



<u>Towards European</u> <u>Standards for Testing</u>

FINAL REPORT

CIECA final report to DG TREN of the European Commission concerning contract n^o ETU/B27020B-E3-2002-CIECA-S07.18488 (analysis of the contents, the location and the duration of the practical driving test for obtaining a category B licence)

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FOREWORD

The TEST project was managed by CIECA, the international driver testing authority. The final report of the TEST project was written and edited by the members of the scientific committee and project manager. All four people contributed to all sections of the report. However, the work was divided amongst these four people and special acknowledgements need to be made to certain people for various sections:

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SUMMARY OF TEST PROJECT

Objectives

The main aims of the TEST project were to:

- \Rightarrow determine to what extent the duration and location of the practical driving test for category B allowed the requirements in Directives 2000/56/EC and 91/439/EEC be met and to consider whether the tests were covering all requirements of the directives;
- \Rightarrow assess the homogeneity in the driving test in the 6 countries involved in the project and in the different test centres within each country;
- \Rightarrow to assess how well the road safety needs of novice drivers are being met through the current practical test and if necessary, develop recommendations to improve the status quo.

Background

Over recent years numerous research projects have been done to consider how to reduce the number of accidents and fatalities, especially amongst novice drivers. The European Commission has introduced directives that aim to harmonise driver licensing requirements and increase road safety in general. The TEST project aims to combine the knowledge that has been gained through these research projects with practical information about the actual contents of driving tests being conducted in the European Union today.

Partners

The TEST project brings together representatives from 6 driver testing authorities from 6 different countries (Austria, France, Great Britain, Netherlands, Spain, Sweden), scientists from 3 different scientific organisations and CIECA, the international driver testing organisation.

Methodology

3150 driving tests were looked at in 45 different test centres across the six countries involved in the project. Half of the tests considered date from before the implementation of Directive 2000/56/EC (on 1 October 2003), and half after. The test assessments were made using a centrally designed and systematic protocol or audit form which was filled out by a selected and specially trained team of auditors. On the form auditors were asked to record information about how many times driving tests were covering different elements or how much time was spent on these items (e.g. crossroads, straight roads, motorways, independent driving, special manoeuvres etc.). They were asked to make an evaluation of how robust they felt the examiner's assessment of the item would be on the basis of the amount of time spent on the item, the location in which it was tested, and the traffic density in which it was tested. The form was also used to collect information about the errors made in the test, the environmental circumstances (light, weather, etc.) and whether or not the test allowed for an evaluation of more general skills (e.g. taking into consideration the safety of all road users, hazard perception skills, etc.). The information was entered into an Access database which was created and managed centrally. In addition to the protocol forms that were collected, examiners in the participating countries were approached and asked to complete a series of questions to gauge their opinion of the driving test and how it could be improved.

All data was analysed using SPSS 12.0.1

Conclusions

There are differences between the driving tests in the 6 countries, mainly in the duration of the test and therefore in the topics that the test are managing to cover. The differences between different types of test centres (on the basis of their location) are however bigger than the differences between countries.

Driving tests rarely cover all elements listed in the European Driving License Directives but in general cover most items listed as compulsory. Again, the biggest differences are not between countries, but between test centre types.

The majority of examiners is relatively satisfied with the driving tests they conduct but if something could be changed, they would want more on-road driving time.

Current driving tests are not yet incorporating the results of research conducted in recent years, which recommend introducing more behavioural elements into the driving test and focussing less on only vehicle control. However, some countries are beginning to consider how this could be done and some ideas have already been launched.

Recommendations

- The practical on-road driving test needs to last at least 25 minutes to be able to test all elements listed in the Directives.
- If the contents of the test are extended beyond the bare minimum, the duration also needs to be increased
- A special effort must be made to ensure that all testing centres (especially those in the countryside) provide all necessary environments for a valid and reliable driving test and to enhance homogeneity.
- An effort needs to be made to incorporate driving on motorways into the practical driving test if this is at all possible
- More time needs to be spent on roads outside urban areas
- Some extra efforts need to be made to ensure that all countries and all test centres are meeting all requirements listed in Directive 2000/56/EC (especially the safety check, the check of the sitting and driving posture, driving on motorways, overtaking, driving on slopes and passing railway crossings)
- Extra thought needs to be given to how to incorporate the higher levels of the GDE matrix into driver testing (for example with the help of suggestions listed in this report) and in doing this it is important to look at more than just driver testing but to also involve the training sector.

PART A: INTRODUCTION

1 BACKGROUND PROJECT

Recent years have seen major developments and progression in both the legislation in the area of driver training and testing and in research done into improving the safety of all road users. The European Commission has introduced directives aimed at harmonising testing and training requirements across the various member countries to improve the safety of all road users, to facilitate the free movement of citizens within the Union and to reduce the possibilities of fraud. To support these directives and to ensure that the new European legislation is directed at relevant issues, a number of research studies have been conducted to examine how best to improve the safety of all road users and in particular that of the most vulnerable drivers, the novice drivers. Despite these measures, novice drivers are still overrepresented in accidents. In addition, it is unclear whether the aimed for harmonisation has indeed been achieved. In this context, the TEST project was launched.

In 1991 the second European Directive on Driving Licences was agreed upon. This Directive 91/439/EEC harmonised a range of subjects in relation to the driving licence: the driving licence model was fixed to be the same in the entire European Union, certain minimum requirements regarding the driving tests (both theory and practical) were defined and standards were set for the health of a driving licence applicant and holder. Concerning the practical test for the driving licence, Directive 91/439/EEC regulated the minimum time spent on the road during the test, as well as the contents of the test and the factors to be assessed. The directive entered into force on 1 July 1996.

Shortly after the directive came into force, the then DG 7 of the European Commission decided to evaluate the contents of certain parts of the directive. It assigned CIECA, the international commission for driver testing authorities, to carry out a study on the theoretical and the practical tests for all driving licence categories. This study was carried out with the help and input of all 29 CIECA member organisations. During workshops best practice recommendations were made regarding the minimum length of

the practical test, the location of the test, its contents, the subjects of assessment etc. In 1999 this study was finalised and the findings and recommendations were submitted to the European Commission. The study resulted in a series of reports: ter Braak, Groot and Ruyters (1998) and Groot and Janssen (1999).

Many of the recommendations made by CIECA, other expert organisations and the member states can now be found in a new Commission Directive launched in September 2000 (2000/56/EC) which came into force on 1 October 2003. In particular, the contents and the items of assessment were reviewed in this new directive; minimum requirements were raised to bring the testing requirements in line with the demands of daily traffic and the driving tests were harmonised further.

Parallel to these events, research in the field of driver training and licensing has developed substantially. Of particular note is the EU-supported "GADGET" project (completed September 1999) which developed *inter alia* a groundbreaking model for explaining the training needs and behaviour of (often learner or young) drivers¹. The so-called GADGET matrix outlines 4 hierarchical levels of driver behaviour which ideally, should all be covered at some point in the training / testing process of a new driver (whether or not they are included in the actual final driving test)². It emphasises the need not only for knowledge and skills, but also for an understanding of risk-increasing factors at each behavioural level and for a degree of self-analysis in relation to these factors. Whereas the lowest level (level 1: vehicle manoeuvring) is heavily emphasised in contemporary training and testing, level 2 (mastery of traffic situations) is only partly covered and levels 3 and 4 (journey-related factors in the context of each trip / goals for life and skills for living) are barely touched upon in pre-licence training and the driving test itself.

Following GADGET, the EU supported projects BASIC (completed 2003), ADVANCED (completed 2002), TRAINER (completed 2003) and NOVEV (completed 2004), continued to build on the findings of the GADGET project, examining how levels three and four could be introduced into driver testing and training. In fact, this is

¹ This model has been used in subsequent EU projects such as DAN and ADVANCED.

² Please refer to the matrix itself and a full explanation in Annex 1.

a development that can be seen not just in EU sponsored projects, but in various countries in the European Union and across the world³, through, for example, the introduction of a 2^{nd} phase of training for novice drivers with the express purpose of dealing with the higher levels of GDE (former Gadget) matrix.

The TEST project (Towards European Standards for Testing) aims to connect the knowledge that has been gained through these research projects to practical information about the actual contents of driving tests being conducted in the European Union today.

2 STRUCTURE AND OBJECTIVES OF THE TEST PROJECT

2.1 Partners

The TEST project brings together 6 testing authorities, scientists from three different scientific organisations and CIECA, the international organisation for driver testing authorities.

The testing authorities are:

- CBR (Dutch driver testing authority), Netherlands, represented by Mr. Han Rietman
- DSA (Driving Standards Agency), Great Britain, represented by Mr. Robin Cummins, Chief Driving Examiner
- Land Salzburg KFZ Prüfstelle (driver testing department for the Salzburg Region), Austria, represented by Mr. Josef Schnitzhofer
- Ministry of Transport, Spain, represented by Mr. Fernando Munoz-Pelaez
- Ministry of Transport, France, represented by Mr. Jean-Pierre Fougère
- SNRA (Swedish Road Safety Authority), Sweden, represented by Mr. Per-Olof Nilsson,

³ Some concrete examples are listed under Part D section 4

The scientists are:

- Chief Research Scientist Chris Baughan from TRL (Transport Research Laboratory), England
- Professor Nils Petter Gregersen from VTI (Swedish National Road and Transport Research Institute), Sweden
- Professor Esko Keskinen from the Psychology Department of Turku University, Finland

The project is managed by CIECA, the umbrella organisation for driver testing authorities, represented by Mrs. Heleen Groot and Ms. Martina Hendrix.

2.2 **Objectives**

2.2.1 Determine to what extent the duration and location of the practical driving test for category B allow the requirements in Directives 2000/56/EC and 91/439 be met and consider whether the tests are covering all requirements of the directives

The European Directives 91/439/EEC and to a greater extent 2000/56/EC provide guidelines for the driving test, listing elements that should be tested and covering a number of other minimum requirements related to the driving test such as minimum vehicle requirements, a minimum driving time and advice on the locations in which the test should be conducted.

The TEST project aims to assess, both before and after the introduction of Directive 2000/56/EC, to what extent the duration and location of the practical driving test for category B allow the requirements of the directives to be met and whether these requirements are fully covered during the test.

Three topics in particular will be considered in this context:

- the level at which the requirements in the Directives (91/439/EEC and 2000/56EC) are being met in the practical driving tests in the various testing centres and countries;

- the impact that the location and duration of a test can have on what is actually covered in the test;

- and following on from that how do the duration and location of the test affect the ability to meet these requirements, and how could the driving test be improved, if necessary?

2.2.2 Assess the homogeneity in the driving test in the 6 countries involved in the project and in the different test centres within each country

The aim of European legislation is, of course, to enhance the homogeneity of driving tests throughout the European Union. European Directives describing the contents and aims of the driving test should be tools that enhance homogeneity. The research done in this project will allow for an analysis on the level of homogeneity in the driving test between countries (six countries are involved in the project); within each country examined (a minimum of 5 and a maximum of 10 test centres were involved in each of the six countries); and when comparing test centres of the same type (on the basis of a typology developed in this project and described later) in the six different countries.

2.2.3 Assess how well the road safety needs of novice drivers are being met through the current practical test

It is a fact that there is a problem with the number of accidents in which novice drivers are involved. It has long been clear that the required skills cover more than just controlling the vehicle and deal with issues like, for example, how to interact with other traffic and hazard perception. Over the last 5 years, numerous studies have been done into this group of drivers and various theoretical models and recommendations have been developed. It also became clear that there is a difference between how well a person is able to perform a task, and how he or she actually performs it from day-to-day. This has been called the distinction between performance and behaviour. An analysis of the data resulting from relevant studies (in particular from the GADGET project and studies and reports building on this about the GDE matrix such as BASIC, TRAINER, ADVANCED and NOVEV) and the data collected in the TEST project will be used to assess how well the road safety needs of novice drivers are being met through the current practical test.

It is also important to consider the issues of reliability and validity. The reliability of a test refers to the test's ability to produce consistent results, something that can be influenced by numerous different things (e.g. the training and experience of the examiners, environmental influences, the marking system used in the test, etc.). The validity of the test is the extent to which the driving test is doing what it is intended to do, whether this is to separate potentially safe from potentially dangerous drivers or to influence driver training so that particular elements are incorporated into the training programmes for learner drivers. Both good validity and good reliability are vital aspects of an effective driver testing and training system.

2.2.4 If necessary, develop recommendations to improve the status quo

With the information collected in the TEST project we will aim to draw conclusions and make recommendations so that, if this proves necessary, the status quo may be improved. For instance, is the time allowed for each practical test sufficient to properly assess the candidate? Does the location of the test provide the necessary variety of road types and circumstances to test the driver? Are the tests in the different countries involved in the project the same and do they require candidates to demonstrate the same skills and driving styles? Is there a connection between the contents, location and duration of the test? Do driving tests as we know them deal with topics that are relevant for improving the safety of novice drivers? Is this done effectively? How can this be improved? And how, if at all, can the highly influential levels 3 and 4 of the GDE matrix be trained and tested on novice drivers? In this context we will be looking at the possibilities offered by technology and driving tests as we know them today. We will also look at ideas for the near and more distant future, that would require greater efforts, investments and changes from all those involved in preparing a new driver for the tasks he will have to deal with once he goes on to the roads alone.

PART B: METHODOLOGY

1 SELECTION OF TEST CENTRES AND AUDITORS

The TEST project covered the following 6 countries: Austria, France, Netherlands, Spain, Sweden and Great Britain. This choice of countries reflected a wide geographical range from across the EU as well as a variation in test duration (ranging, amongst the chosen 6 countries, between 22 and 52 minutes for the practical test).

A total of 3150 category B practical driving tests were assessed across either 5 or 10 exam centres in each country, depending on country size. The breakdown was as follows.

	Nr. of driving tests to be assessed	Nr. of exam centres to be covered
Austria	350	5
France	700	10
Great Britain	700	10
Netherlands	350	5
Spain	700	10
Sweden	350	5
Total	3150	45

Table 1: Audits and test centres in participating countries

1.1 Location of the test centres

In the selection of the test centres to be used in the TEST project, it was necessary to keep in mind that the aim of the project was to collect information from as wide a variety of locations as possible. To facilitate descriptions of the locations and to ensure that test centres from all different types of locations were included, a typology was

developed for the test centres, dividing them into 4 different types on the basis of the following points:

- **Population:** referring to the population size of the city, town, village where the test centre was located.

- **Traffic density:** describing the number of road users within a particular area. This varied from very high density, where road users could barely move as there were so many in so little space; to very low density, where there were hardly any road users.

- Test circumstances dependent on time of day: raising the question of whether or not the circumstances in which the test was conducted were affected by the time at which the test took place (e.g. because of excessive congestion in rush hours).

- **Traffic variation:** describing how much variety there was in the types of traffic participant: buses, trams, bicycles, motorcycles, pedestrians, etc This could be great variation (for example in large towns where there were buses, pedestrians, bicycles, cars, trams) or little variation (for example in small villages where there were only a number of cars and some pedestrians)

- **Road Infrastructure:** describing the availability of roundabouts, railway crossings, zebra crossings, motorways, built up areas, residential areas, etc. This varied from locations where there were numerous possibilities (roundabouts, railway crossings, motorways, etc.) to locations where the possibilities were very limited.

On the basis of these criteria, the following 4 types of test centre were developed:

Type 1: COUNTRYSIDE

- Population: up to 20,000
- Traffic density: low, great fluidity
- Test circumstances dependent on time of day: no
- Traffic variation: little variety
- Road Infrastructure: limited possibilities

Type 2: IN AND AROUND SMALLER TOWNS

- Population: up to 30,000
- Traffic density: medium to dense
- Test circumstances dependent on time of day: yes
- Traffic variation: relatively great variety
- Road Infrastructure: relatively numerous possibilities

Type 3: URBAN PERIPHERY

- Population: up to 50,000
- Traffic density: high
- Test circumstances dependent on time of day: yes
- Traffic variation: great variety
- Road Infrastructure: numerous possibilities

Type 4: URBAN - Population: more than 50,000

- Traffic density: high
- Test circumstances dependent on time of day: yes
- Traffic variation: great variety
- Road Infrastructure: limited possibilities

A form was developed to be completed by all country representatives for each of the test centres to be used during the TEST project. Each test centre was described using the type that was closest, with varying factors being explained in the form. All the data recorded on these forms was entered into the TEST database. The blank test centre description form and all completed forms have been included as Annexe 2.

1.2 Number of test days per centre

Initially, the intention was to conduct the same number of tests at all test centres involved in the project and to conduct tests on each day of the week at each test centre. However, it soon became clear that it would be difficult to achieve this as certain test centres were only opened part-time (making tests on each day of the week impossible) and not all test centres had access to a large volume of driving tests. It was concluded that for this project, it was more important to collect information from the different types of test centre than it was to collect information about the effects of different days. In addition, it was not necessary to have exactly the same number of results from each of the test centres, however, to make the results valid a minimum number of tests had to be conducted at each test centre, including those that were only open part-time.

1.3 Auditors

In the TEST project a total of 3150 driving tests were assessed in the 6 participating countries. The audits were done by especially selected and trained auditors who were proposed by the country representatives for approval by the scientific committee. Descriptions of the auditors used in the different countries are included under Annexe 3. In the selection of the auditors a number of guidelines were taken into consideration.

1.3.1 Auditor requirements

- The auditors needed to have experience with driving tests and understand the principles of the examiner's assessment.

- The auditors all needed to be trained in the use of the audit form.

1.3.2 Additional considerations

The workload of the auditors needed to be limited to a manageable level, especially if there were only a limited number of auditors available.
From a scientific point of view, it was necessary to ensure that the results of the audits were not dependent on the opinion and system of one auditor. It was therefore decided that each test centre should be covered by different auditors to ensure a valid scientific result. This meant that there should be at least two auditors per test centre and that there should be exchanges between the auditors, with auditors from one particular region auditing tests from another region.

2 TEST AUDIT FORMS

The audits were done using a centrally designed and systematic audit form. The aim of TEST was not to evaluate candidates or examiners but the driving test itself. Therefore an entirely new type of form needed to be developed.

In addition, to be able to evaluate the test, it was necessary to know the philosophy behind the test: did passing a test depend on making less than a certain number of mistakes, on not making certain types of mistakes or was it the result of the general opinion of the examiner after the test had been completed (how safe he felt, how confident he feels about the candidates skills, etc). The only way to determine this was from a general description of the testing philosophy of each country (included as Annexe 4), based on information provided by the testing organisations.

2.1 Development of the audit form

The basic idea consisted of splitting the audit form into 2 parts, one to be filled in by the auditor during the test and one to be filled in after the test. The second part would contain questions requiring grading on a scale from 1-5 and would cover elements from paragraph 9 of Directive 2000/56/EC (overall assessment criteria applied to specific situations as described under paragraph 7 with one addition: environmentally friendly driving) and point II of the directive (global assessment applying to entire driving system and skills). The second part of the form could provide some useful insights into how the auditors perceived the test and whether this was different from how an outsider views the test.

In addition, it would be useful to note when and where the faults / errors made during the driving test occurred. There could be a concentration of errors at the beginning or there could be collection of errors at the end.

These ideas resulted in a form which contained a number of different tables, some to be completed during the test and some to be completed after the test had been concluded. A brief instruction manual was written explaining the different parts of the audit form.

An additional source of information to be considered was the test result form, providing information about whether the candidate passed or failed. To avoid privacy issues, the candidate's name and number were removed from both the driving test result form and the TEST audit form once the driving test result form had been attached to the TEST audit form.

2.1.1 Audit form pilots

Once the audit form had been developed, pilot tests were conducted in all six countries to check whether what was expected of the auditors was realistic and whether the audit forms provided the kind of information that was needed in this project. To collect as much information as possible, a questionnaire was developed to be completed by those auditors participating in the pilot tests (included as Annexe 5). The instruction manual was piloted together with the audit forms.

2.1.2 General comments

The main result of the trials was that the auditors needed time and training to learn how to use the audit forms correctly. Initially, all auditors felt overloaded when trying to complete the audit forms, but after having completed a few it became easier and they were able to note down everything. In addition, a training of at least half a day was required to explain the working of the form and the purpose of the project. This was carried out by the country representatives.

2.2 Data collection method

The audit form was translated into the language of each of the participating countries and filled out according to two parallel criteria. Firstly, the auditor was expected to note whether a required element or manoeuvre was carried out or not (Yes / No) and how

much time was spent on the element or how often it was tested. Secondly, where appropriate, he/she was asked to rate the robustness of the assessment in terms of *time* allowed to perform it and to what extent the *location and traffic* were suitable for it to be performed. This rating was done according to a scale of 1-5, with 5 being the best rating. Definitions were provided for each rating (1-5) to ensure that the audit form was filled out systematically by the auditors both within each country and from one country to another.

The audit form was designed to ensure that data collection is systematic. The final audit form and instructions manual in English have been included as Annexe 6.

2.2.1 Visits members Scientific Committee

To support the work of the country representatives and to make sure that the audits were being conducted as described in the instruction manual, one member of the scientific committee visited each of the countries in the TEST project.

The aims of these visits were twofold:

- to see driving tests conducted in the different countries and therefore get an impression of the philosophy behind the driving tests and the system of driver testing and to consider the impact this had on the data collected through the audit forms;

- to see the audits and to discuss with the auditors any problems or ideas they had about the TEST project and the TEST audits. It was not always possible to sit in on the audits themselves as it was of utmost importance not to disturb the candidate by having an excessive number of passengers in the car during the driving test. In the Netherlands, test guidelines even advise that the number of "passengers" in the car during the driving test is limited to two.

During the first series of audits (April 2003 – September 2003), Mr. Esko Keskinen visited Austria (5 and 6 August 2003) and Mr. Nils Petter Gregersen visited Spain (11 September 2003). During the second series of audits (October 2003 – April 2004), Mr. Esko Keskinen visited Sweden (29 January 2004), Mr. Nils Petter Gregersen visited

Great Britain (12 March 2004) and Mr. Chris Baughan visited The Netherlands (18 February 2004) and France (26 March 2004).

Reports of these visits can be found under Annexe 7

2.3 Statistical and other analyses

After the audit forms had been completed, the data ensuing from the audit forms was inputted centrally (at the CIECA secretariat). The data was initially entered into an MS Access database and then transferred (via MS Excel) to SPSS 12.0.1 for analysis. SPSS (Statistical Package for the Social Sciences) is software for handling data by producing descriptive information and performing statistical analyses on this data. It provides the possibilities to apply most of the existing analysis methods on all scale levels, multivariate and univariate. Results may be presented in tables or graphs. The choice of actions/analyses is done through menus or through writing syntax files. Most of the tables and graphs were produced in the presentation module of SPSS.

3 EXAMINER QUESTIONNAIRE

3.1 Development examiner questionnaires

One conclusion from the protocol trials was that the audit forms on their own did not provide enough information about the driving tests. The auditors did not have sufficient time or opportunity to discuss the tests with the examiners or to consider questions like "Is the time allowed for each practical test sufficient to properly assess the candidate? Does the location of the test provide the necessary variety of road types and circumstances to test the driver? How, if at all, can the highly influential levels 3 and 4 of the GDE matrix be trained and tested on novice drivers".

Therefore, to collect information about these topics, a questionnaire was developed which was translated into the 6 languages of the participating countries and distributed amongst examiners.

The main idea of this questionnaire was to collect information about the examiners' ideas of the good and bad sides of the practical driving test and in addition it was hoped that we would get some insight into how examiners see the contents of their work, e.g. what is driving skill, what are the preconditions of safe driving and how do examiners view their own task. This was important, because it has direct consequences on how examiners do their work, at least partly independently of the instructions they have.

3.1.1 The questionnaire

The questionnaire (a list of the questions is provided in Table 2) was a relatively short document (9 items or item groups) with questions where subjects answered using a readymade evaluation scale (1 - 5) and parts where subjects were asked to describe their thoughts using their own words (always after having provided an evaluation). Open questions were particularly applied to collect complete answers and consider the reasons behind those answers. The aim of both the evaluation scales and the open questions was to be able to "hear" the examiners' voices as directly as possible. To facilitate this, the subjects answered anonymously. Only the test centre and the country could be identified from the questionnaires.

Table 1: The main questions of the examiner questionnaire

(a copy of the complete questionnaire can be found in Annexe 8)

- 1. HOW LONG HAVE YOU BEEN WORKING AS AN EXAMINER? PLEASE DESCRIBE WHAT ELEMENT SHOULD BE ADDED OR REMOVED AND WHY...
- 2. DO THE CONTENTS OF THE TEST ALLOW YOU TO MAKE A CORRECT OVERALL DECISION ABOUT THE CANDIDATE'S SAFE DRIVING ABILITIES AND SKILLS? (PLEASE TICK ONE BOX OF FIVE: YES COMPLETELY - NO, NOT AT ALL) PLEASE EXPLAIN WHY...
- 3. DOES THE LOCATION OF THE TEST (TEST ROUTES AND TRAFFIC CONDITIONS AT THIS CENTRE) ALLOW YOU TO MAKE A CORRECT OVERALL DECISION ABOUT THE CANDIDATE'S SAFE DRIVING ABILITIES AND SKILLS? (PLEASE TICK ONE BOX OF FIVE: YES COMPLETELY - NO, NOT AT ALL) PLEASE EXPLAIN...
- 4. DOES THE TEST ALLOW YOU TO PASS CANDIDATES WHO YOU THINK WILL BE

SAFE DRIVERS, AND FAIL THOSE WHO YOU THINK WON'T BE SAFE? (PLEASE TICK ONE BOX OF FIVE: YES COMPLETELY - NO, NOT AT ALL)

PLEASE, DESCRIBE WHAT THINGS NEED MORE TIME AND WHAT THINGS COULD BE GIVEN LESS TIME...

5. HOW WELL IS THE TIME DIVIDED UP (TIME SPENT WITH THE CANDIDATE FROM THE MOMENT HE IS RECEIVED BY THE EXAMINER AT THE TEST CENTRE)?

THE TIME IS WELL DIVIDED (BETWEEN THE RECEPTION, EYE TEST, TECHNICAL CHECK, DRIVING TIME ON THE ROAD, GIVING THE RESULT).

OR

THE TIME NEEDS TO BE DIVIDED UP DIFFERENTLY.

PLEASE, DESCRIBE WHAT THINGS NEED MORE TIME AND WHAT THINGS COULD BE GIVEN LESS TIME...

6. IS THE TOTAL DURATION OF THE TEST SUFFICIENT (I.E. FROM THE MOMENT THE CANDIDATE IS RECEIVED BY THE EXAMINER TO THE ANNOUNCEMENT OF THE RESULT)? (PLEASE TICK ONE BOX OF FIVE: YES COMPLETELY - NO, NOT AT ALL)

IF YOU THINK THE DURATION OF THE TEST SHOULD BE CHANGED, PLEASE SHOW HOW:

SHOULD BE INCREASED TO _____MINUTES

SHOULD BE DECREASED TO _____MINUTES

PLEASE, EXPLAIN WHY, SAYING WHAT THE EXTRA TIME SHOULD BE USED FOR OR WHAT ELEMENTS COULD BE COVERED IN LESS TIME...

- 7. HOW MUCH ON-ROAD DRIVING TIME DO YOU CONSIDER IS NEEDED DURING THE TEST TO ENABLE A VALID ASSESSMENT TO BE MADE? _____MINUTES PLEASE EXPLAIN...
- 8. IS THERE ANYTHING ELSE YOU WOULD CHANGE IN THE PRACTICAL DRIVING TEST TO HELP IMPROVE CANDIDATES' SAFETY AFTER PASSING THE DRIVING TEST: ...
- 9. ANY OTHER COMMENTS...

3.2 Subjects in the questionnaire

There were 404 questionnaires, which were mailed back from 222 testing centres in 6 countries. The exact numbers of questionnaires returned by each country varied greatly depending on the response from the examiners. In Great Britain supervising examiners answered the questionnaires with the intention of representing the views of other examiners.

Table 1: Subjects in the questionnaire study

	NR. OF	COMMENTS
	QUESTIONNAIRES	
AUSTRIA	58	
	QUESTIONNAIRES	
FRANCE	100	100 QUESTIONNAIRES WERE INCLUDED
	QUESTIONNAIRES	IN THE DATA ANALYSIS FOR THIS
		PROJECT; AROUND 50 ADDITIONAL
		QUESTIONNAIRES WERE PROVIDED
GREAT	19	THESE QUESTIONNAIRES WERE
BRITAIN	QUESTIONNAIRES	COMPLETED BY SUPERVISING
	-	EXAMINERS
NETHERLANDS	106	
	QUESTIONNAIRES	
SPAIN	72	
	QUESTIONNAIRES	
SWEDEN	49	
	QUESTIONNAIRES	

3.3 Data collection method

The questionnaire was translated into the 6 languages of the countries involved in the TEST project.

The country representatives distributed the questionnaire amongst their examiners (not only those involved in the test project but as many examiners from as many different test centres as possible) and these questionnaires were then returned to the project office.

A coding frame was developed by the Scientific Committee and all questionnaires were coded and the information recorded in an Excel sheet ready for analysis.

3.4 Statistical analyses

3.4.1 Analysis of the evaluation questions and other structured questions

The evaluation questions and other structured questions were coded into Excel-sheets using a standard coding method whereby a code was given to each answer possibility. Frequencies, means, standard deviations etc. were first computed and after that correlations and cross-tabulations were used to describe and analyse the data. The analyses were made using SPSS 12.0.1 and are presented in Part C of this report under the heading Examiner Questionnaires

3.4.2 Analysis of the open questions

Answers to the open questions were first read carefully and then similar answers were combined and new classes were made of those combinations. The aim was to reduce the number of different classes but still keep the content as rich and as original as possible. In addition to the main content, many questions also encouraged comments concerning what elements should be added or removed. Descriptions of the changes to the contents could be on a general or on a specific level (referring to a particular test location or time of day, for example). These and all similar answers were coded in such a way that the connections between the answers could be still recovered from the database.

In the results, after each of the evaluation questions the open answers connected to them are described. The classes of open answers were mainly described as frequencies only or as cross-tabulations.

An extensive section has been devoted to a description of the methodology used in this project because a lot of time in the project went to the development of procedures and systems to collect the relevant data and to the data collection itself. It proved to be very challenging to collect comparable data from 3150 tests in 45 different test centres across 6 different countries and the data collection procedure was therefore very carefully prepared. Once the data had been collected, it was minutely and extensively checked and verified before it was entered into the central database and only then was it possible to begin with the extensive series of analyses that will be dealt with in the next chapter.

PART C: RESULTS

1 AUDIT FORMS: ANALYSES OF THE COLLECTED DATA

The results of the audit forms have been presented in a number of different ways. Comparisons have been analysed with ANOVA (Analysis of Variance) and χ^2 . ANOVA has been complemented with Sheffé's PostHoc test. The outcome variables (duration, robustness, weather etc.) have been related to country, test centre type, pass/fail or before/after introduction of Directive 2000/56/EC. All outcome variables have not been compared with all these classifying variables. A selection with regard to estimated relevance has been done. Before/after comparisons have not been done for all variables since it was clear that there were no large changes from before to after. In the cases when there were interesting changes, they have been shown.

Because the test centres in each country were not sampled randomly or probabilistically, tests of statistical significance cannot be used to draw inferences about the whole 'population' of driving tests in a country. Where significance tests are reported here, they should be taken as indicating whether the observed differences represent real differences between the observed samples of driving tests - differences that are unlikely to be explained by such factors as moment to moment variation (unreliability) in the way that auditors assess the driving tests, for example. To the extent that the actual driving tests observed at a centre can be assumed to be a random sample of all tests at that centre, the significance tests are enabling us to draw conclusions about driver testing at these centres.

For a number of audits it was indicated that the test was stopped earlier due to a decision of the examiner. The indication of this was, however, done in an open field of the assessment form where additional comments could be written. The validity and

coverage of these remarks was not possible to analyse, which means that in all analyses a number of stopped tests have been included.

In the questions of the audit forms concerning if the tests allowed for a robust assessment of the candidate, a five-graded scale was used, ranging from 1 indicating no opportunities to 5 indicating too many opportunities The analyses of responses suggested a variation in the interpretations of the "too many opportunities". This response alternative was added to the fourth scale alternative, which was "enough opportunities". The scale was thus transformed from 5-grade to 4-grade in the analyses below.

To facilitate the inputting and analysis of the data, each country was given a code. In this section, the order in which the countries are listed is based on the order of the country codes:

- 1 Great Britain
- 2 Spain
- 3 France
- 4 Netherlands
- 5 Austria
- 6 Sweden

1.1 Number of tests

The total number of valid tests that were audited added up to 3139 (Table 4). Most of the tests were performed in urban areas and in the urban periphery, but all four area types were well represented. The distribution between area types varied from countries where most of the audited tests were done in urban areas, e.g. Great Britain, Sweden and The Netherlands, and countries that had a higher proportion of countryside centres, like in France and Austria. Spain did equally many tests in urban and countryside areas. With one exception, all types of areas were well represented in all six countries. The exception was small towns in The Netherlands, which were not covered at all.

		(βB	Sp	bain	Fra	ance]	NL	Sw	eden	Au	stria	Т	otal
		Ν	%	Ν	%	Ν	%	Ν	%	N	%	Ν	%	Ν	%
	Countryside	179	25.6	210	30,0	101	14,3	70	20,1	60	17,2	72	21,3	692	22,0
Test centre	Small town	40	5.7	140	20,0	244	34,6	0	0	69	19,8	106	31,4	599	19,1
type	Urban periphery	192	27.4	140	20,0	241	34,2	148	42,5	71	20,4	74	21,9	866	27,6
	Urban	289	41,3	210	30,0	119	16,9	130	37,4	148	42,5	58	17,2	954	30,4
Total		700	100	700	100	705	100	348	100	348	100	338	100	3139	100

Table 4: Number of audited tests per country and test centre type

In total, 46 different test centres participated in the project. The test centre names and country in which they are located can be found in Annexe 9.

Approximately half of the tests (1562) were carried out before and the rest (1577) after the implementation of Directive 2000/56/EC.

1.2 Duration, mileage, topics covered and pass/fail rates

The mean duration of the on-road driving time for all tests was almost 28 minutes (Table 5). The shortest duration was found in France and Spain where it was 19 and 20 minutes and the longest in Austria, Sweden and The Netherlands with 32-34 minutes. Concerning the distance covered in the tests, 13 km was the average for all tests. Spain had the shortest with 8 km and The Netherlands and Sweden the longest with approximately 17 km.

Out of the total number of audited tests, almost 47% passed and 53% failed (Table 5). There was a large variation of pass rates between countries, where Great Britain had the lowest (36.6%) and Austria the highest (67.7%). Sweden also had a comparably high pass rate (52.3%9).

The pass rates of the audited tests have also been compared to the overall statistics of pass rates for the centres during 2004 (Spain=2003). There was a significant difference

between the two measures where the overall statistics showed higher pass rates than the audited tests.

	GB	Spain	France	NL	Sweden	Austria	Total
Duration	35.8	20.0	19.0	32.5	33.0	34.2	27.6
(F=778.3, df=5, p<0.001)	(4.7)	(7.9)	(7.8)	(5.7)	(5.1)	(7.1)	(10.0)
Distance	14.5	7.9	10.2	16.5	17.6	14.9	12.7
(F=375.0, df=5, p<0.001)	(2.8)	(4.5)	(5.3)	(3.9)	(4.1)	(6.1)	(5.7)
Pass rate audited tests	36.5	46.7	46.4	43.5	52.3	67.6	46.9
(F=428.4, df=5, p<0.001)	(6.6)	(10.9)	(9.4)	(10.0)	(13.7)	(14.2)	(13.6)
Pass rate all tests	43.3	56.0	49.2	47.0	60.3	78.0	51.7
(F=625.9, df=5, p<0.001)	(7.6)	(8.4)	(7.4)	(6.4)	(8.4)	(9.0)	(11.2)

 Table 5: Mean duration (minutes), mean distance (km) and pass rates (%) per country.

 Standard deviations within brackets

When the tests were divided by test centre types instead, as shown in Table 6, it was clear that the duration was shorter in small town areas than in other centre types. The distance driven was approximately 12-14 km where the countryside centres drove longer than other centres. The pass rate was highest in countryside and small town centres. There was an approximately 25% higher pass rate in these types of centres than in urban areas and urban periphery (51.3-54.6% compared to 41.3-42.8%). As in the comparison between countries above, the comparison between test centre types showed a higher pass rate in the overall statistics than in the audited tests.

	Countryside	Small town	Urban periphery	Urban	Total
Duration	27.2	25.0	28.2	28.9	27.6
(F=22.1, df=4, p<0.001)	(9.4)	(10.7)	(8.9)	(10.5)	(10.0)
Distance	13.7	12.7	12.6	11.9	12.7
(F=10.2, df=4, p<0.001)	(6.1)	(6.1)	(5.4)	(5.1)	(5.7)
Pass rate audited tests	54.6	51.3	42.8	41.3	46.9
(F=215.1, df=4, p<0.001)	(16.4)	(13.3)	(11.7)	(6.9)	(13.6)
Pass rate all tests	62.0	54.9	48.0	45.7	51.7
(F=371.0, df=4, p<0.001)	(11.1)	(6.1)	(8.7)	(9.3)	(11.2)

Table 6: Mean duration (minutes), mean distance (km) and pass rates (%) per test centre type.Standard deviations within brackets

The tests where the candidates passed were, with exception of Great Britain, longer on average than the tests where they failed (Table 7). The difference was small in The Netherlands, Sweden and Austria and largest in Spain and France. Partly, this difference between passed and failed tests is explained by the fact that a number of tests were terminated were estimated by the examiners to be too high.

 Table 7: Mean duration of tests for all tests and separated in pass/fail tests by country.

 Standard deviations within brackets

	GB	Spain	France	NL	Sweden	Austria	Total
Pass	35.9	24.6	20.8	33.0	33.6	34.5	29.2
F=385.0, df=5, p<0.001	(4.1)	(3.8)	(6.4)	(5.8)	(4.9)	(6.4)	(8.0)
Fail	35.8	15.9	17.5	32.2	32.2	33.7	26.3
F=511.2, df=5, p<0.001	(5.0)	(8.3)	(8.6)	(5.6)	(5.3)	(8.5)	(11.3)
Total	35.8	20.0	19.0	32.5	33.0	34.2	27.6
I Utai	(4.7)	(7.9)	(7.8)	(5.7)	(5.1)	(7.1)	(10.0)

In Figure 1 the relation between duration and distance has been plotted. Most of the tests follow a logical pattern where a longer duration also means longer distance. There are, however, also tests that show a different pattern, which is indicated by the 15-20 single plots outside the main plot area. The correlation is high, r=0.74.



Figure 1: Scatter graph for test duration and test mileage (Pearsons r=0.74, p<0,001)

The auditors' form included a list of topics that were used as a check list for the topics covered by each test. There were two types of topics assessed, the ones that were measured in duration (minutes used for each topic) and the ones that were assessed by the number of times they were carried out. A general remark concerning these items is that they often overlap. Items such as driving on "straight roads" and "independent driving" may be carried out simultaneously. Driving on "intersections" does not reflect every single intersection that was passed but those intersections that were deliberately used for the test of the candidate's abilities. It is thus not possible to add duration for all items and receive the total test duration.

Tables 8-10 show the topics that were measured by duration. Overall and not unexpectedly, most of the time was spent on straight roads. Great Britain is not doing any independent driving while Sweden spent much time on this, almost 14 minutes. Measured as a percentage of the total duration of each test, a different pattern appears where France spent 65% and The Netherlands 58% of the time on straight roads. Concerning special manoeuvres, Great Britain spent 13% and Spain 5% of the time on this. A longer time, above 1 minute was spent on safety checks in Great Britain, Netherlands Sweden and Austria. Spain and France spent less than 1 minute on this.

 Table 8: Mean duration of different topics in the test per country, all audited tests.

 Standard deviations within brackets

		GB	Spain	France	NL	Sweden	Austria	Total
Safety check	Minutes	1.8 (1.4)	0.3 (0.7)	0.9 (1.8)	1.5 (1.2)	1.9 (0.9)	2.5 (1.5)	1.3 (1.5)
F=185.9, df=5, p<0.001	% of test	5.1	1.7	4.8	4.7	5.7	7.4	4.9
Posture	Minutes	1.2 (0.5)	0.6 (0.8)	0.7 (0.7)	0.3 (0.5)	0.7 (0.6)	1.0 (0.6)	0.8 (0.7)
F=100.3, df=5, p<0.001	% of test	3.3	3.1	3.4	1.1	2.2	3.0	2.8
Special manoeuvres	Minutes	4.7 (1.6)	0.9 (1.0)	1.3 ((1.0)	1.7 (1.3)	2.0 (1.3)	3.5 (2.0)	2.3 (2.0)
F=716.9, df=5, p<0.001	% of test	13.0	4.7	6.7	5.2	6.0	10.2	8.4
Straight roads	Minutes	16.3 (6.6)	5.0 (6.2)	12.7 (7.5)	17.8 (7.4)	5.4 (5.0)	15.9 (7.1)	11.9 (8.4)
F=357.0, df=5, p<0.001	% of test	45.5	24.8	66.9	54.8	16.3	46.6	43.1
Curvy roads	Minutes	12.5 (8.2)	0.6 (1.7)	4.4 (3.2)	9.3 (5.7)	1.5 (2.4)	10.1 (7.2)	6.2 (7.1)
F=490.0, df=5, p<0.001	% of test	35.0	2.8	23.1	28.6	4.5	29.4	22.4
Independent driving	Minutes	0.0 (-)	0.2 (0.9)	0.4 (1.3)	0.9 (2.0)	13.8 (6.2)	4.2 (7.2)	2.2 (5.4)
F=1054.5, df=5,p<0.001	% of test	0.0	.0.8	1.9	2.7	41.7	12.4	8.0

Table 9 also shows the duration of topics, but only for tests where the candidate passed. The only obvious difference concerns independent driving, where more time was spent on this in The Netherlands and less time in Sweden and Austria in the passed tests.
		GB	Spain	France	NL	Sweden	Austria	Total
Safety check	Minutes	1.9 (1.4)	0.4 (0.7)	0.9 (1.8)	1.5 (1.1)	1.8 (0.7)	2.5 (1.5)	1.4 (1.5)
F=91.4, df=5, p<0.001	% of test	5.3	1.4	4.2	4.3	5.3	7.3	4.4
Posture	Minutes	1.1 (0.4)	0.7 (1.1)	0.6 (0.3)	0.4 (0.5)	0.6 (0.5)	1.0 (0.6)	0.8 (0.7)
F=44.7, df=5, p<0.001	% of test	3.2	2.9	3.3	1.1	1.7	3.1	2.7
Special manoeuvres	Minutes	4.5 (1.9)	1.2 (1.0)	1.4 (7.8)	1.7 (1.4)	2.0 (1.2)	3.4 (1.8)	2.3 (1.8)
F=243.0, df=5, p<0.001	% of test	12.5	5.0	6.8	4.9	5.9	9.7	7.5
Straight roads	Minutes	16.1 (6.6)	6.7 (6.8)	13.6 (6.5)	17.2 (7.5)	6.1 (5.3)	15.8 (6.7)	12.3 (7.9)
F=128.0, df=5, p<0.001	% of test	44.8	26.9	63.9	54.8	18.4	45.8	43.0
Curvy roads	Minutes	12.8 (8.0)	0.8 (2.1)	5.1 (2.9)	9.2 (5.7)	2.0 (2.7)	10.8 (7.2)	6.4 (6.9)
F=230.4, df=5, p<0.001	% of test	35.7	3.1	25.8	28.7	6.4	31.3	21.2
Independent driving	Minutes	0.0 (-)	0.2 (1.0)	0.4 (1.2)	1.3 (2.6)	15.0 (5.7)	4.6 (7.5)	2.8 (6.1)
F=491.0, df=5, p<0.001	% of test	0.0	0.7	2.2	3.9	45.0	13.4	8.5

Table 9: Mean duration of different topics in the test per country, passed tests only.

Standard deviations within brackets

In the comparisons between test centre types for the passed tests (Table 10) there were few differences. Concerning safety checks, small town centres were using half a minute more than urban periphery centres and for independent driving urban and countryside centres used more time than urban periphery centres.

Table 10: Mean duration of different topics in the test per test centre type, passed tests or	ıly.
Standard deviations within brackets	

		Countryside	Small town	Urban periphery	Urban	Total
Safety check	Minutes	1.4 (1.3)	1.7 (2.1)	1.1 (1.1)	1.3 (1.3)	1.4 (1.5)
F=22.9, df=4, p<0.001	% of test	4.2	5.8	3.7	3.9	4.4
Posture	Minutes	0.8 (1.0)	0.8 (0.6)	0.6 (0.5)	0.8 (0.6)	0.8 (0.7)
F=5.6, df=4, p<0.001	% of test	2.7	3.2	2.2	3.0	2.7
Special manoeuvres	Minutes	2.2 (1.8)	2.3 (1.5)	2.2 (2.1)	2.4 (1.8)	2.3 (1.8)
F=8.6, df=4, p<0.001	% of test	7.5	7.8	7.2	7.5	7.5
Straight roads	Minutes	11.5 (7.6)	12.7 (6.0)	13.6 (8.4)	11.2 (8.7)	12.3 (7.9)
F=7.1, df=4, p<0.001	% of test	39.0	48.0	46.6	39.6	43.0
Curvy roads	Minutes	5.5 (5.4)	7.0 (6.6)	6.1 (6.0)	7.1 (8.6)	6.4 (6.9)
F=5.4, df=4, p<0.001	% of test	18.0	25.0	19.3	23.1	21.2
Independent driving	Minutes	3.3 (6.5)	2.9 (6.3)	1.4 (3.6)	3.3 (6.9)	2.8 (6.1)
F=11.1, df=4, p<0.001	% of test	10.5	8.2	4.5	9.8	8.5

The calculation of mean duration values in tables 8-10 includes the tests where the topics were not covered at all (i.e. the duration was zero). In order to understand the coverage of each topic in more detail, Figure 2 shows the percentage of tests in each country that did not cover the topics at all. The most obvious result is that most of the countries did not include independent driving in the test. The only exception was Sweden. The majority of tests in Spain, France and The Netherlands did not include sitting posture and most of the tests in Spain and France did not include a safety check. Sweden and Spain also did not drive much on curvy roads.



Figure 2: Percentage of tests that did not include different topics that were measured by their duration, per country, all tests.

In the following section (Table 11-13 and Figure 3), similar types of results are presented as in Tables 8-10 and Figure 2 above, but for the types of topics where the coverage was measured as the number of times that the topics were carried out instead of the duration.

Tests conducted in Great Britain and Netherlands included more instances of driving away than other countries. Spanish and Austrian test covered this topic least times. Netherlands and Austria also include more intersections in the tests. Great Britain and Netherlands made most left and right turns. A difference would be expected between Great Britain and other countries concerning the distribution between left and right hand turning due to the left hand traffic there, and there is one for some of the countries but not for all.

 Table 11: Mean number of times different topics were covered in the test per country, all tests.

 Standard deviations within brackets

	GB	Spain	France	NL	Sweden	Austria	Total
Driving away	07(46)	16(11)	51(28)	75(11)	30(31)	15(17)	51(11)
F=590.1, df=5, p<0.001	9.7 (4.0)	1.0 (1.1)	5.1 (2.0)	7.5 (4.4)	3.9 (3.1)	1.5 (1.7)	5.1 (4.4)
Intersections	58(15)	73(67)	8 1 (5 1)	18.0 (0.6)	67(35)	11 1 (5 0)	88(71)
F=261.7, df=5, p<0.001	5.6 (4.5)	7.5 (0.7)	0.1 (0.1)	10.9 (9.0)	0.7 (0.0)	11.1 (0.9)	0.0 (7.1)
Light regulated junctions	55(58)	55(54)	43(39)	58(38)	47(46)	55(58)	52(50)
F=6.8, df=5, p<0.001	0.0 (0.0)	0.0 (0.1)	1.0 (0.0)	0.0 (0.0)	(1.0)	0.0 (0.0)	0.2 (0.0)
Turning left	110(54)	44(27)	66(33)	11 7 (7 2)	62(31)	58(28)	75(51)
F=256.8, df=5, p<0.001	11.0 (0.1)	(2)	0.0 (0.0)	· · · · · (· · _)	0.2 (0.1)	0.0 (2.0)	7.0 (0.1)
Turning right	10 1 (2 7)	49(32)	69(35)	11.6 (2.8)	63(29)	65(28)	76(38)
F=356.5, df=5, p<0.001	10.1 (2.17)		0.0 (0.0)	11.0 (2.0)	0.0 (2.0)	0.0 (2.0)	1.0 (0.0)
Lane changes	17(19)	28(28)	18(19)	22(19)	19(17)	23(25)	21(22)
F=25.1, df=5, p<0.001	(1.0)	2.0 (2.0)		2.2 (1.0)		2.0 (2.0)	()
Driving on motorways	0.6 (1.7)	0.4 (1.1)	1.0 (1.2)	2.3 (1.6)	1.1 (1.3)	0.8 (1.1)	0.9 (1.3)
F=125.6, df=5, p<0.001	0.0 ()	••••(•••)		()	(()	
Overtaking	0.9 (1.6)	0.1 (0.3)	0.4 (0.7)	3.3 (2.2)	0.0 (0.2)	1.0 (1.3)	0.8 (1.5)
F=396.9, df=5, p<0.001						- (-)	- (-)
Roundabouts	6.9 (4.1)	2.5 (2.9)	3.9 (2.8)	2.9 (2.0)	3.1 (2.1)	1.7 (2.4)	3.8 (3.4)
F=218.6, df=5, p<0.001		- (-)		- (-)		()	- (-)
Pedestrian crossings	5.3 (3.5)	5.3 (5.6)	11.3 (9.9)	6.9 (8.8)	6.7 (8.3)	10.0 (5.8)	7.5 (7.6)
F=75.1, df=5, p<0.001			()			()	()
Railway crossings	0.3 (0.9)	0.1 (0.4)	0.2 (0.7)	0.7 (1.0)	0.5 (1.0)	0.9 (2.0)	0.4 (1.0)
F=46.0, df=5, p<0.001						()	()
Long slopes	1.7 (1.7)	0.1 (0.4)	0.7 (1.4)	0.5 (1.1)	0.2 (0.4)	0.4 (0.8)	0.7 (1.3)
F=162.4, df=5, p<0.001						()	
Bus/tram stops	6.1 (5.1)	0.8 (1.5)	3.1 (4.1)	5.3 (4.0)	1.2 (1.9)	3.3 (4.0)	3.3 (4.2)
F=186.2, df=5, p<0.001						()	
Exiting the car	0.1 (0.3)	0.7 (0.4)	1.2 (0.8)	1.0 (0.2)	0.6 (0.5)	1.0 (0.3)	0.7 (0.6)
F=394.1, df=5, p<0.001	. ,	· · /	· · /	· · /	· · /	. ,	. ,

Table 12: Mean number of times different topics were covered in the test per country, passed tests only.

