. At the same time, bus drivers and bus companies complain that they have to drive so slowly. Car drivers feel impaired. But for the vulnerable users and residents, there are still too many cars in the centre. This is not least due to the fact that the Grand Square still functions as a car-parking space and thus does not invite to urban activities. On the other hand, all changes in the public space have the potential to lead to some disadvantages for somebody. It is difficult to find a balance between different needs. Changes like those in Kristianstad should be carried out from a holistic perspective. However, it is not easy to find a balance between conflicting

interests of different groups. Conflicts of interests arise when different types of road users have to share the same areas. This is often a difficult situation for weaker groups.

2. Both experts and the representatives of the public assess the aspects that have been listed in the frame of the HOTEL work and that were inserted in the questionnaire transformed to standardised questions quite similarly. All aspects that support pedestrian, cyclists, elderly, disabled, and safety or security are considered as very important by both, while good conditions for car drivers are considered as being less importance.
3. The changes achieved by the modifications at the two sites in Kristianstad are perceived as much more positive by the interviewed experts than by the representatives of the public
4. Correlations between QoL and other variables with respect to the question what is considered important, are generally low. Only between the importance of QoL and two other general variables - beauty & aesthetics and traffic safety – somewhat stronger relationships could be found.
5. On a more concrete level, namely when assessing the changes achieved by the modifications at the two analysed sites in Kristianstad, the results show that many correlations between perceived changes in QoL and perceived changes in other variables explain 20 % of the common variance and more: Ease and comfort for pedestrians, Usability for elderly and disabled, Perceived safety, Social interaction, Traffic safety in general. There are some more variables with correlations that explain between 15 % and 20 % of the common variance with perceived changes in QoL, like Children's safety, Smooth traffic flow for pedestrians, Beauty and aesthetics of the quarters after the modifications, the Perceived quality of "being there" after the changes, and the Safety for elderly and disabled. Finally, the following variables explain between 10 and 15 % of the common variance with QoL: Equity between road users, Good environmental quality, Smooth flow for cyclists and Ease and comfort for cyclist. In the end, the only two variables that do not correlate to the improvements of QoL are Smooth car traffic flow and Ease and comfort for car drivers.
6. The list of indicators that have been developed in the frame of HOTEL and that have been transformed into checklist items (HOTEL checklist) and questions (HOTEL questionnaire) may not be complete, but they are related to the concept of QoL according to the persons interviewed in Kristianstad.
7. The preferred mode choice affects the perception of changes: Frequent car users state more strongly that QoL has improved after the interventions. This indicates that frequent car drivers identify improvements in QoL in spite of the fact that the situation for driving a car rather deteriorates when modifications like those in Kristianstad are implemented.
8. Gender does not seem to play a key role on influencing the perceived changes, nor are there any larger differences between other groups that are of relevance for the HOTEL research.
9. But some findings could be interesting for the municipality of Kristianstad, for instance that the safety situation after the restructuring is perceived as much better at Östra Boulevard than on Nya Boulevard. It would be interesting to look for the reason for this.

To conclude, it can be stated that those parts of the HOTEL toolbox to which the pilot study could contribute – the checklist and the questionnaire – appear to work successfully. The checklist allowed us to identify variables in the papers and documents related to the modifications in Kristianstad that aimed at improving QoL, even if this concept was not mentioned there in words. And the application of the HOTEL questionnaire showed that the interviewed persons in fact related these variables to QoL.

It can be recommended to use the two mentioned tools at other occasions. Saving these results according to the database-concept of HOTEL would allow to build on the experiences for Kristianstad and show, whether results like those in Kristianstad can be generalised. At the same time, every new experience of this type contributes to the further elaboration on the HOTEL-guidelines.

5 Appendix

Appendix 1: Questionnaire used in the pilot study



Date __, __, __ (yymmdd) Time __: __

Hello,
my name is and I work for the municipality of Kristianstad. I want to ask some questions respecting changes here in the city.

Mark the place where you interview: Östra Boulevarden
Nya Boulevarden

Would you be prepared to respond to some questions? It takes about 10 minutes.

Before we begin, I want to ask you how often you come here to Östra B /Nya B:

Every day	Several times a week	Once a week	Once a month	Hardly ever, never *
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**: In this case I thank you, as it is necessary that you are familiar with the area for being able to respond to the questions.*

Do you live in Kristianstad? yes no

Within the frame of the EU the Technical University in Lund carries out a project that is called HOTEL. Researchers there should evaluate changes that have happened here in Kristianstad at Östra Boulevarden/Nya Boulevarden. They have compiled the list of questions which I want to ask you to respond now.

In the first questions we ask you to tell us how important you think that certain infrastructure characteristics and more general aspects connected thereto are, t.ex.:

	entirely unimportant	unimportant	neither /nor	important	very important
QoL	1	2	3	4	5
Traffic safety	1	2	3	4	5

Usability for elderly & disabled persons	1	2	3	4	5
Smooth flow of traffic for drivers	1	2	3	4	5
Smooth flow of traffic for cyclists	1	2	3	4	5
Smooth flow of traffic for pedestrians	1	2	3	4	5
Equity between different traffic groups (cyclists, drivers, pedestrians)	1	2	3	4	5
Easiness and convenience for car drivers	1	2	3	4	5
Easiness and convenience for cyclists	1	2	3	4	5
Easiness and convenience for Pedestrians	1	2	3	4	5
Beauty & aesthetics	1	2	3	4	5
Environment (noise/air)	1	2	3	4	5
Children's safety/ security	1	2	3	4	5
Elderlies' and disabled persons' safety/security.	1	2	3	4	5
Your own safety/security	1	2	3	4	5

The following questions refer to what changes you experienced due to the modification carried out here at Östra Boulevarden or Nya Boulevarden?

Traffic is now	1 much less safe	2 less safe	neutral	4 safer	5 much safer
Children are now	1 much less safe	2 less safe	neutral	4 safer	5 much safer
I feel now	1 much less safe	2 less safe	neutral	4 safer	5 much safer
Elderly and disabled persons are now	1 much less unsafe	2	3	4	5 much safer
Traffic flow for pedestrians is now	much worse	2 worse	3 neutral	4 better	much better
Traffic flow for cyclists is now	much worse	2	3	4	much better
Traffic flow for car drivers is now	much worse	2	3	4	much better
Equity between traffic groups	much worse	2	3	4	much better
Ease and comfort for pedestrians are now	much worse	2	3	4	much better
Ease and comfort for car drivers are now	much worse	2	3	4	much better
Ease and comfort for cyclists are now	much worse	2	3	4	much better
Usability for elderly and disabled persons is now	much worse	2	3	4	much better
Environment (air, noise...) is now	much worse	2	3	4	much better
Social interaction with other persons is now	much worse	2	3	4	much better
QoL is now	much worse	2	3	4	much better
This district is now	1 much uglier	2 uglier	3 neutral	4 more beautiful	5 much more beautiful
To stay in this district is now	1 much less convenient	2 less convenient	3 neutral	4 more convenient	5 much more convenient

I want to finish by asking you some personal questions viz. By ticking some personal data:

Man

Woman

Mobility aids: none
 crutches
 walker
 wheelchair

How old are you?:

< 15

15 – 34

35 – 64

65 – 74

> 75

How often:	Every day	Several times a week	Once a week	Once a month	Hardly ever, never
Do you go by bus or train					
By car					
By bicycle					
Do you walk?					
Do you use special trans- port service for the dis- abled?					
Others? Which ones: _____					

Appendix 2: Expert comments in original language (swe)

E (Expert comment nr.) 1

Man kan väl säga så att gatan har betydligt snyggare. Det var en sliten och ful gata tidigare. Problemen är att det är två enkelriktade cykelbanor och många använder dem dubbelriktade och det kan ställa till problem. Vissa tider på dygnet – framförallt vid lunchtid - är det mycket korsande gångtrafik nord-sydlig riktning. Många gående tror de har företräde framför bilarna, men det är inte fallet då torgytan är upphöjd till samma nivå som gatan. I övrigt så fungerar det som förväntat.