Standard deviations within brackets

	GB	Spain	France	NL	Sweden	Austria	Total
Driving away	10.0 (4.0)	18(12)	52(26)	64(40)	10(32)	15(10)	47(41)
F=317.0, df=5, p<0.001	10.0 (4.0)	1.0 (1.2)	5.2 (2.0)	0.4 (4.0)	4.0 (3.2)	1.5 (1.9)	4.7 (4.1)
Intersections	61(17)	0 1 (7 2)	85(51)	20 4(10 8)	7 1 (3 3)	11 2 (5 0)	08(74)
F=114.8, df=5, p<0.001	0.1 (4.7)	9.4 (1.2)	0.0 (0.1)	20.4(10.0)	7.1 (0.0)	11.2 (0.9)	9.0 (7.4)
Light regulated junctions	40(36)	66(58)	46(45)	55(38)	40(45)	50(55)	52(40)
F=8.9, df=5, p<0.001	4.9 (3.0)	0.0 (0.0)	4.0 (4.5)	5.5 (5.6)	4.0 (4.5)	5.0 (5.5)	5.2 (4.9)
Turning left	11 2 (2 8)	55(24)	71(34)	11 7 (2 1)	66(33)	50(27)	77(28)
F=187.7, df=5, p<0.001	11.2 (2.0)	5.5 (2.4)	7.1 (3.4)	11.7 (3.1)	0.0 (3.3)	5.9 (2.7)	1.1 (3.0)
Turning right	10 2 (2 7)	6 2 (2 0)	75(35)	11 8 (3 0)	66(30)	65(36)	7 0 (3 5)
F=120.9, df=5, p<0.001	10.2 (2.7)	0.2 (2.9)	7.0 (0.0)	11.0 (0.0)	0.0 (0.0)	0.0 (0.0)	1.9 (0.0)
Lane changes	17(10)	3 / (3 0)	1 0 (2 0)	1 0 (2 1)	17(16)	20(21)	22(23)
F=24.8, df=5, p<0.001	1.7 (1.9)	3.4 (3.0)	1.9 (2.0)	1.9 (2.1)	1.7 (1.0)	2.0 (2.1)	2.2 (2.3)
Driving on motorways	0.4(1.0)	0 5 (1 2)	1 1 (1 2)	2 2 (1 5)	10(12)	0 8 (1 1)	0 9 (1 3)
F=58.2, df=5, p<0.001	0.4 (1.0)	0.0 (1.2)	()	2.2 (1.0)	1.0 (1.2)	0.0 ()	0.0 (1.0)
Overtaking	0 9 (1 5)	0 1 (0 4)	05(09)	34(21)	0 1 (0 3)	10(13)	08(15)
F=199.0, df=5, p<0.001	0.5 (1.5)	0.1 (0.4)	0.0 (0.0)	J. 4 (2.1)	0.1 (0.0)	1.0 (1.0)	0.0 (1.0)
Roundabouts	64(38)	3 0 (3 1)	44(27)	27(19)	28(20)	18(17)	37(31)
F=89.5 df=5, p<0.001	0.1 (0.0)	0.0 (0.1)	(2)	2.7 (1.0)	2.0 (2.0)	1.0 (1.7)	0.1 (0.1)
Pedestrian crossings	52(32)	64 (58)	11 9(10 2)	56(67)	63(77)	99(56)	79(75)
F=40.7, df=5,p<0.001	0.2 (0.2)	0.1 (0.0)	11.0(10.2)	0.0 (0.1)	0.0 (1.1)	0.0 (0.0)	1.0 (1.0)
Railway crossings	0.2 (0.8)	0 1 (0 5)	03(07)	0.8 (0.9)	0.5 (0.9)	10(20)	04(11)
F=22.7, df=5, p<0.001	0.2 (0.0)	0.1 (0.0)	0.0 (0.7)	0.0 (0.0)	0.0 (0.0)	1.0 (2.0)	0.4 (1.1)
Long slopes	18(17)	0 1 (0 4)	10(16)	0.5 (1.0)	0 2 (0 5)	04(08)	07(13)
F=73.4, df=5, p<0.001	1.0 (1.7)	0.1 (0.1)	1.0 (1.0)	0.0 (1.0)	0.2 (0.0)	0.1 (0.0)	0.7 (1.0)
Bus/tram stops	6.5 (5 2)	0.9 (1 69	3.3 (4.5)	4.8 (37)	1.2 (1.9)	3.3 (4 1)	3.2 (4.2)
F=80.6, df=5, p<0.001	J.J (J.L)	0.0 (1.00	0.0 (1.0)	(0.7)		0.0 (1.1)	<i>∇.∠</i> (ſ.∠)
Exiting the car	0 1 (0 3)	08(04)	13(07)	10(02)	0.5 (0.5)	11(04)	08(06)
F=223.5, df=5, p<0.001	0.1 (0.0)	0.0 (0.1)		(0.2)	0.0 (0.0)	(0.1)	0.0 (0.0)

 Table 13: Number of times different topics were covered in the test per test centre type, passed tests only.

	Standard	deviations	within	brackets
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	Countryside	Small town	Urban periphery	Urban	Total	
Drive away	4 8 (3 0)	37(12)	16(31)	55(45)	A = 7 (A = 1)	
F=10.1, df=4, p<0.001	4.0 (3.9)	5.7 (4.2)	4.0 (3.4)	5.5 (4.5)	(ד. י)	
Intersections	116(80)	7 / (5 1)	11 1 (9 3)	86(57)	0 8 (7 4)	
F=19.3, df=4, p<0.001	11.0 (0.9)	7.4 (5.1)	11.1 (0.3)	0.0 (0.7)	9.8 (7.4)	
Light regulated junctions	2 2 (2 0)	2 2 (2 2)	77(54)	60(47)	F 2 (4 0)	
F=113.6, df=4, p<0.001	2.5 (5.0)	5.2 (5.5)	7.7 (3.4)	0.9 (4.7)	5.2 (4.9)	
Turning left	8 2 (2 2)	61(32)	9 1 (3 6)	91(11)	77(37)	
F=19.5, df=4, p<0.001	0.2 (3.3)	0.1 (3.2)	0.1 (3.0)	0.1 (4.4)	1.1 (3.1)	
Turning right	9 2 (2 4)	64(20)	9 5 (2 2)	9 2 (4 0)	70(25)	
F=20.4, df=4, p<0.001	0.2 (3.4)	0.4 (3.0)	8.5 (3.2)	0.2 (4.0)	7.9 (3.5)	
Lane changes	0.7(1.4)	17(17)	25(20)	27(20)	2 2 (2 2)	
F=107.5, df=4, p<0.001	0.7 (1.4)	1.7 (1.7)	2.5 (2.0)	3.7 (2.0)	2.2 (2.3)	
Driving on motorways	0 1 (0 4)	07(00)	17(15)	1 1 (1 1)	0 0 (1 2)	
F=90.8, df=4, p<0.001	0.1 (0.4)	0.7 (0.9)	1.7 (1.5)	1.1 (1.4)	0.9 (1.3)	
Overtaking	0 6 (1 2)	0 9 /1 2)	10(17)	0.0.(1.6)	0.9/(1.5)	
F=4.6, df=4, p<0.01	0.0 (1.3)	0.0 (1.2)	1.0 (1.7)	0.9 (1.0)	0.6 (1.5)	
Roundabouts	1 0 (1 7)	4 4 (2 4)	4.8.(2.0)	2 0 (2 1)	27/24)	
F=58,6. df=4, p<0.001	1.0 (1.7)	4.4 (2.4)	4.0 (3.9)	3.0 (3.1)	3.7 (3.1)	
Pedestrian crossings	60(71)	61(51)	10 5 (9 7)	02(76)	70(75)	
F=22.0, df=4, p<0.001	0.0 (7.1)	0.4 (5.1)	10.5 (8.7)	0.3 (7.0)	7.9 (7.5)	
Railway crossings	06(11)	07(17)	0.4.(0.9)	0.2 (0.6)	0 4 (1 1)	
F=11.7, df=4, p<0.001	0.0 (1.1)	0.7(1.7)	0.4 (0.8)	0.2 (0.0)	0.4 (1.1)	
Long slopes	0 9 (1 6)	0.0(1.4)	0.2 (0.9)	0 0 (1 2)	07(12)	
F=12.3, df=4, p<0.001	0.8 (1.0)	0.9 (1.4)	0.3 (0.8)	0.9 (1.3)	0.7 (1.3)	
Bus/tram stops	2.0.(2.6)	1 4 (2 0)	20(4.1)	E 2 (E 1)	2 2 (4 2)	
F=56.4, df=4, p<0.001	2.0 (3.0)	1.4 (2.0)	J.9 (4.1)	5.3 (5.1)	3.2 (4.2)	
Exiting the car	07(06)	1.2 (0.5)	0.0 (0.7)	0 5 (0 5)	0.9 (0.6)	
F=74.7, df=4, p<0.001	0.7 (0.0)	1.2 (0.5)	0.9 (0.7)	0.0 (0.0)	0.0 (0.0)	

The type of variation of the number of times different topics have been covered in all tests has been indicated in Figure 3 where the distribution of the topic "driving on roundabouts" is shown as an example. About 17% of the tests did not include roundabouts while around 20% included 7 or more roundabouts.



Figure 3: The distribution of how many times "driving on roundabouts" has been carried out, all tests

As was the case in Figure 2 above for items that were measured by their duration, there were a number of tests that did not cover all the topics measured by the number of times (Figure 4). Examples of topics that were not covered much are "overtaking" in Great Britain, Spain, France and Sweden, "driving on motorways and / or dual carriageways" in Great Britain and Spain, "railway" in all countries, "long slopes" in all countries except Great Britain and "exiting the car" in Great Britain. The final "exiting the car" after the test in Great Britain is not formally included in the test.



Figure 4: Percentage of tests that did not include different topics that were measured by number of times they were performed, per country, all tests

The auditors also recorded the type of weather, the light conditions and road surface during the test. As expected the most common condition was clear weather, daylight and a dry road surface. There was, however, a variation between countries where Sweden had more cloudy weather or snow, more tests during dusk and dawn and more tests on icy or snowy roads. Almost none of the tests were carried out during darkness (Figure 5-7).



Figure 5: Weather type distribution during tests per country, all tests ($\chi 2 = 217.8$, df=20, p<0.001)



Figure 6: Light condition distribution during tests per country, all tests (χ^2 =68.6, df=10, p<0.001)



Figure 7: Road surface distribution during tests per country, all tests $(\chi^2 = 614.5, df = 15, p < 0.001)$

1.3 Duration, mileage, topics covered and pass/fail rates before and after 2000/56/EC

In the following section, the impact of the change to the tests by Directive 2000/56/EC has been investigated. Most of the changes were small with the exception of France where the tests from after the implementation of the new directive were much longer. The mean duration in France increased from 16 to 22 minutes (Table 14) and the mean distance covered from 8 to 12 km (Table 15).

 Table 14: Mean duration of tests in minutes by country before and after 2000/56/EC.

Standard deviations within brackets (Main effect Before/After: F=14.1, df=1, p<0.001; Main effec	t
Country: F=821.7, df=5, p<0.001; Interaction Before/After and Country: F=30.6, df=5, p<0.001)	

	GB	Spain	France	NL	Sweden	Austria	Total
Before	35.5 (5.4)	20.3 (7.6)	15.6 (7.3)	32.2 (6.2)	33.4 (5.5)	34.5 (7.0)	27.0 (10.6)
After	36.1 (4.0)	19.6 (8.2)	22.2 (6.9)	32.9 (5.0)	32.4 (4.6)	33.9 (7.3)	28.3 (9.3)
Total	35.8 (4.7)	20.0 (7.9)	19.0 (7.8)	32.5 (5.7)	33.0 (5.1)	34.2 (7.1)	27.6 (10.0)

Table 15: Mean driving distance in km by country before and after 2000/56/EC.

	GB	Spain	France	NL	Sweden	Austria	Total
Before	14.6 (3.0)	8.2 (4.6)	8.1 (3.9)	16.1 (4.0)	18.0 (4.2)	14.9 (6.4)	12.3 (5.8)
After	14.4 (2.6)	7.6 (4.4)	12.3 (5.5)	16.8 (3.8)	17.3 (4.0)	14.8 (5.7)	13.0 (5.5)
Total	14.5 (2.8)	7.9 (4.5)	10.2 (5.3)	16.5 (3.9)	17.6 (4.1)	14.9 (6.1)	12.7 (5.7)

Standard deviations within brackets (Main effect Before/After: F=10.9, df=1, p<0.001; Main effect Country: F=395.3, df=5, p<0.001; Interaction Before/After and Country: F=29.1, df=5, p<0.001)

Concerning the duration and the number of times different test topics were covered, the changes were also relatively small. There was a slight increase in mean duration (Table 16) and mean number of times (Table 17) that items were tested for the topics "safety check", "straight road", "driving away", "intersections" and "bus/tram stops". The changes in the means were, however, mostly explained by the influence of the French change. The French example is shown in Figures 8 and 9 where it becomes clear that most topics are covered more after the change compared to before. The contribution from Great Britain to the increase of "safety checks" is shown in Figure 10 where it is clear that more time was spent on this after the implementation of 2000/56/EC than before.

 Table 16: Mean duration of different test topics before and after the implementation of 2000/56/EC.

 Standard deviations within brackets

	Before	After	Total	
Safety check	1 2 (1 7)	15(12)	13(15)	
F=26.3, df=1, p<0.001	1.2 (1.7)	1.5 (1.2)	1.3 (1.5)	
Posture	0.0.(0.0)	07(05)	0 0 (0 7)	
F=7.7, df=1, p<0.01	0.8 (0.8)	0.7 (0.5)	0.8 (0.7)	
Special manoeuvres	2 2 (2 0)	2 4 (2 0)	2 2 (2 0)	
F=4.9, df=1, ns	2.2 (2.0)	2.4 (2.0)	2.5 (2.0)	
Straight roads	11 1 (0.0)	40 7 (0 F)	11.9 (8.4)	
F=30.8, df=1, p<0.001	11.1 (8.2)	12.7 (8.5)		
Curvy roads	(0,0)	C A (7 A)	(0,0)	
F=2.6, df=1, ns	6.0 (7.0)	0.4 (7.1)	6.2 (7.1)	
Independent driving	0.0 (5.5)	24(50)	00(54)	
F=2.1, df=1, ns	2.3 (5.5)	2.1 (0.2)	2.2 (5.4)	

Table 17: Mean number of times different topics were covered before and after the implementation of 2000/56/EC.

Standard deviations within brackets

	Before	After	Total
Driving away	4 5 (4 2)	E 7 (4 6)	51(15)
F=56.6, df=1, p<0.001	4.0 (4.3)	5.7 (4.0)	5.1 (4.5)
Intersection	93(71)	8 2 (7 1)	88(71)
F=20.8, df=1, p<0.001	5.5 (1.1)	0.2 (1.1)	0.0 (7.1)
Light regulated junctions	53(57)	5 1 (4 3)	52(50)
F=1.2, df=1, ns	0.0 (0.7)	U. T (T.U)	0.2 (0.0)
Turning left	73(51)	78(51)	75(51)
F=5.8, df=1, ns	1.0 (0.1)	1.0 (0.1)	1.0 (0.1)
Turning right	74(39)	77(37)	76(38)
F=5.2, df=1, ns	и. т (0. <i>0)</i>	1.1 (0.1)	1.0 (0.0)
Lane changes	2 1 (2 1)	2 1 (2 3)	21(22)
F=0.8, df=1, ns	<u> </u>	2.1 (2.0)	<u> </u>
Driving on motorways	09(14)	0 9 (1 3)	09(13)
F=0.3, df=1, ns	0.3 (1.4)	0.0 (1.0)	0.0 (1.0)
Overtaking	09(18)	07(13)	08(15)
F=18.5, df=1, p<0.001	0.0 (1.0)	0.7 (1.0)	0.0 (1.0)
Roundabouts	37(35)	40(35)	38(35)
F=6.3, df=1, ns	0.7 (0.0)	1.0 (0.0)	0.0 (0.0)
Pedestrian crossings	72(67)	77(84)	75(76)
F=3.2, df=1. ns	·.2 (0.7)	1.1 (0.7)	1.0 (1.0)
Railway crossings	04(12)	0.3 (0.8)	04(10)
F=11.8, df=1, p<0.01	U.T (1.2)	0.0 (0.0)	0.4 (1.0)
Long slopes	07(13)	07(13)	07(13)
F=0.5, df=1, ns	0.7 (1.0)	0.7 (1.0)	0.7 (1.0)
Bus/tram stops	3 1 (4 1)	35(44)	33(42)
F=6.9, df=1, p<0.01	U. I (T. I)	0.0 (ד.ד)	0.0 (7.2)
Exiting the car	07(06)	08(07)	07(06)
F=6.1, df=1. ns	0.7 (0.0)	0.0 (0.7)	0.7 (0.0)



Figure 8: Mean duration in France for specific topics before and after 2000/56/EC (**p<0.001)



Figure 9: Number of times in France for specific topics before and after 2000/56/EC (**p<0.001)





(**p<0.001)

There is an overall tendency of decreased pass rate after the implementation of the new Directive 2000/56/EC in all countries except in The Netherlands but these changes are not significant (Table 18 and 19).

Table 18: Pass rates in % before and after the implementation of the new Directive 2000/56/EC per country

Pass rate	GB	Spain	France	NL	Sweden	Austria	Total
Before	37.9	48.0	50.0	38.2	56.4	67.9	48.7
After	35.4	45.4	42.9	48.9	47.9	67.4	45.1
Total	36.6	46.7	46.4	43.5	52.3	67.7	46.9

(all changes within countries non significant)

Table 19: Pass rates in % before and after the implementation of the new Directive 2000/56/EC per test centre type

Pass rate	Countryside	Small town	Urban periphery	Urban	Total
Before	57.2	53.3	45.4	42.0	48.7
After	52.1	48.9	40.3	40.7	45.1
Total	54.6	51.3	42.8	41.3	46.9

(all changes within test centre types non significant)

1.3.1 Test location

Tests are performed in a large variety of locations. The choice of location is partly a matter of the topics that are tested and partly a matter of the locations that are available. The ambition in the audit form was to measure time spent on different locations, but it turned out to be impossible to use the data in this way. The possible analyses were reduced to the distribution between urban, rural and motorway and number of transitions between all different types of roads that were used in the audit forms. Figure 11 shows the distribution of urban, rural and motorway per country and Figure 12 the distribution per test centre type. Urban roads were most common, especially marked in Great Britain and Spain and expectedly in urban and urban periphery test centres. Table 20 shows the distribution of how many times different locations were mentioned on the auditors' form. Out of a total of 62,291 locations during the tests, 28% were residential areas while only 6% were motorway or dual carriageways.



Figure 11: Distribution of time spent in urban locations, rural locations or on motorways and dual carriageways by country

(Urban: F=51.9, df=5, p<0.001; Rural: F=28.8, df=5, p<0.001; Motorway: F=38.1, df=5, p<0.001)





(Urban: F=87.6, df=4, p<0.001; Rural: F=191.0, df=4, p<0.001; Motorway: F=66.5, df=4, p<0.001)

Road types	Number of times	Percent of occasions	Mean number of times per test
Closed area	2134	3.4	0.7
Residential	17697	28.4	5.6
City centre	13213	21.2	4.2
Transfer road	10430	16.7	3.3
B class road	7710	12.4	2.5
A class road	7579	12.2	2.4
Motorway/DC	3528	5.7	1.1
Total	62291	100.0	19.8

Table 20: Number of times each road type has been mentioned on the auditors' form

The overall distribution of time spent in urban locations, rural locations or on motorways and dual carriageways (Figure 12) shows that most of the time in the tests was spent in urban areas. Spain had the largest part of the test in this type of location. A similar pattern as was shown in Table 20, that motorways and dual carriageways were not used very often is also clear from Figure 11 and 12.

1.3.2 Errors

Two types of errors were indicated during the tests. Type 1 is a potentially dangerous error and type 2 is a near accident error. Type 2 is thus the most dangerous type of error. When interpreting these results it is important to take into account that stopped tests have been included in the analyses and thus not separated. This fact influences the timing of the errors. Figure 13 shows the distribution of errors type 1 for short, medium and long duration tests. The pattern clearly shows that the errors were distributed over most of the duration for the medium and long tests while for the short ones most errors were indicated in the beginning of the test.



Figure 13: Distribution of when during the test errors type 1 occur for short, middle length and long tests

(**p<0.001)

When comparing errors type 1 in different test centre types (Figure 14) it is clear that there was a difference in the middle period of the tests, from 15 to 35 minutes. Urban periphery centres also had a significant peek during 5-10 minutes into the test. The general pattern of the distribution was otherwise similar with higher error rates in the first part of the test.



Figure 14: Distribution of when during the test errors type 1 occur per test centre type (*p<0.01, **p<0.001)

The next graph (Figure 15) shows the distribution of errors type 1 for passed and failed tests separately. Failed tests had, expectedly, more errors.



Figure 15: Distribution of when during the test errors type 1 occur for pass and fail tests (**p<0.001)

For errors type 2 the distribution is similar to that for errors type 1 where most errors were recorded at the beginning of the tests and where the short tests had a clear peek during 5-10 minutes while for the medium and long tests they were more distributed over the whole duration (Figure 16).



Figure 16: Distribution of when during the test errors type 2 occur for short, middle length and long tests

(**p<0.001)

No significant differences were found when comparing patterns of type 2 errors between test centre types (Figure 17). The overall pattern shows a peek during 5-10 minutes.



Figure 17: Distribution of when during the test errors type 2 occur per test centre type (no sign. differences)

Type 2 errors were nearly only present in failed tests as shown in Figure 18. There was a clear peek during 5-10 minutes in the tests where the candidate failed. A few type 2 errors were indicated also in the passed tests. As shown in Table 21 these type 2 errors were found in all countries except Great Britain. In Great Britain it is not possible to pass a test if a type 2 error has been made. The results show that it is possible to pass the test in the other countries even if a serious error occurs.



Figure 18: Distribution of when during the test errors type 1 occur for pass and fail tests (**p<0.001)

Table 21: Mean number of type 1 and type 2 errors per passed test a	nd per failed test by country.
Standard deviations within brackets	

		GB	Spain	France	NL	Sweden	Austria	Total
Type 1	Pass	0.0 (0.1)	0.3 (0.9)	0.5 (0.9)	0.4 (0.9)	0.3 (0.8)	1.0 (1.3)	0.4 (0.9)
	Fail	2.5 (1.5)	0.6 (0.9)	1.5 (1.7)	4.5 (3.8)	2.2 (1.8)	3.0(1.8)	2.1 (2.2)
	Total	1.6 (1.7)	0.5 (0.9)	1.1 (1.5)	2.7 (3.6)	1.2 (1.6)	1.7 (1.7)	1.3 (1.9)
	Pass	0.0 (-)	0.0 (0.3)	0.0 (0.1)	0.0 (0.2)	0.0 (0.1)	0.0 (0.1)	0.0 (0.2)
Type 2	Fail	0.1 (0.4)	0.4 (0.6)	1.0 (0.9)	1.3 (1.4)	0.4 (0.7)	0.5 (0.8)	0.6 (0.9)
	Total	0.1 (0.3)	0.2 (0.5)	0.6 (0.8)	0.7 (1.2)	0.2 (0.5)	0.2 (0.5)	0.3 (0.7)

		Countryside	Small town	Urban periphery	Urban	Total
	Pass	0.5 (1.0)	0.4 (0.9)	0.5 (0.9)	0.3 (0.8)	0.4 (0.9)
Type 1	Fail	2.0 (2.0)	1.6 (1.7)	2.4 (2.5)	2.1 (2.3)	2.1 (2.2)
	Total	1.2 (1.7)	1.0 (1.5)	1.6 (2.2)	1.4 (2.0)	1.3 (1.9)
	Pass	0.0 (0.3)	0.0 (0.1)	0.0 (0.2)	0.0 (0.1)	0.0 (0.2)
Type 2	Fail	0.5 (0.8)	0.5 (0.7)	0.6 (0.9)	0.6 (1.0)	0.6 (0.9)
	Total	0.2 (0.6)	0.3 (0.7)	0.4 (0.8)	0.3 (0.8)	0.3 (0.7)

Table 22: Mean number of type 1 and type 2 errors per passed test and per failed test by test centre type.

1.4 Robust assessment of driving behaviour

Standard deviations within brackets

The auditors have indicated to what degree the tests allowed for a robust assessment of the candidate. There were three types of such estimations, whether the test duration, location and traffic density allowed for a robust assessment concerning a number of topics in the test (Table 2 in the auditors' form, see Annexe 6a). A fourth type of estimation concerned overall robust assessment of different types of driving behaviour (Table 5 in the auditors' form, see Annexe 6a).

For all these four types, indexes have been constructed by adding the scale value for each topic and dividing the sum with the total number of topics. This calculation gives an average estimation over all topics. The mean values of the indexes for passed and failed tests and before and after the implementation of Directive 2000/56/EC are shown in Tables 23-26.

Figure 19 shows that the possibilities to make a robust assessment of specific topics of the test varied by topic and by test centre type. The lowest possibilities with respect to duration have been estimated for independent driving, railway crossings, overtaking and motorways. In general the values were lowest for test centres in countryside areas and

highest for urban areas. For all items there are statistically significant differences between at least some test centre types.

The estimations did not differ much between passed and failed tests (Figure 20) or between before and after the introduction of Directive 2000/56/EC (Figure 21). Only a few and relatively small significant differences were found for these two comparisons. These have been marked with ** or * in the graphs. As an example there was an increase of the possibilities to make robust assessments of driving away, special manoeuvres, sitting posture and safety check after the introduction of 2000/56 EC.



Figure 19: Mean scale values of estimation of the possibilities to make a robust assessment of the candidate's performance with regard to the duration of the different topics of the test, by test centre type

(all topics p<0.001)



Figure 20: Mean scale values of estimation of the possibilities to make a robust assessment of the candidate's performance with regard to the duration of the different topics of the test, separate for passed and failed tests



Figure 21: Mean scale values of estimation of the possibilities to make a robust assessment of the candidate's performance with regard to the duration of the different topics of the test, before and after implementation of Directive 2000/56/EC

Details of the assessments concerning robustness are shown in Table 23 for countries and Table 24 for test centre types. The general pattern is that there was a change from before to after in most countries. In Great Britain, France and Sweden the assessments increased, in Spain and Netherlands they decreased and in Austria they remained the same. The added assessments for all countries showed no change from before to after the new directives. In the comparisons between test centre types (Table 24) there were no such patterns. The assessment before and after were similar. Table 23: Mean scale values of the estimation of the possibilities to make a robust assessment of the candidate's performance with regard to duration, location and traffic density of the different topics of the test, by country and separate for passed and failed tests before and after the implementation of Directive2000/56/EC

	Test	Before/after				Country			
	result	2000/56	GB	Spain	France	NL	Sweden	Austria	Total
		Before	3.0 (0.5)	2.5 (0.3)	2.8 (0.5)	3.0 (0.7)	2.6 (0.4)	3.0 (0.5)	2.8 (0.5)
	Pass	After	3.1 (0.4)	2.5 (0.3)	2.9 (0.3)	2.9 (0.4)	2.8 (0.3)	2.8 (0.3)	2.8 (0.4)
		Total	3.1 (0.5)	2.5 (0.3)	2.9 (0.4)	3.0 (0.5)	2.7 (0.4)	2.9 (0.4)	2.8 (0.5)
Robust		Before	3.0 (0.6)	2.2 (0.5)	2.5 (0.5)	3.0 (0.6)	2.7 (0.5)	2.8 (0.6)	2.6 (0.6)
assessment.	Fail	After	3.1 (0.5)	2.1 (0.5)	2.8 (0.4)	3.0 (0.4)	2.8 (0.3)	2.8 (0.3)	2.7 (0.6)
- duration		Total	3.0 (0.6)	2.1 (0.5)	2.6 (0.5)	3.0 (0.5)	2.7 (0.4)	2.8 (0.5)	2.7 (0.6)
		Before	3.0 (0.6)	2.3 (0.4)	2.6 (0.5)	3.0 (0.6)	2.6 (0.4)	2.9 (0.5)	2.7 (0.6)
	Total	After	3.1 (0.4)	2.3 (0.5)	2.9 (0.4)	2.9 (0.4)	2.8 (0.3)	2.8 (0.3)	2.8 (0.5)
		Total	3.1 (0.5)	2.3 (0.5)	2.7 (0.5)	3.0 (0.5)	2.7 (0.4)	2.9 (0.5)	2.7 (0.5)
		Before	3.0 (0.5)	2.5 (0.3)	2.8 (0.5)	3.0 (0.6)	2.6 (0.4)	2.9 (0.5)	2.8 (0.5)
	Pass	After	3.1 (0.4)	2.5 (0.3)	2.9 (0.4)	3.0 (0.4)	2.8 (0.3)	2.9 (0.3)	2.8 (0.4)
		Total	3.1 (0.4)	2.5 (0.3)	2.9 (0.5)	3.0 (0.5)	2.7 (0.4)	2.9 (0.4)	2.8 (0.5)
Robust		Before	3.0 (0.6)	2.3 (0.5)	2.5 (0.5)	3.1 (0.6)	2.6 (0.4)	2.8 (0.5)	2.7 (0.6)
assessment	Fail	After	3.1 (0.5)	2.1 (0.4)	2.8 (0.4)	3.0 (0.4)	2.8 (0.3)	2.9 (0.3)	2.8 (0.6)
- location		Total	3.1 (0.6)	2.2 (0.5)	2.7 (0.5)	3.0 (0.5)	2.7 (0.4)	2.8 (0.5)	2.7 (0.6)
		Before	3.0 (0.6)	2.4 (0.4)	2.7 (0.6)	3.1 (0.6)	2.6 (0.4)	2.8 (0.5)	2.7 (0.6)
	Total	After	3.1 (0.4)	2.3 (0.4)	2.8 (0.4)	3.0 (0.4)	2.8 (0.3)	2.9 (0.3)	2.8 (0.5)
		Total	3.1 (0.5)	2.3 (0.4)	2.8 (0.5)	3.0 (0.5)	2.7 (0.4)	2.9 (0.4)	2.8 (0.5)
		Before	3.0 (0.5)	2.3 (0.4)	2.5 (0.7)	2.8 (0.8)	2.3 (0.6)	2.6 (0.5)	2.6 (0.6)
	Pass	After	3.0 (0.5)	2.3 (0.4)	2.6 (0.7)	2.5 (0.5)	2.5 (0.6)	2.6 (0.5)	2.6 (0.6)
Pobust		Total	3.0 (0.5)	2.3 (0.4)	2.5 (0.7)	2.7 (0.6)	2.4 (0.6)	2.6 (0.5)	2.6 (0.6)
accossmont		Before	2.9 (0.6)	2.2 (0.5)	2.3 (0.6)	2.8 (0.7)	2.5 (0.5)	2.5 (0.5)	2.5 (0.7)
traffic	Fail	After	3.1 (0.5)	2.0 (0.4)	2.5 (0.6)	2.7 (0.5)	2.6 (0.5)	2.8 (0.4)	2.6 (0.6)
- traffic density		Total	3.0 (0.6)	2.1 (0.5)	2.4 (0.6)	2.8 (0.6)	2.6 (0.5)	2.6 (0.5)	2.6 (0.7)
uchoity		Before	2.9 (0.6)	2.3 (0.5)	2.4 (0.7)	2.8 (0.8)	2.4 (0.6)	2.6 (0.5)	2.5 (0.6)
	Total	After	3.0 (0.5)	2.1 (0.5)	2.5 (0.6)	2.6 (0.5)	2.5 (0.6)	2.7 (0.5)	2.6 (0.6)
		Total	3.0 (0.6)	2.2 (0.5)	2.5 (0.6)	2.7 (0.6)	2.5 (0.6)	2.6 (0.5)	2.6 (0.6)

(Indexes developed from Table 2B of the auditors' form, Annexe 6a)

Table 24: Mean scale values of the estimation of the possibilities to make a robust assessment of the candidate's performance with regard to duration, location and traffic density of the different topics of the test, by test centre type and separate for passed and failed tests before and after the implementation of Directive 2000/56/EC

		Test centre type Before/after						
	Test result	2000/56	Countrysido	Small	Urban	Urban	Total	
			Countryside	town	periphery	Orban	TOLAI	
		Before	2.4 (0.4)	2.9 (0.5)	2.8 (0.5)	3.0 (0.3)	2.8 (0.5)	
	Pass	After	2.6 (0.3)	2.9 (0.3)	2.9 (0.5)	2.9 (0.2)	2.8 (0.4)	
		Total	2.5 (0.4)	2.9 (0.4)	2.9 (0.5)	2.9 (0.3)	2.8 (0.5)	
Robust		Before	2.3 (0.6)	2.6 (0.6)	2.6 (0.7)	2.9 (0.2)	2.6 (0.6)	
assessment	Fail	After	2.5 (0.6)	2.6 (0.6)	2.8 (0.5)	2.9 (0.2)	2.7 (0.6)	
- duration		Total	2.4 (0.6)	2.6 (0.6)	2.7 (0.6)	2.9 (0.2)	2.7 (0.6)	
		Before	2.4 (0.5)	2.7 (0.6)	2.7 (0.6)	2.9 (0.3)	2.7 (0.6)	
	Total	After	2.5 (0.5)	2.7 (0.5)	2.8 (0.5)	2.9 (0.2)	2.8 (0.5)	
		Total	2.5 (0.5)	2.7 (0.5)	2.8 (0.6)	2.9 (0.3)	2.7 (0.5)	
		Before	2.4 (0.5)	2.9 (0.5)	2.8 (0.5)	3.0 (0.4)	2.8 (0.5)	
	Pass	After	2.5 (0.4)	2.9 (0.3)	3.0 (0.4)	2.9 (0.4)	2.8 (0.4)	
		Total	2.5 (0.4)	2.9 (0.4)	2.9 (0.5)	3.0 (0.4)	2.8 (0.5)	
Robust		Before	2.3 (0.6)	2.6 (0.6)	2.7 (0.7)	2.9 (0.5)	2.7 (0.6)	
assessment	Fail	After	2.5 (0.6)	2.7 (0.6)	2.8 (0.5)	2.9 (0.5)	2.8 (0.6)	
- location		Total	2.4 (0.6)	2.6 (0.6)	2.8 (0.6)	2.9 (0.5)	2.7 (0.6)	
		Before	2.4 (0.5)	2.7 (0.5)	2.7 (0.6)	2.9 (0.5)	2.7 (0.6)	
	Total	After	2.5 (0.5)	2.8 (0.5)	2.9 (0.5)	2.9 (0.5)	2.8 (0.5)	
		Total	2.4 (0.5)	2.8 (0.5)	2.8 (0.6)	2.9 (0.5)	2.9 (0.5)	
		Before	2.0 (0.6)	2.6 (0.5)	2.7 (0.5)	2.9 (0.4)	2.6 (0.6)	
	Pass	After	2.1 (0.5)	2.6 (0.5)	2.8 (0.5)	2.8 (0.4)	2.6 (0.6)	
Robust		Total	2.1 (0.6)	2.6 (0.5)	2.7 (0.5)	2.9 (0.4)	2.6 (0.6)	
assessment		Before	2.1 (0.6)	2.4 (0.6)	2.5 (0.7)	2.9 (0.5)	2.5 (0.7)	
- traffic	Fail	After	2.2 (0.7)	2.4 (0.6)	2.7 (0.5)	2.8 (0.5)	2.6 (0.6)	
density		Total	2.1 (0.6)	2.4 (0.6)	2.6 (0.6)	2.8 (0.5)	2.6 (0.7)	
uchony		Before	2.1 (0.6)	2.5 (0.6)	2.6 (0.6)	2.9 (0.5)	2.5 (0.6)	
	Total	After	2.1 (0.6)	2.5 (0.6)	2.7 (0.5)	2.8 (0.5)	2.6 (0.6)	
		Total	2.1 (0.6)	2.5 (0.6)	2.7 (0.6)	2.9 (0.5)	2.6 (0.6)	

(Indexes developed from Table 2B of the auditors' form, Annexe 6a)

Figure 22 shows that the possibilities to make robust assessments of specific types of driving behaviour varied between items and between test centre types. The most problematic things to assess robustly were environmentally friendly driving, taking into account factors influencing driving behaviour, detecting severe technical vehicle faults

and vehicle control in critical situations. For all items there are statistically significant differences between at least some test centre types. The general pattern is that country side and small town centres made assessment more difficult than urban and urban periphery centres.



Figure 22: Mean scale values of overall estimation of the possibilities to make a robust assessment of the candidate's performance, by test centre type

(all topics p<0.001)

The estimations did not differ much between passed and failed tests (Figure 23) or between before and after the introduction of Directive 2000/56/EC (Figure 24). Some of the items differed significantly (marked with ** or * in the graph) but the differences were small. Generally they show that for the failed tests the robustness was lower. The same situation is applicable to the before-after comparison in Figure 24. There were differences but they were small (marked with ** or * in the graph).



Figure 23: Mean scale values of overall estimation of the possibilities to make a robust assessment of the candidate's performance, separate for passed and failed tests



Figure 24: Mean scale values of overall estimation of the possibilities to make a robust assessment of the candidate's performance, before and after the implementation of Directive 2000/56/EC

The details of the total index of all robust assessments are shown in Table 25 for countries and in Table 26 for test centre types. There are some general patterns of changes from before to after worth noting in these comparisons. The pattern resembles some of the results from the separated indexes in Tables 23 and 24 above where in France and Sweden the assessments became more robust and in Spain and Netherlands they became less robust. Other differences that were found were very small.

Table 25: Mean scale values of overall estimation of the possibilities to make robust assessment of the candidate's performance, by country and separate for passed and failed tests before and after the implementation of Directive 2000/56/EC

	Test	Before/after				Country			
	result	2000/56	GB	Spain	France	NL	Sweden	Austria	Total
		Before	3.0 (0.5)	2.4 (0.3)	2.7 (0.5)	3.0 (0.7)	2.5 (0.5)	2.8 (0.4)	2.7 (0.5)
	Pass	After	3.1 (0.4)	2.4 (0.3)	2.8 (0.5)	2.8 (0.4)	2.7 (0.4)	2.8 (0.3)	2.8 (0.4)
		Total	3.0 (0.5)	2.4 (0.3)	2.7 (0.5)	2.9 (0.5)	2.6 (0.4)	2.8 (0.4)	2.7 (0.5)
Overall		Before	3.0 (0.6)	2.2 (0.5)	2.4 (0.6)	3.0 (0.6)	2.6 (0.4)	2.7 (0.5)	2.6 (0.6)
robust	Fail	After	3.1 (0.5)	2.0 (0.4)	2.7 (0.4)	2.9 (0.4)	2.7 (0.4)	2.8 (0.3)	2.7 (0.6)
assessment		Total	3.0 (0.6)	2.1 (0.5)	2.6 (0.5)	2.9 (0.5)	2.7 (0.4)	2.7 (0.5)	2.7 (0.6)
		Before	3.0 (0.6)	2.3 (0.4)	2.6 (0.6)	3.0 (0.6)	2.5 (0.5)	2.8 (0.5)	2.7 (0.6)
	Total	After	3.1 (0.5)	2.2 (0.4)	2.7 (0.4)	2.8 (0.4)	2.7 (0.4)	2.8 (0.3)	2.7 (0.5)
		Total	3.0 (0.5)	2.3 (0.4)	2.7 (0.5)	2.9 (0.5)	2.6 (0.4)	2.8 (0.4)	2.7 (0.6)

Table 26: Mean scale values of overall estimation of the possibilities to make a robust assessment of the candidate's performance, by test centre type and separate for passed and failed tests before and after the implementation Directive 2000/56/EC

(Index developed from Table 5 of the audit	tors' form, Annexe 6a)
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	_		Test centre type						
	Test result	Before/after 2000/56	Countryside	Small town	Urban periphery	Urban	Total		
		Before	2.3 (0.5)	2.8 (0.5)	2.8 (0.5)	3.0 (0.4)	2.7 (0.5)		
	Pass	After	2.4 (0.4)	2.8 (0.4)	2.9 (0.4)	2.9 (0.4)	2.8 (0.4)		
		Total	2.4 (0.4)	2.8 (0.4)	2.8 (0.5)	2.9 (0.4)	2.7 (0.5)		
Overall		Before	2.2 (0.6)	2.5 (0.6)	2.6 (0.7)	2.9 (0.5)	2.6 (0.6)		
robust	Fail	After	2.4 (0.6)	2.6 (0.6)	2.8 (0.6)	2.9 (0.5)	2.7 (0.6)		
assessment		Total	2.3 (0.6)	2.5 (0.6)	2.7 (0.6)	2.9 (0.5)	2.7 (0.6)		
		Before	2.3 (0.5)	2.7 (0.5)	2.7 (0.6)	2.9 (0.5)	2.7 (0.6)		
	Total	After	2.4 (0.5)	2.7 (0.5)	2.8 (0.5)	2.9 (0.5)	2.7 (0.5)		
		Total	2.3 (0.5)	2.7 (0.5)	2.8 (0.6)	2.9 (0.5)	2.7 (0.6)		

2 EXAMINER QUESTIONNAIRES; ANALYSIS OF COLLECTED DATA

2.1 General description of the examiners and test centres

Altogether 404 examiners answered the questionnaire. They were from six different countries: Austria, France, Great Britain, Netherlands, Spain and Sweden (Table 27.) In Great Britain Supervising Examiners answered the questionnaires. Supervising Examiners are responsible for the management and quality assurance for several driving test centres. They also conduct driving tests on a regular basis. Before completing the questionnaires they consulted with the examiners they manage with the aim of reflecting the views of the day to day examiners in the completed questionnaires.

The tables in this section include a reminder of this difference in procedure since it may mean that Great Britain's responses are not fully comparable with those from other countries. For the same reason, the relative position of Great Britain is not mentioned in the text accompanying these tables.

A majority (76%) of the test centres in Austria were in the countryside or in smaller towns (Table 27.). In other countries the situation was almost the opposite; most of the test centres were located either in the urban periphery or in urban areas ($\chi^2 = 238.45$, df = 12, p<0.001).

	Country side		Smaller towns		Urban periphery		Urban		Centre type missing		Total	
	Ν	%	Ν	%	N	%	Ν	%	Ν	%	Ν	
Austria	21	46	14	30	6	13	5	11	12	21	58	
France	-	-	6	6	81	81	13	13	-	-	100	
Great Britain (*)	1	5	3	16	10	53	5	26	-	-	19	
Netherlands	4	4	7	7	20	19	75	71	-	-	106	
Spain	18	25	5	7	6	8	43	60	-	-	72	
Sweden	5	11	7	16	11	25	21	48	5	11	49	
Total	49	13	42	11	134	35	162	4	2 1	74	404	

Table 27. Participants by test centre types in different countries

* estimated by the supervising examiners

In general the examiners were experienced in all countries, 40% of them had been working from six to fifteen years (Table 28.). The most experienced examiners were in Spain (mean 16.6 years), 60% of them had been working at least 16 years. The least experienced examiners were in Sweden (mean 7.8 years.), 51% of them had been working five years or less.

Table 28 Experience of examiners in different countries.

Country			Expe	rience a	s an exan	niner											
	Mean length	≤ 5 years 6-15 years			16-35	years	Total										
	of experience	SD	Ν	%	Ν	%	Ν	%	Ν								
Austria	12.1 years	7.5	12	21	32	55	14	24	58								
France	9.4 years	8.0	41	41	38	38	21	21	100								
Netherlands	11.4 years	8.6	37	35	41	39	27	26	105								
Spain	16.6 years	8.5	11	16	17	24	42	60	70								
Sweden	7.8 years	8.4	25	51	17	35	7	14	49								
Great Britain(*)	10.1 years	4.2	2	11	14	78	2	11	18								
Total			128	32	159	40	113	28	400								

* estimated by the supervising examiners

The duration of the on-road driving time in each country was taken from the auditors' forms. Countries were then grouped into two categories according to this duration. This grouping was used in the analysis and is referred to in the rest of this chapter. Those

countries that had on-road driving time lasting around 20 minutes (Table 29.) were France and Spain. Four other countries, Austria, Great Britain, Netherlands and Sweden have on-road driving time lasting around 30 minutes. The longest tests were in Great Britain (mean 36 minutes) and the shortest in France (mean 21 minutes).

tests that were	passeuj									
	Mean	SD	Min	Max	Whole test should last (by regulations)					
Austria	34 min	6.26	20 min	53 min	25 min driving time (*)					
France	21 min	6.47	8 min	40 min	25 min					
Great Britain	36 min	4.67	28 min	54 min	57 min					
Netherlands	33 min	5.68	24 min	50 min	55 min					
Spain	25 min	3.78	8 min	40 min	25 min					
Sweden	34 min	4.89	22 min	45 min	45 min (+)					

Table 29 On road driving time and total test duration of the entire test in different countries (only tests that were passed)

* examiners' manual recommends a total time of 40 min, total time not fixed by regulations

+ in Gothenburg 60 min

2.2 Contents of the test

The examiners were asked how well the contents of the test allowed the examiner to make a correct overall decision about the candidate's safe driving abilities and skills (Table 30.). Answers were on a five point scale varying from "yes, completely" to "no, not at all". Two first options were analysed separately and the three other options on the "no, not at all" side of the scale were put together. This was done because answers in the "no, not at all" option were so few.

A large majority of the examiners (84%) in all countries were completely or almost completely satisfied with the contents of the test in terms of allowing them to make a correct overall decision about the candidate's safe driving abilities and skills. Examiners in the Netherlands, Sweden and Austria were the most satisfied. The distribution of answers was two-fold in Spain: 64% of them claimed that the test completely allowed them to make a correct decision. However, at the same time, over 26% of the examiners were not that satisfied (i.e. used scale points 3, 4 or 5).

Table 30. Do the contents of the test allow you to make a correct overall decision about the candidate's safe driving abilities and skills?

			"1 Yes		"2 Almost		"3 – (5 No not		
Country			comp	letely"	ly" completely?"		at all"			
	Mean	an SD	Ν	%	Ν	%	Ν	%	Total N	
Austria	1.70	0.7	23	40	28	49	6	11	57	
France	2.04	0.8	23	23	54	54	23	23	100	
Great Britain (*)	1.32	0.6	14	74	4	21	1	5	19	
Netherlands	1.69	0.7	44	42	51	48	11	10	106	
Spain	2.04	1.6	46	64	7	10	19	26	72	
Sweden	1.78	0.7	18	37	25	51	6	12	46	
Total			168	42	169	42	66	16	403	

(presented by country)

* estimated by the supervising examiners

Examiners were most satisfied with the contents of the test in urban areas (Table 31.) $(\chi^2 = 20.86, df = 6, p < 0.01)$. There were also examiners that were not that satisfied with the contents of the test, 22% of the examiners in urban periphery answered using the scale points 3-5.

Table 31. Do the contents of the test allow you to make a correct overall decision about the candidate's safe driving abilities and skills?

			"1 Ye	s	"2 Almost completely?"		"3-5 I	No not		
Test centre			comp	letely"			at all"			
type	Mean	SD	Ν	%	Ν	%	Ν	%	Total N	N
Countryside	2.08	1.2	16	33	23	48	9	19	48	
Smaller towns	1.79	1.1	20	53	10	26	8	21	38	
Urban periphery	1.97	0.8	35	28	62	50	27	22	124	
Urban	1.71	1.0	80	51	59	38	18	12	157	
Total			151	41	154	42	62	17	367	

(presented by test centre type)

The effects of all possible background factors (3) were tested. A three-factor model multivariate analysis (GLM) was carried out to test the effects of the test centre type,
examiners' working experience (in years) and country. There were no interactions. Working experience of the examiners was left out from the final analysis because it had not significant effect. Both the centre type (F=2.722, p<0.05) and country (F=3.805, p<0.01) had a significant effect on opinions of the examiners about whether the contents of the test allowed them to make a correct overall decision. Scheffe's test for group means showed that urban areas differed from urban peripheries: urban areas allowed the examiners to make a more correct overall decision about candidate's safe driving abilities and skills. There were no differences between other test centre types. Examiners in Netherlands, Austria and Sweden agreed most that the test allowed them to make a correct overall decision spanish examiners were not as certain.

The examiners' assessments of whether or not the test allowed them to make a correct overall decision about the candidate's safe driving abilities and skills varied according to the on-road driving time (Table 32.) A longer driving time made the assessments more positive ($\chi^2 = 15.02$, df = 2, p< 0.001).

			"1 Ye	s	"2 Al	most	"3 –	5 No not	
On-road driving time	Mean	SD	N	%	N	%	N	%	Total N
About 20 min.	2.04	1.19	69	40	61	36	42	24	172
About 30 min.	1.68	0.67	99	43	10	47	21	10	231
Total			168	42	71	18	63	16	403

Table 32. Do the contents of the test allow you to make a correct overall decision about the candidate's safe driving abilities and skills?

There were altogether 160 responses to the question on what elements could be added or removed from the test and why, thereby allowing examiners to make a correct overall decision about candidates' safe driving abilities and skills. In most answers (84%), suggestions were given on what to add or increase rather than removing something. The most typical suggestions related to different kinds of manoeuvring skills (featuring in 50

responses). The most typical single item was that the test duration should be increased. Most often, the examiners wanted to remove the technical or safety check.

2.3 Location of the test

A majority (69%) of the examiners in all countries were also satisfied with the location of the test centre allowing them to make a correct overall decision about the candidate's safe driving abilities and skills (Table 33.). Spanish, Dutch and Austrian examiners were most satisfied ($\chi^2 = 85.00$, df = 8, p<0.001). This may be connected to the location of the test centre. Austria, Spain and Netherlands differed according to the type of test centre (Table 27.). In Spain and the Netherlands, a majority of the test centres were located in urban areas whereas in Austria it was the opposite. 76% of the Austrian test centres were located in the countryside or in smaller towns. However, the distribution of answers was two-folded in Austria, Spain and Netherlands; there were also not so satisfied examiners. In Austria their proportion was 29%, in Spain 24% and in the Netherlands 18%. Also over half (54%) of the French examiners were not that satisfied (used scale points 3-5) about the location of the test centre allowing them to make a correct overall decision about candidate's safe driving abilities and skills. The majority of the French test centres were located in the urban periphery (Table 27).

Table 33. Does the location of the test (test routes and traffic conditions at this centre) allow you to make a correct overall decision about the candidate's safe driving abilities and skills?

<u>u</u> ,	.,									
			"1 Ye	S	"2 Alr	nost	"3 - 5	No not		
			comp	letely"	comp	letely?"	at all"	,		
Country	Mean	SD	Ν	%	Ν	%	Ν	%	Total N	
Austria	1.95	1.0	25	43	16	28	17	29	58	
France	2.53	0.8	11	11	35	35	54	54	100	
Great Britain (*)	1.63	0.8	11	58	4	21	4	21	19	
Netherlands	1.79	0.9	49	46	38	36	19	18	106	
Spain	1.93	1.5	48	67	7	10	17	24	72	
Sweden	2.18	1.0	11	22	26	53	12	25	49	
Total			155	38	126	31	123	30	404	

(presented by country)

* estimated by the supervising examiners

Examiners (Table 34.) were most satisfied with urban area test centres (test routes and traffic conditions) ($\chi^2 = 57.27$, df = 6, p<0.001).

(presented by te	est centr	e type)								
			"1 Ye	s	"2 Alr	nost	"3-5 N	lo not		
Test centre			comp	letely"	comp	letely?"	at all"	I		
type	Mean	SD	Ν	%	Ν	%	Ν	%	Total N	
Countryside	2.44	1.4	16	33	14	29	18	38	48	
Smaller towns	2.21	1.2	14	36	11	28	14	36	39	
Urban periphery	2.39	0.9	19	15	49	40	56	45	124	
Urban	1.70	1.0	90	57	42	27	25	16	157	
Total			139	38	116	32	113	31	365	

Table 34. Does the location of the test allow you to make a correct overall decision about the candidate's safe driving abilities and skills?

A three-factor model multivariate analysis (GLM) was carried out to test the effects of the test centre type, examiners' working experience and country. There were no interactions. Working experience of the examiners was left out from the final analysis because it had no significant effect. Both test centre type (F= 7.025, p<0.001) and country (F= 6.356, p< 0.001) had significant effect on whether the location of the test centre type allowed the examiners to make a correct decision. Examiners thought that urban areas allowed them to make a more correct decision about the candidate's safe driving abilities and skills. The opinions of the French examiners differed from the opinions of examiners in all other countries. French examiners were the most uncertain about the location of the test centre type allowing them to make a correct overall decision about the candidate's safe driving abilities and skills. The most certain were Dutch, Spanish and Austrian examiners.

Duration of on-road driving time had a significant influence on the assessment whether or not the test centre location allowed examiners to make a correct overall decision about the candidate's safe driving abilities and skills (Table 35.). Examiners in those

countries that had driving time lasting around 30 minutes (Austria, Great Britain, Netherlands and Sweden) were more certain ($\chi^2 = 17.24$, df = 2, p< 0.001).

			"1 Ye	s	"2 Alr	nost	"3 - 5	No not	
Or-road			comp	letely"	comp	letely?"	at all"	,	
Driving time	Mean	SD	Ν	%	N	%	Ν	%	Total N
About 20 min.	2.28	1.21	59	34	42	24	71	43	172
About 30 min.	1.90	0.96	96	41	84	36	52	22	232
Total			155	38	126	31	123	30	404

Table 35. Does the location of the test allow you to make a correct overall decision about the candidate's safe driving abilities and skills?

Examiners gave several explanations in response to the question on what features in the location of the test centre allowed or did not allow them to form the correct overall decision about the candidate. Answers related to restricted or poor coverage of the test centre area were most typical (62%). Among those, the most typical answer was that sometimes or on some routes there is not enough variety in terms of hazards, specific situations or traffic conditions. However, this answer was also the most common when the examiners evaluated that the location of the test centre helps them to form a correct overall decision about candidate's safe driving abilities and skills.

Having or not having enough variation in the location of test centre was the most common response mentioned. This was mentioned most often with regard to test centres located in the urban periphery, both as allowing and not allowing examiners to make a correct overall decision about the candidates' safe driving abilities and skills. Generally this feature was most often seen as a positive characteristic of test centres that were located in urban areas.

A majority of the French examiners thought that their test centre location does not help their assessment. French test centres were located most often in the urban periphery. In other countries, answers were more evenly distributed between the answer options on whether the location of the centres allowed or did not allow them to make a correct decision. Single items by countries are presented in Table 36.

		Helps (Does no	+) ot help ((-)				
Country	Α	F	GB	NL	S	SE	Total	
	n	n	n	n	n	n	n	%
Variety of hazards/possibilities /								
conditions/situations/elements/								
traffic conditions	+20/-6	+18/-47	+9/-1	+26/-9	+14/-11	+10/-5	176	64
Access to motorway/								
dual carriageway/	+2/-11	+1/-35	+1/-5	+2/-19	+1/-4	+2/-3	86	32
Opportunities for higher								
speed driving								
Traffic lights	+5	+3	+1	0	+3	0	12	4
Total	44	104	17	56	33	20	274	100

Table 36. Summary about why the location of the test centre allows / does not allow to form a correct overall decision about the candidate's safe driving abilities and skills? (95% of answers)

Of the negative items related to the location of the test centre that made it difficult to assess the candidate's safe driving abilities and skills, the most common responses were either too little traffic or too much traffic. Most of the answers concerning the negative items in the test centre location came from Sweden and the Netherlands.

2.4 Passing safe drivers, failing unsafe

Examiners in the Netherlands and Austria were the most certain that the test allows them to pass safe drivers and fail unsafe drivers ($\chi^2 = 72.40$, df = 8, p<0.001) (Table 37.). Also 60% of Spanish examiners agreed that the test completely allows them to pass safe and fail unsafe drivers. However, at the same time, one third of the Spanish examiners were not that certain. Over 40% of the examiners in France and in Sweden gave ratings of 3 or more (i.e. they thought that the test did not completely, or almost completely allow them to pass safe candidates and fail unsafe ones).

Table 37. Does the test allow you to pass candidates who you think will be safe drivers and fail those who you think won't be safe?

(presented by country)

			"1 Ye comp	s letely"	"2 Alr comp	nost letely?"	"3 - 5 at all"	No not	
Country	Mean	SD	Ν	%	Ν	%	Ν	%	Total N
Austria	1.72	0.9	28	48	21	36	9	16	58
France	2.39	0.9	16	16	38	38	45	45	99
Great Britain (*)	1.47	0.8	13	68	4	21	2	11	19
Netherlands	1.67	0.7	49	46	45	43	12	11	106
Spain	2.20	1.7	42	60	6	9	22	31	70
Sweden	2.41	1.1	11	22	17	35	21	43	49
Total			159	40	131	33	111	28	401

* estimated by the supervising examiners

The test centre type, in turn, influenced the examiners' (Table 38) answers. Examiners thought that urban areas allowed them to pass safe candidates most reliably ($\chi^2 = 27.51$, df = 6, p<0.001).

Table 38. Does the test allow you to pass candidates who you think will be safe drivers and fail those who you think won't be safe?

			"1 Ye	s	"2 Alr	nost	"3-5 N	lo not		
Test centre			completely"		completely?"		at all"			
type	Mean	SD	Ν	%	Ν	%	Ν	%	Total N	
Countryside	2.23	1.4	19	40	15	31	14	29	48	
Smaller towns	2.00	1.1	16	42	11	29	11	29	38	
Urban periphery	2.27	0.9	25	20	54	44	44	36	123	
Urban	1.85	1.1	79	51	43	28	34	22	156	
Total			139	38	123	34	103	28	365	

	(presented	by test	centre	type'
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A three-factor model multivariate analysis (GLM) was carried out to test the effects of the test centre type, examiners' working experience and country. There were no interactions. Examiners' working experience (in years) was left out from the final analysis because it had not significant effect. Only 'country' had a significant effect (F=5.988, p<0.001). Examiners in the Netherlands and Austria were most certain that the test allows them to pass safe drivers and fail unsafe drivers. Post hoc tests (Scheffe's) showed that the opinions of the examiners in these two countries differed significantly from French and Swedish examiners, however, were more certain than their French and Swedish counterparts.

Those examiners that had a longer on-road driving time in their country were more certain that they are able to pass safe and fail unsafe candidates (Table 39.) ($\chi^2 = 21.13$, df = 2, p<0.001).

			"1 Ye	s	"2 Alr	nost	"3 - 5		
On-road			comp	letely"	comp	letely?"	at all'	,	
Driving time	Mean	SD	Ν	%	Ν	%	Ν	%	Total N
About 20 min	2.31	1.27	58	34	55	26	67	40	169
About 30 min	1.82	0.90	101	44	87	38	44	19	232
Total			159	40	142	35	111	28	401

Table 39. Does the test allow you to pass candidates who you think will be safe drivers and fail those who you think won't be safe?

Responses to the question on whether the test allows examiners to pass safe candidates and fail unsafe candidates were quite evenly distributed. The same items were mentioned in both groups, as either helping or making the assessment more difficult. Possibilities, situations or time to allow for rechecking were the most common items enabling the examiners to make the right decision. The most common negative factor was the duration of the test.

2.5 Is the total time of the test well divided up?

Generally, in all countries the examiners thought that the total time of the test was well allocated (Table 40.). Examiners in the Netherlands and in Austria were the most satisfied ($\chi^2 = 42.05$, df = 4, p<0.001).

	Well		Need	s to be		
Country	divide	ed	divid	ed differentl	у	
	Ν	%	Ν	%	Total N	
Austria	49	84	9	16	58	
France	23	51	22	49	45	
Great Britain (*)	18	95	1	5	19	
Netherlands	94	90	10	10	104	
Spain	39	59	27	41	66	
Sweden	28	58	20	42	48	
Total	251	74	89	26	340	

 Table 40. How well is the total time of the driving examination divided up?

 (presented by country)

* estimated by the supervising examiners

The type of test centre and working experience of the examiners did not affect the opinions of the examiners on how well the total time of the test is divided up.

Those examiners whose on-road driving time lasted about 30 minutes thought more often that the total time of the test is well divided up than the examiners whose on-road driving time lasted about 20 minutes (Table 41.) ($\chi^2 = 27.52$, df = 1, p<0.001).

	Well		Need			
On-road	divide	d	divid	ed differently	/	
Driving time	Ν	%	Ν	%	Total N	
About 20 min	62	56	49	44	111	
About 30 min	189	83	40	17	229	
Total	251	74	89	26	340	

Table 41. How well is the total time of the driving examination divided up?

The examiners mentioned more often contents that required more time than contents that would need less time. Most typically, they thought that the driving time should be longer. More time was also considered necessary for interaction (discussion or briefing) with the candidate. Of the contents that would need less time, the most common items were technical questions and the vehicle or safety check.

2.6 Is the total duration of the test sufficient?

Examiners' opinions varied from country to another on whether or not the total duration of the test is sufficient (Table 42.). Austrian examiners were clearly most satisfied with the total duration of the test ($\chi^2 = 95.69$, df = 8, p<0.001). Examiners in France and Sweden were least satisfied with the total duration of the driving test; 66% of examiners in these two countries answered 'no, not at all'. In Spain and the Netherlands, the distribution of answers was two-fold. There were both completely satisfied examiners as well those who were not that satisfied.

			"1 Ye	s	"2 Al	most	"3 - 5	No not	
			comp	completely"		oletely?"	at all"	,	
Country	Mean	SD	Ν	%	Ν	%	Ν	%	Total N
Austria	1 55	10	42	72	6	10	10	17	58
France	3.04	1.1	8	8	26	26	66	66	100
Great Britain (*)	1.68	0.8	10	53	6	32	3	16	19
Netherlands	1.94	1.1	50	47	27	26	29	27	106
Spain	2.83	1.8	31	44	7	10	33	47	71
Sweden	2.98	1.2	7	15	9	19	31	66	47
Total			148	37	81	20	172	43	401

 Table 42. Is the total duration of the driving test sufficient?

* estimated by the supervising examiners

(presented by country)

The working experience of the examiners had no effect on whether or not they were satisfied with the total duration of the test.

Examiners in the urban periphery were least satisfied with the total duration of the test (Table 43.). 60% of these examiners thought that the total time is not sufficient ($\chi^2 = 26.44$, df = 6, p<0.001).

			"1 Ye	s	"2 Al	most	"3-5 N	lo not	
Test centre			comp	completely"		completely?"		I	
type	Mean	SD	Ν	%	Ν	%	Ν	%	Total N
	0.40	4.0	05	50	0	40			40
Countryside	2.19	1.6	25	52	9	19	14	29	48
Smaller towns	2.35	1.3	14	38	6	16	17	46	37
Urban periphery	2.87	1.3	23	19	27	22	74	60	124
Urban	2.31	1.4	64	41	33	21	59	38	156
Total			126	35	75	21	164	45	365

Table 43. Is the total duration of the driving test sufficient?(presented by test centre type)

Examiners in the countries where the on-road driving time was about 20 minutes were less likely to be satisfied with the total duration of the test (Table 44.) ($\chi^2 = 31.82$, df = 2, p<0.001).

			"1 Ye	s	"2 Al	most	"3 - 5	No not	
Total duration			completely"		completely?"		at all"		
of the test	Mean	SD	Ν	%	Ν	%	Ν	%	Total N
About 20 min	2.95	1.45	39	23	33	19	99	58	171
About 30 min	2.03	1.19	109	47	48	21	73	32	230
Total			148	37	81	20	172	43	401

Table 44. Is the total duration of the driving test sufficient?

The majority of the examiners wanted to have more time added to the total test. The first most common reason was that they wanted to have more driving time (18% of the answers), mostly suggested by French, Dutch, Spanish and Austrian examiners. The second most common reason for wanting more time was to allow a variety of situations and conditions to be tested (13% of the answers), especially in France and Sweden. More time for retesting and checking was requested especially by French and Swedish examiners, and also by the Dutch.

Administration, technical questions and the vehicle or safety check were most often mentioned as matters that required less time or should be tested separately.

2.7 How much on-road time is needed to enable a valid assessment?

Swedish and Dutch examiners wanted to have the longest on-road time (Table 45.). Swedish examiners had also the largest variation in their responses: from 25 minutes to 180 minutes. Spanish, French and Austrian examiners agreed that about 30 minutes driving on the road was sufficient to make a valid assessment.

(presented by country)							
Country	Mean	SD	Min	Мах	No. of answers		
Austria	20.0	83	15	50	50		
-	29.0	0.5	- 15	50	30		
France	29.2	9.8	5	60	96		
Great Britain (*)	35.3	4.9	30	45	19		
Netherlands	44.3	9.8	30	70	93		
Spain	31.4	10.3	20	60	64		
Sweden	56.9	27.6	25	180	45		

Table 45. How much on-road time (minutes) do you think is needed during the test to enable a valid assessment?

* estimated by the supervising examiners

In the urban periphery less time was needed than in other test locations to make a valid assessment (Table 46.). The longest on-road time was needed in urban areas.

Table 46. How much on-road time (minutes) you consider is needed during the test to enable a valid assessment?

Mean	SD	Min	Мах	No. of answers	
34.27	12.48	20	60	41	
36.18	13.02	15	75	38	
33.52	11.59	5	60	115	
40.96	16.97	15	120	139	
	Mean 34.27 36.18 33.52 40.96	MeanSD34.2712.4836.1813.0233.5211.5940.9616.97	MeanSDMin34.2712.482036.1813.021533.5211.59540.9616.9715	MeanSDMinMax34.2712.48206036.1813.02157533.5211.5956040.9616.9715120	MeanSDMinMaxNo. of answers34.2712.4820604136.1813.0215753833.5211.5956011540.9616.9715120139

(presented by test centre type)

On-road time should be increased by about 10 minutes according to French and Spanish examiners and by about 13 minutes according to Austrian, Dutch and Swedish examiners (Table 47).

Table 47. How much on-road time (minutes) do you think is needed during the test to enable a valid assessment?

Duration								
of the test	Mean	SD	Min	Max	No of answers			
About 20 min	30.08	0 00	5	60	160			
About 30 min	43.22	9.99 18.54	15	180	188			

There were altogether 300 responses to the question on why more time is needed for driving. The most common arguments in favour of more on-road time were to cover a sufficient range and variety of situations as well as to extend the test beyond the immediate surroundings of the test centre. Also, features connected to the assessment itself (such as enabling a robust assessment, retest and check) were thought to require more time. A longer driving time was expected to more reveal the candidates' true capabilities and characteristics.

2.8 What else should change?

Examiners were asked if there was anything else that should be changed in the practical driving test to help improve candidates' safety after passing the driving test (Table 48.). A majority of answers were connected to training, post-licensing and manoeuvring issues.

nprove safety, n= 261 (answers)	n	%
Training		
Stepwise driver training / graduated training and/or testing	27	10
Some don't have necessary conditions for a valid driving test	24	9
Improve driver training/education	15	6
Anti skid course compulsory	10	4
Alcohol simulation	1	0
Demand more training	1	0
Total	78	30
Manoeuvring		
Emergency stop	13	5
Test special manoeuvres in closed-off area	10	4
Test obstacle avoidance	4	2
Train or test on coping with sand, blow out; ice	7	3
Give special manoeuvres more importance in assessment	6	2
Add manoeuvres to the driving test	3	1
Test only one manoeuvre	6	2
Give more weight to vehicle checks in test	3	1
Small manoeuvring skills test before the practical on road tes	t 1	0
Total	53	20
Post licensing		
Retest after 2 years	18	7
Make advanced courses compulsory	9	3
Compulsory refresher course after 1 - 2 years	8	3
Promote advanced courses	6	2
Probationary licence	7	3
Make people pay driving penalties immediately by credit card	2	1
Drive accompanied for a year after passing test	1	0

Table 48. What could help to improve candidates' safety after passing the driving test?

(similar contents are summed up into groups and total sums of these are presented)

al	261	100
Total	15	0
	1 15	0.3 e
Ensure continuous training of examiners	1	0.3
	1	0.3
Allow examiner more scope to fail an unsafe candidate	6	2
Stop instructors from using dual controls to influence the test	6	2
Examiners and instructors	~	-
Total	15	6
Make candidates more aware of dangers of driving	3	1
Attitude test	7	3
More attention to behaviour and hazard perception	5	2
Attitude and hazard perception		
Total	39	15
Test driving on verge	3	1
Test on roads not familiar to candidate	5	2
Test controlling lights and other equipment when driving	4	2
Test independent driving	8	3
Test high speed driving	1	0
Test driving on motorways	2	1
Test overtaking	2	1
Test night time driving, special situations, tunnels	12	5
Test large roundabouts with multiple exits	2	1
Testing of various traffic situations		
Total	52	20
Compulsory unving lessons after buying an own car	I	0

Multi stage driver training was proposed by Dutch and Swedish examiners, and dividing the test into two parts and also testing special manoeuvres mostly by French and Swedish examiners. Testing special situations such as night time driving and making anti-skid courses compulsory were put forward mostly by Dutch examiners.

Examiners also claimed that some centres do not have the necessary conditions for a valid driving test. 5 Swedish, 4 Dutch, 3 Austrian, 3 Spanish and 3 French examiners shared this opinion.

2.9 Any other comments?

There were a total of 122 responses to this question. The comments featured a wide range of different items covering in all 31 of the 33 possible items (Table 49.). Most answers were related to the contents of the test and organisational issues.

Other comments (122 answers)	n	%	
Contents of the test			
Test special manoeuvres separately	9	7	
Test night driving	6	5	
Keep two candidates in the test vehicle at the same			
time \rightarrow can cover more distance	6	5	
More time to talk to candidates to pass on safety tips	5	4	
Candidates should be asked to explain why			
they do things	4	4	
Improve theoretical test	1	1	
Compulsory medical check for all	1	1	
Total	31	25	
Organisation			
Simplify administration	7	6	
Make first test slots in a day longer because			
of traffic congestion	4	4	
Support the examiner (candidates' tricks,			
lack of respect)	3	2	
Need to improve the image of the driving test			
and the examiner	3	2	
More time for recovery between two test	3	2	
Introduce penalty point system	3	2	
It would be valuable to have the opportunity to			
communicate with other European partners	2	2	
Persons banned for driving by court for a period			
of time should be re-tested	1	1	
It would be valuable to exchange information			
with other examiners	1	1	

Table 49. Items that were answered to the question: Any other comments?

	122	100	
i otai	-	4	
	۲ ۸	2 A	
has been trained	2	2	
Test at a different centre from where candidate	۷	2	
check and recheck every item	2	2	
Flace			
Placo			
Total	12	10	
Have additional mirrors fitted to test vehicles	1	1	
mprove facilities at test centres	11	9	
Facilities			
Total	22	18	
in dangerous situations	1	1	
- Oblige driving instructors to use the dual controls			
Driving instructors influence the test	5	4	
mprove selection and training of instructors	4	4	
mprove selection and training of examiners	12	10	
Examiners and instructors			
Total	24	20	
Take account of opinion of the instructor	1	1	
Broaden the test to broaden the training	2	2	
Make stepwise training compulsory	3	2	
Driving test is only a part of learning to drive	5	4	
Check the amount of training a candidate has had	6	5	
responsible driver	7	6	
Training is the key to being a safe and socially			
Training			
iotai	20	23	
	20	22	
Need to have a uniform European driving test	1	1	

2.10 Conclusions

Total

Examiners were experienced in all countries; the most experienced ones were in Spain and the least experienced in Sweden. The test centres in Austria were located in the countryside or in smaller towns. In other countries, the test centres were located most often in the urban periphery or in urban areas. The duration of the on-road driving time was about 20 minutes in France and Spain; in other countries it lasted about 30 minutes.

Both the test centre type and country significantly affected the opinions of the examiners on the contents of the test and whether they allow them to make a correct overall decision. Urban areas differed from the urban periphery. Urban areas allowed examiners to make a more correct overall decision about the candidate's safe driving abilities and skills. Examiners in Netherlands, Austria and Sweden agreed the most that the contents of the test allowed them to make a correct overall decision, while the French and Spanish examiners were not that certain.

Examiners mostly wanted to add or increase elements in the driving test rather than removing them. Suggestions related to different kinds of manoeuvring skills were most typical. The most typical single item was that the test duration should be increased. Most often the examiners wanted to remove contents concerning the technical or safety check.

Both test centre type and country significantly affected the examiners' opinions on whether the location of the test centre type allowed them make a correct overall decision about the candidate's safe driving abilities and skills. Examiners thought that urban areas allowed them to make a more correct decision. French examiners were most uncertain, while Dutch, Spanish and Austrian examiners were most certain.

The most typical answer why the test centre helps or does not help to form a correct decision was the restricted or poor coverage of the test centre area. Examiners thought that the location of the test centre did not allow enough variation for example in hazards, situations or traffic conditions. However, if location was evaluated good, this was also the most common reason why it helped in assessment.

Examiners' ratings of whether the test allowed them to pass safe candidates and fail unsafe candidates differed between countries. Examiners in the Netherlands and Austria

were most certain that test allows them to pass safe drivers and fail unsafe drivers. Opinions of the examiners in these two countries differed significantly from French and Swedish examiners' opinions, but not from Spanish examiners' opinions. Spanish examiners were more certain than their French and Swedish colleagues.

Answers to the question how well the test enables to pass safe candidates and fail unsafe candidates were quite evenly distributed. The same items were mentioned both as helping the assessment and making it more difficult. Possibilities, situations or time to allow rechecking was the most common item that facilitated the examiners' assessment for passing safe candidates and failing others. The most common negative factor was that the test duration was not long enough.

A majority of the examiners were satisfied with how the time is divided up. Austrian and Dutch examiners were the most satisfied. Examiners in countries that had a longer driving test thought more often that the test is well divided up. Elements that needed more time were mentioned more often than contents needing less time. The most typical one was that the duration of the test should be longer. More time was also required for interaction with the candidate. Examiners thought that less time is needed for technical questions and the vehicle or safety check.

Austrian examiners were clearly the most satisfied with the total duration of the test and examiners in France and Sweden were least satisfied. In both countries 66% answered using the scale 'no, not at all'. In Spain and the Netherlands the distribution of answers was two-fold. There were both completely satisfied examiners as well those who were not that satisfied. Examiners in the urban periphery were least satisfied with the duration of the test. Examiners in countries where the on-road driving lasted about 20 minutes were less satisfied with the duration of the test.

A majority of the examiners wanted to have more time allocated to the total test. The two most common answers were that they wanted to have more driving time and to allow a variety of situations and conditions to be tested. Administration, technical questions and the vehicle or safety check were most often mentioned as matters that needed less time or that should be tested separately.

The most common suggestion was to increase driving time. Mostly French, Dutch, Spanish and Austrian examiners suggested this. Time to allow a variety of situations and conditions was requested by all examiners, especially by the French and Swedish. More time for retesting and checking was requested especially by French and Swedish but also by Dutch examiners.

Swedish and Dutch examiners wanted to have the longest on-road time. Spanish, French and Austrian examiners agreed that about 30 minutes is sufficient to make a valid assessment. Working experience did not influence it. In the urban periphery, examiners needed less time than in other places to make a valid assessment. Spanish and French examiners wanted to increase on-road time by about 10 minutes and Austrian, Dutch and Swedish examiners by 13 minutes.

The most common arguments why more on-road time is needed were to cover a sufficient range and variety of situations as well as to extend the test beyond the immediate surroundings of the test centre. Also, features connected to the assessment itself (to enable a more robust assessment, retest and check) were considered to require more time. Longer driving time was expected to better reveal the candidates' true capabilities and characteristics.

PART D: DISCUSSION AND CONCLUSIONS

1 THE PRACTICAL DRIVING TEST AND THE EUROPEAN DIRECTIVES

To fully understand what kind of information we are looking at in this project, it is important to understand what is covered in the European Driving License Directives and what the European Commission is trying to achieve through these directives. This is the basis for determining what the aims of the project are in the context of meeting the requirements of the directives and considering whether the contents of the driving test as described in the directive can be and indeed are tested in driving tests as we know them today.

1.1 Overview aims and contents European Driving License Directives⁴

The aims of the European Directives on driver licensing are to harmonise the conditions that must be met by candidates applying for a driving license to facilitate recognition of these licenses throughout the member countries of the European Union and in this way facilitate the movement of persons. A second but by no means less important aim of the European Driving License Directives is to enhance the safety of all road users.

1.1.1 Legislation

Once the first step had been taken by the implementation of Directive 80/1263/EEC, harmonisation of the driving license was taken a step further by the implementation of Council Directive 91/439/EEC of 29 July 1991 on driving licences. In the following years the directive was amended several times.

Table 50 provides more detailed information of when and by which directives these amendments were made.

⁴ Based on information from the European Commission website

Act	Date of entry into force	Final date for implementation in the Member States	Contents
Directive 80/1263/EEC	04.12.1980	01.01.1983	The First European Driving License Directive
Directive 91/439/EEC	01.07.1996	01.07.1994	The second European Driving License Directive which replaced Directive 80/1263/EEC
Directive 94/72/EC	01.01.1995	01.01.1995	Finland and Sweden authorised to issue driving licenses in line with own national models until 31.12.1997
Directive 96/47/EC	18.09.1996	01.07.1996	The introduction of the new "credit-card" format
Directive 97/26/EC	08.06.1997	01.01.1998	The introduction of a Driving License Committee to assists the Commission
Directive 2000/56/EC/EC	11.10.2000	30.09.2003	Extending the requirements for the practical and theory test as listed in Annex II of Directive 91/439/EC

In addition to the directives, Commission Decisions altered the exact content of the directives:

- Decision 96/427/EC - Official Journal L 175, 13.07.1996

Commission Decision of 10 July 1996 concerning derogation from the provisions of Annex III of Council Directive 91/439/EEC.

- Decision 2000/275/EC - Official Journal L 91, 12.04.2000

Commission Decision of 21 March 2000 on equivalences between certain categories of driving licences. The Annex to the Decision sets out tables of equivalence between Member States' driving licences.

Preparations are currently underway for a new Driving License Directive. There is a proposal for a Council Directive on driving licences (which will repeal and replace Directive 91/439) with the following main objectives:

- to reduce the possibilities of fraud;
- to guarantee the free movement of citizens;
- to contribute to improved road safety.

1.1.2 Short overview contents European Driving License Legislation

Driving licences are issued by the Member States according to their national regulations. However, they must respect the minimum requirements laid down by Directive 91/439/EEC and Directive 2000/56/EC, namely:

- all driving license applicants must apply for their driving license in the member state where their "normal residence" is;
- all applicants must pass a practical and theory examination;
- all applicants must meet minimum standards of physical and mental fitness;
- all applicants must meet the minimum age conditions for the different vehicle categories;
- there is a formal ban on holding more than one licence, even if it is temporarily suspended or withdrawn;
- the vehicle categories are defined in terms of the MAM (Maximum Authorised Mass), number of seats (when applicable) and the maximum cubic capacity and maximum power in kilowatts (when relevant);
- the conditions subject to which the driver is authorised to drive are defined (if a driver is limited by a physical disability, for example, it is possible that the Driving License Directive describes limits for which vehicles can be driven);
- for certain vehicle categories, drivers must already be in the possession of a license to be able to apply for another license category.

Driver licensing has not been exhaustively harmonised and as a result, Member States have residual competence (following the principle of subsidiarity) on various points:

- the period of validity of driving licences;
- the frequency of medical examinations;
- States can take measures on taxation (connected with holding a licence);
- States can impose sanctions (e.g. penalty points, provisional license and even disqualification of licenses);
- sub-categories are optional.
- member States may grant certain equivalences for driving in their territory (such as motor-powered tricycles and quadricycles under a category A or A1 licence and light motorcycles under a category B licence);
- the choice of a "plastic" or "paper" driving licence model is the prerogative of the Member State;
- national vehicle categories still exist (for example for agricultural tractors or mopeds).

1.2 The European Directives and the TEST project

The first objective of the TEST project was to take a look at the contents, location and duration of the driving test and to consider whether they fit together. In other words, whether it was possible to test all the elements listed in the European Directives in the time currently allocated to the practical driving test and whether the locations in which the tests are conducted provide the opportunity to test these items. The information collected about the contents tested in the practical driving test is based on the contents of a driving test as described in Directive 2000/56/EC. The information used in this section is based both on the data collected through the audit forms and the information collected through the examiner questionnaires.

1.2.1 Test duration

In general, it appears to be difficult to test all the items listed in Directive 2000/56/EC in the time provided for the practical driving test. One of the main conclusions of the

examiner questionnaire sent out in the framework of the TEST project was that the examiners indicated that they needed more time for the driving test.

- When asked what could be done to make it easier to make a correct overall decision about the candidate's safe driving skills, the answer given most was to increase the length of the test.
- When asked what made it most difficult to separate potentially safe from potentially unsafe drivers, the answer most given was the duration of the test.
- When asked what parts of the test needed more additional time, the answer most given was general driving time.

However, the questionnaire also showed that examiners were relatively satisfied with the driving test as a whole and were quite confident that it was allowing them to make a correct overall decision about the candidate's safe driving skills and abilities. In fact only 16% were not completely confident and answered with a 3, 4 or 5 (on a scale from 1 to 5 where 1 was yes completely and 5 was no not at all). When the duration of the test was correlated with examiner assessments of whether or not it allowed them to make a correct decision about the candidate's safe driving abilities and skills, longer tests made the assessments more positive. Examiners from countries with a comparatively shorter test (Spain and Austria) were less confident; 24% of examiners from Spain and France answered with a 3, 4 or 5 as opposed to only 10% of examiners from Austria, Netherlands, Great Britain and Sweden.

On the audit forms, auditors were asked to indicate to what degree the tests allowed for a robust assessment to be made of the candidate on the basis of (amongst other things) the amount of time spent on the different elements. Items which were most difficult to assess when looking at the amount of time spent on them were independent driving, driving on long slopes, railway crossings, overtaking and driving on motorways. The mean evaluation given to these items for both passed and failed tests for all countries (on a scale from 1 to 4 with 1 being not possible to make a robust assessment and 4 being completely robust assessment⁵) was less than 2. If we look at the number of times

⁵ Auditors were asked to make an evaluation on a scale form 1 to 5. See the explanation given in Part C section 1.1. for the reasoning behind the scale change to a 4 point scale.

these topics are tested we can see that this is less than once per test and the amount of time spent on independent driving is about 2 minutes.

The audit forms were also used to record when during the test errors were made on a time line. In addition auditors were asked to distinguish between type 1 errors (potentially dangerous errors) and type 2 errors (near accident errors). The patterns for the two types of error were generally the same with the main difference being that type 2 errors were mostly only recorded for failed tests (Table 21).

In short tests (up to 24 minutes), errors are made mostly at the beginning. For medium tests (25 minutes to 34 minutes) and long tests (longer than 34 minutes) errors are relatively evenly distributed over the duration of the test (Figure 13). When looking at the test centre type, centres in the urban periphery have a peak of errors in the first 5 - 10 minutes of the test.

The examiner questionnaires and forms completed in this project seem to indicate that in general, the length of the test as it is now provides examiners with enough time to evaluate what they need to. However, they also suggest that examiners would be able to make a more robust evaluation if a bit more time was spent on particularly those elements that they are currently finding relatively difficult to evaluate. Examiners themselves indicated that they would like more time to retest elements and indeed candidates they are unsure of. It is interesting to note that independent driving was tested most in countries with a longer test (Sweden, Austria and Netherlands).

Information collected through the TEST audit forms indicated that nearly all countries were finding it difficult to test all the elements listed in the directive within the timeframe of the current practical driving test. This was true for countries where the on-the road time was longer than the minimum time of 25 minutes indicated in the directive, and even more so for those countries not meeting the minimum requirements of the directive regarding minimum driving time.

1.2.2 Test location

The examiner questionnaires suggest that the location of the test centre also plays a role in determining how safe a driver will be and in the amount of confidence with which an examiner is able to make a confident evaluation of the candidate.

According to the examiner questionnaires, the most significant problems of particular test centres were:

- the variety of hazards / possibilities / conditions / situations / elements / traffic conditions
- access to motorways / dual carriageways

When asked whether the contents of the test enabled them to make a correct overall decision about the candidate's safe driving abilities and skills, test centres in urban areas and in smaller towns seemed to make this decision easiest for the examiners. 53% and 51 % respectively from these areas answered this question with a 1, yes completely as opposed to 33% from countryside centres and 28 % from test centres in the urban periphery.

When asked whether the location of the test enabled them to make a correct overall decision about the candidate's safe driving abilities and skills, test centres in urban areas were found to be most suitable (57% of examiners from these test centres answered with 1, yes completely, as opposed to 33%, 36% and 15% of the examiners from test centres in other locations).

A three-factor model multivariate analysis was carried out to test the effect of the test centre type, examiners' working experience and country which showed no interactions. However, the test centre type did have a significant effect on the examiner's ability to make a correct decision with urban areas coming out as the most suitable.

When asked if the total duration of the test was sufficient, examiners in test centres in the urban periphery were leased satisfied (only 19% replied with 1, yes completely) and examiners in the countryside were most pleased (52% replied with 1 yes completely).

The audit forms show that most time in the test is spent on urban roads and in residential areas and least time is spent on motorways. If we look at the audit forms in more detail, the most striking differences between the number of times different items were tested on the basis of the location of the test centre are shown in Table 51 below:

	Countryside	Small town	Urban periphery	Urban
Light regulated junctions	2.31	3.17	7.70	6.86
Lane changes	0.71	1.69	2.46	3.70
Driving on motorways	.09	.66	1.65	1.14
Roundabouts	1.79	4.37	4.80	3.81
Pedestrian crossings	5.97	6.39	10.49	8.34

 Table 51 Biggest differences between the number of times different topics were covered in the test per test centre type, passed tests only

Items that are (logically) comparatively tested little at countryside centres and centres in small towns are:

Light regulated junctions, lane changes, driving on motorways, roundabouts.

Auditors were asked to determine the possibilities the test offered for robust assessment of the candidate's performance of different topics (table 2 of the audit form) with regards to how much time was spent on the topic (duration), where the item was checked (location) and the traffic density. Test centres in the countryside scored lower than test centres in any other location for both passed and failed tests, both before and after the implementation of the new directive for all of these items. This means that auditors felt that it was more difficult to asses the candidate's performance in relation to these items at countryside centres (Table 24).

Urban test centres generally scored highest in this evaluation. It must be noted, however, that these differences were not extremely big. Answers were again given on a scale from 1 to 4 (with one being not possible at all to make a robust decision and 4 being completely convinced of robust decision). The differences were biggest for the period before the implementation of Directive 2000/56/EC and then especially for the robustness concerning the duration for failed tests (2.9 in urban test centres as opposed to 2.7, 2.6 and 2.3); the robustness concerning the location for passed tests (3 in urban

test centres as opposed to 2.8, 2.6 and 2) and the robustness concerning the traffic density for failed tests (2.9 in urban test centres as opposed to 2.5, 2.4 and 2.1).

If we look at the second list of items on the form (table 5 on the audit form) we can see a slightly different pattern (Figure 22). Again, the differences between the test centres are not very big but it is clear to see that test centres in certain locations have a small advantage over test centres in other locations. In general countryside centres again scored lowest and rural centres again scored highest. Some of the most extreme differences can be found when looking at the following items: the distance to other road users (the mean for countryside centres was 3.6 and the mean for centres in the urban periphery was 4); obeying traffic lights, signals and indications (the mean for countryside centres in small towns was 1.9 and the mean for centres in the urban periphery was 2.7) and making driving predictable (the mean for test centres in smaller towns was 2.6 and the mean for centres in the urban periphery was 3.6).

If we look at the overall estimation of the possibilities to make a robust assessment of the candidate's performance (Table 26) we see that test centres in the countryside provided the least possibilities and test centres in urban areas and the urban periphery provided the most possibilities. However, the differences are again small. A summary of these figures is shown in Table 52 below.

Test result	Test centre type			
	Countryside	Small town	Urban periphery	Urban
Pass	2.4	2.8	2.9	2.9
Fail	2.4	2.6	2.8	2.8
Total	2.4	2.7	2.8	2.9

Table 52 Mean scale values of overall estimation of the possibilities to make a robust assessment of the candidate's performance by test centre type, and separate for passed and failed tests after the implementation of Directive 2000/56/EC

Pass rates were highest in countryside centres and small towns (25% higher than in test centres in the urban periphery or urban areas).

1.2.3 Comparing Directive 2000/56/EC to directive 91/439/EEC

One of the objectives in the project was to compare the contents of the two Driving License Directives and to see whether there was a difference between driving tests conducted before the implementation of the Directive 2000/56/EC on 30 September 2003 and after.

To be able to do this effectively, it is necessary to know where the differences between the directives lie.

In Annex 10, the contents of the two directives are compared in detail.

On the basis of this comparison we can say that the following new elements have been added:

- the technical safety check should also cover information about fluids and head restraints.
- the candidate should be familiar with and able to use safety belts, rear-view mirrors and head restraints
- the candidate should be familiar with the weight, dimensions and characteristics of the vehicle

In addition to these extra elements, the Directive 2000/56/EC is more specific in requirements about the following elements in the driving test:

- approaching / exiting motorways and dual carriageways
- being overtaken by other traffic
- special road features (roundabouts; tram/bus stops; pedestrian crossings; driving up-/downhill on long slopes)
- priority / giving way (priority at crossroads, intersections and junctions; giving way at other occasions (e.g. changing direction, changing lanes, special manoeuvres)
- signalling (give signals where necessary, correctly and properly timed; indicating directions correctly; taking appropriate action with regard to all signals made by other road users)

- braking and stopping (Braking and stopping: decelerating in time, braking or stopping according to circumstances; anticipation)

Other parts are now more extensively described:

- the section about speed adaptation has become more elaborate:
 "not exceeding the maximum allowed speed; adapting speed to weather/traffic conditions and where appropriate up to national speed limits; driving at such a speed that stopping within distance of the visible and free road is possible; adapting speed to general speed of same kind of road users"
- the section about observation has become more elaborate:
 "Observation: all-round observation; proper use of mirrors; far, middle, near distance vision"
- the section about positioning has become more elaborate:
 "Correct position on the road: proper position on the road, in lanes, on roundabouts, round bends, suitable for the type and the characteristics of the vehicle; pre-positioning"
- road signs, etc.

"Traffic lights, road signs and other indications: acting correctly at traffic lights; obeying instructions from traffic controllers; acting correctly at road signs (prohibitions or commands); take appropriate action at road markings"

1.2.4 Directive 2000/56/EC and the driving test

Six countries were involved in the TEST project: Great Britain, Spain, France, the Netherlands, Sweden and Austria. In this section we will take a closer look at the practical driving tests in these countries and consider what kinds of changes needed to be made to their tests according to the requirements of Directive 2000/56/EC.

In General

The introduction of Directive 2000/56/EC meant that all countries in the European Union had to make changes to their driving tests to meet the additional requirements and suggestions (elements that should be tested if possible). Some of these requirements

are causing more problems than others and for a number of countries in particular, meeting all the new requirements is proving to be quite a challenge.

On the basis of the information collected through the audit forms we can say that items that appear to be problematic (and had not yet been fully introduced at the time of this survey) for all countries involved in this project are:

- the added focus on the seating position (the proper use of head restraints and rear view mirrors); on the audit forms this was recorded as "driving and sitting posture"
- explicitly testing overtaking
- testing driving on long slopes

In fact, none of the countries involved in this project, managed to make significant changes to whether or not these elements were systematically incorporated in all driving tests. This meant that at the time of the conclusion of this survey, all 6 countries involved in this project are still only minimally testing the seating position, overtaking and driving on slopes (Figure 25).



Figure 25 the difference in the number of times the various items were tested before and after the implementation of Directive 2000/56/EC.

However, when comparing how robust the assessment of various items was before and after the implementation of the directive, there are some changes. The auditor's assessment for those tests in the period after the implementation of the directive were more robust for driving away, special manoeuvres, sitting position and the safety check.

To meet all new requirements, certain countries had to make more changes to the practical driving test that was in place than others. Some of these changes are reflected in the data collected in this project, other changes still had to be made after the audits done in this project had been concluded (September 2003 – September 2004). An overview is given below of changes that were needed and changes that were made.

Great Britain

The driving test in Great Britain already met nearly all the requirements of the new directive but one: an obligatory technical safety check for each candidate. Previously, the safety check was less extensive and was not a part of every test but was performed at random.

The implementation of the safety check in Great Britain is clearly reflected in the data collected. The number of technical safety checks performed after 30 September 2003 is significantly greater than the number of checks before this date (see Figure 10 in Part C).

The change to the driving test (introducing a technical safety check for all candidates) meant that it was necessary to change the legislation.

Spain

The driving test in Spain was not long enough and should have been extended to meet the requirements of Directive 2000/56/EC. The data collected in this project show that at the time of the "After" survey, this change had not yet been made. The average length of the driving test did not change much before and after 30 September 2003.

Concerning the legislation, the requirements of the directive meant it was necessary to change the General Driver's Regulations. There was a Royal Decree "Real Decreto") 1598/2004, dating from 2 July, published in the Official Journal nº 173, of 19 July.

France

In France, the length of the driving test also needed to be changed to meet the minimum requirement of 25 minutes of net driving time required by Directive 2000/56/EC. The audits showed that in France, the length of the driving test did increase significantly. In fact the mean duration of the driving time in the practical test went from 15.6 to 22.2 minutes (Table 14).

Increasing the length of the test also required a change in the French legislation for category B. According to this legislation, the test now lasts 35 minutes in 49 departments, with 25 minutes net driving time, 2 special manoeuvres in traffic and a vehicle control check inside and outside the vehicle with one question on road safety. 25 new departments will be involved in the first 6 months of 2005 and the rest of the territory at the end of 2005.

A closer look at how this additional time was spent shows that more time was spent on almost all the different parts of the driving test (see Figures 8 and 9).

2 HOMOGENEITY

The second aim of the study was to "make an assessment of the homogeneity in the driving test in the 6 countries involved in the project and in different test centres within each country". Homogeneity in the test, between the countries as well as inside the countries, is one of the most important properties of any test. There are several reasons for that. Justice concerning passing and failing in the test needs homogeneity. This is clearly true within a country: it would not be fair if candidates in some parts of a country faced a much more difficult test than others. It is also important between countries, especially where people are able to pass a test in one country and then use it

to drive unsupervised in another. And even more important are the reasons for passing and failing. The criteria for passing must be equal to ensure the development of a common driving culture and safety. The EU aims to harmonise requirements throughout the Union and thus affect safety in the whole area now people are moving inside Union area more and more.

However, homogeneity in the whole Union area is difficult to reach because of the many traditions and many cultures represented e.g. concerning the way in which examination is designed and the role of examiner. Also the environments and traffic densities vary a lot from the most northern, almost desert areas to the city centres of a metropolis. And countries also tend to be satisfied with what they have, because they developed it over a long period of time. From these starting points it's not so easy to reach total homogeneity across the whole of the EU. The goal, safety in traffic, is however so important that we need to try to reach the goal of homogeneity.

When assessing homogeneity, several criteria variables or properties of a test can be used (Table 53). All these variables give a slightly different picture of the homogeneity of the test and it's not possible to say which one is definitely more important than the other. Of course the contents and level of criteria used in passing and failing the candidates are important. Comparing passing and failing criteria between countries is extremely difficult because the training methods and regulations differ so much from one country to another.

Table 53 Criteria variables of driving tests used to evaluate the homogeneity between the countries and inside the countries and in different type of testing centres

Length of the test: total time, on-road time, driven kilometres

Testing environment and content of the test: what is assessed in the test and where

Passing rate in the test as an indirect criteria for homogeneity

The practical methods used in the test, e.g. feedback and interaction in the test

2.1 Length of the test: total time, on-road time, driven kilometres

The mean duration of the tests, when measured from the pooled data (before + after), differed dramatically between countries, from 20 minutes to 35 minutes (mean 28 minutes), but between testing centre types the differences were quite moderate. This result seems to be typical for all other variables as well. Differences between countries are bigger than differences between testing centre types in the whole material. As the duration varied, so the distance driven also varies between the countries, from 8 km to 17 km. And again the differences between testing centre types are more moderate, from 12 to 14 km. After the implementation of Directive 2000/56/EC, there were only minor changes with regards to the duration and distances covered in all tests (20 – 36 minutes and 8 - 18 km).