E2

Jag tycker att det har blivit väldigt positivt med förändringen som är gjord, det blir en yta som gör att man kan få en samlingsplats och även om det är biltrafik nu så kan man ifrågasätta det. Men man kan begränsa det, så trots det så fungerar det bra, man ska köra på gångtrafikanternas villkor. Jag upplever det som en bra tillvaro där, stenarna, det är fint, beläggningen, som man kan dekorera med blommor och sätta soffor där, och sitta och titta på folk. Beträffande gång- och cykelvägarna är det bra att man har gjort den kombinationen, man har markerat med stenbeläggningen och målat cyklar på cykelvägen för att markera den det är bra. Man har gjort cykelställ, man vet nog nu var man ska ställa sin cykel. Det finns de som upplever det negativt med bilar på samma yta, men jag tror att man lär sig hur man ska uppträda. Det tycker jag nog att man ser med de år som gått. Visst finns det dom som bryter mot det för att ta ut pengar från automaten, men det är ett fåtal. Jag tycker att Boulevarden har blivit väldigt bra när det byggdes om, jag upplever förändringen väldigt positivt.

E3

Har blivit en mycket bättre och säkrare miljö för både gående och cyklister. Det har även blivit vackrare och därmed trevligare.

E4

Jag upplever att Nya Boulevarden har blivit bättre, man har möjlighet att ställa ut bord och ha servering längs gatan, det är rent och snyggt, här finns trädplantering, det har blivit ett gaturum. Nu finns en markerad cykelväg, som markerats med beläggningen, jag upplever att det fungerar bra. Från Storgatoma har gjorts upphöjningar, det kan upplevas osäkert både från de gående och biltrafikanter vem som har företräde. Jag hade önskat att det hade kunnat bli 30 km på Nya Boulevarden, så tror jag att rytmen i trafiken skulle sänkas och då blir det en lugnare miljö. Bussarna stannar ju numera också ute i gatan, det gör att trafikrytmen sänks, genom att hastigheten sänks. Jag tycker att Nya Boulevarden har blivit väldigt bra när det byggdes om, jag upplever förändringen väldigt positivt. Det är en lyckad förändring att cyklisterna är mer skyddade då de kör inte ute på gatorna längre.

E5

Nya boulevarden blev mycket bra. Vi fick en separat cykelväg på båda sidor. Gångutrymmena blev ungefär det samma som tidigare. Blev en upphöjning som en gårdsgata, för det hade vi tänkt att det skulle bli, ett samspel var det tänkt. Men som gårdsgata hade inte bussarna kunnat hålla sina tider. Därför blev det inte det. Så bilar och bussar har företräde i trafiken. Jag tycker själv att det fungerar bra, vi inte har haft några tillbud här, men det finns viss kritik att det är otydligt att det inte finns ett markerat övergångsställe. Det kommer att ytterligare förändringar, det ska bli 30 km i hela centrum, även här på Nya Boulevarden. Vi hade ju mycket planteringar, satte träd i stället för

planeringar. Vi fick fina uteserveringar vid restaurangerna och de har möblerat fint, det ska dom ha en eloge för. Runda bänkar har vi satt runt träden, det är ett lyft. Vi har fått in cykelställ också, och får cyklarna inte plats här så ska man parkera på gågatorna. Där sattes också upp cykelställ i anslutning till förändringarna på gatan.

E6

Det har blivit ganska bra. Om man tar utgångsläget från Domus och normt har det blivit en samlad gångbana på västra sidan. Det har gjort det betydligt bättre för de gående. Sen har det ju inneburit att - med tanke på all den korsande trafiken vid Domus - har det ju blivit mycket bättre då trafiken har minskat. Men det finns mycket kritik vid gårdsgatan. Konstverken upplevs siktskymmande, och det är de. Vi har en korsande cykelväg precis och som gående kan det vara svårt se cyklarna, här finns en konflikt mellan de gående och de som cyklar. För de gående har det blivit bättre. För cyklister finns en cykelbana som är si och så, den är ganska smal och har kanske inte den bästa beläggningen för cyklister. Det är en kompromiss med natursten på torget, med tanke på miljön.

E7

Det var ju mycket bra det vi har gjort där. Vi hade mycket genomfartstrafik förån båda håll på Östra Boulevarden och även busstrafik. En smal gångbana mellan Nya B och så Kaserngatan breddade vi upp. Det byggdes ny gång- och cykelväg hela sträckan förån Södra Boulevarden till Nya Boulevarden på västra sidan. Vi delade upp den med olika material, klinker på gångbanan och asfalt på cykelvägen. Gjorde likadant på östra sidan, inte hela vägen men mellan Nya Boulevarden och Domus. Samtidigt gjorde vi en ny trappa till Parkeringsdäcket vid Östra Boulevarden. Det är en höjdare, det vi gjort. Innan vi genomförde förbättringarna, hade vi stor samordning med handikappförbunden. De var med i hela processen. Allt kunde vi inte tillgodose men vi markerade gångvägar i sågad sten på hela sträckan förån Domus, de fick sitt tillgodo da. Men vi hade också att ta hänsyn till miljöaspekter, man kan inte göra allt som handikapporganisationerna vill, men vi har sökt göra utrymme så att de kan komma förån. Det är en liten kollisionskurs där, tyvärr, men vi gör så gott vi kan. Vi vill ju återanvända gammalt material så mycket vi kan, och det har vi gjort där. Den kvaliteten på sten går att använda i 1000-talös år, den förstörs inte. Rätt många förvaltningar som arbetade tillsammans. Innan vi hade börjat bygga hade vi en föredragning i Kommunstyrelse-salen. Det var många intressenter som kom dit, och fick beskrivning över hur det skulle bli. Det var totalt fullt, det var ett offentligt möte. Man såg exakt hur det skulle bli, vi använde en tredimensionell teknik. När vi gjorde utemiljön lade vi samtidigt om hela vår Infrastruktur, telefonledningar, elledningar och vattenledningar, och bredband ja allt fanns med och är nytt nu. Att göra det samtidigt är bra, för att man kommer ner i kostnader, i pengar. Allting sånt var nerkört, det var slut, det var rätt tid att göra allt det vi gjorde.

E8

Jag har i första hand deltagit i förändringsarbetet på Östra Boulevarden. Det är dessa förändringar jag kommenterar: Förändringarna är mycket positiva. Domustorget har blivit en mer offentlig plats än tidigare, där har blivit ett annat folkliv och det används betydligt mer. Platsen har vissa nackdelar, men alla förändringar innebär ju både fördelar och nackdelar. Synpunkter har framförts att utformningen och beläggningen har inneburit problem för vissa handikappade. Samråd fördes hela vägen med handikapporganisationerna och utformningen har anpassats till dessa synpunkter. Ibland kan det dock vara svårt att balansera mellan olika krav. Jag tror dock att de flesta idag tycker att platsen fungerar bra även ur handikappsynpunkt. Trappan ner mot Döbelnsgatan och resecentrum var från början inte tydligt markerad och det hände någon incident där. Trappan har senare förbättrats och markerats tydligare. Tyvärr finns brister i handikappanpassningen av biografbyggnaden.