2.2 Testing environment and content of the test: what is assessed in the test and where

What contents are assessed at all and how long they are assessed in the six countries differs a lot, but again differences between testing centre types are moderate. In different countries about 70 - 80% of tests do not contain from two to six topics of those listed in the Directive 2000/56/EC. But the variation between countries is big concerning what those topics are. The duration of assessed topics differs between the countries but between testing centre types the differences again are moderate.

When the possibilities for making robust assessments of the candidate's performance are evaluated, then test centres in the countryside and in small towns differ from urban and urban periphery centres. Urban periphery and urban centres seem, according to auditors, to provide better possibilities to make a robust assessment concerning slowing down and stopping, communication, speed adaptation, distance to road users, positioning, priority, observation and vehicle control. Also driving in a predictable way seems to be easier to assess in urban and urban periphery centres. The evaluation of the possibilities to make robust assessments does not differ much between the countries, only from 2.5 to 3 (scale 1 - 4, where 4 is best possibility). The majority of the examiners in each country seem to be very satisfied with their own tests, even when the tests seem to differ greatly from country to country on the basis of the objective measures made by the auditors. Here the difference between countries and the differences between test centre types is not as great as in earlier measures. There is however a difference (2.1 - 3.0, on the scale from 1 to 4).

Questionnaires, completed by examiners, give quite a similar picture of the satisfaction of examiners in the different countries. On a scale from 1 to 5 (ob. 1 is best, and 5 is worst) examiners in six countries evaluated that the *location* provides a possibility from 2 to 2.5 to make a robust assessment of the candidates' performance and the *contents* a possibility from 1.7 to 2. Satisfaction does not differ so much from one country to another. But when examiners answered questions concerning the possibilities to make a robust assessment about passing and failing there seemed to be a difference between countries. The satisfaction values varied from 1.7 to 2.4, when 1 was best and 5 was worst. The evaluation of how the duration of the test was connected to possibilities to make robust assessments varied much from one country to another: 1.6 - 3.0. Examiners in countries which have a short (about 20 min) test, were less satisfied than those from countries which had longer test. The duration of the test seems to be one of the most important variables differentiating countries and satisfaction with the test.

2.3 Passing rate in the test

Passing rates again differ greatly between the countries during audits (from 37% to 68%, mean 47%) but not so much between the test centre types (41% to 55%). After the implementation of the new directive there was practically no change compared to the situation before the new directive (35% - 76%, mean 45%) and the situation between test centre types also remained the same. However the pass rates differ during audited tests and during normal, non-audited tests. Audited tests had lower pass rates, which may mean that these tests were evaluated with stricter criteria than normally. There are differences between the pass rates of the countries, which cannot be dealt with here. Of
course relevant factors linked to this are the level of ability of candidates coming for test and how demanding the test is - i.e. what level of skills is expected from candidates for them to pass the test. One possibility to evaluate the level of pass-fail criteria in this study was to compare how many type 1 errors (potentially dangerous error) and type 2 errors (near accident error) those candidates who passed the test made. The differences were big between the countries: error type 1 from 0.01 to 1.04 errors (mean 0.4) and error type 2 from 0.00 to 0.05 errors (mean 0.02). Between test centre types the differences were not so big (type 1: 0.30 - 0.50, type 2: 0.01 - 0.04) but there were differences.

It seems that even when errors are assessed using apparently the same criteria in different countries there are still differences between countries in how many errors the candidate can make and still pass the test.

Taken at face value, this would indicate considerable differences in pass-fail standards, with candidates in one country being allowed to make no actually or potentially dangerous errors, while some candidates in another country do pass the test having made such errors. However, there may be differences between countries in the examiners' interpretation of such errors which could provide an alternative explanation of the findings.

2.4 The practical methods used in the test, e.g. feedback and interaction in the test

On the basis of the visits of the scientific group to different countries, we see that the interaction type and the role of the examiner were totally different in different countries. In some countries (e.g. Spain) there was no interaction during the test and there was no personal feedback from the examiner to the candidate after the test. In other countries (e.g. France) there was interaction or advise during the test but no personal feedback afterwards. At the other end of the continuum of interaction and feedback were the countries (e.g. Sweden), where there was a lot of interaction and discussion during the test and where there was also a thorough personal, interactive feedback session after the

on-the road part of test. Longer tests, about 30 minutes, more often also contained thorough personal feedback. There were no comments from examiners in these "interactive and feedback intensive countries" that candidates became emotional and aggressive resulting in problems in the test. However it should also be borne in mind that some countries (France, Spain) have found it necessary to stop the examiner from telling the candidate the result of the test in order to avoid aggressive reactions. Clearly the giving of test feedback is a sensitive matter and moves to increase feedback will have to be introduced with great care.

2.5 Conclusions concerning homogeneity of driving test between the six countries and inside the countries

It can be concluded that when the above variables were used to compare the countries and assess the differences inside the countries, there was a lack of homogeneity in most of the assessed variables. One especially important thing is that the pass rates were extremely different. As discussed the reasons for this may be in the training system and its quality as well as the testing system (including the environment and duration) and it's requirements.

3 Meeting the Needs of Novice Drivers

3.1 Introduction

The main focus of preceding chapters has been to describe the practical test for car drivers as currently carried out in 6 European countries and to evaluate this in terms of:

- Comparisons with EU Directive requirements
- Comparisons between the 6 countries
- Auditors' and examiners' opinions on various aspects of the test
- The degree to which examiners' and auditors' ratings of the ability of a test to produce a robust assessment of the candidate can be predicted by the content of

the test, thus indicating which test elements appear to contribute most to subjective robustness of assessments

One aim of the project, however, is to look beyond current EU requirements and beyond what examiners and auditors currently consider to be good or desirable practice, and to consider how driving tests could be improved in the future. There are instances in the foregoing analyses where such matters are touched upon. For example, the relation between test content/duration and auditors'/examiners' ratings of whether a test leads to robust decisions about driving safety are not limited by any predetermined criteria about test content, and they give an indication of some areas where the current content needs to be improved. Such assessments may, however, be limited by the auditors' and examiners' experience and beliefs. For example an auditor may give high ratings because a test is good in terms of what he or she believes to be possible, rather than because it actually does enable unsafe drivers to be identified and failed. In other words, the ratings may be influenced by an auditor's or examiner's frame of reference, and thus fail to tap potential improvements to testing that the auditor is unaware of, or decides to discount for some other reason. This type of effect is apparent in Part C section 2, where examiners opinions on what constitutes a good test appear to be influenced by the test they experience daily. Likewise, other responses to the examiner and auditor questionnaires are extremely useful in suggesting where improvements to the test may be needed, but should not be regarded as exhaustive: there may be wider ranging improvements that ought to be considered.

This section therefore considers the questions:

- What, at the broad conceptual level, and in the light of recent research and thinking, are the characteristics of the 'ideal' driving test
- To what extent are these requirements already met by Annexe 2 of Directive 2000/56/EC
- To what extent are they met by current practice in the six countries studied in this project
- How important are any failures to meet these ideal requirements, and what does this mean in terms of how driver testing could be improved in future.

3.2 Characteristics of the ideal driving test

3.2.1 Introduction

Though this discussion is in the context of a project that has evaluated <u>practical</u> driving tests, it needs to avoid being restricted by current labels. Future improvements to driver testing may blur the distinction between practical tests and theory/knowledge tests. For example, they may involve in-car tests of knowledge, or may make use of simulators or multi-media computer-based tools that allow testing of aspects of practical driving as well as of knowledge. We need to be able to consider afresh the coverage of all aspects of driver testing, including the potential for novel forms of testing using simulators or multimedia tools. We also need to be able to propose ideal requirements for testing even if we are currently unable to see how these could actually be achieved.

3.2.2 Objectives and functions of driver testing

The main objective of driving tests is obviously concerned with road safety. Secondary objectives have to do with competence to make use of the car as a means of transport and with the efficiency and fairness of the testing (Baughan 1998). Superficially, the function by which driving tests seek to meet the safety objective is that of driver selection - i.e. people who lack the required competence to drive in traffic are not permitted to enter the system. This is the 'prognostic' function of the test as identified by Keskinen, Hatakka and Laapotti (1988). However, most people who fail the test simply have more training or practice and then take it again, so that in the end, the test permanently selects-out relatively few people from the traffic system. Therefore, as is now well-recognised, a main function of the driving test is to influence the training and practice undertaken by learner drivers (Waller, Li, Hall and Stutts, 1978; Macdonald, 1988; McKnight, 1992; Mynttinen, 1996; Baughan 1998). At a crude level, this operates simply by returning the failers for more training. But, as Keskinen, Hatakka and Laapotti (1988) pointed out, there may be more specific mechanisms at work. The test can have a diagnostic function, identifying which aspects need further training, and can be used to evaluate (and by implication improve) the training system - assessing how well it is functioning and what are its strongest and weakest points.

To an extent, all this depends on the place of testing in the training/testing/licensing system, in that different types of licensing system place different degrees of reliance on testing to govern training. Some, e.g. Britain, have no requirements for learner drivers to take any specified amount or type of training or supervised practice, and have no minimum learning period. Such systems rely heavily on the driving test to determine the quantity and type of training and practice a learner driver takes, and to provide a standard or goal for driver training. Other countries e.g. Finland, Norway, Denmark, Germany, do make specific requirements for training, and thus the driving test and the training requirements work together to influence training. Finland, for example, has systematically tried to make testing one influencing part in driver education. If, in future, we wish to improve the training and education of learner drivers, decisions will be needed as to whether this should best be done via the test alone, or training requirements alone, or a combination of both. Some types of skills and knowledge may prove so difficult to test that it will be more cost-effective to rely on changes to training requirements to bring them about, as has recently been decided in Norway (Glad et al (2002).

Depending on the design of the overall testing, training and licensing system, a driving test may influence driver training in several ways:

- The test syllabus and test standards directly influence the contents, standards and amount of training and practice – partly by governing the degree of competence that learners seek to reach before coming for test, and partly by direct influence on the training system;
- The test may itself constitute an important component of training for both passing and failing candidates. This may be via direct, formal feedback from the examiner to candidate or instructor, or by the informal training effects of experiencing a driving test.
- Screened-out candidates are returned for more training and practice, and the test result indicates the areas that this training and practice needs to concentrate on.

3.2.3 Reliability and validity

As with any test, reliability and validity are key indicators when assessing driving tests. The reliability of a test is its ability to produce consistent results: a test is considered to be reliable if it would produce about the same results when repeated under identical circumstances.

Sources of unreliability

One potential source of unreliability is lack of agreement between examiners themselves, which might arise because of characteristics of the test itself, or because of shortcomings with selection, training and monitoring of examiners. Information on this is not available for all testing organisations but, where it is, it tends to suggest that this form of unreliability is not a serious problem in practice, at least when more than one examiner observe the same test and give a pass-fail decision. The difference between passing and failing is usually clear - i.e. the examiner seldom finds it very difficult to make the decision, and the number of cases with disagreement between the candidate and examiner is typically rather low. In a Finnish evaluation study on a five point scale (1=I totally disagree 5= I totally agree) the fairness of judgement was evaluated to be 4.4 by the passed candidates and 3.8 by the failed candidates (Laapotti et al. 1998). Furthermore, in another evaluation study (Keskinen et al. 1988) there was about 90% agreement between the examiner and driving instructor on the number of conflicts, when evaluating a driving test. The number of minor, potentially dangerous mistakes was within +/- 1 in 80% of the tests. In Britain the level of agreement on test outcome between examiners observing the same test as part of the Driving Standards Agency's procedures for maintaining test standards is very high (Baughan et al. (in press)).

Even if examiners' assessments are perfectly reliable (such that an examiner observing a given test drive would always assess it in the same way, and would agree with the assessments made by all other examiners) there are several other potential sources of unreliability (Baughan 1998). For example:

• Tests are subject to several quasi-random components such as weather, traffic conditions, specific traffic incidents and choice of test route.

- A test's marking system may make it vulnerable to some of these components of variation. In particular, for a given candidate, the probability that a fault will be made during a test will depend on the number of opportunities there are for that fault to occur.
- At the time of the test, driving performance is likely to be unstable since candidates have accumulated only limited amounts of practice (e.g. Groeger and Clegg, 1993).
- In an attempt to reduce the overall cost of learning to drive, and to achieve as soon as possible the independence that unsupervised driving gives, it is possible that candidates will tend to have just that amount of training and practice that brings them into the range of competence where they have a moderate probability of passing the test. This would guarantee low test-retest reliability for these candidates: if all candidates came for test when they had a probability of passing of 0.5 the test would have no test-retest reliability for these candidates.

All these factors would tend to reduce the test-retest reliability of the test - i.e. if candidates could be given two tests close to each other in time, there would be a rather high proportion of candidates who failed one test and passed the other. In fact, Baughan and Simpson (1999) demonstrated this to be the case for the British driving test. Candidates who had already booked but not yet taken a driving test were asked if they would be willing to take a second test within a few days of the first. The 366 participants were not told the result of the first test, or given feedback on how they had performed, until they had completed the second test. The second examiner was not told the result of the first test until after the second test had finished. The pass rates were 34.7% and 42.3% respectively in the first and second tests. This difference is in a direction consistent with participants learning as a result of completing the first test and any training or practice they took between the tests. 36% of participants had different results in the two tests: 20% failed the first and passed the second, and 16% passed the first and failed the second. 64% of participants obtained the same result in both tests. It should be noted that, if all participants were identical in terms of driving competence and came to the first test with a probability of passing of p = 0.347 (i.e. corresponding to the pass rate of 34.7%), and to the second test with a probability of passing of p = 0.423, this would lead to an expected 53.5% agreements between first and second test. The above results indicated that rather a high proportion of candidates were coming forward for the test with only a moderate probability of passing it – in other words, they were coming forward at a stage when their driving was not consistent enough to ensure a high probability of passing.

Consequences of unreliability

The implications of low test-retest reliability are not straightforward. To examine them it is enlightening to consider the extreme case in which a pass-fail driving test is found to have no test-retest reliability for *current* candidates⁶ (Baughan, 1998; Baughan and Simpson, 1999; Goldenbeld, Baughan and Hatakka, 1999). In such a case the pass-fail result would tell us nothing about the competence or future accident liability of current candidates, and would provide no basis for withholding or granting a licence. The test would have no predictive or concurrent validity for these candidates - see the section on validity below. However, the same test could still be valid in the sense of having the desired beneficial effect on road safety and driver competence if it induced good driver training and practice. To do this, it would have to be reliable in failing *potential* candidates - i.e. candidates who were at an earlier stage of their training and who would be unsafe or incompetent as unsupervised drivers. To be useful, a driving test must have reasonably high reliability for this broad spectrum of candidates - it must detect those who have not reached an acceptable standard and return them for more training. But the very success of a test in communicating the required standard to learners and instructors means that it will tend to restrict the range of candidates actually coming forward for test. In countries where candidates choose to come forward when they have a moderate probability of passing, the test is guaranteed to have low test-retest reliability for these candidates. This reasoning implies that the test-retest reliability of a test should be assessed using a broad spectrum of candidates, including people who have not reached the stage where they would normally choose to present themselves for test.

 $^{^{6}}$ By 'current candidates' Baughan (1998) meant candidates who are currently choosing to come forward for their practical driving test – i.e. candidates who have reached that stage of competence where they think it is worthwhile attempting the test.

Although a test with low test-retest reliability for current candidates can still fulfil its main objectives of maintaining good standards of training, safety and competence all other aspects of reliability need to be good if those objectives are to be met. Low reliability is also undesirable for other reasons:

- An unreliable test is likely to be seen as unfair randomly penalising some candidates and passing others.
- An unreliable test is inefficient and costly, since it would result in unnecessary failures and subsequent retests.
- An unreliable test is likely to be held in general disrepute.

Validity

In general, the validity of a test is the extent to which it measures what it purports to measure - which, for driving tests, might be defined in terms of competence, and propensity for being a safe driver. One way of providing evidence on validity is to analyse the relation between test results and criterion variables - an assessment of predictive or concurrent validity. The test results could be pass-fail markings, or scores, for the overall test or for individual test items. Criterion variables could, in principle, be future accidents or critical incidents, or some other measure of future driving behaviour, in which case *predictive validity* would be assessed. Of course, a non-accident criterion variable needs to have its own validity established as an indicator of safety or competence. The correlation of test results with some other accepted indicator of the driver's present competence (e.g. performance in special driving assessments) would measure concurrent validity. As mentioned above. considered as an instrument for achieving certain goals, there is a sense in which a test may be judged to be valid if it meets its objectives. Thus a driving test would have good 'consequential' validity if, when introduced into a testing/training/licensing system, it influenced the amount and quality of training and practice undertaken by learner drivers so as to achieve acceptable levels of safety and competence. This is important to bear in mind since, as has been argued above, there are special characteristics of driving tests that mean that they may have low test-retest reliability and therefore low predictive and concurrent validity for candidates who actually come forward for test, but may still induce good training and practice and thus have high consequential validity.

The overall, or consequential validity of a new or modified driving test could, in principle at least, be assessed by monitoring the effect on accidents or driver competence of introducing the test into a licensing system. There are, however, a number of difficulties that beset validity assessment for driving tests, as discussed below.

Methodological problems with validity assessment

In several reviews and articles the lack of evidence for a relationship between driver test score and subsequent accident record has been noted (e.g. Macdonald, 1988). There are numerous and severe methodological problems in assessing the predictive validity of driver testing. For example:

- Drivers who fail an established driving test and are therefore expected (if the test is valid) to have a poor accident record are, in fact, excluded from the population of drivers who drive unsupervised. Until they pass the test they can play no further part in a study of the test's ability to predict accident liability.
- Only a fully implemented test (i.e. one that is an established part of the licensing system) will induce changes to drivers' training and practice, and these changes will take time.
- In the process of inducing beneficial changes to drivers' training and practice, a test may reduce or remove its own predictive validity for actual candidates by reducing their range of driving performance and accident liability. That is, good consequential validity may act to reduce or remove predictive and concurrent validity.
- As discussed above, candidates may tend to take only enough training and practice to bring them to a moderate probability of passing, which would guarantee low reliability and therefore low predictive validity for these candidates.
- Accidents are themselves a problematical criterion variable for validity assessments because of their relative rarity, and because of their multicausal and partly random nature.

In addition to the above problems, there is the question of how far we can legitimately expect a driving test to predict subsequent driving behaviour and accidents. Differences between driving performance on test and behaviour afterwards reduce the ability of driving test results to predict accident liability (Macdonald, 1988; McKnight, 1992). This points to the desirability of finding ways of including in driving tests items that tap motivational and attitudinal influences on behaviour, as well as assessments of driving style which have also been shown (Parker et al., 1995; Hall and West, 1994) to be related to accident liability. Scope for manipulation by candidates is a problem here: during the test, candidates may well be able to give a falsely positive picture of their attitudes and driving style. The distinction between how well a driver is able to perform (e.g. on test) and how he or she then chooses to behave during typical everyday driving, is taken up in the following sections, as is the question of how testing might be improved to provide a better prediction of typical driving behaviour.

In the light of the difficulties with predictive validity, any assessment of driving tests needs to place heavy reliance on *content validity*. Content validity concerns the coverage of the test and the training it induces. A test would be judged to have good content validity if it (a) covered all aspects of driving known or judged to be relevant to its objectives or (b) induced adequate training and practice in all these aspects even if they did not feature in the test itself (Baughan, 1998). Content validity is closely linked to the concept of driver competence since establishing a set of desired competencies leads directly to an outline description of test and training coverage. A further aspect that can be considered to be part of content validity is the quality of the testing – for example, whether it complies with established knowledge and good practice in giving feedback, having a marking system that minimises the influence of chance events, promoting consistency of standards, etc. To assess content validity it is desirable to have a clear theoretical view on the driver task and the goals of driver training. The hierarchical GDE model of driver behaviour presented in the next section provides a theoretical framework that is well suited for this.

3.2.4 Test content: knowledge and skills for safe driving – a hierarchical approach

The goal of driver education, training and testing is to ensure that drivers have the skills and knowledge necessary for them to drive safely and competently or, at least, safely and competently enough for them to be permitted progress to the next stage of the licensing system.

It has long been recognised that such knowledge and skills go beyond those involved in controlling the vehicle. They cover such aspects of the driving task as dealing with traffic, detecting and dealing with hazards and making journey-related decisions about choice of route, where to manoeuvre and so-on. It is also well-recognised that there is a distinction between how well a person is able to perform a task, and how he or she actually performs it from day-to-day. This has been termed the distinction between performance and behaviour (e.g. Evans (1991)) or between maximal and typical behaviour, the discrepancy between them being governed by such factors as personal and situational goals and attitudes, as well as personal states such as drug impairment or fatigue. The distinction is particularly important in systems such as the road transport system in which the possibilities for personnel selection, and for supervision or control of behaviour to keep it near maximal, are rather limited.

The above principles imply a hierarchical model of behaviour (e.g. basic control skills at the lowest level; traffic and journey-related behaviour at higher levels) with lower level behaviour being influenced or supervised by the higher levels. In the context of driver behaviour, the first comprehensive models of this type were described around 25 years ago (e.g. Michon, 1976; Janssen, 1979; Mikkonen and Keskinen, 1980) and interest has steadily grown (see, for example, Ranney (1994) and Keskinen et al (2004) for reviews). Keskinen (1996) proposed an extended model in which an individual's 'goals for life and skills for living' were introduced as the highest level in the hierarchy. A further development was used in the EU project 'GADGET' (Hatakka, Keskinen, Gregersen and Glad, 1999); it became known as the 'GADGET matrix' or 'GADGET framework' and, more recently, as the GDE (Goals for Driver Education) framework (Hatakka, Keskinen, Gregersen, Glad and Hernetkoski, 2002).

The GDE framework: four levels of behaviour

The GDE framework (attached as Annexe 1, distinguishes four levels of behaviour). The two lower levels, Vehicle Manoeuvring, and Mastery of Traffic Situations are self-explanatory, and are where traditional driver training and most driver testing concentrates. This is partly because they are the 'natural' testing variables – i.e. those which the examiner observes directly and can assess immediately. The third level, Goals and Context of Driving, concerns the behaviours influenced by trip-related factors such as trip goals, effects of social pressure from passengers, decisions about whether and when to make the trip, whether to go by car, what route to choose, environmental considerations, and by the driver's own state (tiredness, impairment). The driver needs to recognise and understand such factors, and know how take account of them in way that maintains an acceptable level of safety.

The fourth level, Goals for Life and Skills for Living, covers the influence of the individual's personal characteristics and life goals on driving behaviour. Driver education is unlikely to change such goals and characteristics. However, to the extent that behaviour is driven by attitudes, themselves based on beliefs, it would seem to be a legitimate aim of driver education to improve the knowledge on which these beliefs are based – i.e. to try to ensure that people have correct, rather than incorrect, factual information on which to base their beliefs, attitudes and behaviour. Apart from this, the aim of training and education at Level 4 should generally to help make drivers aware of their personal strengths and weaknesses, how these may affect driving, and how they can be taken into account when driving. For example, driver education can help a person to recognise the problem of missing self control, even if it does not provide him with that self-control. Level 4 is mainly concerned with the influence of self on driving, so two types of skill/knowledge are particularly important: self evaluation skills, and knowledge about how personal characteristics can influence driving safety.

The hierarchical nature of the GDE model implies that the upper levels in some sense supervise lower levels. Adequate skills and knowledge at Levels 1 and 2 are necessary, but not sufficient, for safe driving. Indeed relatively poor skills and knowledge at Levels 1 and 2 may be compensated for by very good Level 3 and 4 abilities to recognise limitations in vehicle control and traffic-related skills, and make trip decisions that limit risk. However, according to the GDE model, deficiencies at Levels 3 and 4 cannot be compensated for by good skills and knowledge at Levels 1 and 2 since it is the goals and skills at Levels 3 and 4 that determine how a driver will make use of the lower level skills and knowledge.

The implication of the GDE hierarchy for driver *education and training* is that focussing training on the lower levels does not guarantee that drivers will drive safely once they start to drive unsupervised and are subject to Level 3 and 4 situations and goals. This can be a particular problem with work-related driving, where training focussed on Levels 1 and 2 can be undermined by trip-level goals determined by the driver's employer (Baughan, 2004; Broughton, Baughan, Pearce, Smith, and Buckle, (2003). Indeed, focussing training solely at Levels 1 and 2 can have a negative effect on safety, increasing confidence and encouraging drivers to explore a wider 'performance envelope' without giving them the insight into the risks that this type of behaviour brings (Gregersen, (1996).

For driver *testing*, the controlling influence of Level 3 and 4 goals, skills and knowledge presents a problem: one of the main trip goals (Level 3) will be to pass the test. This will tend to influence behaviour during the test - so that people try to perform as well as they can, rather than behave as they would in typical day-to-day driving. The difficulties it poses for driver testing are discussed further below.

The GDE framework: three types of knowledge and skill

At each level of the GDE hierarchy there are three types of knowledge and skill that a driver needs:

3.2 Knowledge and skills to master

This covers the basic knowledge and skills needed to drive in normal traffic. At the lowest level it includes basic vehicle control skills such as control of speed, position, gear shifting, and knowledge about the effects of basic vehicle properties such as effects of front or rear wheel drive. At level two, it covers knowledge of traffic rules, and skills for interacting with other traffic. At the third level appear the basic skills and knowledge

associated with trip planning, dealing with time pressure and the effects of other trip-related goals. The fourth level includes knowledge of how personal characteristics and goals can affect driving, and how to control these effects.

- 3.3 Awareness of risk-increasing factors
- 3.4 This concerns aspects of knowledge and skills that have particular importance because of their relation to risk. Different risk increasing factors appear at each level of the hierarchy
- 3.5 Self-evaluation

This column of the GDE framework in effect deals with 'metacognition'. Defined in simple terms as 'thinking about thinking', metacognition can be focused on knowledge (thinking about and knowing what you know and what you do not know); skill (awareness of what you are doing/able to do); and experience (awareness of your own mental state, goals and motives). Clearly, such self evaluative skills and the knowledge of self that they generate are potentially very important for driving safely, since only with accurate knowledge can an individual pace and adapt the driving task to match and compensate for his own abilities and limitations.

The challenge for driver training/education is to help drivers develop adequate skills and knowledge in all the cells of the GDE framework, not just the cells towards the lower left part of the matrix. The question is, to what extent can this be assisted or promoted by testing? Can we devise tests of Levels 3 and 4, and Columns 2 and 3, that encourage people to develop the desired knowledge and skills, and establish whether they have done so?

The 'ideal' driving test would cover adequately all the GDE framework cells – though in practice the costs and likely benefits of doing so, and the scope for achieving the desired improvement in safety by other methods, would need to be taken into account when deciding how close to the ideal it is necessary to go. Section 3.5 discusses this issue further.

3.2.5 Measuring maximal and typical behaviour

There are several possible ways of collecting information on a person's behaviour. The basic problem lies in the way human behaviour is controlled and executed. We can simply observe the behaviour (i.e. what a person does). However, before acting in any situation there is a phase during which plans are created and selected; and in assessing a person's competence to perform a given task, it is highly desirable to be able to assess this planning phase also. In other words, as well as observing actual behaviour we need to know why a person is behaving in a certain way. We can attempt to draw conclusions about the reasons for observed behaviour either from making direct inferences from the observed behaviour itself and the circumstances in which it occurs, or by asking the person to describe his motives and goals concerning his selection of actions in general or in a certain situation.

The distinction between maximal and typical behaviour has already been mentioned. It is the distinction between what a person is able to do, and what he actually does in typical situation when he is being influenced by his usual day-to-day goals and motives. As several authors have pointed out (e.g. Naatanen and Summala (1976), Keskinen (1991), Evans (1991)) it is what a driver actually does that is important for safety, not what he is able to do. Maximal behaviour will generally occur in test situations in which the individual is motivated to do his best and to show his skills. A driving test candidate is likely to try to behave maximally, because his or her behaviour is influenced by the goal of passing the test, instead of by the day-to-day trip-related goals and personal goals that influence unsupervised driving. A further reason for behaving atypically is that the driving task that the candidate is faced with is also atypical.

Testing of maximal behaviour is certainly needed in a driving test: we need to ensure that candidates have acquired the skills and knowledge necessary to enable them to drive safely. But having such skills is not sufficient to ensure safe driving. Therefore, we would also like to be able to assess typical, day to day driving behaviour in the driving test. Where this is not possible we would like to use the driving test to predict what this behaviour will be or, at least, to ensure that the candidate has the skills and knowledge that he will need if he is to recognise and deal safely with the effects of higher level factors on his behaviour. In principle, maximal behaviour is straightforward to measure - by setting the task and asking the candidate to perform at his or her best. The problems here are those of choosing the tasks so that they cover the important aspects of performance, and of finding ways to represent these tasks consistently in a reliable and valid way as part of a driving test. Potential test elements include:

- Observing on-road behaviour during a driving test
- Observing manoeuvring behaviour at an off-road test site
- Asking candidates about their behaviour and the reasons for it
- Testing knowledge
- Testing ability to recognise and deal with hazardous situations during an on-road test (e.g.- using commentary techniques, Situation Awareness tests, or simply observing driving behaviour)
- Performance on computer-based hazard perception tests
- Testing of ability to recognise and deal with 'higher level' scenarios presented in a simulator or multi-media test tool
- Assessing candidates' self evaluation skills by comparing their self-evaluations with the examiner's evaluation of their driving

The observation of typical behaviour is much more problematical. If candidates are to behave typically, the prerequisites are (a) that the influences governing the distinction between maximal and typical behaviour are present (and not overridden by other influences such as the goal of passing the test), and (b) that candidates are presented with the situations, and given the freedom of action, to enable them to behave typically. These conditions are impossible to replicate fully in an on-road driving test because the test-passing goal is always there, and because of the difficulty in an on-road test of ensuring that the necessary situations are encountered in replicable way. In general, on-road tests can include only a restricted range and number of conditions which would elicit the critical behaviours from the driver, and this in a way that is unlikely to be controlled or repeatable. It should be noted though, that some examiners believe that drivers can only maintain maximal performance for a short time and tend to revert to their 'typical' behaviour in long-duration driving tests.

In situations where typical behaviour may be occurring, it is particularly desirable to understand why the candidate is behaving in a certain way. This is because of the insights it gives into whether higher level goals are coming into play and being dealt with successfully (i.e. safely) by the candidate. It is possible to attempt to infer the reasons for behaviour just from observation, i.e. with the examiner trying to figure out why the candidate is doing what he is doing. This is difficult, and will become even more difficult when higher level goals are coming into play. In a sense, assessments of driving style can be seen as an example of inferring higher level control of behaviour, in that the examiner is trying to classify the driver as someone who is likely to behave in a certain way in day to day driving. Although scope here may be limited, casual observation, as well as some research studies, suggests that it is possible for examiners to form strong impressions of whether a candidate is likely to drive safely; and these impressions have been shown to have some predictive validity in term of subsequent accidents (Hall and West, 1994; Quimby et al, 1999). Whether such assessments can be translated into fair pass/fail criteria, remains to be seen - one problem being that such ratings of driving style may be strongly correlated with candidates' age and sex.

Another approach to trying to understand what is controlling observed behaviour is to use self-reporting: the driver can be asked what he thinks he is doing, and why he is doing it. This is an attractive and flexible approach, and well-worth pursuing; though it is not without its own difficulties:

- People do not always have good insight into the reasons for their behaviour and hence may not be able to report them correctly, even if they wish to.
- The technique is also open to bias in that people may know, and report, the desirable answer, just as they may be exhibiting desirable (maximal) rather than typical driving behaviour. (Careful design of test should help here).
- Asking for verbal reports may change behaviour e.g. by reminding candidate that certain types of behaviour are good, or by increasing workload etc.
- Ability to make verbal reports (and, indeed, to identify hazards) may be degraded by attentional demands of poorly automated lower level control skills (and the verbal reporting may degrade the control skills themselves). Also,

people who have difficulty expressing themselves may be disadvantaged by such test elements.

• People who find it difficult to express themselves verbally will tend to be at a disadvantage.

In situations where we cannot expect to have typical behaviour to observe, an alternative is to discover whether the candidate has (a) knowledge and insight into goals, personal characteristics and risk increasing factors in everyday driving situations, (b) knowledge of how these factors can affect driving and (c) knowledge and skills to enable him to make good, safe, decisions in the light of (a) and (b). In other words, if we cannot observe and assess directly a candidate's typical behaviour, we can at least try to discover whether he has the prerequisites for 'acceptable' typical behaviour.

To an extent, this translates the problem into one of assessing maximal performance – testing a candidate's (maximal) knowledge about self, goals, and risk increasing factors, and about how to deal with them in such that maintains driving safety.

Limitations of this approach include the fact that we cannot be sure that drivers will use their knowledge optimally in everyday driving. There is also scope for bias in the testing of this knowledge. A test might, for example, allow candidates with poor knowledge to succeed by choosing cautious, self-critical responses or by identifying large numbers of factors as being 'risk-increasing'. However, even if this does happen, it may still be valuable to include such questions in the test because of the effect they will have on learning. This point – i.e. that there can be useful aspects of tests other than their ability to pass or fail a candidate – is taken up in the next section.

3.2.6 Are tests useful only as pass-fail instruments?

The principal function of driving tests is normally seen as that of identifying candidates who do not meet the required standards, and returning them to the training system so that they can improve by having more training or practice. Here the test operates as a screening mechanism, preventing people who do not meet the required standard from driving unsupervised – and its ability to provide a pass/fail decision is crucial.

As an aside, it is worth noting that this traditional concept of how driving tests operate is not entirely correct. Section 3.2.3 points out that in at least some licensing systems, candidates tend to come forward for test when they have developed the skills and knowledge to give them a moderate probability of passing. This means that the actual *test-retest* reliability for candidates who choose to come forward for test may not be very high. In such systems the test operates not so much by reliably sorting *actual* candidates into passers and failers, as by reliably dissuading *potential* candidates who are at an earlier stage of learning to drive, and have a low probability of passing, from attempting the test at all. The pass-fail standard of such a test needs to be set such that people with a moderate probability of passing have reached the degree of competence needed for them to progress to the next stage of their driving career⁷ (Baughan, Sexton, Maycock, Simpson, Chinn and Quimby (in press). Nevertheless, the fact that the test does provide a pass-fail decision is still crucial to this function.

Traditionally, the focus of driving tests has been on skills to do with car-control and dealing with traffic according to the traffic regulations, with the driving task during the test being well defined and controlled. The driving behaviour being evaluated has therefore been limited to the two lower levels of the GDE matrix, allowing the test to be done by observation alone, with little or no attempt or opportunity to infer what the influence of the higher level GDE factors will be on the candidate's typical behaviour when he is allowed to drive unsupervised. Maximal observed behaviour is what is being assessed, and this lends itself to the setting of pass fail standards.

Testing at GDE Levels 3 and 4 might involve the following types of element:

- Knowledge tests covering influences and risks associated with life goals, social pressures, behavioural style, substance abuse, on driving
- Tests of knowledge about how such influences can be dealt with to maintain driving safety

⁷ This next stage is usually to drive unsupervised, though tests at various stages of pre and post solo driving are possible

- Tests of decision making behaviour in which scenarios involving the above are presented
- Extended multi-media based 'hazard perception' tests in which scenarios involving the above risks are presented
- Self evaluations, and comparisons of these with evaluations of examiners (and/or possibly peers, instructors and supervisors).

Although pass-fail tests for some of these are, in principle at least, straightforward to devise, for others there will be difficulties. For example:

- An individual's self reports of goals, attitudes, beliefs are open to bias
- Defining pass/fail criteria is not straightforward i.e. what standards are good enough? This is made more difficult by the fact that there will be large variation between candidates in terms of 'goals for life and skills for living' whereas the test needs to select people not on this basis⁸ but on the basis of how well they are able to recognise and cope with these personal characteristics and goals.
- Making the assessments may be difficult partly a matter of training of examiners and instructors
- There may be difficulties in explaining and justifying the assessments and decisions to candidates, instructors and (occasionally) in response to legal challenge. (Different countries have different traditions and legal requirements here.)
- Traditions in legal systems, testing practice, and instructor and examiner selection and training may make it difficult to accept a change from objective records of errors to other, less tangible, pass/fail criteria.

⁸ Traditionally, acquiring a driving licence has been seen as more or less a right for a very high proportion of the population, and a person's 'goals for life and skills for living' are not generally seen as a legitimate basis for failing the driving test, though in some administrations alcohol dependency may be sufficient grounds for refusing to issue a licence. Of course, where post-test driving behaviour reveals that goals are not compatible with safe driving, a licence can be withdrawn and/or the driver given special remedial attention.

Despite such difficulties, it will be desirable to develop tests and pass-fail criteria that can make use of information gained from interactions during the test between candidate and examiner - e.g. information to do with reasons for decisions, awareness of risk and hazards, and the level of agreement between examiner and candidate regarding the candidate's skills and limitations. A future task for the development of driver testing is to decide how (and how far) this can be achieved and to assess the likely costs and benefits.

Where it is not (or not yet) possible to devise test elements and performance criteria suitable for pass/fail testing, the question arises of whether there is any value in including in a driving test, elements that do not contribute to the pass-fail decision. Clearly, such elements cannot contribute to the immediate screening function of the test. But, as has been argued above, the main function of the test is to influence the training, education and practice accumulated by drivers before they come for test. It seems likely that test elements could have such influence, even if they were known not to contribute to the pass fail decision. For example the test gives a message about the importance of certain aspects of driving and driving knowledge, and this may influence training and education.

Another possibility is that examiners are allowed to take account of certain elements of performance informally when deciding whether to pass or fail a test candidate. This would appear to be one way of satisfying the current Annexe 2 of Directive 2000/56/EC which requires examiners to pay special attention to whether the applicant is showing a defensive and social driving style, taking account of road and weather conditions, other traffic, the interests of other road users and anticipation, and to "take this into account in the overall picture of the candidate". In some countries, such informal assessments are already used, since the pass-fail decision is based on examiner's global ratings of the candidate's driving. However, informal assessments do not fit easily into tests that are based on formally observing, assessing and recording individual errors. Such tests need to rely on being able to define these 'undesirable' aspects of driving style as observable errors.

It should also be noted that the test is an educational/training opportunity itself, an opportunity that can in principle be exploited by having the examiner delivering feedback and other information to candidates (both passers and failers), and to instructors/lay supervisors. For example, a test that includes an attitude questionnaire and discussion, or a comparison between examiner's and candidate's evaluation, might be expected to have beneficial influence on training even though these aspects may not be suitable for inclusion in the pass-fail criterion. However, there are a number of difficulties with giving feedback on test performance. For example:

- candidates may not be in the best frame of mind to receive feedback after having finished a driving test – especially if they have failed but also, perhaps, if they have passed and wish now to escape from the driver education system.
- feedback delivered during the test drive may itself influence the candidates test behaviour
- special skills are required of the examiner to deliver feedback effectively
- in parts of at least one country (France) pass-fail information is already withheld from candidates and mailed to them later, to avoid problems of aggression towards the examiner. In Spain, the instructor is left to tell the candidate the result of the test, for the same reason.
- the giving of feedback by examiners may be seen as blurring the distinction between examiner and instructor and, as such, may be resented by both.
- It is possible for feedback to become intrusive and possibly counterproductive if delivered each time a fault is made during the test.

There are a number of potential purposes of providing examiner feedback during a driving test – e.g.:

- To improve the candidate's performance during the test
- To ensure that the candidate is aware of what the test requires
- To improve the candidate's performance post-test
- To show an observing instructor what the candidate's shortcomings are, and what the test standards are

- To check whether a candidate really cannot achieve an acceptable performance even when reminded of a desired behaviour.
- To give a failing candidate information on aspects of driving that need to be improved before the next test
- To make the test more demanding
- To reduce stress levels during the test and thereby help candidates show their true capability

Not all these objectives are necessarily compatible with improving road safety. For example, it could be that using feedback to improve test performance results in candidates passing before they have reached an acceptable standard for unsupervised driving.

Despite the difficulties, feedback is given by the examiner during and/or after the test in a number of countries and there is clearly scope for developing this aspect of testing further. In Finland, giving structured feedback after the test was found to increase both candidates' and instructors' satisfaction with the test (Laapotti, Keskinen, Hatakka and Katila (1998).

There are also more subtle forms of test feedback. A test that does not appear to the candidate to be a serious or demanding assessment of his driving gives a negative message about the importance of training and competence. Both the content of the test, and the behaviour of the examiner in the car – for example whether he spends much of the drive in conversation with the instructor – are relevant here. The examiner's own safety-related behaviour may also convey important messages to the candidate. The obvious example here is failure to use a safety belt.

3.2.7 Pass rate

Pass rates for practical driving tests vary from 99% to less than 20%, with many countries having a rate of around 50%. A low pass rate is sometimes taken to indicate that a test is unjustifiably severe, or that a high proportion of candidates have not prepared sufficiently for it. Likewise, a very high pass rate for a test, or test item, is

sometimes taken to indicate that the test or item is ineffective at identifying poor candidates. However, the test pass-rate, and the concept of being "ready for test" needs to be considered alongside the related issues of test reliability, test severity, and individual probability of passing (Baughan 1998). For example, to take two extreme alternatives, a test pass rate of 40 per cent could indicate:

 40 percent of candidates are" ready" for test in the sense that they have reached a level of competence that gives each of them a very high probability of passing. The other 60 per cent of candidates are at a much earlier stage of learning to drive and each have a very low probability of passing.

or:

All candidates come for test having reached the level of driving competence, which gives them each a probability of passing of 0.4. This would imply that *for these candidates*, the test has low test-retest reliability (it would have no test-retest reliability if all candidates had a probability of passing of 0.5). Depending on the severity of the test, a candidate with a probability of passing of 0.4 may or may not have reached a suitable level of competence to be allowed to drive unsupervised.

It can therefore be seen that a low pass rate does not in itself necessarily imply an unacceptably low standard of candidate. Likewise, a high pass rate does not necessarily mean that the test is not successfully identifying and screening out candidates who have failed to reach a desired standard.

There are, however, a number of reasons why a low pass rate is undesirable. Part of driver testing is done by specially devised instruments, e.g. written test, hazard perception test, that do not involve examiners' judgments. The on-road test does involve such judgments and thereby brings a complicated set of social relations into play. Three parties are affected by the outcome of the on road test: the learner driver, the instructor and the examiner. A high failure rate tends to put strains on the relationships between them.

Learners who fail may feel tempted to blame either instructor or examiner, especially if feedback is not adequate or if the instructor does not agree with this feedback. Instructors themselves may tend to be dissatisfied with the performance and the judgment of examiners if they repeatedly see candidates fail, whom they judge to be ready for test. Examiners who repeatedly have to give a failure notice may tend to believe that instructors are not performing well and are succumbing too early to wishes of learners to apply for the test. Furthermore, examiners have to cope with the sometimes strong emotional reactions from both learners and instructors that may follow upon a failure notice - reactions that make it difficult to deliver effective feedback. In this context it may be instructive in future to examine why to avoid aggression against the examiner, some countries have found it necessary to deliver the result of a driving test by post or via the instructor while others have not.

Thus, a high failure rate means that there are repeated negative experiences for learners, instructors and examiners alike. In the long run, these experiences may strain the professional relations between instructors and examiners, possibly leading them to develop different views on what constitutes good and safe driving competence and what constitutes a fair and objective test of this competence. As the result of such a negative process the standards underlying training and those underlying testing may differ in a way that disturbs the close connection between training and testing which we may ideally expect.

In addition, of course, a high failure rate means that there are large numbers of tests being conducted which would be unnecessary if candidates could be dissuaded from coming for test until they had a high probability of passing.

Causes of low pass rates

The question arises what causes a low pass rate. There are several possibilities – e.g.:

• Learners may put pressure upon instructors to apply for testing when they are in fact not ready for test. This may be because learners believe, incorrectly, that they have a high probability of passing. Alternatively, as discussed above, they

may know they only have a moderate probability of passing, but choose to come for test anyway. Baughan (2000) in an exploratory study found that some candidates made a distinction between being ready for test, and having a high probability of passing. Being ready for test was seen as giving the candidate a reasonable probability of passing. However the elements of luck in the conditions and events met during the test, and perceived foibles of the examiner were believed by the candidate to intervene in determining the actual test result. This implies that candidates' perceived ability to increase their probability of passing by taking more training or practice may be rather low.

- Learners may perform below their capability on the on-road test (e.g. because of stress).
- Instructors and examiners may use different standards to evaluate good, safe driving, so that instructors are putting people forward for test too early. In Britain, Baughan and Simpson (1999) found that instructors tended to overestimate the candidates' probability of passing.
- Instructors may not be trained well enough to assess whether a learner has reached the required level of competence for the test.
- Examiners may not be trained well enough to evaluate good, safe driving according to legally set standards.

Finding ways of increasing pass rates - e.g. by increasing pre-test training/practice - could produce many benefits: the standard of novice drivers would improve, the number of re-tests (and therefore the total cost of driver testing) would decrease and test-retest reliability would increase. Persuading or requiring candidates to have more pre-test training and or practice is one possibility here though at present we do not know how effective this would be. The RIS (Stepwise) system of training being introduced in the Netherlands, or other ways of improving pre-test training or providing experience of driving tests, may also be effective – though again, controlled studies in which 'volunteer bias' is not an issue would be instructive here.

3.2.8 Further issues

When to test?

While some types of knowledge may be best tested early, other types may need to be tested around the time of the practical test or even later. For example the basic rules of what is allowed and what is forbidden may best be tested early (though perhaps retested later to check that they have not been forgotten). But driving experience may be needed in order to enable people to learn the relevance of these rules to different driving situations. Likewise, self-evaluation of driving skills is only meaningful when some experience has been gained. Some types of knowledge may be best gained (and tested) once a driver has accumulated solo experience - i.e. some time after the practical test.

The interaction between driver training and testing

As already discussed, the main function of driver testing is to support the training and education of learner drivers. In some countries there are no formal requirements for candidates to take any particular amount or type of training. In these countries the test is the main mechanism for governing the training and experience accumulated by learner drivers - though the content and quality of training is influenced by the testing and training authorities. Other countries do require learners to have certain types or amounts of training but, even so, testing is needed to ensure that instructors and pupils take the training seriously, and achieve the desired standards. This interplay between training and testing implies that changes to testing of the sort discussed here will maximise their value if they support, and are supported by, improvements in driver education and training. In practice, this means that changes to testing will need to be brought in alongside changes in training – or, at least, with some regard to how training is expected to adapt to the new demands. Clearly, the level of organisation of driver training in the country in question is relevant here.

As discussed in section 3.2.2, it may prove so difficult to formulate adequate tests for some areas of the GDE matrix that it will be more cost-effective to rely on specifying mandatory training to cover them.

It should be noted that some potential future improvements to testing methods also lend themselves to training. In particular, part task or low fidelity simulators, and multimedia tools, can train as well as test; it would seem natural to develop any new testing tools with this in mind. The report of the TRAINER project provides examples of some possibilities here. A related point is that some of the possible changes to testing would require examiners to interact more with candidates before, during or after the test drive - for example to discover the reasons for observed behaviour, and to compare candidates self assessments with examiner assessments. This will present increased opportunities for examiners to deliver feedback to candidates and thus increase the training element of the test.

Meeting other needs of test candidates

The requirements of the ideal test should also be considered from the point of view of the needs, hopes and expectations of test candidates. Some of these will be short term and some long term, some related directly to driving and others having to do with the candidate's self-image and need to achieve. Clearly there will big individual differences here.

Short term needs, highly relevant to the test's function as a way of inducing good training, include the need to feel that the test is a fair test of the important driving skills, that it is serious, demanding and relevant to safety, and that it allows candidates to demonstrate the skills they have acquired. If the test is failed, this needs to be for understandable reasons, and it is highly desirable that candidates accept that if they fail the test, this is beneficial to their safety. Being treated with respect is also important. There are also the longer term needs that the test, when passed, should indicate that the driver will be safe and competent.

These considerations imply that the test should be demanding, valid and reliable, with the examiner behaving professionally and delivering good feedback on the reasons for failure. Good face validity (i.e. such that the candidate sees the test as a valid test of his driving ability) and good perceived reliability (such that the candidate feels the outcome to be governed by his driving competence rather than 'luck') will be particularly important in influencing candidates' perceptions of the test. Providing candidates with opportunities to correct their mistakes is also desirable, though some errors may still be judged to be severe enough to warrant immediate failure.

3.2.9 Possible improvements to driver testing

Overview

Improving the content of driver testing, so that it covers all the cells of the GDE matrix, will in general involve:

(a) Providing opportunities to observe typical behaviour, and to ask candidates about the reasons for that behaviour, in situations where Level 3 and 4 factors come into play.