När det gäller trafiksituationen, så bedömdes det inte möjligt att göra Ö Boulevarden till en gågata. Ingenting är i och för sig omöjligt. Det hade säkert gått att hitta en lösning, men det hade sannolikt kostat en bro från parkeringsplatsen över till Kanalgatan. Det har framförts från många håll att utformningen med en gårdsgata skapar en farlig trafiksituation genom blandningen av gående och biltrafik. Men det är just syftet med en gårdsgata, mig veterligt har där inte inträffat någon allvarlig incident. Gårdsgatemodellen används idag på många ställen i landet och regelverket börjar bli känt, att biltrafik får förekomma på de gåendes villkor. En olägenhet är att man parkerar bilar på cykelbanan vid torget framförallt vid uttagsautomaten vid banken. Det har skapat irritation. Beträffande det estetiska –så har det blivit tilltalande. Det är trevligt med stenblocken som fungerar som sittmöjlighet. Och de blå ljusen är lite annorlunda, det är trevligt. Det är också en trevlig markering av den offentliga toaletten. Kontakten med undre däck på parkeringen har blivit öppnare och parkeringen är mer tillgänglig och inte så avstängd. Där har skapats en öppenhet så att man vågar parkera på nedre däck. De gamla slutna trapphusen fungerade som urinoarer, detta undviks genom den öppna lösningen. Slutsats: bra komplement till gågatorna, allt behöver inte vara helt trafikfritt.

E9

Det är två saker som har hänt: Det ena är att man har fått cykelbanor som är rätt så vettiga på båda sidor om gatan. Det andra är att man har fått en övergång från gågatorna till trottoaren på andra sidan Nya Boulevarden mot Stora Torg i ett plan (upphöjningen) och det har två effekter. Dels underlättar det för gångtrafikanterna och dels sänker det hastigheten på gatan. I övrigt har man flyttat busshållplatsema men det är inte något avgörande för upplevelsen. Det är positiva förändringar båda två saker som har hänt. Det underlättar för båda trafikslagen gångtrafikanter och cyklister och det medför att olycksriskerna minskar och att det stimulerar till ytterligare promenader och cyklande i centrum. Det borde kunna innebära att man kan skicka ut bilarna längre från centrum. Ledstråket har tagits emot positivt av synskadade, men man saknar en genomtänkt strategi för hur ett ledstråk ska vara i Sverige. Sen blev det ju inte så mycket mer förändringar. Det var mycket diskussioner men i och med att Stora Torg inte förändrades så blev lösningen lite rumpuggen. Tanken var att det skulle bli ett Torg som inbjöd till aktiviteter, men det blev det inte. Tankarna med torget var att det skulle bli en slät gång över torget för att underlätta för funktionshindrade och också att man skulle göra handikapparkeringar.

E10

Jag tycker att trafikrytmen har dämpats och även genomfartÖstrafiken har minskat, men att Östra Boulevarden på den biten utanför Domus borde stängs helt för biltrafik. Syftet med en stängning är att förbättra för fotgängarna och skaffa en bättre trafiksäkerhet. Den delen är inte nödvändig ur kommunikationssynpunkt för bilister. Det är positivt att trottoaren har hamnat i nivå med instegen till affärens. Jag tycker att man tog alldeles för stor hänsyn till arkitektens synpunkter beträffande att lägga vettiga gångstråk på den sk piazzan framför Domus. Det skulle ha varit ett gångstråk på förlängningen på Cardellösgatan också, för att förbättra för bla handikappade eller personer som har ett gånghjälpmedel. Det är bra med cykelvägarna, men det är en klumpig lösning. När man kommer norrifrån och cyklar till Domus och kommer man fram till piazzan, så ska man cykla över till andra sidan. Det är dålig respekt från fotgängarnas sida att det faktiskt är en cykelbana där. Det är irriterande.

E11

Ombyggnaden var ett sätt att tillskapa en möjlighet för cyklisterna att befria dem från körbanan och anlägga cykelbanor på södra och norra sidan, och tillskapa ytor för serveringar och affärer utefter gatan och de stora stråken, från gågatorna. Vi höjde upp ytan mellan södra och västra Storgatorna, här finns heller inga kantstenar. Det skulle bli

gårdsgatukaraktär, men man tog bort övergångsställena. Det är någon form av dålig kompromiss. Hade även tankar på att förändra hela stora torg och gatorna runt omkring och att det skulle ligga i ett plan, det skulle bli en helt annorlunda miljö, med mer flexibla ytor som kunde användas på annorlunda sätt. Ombyggnaden av Nya Boulevarden har blivit en mer isolerad del då det övriga inte utfördes, det blev rumphugget. Det finns en otrygghet eftersom att man inte talat om vad som gäller för de oskyddade trafikanterna. Man skulle se att det blev en mer skyddad miljö och göra en gårdsgata. Det är busstrafiken som visar att det kan bli problem med framkomligheten, att det går för sakta, mycket störningar så att man inte kan hålla tidtabeller mm. Man får kanske räkna med att i stadsmiljö kan man kanske inte köra så fort med bussarna. Det är ungefär 21-22 km/tim i stadstrafik idag, och man strävar mot att vidta åtgärder för att prioritera kollektivtrafiken, 26 km/tim vill man att det ska vara möjligt att köra. Men det finns vissa känsliga punkter, som tex Nya Boulevarden och då skulle jag vilja att det gick saktare där än det gör idag. Vi har inte löst Västra Boulevarden och nya Boulevardens korsning för de oskyddade trafikanterna, framförallt för cyklisterna. De har inte fått en prioriterad cykelfas. Vi har slutat 10 m innan, och låter dem gå i fordonsgrupper i gaturummet. Man har diskuterat rondell men om det ska vara rondell i en rätvinklig stad som Christian den fjärde anlagt blir det en svulst, dessutom blir det inte samma säkerhet för de oskyddade cyklisterna med rondell. Korsningen Östra Boulevarden och Nya Boulevarden är ett problem och det uppstår konflikter. Som trafikant uppfattar man att Nya Boulevarden är huvudled, vilket den inte är. Det blir problem vid varje växling av fordonsrörelse när ingen vet vad som gäller. När vi projekterade Nya Boulevarden gjorde vi det möjligt för en minirondell där, men av olika anledningar har det inte fått utföras. Det har blivit större tillgänglighet i handikapphänseende på Nya B. Beläggningen har vi lagt i ett plan, det finns inga kanter som hindrar rullstolsburna och rullatorer att ta sig fram. Vi frönändrade också busshållplatsernas läge, idag är de utanför Skandiahuset och vid turistbyrån, tidigare låg de mitt emot varandra. Det gjorde vi för att bussarna skulle kunna stanna och att det skulle finnas plats i gaturummet tillsammans med andra.

E12

Tidigare var det "Östra utfartsvägen med 8800 fordon i vardagsmedeldygn", det var parkerade fordon på båda sidor och en trafiksignalanläggning som förband gatorna. Det var omtalat i planen från 1980-talet att gatan skulle stängas. Gåtgatorna genomfördes och det diskuterades en utökning och en avstängning av Östra Boulevarden. Man kom fram till att enkelriktad gatan söderut, att separera cykeltrafiken på en särskild bana. Man bestämde sig också för att göra en gårdsgata, med ytor som inte var tillåtna för stannande utan bara genomfartstrafik i en hastighet med gångfart, högst 7 km/h. Det har ju inte alla anammat, man kan inte lagstiftningen, vilket gör att de oskyddade trafikanterna upplever otrygghet. Vi la stenhällar och smågatsten för att göra det obekvämt att köra fort, det är ett sätt att hålla nere hastigheten och också hålla på karaktären av stenstaden Kristianstad.