(b) Obtaining better predictions of such behaviour, by testing the skills and knowledge, including knowledge of self-limitations, that are necessary to enable a driver to deal safely with Level 3 and 4 factors

To achieve this, the following approaches are available:

- Providing more opportunities in on-road tests for Level 3 and 4 factors to come into play.
- Broadening this further by making more use of simulators and multimedia tools to present situations in a safe and controlled way.
- Giving more emphasis to assessment of knowledge and skills necessary to deal safely with Level 3 and 4 factors.
- Making more use of interactions between examiner and candidate to assess hazard perception skills, infer reasons for behaviour, and assess self-evaluation skills.
- Possible inclusion in the test of elements that do not contribute to the pass-fail decision, but help establish the importance of a particular area of training.

Other possible developments that could be considered include the following:

- Giving more emphasis to feedback, so as to improve the ability of the test to influence training, and to provide the maximum opportunity for the candidate to learn from his or her performance in the test.
- Investigating the case for introducing (where they are not already used) assessment methods that allow examiner's overall judgements to contribute to the pass-fail decision.
- Increasing pass rates by persuading candidates not to come for test until they have reached a higher level of competence.
- Multi-stage testing
- Use of new tools (e.g. multimedia tools) for training as well as testing
- Optimising the relationship between testing, training and licensing provisions which might mean relying more on training than testing to deal with some areas of the GDE.

Clearly, to achieve such changes the duration of testing is likely to increase, though if pass rates can be substantially increased, the overall cost of testing will not necessarily increase.

Some more specific ideas for future testing

Based on the general approaches listed above, the following more specific ideas for improved testing may be suggested for further evaluation and development:

(i) Practical, on-road testing

 Where possible, include tasks and freedom of action, relating to Levels 3 and 4. In the practical on-road test this will be mainly Level 3. For example, some triprelated planning and decision skills to do with both safety and environmental objectives could be included in the practical test. This would probably need to include some questioning from the examiner about how and why choices were made. The scope here is limited because (a) behaviour might not be typical, (b) there are difficulties in using behaviour or even verbal reports as a basis for inferring whether behaviour is being controlled by higher level goals, knowledge and skills, and (c) formal pass-fail criteria may be difficult to establish. Nevertheless, it should be possible to assess the candidate's 'maximal' performance, and adequate maximal performance is a prerequisite for adequate typical performance.

- Feedback from/discussion with examiner unlikely to contribute to pass/fail, but would impart knowledge and emphasise the importance of aspects of driving.
- Traffic-related skills testing could also be enhanced e.g. by asking candidate to make decisions about where to conduct manoeuvres
- Testing of hazard perception and situation awareness might be enhanced e.g.: by the use of commentary and situation-awareness techniques during on-road testing
- Develop ways of assessing a candidate's overall driving style, and bringing examiners' assessments of future driving safety into the test
- Use of prolonged tests (in which drivers *may* in some respects revert to typical behaviour) could be investigated. However, the basic premise would need to be substantiated, and a greatly increased test duration might be too costly to contemplate for mass use.

(ii) Multimedia tools

- Broaden current computer-based hazard perception tests (currently focussed on Level 2) to include higher-level situations and risk factors.
- High fidelity, 'whole task' driving simulators will clearly not be available for mass driver testing. However, lower fidelity and part-task simulators and multimedia tools offer potential benefits for both training and testing. For example, they can be used to:
 - Present aspects of the driving task that on-road tests cannot cover in a standardised way – e.g.:
 - High risk/hazard scenarios
 - Scenarios involving the behaviour of other road users (which the candidate would interact with during driving, and answer questions about).
 - Scenarios involving passengers (here, the simulator would need to present an in-car scene)

- Scenarios involving travel planning and route planning
- Decision scenarios
- Ask questions of the candidate in a standardised way generally these will be multiple choice
- o Train as well as test

(iii) Knowledge tests.

• These could be extended to cover all levels and cells of the GDE matrix. Some could take place during a practical test session, and others would be more suitable for testing separately – e.g. by means of 'classroom' tests or by the use of multimedia tools as discussed above. Where they form part of an on-road test, they could be predetermined formal tests or informal assessments made during a 'conversation' with the examiner. The issue that will need to be investigated is the extent to which suitable pass-fail criteria for such tests can be established - and this in turn will depend partly on the extent to which overall examiner judgement, rather than formal test scores, can be accepted as the basis for pass-fail decisions.

Even if they cannot initially be accepted as part of a pass-fail decision, such tests could form a useful element of the driving test, in that they help to establish the importance of such knowledge, and will influence the training curriculum and will give examiners experience of this type of assessment. It is possible that once experience is gained, and any necessary research evidence connecting performance of these test elements to safety has been collected, that they can then become part of the pass-fail criterion.

• Self-assessments (perhaps compared with examiner assessment, and perhaps including discussion). These assessments would be useful at levels 3 and 4. It is not yet clear how far they could contribute to a pass-fail decision – partly because the examiner may not have good information against which to compare the candidate's self-assessments.

Assessments of attitudes, goals, etc

• In general, not suitable as pass-fail elements of testing but could be included to promote awareness of the importance of these factors. The beliefs underlying attitudes could be tackled by knowledge tests.

Use of instrumented cars for driver monitoring and/or testing

In principle, it would be possible to extend the driving test, so that it required a period of unsupervised driving in an instrumented car before awarding a full licence. In effect, this could be seen as an element of a graduated licensing system. There are already available GPS-based systems that can record information on a vehicle's position, speed and accelerations, and transmit this back to base via mobile phone technology. Large scale trials of such equipment are currently taking place. This information could be used to form indices of driver behaviour such as frequency of harsh braking, acceleration and cornering, speed choice, and compliance with speed limits. The system could thus be used as a supervisory influence to monitor and even enforce at least certain elements of a sedate driving style which might reduce risk during the probationary phase and enable drivers to increase their experience and develop good habits before being allowed to drive solo without the instrumentation. Level-3 behaviour concerning when and where to drive could also be influenced by such a system. Smart card technology could be used to identify drivers to the system. Such a system would measure behaviour and could influence it by (for example) denying a full licence to people who exhibited undesirable behaviour, or by increasing their insurance premiums. Pilot studies for insurance systems in which premiums will depend on the results of in-car data recording are already in progress. To an extent, using instrumented cars to monitor behaviour could be seen as a test of typical behaviour but, since the system would still be exerting a strong supervisory effect on behaviour, it might be better regarded as a way of influencing early post test behaviour.

Other possibilities for testing

- Remove negative aspects from current tests e.g.:
 - Examiner not wearing seat belt

- Omission of all higher level content from test (implies higher levels are not important)
- Ensure test seems fair, serious, and demanding to candidates
- Self assessment as part of driver training history/portfolio

Table 54 shows the GDE matrix, with some suggestions for testing in each cell.

Hierarchical level	Central content of driver education:		
of behaviour (extent of	Knowledge and skills the driver has to	Risk increasing factors the driver must be aware	Self-evaluation
generalisation):	master	of	
Goals for life and skills for living	Knowledge about / control over how	Knowledge about / control over risks	Awareness of personal tendencies re. impulse
(global)	general life goals and values, behavioural	connected with life goals and values, behavioural	control, motives, lifestyle, values, etc. Developing
	style, group norms etc. affect driving.	style, social pressure, substance abuse etc.	self-evaluation skills.
	Know the effects of these factors on	Know the risks associated with these factors;	Know self in terms of these factors and tendencies,
	driving; have knowledge and skills to	have knowledge and skills to assess and control	and ability to control and assess them and their
	control these factors or their effects and/or	these risks and make decisions about driving	effects. Know own self-evaluation skills.
	to make decisions about driving that take	that take them into account.	
	account of these factors.		
	Knowledge tests – what are the facts about	Knowledge tests – what are the facts about these	Self evaluations. However, examiner will have little
	these influences on driving; what kinds of	influences on driving; what kinds of strategies	information on actual personal tendencies of
	strategies are needed to deal with them.	are needed to deal with them.	candidate to compare these with. Unlikely to be
			suitable for pass-fail.
	Tests of decision making in 'simulations' in	Extended hazard perception tests in which such	
	which scenarios involving self or others are	elements are introduced into the scenarios.	Could include attitude questionnaire (not pass-fail)
	presented.		
		Tests of decision making in multimedia	Use of peer-group evaluations as comparator for self-
	Little scope for testing this cell by inferring	'simulations' in which scenarios involving self or	evaluations - i.e. how does driver see self, vs. how
	from observed behaviour during on-road	others are presented.	does his peer group see him.
	test, though may get some information from		

Table 54: Possible test elements suitable for the cells of the GDE Matrix
	self reports of reasons for behaviour	Tests of ability to deal with social pressures -	Instructor and/or parent supervisor as provider of
		e.g. role-playing or just knowledge of	comparator data
		techniques/strategies	
			Self-evaluation of self-evaluation skills. Again,
			unlikely to be suitable for pass-fail decisions (e.g.
			because of lack of comparator)
Goals and context of driving	Knowledge and skills re. trip-related	Knowledge and skills re. risks connected with	Awareness of personal planning skills, typical
(specific trip)	considerations (effect of goals, environment	trip goals, driving state, social pressure, purpose	driving goals, driving motives, etc. Developing self-
	choice, effects of social pressure, evaluation	of driving, etc.).	evaluation skills.
	of necessity, etc.).		
	Know the effects of these factors on	Know the risks associated with these factors;	Know self in terms of these factors and tendencies,
	driving; have knowledge and skills to	have knowledge and skills to assess and control	and ability to control and assess them and their
	control these factors or their effects and/or	these risks and make decisions about driving	effects. Know own self-evaluation skills.
	to make decisions about driving that take	that take them into account.	
	account of these factors		
		Knowledge tests:	Self evaluations.
	Include trip decision-making in the practical	what are the facts about the risks	However, examiner will have little information on
	test, and observe behaviour and possibly	associated with these factors; what kinds of	actual personal tendencies of candidate to compare
	self reports. Scope for this will be limited to	strategies are needed to deal with them?	these with. Unlikely to be suitable for pass-fail.
	aspects of route choice and choice of places	What are the facts about legal	
	to manoeuvre, because of difficulties in	requirements for driving licences- e.g. amount of	Identify the risk-increasing factors that typically
	providing adequate freedom for other types	alcohol that is permissible to consume; what is	apply to yourself.
	of trip decisions. Implies that test should	the legal alcohol limit	
	test, and observe behaviour and possibly self reports. Scope for this will be limited to aspects of route choice and choice of places to manoeuvre, because of difficulties in providing adequate freedom for other types of trip decisions. Implies that test should	associated with these factors; what kinds of strategies are needed to deal with them? What are the facts about legal requirements for driving licences- e.g. amount of alcohol that is permissible to consume; what is the legal alcohol limit	actual personal tendencies of candidate to compare these with. Unlikely to be suitable for pass-fail. Identify the risk-increasing factors that typically apply to yourself.

include some independent driving, and	Extended hazard perception tests in which such	Could include attitude questionnaire (not pass-fail)
some tasks to test this independent driving.	elements are introduced into the scenarios.	
Observe 'simulated' trip decision-making – paper and pencil, or computer based. Combine with self-reports on reasons for	Observe 'simulated' trip decision-making – paper and pencil, or computer based. Combine with self-reports on reasons for the decisions.	Use of peer-group evaluations as comparator for self- evaluations – i.e. how does driver see self, vs. how does his peer group see him.
the decisions.	Could include trip-planning tasks	Instructor and/or parent supervisor as provider of comparator data
Knowledge tests – what are the facts about	Tests of ability to deal with social pressures -	
the effects of trip-related considerations on	e.g. role-playing or just knowledge of	
driving; what kinds of strategies are needed	techniques/strategies	
to deal with them.		
Tests of planning/decision making skills		
and knowledge		

Mastery of traffic situations	General knowledge and skills re. rules,	Knowledge and skills re. inappropriate speed,	Awareness of personal skills, driving style, hazard perception,
(specific situation)	speed adjustment, safety margins,	narrow safety margins, neglect of rules, difficult	etc. from the viewpoint of strengths and weaknesses. Developing
	signalling, etc	driving conditions, vulnerable road-users, etc.	self-evaluation skills.
	Knowledge tests - what are the facts about	Knowledge tests – what are the facts about these	Self evaluations compared with examiner evaluations
	these traffic related factors	risk increasing factors; how can they be	based on other test results.
		recognised; what sort of response is needed from	
	Observations of behaviour during road test	drivers to maintain safety. Note, these factors	Knowledge of how personal skills and limitations
	- errors, judgements of skill level	apply to both the test candidate, and to the other	will affect safety, and how they need to be dealt
		traffic.	with/compensated for.
	Self reporting during road tests - e.g.		
	commentary, stop and tell Situation	Observations of behaviour during road test – e.g.	
	Awareness questions, examiner questions at	dealing with poor behaviour of other road users,	
	end of test.	dealing with unexpected hazards, dealing with	
		encounters with vulnerable road users.	
	Observations of behaviour during simulated		
	drives	Self reporting during road tests - e.g.	
		commentary on hazards and dealing with them,	
		remember and report on hazards, Situation	
		Awareness questions, questions about reasons for	
		particular behaviour; questions at end of test.	
		Observations of behaviour and self-reporting as	

		above, but during simulator/multimedia drives	
		(in which the risk increasing situations can be	
		presented in safety, and in a consistent way from	
		test to test). Knowledge tests could also be	
		incorporated.	
		Computer/multimedia hazard perception tests	
Vehicle manoeuvring	Basic knowledge and skills re. car control,	Knowledge and skills re. risks connected with	Awareness of personal strengths and weaknesses re.
(specific task)	vehicle properties, friction, etc.	car control, vehicle properties, friction, etc.	basic driving skills and car control (especially in
			hazardous situations), etc. Developing self-evaluation
	Observed drives on-road	Knowledge tests – what are the facts about these	skills.
	Observed drives at off-road centre	risk increasing factors; how can they be	
	Knowledge tests – the facts about effects of	recognised; what sort of response is needed from	Self evaluations compared with examiner evaluations
	vehicle properties, friction, and how to deal	drivers to maintain safety.	
	with them		Knowledge of how personal skills and limitations
		Test track assessments of skills in dealing with	will affect safety, and how they need to be dealt
		these factors (but note possible negative effects	with/compensated for.
		of practising (e.g.) skid control)	

Table 55: The GDE Matrix and Annexe 2 of Directive 2000/56/EC

Hierarchical level	Central content of driver education:			
of behaviour (extent of	Knowledge and skills the driver has to	Risk increasing factors the driver must be	Self-evaluation	
generalisation):	master	aware of		
Goals for life and skills for living	Knowledge about / control over how	Knowledge about / control over risks	Awareness of personal tendencies re. impulse	
(global)	general life goals and values, behavioural	connected with life goals and values,	control, motives, lifestyle, values, etc. Developing	
	style, group norms etc. affect driving.	behavioural style, social pressure, substance	self-evaluation skills.	
		abuse etc.		
	Know the effects of these factors on driving;		Know self in terms of these factors and tendencies,	
	have knowledge and skills to control these	Know the risks associated with these factors;	and ability to control and assess them and their	
	factors or their effects and/or to make	have knowledge and skills to assess and	effects. Know own self-evaluation skills.	
	decisions about driving that take account of	control these risks and make decisions about		
	these factors.	driving that take them into account.		
	No coverage in Annexe 2	No coverage in Annexe 2	No coverage in Annexe 2	
Goals and context of driving	Knowledge and skills re. trip-related	Knowledge and skills re. risks connected with	Awareness of personal planning skills, typical	
(specific trip)	considerations (effect of goals, environment	trip goals, driving state, social pressure,	driving goals, driving motives, etc. Developing self-	
	choice, effects of social pressure, evaluation	purpose of driving, etc.).	evaluation skills.	
	of necessity, etc.).			
	Know the effects of these factors on driving;	Know the risks associated with these factors;	Know self in terms of these factors and tendencies,	
	have knowledge and skills to control these	have knowledge and skills to assess and	and ability to control and assess them and their	
	factors or their effects and/or to make	control these risks and make decisions about	effects. Know own self-evaluation skills.	

	decisions about driving that take account of	driving that take them into account.	
	these factors		
	2.1.2 (part) Theory test questions on the driver: importance of alertness and attitude towards other road users	2.1.2 (part) Theory test questions on the driver: perception etc, effects of alcohol and drugs, effects of fatigue and state of mind	No coverage in Annexe 2
	9.3.2 Examiner to assess specified aspects of economical and environmentally friendly driving	2.1.3(part) Theory test questions about driving risk factors related to road conditions, particularly as they change with the weather and time of day or night.	
Mastery of traffic situations	General knowledge and skills re. rules,	Knowledge and skills re. inappropriate speed,	Awareness of personal skills, driving style, hazard
(specific situation)	speed adjustment, safety margins, signalling,	narrow safety margins, neglect of rules,	perception, etc. from the viewpoint of strengths and
	etc	difficult driving conditions, vulnerable road-	weaknesses. Developing self-evaluation skills.
		users, etc.	
	2.1.1 Theory test questions on road traffic regulations2.1.3 (part) Theory test questions on safe distances, braking and road holding (general)2.1.3 (part) Theory test questions about characteristics of types of road and related	2.1.4 Theory test questions on risk factors related to inexperienced and vulnerable road users; risks involved in movement and driving of various types of vehicle and of the different fields of view of their drivers	No coverage in Annexe 2

statutory requirements	9.2 Examiners to pay special attention to	
2.1.3 (part) Theory test questions about effect	whether the applicant is showing a defensive	
of weather and road conditions on safe	and social driving style,, taking account of road	
distances, braking and road holding	and weather conditions, other traffic, the	
2.1.5 (part) Theory test questions about the	interests of other road users and anticipation	
rules concerning behaviour in the event of an	and to "take this into account in the overall	
accident (setting warning signs; assisting	picture of the candidate	
victims); safety factors relating to the vehicle,		
load and persons carried		
2.1.6 Theory test questions on precautions		
necessary when alighting from the vehicle		
2.1.9 Theory test questions about vehicle use		
in relation to the environment		
7.4 Applicants to perform specified actions in		
normal traffic situations in complete safety		
and taking all necessary precautions		
(overlaps with Level 1 and with Column 2?)		
9.3.3 Examiner to assess observation		
9.3.4 Examiner to assess priority/giving way		
9.3.5 Examiner to assess vehicle positioning		
9.3.6 Examiner to assess keeping adequate		
distances to front and side, and from other		
road users		
9.3.7 (part) Examiner to assess adapting		

	speed to weather/traffic conditions, and to general speed of same kind of road users. 9.3.7(part) Examiner to assess not exceeding speed limit, driving at a speed that enables stopping within distance that is seen to be clear 9.3.8 Examiner to assess acting correctly in regard to road signs, traffic lights, traffic controllers, road markings 9.3.9 Examiner to assess signalling and responding to signals from other road users 9.3.10 Examiner to assess decelerating in time, braking or stopping according to circumstances		
Vehicle manoeuvring (specific task)	Basic knowledge and skills re. car control, vehicle properties, friction, etc. 2.1.8 Theory test questions on vehicle safety equipment (seat belts, head restraints, child safety equipment) 5.1 Skills and behaviour test on a vehicle with manual transmission is needed in order to drive such a vehicle.	 Knowledge and skills re. risks connected with car control, vehicle properties, friction, etc. 2.1.7 Theory test questions on mechanical aspects with a bearing on safety – detection of faults 	Awareness of personal strengths and weaknesses re. basic driving skills and car control (especially in hazardous situations), etc. Developing self-evaluation skills. No coverage in Annexe 2

7.1 Prepa	aration and technical checks of the	
vehicle w	ith a bearing on safety	
7.2 Spec	ial manoeuvres to be tested with a	
bearing o	n safety	
9.3.1 Exa	miner to assess specified aspects of	
vehicle c	ontrol	

3.3 Does Annexe 2 of Directive 2000/56/EC meet the requirements for an 'ideal' test?

Table 55 shows the GDE matrix with the test elements of Annexe 2 entered in the cells. It can be seen that there are no entries at Level 4 or in Column 3 of the matrix. Some theory test questions appear at Level 3, and the requirement (9.3.2) for the examiner to assess specified aspects of economical and environmentally friendly driving also taps Level 3 factors to some extent. Most of the test content relates to the four cells in the lower left hand corner of the matrix.

Clearly, although Annexe 2 does pay some attention to Level 3, there is considerable scope for further improving the coverage of the GDE matrix.

3.4 Does current practice in the six TEST countries meet the ideal requirements for testing?

Given that Annexe 2 does not fully cover the GDE matrix, and that there is little evidence of the participant countries going beyond the requirements of Annexe 2 in such a way as to improve this coverage, it is clear that current practice does not meet the ideal requirements discussed earlier. However, some of the participant countries (notably Sweden and the Netherlands) are starting to address the higher levels of the GDE in their driver education programmes, and Sweden has recently started a research programme to develop testing methods for these levels. Part D section 4 of this report describes some of these developments in more detail, as well as giving information on the way that some other countries (New Zealand, Norway, Finland) are tackling issues related to the higher GDE levels.

3.5 How much do the discrepancies between actual and ideal testing matter?

3.5.1 Test content

It is clear that current testing practice in the six countries taking part in this project, and current requirements as specified in Annexe 2 of Directive 2000/56/EC do not cover all the cells in the GDE matrix. It is also clear that to improve coverage significantly will require considerable effort and cost, and often research will be needed to develop and evaluate the test elements. The question therefore arises of how important it is to improve driving tests so that they do cover most or all of the GDE matrix.

The fact that the accident liability of novice drivers is very high during the first few months of unsupervised driving certainly implies that something useful is being learned during this period, and that it would be worthwhile to find ways of encouraging this learning to take place before unsupervised driving is permitted (e.g. Baughan and Simpson (2002)). Accident rates during supervised training are very much lower than those during post-test unsupervised driving (e.g. Peraaho, Baughan, Wedge and Hatakka (2004)) which suggests that examining the differences between supervised and unsupervised driving would give insight into the reasons for novice drivers' high accident liabilities – i.e. into what is actually being learnt during the early period of unsupervised driving. These differences include:

- Supervision of behaviour by the instructor or lay supervisor is relinquished in favour of supervision by GDE Level 3 and 4 factors, and by the driver's actual and perceived limitations.
- The range of risk increasing factors likely to be encountered increases, and these factors must now be recognised and dealt with safely by the novice driver, since he or she can no longer rely on a supervisor/instructor.
- Lower level skills and knowledge must now be exercised in 'real' situations which may place more demands on them.

Thus there is a strong indication that deficiencies at the higher levels and right-hand column of the GDE matrix do play a crucial role in novice driver safety, and that making good such deficiencies is likely to be effective in improving safety. What will need to be considered, however, is the extent to which testing, or testing alone, is the best way of achieving this. In general, it will certainly be desirable to cover as much as reasonably possible of the specified skills and knowledge by testing, even where obligatory training is introduced for these areas. However, where it proves particularly difficult or expensive in terms of test development or implementation to introduce new elements into the driver testing it may be necessary to rely on obligatory training, and/or to use elements of graduated licensing to introduce other risk-controlling mechanisms into the early stages of unsupervised driving.

3.5.2 Pass rates

As discussed in section 3.2.7, there would be many advantages if candidates could be persuaded to delay coming for test until their level of competence gave them a high probability of passing the test. At present, the rather low rates in most of the countries participating in this project indicate a considerable waste of resources. What is not at present known is how sensitive pass rates actually are to moderate (and therefore achievable) increases in the amount of training and practice. Cross sectional studies in which the relationship between pass rates and amounts of training and experience in a sample of driving test candidates is examined cannot answer this question. What they typically show is that candidates with more training tend to have lower pass rates – which is a reflection of the fact that people who find it difficult to learn to drive tend to have more lessons pre-test than other learners, but still find it relatively difficult to pass the test. What is needed is an experimental study, in which samples of test candidates are persuaded to take extra training and practice before coming for test. Such a study is recommended in Part E section 5.

4 SURVEY OF CURRENT PRACTICES

4.1 In the theory test

In many countries the theory test already includes questions about risk increasing factors like the use of alcohol, drugs and medication in traffic as well as the impact of social pressure and the use of mobile telephones whilst driving. Some examples of countries that do this are France, Great Britain and Netherlands. Below are some examples of the questions used in these countries:

You are planning a long journey. Do you need to plans rest stops?

- a. Yes you should plan to stop every half an hour
- b. Yes, regular stops help concentration
- c. No you would be less tired if you get there as soon as possible
- d. No, only fuel stops will be needed

Your vehicle is fitted with a hand-held telephone. To use the telephone you should:

- a. reduce your speed
- b. find a safe place to stop
- c. steer the vehicle with one hand
- d. be particularly careful at junctions

Can medication with a yellow sticker influence your driving?

- a. Yes
- b. No

Which four are most likely to cause you to lose concentration while you are driving?

- using a mobile phone
- tuning your car radio
- checking the mirrors
- talking into the microphone
- looking at a map
- using the demisters

Which two things would help to keep you alert during a long journey?

- finishing your journey as fast as you can
- keeping off motorways and using country roads
- making regular stops for refreshments

You should not use a mobile phone whilst driving:

- until you are satisfied that no other traffic is near
- because it might distract your attention from the road ahead
- unless you are able to drive one-handed
- because reception is poor when the engine is running



I can overtake

Yes___A No___B



Pour adapter mon allure, je tiens compte : - du cycliste OUI _____ A NON ____ B - de la voiture qui me suit OUI _____ C NON ____ D When adapting my speed I need to take into consideration:

- the	cyclis	st	
Yes	A	No	<u> </u>
- the	car be	ehind me	
Yes	<u>C</u>	No	D

Dans cette OUI	situation, je rale	entis : NON		In this si Yes_ No _	tuation I will s	low down:
Je peux dér - par • D.S.C.R. PAINE	passer cette cam la droite la gauche	ionnette : OUI NON NON	A B C D	I can c - -	overtake this va On the right On the left	un: YesA NoB YesC NoD

However, just because these topics are covered in the theory test, doesn't mean that they are actually accepted as issues to be taken into account when actually driving. There is a difference between knowing what answer to give in a theory test and actually applying this knowledge when driving.

4.2 In driver training

4.2.1 The Netherlands

In the Netherlands the RIS (Driver Training Stepwise) programme was recently introduced. In this training a number of things from the higher levels of the GDE matrix are touched on. In fact, the fourth (and last) module of the programme is entitled safe and responsible participation in traffic and includes elements like planning and selection of routes and mentality and responsibility.

A key element of RIS is the *s*ystematic training of handling scripts and training to apply them in proper situations. There are a total of 39 scripts, which define in short statements the essential steps of a right solution of driving tasks e.g. the script "*Starting the engine*"

- » Handbrake
- » gearlever in neutral
- » left foot down on clutch pedal
- » turn starting key)

The RIS training is based on a stepwise system, where the learner driver learns to master a certain task before moving on to the next one. Module 1 covers vehicle checks and vehicle operation; module 2 covers simple manoeuvring and driving tasks; module three deals with advanced vehicle operation, complex manoeuvring and complex driving tasks and module 4 handles the goals behind driving, focussing on *s*afe and responsible traffic participation and the effects of for example alcohol and stress on driving ability.

A number of special elements incorporated into the RIS training are:

- Training "difficult conditions"
- Independent driving
- Energy-efficient driving
- Homework for learner drivers
- Integration of theory and practice

4.2.2 New Zealand

New Zealand is currently experimenting with a competency based training and assessment programme which brings training and testing closer (they are already quite close in New Zealand where there is a Graduated driver licensing system).

Street Talk is currently a course that can be completed by drivers with a restricted licence (can drive solo, but subject to passenger and night driving restrictions) and to reduce the period of their licence restrictions from 18 months to 12 months. The aim of this course is to help drivers better understand and cope with risk as drivers and to be aware of their own performance as a driver and to bring out improvement in their driving if needed. It is an interactive programme training advanced driving skills, control, the ability to make the right decisions, the ability to manage risk.

The Street Talk Course was originally written for use with students in the final two years of their secondary school career (years 12 & 13), with particular connections to the Health curriculum requirements. At the time the course was written the Health curriculum was to be compulsory, providing an ideal location for the course, but just prior to the course's release the decision was made to make the Health curriculum "optional" at years 11 - 13. At the same time, the government of the day decided that it was necessary to retain a course that provided an opportunity for novice drivers to reduce the period of their licence meaning that a course needed to be found that would not increase risk for these people and also have the best chance of improving their safety. Because the Street Talk course was available it was adapted for this "time reduction" course.

The Street Talk course uses modern approaches to health related behaviour modification, and is a facilitated learning course rather than one led from the front by a teacher. Participants in the course (max 16) are guided through a series of small group interactive exercises that take them from exploring the novice driver problem, through topics such as the effects of wider health and well-being on driver safety, the effects of alcohol, the effects of other passengers, the effects of emotion, on to an exploration of the sources of risk and the control the driver has over them, finally to exploring ways of identifying risk factors and addressing them in oneself. Alongside these classroom exercises are a number of other independent activities that must be completed in the participant's own time - related to the practical application of classroom learning. A common activity running through the course is one of critical reflection - reflecting on learning and reflecting on driving.

4.3 In driver testing

4.3.1 Independent driving

Independent driving is already being applied in numerous countries. The candidate will be told to head in a certain direction or follow sign heading in a certain direction and it is left up to him / her to determine exactly how to drive (which lane, when to turn, etc.) This touches on knowledge and skills regarding risks connected with trip goals, driving state, social pressure, purpose of driving (level 3). Some examples of countries where independent driving is applied in the driving test are Sweden, Great Britain and The Netherlands.

4.3.2 Finland

In the practical driving test in Finland, candidates are asked make an evaluation of their own driving skills. The candidate indicates on the test results form what he thinks of his skills before actually taking the driving test and after the driving test this is compared with the examiner's opinion.

4.3.3 New Zealand

The full license test in New Zealand is worth considering in more detail.

The full licence test is a tough on-road driving test that restricted licence holders must pass before "graduating" to a full New Zealand driver licence.

In the test the candidate is expected to demonstrate safe driving behaviour across a wide range of traffic situations and road conditions.

The things that the candidate is asked to do in the test are designed to see if he / she can safely handle driving situations that present the greatest crash risk to him / her in the first five years of driving.

What does the test involve?

The full licence test takes about one hour.

The full licence test has three parts:

Part 1 - basic driving (about 10 minutes)

Part 2 - detecting and responding to driving hazards in built-up areas (about 15 minutes) Part 3 - detecting and responding to driving hazards in higher speed zones (about 20 minutes).

The candidate must successfully complete Part 1 before progressing to Parts 2 and 3. The testing officer will inform the candidate of the result of Part 1 as soon it has been completed.

Part 1: a test of basic driving

Part 1 confirms that the candidate has some basic driving skills. The candidate will be tested on:

- driving in a straight line (tested once in Part 1)
- turning left at 90° intersections (tested twice in Part 1)
- turning right at 90° intersections (tested three times in Part 1).

In Part 1 the testing officer will check the following aspects of the candidate's driving: Search, Mirror use, Signal use, Head checks, Speed, Braking, Position and Gap selection.

Part 2: detecting and responding to driving hazards in built-up areas

In part 2 of the test the candidate is required to show that he / she can detect and respond to driving hazards in built-up areas (e.g. in and around towns and suburban areas), where the speed zones range up to 60km/h.

In Part 2 the testing officer will be looking at the same things as in Part 1, and will also be looking closely at the way the candidate detects hazards and responds by adjusting the vehicle's speed or position. A hazard is anything that may be a crash danger to the driver, or to other road users (e.g. cross-traffic at an intersection). The testing officer will ask the candidate to observe and remember the major hazards that he / she detects as he / she performs a particular driving manoeuvre. As soon as possible after each one of these situations, the testing officer will ask the candidate to pull in to the kerb (or a safe area on the side of the road) and ask him / her to describe the hazards he / she saw.

For example, if the candidate had been asked to make a right-hand turn at a busy intersection, the testing officer would expect to hear a description of what vehicles or other road users he / she was looking at during the manoeuvre.

The things that the candidate recalls must match those that the testing officer noted. The driving manoeuvre (e.g. the right-hand turn) must also have carried out correctly and safely.

Part 3: detecting and responding to driving hazards in higher speed zones In Part 3 of the test the candidate is required to show that he / she can detect and respond to driving hazards in higher speed zones (e.g. on highways, major roads and motorways) — areas where the speed limits range from 70 to 100km/h. The candidate's ability to detect and respond to hazards will be assessed across a variety

of traffic situations, including:

- driving straight on highways, major roads and/or motorways
- driving around curves on highways, major roads and/or motorways
- making a U-turn on a highway or a major road
- merging and changing lanes on highways, motorways and/or major roads.

The candidate will be asked to describe the hazards he / she is seeing and what he / she thinks needs to be done to deal with them as the manoeuvre is performed.

For example, if the candidate had been asked to change lanes on a highway, the testing officer would expect him / her to describe what vehicles he / she was seeing, why he / she merged when he / she did and what things presented the greatest hazards to him / her during the manoeuvre. *This means that the candidate must be able to drive safely and talk at the same time*.

The things that the candidate saw, described and responded to must match those that the testing officer noted. The driving manoeuvre (e.g. the U-turn or lane change) must have been carried out correctly and safely.⁹

4.4 Combining driver training and testing

4.4.1 Norway

Norway has formulated a new vision for transportation: Vision Zero. The main concern for the Norwegian Public Roads Administration in this context is to reduce the large number of accidents caused by those who have just obtained their driving licenses. To help achieve this, a document has been drawn up which sets up a common educational platform for all categories of driving licences. Further, a general and principal educational model has been developed for use in all categories. The educational model is based on the GADGET-model, with a particular emphasis on the upper levels of the model, in an effort to improve education within traffic safety.

The model also emphasizes the importance of automatic actions so as not to overload the cognitive system during driving. Consequently, the education is to be executed step by step in 4 steps, with clear competence objectives at each step (the steps are 1: Basic knowledge; 2: Vehicle manoeuvring; 3: Mastery of traffic situations and 4: Traffic Safety).

Topics that cannot be tested during the driving test will be subject to mandatory training. In fact, the new regulations will not result in major changes in the Norwegian driving test. There will be a slight revision of the guidelines and criteria, but not any radical adjustment. In the new curricula there is a principle that says: If topics can not be tested in the theoretical or practical test, they must be put into mandatory education. In fact step 1 and 4 in all the curricula aim at increasing reflection and self awareness, and consequently there are a lot of mandatory courses there.

⁹ From Fact sheet 58, Land Transport Safety Authority

With basis in the top level document, new curricula have now been designed for all categories which will be implemented in 2005.

The first step in the implementation process was the introduction of a mandatory 15 lessons Course in Basic Road Traffic Knowledge from July 2003. The course is a theoretical course focussing on understanding the road traffic system and aimed at starting the process of increasing reflection and self awareness, a theme that will be picked up again in the last step of the educational model. The course also includes lessons in first aid and dark driving demonstrations.

4.4.2 Sweden

A new curriculum was recently introduced in Sweden for Category B education. The curriculum will be fully introduced in March 2006. A project has already started to line out the implementation procedures in detail. This programme will concern both training and testing.

The new curriculum is based on the GDE matrix, which is partly revised and changed to fit the aims and outcomes of driver training. It is a goal oriented description of the contents and structure of driver competence that should be reached before getting a B-licence (other categories will follow later on). Aims, goals and examination criteria are written in very general terms, which have to be specified in different working documents for training and testing.

The project is still at an early stage so not very much can be said about it as yet. It is however interesting to look a bit more closely at 2 particular parts of the curriculum:

- "Travelling with the car under special conditions"

This section should deal with the candidate's knowledge about the importance of planning the travelling with regard to e.g. where, when, how, under which circumstances and why a trip should be carried out. This knowledge shall be used to make trips as environmentally friendly as possible and to avoid travelling under

dangerous circumstances such as dense traffic, low friction, bad weather, driving under the influence of alcohol or fatigue, etc.

- "personal preconditions and goals"

The aim of this section is to provide understanding to the candidate how different personal and social preconditions influence the role as a driver. The candidate shall realise how driving behaviour and accident risk is correlated with factors such as age, gender, personality, lifestyle, socio-economy, education and per groups. By understanding these relationships the candidate is expected to obtain better precondition to adjust the driving in a way that own preconditions are taken into account.

4.5 Conclusions

We can see that various countries across Europe (and beyond) are looking at how to introduce the GDE matrix, and in particular how to introduce the higher levels of the GDE matrix into driver training and testing. It must be stated that the examples listed in this section are only a few examples and that they should not be seen as an exhaustive list of all that is being done to introduce the elements of behaviour and attitudes into driver training and testing. They do however give us some insight into the directions in which we can expect to be heading and perhaps provide some ideas of how to provide better and more effective training for novice drivers.

PART E: RECOMMENDATIONS

To be able to formulate recommendations and suggestions on the basis of the information collected in this project, it may be useful to reiterate the 4 main objectives of the project as well as its original title: Analysis of the Contents, the Location and the Duration of the practical driving test for obtaining a category B driving licence.

- to determine to what extent the duration and location of the practical driving test for category B allow the requirements of Directives 2000/56/EC and 91/439/EEC to be met and to consider whether the tests are covering all requirements of the directives;
- 2. to make an assessment of the homogeneity of the driving test in the 6 countries involved in the project and in the different test centres within each country;
- 3. to make an assessment of how well the road safety needs of novice drivers are being met through the current practical tests;
- 4. to develop recommendations to improve the status quo.

For each objective, a short summary is first provided of the most important findings as presented in earlier sections of this report. Thereafter follows a number of concrete recommendations on how to improve the current situation, if such improvements are considered necessary.

1 LOCATION – DURATION AND CONTENTS OF THE PRACTICAL DRIVING TEST AND MEETING THE REQUIREMENTS OF THE EUROPEAN DIRECTIVES

1.1 Does the duration of the test provide sufficient opportunities to properly assess the candidate?

- ⇒ Tests where the candidate passed were longer on average than tests where the candidate failed. Part of this difference is due to the fact that in France and Spain, tests are halted when the candidate can no longer pass.
- ⇒ Items that were most difficult to assess tended to be items for which very little time was spent on in the practical driving test (e.g. independent driving, driving on slopes, driving on motorways).
- \Rightarrow The mean duration of tests in general was shortest in test centres located in small towns and longest in test centres in urban areas.
- ⇒ Examiners were generally quite satisfied with the driving tests but tended to feel they needed more time. Examiners with a longer test were more satisfied than examiners with a shorter test with how the driving test was divided up and with their ability to determine whether or not a candidate was a safe driver.

The majority of examiners who wanted more time felt they needed this extra time for on-road driving in order to retest certain tasks / skills and because they wanted more time to communicate and interact with the candidate. A repeated suggestion was to separate the special manoeuvres test from the on-road test so that there would be more time left over for the on-road driving.

Examiners have indicated that it is more difficult to assess a candidate's driving skills if the driving test is very short. Longer tests make it easier to evaluate more intricate and combined tasks (independent driving, driving on motorways, overtaking, etc.) and to provide examiners with enough opportunities to retest particular items and skills so that they are more confident about their final assessment. Auditors indicated that it was difficult for them to make a robust decision about items that were only briefly checked in the driving test.

It is interesting to note that there appears to be a relationship between when errors are made and the length of the test. In medium and long tests (25 -34 minutes and more than 35 minutes) both types of errors (potentially dangerous errors and near-accident errors) are distributed over most of the test. In short tests (less than 24 minutes) most errors are recorded at the beginning of the test.

1.1.1 Recommendations:

- ⇒ The minimum duration of the test as currently required by the European Directives (25minutes net driving time) is indeed a minimum duration if examiners are to be able to correctly assess and evaluate driving licence candidates.
- ⇒ If we want to keep more complicated items in the practical driving test (such as independent driving, respecting the safety of all road users, hazard perception) and perhaps even add more (see part III of this section, meeting the needs of novice drivers), we need to make sure there is enough time to deal with all these items in addition to those items that are already being tested. Therefore, if we decide to extend the driving test beyond the bare minimum, we also need to make the driving test longer, as the current minimum duration of 25 minutes is barely enough to cover the basic requirements now listed in Directive 2000/56/EC.

1.2 Do all locations provide the necessary variety of road types to properly assess all candidates?

- \Rightarrow The audit forms have indicated that some areas make it a lot easier to make a robust assessment of the candidate's skills than others.
- \Rightarrow The examiner questionnaires showed that when the general coverage of road types and special road features was poor this made it more difficult for them to

correctly evaluate a candidate; if the coverage was good this significantly helped in the assessment. In fact, the quality of the location had the most effect (in comparison to the duration, the examiners' working experience and the country of origin) on how easy it is for an examiner to make a valid assessment of the candidate.

- ⇒ The examiner questionnaires also indicated that certain test centres do not provide them with enough opportunities for testing / retesting the candidate's skills.
- ⇒ Examiners working at test centres in urban areas were most positive about the impact of the location of the test centre on their ability to make a correct overall assessment of the candidate's safe driving skills.
- ⇒ Countryside centres were least suitable for enabling examiners to make a robust assessment of a candidate's skills (based on the location in which items were tested, the amount of time spent on the items tested and the traffic density when the items were tested). Items that are tested especially little in countryside centres are (unsurprisingly) driving on junctions regulated by traffic lights, roundabouts and changing lanes.
- \Rightarrow The pass rate was highest in test centres in the countryside and in small towns (25% higher than tests centres in urban areas or in the urban periphery)
- ⇒ In particular, test centres in the urban periphery (on the basis of the audit forms) and test centres in urban areas (on the basis of examiner questionnaires) seem to provide the best opportunities to correctly assess a candidate's skills.
- ⇒ Motorways and similar roads are tested most often in test centres in the urban periphery.
- ⇒ Examiners working at test centres in the urban periphery were least satisfied with the duration of the test. This could be explained by the preponderance of urban periphery tests in France (where the duration of the tests was comparatively short). The audit forms indicated that the urban periphery was the most difficult location to check independent driving.
- ⇒ Driving on motorways and closed off areas was very limited. The majority of the time in driving tests is spent driving in built up areas (residential areas or city centres) and on straight roads.

A good test location will ensure that a test is <u>reliable</u> by providing enough opportunities to test all elements at all times (not only certain times of day) so that all candidates are tested at the same level and all tests produce consistent results (see Part D, section III b point 3 Reliability and validity). In addition a good test centre allows a test to be <u>valid</u>, by covering a wide variety of elements which are vital for examiners to be able to make a correct evaluation of the candidates' driving skills. The European Directives describe minimum testing requirements for elements that need to be dealt with in each driving test or whenever possible. It is important to make sure that all testing centres provide examiners with the opportunity to test these items.

1.2.1 Recommendations

- ⇒ Ensure that testing centres in countryside locations in particular provide examiners with the opportunity to check all elements they are supposed to be checking including passing and overtaking; approach and exit of motorways (if possible); driving on roundabouts (if possible); driving on light regulated junctions.
- ⇒ Incorporate driving on motorways (or similar types of roads) into the routes used for the practical driving test if they are available within the vicinity of the test centre.
- \Rightarrow Spend more time on roads outside urban areas (if these are accessible).

1.3 Are driving tests in these 6 countries meeting the requirements of the European Directives?

- ⇒ Nearly all countries find it difficult to test all elements listed in the European Directive in all driving tests. To be able to adequately check each item, the test would need to be a lot longer. However, the majority of tests (especially the longer tests) are covering nearly all elements in the European Directive.
- \Rightarrow In some countries more changes will need to be made than in others if they are to comply with Directive 2000/56/EC:
 - According to Directive 2000/56/EC, the on road time for a practical test for category B should be 25 minutes. The length of the tests in France

went from 15 $\frac{1}{2}$ minutes to 22 minutes; the length of the test in Spain went from 20 $\frac{1}{2}$ minutes to 19 $\frac{1}{2}$ minutes

- The European Directive requires that a safety check is performed in all tests. Safety checks are rarely performed (the mean for all tests was less than 1) in particular in Spain and France.
- The 2000/56/EC Driving License Directive has specific requirements for checking the sitting and driving posture. This is barely checked in any of the 6 countries (the mean for all tests was less than 1) and is checked extremely rarely in Netherlands, France and Sweden.
- Other requirements that have proved difficult to meet are:
 - driving on motorways or similar roads (the mean for all tests was less than 1)
 - passing and overtaking
 - driving on special road features: railway crossings, slopes (the mean for all tests was less than 1)

There was no significant increase in the amount of time spent on these special road features.

⇒ There is an overall tendency of decreased pass rates (except Netherlands) after the implementation of the new Driving License Directive, but these changes are not significant.

All countries involved in this project still need to modify their driving test before they fully comply with the European Directive. Some countries need to make more changes than others.

1.3.1 Recommendations

- \Rightarrow The time spent on the road in Spain needs to be significantly increased.
- \Rightarrow The time spent on the road in France has gone up but needs to go up a bit more.
- ⇒ A special effort needs to be made in Spain and France to include a safety check in all practical driving tests.

- \Rightarrow All countries involved in this project need to make an effort to include a check of the sitting and driving posture as a standard element in all tests.
- \Rightarrow All six countries need to make an increased effort to check driving on motorways or similar roads.
- \Rightarrow All six countries need to make an increased effort to check overtaking.
- ⇒ All six countries need to make an increased effort to check driving on slopes and railway crossings (if these are available in the vicinity of the testing centre).

2 HOMOGENEITY

The different elements covered in the driving test are greatly influenced by the facilities, characteristics and traditions of the country in question. This is an aspect that will always have to be taken into consideration when trying to ensure homogeneity of the driving test across various different countries. Each country will have its own specific elements that on the basis of tradition or safety need to be incorporated into its driver testing and training system.

2.1 Are the tests in all test centres in the 6 countries the same? Do they require the same skills from all candidates?

- ⇒ With regard to duration, the 6 countries involved in this project can be separated into countries with long tests and countries with short tests. Four of the six countries involved had tests with a mean duration of 33 minutes or more. Two countries had shorter tests: the mean duration of a test in Spain was 20 minutes and the mean duration of a test in France was 19 minutes (figures combined for all tests audited in the project)
- \Rightarrow Exactly what contents are assessed in the six countries differs a lot, with 70 to 80% of tests not covering anywhere from two to six topics of all those listed in the Directive 2000/56/EC.
- \Rightarrow When considering the build-up of the tests and what percentage of the test is spent on different items, there are again some striking differences:

- special manoeuvres make up 13% of the test time in Great Britain; in Spain this is only 5%
- the safety check in Austria consumes 7% of the test time; in Spain this is only 2%
- In the Netherlands, only 1% of the test time goes to the check of posture; in France this is 3%.
- ⇒ However, when items are tested, there are no big differences between the number of times they are tested in the different countries. Some interesting details include:
 - Driving away is tested comparatively often in Great Britain and Netherlands
 - Intersections are tested comparatively often in Netherlands and Austria
 - o Left and right turns are tested relatively little in Spain
 - o Motorways and overtaking are tested most in Netherlands
 - o Roundabouts are tested relatively often in Great Britain
 - o Pedestrian crossings are tested relatively often in France
 - o Bus and tram stops are tested relatively often in Great Britain
- ⇒ There seems to be more homogeneity between test centres of the same type (as described in Part B Section 1.1 Location of the test centres) in the different countries than between test centres (of a different type) within one country.
- ⇒ There are very big differences between the pass rates in the six countries (from 37% to 68%) and between the pass rates of the different test centres. This can be explained by numerous things, however.
- ⇒ A comparison was made of the number of errors candidates could make in the various countries and still pass the test. This showed very big differences between the numbers of errors that were considered acceptable though some of this could be explained by between-country differences in interpreting error definitions.
- \Rightarrow The amount of interaction between examiner and candidate was also considered and this again differed greatly between the 6 countries.

Differences in the training systems will also need to be looked at carefully when trying to achieve homogeneity, as the training and testing together combine to produce the novice driver.

It is important, however, that a candidate trained in one country has the skills and abilities to also drive in another country within the Union as this is what a European driving license means.

2.1.1 Recommendations:

- \Rightarrow Make sure that all countries in the European Union are meeting all the requirements of the European Directive 2000/56/EC
- ⇒ Make sure all test centres within each country are meeting the same requirements
- ⇒ Look at more than just the testing system to achieve homogeneity; the training system plays an extremely important role here too. When making a change to one, be careful to also consider the consequences it will have for the other.

3 MEETING THE NEEDS OF NOVICE DRIVERS

Do the current driving tests deal with all the topics that are relevant to the safety of novice drivers? This does not seem to be the case. The number of accidents amongst young, novice drivers seems to indicate that we need to look for ways of improving driver education and training – and driver testing is one of the mechanisms that can be used to achieve this.

What can we do?

3.1 Input from the examiner questionnaires

A number of suggestions for improvement were made by the examiners who took part in the survey:

- \Rightarrow stepwise driver training / graduated training and testing
- \Rightarrow retest after 2 years

- \Rightarrow test night time driving, driving in special situations
- \Rightarrow test independent driving
- \Rightarrow make learner and novice drivers take an attitude test
- \Rightarrow ask candidates to explain why they are doing things
- \Rightarrow training is the key to being a socially responsible driver
- \Rightarrow check the amount of training a candidate has had before allowing him to take the test
- \Rightarrow Improve the selection and training of examiners

3.2 Considerations

According the audit forms, the most difficult items to make a robust evaluation of are independent driving, railway crossings, overtaking, driving on motorways, lane changes, driving on slopes, environmentally friendly driving, the impact of factors influencing driving behaviour, severe technical faults and vehicle control in critical situations. These are also likely to be the elements that most learner drivers have encountered least during their driver training and are elements receive little during the practical test.

These are also elements that when not dealt with correctly, are likely to put the driver in a dangerous situation because most of these are high speed manoeuvres where the margin for error is relatively small and where errors will have the most serious consequences. In addition, many of them are related to a driver's behaviour in general and his attitude towards safety and other road users.

3.3 The story of pass rates

A common statement is that very low pass rates should be changed to higher ones as very short tests should be made longer ones. However, increasing pass rates does not mean that less skilful candidates should be able to pass the test. Almost vice versa, it would be better, if pass rates would be higher but at the same time, the requirements for passing would be more demanding. This means that the biggest changes should be made to the training and not to the testing. Very low pass rates mean unnecessary testing and unnecessary dissatisfaction but possibly also that the demands for the quality of the test may be too high to be reached. Low pass rates seem to be found in those countries where there is little or no control over driver training and education. Also, in the countries where driver education is organised in professional driving schools but there is a possibility to receive layman instruction or a similar other less well organised forms of education, the passing rates for those who come from layman instruction are lower than for those coming from driving schools.

4 HOW TO IMPROVE THE STATUS QUO

4.1 Overview

Research has taught us that to effectively train a novice driver and prepare him to drive alone in today's traffic, we need to cover all the cells of the GDE matrix (see Part D Section III meeting the needs of novice drivers). One way of encouraging this to happen is by broadening the driving test to cover these cells. Improving the content of driver testing, so that it covers all the cells of the GDE matrix, will in general involve:

- \Rightarrow Providing opportunities to observe typical behaviour (not just what a person is able to do but also what he actually does in practice), and to ask candidates about the reasons for that behaviour, in situations where Level 3 and 4 factors come into play.
- ⇒ Obtaining better predictions of such behaviour, by testing the skills and knowledge, including knowledge of self-limitations, that are necessary to enable a driver to deal safely with Level 3 and 4 factors

Concrete recommendations concerning how the test should be conducted are more difficult and, in general, the study is only able to indicate areas that merit further exploration. For example, increasing the amount of feedback to and interaction with the candidate is difficult, partly because such kinds of behaviour are likely to require new skills from the examiner and also some new tools, such as forms. More importantly, such new behaviour requires a new kind of attitude and motives. At least partly, a new kind of professional identity is also needed. When an examiner has worked for decades without saying a word to the candidate concerning his or her abilities and skills, a lot of time, energy and education is needed to make the change. Other difficulties of testing

the upper levels of the GDE matrix are discussed in section D. Sometimes they may prove so great that other approaches to improving driver competence will be needed – for example specifying mandatory amounts and types of training instead of relying on testing.

4.2 Recommendations for future testing

The following items merit future investigation as ways of improving coverage of the higher GDE levels in driver testing.

4.2.1 Practical, on-road testing

- ⇒ Where possible, include tasks, and freedom of action, relating to Levels 3 and 4. e.g. route following (i.e. independent driving). This would probably need to include some questioning from the examiner about how and why choices were made.
- ⇒ Feedback from/discussion with examiner unlikely to contribute to pass/fail, but would impart knowledge and emphasise the importance of aspects of driving.
- \Rightarrow Traffic-related skills testing could also be enhanced e.g. by asking candidate to make decisions about where to conduct manoeuvres
- ⇒ Testing of hazard perception and situation awareness might be enhanced e.g.: by the use of commentary and situation-awareness techniques during onroad testing
- \Rightarrow Develop ways of assessing a candidate's overall driving style, and bringing examiners' assessments of future driving safety into the test
- \Rightarrow Use of prolonged tests (in which drivers *may* in some respects revert to typical behaviour) could be investigated.

4.2.2 Multimedia tools

- \Rightarrow Broaden current computer-based hazard perception tests (currently focussed on Level 2) to include higher-level situations and risk factors.
- \Rightarrow Use lower fidelity and part-task simulators and multimedia tools to:

- Present aspects of the driving task that on-road tests cannot cover in a standardised way e.g.:
 - High risk/hazard scenarios
 - Scenarios involving the behaviour of other road users (which the candidate would interact with during driving, and answer questions on).
 - Scenarios involving passengers (here, the simulator would need to present an in-car scene)
 - Scenarios involving travel planning and route planning
 - Decision scenarios
- Ask questions of the candidate in a standardised way generally these will be multiple choice
- o Train as well as test

4.2.3 Knowledge tests

- \Rightarrow During practical test sessions (predetermined formal tests or informal assessments made during a 'conversation' with the examiner), or
- \Rightarrow As classroom tests with the use of multimedia tools
- \Rightarrow Self-assessments (perhaps compared with examiner assessment, and perhaps including discussion). These assessments would be useful for levels 3 and 4.

The issue that will need to be investigated is the extent to which suitable pass-fail criteria for such tests can be established. CIECA is exploring this issue as part of its contribution to the European Road Safety Charter. Even if they cannot initially be accepted as part of a pass-fail decision, such tests could form a useful element of the driving test, in that they help to establish the importance of such knowledge, and will influence the training curriculum and will give examiners experience of this type of assessment.
5 IDEAS FOR FURTHER ANALYSES AND RESEARCH BASED ON THE INFORMATION COLLECTED IN THIS PROJECT

Having considered all input and results that have come from this project and formulated a number of recommendations, it is interesting to think about what additional questions this information has raised and what kinds of solutions could be found to solve these questions. It is in this context that the following research ideas were formulated.

5.1 Combining research on driver training, driver testing, instructor training, etc.

- A lot of information has been collected in this project about the contents of the driving test. In previous projects, information has been collected about the contents of curricula and the contents of driver training. In line with what was discussed earlier and ideas of how to incorporate the higher levels of the GDE matrix into driver training / testing we now need to consider how all these separate elements can be combined in the most effective way (perhaps even incorporating instructor training) and how a complete system would fit into the current national systems. A considerable amount of work will be needed to develop and evaluate ways of improving testing and training at the higher GDE levels.

- Following on from this, a next step would then be to consider how to raise awareness amongst all those involved in the various related sectors and to convince them that it is important to deal with the whole package. An additional question in this context would be where and how the candidate fits into this package.

5.2 Examiner exchanges

It would be interesting to see how examiners from different testing systems would evaluate the same drive (e.g. Great Britain – Netherlands). This could be evaluated and considered using a similar system to the audit forms developed in this project. The aims of such a comparison would be first to increase harmonisation of the testing systems by providing a direct demonstration of any differences in overall standards. It would also be extremely useful as a way of directly comparing the different approaches to practical testing, thereby improving our knowledge of the advantages and disadvantages of each approach.

5.3 The effect of increased training on pass rates

A further study would focus on the relationship between the training (quality and length) of candidates and their pass rate in the practical driving test. What would be the effect of increasing the amount of training? Would increasing the training have a noticeable impact on the pass rates? Should such training be a specific type? The very low pass rates most countries have now seem to be a waste of resources. Finding ways to improve pass rates by encouraging candidates to have more training and practice before coming for test would have several beneficial effects.

5.4 Further analyses of the data collected in this project:

- A vast amount of data has been collected in the TEST project. Within the project and in the final report, the scientific committee has conducted only a fraction of the analyses that could be done. The selection of analyses was made on the basis of the main objectives and aims of this project and even these were limited by the time and funds available once the collection of the data had been completed. However a lot more could be done with the data. This could be, for example, more in depth analyses of the six countries involved, country by country or more in depth and systematic comparisons between test centres and countries involved.

- A "product" actually developed in this project was the TEST audit form, a form that was designed in this project to collect information about the practical driving test. This form could continue to be a useful tool to collect detailed information about the practical driving test in other countries not involved in the TEST project. For example it could be used as a pre test form to evaluate future changes to directives or national testing systems.

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ANNEXE 1: GADGET MATRIX AND EXPLANATION

Hierarchical	Essential contents		
level of behaviour	(examples)	Risk-increasing	
	Knowledge and skills	factors	Self evaluation
Goals for life and	Knowledge about/control over	Risky tendencies	Self evaluation/awareness of
skills for living	how life goals and personal	- acceptance of risks	- personal skills for impulse
(general)	tendencies affect driving behaviour e situation	 self-enhancement through driving high level of sensation seeking 	control - risky tendencies
	- motives	- use of alcohol and drugs	- personal risky motives
	- self-control, other characteristics	- values, attitudes towards society	etc
	- personal values etc.	eic.	elc.
	Knowledge and skills concerning	Risks connected with	Self evaluation/awareness of
context	- effects of trip goals on driving	- driver's condition (mood, BAC	- personal planning skills
of driving	- planning and choosing routes	- purpose of driving	- typical goals of driving
(trip related)	- evaluation of requested driving	- driving environment (urban/rural)	- typical risky driving motives
	- effects of social pressure in car	- social context and company	
	trip	- extra motives (competing etc.)	
	etc.	etc.	etc.
Masterv of	Knowledge and skills concerning	Risks caused by	Self-evaluation/awareness of
Mastery of traffic situations	Knowledge and skills concerning	Risks caused by	Self-evaluation/awareness of
Mastery of traffic situations	Knowledge and skills concerning - traffic rules - observation/selection of	Risks caused by - wrong expectations - risk-increasing driving style (e.g.	Self-evaluation/awareness of - strong and weak points of basic traffic skills
Mastery of traffic situations	Knowledge and skills concerning - traffic rules - observation/selection of signals - anticipation of course of situations	Risks caused by - wrong expectations - risk-increasing driving style (e.g. aggression.) - unsuitable speed adjustment	Self-evaluation/awareness of - strong and weak points of basic traffic skills - personal driving style
Mastery of traffic situations	Knowledge and skills concerning - traffic rules - observation/selection of signals - anticipation of course of situations - speed adjustment	Risks caused by - wrong expectations - risk-increasing driving style (e.g. aggression.) - unsuitable speed adjustment - vulnerable road-users	Self-evaluation/awareness of - strong and weak points of basic traffic skills - personal driving style - personal safety margins
Mastery of traffic situations	Knowledge and skills concerning - traffic rules - observation/selection of signals - anticipation of course of situations - speed adjustment - communication	Risks caused by - wrong expectations - risk-increasing driving style (e.g. aggression.) - unsuitable speed adjustment - vulnerable road-users - not obeying rules/unpredictable behaviour.	Self-evaluation/awareness of - strong and weak points of basic traffic skills - personal driving style - personal safety margins - strong and weak points
Mastery of traffic situations	Knowledge and skills concerning - traffic rules - observation/selection of signals - anticipation of course of situations - speed adjustment - communication - driving path	Risks caused by - wrong expectations - risk-increasing driving style (e.g. aggression.) - unsuitable speed adjustment - vulnerable road-users - not obeying rules/unpredictable behaviour. - information overload	Self-evaluation/awareness of - strong and weak points of basic traffic skills - personal driving style - personal safety margins - strong and weak points of skills for hazard situations
Mastery of traffic situations	Knowledge and skills concerning - traffic rules - observation/selection of signals - anticipation of course of situations - speed adjustment - communication - driving path - driving order	Risks caused by - wrong expectations - risk-increasing driving style (e.g. aggression.) - unsuitable speed adjustment - vulnerable road-users - not obeying rules/unpredictable behaviour. - information overload - difficult conditions (darkness etc.)	Self-evaluation/awareness of - strong and weak points of basic traffic skills - personal driving style - personal safety margins - strong and weak points of skills for hazard situations - realistic self-evaluation
Mastery of traffic situations	Knowledge and skills concerning - traffic rules - observation/selection of signals - anticipation of course of situations - speed adjustment - communication - driving path - driving order - distance to others/safety margins etc.	Risks caused by - wrong expectations - risk-increasing driving style (e.g. aggression.) - unsuitable speed adjustment - vulnerable road-users - not obeying rules/unpredictable behaviour. - information overload - difficult conditions (darkness etc.) - insufficient automatism / skills etc.	Self-evaluation/awareness of - strong and weak points of basic traffic skills - personal driving style - personal safety margins - strong and weak points of skills for hazard situations - realistic self-evaluation etc.
Mastery of traffic situations	Knowledge and skills concerning - traffic rules - observation/selection of signals - anticipation of course of situations - speed adjustment - communication - driving path - driving order - distance to others/safety margins etc.	Risks caused by - wrong expectations - risk-increasing driving style (e.g. aggression.) - unsuitable speed adjustment - vulnerable road-users - not obeying rules/unpredictable behaviour. - information overload - difficult conditions (darkness etc.) - insufficient automatism / skills etc.	Self-evaluation/awareness of - strong and weak points of basic traffic skills - personal driving style - personal safety margins - strong and weak points of skills for hazard situations - realistic self-evaluation etc.
Mastery of traffic situations Vehicle	Knowledge and skills concerning - traffic rules - observation/selection of signals - anticipation of course of situations - speed adjustment - communication - driving path - driving order - distance to others/safety margins etc. Knowledge and skills concerning	Risks caused by - wrong expectations - risk-increasing driving style (e.g. aggression.) - unsuitable speed adjustment - vulnerable road-users - not obeying rules/unpredictable behaviour information overload - difficult conditions (darkness etc.) - insufficient automatism / skills etc. Risks connected with insufficient automatism / skills	Self-evaluation/awareness of - strong and weak points of basic traffic skills - personal driving style - personal safety margins - strong and weak points of skills for hazard situations - realistic self-evaluation etc. Self-evaluation/awareness of strong and weak points
Mastery of traffic situations Vehicle manoeuvring	Knowledge and skills concerning - traffic rules - observation/selection of signals - anticipation of course of situations - speed adjustment - communication - driving path - driving order - distance to others/safety margins etc. Knowledge and skills concerning - control of direction and position	Risks caused by - wrong expectations - risk-increasing driving style (e.g. aggression.) - unsuitable speed adjustment - vulnerable road-users - not obeying rules/unpredictable behaviour. - information overload - difficult conditions (darkness etc.) - insufficient automatism / skills etc. Risks connected with - insufficient automatism / skills	Self-evaluation/awareness of - strong and weak points of basic traffic skills - personal driving style - personal safety margins - strong and weak points of skills for hazard situations - realistic self-evaluation etc. Self-evaluation/awareness of - strong and weak points
Mastery of traffic situations Vehicle manoeuvring	Knowledge and skills concerning - traffic rules - observation/selection of signals - anticipation of course of situations - speed adjustment - communication - driving path - driving order - distance to others/safety margins etc. Knowledge and skills concerning - control of direction and position - tyre grip and friction - vehicle properties	Risks caused by - wrong expectations - risk-increasing driving style (e.g. aggression.) - unsuitable speed adjustment - vulnerable road-users - not obeying rules/unpredictable behaviour information overload - difficult conditions (darkness etc.) - insufficient automatism / skills etc. Risks connected with - insufficient automatism / skills - unsuitable speed adjustment - difficult conditions (low friction	Self-evaluation/awareness of - strong and weak points of basic traffic skills - personal driving style - personal safety margins - strong and weak points of skills for hazard situations - realistic self-evaluation etc. Self-evaluation/awareness of - strong and weak points of basic manoeuvring skills - strong and weak points
Mastery of traffic situations Vehicle manoeuvring	Knowledge and skills concerning - traffic rules - observation/selection of signals - anticipation of course of situations - speed adjustment - communication - driving path - driving order - distance to others/safety margins etc. Knowledge and skills concerning - control of direction and position - tyre grip and friction - vehicle properties	Risks caused by - wrong expectations - risk-increasing driving style (e.g. aggression.) - unsuitable speed adjustment - vulnerable road-users - not obeying rules/unpredictable behaviour information overload - difficult conditions (darkness etc.) - insufficient automatism / skills etc. Risks connected with - insufficient automatism / skills - unsuitable speed adjustment - difficult conditions (low friction etc.)	Self-evaluation/awareness of - strong and weak points of basic traffic skills - personal driving style - personal safety margins - strong and weak points of skills for hazard situations - realistic self-evaluation etc. Self-evaluation/awareness of - strong and weak points of basic manoeuvring skills - strong and weak points
Mastery of traffic situations Vehicle manoeuvring	Knowledge and skills concerning - traffic rules - observation/selection of signals - anticipation of course of situations - speed adjustment - communication - driving path - driving order - distance to others/safety margins etc. Knowledge and skills concerning - control of direction and position - tyre grip and friction - vehicle properties - physical phenomena	Risks caused by - wrong expectations - risk-increasing driving style (e.g. aggression.) - unsuitable speed adjustment - vulnerable road-users - not obeying rules/unpredictable behaviour information overload - difficult conditions (darkness etc.) - insufficient automatism / skills etc. Risks connected with - insufficient automatism / skills - unsuitable speed adjustment - difficult conditions (low friction etc.)	Self-evaluation/awareness of - strong and weak points of basic traffic skills - personal driving style - personal safety margins - strong and weak points of skills for hazard situations - realistic self-evaluation etc. Self-evaluation/awareness of - strong and weak points of basic manoeuvring skills - strong and weak points of skills for hazard situations

EU GADGET project (Hatakka, Keskinen, Gregersen & Glad 1999).

The GADGET-matrix is based on the assumption that the driving task may be described as an hierarchy. The idea of the hierarchical approach is that abilities and preconditions in a higher level influence the demand and preconditions on a lower level. The four levels are:

- Goals for life and skills for living
- Goals and context of driving
- Mastering traffic situations
- Vehicle manoeuvring

The highest level refers to personal motives and tendencies in a broader perspective. This level is based on knowledge that lifestyles, social background, gender, age and other individual preconditions have an influence on attitudes, driving behaviour and accident involvement.

On the next level, the focus is on the goals behind driving and the context in which driving is performed. The focus is on why, where, when and with whom driving is carried out. Examples on more detailed aspects are the choice between car or bus, day-time or night-time driving, rush-hours or not, decisions to drive under the influence of alcohol, fatigue or stress etc.; all in relation to the purpose of the trip.

The next level is about mastering driving in traffic situations. A driver must be able to adjust his/her driving in accordance with the constant changes in traffic, for example in junctions, when overtaking or when encountering unprotected road users. To be able to identify potential hazards in traffic is also on this level. Driver education and training traditionally focuses on this level.

The bottom level is focusing on the vehicle, its construction and how it is manoeuvred. To know how to start, shift gears and stop the car well enough to be able to use the car in traffic belongs to this level as well as more complex evasive manoeuvres, reducing skids on low friction and understanding the laws of nature (driving physics). The functioning and benefits of injury preventive systems such as seat belts and airbags also belong here.

A safe driver is, however, not only skilled but also aware of risks and of his own abilities. In order to cover these different dimensions the hierarchy was expanded in the EU-project GADGET to a matrix which in addition to the four levels includes the following three dimensions:

-Knowledge and skills. -Risk increasing factors. -Self-assessment.

The content of the first column describes the knowledge and skills that a driver needs for driving under normal circumstances, namely, on the lower hierarchical levels how to manoeuvre the car, how to drive in traffic and what rules must be followed. On the higher levels the column relates to how trips should be planned and how personal preconditions may influence behaviour and safety.

In the second column about risk increasing factors the focus is on awareness of aspects of traffic and life that can be associated with higher risk. On the basic level it may be worn-out tyres, poor brakes, lack of routine in performing basic manoeuvring, etc. Higher in the hierarchy the column refers to risky driving in darkness, on low friction roads, among unprotected road users, excessive speeding, mental overload, etc. It also relates to dangerous motives and risk increasing aspects of lifestyle and personality.

The third column is about how the driver is assessing his/her own situation on the four levels. It emphasises measurement of one's own skills on the basic levels and awareness of one's own personal preconditions and tendencies as well as abilities in decision-making about trips and in life in general on the upper levels.

The cells in the matrix thus define frames for definition of detailed competencies that are needed in order to be a safe driver. The matrix may be used for defining educational goals and educational content in driver education and training. The suggestion from the constructors of the matrix is that

driver training strives at covering as much as possible of the whole matrix, not only the lower leftmost cells that traditionally are covered.

ANNEXE 2: TEST CENTRE DESCRIPTION FORMS

TEST CENTRES GREAT BRITAIN

Site Number 10: Bristol

Name of the test centre: Bristol

Address: 2 Concorde Driver, Southmead, Bristol BS10 6PZ

Type (please select one from the list): Type 5: Urban

Details:

Population: > 50,000

Traffic density:

Test circumstances dependent on time of day (please select yes or no): Yes

high

Traffic variation: great variety

Road Infrastructure (please give details): limited possibilites

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 40

2. How many days in the week is this test centre open? 6

3. What is the distance to the closest test centre? 16

4. How many test centres are there in a 50 km radius? 2

5. How many test centres are there in a 100 km radius 9

Any other comments:

shopping precinct, no car park, limited parking

Site Number 11: Aberystwyth

Name of the test centre: Aberystwyth

Address: Yr Hen Ysgol, Alexandra Road, Aberystwyth, SY23 1LE

Type (please select one from the list): Type 1: Countryside

Details:

Population: 12720

Traffic density:

Variable; seaside holiday location. Autumn and Winter very lite traffic; Spring and Summer usually very busy

Test circumstances dependent on time of day (please select yes or no): Yes

Traffic variation: Variable dependent on season: Medium to high

Road Infrastructure (please give details): Very limited, approximately 4 roundabouts in area; 2 small railway crossings, no motorways or dual carriageways. 30, 40, 60 mph speed limits.

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 15

How many days in the week is this test centre open?
 3

What is the distance to the closest test centre?
 48

4. How many test centres are there in a 50 km radius? 2

5. How many test centres are there in a 100 km radius 6

Any other comments:

Rural location only used on avergage 3 days a week, the six centres in the 100 km radius are all of a similar status.

Site Number 12: Mill Hill

Name of the test centre: Mill hill

Address: Unit 9, Granard Business Centre Bunns Lane Mill Hill London NW7 2DZ

Type (please select one from the list): Type 3: Urban periphery A

Details:

Population:	50000
Traffic density:	High
Test circumstances dependent on time of d	ay (please select yes or no): No
Traffic variation:	High
Road Infrastructure (please give details):	Medium

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 42

2. How many days in the week is this test centre open? 6

3. What is the distance to the closest test centre?3

4. How many test centres are there in a 50 km radius? 24

5. How many test centres are there in a 100 km radius 37

Any other comments:

Rural location only used on avergae 3 days a week, the six centres in the 100 km radius are all of a similar status.

Site Number 13: Broadstairs

Name of the test centre: Broadstairs

Address: DSA, The Cottage, Pierrement Hall, Broadstairs, Kent CT10 1JH

Type (please select one from the list): Type 2: Smaller towns

Details:

Population:	22,000
Traffic density:	medium

Test circumstances dependent on time of day (please select yes or no): No

Traffic variation: medium

Road Infrastructure (please give details): Medium/ good; only restriction is no national speed limit dual carriageways, except for extended tests

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 20

2. How many days in the week is this test centre open?5 plus occasional Saturdays

3. What is the distance to the closest test centre? 27

4. How many test centres are there in a 50 km radius? 3

5. How many test centres are there in a 100 km radius 7

Any other comments:

Polulation is an estimate

Site Number 14: South Yardley

Name of the test centre: South Yardley

Address: Driving Test Centre, Clay Lane, South Yardley, Brimingham B28 1EA

Type (please select one from the list): Type 5: Urban

Details:

Population:	31,000 (Yardley area); 997,000 (Birmingham City)
Traffic density:	high
Test circumstances dependent on time of d	lay (please select yes or no): Yes
Traffic variation:	great variety
Road Infrastructure (please give details):	numerous

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 21

2. How many days in the week is this test centre open? 6

3. What is the distance to the closest test centre? 8

4. How many test centres are there in a 50 km radius? 23

5. How many test centres are there in a 100 km radius 61

Any other comments:

shopping precinct, no car park, limited parking

Site Number 15: Spalding

Name of the test centre: Spalding

Address: Driving test centre, Groun Floor, Holland House, High St, Spalding, PE11 1UJ

Type (please select one from the list): Type 1: Countryside

Details:

Population: 22,030

Traffic density: heavy in town, light out

Test circumstances dependent on time of day (please select yes or no): Yes

Traffic variation: Traffic build up morning and school times

Road Infrastructure (please give details): The town is divided by a river. Either side is one way. Very old congested roads in town, Main A17 is the by-pass, although not dualed. Long, straight roads on the outskirts, all national speed limit. Market square with weekly market. Some suburbs and estates but limited.

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 14

2. How many days in the week is this test centre open? 5

3. What is the distance to the closest test centre? 27

4. How many test centres are there in a 50 km radius? 5

5. How many test centres are there in a 100 km radius 16

Any other comments:

No variation on Bay park as it has to be a left reverse due the car part. Very few hazards outside the town as they are mainly long straight fen roads. The only trunk road is the A17, but this is only used for a short distance due to the space between roundabouts and roads back towards the test centre.

Name of the test centre: Kenton Bar

Address: Driving Standards Agency, Government Builsings, Block A, Spur J, Kenton Lane, Newcastle Upn Tyne NE1 2 YW

Type (please select one from the list): Type 3: Urban periphery A

Details:

Population:

40,000

Traffic density: medium -high

Test circumstances dependent on time of day (please select yes or no): No

Traffic variation: Great variety

Road Infrastructure (please give details): Roundabouts, zebra and pelican crossings, built up areas, residential areas, dual carriageways

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 35

2. How many days in the week is this test centre open? 6

3. What is the distance to the closest test centre? 13 km

4. How many test centres are there in a 50 km radius? 10

5. How many test centres are there in a 100 km radius 17

Any other comments:

Test centre is on the periphery of a large city (Newcaslte upn Tyne)

Site Number 17: Malton

Name of the test centre: Malton

Address: 3 Milton Avenue, Malton, North Yorks, Y017 0LB

Type (please select one from the list): Type 1: Countryside

Details:

Population:	5000
Traffic density:	low, generally busier in Summer

Test circumstances dependent on time of day (please select yes or no): No

Traffic variation: little variation

Road Infrastructure (please give details): limited possibilities. Roundabouts, level crossing, zebra/pelicam crossings, traffic lights, short, national speed dual carriageway with little traffic, built up area, market place

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 13

2. How many days in the week is this test centre open?

3. What is the distance to the closest test centre? 29

4. How many test centres are there in a 50 km radius?

5. How many test centres are there in a 100 km radius 16

Any other comments:

Rural centre, often slow moving traffic through main street. Congestion around centre at school times. Outstation to York

Site Number 18: Anniesland

Name of the test centre: Anniesland

Address: 351 Anniesland Road Glasgow G13 1XS

Type (please select one from the list): Type 1: Countryside

Details:

Population:	52,000
Traffic density:	High

Test circumstances dependent on time of day (please select yes or no): Yes

Traffic variation: Great Variety

Road Infrastructure (please give details): Roundabouts, pedestrian crossings, residential areas , traffic calming, varying speed limits, dual carriageways, built up areas

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 25

2. How many days in the week is this test centre open? 5

3. What is the distance to the closest test centre? 14

4. How many test centres are there in a 50 km radius? 20

5. How many test centres are there in a 100 km radius 32

Any other comments:

The Anniesland DTC is situated on the West outskirts of Glasgow. The City of Glasgow has an approximate population of 600,000.

Site Number 19: Fraserburgh

Name of the test centre: Fraserburgh

Address: Warld's End, 11 Dalrymplo Street, Fraserburgh AB43 9BH

Type (please select one from the list): Type 1: Countryside

Details:

Traffic density:

Population:	13400

Test circumstances dependent on time of day (please select yes or no): No

Traffic variation: Little variation: Cars, Lorries, Buses

Road Infrastructure (please give details): Easy access to roundabouts, Pedestrian Crossings, Built up areas, Residential areas, Traffic calming and National Speed limits

Low

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 6

2. How many days in the week is this test centre open?

3. What is the distance to the closest test centre? 30

4. How many test centres are there in a 50 km radius? 2

5. How many test centres are there in a 100 km radius 8

Any other comments:

Test centre is on the periphery of a large city (Aberdeen)

TEST CENTRES SPAIN

Site Number 20: Mostoles (Madrid)

Name of the test centre: Mostoles (Madrid)

Address: Carretera de Extremadura, km 16,500 28935 - Móstoles (MADRID)

Type (please select one from the list): Type 5: Urban

Details:

Population:	Madrid: 4,500,000; Mostoles: 200,000
Traffic density:	High
Test circumstances dependent on time of d	ay (please select yes or no): Yes
Traffic variation:	Great variety
Road Infrastructure (please give details):	numerous possibilities: Highways, industrial zones, conventional roads, residential areas, built-up areas, crossroads, roundabouts, traffic lights.

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 800

2. How many days in the week is this test centre open? 5

3. What is the distance to the closest test centre?52

4. How many test centres are there in a 50 km radius?

5. How many test centres are there in a 100 km radius

Any other comments:

There are no tests in Madrid itself

Site Number 21: Barcelona

Name of the test centre: Barcelona

Address: Gran Vía de las Cortes Catalanas 184, ES - 08071 Barcelona

Type (please select one from the list): Type 5: Urban

Details:

Population:	2000000
Traffic density:	High
Test circumstances dependent on time of da	ny (please select yes or no): Yes
Traffic variation:	Great
Road Infrastructure (please give details):	Highways, industrial zones, conventional roads, residential areas, built-up areas, crossroads, roundabouts, traffic lights

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 500

2. How many days in the week is this test centre open? 5

3. What is the distance to the closest test centre? 29

4. How many test centres are there in a 50 km radius?

5. How many test centres are there in a 100 km radius

Site Number 22: Sevilla

Name of the test centre: Sevilla

Address: Páez de Rivera, 4 41012 -SEVILLA

Type (please select one from the list): Type 5: Urban

Details:

Population:	610,000
Traffic density:	High
Test circumstances dependent on time of d	ay (please select yes or no): Yes
Traffic variation:	Great
Road Infrastructure (please give details):	Great variation: - Highways, conventional roads, roads around the town, commercial and administrative zones, industrial areas, built-up areas, residential areas, crossroads, roundabouts, traffic lights.

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 370

2. How many days in the week is this test centre open? 5

3. What is the distance to the closest test centre? 85

4. How many test centres are there in a 50 km radius?

5. How many test centres are there in a 100 km radius

Any other comments:

This town is the provincial capital

Site Number 23: Castellon

Name of the test centre: Castellón

Address: Galicia, 6

Type (please select one from the list): Type 3: Urban periphery A

Details:

Population:	126,500
Traffic density:	1200 vehicles / hour
Test circumstances dependent on time of d	ay (please select yes or no): Yes
Traffic variation:	Great variety
Road Infrastructure (please give details):	numerous possibilities: highways around the town, commercial and administrative zones, residential areas, built up areas

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 97

2. How many days in the week is this test centre open? 5

What is the distance to the closest test centre?
 78

4. How many test centres are there in a 50 km radius?

5. How many test centres are there in a 100 km radius

Site Number 24: Valladolid

Name of the test centre: Valladolid

Address: Verbena, 9 47005 -VALLADOLID

Type (please select one from the list): Type 3: Urban periphery A

Details:

Population:	326,000
Traffic density:	High (depends on the route drivesn)
Test circumstances dependent on time of c	lay (please select yes or no): Yes
Traffic variation:	Great variety
Road Infrastructure (please give details):	numerous possibilities: highways, conventional roads, commercial and administrative areas, industrial zones, built up areas, crossroads, roundabouts, traffic lights.

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 70 - 90

2. How many days in the week is this test centre open? 5

3. What is the distance to the closest test centre?45

4. How many test centres are there in a 50 km radius?

5. How many test centres are there in a 100 km radius

Site Number 25: Quintanar de la Orden

Name of the test centre: Quitanar de la Orden (Toledo)

Address: Carretera de los Hinojosos, s/n	45800 -Qintanar de la Orden (TOLEDO)
Type (please select one from the list): Type	e 1: Countryside
<u>Details:</u>	
Population:	10,000
Traffic density:	2300 - 9850 depending on the route chosen
Test circumstances dependent on time of c	lay (please select yes or no): Yes
Traffic variation:	Little
Road Infrastructure (please give details):	quite numerous possibilities: national road around the village, urban area, residential area, crossroads, roundabouts, a few traffic lights

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 50-100 (depending on the season)

2. How many days in the week is this test centre open? 1

3. What is the distance to the closest test centre? 100

4. How many test centres are there in a 50 km radius?

5. How many test centres are there in a 100 km radius

Site Number 26: Teruel

Name of the test centre: Teruel

Address: Córdoba, 6 44002 - TERUEL

Type (please select one from the list): Type 2: Smaller towns

Details:

Population:	27,000
Traffic density:	Not very high
Test circumstances dependent on time of d	ay (please select yes or no): Yes
Traffic variation:	Little
Road Infrastructure (please give details):	limited variation: roads around the town, built-up areas, commercial and residential areas, crossroads, roundabouts, traffic lights.

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 10

2. How many days in the week is this test centre open?3

3. What is the distance to the closest test centre? 141

4. How many test centres are there in a 50 km radius?

5. How many test centres are there in a 100 km radius

Any other comments:

This town is the provincial capital

Site Number 27: Segovia

Name of the test centre: Segovia

Address: Guadarrama 24, Poligono Industrial El Cerro 40006 -SEGOVIA

Type (please select one from the list): Type 2: Smaller towns

Population:	52,000
Traffic density:	Medium
Test circumstances dependent on time of day (please select yes or no): Yes	
Traffic variation:	Medium
Road Infrastructure (please give details):	average possibilities: conventional roads, built-up areas and around buillt-up areas, crossroads, many roundabouts, traffic lights.

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 30

2. How many days in the week is this test centre open?4

What is the distance to the closest test centre?
 58

4. How many test centres are there in a 50 km radius?

5. How many test centres are there in a 100 km radius

Any other comments:

There are no tests in Madrid itself

Site Number 28: Hellín

Name of the test centre: Hellín (Albacete)

Address: Carretera N -301. Polígono Industrial San Rafael 02400- Hellín (ALBACETE)

Type (please select one from the list): Type 1: Countryside

Details:	
Population:	16,000
Traffic density:	Medium
Test circumstances dependent on time of day (please select yes or no): Yes	
Traffic variation:	Medium (includes carts)
Road Infrastructure (please give details):	numerous possibilities: Highway, conventional roads, industrial areas, built-up areas traffic lights, crossroads, roundabouts.

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 57

2. How many days in the week is this test centre open?3-4 per month

3. What is the distance to the closest test centre? 66

4. How many test centres are there in a 50 km radius?

5. How many test centres are there in a 100 km radius

Any other comments:

Countryside centre

Site Number 29: Monforte de Lemos

Name of the test centre: Monforte de Lemos (Lugo)	
Address: Carretera de Correlos, Las Lama	as 27400 -Monforte de Lemos (LUGO)
Type (please select one from the list): Type 1: Countryside	
Datailar	
Detans:	
Population:	14,000
Traffic density:	Low
Test circumstances dependent on time of d	lay (please select yes or no): Yes
Traffic variation:	Little
Road Infrastructure (please give details):	Various possibilities: roads around the village, conventional road, built- up area railway crossings, traffic lights, crossroads, roundabouts.

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 50-70

2. How many days in the week is this test centre open?3 days per month

3. What is the distance to the closest test centre?62

4. How many test centres are there in a 50 km radius?

5. How many test centres are there in a 100 km radius

Any other comments:

Countryside centre

TEST CENTRES FRANCE

Site Number 30: Villaines La Juhel

Name of the test centre: VILLAINES LA JUHEL (Mayenne)

Address: Place Maurice BURON

Type (please select one from the list): Type 1: Countryside

<u>Details:</u>	
Population:	5,000
Traffic density:	Very low
Test circumstances dependent on time of day (please select yes or no): No	
Traffic variation:	very little
Road Infrastructure (please give details):	numerous possibilities: railway level crossing, roundabout, roads outside built-up areas, local roads, farm roads, maximum speed possible rarely greater than 40 km/h

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 20

2. How many days in the week is this test centre open? 1/2 (the test centre is open 1.5 - 2 days per month)

3. What is the distance to the closest test centre? 28

4. How many test centres are there in a 50 km radius? 11

5. How many test centres are there in a 100 km radius + 28

Site Number 31: Alencon

Name of the test centre: ALENCON(Orne)

Address: Route de Paris, near the airport

Type (please select one from the list): Type 2: Smaller towns

Details:

Population:	45,000
Traffic density:	Low, Busier at 8.00 and 12.00 but fluid
Test circumstances dependent on time of c	lay (please select yes or no): No
Traffic variation:	cyclists, motorcycles, lorries
Road Infrastructure (please give details):	Roundabout, dual carriageway, urban zone, 30km/h zone, semi-residential area, small roads, straight roads, access to motorways

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 20

2. How many days in the week is this test centre open?2 (open 8 to 10 days per month)

3. What is the distance to the closest test centre?38

4. How many test centres are there in a 50 km radius? 11

5. How many test centres are there in a 100 km radius +25

Site Number 32: Rosny ss Bois

Name of the test centre: ROSNY ss BOIS (Seine St Denis)

Address: 99, avenue Charles de Gaulle

Type (please select one from the list): Type 5: Urban

Details:

Population:

39,105

Traffic density:

Very high, from 6.30-9.30 very busy, from 16.00-20.00 exceedingly busy with speeds equal to or less than 30 km/h from 15.00-16.00 average speed of 45 km/h from 11.00 to 13.30 fluid

Test circumstances dependent on time of day (please select yes or no): Yes

Traffic variation:

Road Infrastructure (please give details):

possibilities: all types except those outside builtup areas

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 160 (6 examiners are working on this center)

How many days in the week is this test centre open?

3. What is the distance to the closest test centre?

7 km (2 test centres in a 10 km radius, Blanc-Mesnil, Noisy le Grand)

4. How many test centres are there in a 50 km radius? 63

5. How many test centres are there in a 100 km radius +16

Site Number 33: Rennes

Name of the test centre: RENNES SUD (Ille et Vilaine))

Address: Boulevard de Bulgarie / square de Macédoine

Type (please select one from the list): Type 4: Urban Periphery B

Details:	
Population:	200,000
Traffic density:	High in the morning until around 9.00, after that relatively high but not too high
Test circumstances dependent on time of day (please select yes or no): Yes	
Traffic variation:	yes
Road Infrastructure (please give details):	possibilities: centre is situated in a section of Rennes along the Paris/Brest express way. Numerous roundabouts, several acceleration lanes near the centre, it is very easy to propose many assessment situations.

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 12 (duration of the test : 35 mn)

2. How many days in the week is this test centre open?5 (6 examiners are working at this centre, the centre is open 20 to 30 days per month)

3. What is the distance to the closest test centre?6km (2 test centres in a 10km radius, Rennes Nord et Rennes Ouest)

4. How many test centres are there in a 50 km radius? 8

5. How many test centres are there in a 100 km radius +29

Site Number 34 Reims Serbie

Name of the test centre: REIMS SERBIE (Marne)

Address: Place Alexandre de Serbie

Type (please select one from the list): Type 3: Urban periphery A

Details:	
Population:	180,000
Traffic density:	High, during rush hour in the entry and exit lanes to the motor way (especially 8.00-9.00)
Test circumstances dependent on time of day (please select yes or no): Yes	
Traffic variation:	several kinds of users (motorcyclists, lorries)
Road Infrastructure (please give details):	sufficient possibilities except railway level crossings

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 40 (2 examiners are working at this testing center)

2. How many days in the week is this test centre open? 5

3. What is the distance to the closest test centre?1 km - 1 test centre in a 10 km radius, Reims Ste Clotilde

4. How many test centres are there in a 50 km radius? 6

5. How many test centres are there in a 100 km radius +23

Site Number 35 Pontarlier

Name of the test centre: PONTARLIER(Doubs)

Address: Place Morand devant le théatre Morand

Type (please select one from the list): Type 2: Smaller towns

Details:	
Population:	19,000
Traffic density:	low, regular traffic with busier periods during summer and winter holidays (the main road for traffic to Switzerland, 15 km from the border)
Test circumstances dependent on time of c	lay (please select yes or no): No
Traffic variation:	No
Road Infrastructure (please give details):	great variation: bridges, dual carriageways, high and low speed roads, 5 ways to leave the town, full and busy city center.

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 20

2. How many days in the week is this test centre open?2 (the test centre is open 8 days per month)

3. What is the distance to the closest test centre?30 km (much smaller centre)

4. How many test centres are there in a 50 km radius? 6

5. How many test centres are there in a 100 km radius +11
Site Number 36 Luxeuil les Bains

Name of the test centre: LUXEUIL LES BAINS (Haute-Saône)

Address: Place de la Gare SNCF

Type (please select one from the list): Type 2: Smaller towns

Details:		
Population:	9,000	
Traffic density:	low	
Test circumstances dependent on time of day (please select yes or no): No		
Traffic variation:	limited variety -there are a few cars of tourists in the city centre	
Road Infrastructure (please give details):	great variation: numerous roundabouts, access to the ring road, all types of crossroads, all types of signs and signals	

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 20

2. How many days in the week is this test centre open? 1

3. What is the distance to the closest test centre? 18 km

4. How many test centres are there in a 50 km radius? 8

5. How many test centres are there in a 100 km radius +21

Site Number 37 Le Mans Adelet

Name of the test centre: LE MANS ADELET (Sarthe)

Address: Place Raymond ADELET

Type (please select one from the list): Type 3: Urban periphery A

Details:	
Population:	280,000
Traffic density:	high
Test circumstances dependent on time of d	lay (please select yes or no): Yes
Traffic variation:	varied - constant traffic, dense and continuous during all the day. All kinds of users (pedestrians, cyclists, motorcyclists, lorries)
Road Infrastructure (please give details):	Numerous possibilities inside and outside the town: high and low speed roads, priority roads, straight roads,

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 80 (4 examiners work at this test centre)

2. How many days in the week is this test centre open?4

3. What is the distance to the closest test centre?1km - 1 test centre in a 10 km radius, Le Mans Belgrade

4. How many test centres are there in a 50 km radius?9

5. How many test centres are there in a 100 km radius +24

Site Number 38 Etain

Name of the test centre: ETAIN (Meuse)

Address: Place de la Mairie

Type (please select one from the list): Type 1: Countryside

Details:

Population:	3,700
Traffic density:	very low
Test circumstances dependent on time of da	ay (please select yes or no): No
Traffic variation:	low
Road Infrastructure (please give details):	Very limited possibilities 1 traffic light, 2 roundabouts, 1 railway level crossing, no fast roads, route outside the built-up area and only straight roads

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 20

2. How many days in the week is this test centre open? 1 day per month

3. What is the distance to the closest test centre? 20 km (Verdun)

4. How many test centres are there in a 50 km radius? 11

5. How many test centres are there in a 100 km radius +18

Site Number 39: Creteil

Name of the test centre: CRETEIL (Val de Marne)

Address: Centre Commercial Kennedy

Type (please select one from the list): Type 5: Urban

Details:

Population:

90,000

Traffic density:

Very high, barley moving between 8.00 and 9.30 and after 16.30

Test circumstances dependent on time of day (please select yes or no): No

Traffic variation:

Road Infrastructure (please give details): technical area : - many signs and signals, dual carriageway and motorway

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 80 (4 examiners are working at this center)

2. How many days in the week is this test centre open?4 (open 20-40 days per month)

3. What is the distance to the closest test centre? 1 km - 1 test centre within 10 km

4. How many test centres are there in a 50 km radius? 63

5. How many test centres are there in a 100 km radius +16

TEST CENTRES NETHERLANDS

Site Number 40: Amsterdam

Name of the test centre: Amsterdam

Address: Naritaweg 150 1043 CA AMSTERDAM

Type (please select one from the list): Type 5: Urban

Details:	
Population:	735,000
Traffic density:	high (Very dense traffic, regularly presence of traffic jams)
Test circumstances dependent on time of d	ay (please select yes or no): Yes
Traffic variation:	great variety (trams also)
Road Infrastructure (please give details):	unlimited possibilities (roundabouts, residential areas and city centre areas, high way en motorway, also country roads)

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 116

How many days in the week is this test centre open?

3. What is the distance to the closest test centre? 15

4. How many test centres are there in a 50 km radius? 5

5. How many test centres are there in a 100 km radius 10

Any other comments:

Capital of the Netherlands.

Site Number 41: Assen

Name of the test centre: Assen

Address: Overcingellaan 13 9401 LA ASSEN

Type (please select one from the list): Type 3: Urban periphery A

Details:

Population:	60,000	
Traffic density:	medium to dense	
Test circumstances dependent on time of day (please select yes or no): Yes		
Traffic variation:	relatively great	
Road Infrastructure (please give details):	numerous possibilities; railway crossing, zebra crossings, motorways, highway, residential areas, built up areas.	

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 16

2. How many days in the week is this test centre open? 5

3. What is the distance to the closest test centre? 20

4. How many test centres are there in a 50 km radius? 4

5. How many test centres are there in a 100 km radius 7

Any other comments:

Country-seat. Low level of traffic. In the North of Holland.

Site Number 42: Eindhoven

Name of the test centre: Eindhoven

Address: Hoevenweg 20 5652 AW EINDHOVEN

Type (please select one from the list): Type 5: Urban

Details:		
Population:	250,000	
Traffic density:	high	
Test circumstances dependent on time of day (please select yes or no): Yes		
Traffic variation:	great variety	
Road Infrastructure (please give details):	unlimited possibilities (roundabouts, residential areas and city centre areas, high way en motorway, also country roads)	

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 45

How many days in the week is this test centre open?

3. What is the distance to the closest test centre? 20

4. How many test centres are there in a 50 km radius?

5. How many test centres are there in a 100 km radius 10

Any other comments:

nodal point of high ways. In the south of Holland.

Site Number 43: Gorinchem

Name of the test centre: Gorinchem

Address: Sportlaan 2 4209 AX GORINCHEM

Type (please select one from the list): Type 3: Urban periphery A

Details:

Population:	34,000	
Traffic density:	medium to dense	
Test circumstances dependent on time of day (please select yes or no): Yes		
Traffic variation:	medium variety	
Road Infrastructure (please give details):	numerous possibilities, Highway and motorway, residential areas and built up areas.	

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 32

How many days in the week is this test centre open?

3. What is the distance to the closest test centre? 15

4. How many test centres are there in a 50 km radius?

5. How many test centres are there in a 100 km radius 18

Any other comments:

junction of highways.

Site Number 44: Lichtenvoorde

Name of the test centre: Lichtenvoorde

Address: Winterswijkseweg 9 7134 NB LICHTENVOORDE

Type (please select one from the list): Type 1: Countryside

Details:

Population:	25,000	
Traffic density:	low, great fluidity	
Test circumstances dependent on time of day (please select yes or no): Yes		
Traffic variation:	little variety	
Road Infrastructure (please give details):	limited possibilities, no highway and motorway, small acceleration lanes.	

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 10

2. How many days in the week is this test centre open?4

3. What is the distance to the closest test centre? 15

4. How many test centres are there in a 50 km radius? 5

5. How many test centres are there in a 100 km radius 10

Any other comments:

Small town. Few road infrastructures, not very rich driving situations out of built up areas, test areas without particular difficulties

TEST CENTRES SWEDEN

Site Number 50: Älmhult

Name of the test centre: Älmhult

Address: Honnörsgatan 26 352 36 Växjö

Type (please select one from the list): Type 1: Countryside

Details:

Population:	15,400	
Traffic density:	very low	
Test circumstances dependent on time of day (please select yes or no): Yes		
Traffic variation:	little variation: - Bicycles and pedestrians on a small scale, dependining on the time of the day - Very few buses	
Road Infrastructure (please give details):	very limited: - no motorway - most outside built up areas and small residential areas - small roudabouts, one traffic lights, railway crossings yes	

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 2

2. How many days in the week is this test centre open? 1

3. What is the distance to the closest test centre? 59

4. How many test centres are there in a 50 km radius? 0

5. How many test centres are there in a 100 km radius +3

Any other comments:

2 test per day = 443 test per year. Älmhult is a very small city in the south of Sweden

Site Number 51: Umeå

Name of the test centre: Umeå

Address: Storgatan 60 903 30 Umeå Sweden

Type (please select one from the list): Type 2: Smaller towns

Details:		
Population:	80,000	
Traffic density:	low	
Test circumstances dependent on time of day (please select yes or no): Yes		
Traffic variation:	variation	
Road Infrastructure (please give details):	All type of roads available also all types of road furniture but lower traffic density then Linköping.	

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 8

2. How many days in the week is this test centre open? 5

3. What is the distance to the closest test centre? 134

4. How many test centres are there in a 50 km radius? 0 $\,$

5. How many test centres are there in a 100 km radius 3 (+2 in radius of 200 km)

Any other comments:

8 test per day = 1900 test per year. Umeå is a town in the north of Sweden 1000 km from Sockholm.