Vi fick en torgbildning framför Domus som utnyttjas Apellröten, demonstrationer och sådant, dvs till olika aktiviteter. Avarterna har varit att man inte tar hänsyn till gåendes villkor, bilisterna parkerar och tar ut pengar i uttagsautomaten och stannar och tar upp folk på torgytan. Det har också förekommit att man kör emot enkelriktningen. Man har tillskapat sk objekt, det vill säga stenstoderna som placerats mellan gångutrymmet och cykelutrymmet. De skymmer sikten, för de oskyddade trafikanterna, men också för barnen har det blivit en otryggare miljö. 2600 fordon går förbi idag. Diskussion pågår om de behöver gå där, eller om man kan stänga av den. Diskussionen pågår nu intensivt och vi har gjort en nummerförskrivning, och kartlagt fordon som kommer från norr och kör in på Östra Boulevarden, som trafikerar rakt igenom nu i maj. Där kan man konstatera att det finns ett behov idag av att köra igenom gårdsgatedelen. När vi gjorde förändringen tittade vi på hur vi skulle enkelrikta den. Söderut gav minst antal fordon på den känsliga delen av gatan. Troligen skulle vi behöva ha en broförbindelse från Kanalgränd till biltorget vid Domus.

Det håller vi på att analysera nu. I dagarna har vi skrivit en lokal trafikföreskrift som innebär att stänga av gårdsgatedelen under juli och augusti i är på försök. Tidigare har vi stängt av långlördagar med mer aktiviteter i april/ maj, aug/sept och julslytningssöndagen. Det finns önskemål från vissa politiska håll att gårdsgatan ska stängas för all trafik, utom cyklar. Jag förlitar mig på den trafikutredning som vi gjort, för att se genomföra konsekvenserna av den situation vi har. Vi kommer att lämna den till de politiska bestuftsattarna, där vi gör beskrivningar hur vi kan gå åt det här. Jag tycker det är bra det som är gjort, att ha fått en möjlighet att ha tillgänglighet på de gåendes villkor. Att inte alla trafikantgrupper håller det som lagstiftaren säger är en annan sak, man kan inte lagstiftningen och då upplevs också otrygghet. Det är inte alldeles nödvändigt att stänga av gatan helt, det går att ha tillgänglighet på de oskyddade trafikanternas villkor. Vi utredde också att ge länstrafiken möjlighet att köra dubbelriktat på Boulevarden på vissa kollektivtrafiklinjer. Men det har avvisats. Det är nu en bredare gångbana på den västra sidan. Den var smal som den var för alla gångtrafikanter, och vi skapade cykelväg på västra sidan som förbinder Nya Boulevarden på östra sidan sen går den över på västra sidan och sen över till Södra Boulevarden. Det fanns ingen sån förbindelse tidigare och det möjliggjordes med den här förändringen. Det blev bra. Man tog bort de parkerade bilarna som en kompromiss för att det skulle vara bredare cykelbana.

E13

Motivet för ombyggnaden i grunden var egentligen två, vatten- och avloppsledningarna var slut och måste bytas och det skapade tidpunkten när man skulle bygga om, det andra var att gatan fick sin form på 60-talet och den prioriterade bilarna jämfört med andra trafikslag. Och det fanns också ett tredje motiv: och det var diskussionerna kring förändringar på Stora Torg. Det vi gjorde var att vi genomförde den omdisponeringen att vi minskade bilytorna och prioriterade fotgängare och cyklister. Vi lyfte upp ytorna framför Stora Torg, vilket säkert förbereder ombyggnaden av Stora Torg. Vi har också planterat träd igen på gatan, det har ju funnits träd tidigare där. Jag tycker det har blivit mycket bättre, men vi har kvar att göra en del som vi inte har löst ännu. Men det har mer att göra med trafikstrukturen i gamla staden än själva gatan, vi har för mycket genomfartstrafik genom staden. Vi funderar på att flytta bussarna till en annan tvärgata för att skapa möjligheter att reglera Nya Boulevarden bättre. Vi har genomfört förändringarna på hela gatan för att underlätta för funktionshindrade. Vi har arbetat med signalplattor, anpassat till befintliga entreer, vi har lyft gatan på vissa ställen och det är en mycket bredare gångyta nu, 2.80 som handikappföreningen ville ha.

E14

Det har blivit bättre i alla avseenden. Det är fysiskt bättre och en mänskligare miljö, det är också miljömässigt bättre, det är en tryggare miljö och en vackrare miljö. Jag kommer ihåg hur det var innan och jämfört med det måste man ju säga att allt har blivit bättre. Det är funktionellt bättre också, även om det är diskussion om att stänga gatan.

Den ska stängas på prov under två månader i sommar och användas som gågata och det slutar säkert med att det blir en stängning permanent tror jag. Eftersom vi kommer att stänga av gatan så innebär det att det finns kritik mot att bilarna inte sköter sig som de ska. Man parkerar vilt och det finns inte acceptans för det. Men det är också så att man flyttar fram positionerna nu. Utgångslaget är dagsläget och man jämför nu med vad man kan få om man gör det till en gågata. Tidigare var det ca. 9000 bilar som gick där varje dag; det var oerhört nedslitet, bilarna prioriterades på bekostnad av övriga trafikanter, där fanns inga sittplatser. Det var slitet i alla avseenden. Det är ju logiskt tycker jag att man nu ser möjligheterna att gå vidare och förbättra.

E15

Tanken med ombyggnaden av Östra Boulevarden var att man skulle ta bort den starka barriären som trafikströmmen utgjorde och det var möjligt att göra eftersom man gjorde en större trafikomläggning i Kristianstad vilket reducerade antalet bilar från om jag minns runt 10 000 till 1500 bilar per dygn ca. Min tanke var att Domus och det som händer i det området med McDonald's och filmstaden var en viktig målpunkt, så det kändes som en stor kvalitet i staden om man kunde knyta ihop den här delen med stenstaden. Före den här förändringen var Östra Boulevarden ett asfalterat kördike med kantstenar, och signalreglerade övergångsställen. Idag är situationen en helt annan, där man kan uppfatta hela Östra Boulevarden som ett stort torg som människor fritt kan röra sig över på alla håll och kanter. Utformningen är gjord på ett sådant sätt att bilarna tar sig fram mycket långsamt och på fotgängarnas villkor. Samtidigt var det i Kristianstad - som ju brukar benämnas Lilla Paris - viktigt att ta hänsyn till stadens historiska arv där Boulevarderna är en väsentlig del. Därför tyckte vi att det var viktigt att understryka den forna Boulevardens längdriktning och vi tänkte göra det med alleplanteringar av stora träd. Alla de träden har inte blivit planterade ännu, men jag hoppas att detta kan ske, det är angeläget för projektet. Projektet var också ett demonstrationsprojekt för stenindustrin, materialet sponsrades av stenindustrin (sammanslutning av stenhuggerier i Sverige) och två gånger om året används Östra Boulevarden som en demonstrationsanläggning för arkitekter som går på kurs vid Breans (Immeln). Jag anlitas och Tomas - stadsarkitekten - anlitas också och berättar. Detta är den idémässiga utgångspunkten. Projektet har blivit publicerat i internationella tidskrifter, i flera olika trafiktekniska tidskrifter i hela Europa, och jag har hållit många föredrag om det. Det har också funnits på omslaget till den trafiktekniska tidskriften i Sverige och har framhållits som ett föredöme i Sverige. Man har sett arbetet som ett trafiktekniskt intressant experiment, ett nytt sätt att hantera trafik i staden, och det här exemplet visar hur man försöker skapa en stämning med ömsesidig hänsyn som utgår från individerna och inte från regler och stoppljus. P 60- 70 talen var trafikplaneringen en helt annan. Inställningen var att allt måste regleras och allt var styrt och normreglerat. I det här exemplet har man lagt över på individerna att bestämma hur man samsas i staden, de mjuka trafikanternas - fotgängarnas - situation har stärkts, vilket jag har hjälpt till med att utforma som landskapsarkitekt. Rent tekniskt har vi tagit bort alla kantstenar som utgör hinder för funktionshindrade och som kanske också är hinder för andra människor. Samtidigt har vi infört smågatsten som material, vilket gör det svårt för bilar att färdas speciellt fort på gatan. Målsättningen är vad man trafiktekniskt kallar Gårdsgata, vilket innebär högst 6 km/tim (gånggångarhastighet). Smågatstenen är emellertid också ett obekvämt material för rullstolar, så där har vi en motsättning som vi har försökt hantera. Sättet som vi gjort det på är att lägga trafiksliten - begagnad och ganska slät - gatsten, och den har dessutom lagts med högre krav på ytjämnhet än normalt. Dessutom finns det stråk av släta granithällar inlagda. Tillgänglighetsfrågorna har varit extra viktiga eftersom Kristianstad är en handikapprioriterad stad med ett riksgymnasium för handikappade. Den nya miljön har fått en hel del kritik från rörelsehindrade, men en stad är till sin konstruktion sådan att många anspråk måste sättas mot varandra. Vi har försökt hitta en balans där många anspråk ska samsas och vi har sökt åstadkomma en balans som kan vara godtagbar för alla. Jag tycker att om man tänker hur Östra Boulevarden såg ut för fem år sedan har stadsmiljön genomgått en enorm förbättring; folk sitter och solar på de långa stembänkarna, man ser människor som träffas, umgås och pratar, bilarna färdas långsamt, och man ser människor röra sig fritt där det förut var ett körfält. Men jag saknar fortfarande tre-fyra alléträd. Projektet var ett samarbete mellan konstnär och landskapsarkitekt. Man skulle se vad man skulle kunna åstadkomma om båda kategorierna var med från början, så projektet är ett samarbete mellan mig som landskapsarkitekt och Pål Svensson som skulptör. Förutom att ha varit med och utformat projektiden har Pål gjort fyra skulpturer som vi har kallat "skåp". De står som fyra väktare placerade på gränsen till den gamla stenstaden. Stadsarkitekten