Site Number 52: Sollentuna

Name of the test centre: Sollentuna

Address: Djupdalsvägen 10 192 51 Sollentuna

Type (please select one from the list): Type 3: Urban periphery A

Details:

Population:	50,000	
Traffic density:	high (very dependant on the time of day)	
Test circumstances dependent on time of day (please select yes or no): Yes		
Traffic variation:	variation	
Road Infrastructure (please give details):	possibilities:All types of road available.could be some problems with small rural roads	

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 22

2. How many days in the week is this test centre open? 5

3. What is the distance to the closest test centre? 20

4. How many test centres are there in a 50 km radius? 3

5. How many test centres are there in a 100 km radius +2

Any other comments:

22 test per day = 5000 per year. Sollentuna is a suburb city to Stockholm. All types of road available; coud be some problems with small rural. The traffic density dependson the time of the day

Site Number 53: Linköping

Name of the test centre: Linköping

Address: Brigadgatan 19 581 33 Linköping

Type (please select one from the list): Type 5: Urban

Details:		
Population:	135,000	
Traffic density:	high (morning and evening there can be traffic jams)	
Test circumstances dependent on time of day (please select yes or no): Yes		
Traffic variation:	great variation	
Road Infrastructure (please give details):	numerous possibilities: - More possibilities to reach the countryside than Göteborg - All types of road is available and all types of road furniture	

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 13

2. How many days in the week is this test centre open?5

3. What is the distance to the closest test centre?45

4. How many test centres are there in a 50 km radius? 3

5. How many test centres are there in a 100 km radius +3

Any other comments:

13 test per day = 2900 tests per year

Site Number 54: Göteborg

Name of the test centre: Göteborg

Address: Mölndalsvägen 30 B 400 20 Göteborg

Type (please select one from the list): Type 5: Urban

Details:

Population:	475,000
Traffic density:	very high
Test circumstances dependent on time of d	lay (please select yes or no): Yes
Traffic variation:	great variation
Road Infrastructure (please give details):	numerous possibilities: -All types of road inside built up areas. - Some problems with small rural roads. - All types of road furniture

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 45

2. How many days in the week is this test centre open? 5

3. What is the distance to the closest test centre?30

4. How many test centres are there in a 50 km radius? 2

5. How many test centres are there in a 100 km radius +3

Any other comments:

45 test per day = 10100 per year. Sweden's second biggest city. .

TEST CENTRES AUSTRIA

Site Number 60: Driving School Lämmerhofer

Name of the test centre: Driving school Lämmerhofer

Address: Salzburgerstrasse 32, A-5202 Neumarkt am Wallersee

Type (please select one from the list): Type 1: Countryside

<u>Details:</u>

Population:	5000
Traffic density:	low, great fluidity
Test circumstances dependent on tin	ne of day (please select yes or no): No
Traffic variation:	car, truck, motorsycles, bicycles, pedestrians
Road Infrastructure:	limited possibilities: roundabouts, zebra crossing country road, residential areas,

Additional questions:

1. How many tests are conducted at this test centre per day (on average)? 15

2. How many days in the week is this test centre open? 0

3. How many other test centres are there in a 10 km radius? 2

4. How many test centres are there in a 50 km radius? 27

5. How many test centres are there in a 100 km radius? 105

Any other comments:

All tests on Wednesday

Site Number 61: Verkehsramt Wien, Bundespolizeidirektion Wien

Name of the test centre: Verkehrsamt Wien, Bundespolizeidirektion Wien

Address: Amtsgebäude Josef Hollabeck-Platz

Type (please select one from the list): Type 5: Urban

Details:

Population:	1560000		
Traffic density:	high		
Test circumstances dependent on tin	ne of day (please select yes or no): Yes		
Traffic variation: great variety: cars, motorcycles, bicyles, tran pedistrians, busses, trucks			
Road Infrastructure:	limited possibilities of a large city		

Additional questions:

1. How many tests are conducted at this test centre per day (on average)? 45

How many days in the week is this test centre open?

3. How many other test centres are there in a 10 km radius? 13

4. How many test centres are there in a 50 km radius? 94

5. How many test centres are there in a 100 km radius? 148

Any other comments:

In Vienna, all tests are held by the police-office of the "Bundespolizeidirektion Wien". Therefore it is not possible to take a driving-school as test centre. In practice it is possible that the examiner begins with the first test at the police-office and the continues the tests at the driving-school or at the place where are the practical exercises are held.

Site Number 62: Driving School Sauer

Name of the test centre: Driving school Sauer; Ing. Reichard Mader

Address: Porschestrasse, A-3100 St. Pölten

Type (please select one from the list): Type 3: Urban periphery A

Details:

Population: 50000

Traffic density: high

Test circumstances dependent on time of day (please select yes or no): Yes

Traffic variation:	great variety: cars, trucks, busses, motorcycles, bicycles, pedestrians;
Road Infrastructure:	numerous possibilities: roundabouts, railway crossing, zebra crossing, motorways, residential areas, built up areas;

Additional questions:

1. How many tests are conducted at this test centre per day (on average)? 15

2. How many days in the week is this test centre open?

3. How many other test centres are there in a 10 km radius? 3

4. How many test centres are there in a 50 km radius? 73

5. How many test centres are there in a 100 km radius? 192

Any other comments:

Tests every Wednesday.

Site Number 63: Driving School Grubhofer Enns

Name of the test centre: Driving school Grubhofer Enns/Rothbaue Irene

Address: Stadlgasse 4, A-4470 Enns

Type (please select one from the list): Type 2: Smaller towns

<u>Details:</u>	
Population:	

Traffic density: medium

Test circumstances dependent on time of day (please select yes or no): Yes

10000

Traffic variation:	buses, trucks, pedistrians, bisycles, cars, agricultural vehicles
Road Infrastructure:	roundabouts, railway crossing, zebra crossing, build up areas, country road, residential areas

Additional questions:

1. How many tests are conducted at this test centre per day (on average)? 10

2. How many days in the week is this test centre open? 0

3. How many other test centres are there in a 10 km radius? 3

4. How many test centres are there in a 50 km radius? 49

5. How many test centres are there in a 100 km radius? 124

<u>Any other comments:</u> Tests on Wednesday for example 16., 30. April

Site Number 64: Driving School Ing. Eduard Wallner

Name of the test centre: Driving School Ing. Eduard Wallner

Address: Südtiroler Platz 3, A-6200 Jenbach/Tirol

Type (please select one from the list): Type 2: Smaller towns

Details:

Population: 5000

Traffic density: middle

Test circumstances dependent on time of day (please select yes or no): Yes

Traffic variation:	relatively great: buses, trucks, pedestrians, bicycles, cars,
Road Infrastructure:	numerous possibilities: roundabouts, railway crossings, zebra crossings, motorways, built up areas, country road, residential areas

Additional questions:

1. How many tests are conducted at this test centre per day (on average)? 15

2. How many days in the week is this test centre open? 1

3. How many other test centres are there in a 10 km radius? 2

4. How many test centres are there in a 50 km radius? 25

5. How many test centres are there in a 100 km radius? 33

Any other comments:

Tests every Tuesday. Jenbach is a little village beside the "Brennerautobahn", where there are numerous possibilities for testing.

Site Number 65: Driving School Fahrschule Traun

Name of the test centre: Driving school "Fahrschule Traun"

Address: Madlschenterweg 5, A 4050 Traun

Type (please select one from the list): Type 1: Countryside

Details:

Population:	24000
Traffic density:	medium
Test circumstances dependent on time of da	y (please select yes or no): Yes
Traffic variation:	cars, buses, trucks, train, pedistrians, bicycles, agricultural
Road Infrastructure (please give details):	roundabouts, railway crossing, zebra crossing, build up areas, motorways, country road, residential areas

Additional questions:

1. How many category B tests are conducted at this test centre per day (on average)? 8

2. How many days in the week is this test centre open?1 day in July and August, in other months 1 day every two weeks

3. What is the distance to the closest test centre? 2 km

4. How many test centres are there in a 50 km radius? 100

5. How many test centres are there in a 100 km radius 250

ANNEXE 3: DESCRIPTIONS AUDITORS

THE NETHERLANDS

The auditors are the people who are normally responsible for the quality checks in the Netherlands. They are examiners who have the added task of practical accompaniment. There is no hierarchical connection to the examiners. The auditors are well qualified to judge and explain the examiner's way of thinking in relation to their candidates. They are independent concerning the contents of this project.

GREAT BRITAIN

There will be 2 main auditors (assistant chief driving examiners) who will coordinate the work. Their normal duties include checking and monitoring quality and standards of all driving tests in GB. These include selecting locations and assessing the acceptability of driving test routes.

Except for these two, work will be passed on to traditional auditors. Their normal duties entail riding in the back of the car and completing a small version of the driving test report form which is used as a basis for discussion after the test.

The rural sites will be covered by the two main auditors; the 6 remaining sites will be covered by normal auditors. The two main auditors will also do some audits in various centres for control reasons. For large sites there would therefore be three auditors per test site

AUSTRIA

As there is no quality control system in place in Austria, the auditors must be examiners and therefore colleagues of those taking the tests. It therefore becomes very more important that the auditors do not do audits in the regions they are originally from, but that they travel to other regions.

The auditors in Austria all have varying backgrounds and normal duties (in addition to conducting driving tests). Some examples of their day-to-day activities are: technical expert for vehicles and road safety; Skid-instructor; examiner for driving instructors; head of the department of traffic of Lower Austrian; head of the vehicle technology department of Lower Austria; driving-school-inspector; or law-expert in the department of traffic of Tyrol.

SPAIN

In Spain 3 different types of people will be used to audit the driving tests :

1. Instructors from the Centre de Formation de Móstoles (Madrid).

These were examiners who have now specialised to become instructors. They are responsible for the theory and practical training of examiners and for the practical training of driving instructors. They

hold a licence in all categories and are responsible for the development of criteria for the practical driving tests. There is no relationship to the examiners.

2. Provincial heads of service of the driving tests

These are highly qualified traffic technicians with university degrees. They are in charge of monitoring the examiners and their objectivity is guaranteed.

3. Examiner coordinators

Examiner coordinators are specialised examiners chosen through a selection procedure. In addition to coordinating a group of examiners, they conduct special driving tests, like tests for handicapped persons or foreigners who need to pass a theory or practical test to be able to exchange their license.

FRANCE

There are 2 auditors per area, the delegates of the Formation du conducteur, who can do audits at test centres in various locations (not only in their own region). The normal tasks of the delegates are the following:

- To manage the driving tests; to assist prefectoral authorities to ensure the supervision of driving training and to define road safety policy; to manage examiners; to train and to inform; and to ensure the interface between the service and the local authorities.

SWEDEN

All of the auditors are professional examiners who execute driving tests on a daily basis. Some are supervisors to other examiners and are also responsible for the quality of the practical tests at each office.

ANNEXE 4: THE TESTING PHILOSOPHIES IN THE 6 PARTICIPATING COUNTRIES

GREAT BRITAIN:

Examiners in GB observe all aspects of a candidate's behaviour during a pre-set route. Errors are assessed as either a driving fault (minor error), serious or potentially dangerous error or actually dangerous (involves actual danger). Candidates who accumulate up to 15 driving faults pass the test (16 or more and they fail). A single serious or dangerous error results in failure though the test will generally continue. The only time a test is terminated is where the candidate's driving is continuously so poor that it risks placing the examiner or other road users in danger.

The top ten items leading to failure on the driving test are as follows:

- 1. Observation at junctions
- 2. Use of mirrors
- 3. Reversing into a limited opening
- 4. Driving too slowly or hesitantly
- 5. Use of signals
- 6. Reverse Parking
- 7. Move away safely/control
- 8. Use of steering
- 9. Road Positioning
- 10. Use of gears

Test Result Form Great Britain

DECLARATION I declare that my use of the test vehicle for the purposes of the test is covered by a valid policy	Driving Test Report			
of insurance which satisfies the requirements of the relevant legislation. Signed	Candidate's Name			
	Vehicle Registration No.			
	Driver Number			
	SD SI			
l(a). Eyesight	12. Use of speed			
1(b). Highway Code (Categories F/G/H)	13 Following distance			
2. Precautions				
3. Control :- accelerator	14. Maintain progress by :-			
clutch	avoiding undue hesitation			
footbrake				
handbrake	IS. Junctions :- approach speed			
steering				
balance m/c	turning left			
4. Move away :- safely				
under control	16. Judgement when :- overtaking			
5. Emergency stop :- promptness	meeting traffic			
making proper use of front brake (m/c)	crossing traffic			
6. Reverse to left or right :- control	17. Positioning :- normal driving			
observation	lane discipline			
7. Turn in the road / control 'U' turn (m/c) :- observation	18. Clearance to obstructions			
8. Reverse parking :- control	19. Pedestrian crossings			
R C observation	20. Position for normal stops			
9. Use of mirrors / rear observation (m/c) well before :-			
signalling	21. Awareness and planning			
changing speed	22. Ancillary controls			
10. Give appropriate signals :-	Visitor Total dviving faults :			
where necessary				
correctly properly timed	23. Result of test Pass Fail None			
11. Response to signs and signals :-	Route Examiner's			
traffic signs	number signature			
road markings	Extended Examiner's			
traffic lights				
other road users	2 4 Supervision. SDE SE AOM ACDE			
Test Terminated in the Interest of Public Safety	Pass certificate No. ADI Number Categor			
Test Terminated at Request of Candidate	Test Centre			
Examiner Took Action Verbal Phy	sical Staff number Date M			
Oral Explanation Given Yes N	Time of Test			
DL25A DSA - An executive agency of the Department of the Environment, Transport and the Regions 2/00 © Crown Copyright 2000				

weather conditions (pleas	e ✓ appropriate box[es])	11 Ofer
1. Bright/dry roads	6. Dull/wet roads	II. Other
2. Bright/wet roads	7. Dull/dry roads	weather conditions.
3. Raining throughout test	8. Snowing	
4. Showers	9. Icy	
5. Foggy/misty	10. Windy	
Brief description of candid	late	
Remarks		

Oral explanation comments

Disability tests

Description of any fitted adaptations

Guidance Notes

More detailed advice about the test requirements and the items marked for your attention overleaf are given in 'The Driving Test Report Explained', and also in the DSA products listed below :-

The Driving Test

The Motorcycling Manual

The Driving Manual

The Guide to Tractor and Specialist Vehicle Driving Tests.

These can be purchased from all good book shops.



The result of your test is marked at Item 23 overleaf, the following statement only applies if your result is marked as a fail.

Statement of Failure to Pass Practical Test - Test of Competence to Drive Road Traffic Act 1988.

This candidate named herein has been examined and has failed to pass the practical test/test of competence to drive prescribed under the Road Traffic Act 1988 (and for the purposes of Section 36 of the Road Traffic Offenders Act 1988 if an extended test).

Candidates are assessed against the items listed overleaf in deciding whether they are competent to drive. Items needing special attention are marked. You should study these along with the Guidance Notes above, and the 'Driving Test Report Explained' leaflet given to you by the examiner.

Unsuccessful candidates are required to wait a minimum period

of ten clear working days before taking a further test in the same category.

Appeals

If you consider that your test was not properly conducted in accordance with the relevant Regulations, you may apply to a Magistrate's Court acting for the Petty Sessions Area in which you reside (in Scotland to the Sheriff within whose jurisdiction you reside) which (who) has the power to determine this point. If you reside in England or Wales you have six months from the issue of this Statement of Failure in which to appeal, and if you reside in Scotland, 21 days. If the Court finds that the test was not properly conducted it may order a refund of the fee and authorise you to undergo a further test forthwith (see Road Traffic Act 1988 Section 90).

You should note that your right to appeal to the Court under Section 90 is strictly limited to the question of whether the test was properly conducted in accordance with the relevant Regulations. The examiner's decision and test result cannot be altered.

Before you consider making any appeal you may wish to seek legal advice.

Details of DSA's service standards and complaints procedures are contained in our 'Customer Charter' and 'If Things Go Wrong' leaflets available in test centre waiting rooms.

The Driving Test Report Explained

1(a). Eyesight test

At the start of the test the examiner asked you to read a vehicle registration number. If you required glasses or contact lenses, you must wear them whenever you drive. If you had problems with the eyesight test, perhaps you should consider consulting an optician.

1(b). Highway Code (Categories F/G/H)

If you didn't need to take a separate Theory Test, for example, to obtain a licence for a tractor or other specialist vehicle, you will have been asked questions on the Highway Code and other related motoring matters. You will have also been asked to identify some traffic signs. If you had difficulty with these questions make sure that you study properly by reading as wide a range of publications as you can find to increase your understanding. If you have already passed a theory test you will not have been asked Highway Code questions at the practical test stage - but you should still have a thorough knowledge of it.

2. Precautions

Make sure you always adjust the

- seat
- mirrors
 seat belt

so that you are comfortable and can reach all the controls. Before you start the engine make certain the doors are shut properly, the handbrake is on and the gear lever or selector is in neutral or park. If you need to restart your engine quickly, for example after a stall, you must make sure that you keep the vehicle under control.

3. Control

This section covers where appropriate, the use of the accelerator, clutch, gears, footbrake, handbrake and steering, and for motorcyclists - balance. Always try and use the vehicle controls as smoothly as possible. This means less wear and tear on your vehicle and a smoother ride for your passengers. Make proper use of the accelerator and clutch to make a smooth start. Always depress the clutch just before you stop. Select the correct gear to match the road and traffic conditions. Change gear in good time but not too soon before a hazard. Do not allow the vehicle to coast by running on in neutral or with the clutch down. There should be no need to look down at the gear lever when changing gear. Use the footbrake smoothly and progressively. Brake in plenty of time for any hazard. Make full use of the handbrake whenever it would help you to prevent the car rolling backwards or forwards, and if you are parking. Steer the vehicle as smoothly as possible. Avoid harsh steering, or steering too early or too late as it may cause you to hit the kerb or swing out towards another road user. If you are riding a motorcycle slowly, maintain a straight line and do not allow the machine to wobble towards other vehicles

4. Move away

The Examiner will have asked you to move off safely and under control on level ground, from behind a parked vehicle and if practicable on a hill. Remember always to use your mirrors, and signal if necessary. Just before moving away check that it is safe by looking round for traffic and pedestrians in your blind spot. Move off in a controlled way making balanced use of accelerator, clutch and brakes, and steer safely. Make sure you are in the correct gear. Do not allow the vehicle to roll back.

5. Emergency stop

If you have to brake in an emergency remember to brake evenly and progressively and try to avoid locking the wheels. Remember that in wet weather it can take twice as long to stop safely. If you are riding a motorcycle you must make correct use of the front and rear brakes to make sure that you stop the machine as quickly as possible.

6. Reverse to the left or right

Whenever you are reversing a vehicle, you will need to control your speed. Steer a course reasonably close to the kerb. Remember that your vehicle will swing out as you turn the corner. Avoid hitting or mounting the kerb, or steering too wide. You must take good, effective, all-round observation throughout the manoeuvre and show consideration to other road users.

7. Turn in the road / Motorcycle 'U' turn

Keep a look out for traffic and pedestrians whenever you are turning your vehicle and be prepared to give way to them. Control your vehicle smoothly. Do not let the vehicle mount the pavement. Try not to touch the kerbs as this could damage your vehicle and endanger other road users and pedestrians.

8. Reverse parking

You must take good, effective, all-round observation and show consideration to other road users whilst parking your vehicle. Control your vehicle smoothly making proper use of the clutch, accelerator, brakes and steering. Remember, as you steer your vehicle into the parking space, the front of the car will swing out. Keep a special look out for cyclists and pedestrians who may pass close to the front of your vehicle.

9. Use of mirrors / rear observation

You should use your mirrors often, including exterior mirrors where necessary, and always be aware of what may be in your blind spots. Just looking is not enough. You must know what is happening all around you and act sensibly and safely on what you see. You must always check carefully before

- signalling
- changing direction
- changing speed.

Use the Mirrors Signal Manoeuvre (MSM) routine. Do not signal or act without first using the mirrors. Rear observation for motorcyclists is a combination of mirror checks and looking to the rear (Lifesaver).

10. Give appropriate signals

You must signal clearly to let others know what you intend to do. Signal

- · only using signals shown in the Highway Code
- if it would help other road users, including pedestrians
- in plenty of time.

Other road users need to see and understand what you intend to do so that they can react safely. Your signals, or lack of signals, must not mislead others. Always ensure that the signal has been cancelled after the manoeuvre has been completed. Do not beckon to pedestrians to cross the road, you could put them in danger from other vehicles.

11. Response to signs and signals

You should understand and be able to react to all traffic signs and road markings. You must act correctly at traffic lights, and check that the road is clear before proceeding when the green light shows. Obey signals given by police officers, traffic wardens and school crossing patrols. Look out for signals given by other road users, including people in charge of animals, and be ready to act accordingly.

12. Use of speed

You should make safe, reasonable progress along the road bearing in mind the road, traffic and weather conditions and the road signs and speed limits. Make sure you can stop safely, well within the distance you can see to be clear. Do not speed. Remember that as a new driver, your licence will be revoked if you accrue six or more penalty points during the first two years, and you will have to retake and pass both your theory and practical tests.

13. Following distance

Always keep a safe distance between yourself and other vehicles. Remember, on wet or slippery roads it takes much longer to stop. When you stop in traffic queues leave sufficient space to pull out if the vehicle in front has problems.

14. Maintain progress

In order to pass your test you must show that you can drive at a realistic speed appropriate to the road and traffic conditions. You should be able to choose the correct speed for the

- type of road
- type and density of traffic
- weather and visibility.

You should approach all hazards at a safe, controlled speed, without being over cautious or interfering with the progress of other traffic. Always be ready to move away from junctions as soon as it is safe and correct to do so. Driving excessively slowly can create dangers for yourself and other drivers.

15. Junctions (including roundabouts)

You should be able to judge the correct speed of approach so that you can enter a junction safely and stop if necessary. Position your vehicle correctly. Use the correct lane. If you are turning right, keep as near to the centre of the road as is safe. Avoid cutting the corner when turning right. If turning left, keep over to the left and do not swing out. Watch out for cyclists and motorcyclists coming up on your left and pedestrians who are crossing. You must take effective observation before moving into a junction and make sure it is safe before proceeding.

16. Judgement when overtaking, meeting oncoming traffic, turning across traffic

Only overtake when it is safe to do so. Allow enough room when you are overtaking another vehicle. Cyclists and motorcyclists need at least as much space as other vehicles. They can wobble or swerve suddenly. Do not cut in too quickly after overtaking. Take care when the width of the road is restricted or when the road narrows. If there is an obstruction on your side or not enough room for two vehicles to pass safely, be prepared to wait and let the approaching vehicles through. When you turn right across the path of an approaching vehicle, make sure you can do so safely. Other vehicles should not have to stop, slowdown or swerve to allow you to complete your turn.

17. Positioning

You should position the vehicle sensibly, normally well to the left. Keep clear of parked vehicles and position correctly for the direction that you intend to take. Where lanes are marked, keep to the middle of the lane and avoid straddling the lane markings. Do not change lanes unnecessarily.

18. Clearance to obstructions

Allow plenty of room to pass stationary vehicles and be prepared to slow down or stop. A door may open, a child may run out or a vehicle may pull out without warning. Keep a safe distance from builders' skips or other large obstructions, as you may not be able to see pedestrians or workers close to the obstruction.

19. Pedestrian crossings

You should be able to recognise the different types of pedestrian crossing and show courtesy and consideration towards pedestrians. At all crossings you should slow down and stop if there is anyone on the crossing. At zebra crossings you should slow down and be prepared to stop if there is anyone waiting to cross. Give way to any pedestrian on a pelican crossing when the amber lights are flashing. You should give way to cyclists as well as pedestrians on a toucan crossing.

20. Position for normal stops

Choose a safe, legal and convenient place to stop, close to the edge of the road, where you will not obstruct the road and create a hazard. You should know how and where to stop without causing danger to other road users.

21. Awareness and planning

You must be aware of other road users at all times. You should always think and plan ahead so that you can

- · judge what other road users are going to do
- predict how their actions will affect you
- react in good time.

Take particular care to consider the actions of the more vulnerable groups of road users such as pedestrians, cyclists, motorcyclists and horse riders. Anticipate road and traffic conditions, and act in good time, rather than reacting to them at the last moment.

22. Ancillary controls

You should understand the function of all the controls and switches, especially those that have a bearing on road safety. These include

- indicators
- lights
- windscreen wipers
- demisters
- heaters.

You should be able to find these controls and operate them correctly when necessary, without looking down.





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SPAIN

During the driving test, the examiner sits in the back of the car, leaving the instructor to manage the dual controls. The instructions for the driving test are given by the examiner. During the driving test a minimum of 3 special manoeuvres must be conducted. All examiners have a detailed catalogue of mistakes with their severity to guarantee objectivity.

The candidate fails if he makes a severe fault ("eliminatoria") 2 less severe faults ("deficientes"), one less severe fault and 4 minor faults ("leves") or 8 minor faults. The examiner must complete an evaluation form recording the mistakes made. This form is given to the candidate (via the instructor).

Test Result Form Spain:

CLAVES DE LA PRUEBA DE CONTROL DE APTITUDES Y COMPORTAMIENTOS EN CIRCULACIÓN EN VÍAS ABIERTAS AL TRÁFICO GENERAL

6.5. Permitir el adelantamiento.6.6. Adelantar por la derecha.

7. INTERSECCIONES

7.1. Observación.7.2. Señalización.7.3. Posición.

7.4. Velocidad.

7.5. Detención.
 7.6. Reanudación.

Ξi

352

 COMPROBACIONES PREVIAS Generales. Específicas. INSTALACIÓN EN EL VEHÍCULO Asiento. Espejos. Cinturón. Casco. Tacógrafo. Otros. INCORPORACIÓN A LA CIRCULACIÓN Observación. 	 CAMBIO DE SENTIDO Observación y valoración. Señalización. Selección del lugar. Ejecución. PARADAS Y ESTACIONAMIENTOS Observación. Señalización. Señalización. Selección del lugar. Selección del lugar. Selección del lugar. Selección del lugar. Belección. Selección del lugar. Selección. Selección. BEDIENCIA DE LAS SEÑALES 	 13. MANEJO DE MANDOS 13.1. Operaciones simples. 13.1.1. Puesta en marcha. 13.1.2. Embrague. 13.1.3. Freno de servicio. 13.1.4. Acelerador. 13.1.5. Caja de velocidades. 13.1.6. Freno de estacionamiento. 13.1.7. Volante. 13.2. Operaciones combinadas. 13.2.1. Embrague/freno. 13.2.2. Embrague/acelerador. 13.2.3. Embrague/aja de velocidades.
 3.2. Señalización. 3.3. Ejecución. 4. PROGRESIÓN NORMAL 	 11.1. Agentes. 11.2. Balizamiento. 11.3. Semáforos. 11.4. Vorticular. 	13.2.4. Embrague/dirección. 13.2.5. Freno/dirección. 13.2.6. Acelerador/caja de velocidades.
 4.1. Carril adecuado. 4.2. Separación frontal. 4.3. Separación lateral. 4.4. Velocidad adaptada tráfico/vía. 4.5. Velocidades máximas. 4.6. Observación. 	 11.5. Marcas viales. 11.5.1. Marcas blancas longitudinales. 11.5.2. Marcas blancas transversales. 11.5.3. Señales horizontales de circulación. 11.5.4. Otras marcas e inscripciones de color 	 14. OTROS MANDOS Y ACCESORIOS 14.1. Limpia/lavaparabrisas. 14.2. Señales acústicas. 14.3. Relacionados con la seguridad. 14.4. Relacionados con la visibilidad.
 DESPLAZAMIENTO LATERAL 5.1. Observación. 5.2. Señalización. 	11.5.5. Marcas de otros colores. 12. UTLLIZACIÓN DE LAS LUCES	 DURANTE EL DESARROLLO DE LA PRUEBA 15.1. Poner en peligro la integridad física propia o la de los demás conductores o usuarios.
 5.3. Ejecución. 6. ADELANTAMIENTO 6.1. Posición con el vehículo precedente. 6.2. Velocidad. 6.3. Observación y valoración. 	 12.1. Utilización mandos. 12.2. Posición. 12.3. Cruce. 12.4. Carretera. 12.5. Antiniebla. 12.6. Einergencia. 	 15.1.1. Accidente. 15.1.2. Maniobra o actuación evasiva. 15.1.3. Falta de visibilidad. 15.1.4. Pérdida de dominio. 15.1.5. Caída de la motocicleta. 15.1.6. Intervención del profesor.
 6.4. Desplazamiento lateral. 6.4.1. Observación. 6.4.2. Señalización. 6.4.3. Elecución. 		15.2. Bordillo. 15.3. No seguir las indicaciones del examinador.

AVISO: Contra el informe desfavorable de aptitud en la presente prueba podrá formular, en el plazo de QUINCE DÍAS HÁBILES siguientes a aquél en que se notifique, reclamación ante el Jefe Provincial de Tráfico y, contra la calificación definitiva, RECURSO DE ALZADA ante el Director General de Tráfico en el plazo de un mes a contar desde el día siguiente al de su notificación.

NOTA: Los datos contenidos en este documento, necesarios para el desarrollo de las competencias de este Organismo, serán tratados informáticamente (Art. 5.1. de la Ley 15/1999, de 13 de diciembre).

DIRECCIÓN GENERAL DE TRÁFICO DIRECCIÓN GENERAL DE TRÁFICO JEFATURA PROVINCIAL DE TRÁFICO DEL INTERIOR PRUEBA DE CONTROL DE APTITUDES Y COMP	O O PORTAMIENTOS	CALIFICAC APTO APTO PR	IÓN esentado	FIRMA DE LA PERSONA QUE EXAMINA
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Segundo apellido		Autoescuela		
Nombre		DNI del profesor		Matrícula del vehículo
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OBSERVACIONES				FIRMA DE LA PERSONA
X			×	QUE SE EXAMINA

FRANCE:

The Evaluation Procedure

Evaluation Conditions

To be able to make an evaluation examiners need to know the following definitions:

- 1. The 9 situations and the objectives related to them
- 2. The 6 actions
- 3. The 3 behavioural codes

Situations and Objectives

The "situations" define and represent the specific driving tasks that should be tested during the practical driving test

There are 9 "situations" inside built-up areas and 8 outside built-up areas of which 4 are checked immediately:

The other 5 situations are checked during the test and it is therefore important for the examiner to be very familiar with his surroundings.

All driving situations must be checked at all test centres.

Definitions

• DEPARTURE: Putting the vehicle into motion whether in traffic or not.

Objective: Evaluate if the driver is capable of joining traffic safely

• STOPPING: bringing the vehicle to a stop in traffic or to leave traffic.

Objective: Evaluate if the driver can slow and stop his vehicle under all circumstances.

• MANOEUVRES: Reversing, doing a u-turn, parallel and oblique parking, reversing in a straight line

Objective: Evaluate peripheral observation and vehicle control at a low speed and in a confined space

• STRAIGHT LINE: Following the road at normal speed (changing lanes and direction is dealt with in "changing direction").

Objective: evaluate control of the line being followed.

• INTERSECTION: crossing an intersection with 2 or more roads or a roundabout *Objective: Evaluate the behaviour when approaching an intersection.*

- CHANGING DIRECTION: Turning right or left. Making a pre-selection. Joining or leaving a motorway or dual carriageway at high speed. (Positioning to avoid a fixed or moving obstacle is dealt with in "overtaking")
- *Objective: Evaluate the cautiousness and decision making before and during the changing of lanes*
- TURNING: Adapting the line the vehicle is taking to follow the road.

Objective: Evaluate adaptation of the pace and positioning of the vehicle.

- OVERTAKING: Anticipating, overtaking and passing another road user or an obstacle in the same lane (being overtaken is also dealt with in this situation).
- *Objective: Evaluate the performance of the preparation and the actions taken during and after.*
- PASSING: Encountering another road user coming from the other direction on the same road.

Objective: Evaluate the behaviour of the driver and his orientation when sharing the road.

THE ACTIONS

The "actions" essentially concern a description of the knowledge needed to perform a specific driving task. In general, these 6 actions should be performed in each driving situation and should be done in this order. All actions changing the situation mean that the cycle should be restarted.

- 1. OBSERVATION
- 2. WARNING
- 3. CHOOSING LANES
- 4. SLOWING DOWN SPEEDING UP
- 5. DIRECTING
- 6. POSITIONING

THE BEHAVIOURAL CODES

The analysis of driving situations for the purpose of evaluation is based on a number of basics, which have been used to establish evaluation criteria (allowed, tolerated, not tolerated).

3 behavioural codes are defined as follows:

ALLOWED : a logical action or one that facilitates circulation or solves a particular problem. Attitude of the examiner: \Rightarrow SAY NOTHING.

TOLERATED: a mistake that could be serious but did not cause any immediate danger. The examiner must warn the candidate; the test is continued to determine whether it was a single mistake or the result of insufficient training.

Attitude of the examiner:⇒ WARN THE CANDIDATE AND PLACE HIM / HER IN THE SAME SITUATION.

NOT TOLERATED: an action (or lack of an action) by the driver places other road users and / or the vehicle in a situation where their/ its safety is no longer in their own hands. As a result, the candidate will fail, whether or not the examiner had to intervene. Attitude of the examiner:⇒ STOP THE TEST AND FAIL THE CANDIDATE.

The Work of the Examiner

Definition:

Evaluating is a task through which the examiner makes a value judgement of a result in relation to certain criteria. This result can be positive or negative.

The examiner:

- Constantly asks himself / herself the right questions
- Works on the basis of driving situations (principle of "boxes")
- Evaluates actions in every situation
- Does not revert to the habit of a fixed route
- Runs through the mental procedure

« BOX » METHOD

ACTIONS



- putting the candidate in various driving SITUATIONS.-
- determining which ACTIONS or NON-ACTIONS are erroneous and taking into account all influencing factors in the surroundings.
- determining BEHAVIOUR : Admitted, tolerated, not tolerated (written procedure or not).

Ministère de l'Equipement, des Transports et du Logement D.S.C.R. Sous-Direction de la Formation du Conducteur

		0000000	Série AA	Mod.H
	RESULT FO	ORM PRACTICAL	DRIVING TEST	
Date :	Centre :		Department :	
The examiner				
Name :	••••••	•••••		

Evaluation of:

EVALUATION

DRIVING SITUATIONS THAT	ACTIONS								
ARE EVALUATED	Perception	Signalling	Lane selection	Slowing down Speeding up	Steering	Positioning			
DRIVING OFF									
STOPPING									
MANŒUVRE (category B)									
STRAIGHT LINE									
INTERSECTION									
CHANGING DIRECTION									
CURVES									
OVERTAKING									
CROSSINGS									
UPHILL (specific for heavy vehicles)									
DOWNHILL (specific for heavy vehicles)									
T = admissible - NT = not admissible - INT = intervention - INTV = verbal intervention									
Explanation of the result : (indicate here which mistakes resulted in the candidate failing)									

Attest that the candidate

Born on	in		district
Place of residence			
street			
already the holder of a driving NOTA : only complete if the result is positive	license in category (ies	8)	

Has met the requirements for the practical driving test for category (1)

Therefore, this certificate should be considered by the police to be valid as a driving license for a period of <u>two months</u> dating from the day of the driving test until the definite license is issued by the préfet *(ministerial decree from 8 February1999)*. The validity of this certificate is limited to two months, the candidate is requested to collect his definite license from the préfecture or sous-préfecture where his qui a test request was registered as soon as possible.

License N°:]
Specific codes:													
Has not met the requirements for the practical driving test for (1)													

As a result this document is not valid as a drive

Signature :

(1) Cross out what is not relevant.

1st FORM: ADMINISTRATION/ 2nd FORM: CANDIDATE / 3rd FORM: DRIVING SCHOOL
NETHERLANDS

Evaluating a driving test.

An examiner's task can be described as follows. He must:

- 1. Observe (the candidate and the other traffic)
- 2. Analyse (Is the candidate doing the right things)
- 3. Evaluate (Is what the candidate is doing right or wrong)
- 4. Register (write it down at the end of the test)

The Rijprocedure

To help in this, in The Netherlands, the basis of the driving test is described in a curriculum for drivers called "de Rijprocedure" (driving procedure). This is a procedure which both examiners and driving instructors can consult and which explains the basics of driving. The procedure describes 10 traffic assignments and every assignment must be carried out adequately.

The traffic assignment can be described as all the things a driver has to do before, during and after a drive all the way through various types of traffic and in various different traffic situations.

Every traffic assignment (Turning, Overtaking, etc) should be performed in the same way: the driver must do five things: Observe – foretell – decide – evaluate – act.

Evaluating a candidate

Driving involves various different things and during the test, the examiner will be checking different aspects.

The candidate has to react at the right time. This is very important. The examiner can recognise this by the candidate's all-round observation, by the proper use of mirrors, by the alternation between long, near, and middle distance vision.

Throughout the test, the candidate has to demonstrate that he / she:

- recognises the traffic assignment
- checks all the other traffic (at the front, at the back and next to him /her)
- uses the right speed and the right position on the road
- applies the rules of priority / giving way correctly

The examiner has to judge the performance of the candidate concerning these four things in all traffic situations.

The examiner should consider and analyse the behaviour of the driver:

Is the decision the driver made:

- In accordance with his traffic assignment?
- demonstrative of correct social behaviour towards other traffic participants?
- safe?

During the test, examiners will be confronted with behaviour that deviates from the "Driving Procedure" as this only describes basic situations. However, the procedure does not indicate how to handle this behaviour. To fill in this gap there is a guideline for examiners indicating which items are essential for evaluation and which are not.

Passing / failing the test

How much the different parts of the traffic assignment and the correct or incorrect actions taken by the candidate count for the judgment depend on a couple of factors. Important factors are:

- the nature (this refers to the action or negligence itself)

- the seriousness (this means how far the execution of the actions taken by the candidate

deviates from the behaviour described in the "Driving Procedure")

- and/or the number of times it occurs

How many times certain actions come up for discussion, related to the item that has to be judged, depends on how many times it occurs during the exam.



For the judgment of behaviour additional factors like road-, weather- and traffic conditions are taken into account. Therefore it is possible that deviating behaviour is acceptable in certain circumstances.

Another important factor in judging the driving ability is the total impression of the exam. One of the most important questions for the examiner is: Is it a responsible decision to allow this candidate to participate in traffic independently?

The examiner will use this emphatically in his conclusion.

This means that it is possible that, although one or more items are not executed correctly, the overall performance of the candidate leads to a satisfactory result.

As a result, a candidate can pass even if he/she makes a serious error. Because the overall performance of the candidate is so important, all candidates are given the opportunity to complete the test after having made a mistake. However, the exam will stop immediately when there is a great danger for the other traffic.

A candidate does not fail on the basis of having made a certain number of mistakes. However, when the examiner concludes that all relevant aspects of one or more items are not executed correctly, the candidate will fail.

Result form for the practical driving test

name of candidate						p	1906 01	f birth							
date of birth		mal	e/female		med	lically kr	nown	numbe	r of the c	andida	ate				
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val to of the exam	moving away													supervised e	xam
d	lriving on straight roads & curves													exam in over	ime
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	changing direction												exam not con	ducted because	
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		_					_			_	_	_			
	overtaking - passing													too	late
	meeting traffic - being overtaken												an u	nfit driver / no veh	icle
	changing lanes													other reas	ons
behaviour nea and in spe	r and on special parts of the road cial areas (e.g. residential areas)														
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														dangerous driv	/ing
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Centraal Bureau Rijvaardigheidsbewijzen

SWEDEN

<u>Sweden' s practical driving test.</u> The driving test is judged on the basis of six competences. One is an overall competence: Risk Awareness. The other competences are

- Speed (adapted to the situation)
- Manoeuvring (Physiological motor ability)
- Placement (assertive)
- Traffic Behaviour (planning & obeying rules)
- Attentiveness (dangerous situations)

The test always starts with the examiner explaining to the candidate which competences will be evaluated.

During the test several elements will be judged (see the driving test report). Each element is related to a competence. If one of the elements is found to be unsatisfactory, the candidate fails the test. However, the examiner must always be comprehensive in his judgement. In case of a situation where the examiner has to intervene, the test is automatically failed.

Test Result Form Sweden:

Swedish National 1 Road Administration DRIVING TEST REPORT PRACTICAL TEST	123456-7890 Temporary Driving Licence Permit Valid only in combination with identification papers Period of validity (see overleaf)						
Licence Category B Terms and Conditions 01.0	Official Examiner's Signature						
Theory 970918 COMPETENCY	YASSESSED						
Test no. Risk Awaren	ness						
peed Manoeuvring Placement	Traffic Behaviour Attentiveness						
adapted to ne situation - physiological - assertive - assertive	- planning - obeying rules						
┶┽┶┽┶┥┝┵┽┙	└┼╍┥┝╍╄╍┼╍┥┝╍╀╍┼╴						
Points 10 - 52: $T = te$	ested $F = failed$						
Test Location Test Date	CONTENTS OF TEST						
5000 ÖDDDO 904004	F Part 1: Handling the vehicle						
5200 ORBRO 891231	10						
123456-7890 4444	11 Safety check/Functional description						
TESTSSON TESTIS	12 Parking						
BAKGATAN 99	13 Driving in reverse						
123 45 SMÅSTAD 999	14 Starting on an incline						
Proof of	16 Efficient braking/Special braking test for motorcycles						
identity papers	Part 2: Built-up Areas						
Test for B YES NO	20						
Passed driving test	21 Driving in residential areas						
drive functional description	22 Pedestrian/cycle crossings						
Official Initials	23 Changing lanes						
PER PEDAL	24 Street intersections						
CERTIFICATE OF NON-POSSESSION OF OTHER EES COUNTRY DRIVING LICENCE I solemnly declare that I do not possess any driving licence issued in any other EES country.	25 Intersections regulated by traffic lights						
	26 Roundabouls						
	Part 3: Non-Built-up Areas						
-	30						
	31 Driving on narrow, winding roads						
Incompleted Examiner's Failed specific test intervention manoeuvre	32 Accessing and driving on wide roads						
	33 Left turns						
Reg (plate) No	34 Right turns						
Notes	36 Accessing eviting and driving on motonways						
	Part 4:Built-up Areas/Non-Built-up Areas						
	40						
	41 Changing directions of travel						
	42 Railway and light rail crossings						
	43 Pedestrians and cyclists (vulnerable road users)						
	44 Driving to a specific destination						
	45 Driving at road works sites						
Test hindrance according to (see overleaf)	50						
point A This report should be presented in the event of a new driving test.	51 Driving in darkness						
	50 Driving on elignery mode						

AUSTRIA:

Description of how the Driving Test is intended

In Austria there is a "Handbuch für die praktische Fahrprüfung" (Handbook for the practical examination). This handbook is sent to the examiners and to the driving schools. The handbook is an <u>order</u> by the ministry of transport, and examiners have to do their work according to this handbook.

Examiners have to use a form. The form is written in law for category A, B, C1/C/D and for -E.

The form has 4 parts:

- (A) Safety check
- (B) Manoeuvres
- (C) Driving on roads in traffic
- (D) Closing discussion

In part (C), driving on roads, we have three different kinds of faults:

- L Small fault (Leichter Fehler)
- M Middle hard fault (Mittlerer Fehler)
- S Hard fault (Schwerer Fehler)

The exact definitions of the faults are defined as L, M or S are in the handbook.

For the result of the examination, <u>in general</u> the examiner has to consider the whole picture. The examiner has to feel safe during the whole time on the road. The test is automatically always failed if there are more than 2 faults "S" or more than 5 faults "M".

The examiner is allowed to stop the examination, if there was a very great danger (e.g. ignoring a red light), if there was a crash by the candidate, or if candidate wants to stop.

The faults are recorded on the form. The form exists of 1 original and 1 copy. If a candidate fails, the copy of the form <u>must</u> be handed to the candidate. If he passes the test, the copy <u>can</u> be handed to him/her, if the candidate or instructor wants it.

Test Result Form Austria:

PRÜFUNGSPROTOKOL	L gem	. § 11 Abs. 7	7 FSG			Б		
Aktenzahl:		Prüfer-Nr.	:	Dolmetse	ch:			
Nachname:		Name	:	Prüfort:				
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Von	0 B	estanden						
Bis	O N	icht Bestai	nden	Datum, Untersch	nntt des Prüh	ers		
A. ÜBERPRÜFUNG AM FAHRZE	EUG (Minde	estens 3 überpi	rüfte Punkte markiere	en)				
Räder Beleuchtur	ng		Ausreich	ende Sicht	Batterie			
Profiltiefe Einschalten	der Lichtstufen		Scheib	enwischer	Pole			
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Luttaruck Signal- und Padwachsol arklären Patätigen da	J Warneinric	ntungen	Scheib	engeblase	Sponnung	nrüfon		
Bremsanlage Betätigen de	er Hupe		Flüssigke	eitsstände	Zustand p	rüfen		
Vorratsbehälter Betätigen de	er Alarmblinkanla	ge	Motorö	il	Innenkon	trollen		
Standbremsprobe Lenkung		-	Kühlflü	issigkeit	Sitzpositio	n, Spiegel		
Feststellbremse Lenkhilfe, Le	erweg überprüfe	n	Brems	flüssigkeit	Kopfstütze	•		
Bremshilfe Abnützung d	ler Vorderreifen		Scheib	enwaschanlage	Sicherheit	sgurt		
B. ÜBUNGEN IM LANGSAMFAH	IRBEREICH	(Fehle	er markieren)					
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O Eabrtabbruch, Grund:							
0	Anlauf-Ablauf erkennen						
0	Defensiv-Taktik, Öko-Fahrstil						
0	Gefahrenstellen erkennen, Partnerkunde						
0	Überholen, Überholtwerden						
0	Fahren auf Autobahnen und Autostraßen						
0	Wahl von Tiefen- und Seitenabstand						
0	Wahl der Fahrspur						
0	Wahl der Fahrgeschwindigkeit						

O Fahrtabbruch, Grund: *A= Ausgleichkraftfahrzeug, **Code= Zahlencode gemäß § 2 Abs.3 u. 4 FSG-DV, L/M/S= Leicht/Mittel/Schwer

ANNEXE 5: QUESTIONNAIRE PILOT TESTS PROTOCOL FORM

Pilot test questionnaire

TEST (Towards European Standards for Testing) is a project funded by the European Commission and managed by CIECA (the International committee for driver testing authorities). The purpose of the project is to discover whether the driving test provides sufficient opportunities for examiners to make a confident decision about a candidate's skills and approach to driving.

To be able to determine this, we will be studying 3500 tests in 6 different countries. Your job as an auditor is vital to the success of this project as we are dependent on what you do for our information. To help us collect the information we require, we have developed a protocol form, to be filled out by you during and after each driving test. Because it is difficult for us to determine exactly what is possible in practice, we are conducting pilot tests to find out if the form we have developed is suitable. We would therefore like to ask you to complete the questions below and let us know what you think.

1. Overall, how easy or difficult was the auditing task? (Respond using the following scale 1 = very easy and 5 = very difficult)

2. Can you suggest improvements to the auditing forms (please write them on the attached copies of the form if this is helpful)

3. Were the instructions clear, and could they be improved? (Please write your comments on the attached copy of the instructions, if this is helpful)

4. Were there any problems in carrying out the auditing task? (please describe)

5. Were you able to remember all the codes you were being asked to use during the test?

6. Did you feel confident in being able to make the judgements you were asked to make? (Please describe any problems you had)

7. Did you have enough time during the test to fill in the form?

8. Did you have enough time after each test to fill in the second page of the auditing form?

9. Do you think your presence in the car influenced the examiner at all during the test?

10. We would be very grateful for any further suggestions that could help us improve the method? (Please write in below)

Thank you for helping us try out our method of collecting information on driving tests in Europe for the project "TEST" We are keen to improve the method before it is used for a large number of driving tests, and would be very grateful for any comments you may have on it.

ANNEXE 6A TEST PROTOCOL FORM

Auditor's Form



TABLE 1

Candidate's name	Number	Date		
Test Centre	Mileage counter start test	Time start test		
Auditor's name	Mileage counter end test	Time end test		

TABLE 2A						TABL	E 2B*		EXPLANATIONS OF COD	ES AND SCALES
Content	Cov	erage	Location		Candidate errors	Did test allow robust assessment?		v ent?	Scale 1 (density) 1-5	Code 1 (road type) A-G
	Number	Minutes	Road type	Tr. density	Scale 2	Duration	Location	Traffic Scale 3	1 no other traffic	A closed erea
Technical safety check	TICK		Code I	Scale 1	Julie 2	ocale o	ocale o	ocale o	2 very light traffic	B residential
Driving- and sitting posture	-								3 light trainc	C city center
Special maneouvres	_						·		4 Treely moving of traffic	D transfer road
							- <u> </u>		5 Very dense traffic	E B class road
Driving on straight road		_					·		Scale 2 (errors) 1-2	F A class road
	-						·		1 potentially dangerous error	G motorway/dual carriageways
Driving on curvy road									2 near accident error	Code 2 (weather) A-E
Approach/passing intersections									Scale 3 (opportunities) 1-5	A clear
Passing light regulated junctions									1 no opportunity at all	B rain
Turning left									2 possible but difficult	C snow
Turning right									3 possible but not convinced	D fog
Lane changing									4 sufficient oppertunities	E cloudy
Approaching/exiting motorway									5 too many oppertunities	Code 3 (light) A-C
Overtaking										A daylight
Driving in roundabouts										B dark
Passing pedestrian crossings										C dusk/dawn
Passing railway crossings										Code 4 (surface) A-D
Driving on long slopes	_									A dry
Passing bus/tram stops	_									B wet
Getting out of vehicle										C icy
Independent driving										D snowy

TABLE 3											
Time line	Start	5′	10′	15′	20′	25′	30′	35′	40′	45′	50′
Road type (Code 1)											
Errors (Scale 2)											

TABLE 4								
D-ising antisonant	We other	linka	Gurda a a	Urber 0/	Dural 0/		Distance	Duive time
Driving environment	vveatner	Light	Surface	Urban %	Kurai %	wotorway %	Distance	Drive time
(after test)	Code 2	code 3	Code 4		Sum = 100		Km or Miles	Minutes

TABLE 5			COMMENTS
General assessment (after test)	Did the test allow you to make a robust assessment? Scale 3	Indicate type of candidate errors Scale 2	
Vehicle control			
Observation			
Own and others' priority			
Positioning			
Distance to other road users			
Speed adaption			
Obeying traffic lights, signals, indications			
Signalling / communication			
Slowing down, braking and stopping			
Hazard perception			
Vehicle control in critical situations			
Complying with traffic regulations			
Detecting severe technical vehicle faults			
Taking account factors inluencing behaviour			
Ensure safety of all road users			
Making driving predictable			
Environmental friendly driving style			
Overal safe driving style			

ANNEXE 6B: INSTRUCTIONS FOR COMPLETING

PROTOCOL FORM

TEST: Instructions for test auditing form

Enclosed with this description are directives 2000/56/EG and a fictive example of a completed form.