Tomas Theander har varit stark i de kritiska diskussionerna med att framhärda att projektet syfte var att åstadkomma en bättre stadsmiljö och att då måste alla anspråk samsas.

E16

Ombyggnaden av Nya Boulevarden är intressant så till vida att det tidigare var en kanal som löpte genom staden. Det fanns diskussioner att man åter igen skulle skapa en vattenmiljö där, men eftersom Nya Boulevarden är en utav de absolut tyngsta lederna i öst-västlig riktning så kunde man inte ta bort den. Det viktigaste att tillskapa när vi byggde om Nya Boulevarden var att skapa separata cykelleder. Och det innebar att man var tvungen att minimera gaturummet för fordonstrafik. Det innebär att det inte finns någon möjlighet att köra om en buss när man har mötande trafik. Vi har fått bra miljöer för de gående och för cyklister, men vissa begränsningar för fordonstrafiken. Fordonstrafiken upplever att det kan bli stockningar, men trots allt upplever jag att Nya Boulevarden fungerar som den här tvärliden som vi behöver. När det gäller Östra resp. Västra Storgatans anslutning till Nya Boulevarden, så har de markerats i gaturummet, men har inte utformats som övergångsställen. Det upplever vissa gångtrafikanter som en miss, men i praktiken fungerar de och fordonstrafiken släpper fram de gående. Vissa konflikter kan finnas mellan cyklister och gående pga av att gångbanan resp cykelbanan är bara markerade i gatustenen. Men trots allt fungerar det för de tre olika trafikanslagen. De största vinnarna är nog trots allt cyklister som tidigare var hänvisade till det mycket hårt trafikerade gaturummet. Genom ombyggnaden skapades förutsättningar för uteserveringar längs med Nya Boulevarden, som tidigare var ytterst begränsade. Och man måste då betänka att Nya Boulevarden är historiska miljöer där man inte kan göra större intrång. Jag tänker då såväl på Stora torg och Frimurarhuset som Museet. Man hade den gamla gatuytan som begränsning. Ur tillgänglighetssynpunkt, så har ombyggnaden av gatan inneburit en förbättring, det finns inte någon kantsten eller sådant som tidigare begränsade framkomligheten. Och Nya Boulevarden fungerar fortfarande som den oerhört viktiga pulsådern som sammankopplar Västra Boulevarden med Östra Boulevarden och Kanalgatan. Där finns ingen möjlighet att göra den till gågata eller liknande. Egentligen tycker jag att vi, genom den här ombyggnaden då vi smalnade av gaturummet för fordonstrafik, på något sätt illustrerar det den gamla Kanalen som fanns här på 1800 talet. På så vis har vi gjort en historisk anknytning också.

E17

Främst att vi har skapat ett rum framför Domus och Sparbanken, och vi har då fått en utav Kristianstads "mötesplatser". Vi har fått en betydligt lugnare trafikmiljö, men jag tillhör dorn som tycker att man ska förbjuda fordonstrafik på den sträckan uppåt till parkeringen till resecentrum. Det skulle alltså bli gågata. Jag anser det beroende på att den här gårdsgatan har uppenbart inte fungerat som det var tänkt. Säkert är det så därför att vi som bilister inte respekterar den hastighetsbegränsning som gäller. Jag tror inte heller att folk som rör sig på den här gatubiten upplever att det är någon säker miljö. För att det ska vara det, så menar jag att man måste ta bort fordonen. När det gäller Östra Boulevarden i övrigt skapade vi en ny gatumiljö, där vi återigen tog konsten till oss och dorn konstverk som finns där tycker jag är en del av det nya gaturummet som vi skapade. När det gäller cyklister fick de då separata utrymmen, som jag tror har fungerat väldigt bra. För de gående fungerar det bra. Framförallt stråket Cardellösgatan som mynnar i Östra Boulevarden. Cardellösgatan är en utav Sveriges mest utnyttjade gågator - bara Drottninggatan i Stockholm är större. För de funktionshindrade har det funnits kritik att man använt smågatsten, att det skulle försvåra framkomligheten, men det tycker jag nog faktiskt är överdrivet, där måste en avvägning ske mellan miljö och framkomlighet. Vi kan inte asfaltera alla ytor bara för att öka tillgängligheten, för det skulle miljön förlora på. Där finns stråk med sten av granit som är släta. Så det är alltså när man korsar stråket som man har smågatstenen. Hela projektet genomfördes i samråd med stenindustrin, som satsade pengar i det här för att skapa rumsmiljön.

Appendix 3: Expert comments (E) translated to English

E (Expert comment nr.) 1

I think that the street has become considerably more attractive. It used to be a worn and ugly street. The problem is that there are two one-way bicycle paths, and many people use them as if they were two-way paths and that can cause problems. Certain times of the day – especially at lunchtime – there's a lot of crossing pedestrian traffic in the north-south direction. Many pedestrians think they have right of way before cars, but that's not the case since the surface of the square is level with the street. Apart from that, things are functioning as intended.

E 2

I think that things have turned out very well after the change, there's a surface that makes it possible to have a gathering-place, and even if there's car traffic now, that can be questioned. But it can be limited, so it functions well anyway; people should drive their cars on pedestrians' conditions. I experience it as a good life there; the stones, that's nice, the paving that they can decorate with flowers and put benches there so that you can sit there and look at people. As for the paths for pedestrians and bicyclists, it's a good thing that they have made that combination, they have marked it with the paving and painted bikes on the bicycle path to mark it, that's good. They've put out bicycle stands; now it's probably easier for people to know now where to put their bikes. There are those who think it's negative to allow cars in the same area, but I think you learn how to behave. I think you can see that during the past years. Of course there are those who break the rules to withdraw money from the ATM, but there's only a few of them. I think the Boulevard turned out very well when it was reconstructed, I think it's a very positive change.

E 3

The environment has become much better and safer for both pedestrians and bicyclists. It has also become prettier and therefore nicer.

E 4

I think that Nya Boulevarden has become better; it's possible to put out tables and serve things along the street, it's nice and clean, they have planted trees, it has become a street space. Now there's a special bicycle path that's been marked with the paving; I think that's functioning well. Crosswalks from the main streets have been elevated; they may cause uncertainty both among pedestrians and car drivers about who has right of way. I would have liked the speed limit to be 30 km on Nya Boulevarden, I think that would have lowered the traffic rhythm, which would create a calmer environment. Also, the buses now stop out in the street, which lowers the traffic rhythm since it lowers the speed. I think that Nya Boulevarden turned out very well when it was reconstructed. I experience it as a very positive change. It's a change for the better that bicyclists are better protected since they don't have to ride in the streets any more.

E 5

Nya Boulevarden turned out very well. We put separate bicycle paths on either side. The space for pedestrians is about the same as before. It was meant to become a local street with general priority for pedestrians; that's what we had intended, we had planned for some cooperation. But if we'd converted it like that, buses wouldn't have been able to keep to their schedules. That's why we didn't do that. So cars and buses have the right of way in traffic.

Personally I think it's working well, we haven't had any near-accidents here, but some people have pointed out that it's unclear that there's no marked pedestrian crossing. There will be further changes; the speed limit will be 30 km in the entire downtown area including Nya Boulevarden. We used to have a lot of flowerbeds, but we planted trees instead of those flowerbeds. We got nice outdoor areas at the restaurants and they have furnished them very nicely, I'll give them credit for that. We've put round benches around the trees, which is a great improvement. We have also made room for bicycle stands, and if there's no room for bicycles there, people should park them in the pedestrian streets. We put bicycle stands there too while we were reconstructing the street.

E 6

It has turned out quite well. If you start at Domus and go north, there's now one (integrated) footpath on the western side. That's a considerable improvement for pedestrians. Then, considering all the cross traffic at Domus, this has also meant that the situation has improved a lot since there's less traffic. But there's a lot of criticism directed at the local street with general priority for pedestrians. People feel that the works of art block their view, and they do indeed. We have a crossing bicycle path just there and it can be difficult for pedestrians to see the bikes, so there's a conflict between pedestrians and bikers here. There has been an improvement for pedestrians. For bicyclists there's a bicycle path that's so-so, it's rather narrow and may not have the ideal paving for bicyclists. We've paved the square with natural stone, which is a compromise considering the environment.

E 7

What we've done there is very good. We had a lot of through traffic as well as bus traffic in both directions on Östra Boulevarden. We widened a narrow footpath between Nya Boulevarden and Kaserngatan. We put in a new pedestrian and bicycle path all the way from Södra Boulevarden to Nya Boulevarden on the western side. We divided it by using different materials, clinker on the footpath and asphalt on the bicycle path. We did the same thing on the eastern side, not all the way but between Nya Boulevarden and Domus. At the same time we made a new staircase to the parking deck at Östra Boulevarden. What we've done is a great thing! Before we made the improvements we coordinated everything with the handicap organizations. They participated in the entire process. We couldn't oblige them on every point, but we marked footpaths in cut stone all the way in front of Domus, so they had their way there. But we also had to take environmental aspects into account, you cannot do everything the handicap organizations request, but we've tried to improve accessibility for them. Unfortunately we're on a bit of a collision course there, but we do the best we can. Of course we want to reuse old material as much as possible, and that's what we've done there. Stone of that quality can be reused for thousands of years; it's not ruined. There were quite a few administrative bodies that cooperated. Before we started building, we made a presentation in the premises of the municipal executive board. Many interested parties showed up, and we described to them what it was going to be like. It was a public meeting, and the room was crammed. They could see exactly what it was going to be like, since we used three-dimensional technology. When we planned the outdoor environment we redid our entire infrastructure at the same time, telephone lines, electricity lines and water pipes, broadband – yes, it was all included and is now new. It's good to do those things at the same time, because you reduce costs in terms of money. All that stuff was worn out, it was finished, it was the right time to do all the things we did.

E 8

Since I mainly worked with the changes in Östra Boulevarden, these are the changes I'll comment on: the changes are very positive. The Domus square has become more of a public space than it used to be, more people are attracted to it and it's used much more than be

fore. It's a place that has certain drawbacks, but as we all know any change results in both drawbacks and benefits. We have been informed that the design and paving have caused problems for certain groups of handicapped people. We consulted the handicap organizations throughout the entire process, and the design was adapted to their requests. But sometimes it can be difficult to find a good balance between different requests. I do think, however, that today most people think that place is functioning well, even from the perspective of the handicapped. Initially the staircase down to Döbelnsgatan and **Travel Centre** was not clearly marked, and some incidents occurred there. This staircase has now been improved and marked more clearly. Unfortunately, the adaptation of the movie theatre to the needs of handicapped people falls short of the ideal. As for the traffic situation, we didn't feel it was possible to convert Östra Boulevarden into a pedestrian street. Not that anything is totally impossible. I'm sure we could have found a solution, but it would probably have cost a bridge from the parking lot over to Kanalgatan. It has been pointed out from many quarters that the design with a local street with general priority for pedestrians creates a dangerous traffic situation due to blending pedestrian and car traffic. But that's the very point of a local street with general priority for pedestrians, and as far as I know there hasn't been any serious incident. Today the a local street with general priority for pedestrians model is used in many places in this country and we're getting familiar with the regulations - that car traffic is allowed on pedestrians' conditions. It's a drawback that people park their cars on the bicycle path at the square, especially at the ATM at the bank. That's become a source of irritation. As far as the aesthetics is concerned - it's become attractive. The stone blocks that people can use to sit on are nice. And the blue lights are a little different, which is nice. The public toilet is also attractively indicated. Contact with the lower deck of the parking has become more open, and parking is more accessible and not so closed off. An openness has been created there so that people dare park on the lower deck. The old, closed stairwells were used as urinals, but the open solution prevents that. Conclusion: it's a good complement to the pedestrian streets: not everything has to be totally free from traffic.

E9

Two things have happened. One is that we got bicycle paths that are quite sensible on both sides of the street. The other is that we got a new crossing from the pedestrian streets to the sidewalk on the other side of Nya Boulevarden in the direction of Stora Torg on one level (the elevation), which has two consequences. For one thing it improves the situation for pedestrians, and for another it lowers speed on the street. The bus stops have also been moved, but that's not of crucial importance for how you experience it. Both those two things that have occurred are changes for the better. They make things easier for both pedestrians and bicyclists and reduce the risks of accidents, and it encourages people to walk and bike more in the downtown area. It should also mean that we'll be able to send cars further out from the downtown area. The passageway has been received positively by the visually impaired, but in Sweden we lack a well thought-out strategy for what a passageway should be like. Then there weren't so many more changes. There was a great deal of discussion, but since Stora Torg wasn't changed the solution was a bit chopped up. The idea was that it would be a place that invited people to be active there but it didn't turn out that way. The plan for the square was that there should be a smooth path across it to make things easier for the functionally impaired and that there should also be parking places for the handicapped.

E10

It seems to me that the traffic rhythm has been lowered and also that through-traffic has been reduced but that the section of Östra Boulevarden outside Domus should have been completely closed off for car traffic. The aim of closing it off is to make things better for pedestrians and to improve traffic safety. That particular aspect is not important to car drivers

from the perspective of communication. It's a good thing that the sidewalk has been laid out on a level with the entrances into the shops. I think we paid far too much attention to the architect's views concerning the issue of placing sensible footpaths on the so-called piazza in front of Domus. There should have been a footpath on the extension of Cardellösgatan too, to improve the situation for the handicapped, for example, or for people who use a walking aid. The bicycle paths are good, but it's a clumsy solution. When you come biking from the north heading for Domus and arrive at the piazza, you have to bike over to the other side. Pedestrians don't show much respect for the fact that there's actually a bicycle path there. That's irritating.

E11

The reconstruction was a way of making it possible for bicyclists not to have to use the roadway by laying out bicycle paths on the southern and northern sides and of creating space for outdoor restaurants and shops along the street and the main thoroughfares, from the pedestrian streets. We raised the surface between Östra och Västra Storgatan, and there are no curbstones here either. We were aiming at a character of a local street with general priority for pedestrians but the pedestrian crossings were removed. That's some kind of bad compromise. There were also thoughts of changing the entire Stora Torg and the streets around it and laying it all out on one level; it was to be a totally different kind of environment with more flexible areas that could be used in different ways. The reconstruction of Nya Boulevarden has become a more isolated project since the other things were not implemented, and the whole thing turned out to be chopped up. People feel uncertain since they haven't been informed about what applies to unprotected road users. We should have created a more protected environment and make a local street with general priority for pedestrians. The bus traffic people claim that there may be problems of navigability, that traffic is too slow, that there are many interruptions so that they cannot keep their schedule and so on. Maybe one has to accept that one cannot drive buses very fast in an urban environment. They do about 21-22 km/hour in urban traffic today, and it's our ambition to take measures to give priority to public transportation; we would like it to be possible to do 26 km/hour. But there are certain sensitive spots, Nya Boulevarden for example, and I would like traffic to be slower there than it is today. We haven't found a solution for unprotected road users, especially bicyclists, at the intersection of Västra Boulevarden and Nya Boulevarden. They haven't got a prioritized bicycle crossing. We stopped 10 meters before and we let them bike among the vehicles in the street area. We have discussed a traffic circle, but if there's to be a traffic circle in this right-angled city founded by Christian IV there will be a swelling, and furthermore a traffic circle won't provide the same degree of safety for unprotected bicyclists. The intersection of Östra Boulevarden and Nya Boulevarden is a problem, and conflicts occur there. As a road user you believe that Nya Boulevarden is a major road, but it's not. There is a problem at every shift in vehicle movement when no one knows what the rules are. When we planned Nya Boulevarden we made it possible to lay out a mini traffic circle there, but it hasn't been implemented for various reasons. Nya Boulevarden has become more accessible to handicapped people. We have laid out the paving on one level, so there are no edges that prevent people in wheelchairs and people using walkers from moving around. We also changed the location of the bus stops; today they are outside the Skandia building and at the Tourist Center, while they used to be opposite each other. We did that so that the buses would be able to stop and there would be sufficient room in the street space for everyone.

E12

It used to be "the eastern exit road with an average of 8,800 vehicles per working day", vehicles used to be parked on both sides and there used to be a traffic light arrangement that connected the streets. It was mentioned in the plan from the 1980s that the street would be closed off. The pedestrian streets were introduced, and an expansion as well as a closing off

of Östra Boulevarden was discussed. It was decided to make it a one-way southbound street and to put bicycle traffic on a separate path. It was also decided that a local street with general priority for pedestrians should be created with areas where it would be prohibited to stop and where there would only be through traffic at walking speed, no more than 7 km/hour. Not everybody has accepted that; people aren't familiar with the legislation, which makes unprotected road users feel unsafe. We laid out flagstones and small cobblestones to make it unpleasant to drive fast, which is a way of keeping speed down and also preserving the character of Kristianstad as a city of stone. We constructed a square in front of Domus that's used for various kinds of activities such as meetings and demonstrations. The drawbacks are that people don't pay attention to the pedestrians' situation; car drivers park at the ATM and withdraw money and stop and pick up people in the square. People have also been known to drive against the one-way direction. So-called "objects" have been created; I'm referring to the stone statues that have been placed between the pedestrian area and the area for bicyclists. They block the view for unprotected road users, but the environment has also become less safe for children. Today 2,600 vehicles pass here daily. We are discussing whether they have to pass there or whether it can be closed off. This discussion is currently intense and we've listed registration numbers and charted the vehicles that arrive from the north and drive into Östra Boulevarden that runs straight through now (in May). It can be established there that today there is a need to drive through the local street with general priority for pedestrians. When we made the change we considered how to make it a one-way street. If we chose the southern part, we would get the lowest number of vehicles in the sensitive part of the street. We would probably have to have a bridge connection from Kalgatan to the parking lot at Domus. We're analyzing that now. We have recently written a local traffic regulation where we plan to close off the local street with general priority for pedestrians section during July and August this year as an experiment. Previously we've closed it off in April/May and August/September during so-called "long Saturdays" when there are more activities and on the Sunday of the Christmas window display. Certain politicians have expressed a request that the local street with general priority for pedestrians be closed off to all traffic except bicycles. I rely on the traffic study we've made to evaluate the consequences of the situation we're currently in. We'll hand it over to the political decision-makers, who can then read our descriptions of how we can go about this. I think what's been done is good; it's good that it has become possible to provide accessibility on pedestrians' conditions. Then it's another matter that not all groups of road users stick to what the legislators say; people feel unsafe because they aren't familiar with the legislation. It's not absolutely necessary to close off the street completely; it's possible to create accessibility on the unprotected road users' conditions. We also looked into making it possible for the county traffic authority to drive in both directions on the Boulevard along certain public transport routes. But that idea has been dismissed. There is now a wider pedestrian path on the western side. It used to be narrow for all pedestrians, and we created a bicycle path on the western side that connects with Nya Boulevarden on the eastern side and then it goes over to the western side and then to Södra Boulevarden. There was no such connection before, and it was made possible by this change. It turned out well. We removed the parked cars as a compromise to achieve a wider bicycle path.

E139

There were basically two main reasons for the reconstruction; one was that the water and sewage pipes were worn out and had to be replaced, which determined the point in time for the reconstruction work, and the other was that the street was laid out in the 60s and gave priority to cars as compared to other kinds of traffic. There was also a third reason, and that was the discussions about the changes in Stora Torg. What we did was we implemented a rearrangement so that we reduced the car areas and gave priority to pedestrians and bicyclists. We raised the surfaces in front of Stora Torg, which is likely to facilitate the recon

struction of Stora Torg. We also planted trees again in the street, since there used to be trees there before. I think it has become much better, but a few things remain to be done that we haven't solved yet. But that's more to do with the traffic structure in the Old Town than with the street itself; we have too much through traffic running through the city. We are thinking of moving the buses to another cross street to make it possible to regulate Nya Boulevarden in a better way. We have implemented changes all along the street to make things easier for the functionally impaired. We have worked with tactile tiles adapted to the existing entries, we have raised the street in certain places and the pedestrian area is much wider now; it's 2.80 as the handicap organization requested.

E14

Things have become better in all respects. It's better physically and it's a more human environment, it's also better from an environmental perspective, it's become a safer and prettier environment. I can remember what it used to be like, and if you compare with that you have to conclude that everything has become better. It's better from a functional point of view too, even if closing off the street is being discussed. It will be closed off as an experiment during two months this summer and be used as a pedestrian street, and I'm pretty sure it will end up being closed off permanently. Since we are going to close off the street, this implies that there is criticism to the effect that car drivers do not behave as they should. People park their cars all over the place, and that cannot be accepted. But it's also that positions are moved forward now. Today's situation is the starting point, and we're now comparing it with what we can achieve if we make it into a pedestrian street. Previously some 9,000 cars passed there every day; it was enormously worn down, cars were given priority at the expense of other road users and there was nowhere you could sit down. It was totally run down. I think it's quite logical that we're now realizing the possibilities to proceed and to improve.

E15

The purpose of the reconstruction of Östra Boulevarden was to remove the glaring barrier caused by the stream of traffic, and it was possible to do that since a major redistribution of traffic was undertaken in Kristianstad, which reduced the number of cars, if I remember correctly, from around 10,000 to ca 1,500 cars per day. I felt that Domus and what's going on in that area with McDonald's and Cinema City was an important target, so it felt like a great improvement for the city if this area could be integrated into "the city of stone". Before this change, Östra Boulevarden was an asphalted traffic trench with curbstones and pedestrian crossings regulated by traffic signals. Today there is a totally different situation where you can perceive the whole of Östra Boulevarden as a large square where people can move around freely in all directions. It has been designed in such a way that cars have to drive very slowly and on the pedestrians' conditions. At the same time it was important for us in Kristianstad – which, as you may know, is called "Little Paris" – to consider our historic heritage with the Boulevards as an important element. That's why we thought it was important to emphasize the longitudinal direction of the Boulevard, and we planned to do that by planting big trees in the allée fashion. All those trees haven't been planted yet, but I hope they will be, because it's important for the project. This project was also a demonstration project for the stone industry; the material was sponsored by the stone industry (an association of stonemasonries in Sweden) and Östra Boulevarden is also used twice a year as a demonstration installation for architects who take courses at Breans (Immeln). Tomas – the city architect – and I myself are consulted and tell about it. This is the conceptual starting point. The project has been published in international journals, in several traffic-engineering journals all over Europe, and I have given many lectures about it. It has also been on the cover of the Swedish traffic-engineering journal and has been held up as a good example in Sweden. The work has been regarded as an interesting traffic-engineering experiment, as a

new way of handling urban traffic, and it's an example of an attempt at creating an atmosphere of mutual consideration emanating from individuals rather than from rules and stoplights. In the 60s and 70s traffic planning was totally different. The view then was that everything had to be regulated, and everything was governed and guided by norms. In this example it's the individuals' responsibility to decide how people should get on in the city; the situation of the "soft" road users – the pedestrians – has improved, and I, as a landscape architect, have contributed to that. From a purely technical point of view we have removed all the curbstones that are obstacles for the functionally disabled and that may also be obstacles for other people. At the same time we have introduced the material of small cobblestones, which makes it difficult to drive cars very fast on that street. The aim is what in traffic-engineering terms is called "a local street with general priority for pedestrians", which means a maximum of 6 km/hour (pedestrian speed). But at the same time the small cobblestones are a bumpy material for wheelchairs, so there we have a conflict that we've tried to cope with. The way we solved it was to lay out traffic-worn – used and fairly smooth – paving stones, and in addition it has been laid out with higher requirements for superficial smoothness than normal. Moreover, paths of smooth granite slabs have been laid out. Accessibility has been particularly important since Kristianstad is a city where handicap issues are given priority and where there's a national upper secondary school for handicapped students. The new environment has been criticized a great deal by people with functional disabilities, but a city is constructed in such a way that many contradictory demands must be taken into consideration. We've tried to find a balance where many demands should be able to coexist, and we've tried to achieve a balance that will be acceptable to everybody. If you think about what Östra Boulevarden used to look like five years ago, I think the urban environment has improved enormously; people sit in the sun on the long stone benches, you see people meet, spend time together and talk, the cars move slowly and you see people move freely where there used to be a traffic lane. But I still miss three or four allée trees. An artist and a landscape architect cooperated in the project. The idea was to see what could be achieved if both those categories were involved from the beginning, so I as a landscape architect and Pål Svensson, a sculptor, cooperated in the project. Besides participating in designing the project idea, Pål has made four sculptures that we call "cupboards". They are placed like four sentinels on the borderline to the old stone city. In the critical discussions Tomas Theander, the city architect, has strongly emphasized that it was the aim of the project to achieve a better urban environment, and that consequently all demands must therefore be able to coexist.

E16

The reconstruction of Nya Boulevarden is interesting, since it used to be a canal running through the city. It was suggested that a water environment should be created there again, but since Nya Boulevarden is one of the most important roads in the east-west direction it couldn't be removed. The most important thing in reconstructing Nya Boulevarden was to create separate bicycle paths. And that meant that the street area for vehicular traffic had to be minimized. This means that it isn't possible to pass a bus when there's traffic in the oncoming direction. We have created a good environment for pedestrians and for bicyclists, but it has resulted in certain limitations for vehicular traffic. Road users involved in vehicular traffic feel that there are occasional traffic jams, but I nevertheless think that Nya Boulevarden is functioning as this new crossroad that we need. As for the connections of Östra Storgatan and Västra Storgatan with Nya Boulevarden, they've been marked in the street space but they haven't been designed as pedestrian crossings. Some pedestrians feel we missed there, but they function in practice and vehicular traffic gives pedestrians the right of way. There may be certain conflicts between pedestrians and bicyclists due to the fact that both the footpath and the bicycle path are only marked in the paving stones. But in spite of all that, things are functioning well for the three different kinds of traffic. After all, the win

ners are probably the bicyclists, who used to be directed to the very densely trafficked road area. The reconstruction increased the possibilities for having outdoor restaurants along Nya Boulevarden, which used to be very difficult. And then you have to keep in mind that Nya Boulevarden is located in a historic environment where you cannot make any major intrusions. I'm thinking of Stora Torg as well as the Freemasons' House and the Museum. The old street surface set a limit. From the point of view of accessibility, the reconstruction of the street has meant an improvement; there are no curbstones or other things that used to reduce accessibility. And Nya Boulevarden is still functioning as the extremely important artery that connects Västra Boulevarden with Östra Boulevarden and Kanalgatan. It's not possible to make it into a pedestrian street or something similar. As a matter of fact I think that making the street space for vehicular traffic narrower, as we have done in this reconstruction, is somehow reminiscent of the old Canal that used to be here in the 1800s. In that way we have created a link with history as well.

E17

The main thing is that we've created a space in front of Domus and the Savings Bank and thus we've got one of Kristianstad's "meeting places". We've got a considerably calmer traffic environment, but I'm one of those who think that vehicular traffic should be forbidden on the driveway into the parking lot at the travel center. That would then turn it into a pedestrian street. I think so because this a local street with general priority for pedestrians has apparently not been functioning as intended. I'm sure that's because as car drivers we don't respect the relevant speed limit. Nor do I think that people who move around on this part of the street feel that it's a safe environment. In order to make it safe I think vehicles have to be removed. As for Östra Boulevarden in other respects, we created a new street environment where we reintroduced art, and I think the works of art there are part of the new street space that we created. As for bicyclists, they got separate breathing space that I think has functioned very well. The situation for pedestrians is working well, especially in Cardellösgatan, the street that leads to Östra Boulevarden. Cardellösgatan is one of Sweden's most exploited pedestrian streets — only Drottninggatan in Stockholm is used more. There has been criticism from the functionally impaired that the use of small cobblestones reduces accessibility, but I personally think that's an exaggeration; this is a case of finding a balance between the environment and accessibility. We cannot asphalt all surfaces to improve accessibility; that would be at the expense of the environment. There are paths with granite slabs that are smooth. It's when you cross the path, then, that you are on the small cobblestones. The entire project was implemented in cooperation with the stone industry, which invested money into the project to create the spatial environment.

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