Only the white fields shall be filled in by the auditor.

TABLE 2A and TABLE 3 shall be filled in during the drive

Table 2B, Table 4 and Table 5 (marked with grey) shall be filled in after the test is completed

After the test a copy of the examiner's test result form shall be appended to the auditor's form (this does not need to be done immediately but could be done at the end of the day / week, so long as the correct form is attached to the protocol form).

TABLE 1:

Fill in the candidate's name and official number as given by the testing authority and recorded on the test result form (so that you can find the test result form). Once a copy of the test result form has been attached, the candidate's name and number can be removed from the TEST protocol form to avoid problems with the protection of privacy.

Fill in the date of test.

Fill in name of test centre and auditor's name.

Fill in when the test starts (this refers only to the actual driving time).

Fill in when the test ends (this refers only to the actual driving time).

Fill in what the mileage counter reads at the beginning of the test. Please state clearly whether you are using km or miles.

Fill in what the mileage counter reads at the end of the test. Please state clearly whether you are using km or miles.

TABLE 2:

Contents

The terms used in the *content* column are from the EU directive 2000/56/EG, which regulates what areas the test must cover.

"Technical safety check" and "Driving- and sitting posture"

In the directive, the technical check and the sitting posture is combined. In your assessment form they are divided in two items. In the *Coverage* column of Table 2, the total time spent on these activities should be filled in.

7.1. Preparation and technical check of the vehicle with a bearing on road safety Applicants must demonstrate that they are capable of preparing to drive safely by satisfying the following requirements:

7.1.1. Adjusting the seat as necessary to obtain a correct seated position;

7.1.2. Adjusting rear-view mirrors, seat belts and head restraints if available;

7.1.3. Checking that the doors are closed;

7.1.4. Performing a random check on the condition of the tyres, steering, brakes, fluids (e.g. engine oil, coolant, washer fluid), lights, reflectors, direction indicators and audible warning device;

"Special manoeuvres"

In the directive, special manoeuvres refer to special vehicle control exercises which must be included in the practical driving test. Count the number of times such special manoeuvres are checked during the test and record how much time is spent on them.

7.2. Categories B and B1: special manoeuvres to be tested with a bearing on road safety A selection of the following manoeuvres shall be tested (at least two manoeuvres for the four points, including one in reverse gear):

7.2.1. Reversing in a straight line or reversing right or left round a corner while keeping within the correct traffic lane;

7.2.2. Turning the vehicle to face the opposite way, using forward and reverse gears;

7.2.3. Parking the vehicle and leaving a parking space (parallel, oblique or right-angle, forwards or in reverse, on the flat, uphill or downhill);

7.2.4. Braking accurately to a stop; however, performing an emergency stop is optional.

"Driving away"

In the directive this, and the rest of the items in Table 2 are parts of the general paragraph about "Behaviour in traffic". The behaviour to be considered here is when the applicant is driving away in traffic, after having stopped for example at a parking lot or at a junction. The number of times this is done should be filled in.

7.4.1. Driving away: after parking, after a stop in traffic; exiting a driveway;

"Driving on straight road" and "Driving on curved road"

These items should cover how much of the test is done on straight and curved roads. By straight and curved roads we mean the general description of the road type and not each single section of a road. A straight road is a road that requires only minor corrections with the steering wheel from the driver whilst a curved road requires bigger movements of the steering wheel from the driver (larger movements than when changing lanes).

Driving on a country road that is mostly straight should be regarded as straight even if there are scarce curves now and then. And similarly a road that is mostly curvy should be regarded as curvy even if there are some shorter straight stretches. Use your imagination to make a good distinction. The time recorded here should be an estimate and can be filled in after the test has been completed.

7.4.2. Driving on straight roads; passing oncoming vehicles, including in confined spaces; 7.4.3. Driving round bends;

"Approaching/passing intersections" and "Passing light regulated junctions"

Even if the directives do not distinguish between these, we have decided to do so in the assessment form. By "Approaching/passing intersection" we mean to count number of times this is done. Not all intersections should be counted, only those that are regarded as important for the test. For "Passing light regulated junctions", all should be counted.

7.4.4. Crossroads: approaching and crossing of intersections and junctions;

"Turning left and right" and "Lane changing"

These items are treated in the directive under the same paragraph, but divided in three in our assessment form. Each time these things are done should be counted.

7.4.5. Changing direction: left and right turns; changing lanes;

"Approaching/exiting motorway"

Each time one of these activities is tested should be counted. The directive states that this should be tested "if available".

7.4.6. Approach/exit of motorways or similar (if available): joining from the acceleration lane; leaving on the deceleration lane;

"Overtaking"

In the directive "overtaking" means to overtake other vehicles, to pass alongside obstacles and to be overtaken by others. In our assessment for, however, we have made a limitation where only times when the candidate is overtaking other moving vehicles should be counted.

7.4.7. Overtaking/passing: overtaking other traffic (if possible); driving alongside obstacles, e.g. parked cars; being overtaken by other traffic (if appropriate);

"Driving in roundabouts", "Passing pedestrian/bicycle crossings", "Passing railway crossings", "Driving on long slopes" and "Passing bus/tram stops"

All these 5 different items are part of what the directive refers to as" special road features". In our assessment form we have regarded them as separate situation and each time the candidate passes one of these road features should be counted.

7.4.8. Special road features (if available): roundabouts; railway level crossings; tram/bus stops; pedestrian crossings; driving up-/downhill on long slopes;

"Getting out of vehicle"

The meaning behind this, according to the directive, is to test if the candidate takes necessary precautions when aligning from the vehicle. This could either be examined as a special task during the test or as the final task when the test is finished.

7.4.9. Taking the necessary precautions when alighting from the vehicle.

"Independent driving"

Independent driving means that the candidate is told to head towards a certain place but is not told exactly how to get there. In other words, the candidate has to decide for himself whether he is turning left, right or going straight at a crossroads on the basis of the place he is trying to reach. This item should be assessed in our form even if it is not included in the directives.

Coverage

Coverage of the test is registered two different ways. In the column "number" the auditor counts the total number of times each item is performed and at the end of the test, notes down the total number.

If the route you are covering is a fixed route and these items are know, the numbers can be filled in before or after the driving test itself. If it becomes too difficult to count the number of times a situation occurs because it occurs so often, please fill in an estimate (between 10 and 15, between 15 and 20, etc.)

In the column "minutes", the auditor registers how much time is spent on each item in total by noting down the number of minutes each time the situation occurs and adds these at the end for a total. The figures recorded here do not need to be exact measurements but can be estimates.

Grey fields are not to be used.

If a candidate performs more than one action at the same time, please record all actions (for example if a candidate turns left at an intersection, please record both a left turn and an intersection).

Location

The location of the test is also registered two ways. For each item in the "content" column, both the road type and the traffic density must be registered. The codes to be used for road type is A-G (Code 1) and for traffic density is scale 1-4 (Scale 1) in accordance with the explanation in the table Explanations of codes and Scales on page 1.

Errors

These are the errors that are made for each of the items described under *content* and are classified as near accident errors or dangerous or potentially dangerous error. Minor errors shall not be counted. To complete this column, Scale 2 as described in the table Explanations of codes and Scales shall be used.

Did the test allow robust assessment?

This section (Table 2B) is to be filled out after the test has been completed. The three columns under the heading "Did test allow robust assessment?" require a quality estimation where the auditor shall make three different estimations on a scale of 1-5 (see definition of "Scale 3" in the table Explanations of codes and Scales). The elements to be assessed are the *duration* (whether the amount of time spent on this item allows to make a robust assessment), the *location* (whether the location selected allows for a robust assessment to be made) and whether the type of *traffic* allowed the examiner to make a robust assessment of the candidate.

All three (duration, location and traffic) should be completed for each of the elements in the *content* list.

TABLE 3:

Time line

In the white field above the *time line* arrow, the auditor shall mark:

- when during the test the candidate moves from one road type to another by marking on the time line one of the codes A-G (according to Code 1 in the table Explanations of codes and Scales) at the time when the candidate moves to a different road type

In the white field under the time line arrow, the auditor shall mark:

- when *errors* are committed by filling in 1 or 2 (according to scale 2 in Table the table Explanations of codes and Scales).

The total time line is 50 minutes. If your test is shorter, just use the part that you need and skip the rest. The long line is used to cover variations in total test duration in different countries.

TABLE 4:

At the end of the test, a general description of the *driving environment* is registered. If several of the conditions have occurred during one test, please add several codes.

Weather

In this column the auditor should describe the weather conditions, using Code 2

Light

In this column the auditor fills in A, B, or C according to Code 3

Surface:

In this column the auditor describes the condition of the surface during the driving test using Code 4.

Urban %, Rural % and motorways / dual carriageways

These columns require the auditor to make a general estimation of the percentage of time that was spent in these two types of locations during the driving test.

The sum of the two estimates shall be 100 percent.

Urban % = the time spent inside built up areas

Rural % = the time spent outside built up areas

Motorways / dual carriageways % = time spent on motorways or dual carriageways

Distance

For each test, the total *distance* shall be measured. For this purpose the starting figure and end figure on the mileage counter of the test car shall be recorded for each test (this is noted in table 1). Please record clearly whether you are using kilometres or miles.

Driving time

For each test, the total driving time should be recorded (the starting and finishing time is recorded in Table 1). Driving time means only the time when the candidate is behind the wheel driving the car in traffic. Driving time does *not* include the reception of the candidate, the preparation of the car, the technical check of the car, any "special manoeuvres" not performed in traffic (see definition under "TABLE 2A" above) or the announcement of the outcome of the test.

TABLE 5:

Did the test allow you to make a robust assessment?:

A final *general assessment* of the test is done after the test by using Scale 3. The question that the auditor is answering here is if the test allowed the examiner to make a robust assessment of the different items listed under General assessment. Most of these items come from directive 2000/56/EG as cited below.

To fill in this column, the auditor is to use Scale 3 as described in the table Explanations of codes and Scales.

9. Marking of the test of skills and behaviour

9.1. For each of the abovementioned driving situations, the assessment must reflect the degree of ease with which the applicant handles the vehicle controls and his demonstrated capacity to drive in traffic in complete safety. The examiner must feel safe throughout the test. Driving errors or dangerous conduct immediately endangering the safety of the test vehicle, its passengers or other road users shall be penalised by failing the test, whether or not the examiner or accompanying person has to intervene. Nonetheless, the examiner shall be free to decide whether or not the skills and behaviour test should be completed.

Driving examiners must be trained to assess correctly the applicants' ability to drive safely. The work of driving examiners must be monitored and supervised, by a body authorised by the Member State, to ensure correct and consistent application of fault assessment in accordance with the standards laid down in this Annex.

9.2. During their assessment, driving examiners shall pay special attention to the fact whether an applicant is showing a defensive and social driving behaviour. This should reflect the overall style of driving and the driving examiner should take this into account in the overall picture of the applicant. It includes adapted and determined (safe) driving, taking into account road and weather conditions, taking into account other traffic, taking into account the interests of other road users (particularly the more vulnerable) and anticipation.

9.3. The driving examiner will furthermore assess whether the applicant is:

Vehicle control

9.3.1. Controlling the vehicle; taking into account: proper use of safety belts, rear-view mirrors, head restraints; seat; proper use of lights and other equipment; proper use of clutch, gearbox, accelerator, braking systems (including third braking system, if available), steering; controlling the vehicle under different circumstances, at different speeds; steadiness on the road; the weight and dimensions and characteristics of the vehicle;

Observation

9.3.3. Observation: all-round observation; proper use of mirrors; far, middle, near distance vision;

Own and others' priority

9.3.4. Priority/giving way: priority at crossroads, intersections and junctions; giving way at other occasions (e.g. changing direction, changing lanes, special manoeuvres);

Positioning

9.3.5. Correct position on the road: proper position on the road, in lanes, on roundabouts, round bends, suitable for the type and the characteristics of the vehicle; pre-positioning;

Distance to other road users

9.3.6. Keeping distance: keeping adequate distance to the front and the side; keeping adequate distance from other road users;

Speed adaptation

9.3.7. Speed: not exceeding the maximum allowed speed; adapting speed to weather/traffic conditions and where appropriate up to national speed limits; driving at such a speed that stopping within distance of the visible and free road is possible; adapting speed to general speed of same kind of road users;

Obeying traffic lights, signals, indications

9.3.8. Traffic lights, road signs and other indications: acting correctly at traffic lights; obeying instructions from traffic controllers; acting correctly at road signs (prohibitions or commands); take appropriate action at road markings;

Signalling / communication

9.3.9. Signalling: give signals where necessary, correctly and properly timed; indicating directions correctly; taking appropriate action with regard to all signals made by other road users;

Slowing down, braking and stopping

9.3.10. Braking and stopping: decelerating in time, braking or stopping according to circumstances; anticipation

Hazard perception

II. KNOWLEDGE, SKILL AND BEHAVIOUR FOR DRIVING A POWER-DRIVEN VEHICLE Drivers of all power-driven vehicles must at any moment have the knowledge, skills and behaviour described under points 1 to 9 above, with a view to be able to:

- Recognise traffic dangers and assess their seriousness;

Vehicle control in critical situations

- Have sufficient command of their vehicle not to create dangerous situations and to react appropriately should such situations occur;

Complying with traffic situations

- Comply with road traffic regulations, and in particular those intended to prevent road accidents and to maintain the flow of traffic;

Detecting severe technical faults

- Detect any major technical faults in their vehicles, in particular those posing a safety hazard, and have them remedied in an appropriate fashion;

Taking into account factors influencing behaviour

- Take account of all the factors affecting driving behaviour (e.g. alcohol, fatigue, poor eyesight, etc.) so as to retain full use of the faculties needed to drive safely;

Ensure safety of all road users

- Help ensure the safety of all road users, and in particular of the weakest and most exposed by showing due respect for others.

Making driving predictable

This means that the candidate indicates clearly to other road users when he is turning left or right, when he is slowing down or stopping, when he intends to move into another lane, etc.

Environmentally friendly driving style

Most countries now have a form of environmentally friendly driving training, either as part of the basic training or in advanced driving courses.

CIECA defines environmentally friendly driving as follows:

"Environmentally friendly driving is driving defensively at low revs with maximum fluency and minimum braking.

The results of this type of driving are: reduced fuel consumption, costs, noise and air pollution and increased safety and comfort."

Overall safe driving

This reflects the candidate's general driving style taken throughout the entire test.

Indicate type of error

Finally, the *errors* made during the test should be sorted out in accordance with the items listed under general assessment. The errors are to be classified in accordance with scale 2.

As a help in this, the auditor can refer to the marks made in Table 2A or on the time line (Table 3) on page 1.

Explanations of codes and scales

Scale 1 (density)

This scale is used to describe how many other road users are within a particular area during the test. This can vary from very high density, where road users can barely move as there are so many in so little space; to no other traffic. Below the scale values are defined.

- 1 = no other traffic: no other road users are present
- 2 = very light traffic: candidates rarely have to interact with other road users
- 3 = light traffic: plenty of gaps of more than 100m
- 4 = freely moving stream of traffic: few gaps
- 5 = very dense traffic: slow moving or stationary queues

Scale 2 (errors)

This scale is used to describe the mistakes made by the candidate during the driving test.

1 = potentially dangerous error: an event that would have been a near accident if other road users were present.

2 = near accident error: an event occurred as a result of which the examiner, another road user or the candidate had to take action (e.g. brake hard, swerve) to avoid an accident.

Scale 3 (opportunities)

This scale is used to describe if the test provides the examiner with the opportunity to make a robust decision about something (for example the candidate's vehicle control).

1 = No opportunity at all to evaluate the candidate on this element

2 = It was possible to make an evaluation but it was difficult

3 = It was possible to make an evaluation but the auditor was not completely convinced of his evaluation

4 = There were sufficient opportunities to make a robust decision

5 = There were too many opportunities; this item was tested more than necessary

Code 1 (road type)

These codes describe different road types that can be covered during the driving test A = Off road: Area outside the road without other traffic

B = Residential: Urban area outside city centre where people live

C = City centre: Roads within the city centre

D = Transfer to residential: Urban transfer roads between city centre and residential area or between residential areas

E = Small rural: Small country road (speed limit 60 km/h (The Netherlands), speed limit 70 km/h (Sweden), B-class roads (Great Britain), speed limit 50 km/h (Spain)F = Large rural: Large country road (speed limit 80 km/h (The Netherlands), speed limit 90 km/h (Sweden), A-class roads that are not dual carriageways (Great Britain), speed limit 90 km/h (Spain)

G = Motorway: Motorway or other high speed dual carriageway

Code 2

These codes describe different weather conditions (the auditor can fill in more than one if the weather changes during test)

Code 3

These codes describe different types of light during the driving test (the auditor can fill in more than one if the light changes during test)

Code 4

These codes describe different types of surface that could be covered during the driving test (the auditor can fill in more than one if the surface changes during test)

COMMENTS

There are several things that can be recorded in this section

- All auditors must record the result of the test (pass or fail) and if the test was stopped

- All auditors are asked to record behaviour, routes or evaluations that seem different or stand out for any reason

- If more than one candidate is in the car when the test starts, auditors are asked to record this. If the candidates switch half way through the test (the candidate who was driving moves from the driving seat and the other candidates now moves into the driving seat and starts his / her test) auditors are asked to record whether the candidate being audited drove first or second.

- Auditors are free to use this section to make any other comments they feel will contribute to the project.

Good luck!

ANNEXE 7: VISITS COUNTRY REPRESENTATIVES

VISIT MR. ESKO KESKINEN AUSTRIA (5 AND 6 AUGUST)

Visited test-centres: Lämmerhofer/Neumarkt, Rauch/Traun andSauer/Mader, St. Pölten One important thing to keep in mind when describing the testing system in Austria is that there are big differences between first, the different parts of Austria and second, between what is described in Bundesministeriums handbook and the practical solutions applied in practice in the different areas as well in the different test-centres. The professional background of examiners as well as their experience varies a lot. There are about 600 test sites in Austria while there are 420 driving schools, which means that several schools have more than one test site.

The visit covered three different test-centres in a large area one test was seen per testing location. Two candidates passed and one failed.

The tests were almost totally different: the traffic environment, testing practise and the style of testing varied. All the examinations began at a driving school, where the examiner came for the tests.

Description of test-centres and tests

Site 1 was situated in a small countryside village (residential area), with a low volume of traffic and no traffic lights or pedestrians. The test started with a good and detailed technical check. Manoeuvring testing was arranged as part of on route testing. The examiner gave instructions and the instructor did not talk at all during the driving test. Orders for route selection were clear and came early enough but they gave the candidate no room to demonstrate his own abilities in route selection. The examiner was in close contact with the candidate throughout the test, asking, commenting and giving feedback. This means that the examiner was able to collect a lot of information from the candidate which he would not have been able to gather through only observation, like asking what should be done in a certain situation or asking the speed limit or why candidate did what he did etc. The testing time was 31 minutes + technical check. The examiner used his form effectively, making many comments even when the candidate

passed. The auditor said that the TEST-project form is easy to use. The auditor was in the car during the test.

The low traffic volume and country-like environment limited the possibilities to extensively test the interaction with other traffic. There is a bigger town and a testing centre relatively close by (about 30 km) but the school does not use it, because of the lower pass rates.

Site 2 was situated in the centre of a small town. The technical check and manoeuvring were done on a closed-off area, where the candidate drove alone following a prefixed program. The time used in the practising area was 12 minutes. Driving tasks were given as goals, further away. Different traffic environments were used and there were also all kind of road users on the route, as well as traffic lights and pedestrian areas. The instructor gave all the directions and the examiner did not say anything to the candidate during the test. He did, however answer his mobile phone and he and the instructor were talking with each other and telling stories throughout the test. The candidate was just driving; he did not get any comments or any questions. The auditor was not in our testing vehicle. The candidate passed. The test took 38 minutes but the driving part in traffic was only 26 minutes. On his test result form, the examiner marked only that all the test items had been checked and that there was nothing to comment.

Site 3 was located in the biggest town and the traffic environment was varied. The technical check and manoeuvres were done on a closed-off area, which was driving school's training area. The examiner gave instructions, manoeuvre by manoeuvre and the candidate drove alone. Also during the test route, only the examiner gave directions, often corner by corner without any feedback or further interaction of any kind. The atmosphere of the test was very formal. The examiner was very much concentrating on the behaviour and made comments on the form. Giving feedback would have been useful, because the candidate had clearly understood some things in a different way than how the examiner intended them and it did not always seem to be the candidate's fault. The differences were not a result of a lack of skills but more a different way to do things. The candidate failed the test. It was very hard for the school because before test the owner had explained that nobody from his school had failed the test in a period of 1.5 years.

<u>General comments</u>: driving- and sitting position were checked and discussed only in one site, there were no special manoeuvres, approaching/exiting motorways, overtaking or special road features in any test. It was also not possible to test vehicle control in critical situations, detect severe technical faults and only in one case it was possible to get information concerning account taking of factors influencing behaviour. Otherwise there were good opportunities, but not demanding, to make a robust assessment.

VISIT MR. NILS PETTER GREGERSEN SPAIN (11 SEPTEMBER).



4 tests (not at all representative)

The testing centre combined a lot of different activities (vehicle registration, vehicle checks, theory test, practical test, etc.). The first test started at one test centre and ended at another where a new candidate was picked up. The instructor from the driving school was sitting in the front passenger seat and the examiner behind in the rear seat. At these occasions the auditor was also present in the car behind the candidate. Including myself, we were 5 persons in the car.

The procedure was that the examiner gave instructions before start. None of the tests included safety check or adjusting sitting posture. All tests were performed in city roads with dense traffic and lasted about 20-25 minutes in total. The examiner gave short instructions about directions and there was no other conversation in the car. Pocket parking was done in all tests. No information about the test result was given to the candidate after the test.

Some additional remarks are that very small cars were used with no air conditioner and no neck protection in the rear seat.

It appeared that even though the environment offered numerous opportunities for testing, these were not all being used in the test. The factors that were tested were tested effectively, but there is a lot of space for improvements.

The examiner did not use a seatbelt. This is not an exception; it has proved to be very difficult to convince the Spanish examiners to use seat belts, as they claim they feel safer without them.

VISIT ESKO KESKINEN SWEDEN (29 JANUARY 2004)

Place and environment

The testing centre was on the outskirts of Stockholm. The first wet snow (5-10 cm) of the year had just fallen and roads were slippery and especially one place on the road (uphill coming to the main road and avoiding other traffic) needed special skills

Students

There were five students (2 males and 3 females) who took their examination and one who didn't show up.

Meeting and checking the candidates' identity

The candidates were met by the examiner in a room where candidates waited. The identity and the training documents were checked before walking to the car

To car, safety check and briefing

Before sitting down in the car there was first a brief safety check outside the car and then it continued inside before starting the engine. Also before starting to drive the examiner gave a very detailed briefing about what to do, how to do etc.

On the road

- From the courtyard the candidate drove to the road but he/she had to make some manoeuvres before he or she was able to do this. The examiner used this manoeuvring experience to make his decision concerning the beginning of the test route: more simple or more demanding route at the beginning.
- Manoeuvring was done during the road driving after some minutes of driving. During these tests, checking the manoeuvring always happened in the same place on a quite street. The candidate could make several trials and the examiner said that there was no hurry.
- There was quite a lot of independent driving each candidate had to do at the end of the test. Mainly it meant that the candidate had to drive toward Stockholm according to road signs.

• During the on road part the examiner gave orders and talked in a normal, social way. The discussion was also about other things than just the driving task. It can be said that the examiner kept contact with the student.

Back to the testing centre and feedback in car at the end of the test

As independently as possible the candidate had to drive back to the testing centre and park the car there. Immediately after this the candidate got quite intensive feedback and the result of the test, passed or failed.

Total evaluation

Professional and strict but at the same time warm and interactive. The candidate was well informed all the time. The routes provided good opportunities to assess candidates safe driving skills even if the traffic density was quite low most of the time (1 - 4 on the scale from 1 - 5).

Some comments concerning individual tests and candidates

The candidates' general level was poor (1 out of 5 passed), they were mainly (3 out of 5) trained privately. One of the main reasons for failing was the low level of the manoeuvring skills of the candidates which did not give them the opportunity to concentrate on the traffic situations. In one case the examiner even had to help the candidate by using the steering wheel, and in two cases the examiner finished earlier than normally because of the low level of the candidate. Some candidates had tried to pass the test already several times and failed again.

The duration of the total tests on the road were 35, 26, 32, 43 and 38 minutes.

Auditors evaluation concerning the use of auditing form and other things.

The auditor said that there were no special problems concerning the auditing or auditing form.

VISIT NILS PETTER GREGERSEN TO GREAT BRITAIN (12 MARCH)

Two tests were observed. More tests were supposed to be included on the second day but it had snowed (2 cm) and the test centre was closed. The tests were conducted by two different examiners; one candidate passed and one candidate failed. The length of the test was 38 and 40 minutes. The atmosphere in the car was quite friendly with conversations about studies, leisure time activities etc.

The safety check in Great Britain is "show me / tell me" which means that the candidate either has to show the examiner something or explain something to the examiner. The introduction is done in the car. Examiners follow a fixed route but there are numerous different routes per test centre. In one of the tests the examiner seemed to put a lot more effort into the special manoeuvres than in the other test and the examiner rechecked a number of different actions. The examiners have the freedom to do this even though they use fixed routes.

The examiner made no comments about sitting posture even though both candidates had really bad sitting posture. Both routes were performed in "urban periphery" with a large part of the driving in residential areas.

The impression of the tests was positive, taking into account that the GB test system does not give opportunities for independent driving. The two tests were to some extent performed in a road environment with low variation, something that was confirmed by the examiners.

VISIT CHRIS BAUGHAN TO THE NETHERLANDS (18 FEBRUARY)

1. General

The practical driving test in The Netherlands is carried out by the Centraal Bureau Rijvaardigheidsbewijzen (CBR), a non-profit organisation licensed by the Dutch Government to execute the driving tests.

A full test-day for an examiner is 8 tests, with 55 minutes being allocated as a standard test slot (i.e. time between examiner receiving the candidate, and the candidate leaving the building after the debriefing). Tests must take place in a dual controlled car (brake, clutch and extra mirrors). Before passing their test, learner drivers must be supervised by a driving instructor. Informal supervision by a parent or other licence-holder is not permitted. No minimum amount of on-road training is specified. Manoeuvres are tested on-road during the practical test – there is no off-road testing except for parking in the test centre car park at the end of the test. Test routes are not fixed - the examiner chooses which roads to use, and may adapt the test to the candidate's driving. For example, a candidate who has made a particular type of error might be given more opportunities to either repeat that error or demonstrate that it was an isolated event, not representative of his or her true performance. The examiner makes no notes during the drive, and indeed has no means of doing so: the principle is generally to withhold judgement about passing or failing until the end of the test, to give candidates the opportunity to 'cancel out' errors by examples of good performance. There are no set rules about the number or types of error that will lead to failure, although the examiner will judge every exam according to the Dutch written driving procedure. Nevertheless, very serious or repeated errors cannot be cancelled-out in this way. Candidates are not asked to choose their own route (e.g. to a specified destination), or to choose where to turn the car or conduct other manoeuvres

Each examiner has two check tests per year – the results of which are used to advise the examiner how to execute the test in a uniform way, consistent with his colleagues and CBR regulations.

Candidates have to pass a computer-delivered knowledge test before booking the practical test. No changes were made to the practical test to comply with EC Directive 2000/56 – it was already felt to comply.

The practical test starts with the examiner receiving the candidate and instructor in a room equipped with desks and chairs. The examiner checks paperwork and briefs the candidate on the test; explaining, for example, that if no other instruction is given at a junction the candidate is to proceed ahead, overtaking at his own discretion, adapting speed to other traffic and paying attention to traffic signs without being prompted. This phase takes about five minutes. The examiner, instructor and candidate then walk to the car, pausing on the way for an eyesight test which requires the candidate to read a number plate at about 25 metres range. On reaching the car, the examiner may ask four or five questions about general technical knowledge, e.g. engine, tyres and warning lights. The candidate then sits in the driver's seat, and operates the lights and indicators according to instructions from the examiner, who checks the lights from outside the car. The examiner then sits in the front passenger seat. The instructor is allowed to observe the test from the rear seat of the car. CBR estimates that instructors observe about 45% of tests overall in the Netherlands, and about 35% of the tests in the northern part of the country. The printed invitation to the test recommends that instructors should be present. Only three people in total are permitted in the car during the test.

The test drive then starts, and normally lasts about 35 minutes. Occasionally a test may be cut short because of a very serious error, but in general it is felt that even candidates who are definitely going to fail the test have a right to a full length test and the feedback at the end of it. At the end of the drive, the candidate parks in a place designated by the examiner. They and the instructor then go back into the briefing room and sit at a desk. The examiner tells the candidate whether he or she has passed or failed. If failed (not if passed) the examiner explains why, and gives suggestions for how the candidate's driving should be improved. The examiner involves the instructor in this discussion. The examiner fills in a summary sheet, a copy of which is handed to the candidate. It indicates the reasons for failure but does not describe any shortcomings of driving if the candidate has passed. If the candidate has passed, other paperwork is completed. This debriefing phase takes about 4-5 minutes.

2. Tests observed

I observed four tests, two with an examiner at Gorinchem and two with an examiner at Amsterdam. It was not possible to observe an audit in progress as only one person is permitted to ride in the back of the car during the test. However, I had a short discussion with an auditor at Amsterdam. A last-minute change of plan meant that the auditor at Gorinchem was not available.

3. Tests at Gorinchem

Gorinchem is a small rural town (pop. 35,000) about 85 km SSE of Amsterdam. The centre has about 4-5 examiners, and serves a radius of about 20 km. Traffic density is generally light. The road system included motorways, modern rural single and dual carriageway roads, and older country roads (e.g. very narrow roads across fields and along a causeway). In the town itself there is a good variety of road types and junctions, including traffic-calmed areas.

Test 1

Male, late teens/early 20s Conditions: bright, dry

The format of the test was as described in section 1. The initial briefing was relaxed and friendly, clearly designed to put the candidate at ease. The initial lighting check was followed by a very short session on (I believe) dashboard controls, but I am not sure whether any other test questions were dealt with, or whether anything was said about seating position. The friendly atmosphere continued in the car, such that the candidate initiated short exchanges with the examiner from time to time. However, while calm and friendly, the atmosphere was not frivolous – the test was being taken seriously, and conducted professionally. The examiner also exchanged the odd word with me. The examiner wore his safety belt. A good variety of roads and junction types was included, and the candidate's ability to cope with pedestrians and cyclists was well tested. Traffic density was very light. A section of 100kph limit motorway was included, on which candidate drove at 100kph.

Apart from the odd remark (possibly designed to keep the atmosphere light), the examiner restricted his comments to what appeared to me to be brief instructions on

directions, and on when to do the low speed manoeuvres. He reminded the candidate to use the sun visor at one point, but did not give feedback or ask the candidate questions about his driving. (I confirmed this with the examiner afterwards.) As regards special manoeuvres, the candidate was asked to conduct a turn in the road (on a very narrow road), a reverse-round-a-corner on the right (i.e. nearside) and, on return to the centre car park, a forward park into a car park space.

The feedback session in the office at the end of the test was again conducted in a friendly but suitably serious way (the candidate had failed), and the instructor apparently agreed that the weaknesses demonstrated were typical of the candidate. The candidate, too, appeared to receive the feedback well – as far as I could see the session was worthwhile.

Though not strictly part of the purpose of this inspection, it may be worthwhile noting my own observations on the candidate's performance – bearing in mind that I was unable to see his use of the mirrors and am not trained to assess driving! He coped well on the motorway, except for a transient period of close following after an accelerating change of lane. On a single carriageway road he stalled part way through a left turn into a junction but recovered well. There was a tendency to brake rather too hard and too late for my taste as he approached junctions or vehicles queuing for junctions. He declutched very early during braking. He stalled before starting the turn in the road, during which he ran into both kerbs and did not look along the road before reversing. On several occasions he did not see that a particular manoeuvre (e.g. turning out of a T junction near a parked truck that forced him onto the wrong side of the road, or a sharp bend with narrow lanes and parked vehicles, would inevitably produce a (low speed) conflict with oncoming vehicles. In effect, he relied on them to avoid him, which they did. I do not think he was aware of this. He nearly clipped at least one parked car, and came very close to clipping a cyclist. He also started his reverse round the bend when it was obvious that the front offside of his car would swing out into the path of an oncoming car – but he spotted this in time and stopped. He also stalled on exit from the reversing manoeuvre. My short discussion with the examiner afterwards suggested that these were generally the types of fault for which he had failed.

The whole test lasted 49 minutes, of which the initial brief + static items at the car took 11 minutes, the test drive itself 34 minutes and the debriefing 4 minutes.

Test 2

Female; late teens/early 20s Conditions, dull and dry.

The initial briefing session was again relaxed and friendly, and the questions on arrival at the car included ones on lights and tyres (I could not tell whether other subjects were covered). There did not appear to be any check on or discussion of seating position. Traffic during the test was very light. There was some motorway driving at speeds up to 100km/m, and a good selection of other types of road, including dual carriageway distributor roads, residential roads (some with traffic calming), some roads with a lot of parked vehicles, very narrow, traffic-calmed roads through fields and along a causeway, and town-centre roads. A variety of junction types was covered, including roundabouts, slip roads, and light-controlled junctions. The candidate was asked to do hill start, a reverse-park between parked vehicles on the right (nearside). The drive ended with the candidate forward-parking into a car park space indicated by the examiner.

As with test 1, the examiner was calm and friendly throughout the drive. He did not appear to give any feedback on driving, or ask any questions to do with driving. Again, he wore his seatbelt.

The initial briefing, together with the walk to car and static questions, lasted 10 minutes. The drive itself took 33 minutes, and the walk back to the office and debrief about 5 minutes.

The candidate failed this test. The examiner had to brake to prevent the candidate pulling out in front of a vehicle on a roundabout. I also noted that the candidate's reverse park was poor, and that she came dangerously close to a bicycle.

4. Tests at Amsterdam
The test centre at Amsterdam (pop. 735,000) was very different from the Gorinchem centre. It has about 18 examiners, and serves Greater Amsterdam. It is also in the city, with much higher traffic levels and some complex junctions.

Test 3

Female, early 20s Conditions: Dull and dry.

As at Gorinchem, the initial briefing was relaxed and friendly. The eyesight test and lighting test were done in the same way as at Gorinchem, but I did not notice any questions about instruments etc (though I might very well have missed these). There did not appear to be any question about seating position.

During the drive the examiner's style was also similar to that observed at Gorinchem. He talked occasionally in a relaxed and quiet way to the candidate, but did not comment on her driving (as far as I could tell) or ask questions about her driving. He wore his seat belt.

The test covered a wide variety of road and junction types including motorway, dual carriageways, cobbled residential roads with pedestrians, and single carriageway roads in residential, commercial and shopping areas. Speeds and traffic density of some of these roads were high. Junctions included roundabouts, light controlled and uncontrolled crossroads, and slip roads. Conditions were demanding, probably giving a good representation of the conditions to be met when driving in the Amsterdam area. The candidate was asked to do a reverse park on the right, and a hill start.

It was interesting to observe how the examiner dealt with this candidate, who was quite obviously not ready for test. She had not learned proper clutch control, which meant that she stalled on moving out of the test centre, several times on the hill start, at a pedestrian crossing, and after slowing down for a speed ramp. The examiner used his controls to do the hill start for her in the end. She came up very fast behind another car after a bend, came close to a bike while overtaking it, and braked heavily for a traffic queue at the bottom of a slip road. She was very hesitant during the reverse park, and ran into the kerb. On pulling away from this manoeuvre the examiner pushed the steering wheel to stop her hitting the car in front. During all this, the examiner managed to keep the atmosphere reasonably relaxed, but became less chatty towards the end of the test. When I discussed this with him afterwards he said that when a candidate is failing badly, he tends to let the atmosphere become a little more serious, thus preparing the candidate for the debriefing session. The drive ended with the candidate forward-parking into a car park space indicated by the examiner.

The candidate failed the test. The examiner had to intervene several times. The examiner thought that this was a very poor test drive, and that the candidate was not yet ready for test.

The examiner's feedback during debriefing session appeared to be well received by both instructor and candidate, though I thought that the candidate was starting to get a bit upset towards the end.

The test drive itself took 32 minutes, and the briefing and debriefing sessions about 4-5 minutes each.

<u>Test 4</u> Male, late teens / early 20s Conditions: Dull and dry

The procedure and type of interaction with the examiner were similar to those seen in tests 1-3. The route features, and traffic levels, were similar to those in test 3.

The drive lasted 30 minutes, and the briefing and debriefing sessions lasted about 5 minutes each. This candidate passed. I do not think that he was given any feedback at the debriefing session on minor faults, or on how his driving might be improved, but I am not sure about this.

5. General comments on the four tests observed

It seemed to me that all the tests had permitted a good assessment of the candidate's performance at levels 1 and 2, columns 1 and (partially 2) of the GADGET framework, including perception of hazards involving pedestrians cyclists, and lane-conflicts. My own judgement was that the tests were sufficient to provide a very robust assessment of

the three candidates who failed. I am less sure about the candidate who passed – I would have needed to observe more of his driving before I could be confident. However, the examiner, with his experience of the spectrum of performance that candidates demonstrate on test, may have been able to be much more confident about this candidate. Of course, none of the tests could provide a robust assessment of whether a candidate would actually choose to drive safely when solo – a point that will be returned to later in the project.

Both examiners I observed appeared well-trained, competent, and fair, with very good inter-personal skills and a good relationship with the instructors.

At Gorinchem, traffic conditions were not particularly demanding and, away from the motorway, speeds were low. I think that candidates learning to drive in the Gorinchem area, and passing their test there, would find driving in Amsterdam demanding – though we do not know whether this would make them less safe. This is an important issue for driver testing in all countries. In one sense it is desirable to standardise tests. But, in practice, the extent to which this is possible is limited by the differences in the types of road and traffic conditions available to test centres in rural and urban locations. And these variations may not be important if drivers passing their test in one area tend to restrict their early driving to that area, or if the demands of a 'new' area make them drive cautiously.

6. Auditors

I was not able to observe any audits because of the limit on the number of people allowed to travel in the car during a test. The planned interview with an auditor at Gorinchem had to be cancelled. However, I did have a short interview with an auditor at Amsterdam. He said that he had no problems with conducting the audits, but had developed his own way of dealing with the complexities of the task. In particular, he estimated some parts of Table 2A at the end of the test. Also, to help him complete Table 5 after the test, he annotated the errors on the timeline (Table 3) with his own codes.

VISIT CHRIS BAUGHAN TO FRANCE (26 MARCH 2004)

1. General

My visit to the test centre in Rennes was arranged by M. Jean-Pierre Fougère, Adjoint du Sous-Directeur de l'Education Routière, of the French Ministry of Transport. I also met M. Auclaire, the Test Centre Manager, and M. Daniel, the TEST Project Auditor at the centre. I observed four tests, all with the same examiner. It was not possible to observe an actual audit in progress because the instructor has to be present in the car during a test. Instead, M.Fougère drove a car in two simulated tests, which were audited by M. Danielle. The routes on these simulated tests were chosen to show me the full range of road types available at the centre.

The practical driving test in France is carried out by the Ministry of Transport. It is free of charge. At the time of the visit, about half of the 100 Departments had instituted changes to the test to accommodate the EC Directive. At these centres, the total length of a test slot had increased from 22 minutes to 35 minutes, and the driving time (including stops for manoeuvres and questions) has increased to 25 minutes. This change has been accompanied by a drop in pass rate.

In 50 Departments, including Ille-et-Vilaine in which Rennes is situated, it was decided a few years ago to stop announcing the outcome of the test to the candidate at the end of the test. This was done to reduce the likelihood of violence against examiners, which had become an issue. Instead, at these Départements, the examiner simply tells the candidate that the test has finished, and that the result will be sent in the post. If the test is passed, the result form that candidates receive through the post may be used as a driving licence for two months. If the test is failed, the form gives brief information about which of nine assessment areas the candidate has failed on (check boxes are used to indicate faults).

In the 50 Départements where the examiner announces the test result, it has recently been decided that examiners should say the minimum at the end of the test. For several years, feedback was given, but I was told that examiners were not necessarily trained to do this well. New examiners will be trained to tell the candidate which faults they have failed on.

There are no fixed test routes. The examiner is free to construct a route, but must ensure that the nine assessment areas are covered in the test. In addition, the examiner aims to have 60% of the route outside urban areas, and 40% inside. Typically, a test covers 15 - 18 km of driving.

Three classes of fault are recorded during the test. A single fault in the most serious category leads to failure, whereas there is no upper limit on the number of the least serious faults that the candidate may make and still pass the test. The intermediate category covers faults that are potentially dangerous but which do not produce actual danger during the test. When a candidate makes such a fault, the examiner is required to place the candidate in a similar situation later in the test, to see whether the fault is repeated. If it is, the candidate fails. Note that candidates generally complete the full duration of the test even if they make a failing fault part- way through. Manoeuvres are tested on-road during the practical test – there is no off-road testing, except insofar as the test starts and finishes in a car park. The examiner makes notes on a form in a large binder during the drive, and there is a certain amount of page-turning involved. Examiners follow procedures that require them to deliver some feedback to candidates during the test. Candidates are not asked to choose their own route (e.g. to a specified destination), or to choose where to turn the car or conduct other manoeuvres.

The instructor must be present in the back seat of the car during the test - partly because he or she is then legally in charge of the vehicle. Tests must take place in a dual control car provided by the candidate (in practice, by the driving school).

The practical test starts with the candidate, examiner and instructor meeting by the car and getting into it. In fact, where a series of tests is being conducted in the same car, the examiner sits in it and waits for the next candidate to get in. There is a very short initial briefing session (less than half a minute for three of the four tests I observed). During the test drive, the car is stopped on two occasions and the candidate asked to read out the last two digits from the odometer. This is used as a way of randomly selecting questions for the examiner to ask. The eyesight test is done from inside the car at the end of the test drive. This involves the candidate looking through the windscreen at the number plate of a parked vehicle.

2. Tests observed

Rennes has a population of approximately 200,000. The road system available to the test centre includes motorways, modern rural single and dual carriageway roads, residential roads and shopping streets, traffic calmed areas, and some very narrow lanes through farmland. There is a good variety of junctions, speed limits and traffic densities available to the test centre. However, on the tests I observed there were not many pedestrians and cyclists to interact with.

Test 1

Female, late teens/early 20s

Conditions: bright, dry

Duration: 4 minute initial briefing, followed by 29 minutes on the road, and 2 minutes at the end for an eyesight test and debriefing.

The examiner, candidate and instructor met in the car park and got into the car. There was a friendly, short briefing which included a mention of the importance of respecting rules and signs during the test. Feedback started before the car had left the car park, the examiner asking the candidate to drive forward a bit so that she had a better view of the road she was joining. The test included a good selection of road and junction types, speeds, and traffic levels, though there was little pedestrian or cyclist traffic. The examiner asked a question about vision (I think to prompt the candidate to use the sun visor), and commented several times on the need to adapt driving to signs and to the environment. There was a prompt not to hesitate at a roundabout, and at least two instances of the examiner criticising the candidate for not making use of the information available to her from all round the vehicle. Most of the time the candidate was told which way to turn at junctions, but there were some instances of her being asked to follow road signs. There were at least two exchanges between examiner and instructor during the drive, but I was not able to understand these. The special manoeuvre was a reverse park on the right, parallel to the kerb.

On two occasions when the car was stopped, the examiner asked the candidate to tell him the last two digits on the odometer, which were used to identify questions to be asked. These concerned vision, (I did not understand the precise point) and identifying a component (the washer bottle I think) under the bonnet.

The examiner had a thick folder of papers on his lap, and turned pages on several occasions during the test. This may have been potentially distracting for both him and the candidate.

My assessment of the candidate's performance was that she was not declutching early enough when slowing down, rolled back a little when starting off at a roundabout, had very poor observation when reverse parking, was very hesitant, and poor at positioning/steering when reverse parking (she had to make a second attempt, and even then needed two attempts to get parallel to the kerb). She selected the wrong gear at a roundabout, tried to move off with the handbrake on, and muddled the gears on the motorway. She also selected the outside motorway lane just before turning off, prompting the examiner to steer. Clearly the examiner also felt that she was not observing well at several stages of the test, and was not making proper use of the information available to her - points that I was not able to assess. It should be borne in mind that I was unable to see the candidate's use of the mirrors and am not a trained driving examiner.

The test ended with the candidate pulling up just inside the car park entrance, and being asked to read the number plate of a parked car. There was no real debriefing, the candidate just being told that the test had ended, and that she would hear the result through the post.

The candidate failed the test. The examiner told me that this was because of the incorrect lane change on the motorway.

Test 2 Female, late teens/early 20s

Conditions: Bright and dry

Duration: 30 second initial briefing, 30 minutes on-road, 30 second debriefing.

The examiner stayed in the car after the previous test, and the instructor rejoined him with the next candidate. The conduct of the test, and the range of conditions covered, was very similar to the first test, except that there was much more feedback from the examiner. This concerned taking information from the entire environment, using the controls (following a stall), not forgetting to use the accessories to obtain information, thinking about the position of the vehicle, not forgetting to look (during the turn in the road), poor trajectory, etc. It appeared that the examiner was commenting on every fault. The comments appeared to be making the candidate flustered. There were also some repetitions of instructions in an irritated tone of voice (immobilise your vehicle, turn left, stop) when the candidate did not react fast enough for the examiner.

My assessment of the driving was that the candidate was able to drive fluently, but tended to brake too harshly. She stalled once but recovered well. She ended in an awkward position after a difficult reverse round a long bend, and drove too fast over a crossroads without appearing to adjust her speed. She got out of position on a bend, and the instructor grabbed the steering wheel. I was not able to assess the candidates' observation, but was certainly not surprised that she failed the test.

The examiner told me that the candidate had failed because she was not looking properly to the left, and because of her poor steering trajectories and positioning. He believed that she had an eyesight problem that had contributed to her poor observation during the test (in the eyesight test she failed to read one number plate correctly). Apparently the instructor acknowledged this problem.

Test 3 Male, early 20s

Conditions: dry and bright

Duration: four minute initial briefing, 36 minutes on-road, 10 second debrief at end.

Again, the examiner stayed in the car after the previous test, and the instructor rejoined him with the next candidate. Again, too, a wide range of traffic and road conditions was covered, and a good variety of junction types.

The examiner's questions concerned action to be taken if a particular dashboard warning light came on, and checking the external lights (for which the candidate stood outside the car and shouted instructions to the instructor, who sat in the driver's seat for the purpose). There was some discussion between the examiner and the instructor about what the instructor should do during this exercise. I think the instructor was not always waiting for the candidate to tell her what to do, but was switching on the lights anyway.

The special manoeuvre tested was a tight reverse park into a slot at right angles to the road.

The examiner gave feedback to the candidate on several occasions, telling him (in an irritated tone of voice) not to forget to use the information available to him, reminding him to breathe (I think) after completing the reverse park, telling him to adapt his driving to the conditions in a very narrow road across farmland, on a bend, and on approach to a junction, and reminding him to pay attention to the vehicle's trajectory and to use the traffic signs (for a road junction). At one point the candidate asked a question (which I did not understand) and the examiner responded. On another occasion, the candidate made a comment under his breath, and the examiner asked him what he had said.

My assessment of the candidate's driving was that he was very nervous, had rather poor clutch control and tended to brake harshly. Some downward gear changes were poor, and his steering on a high speed section was erratic. Initial positioning for the reverse park was poor, and I do not think he was observing well to the left as he performed this manoeuvre. He braked too late for a T junction, and did not adjust his speed when passing blind junctions.

The examiner told me that the candidate had failed because he continued straight on past junctions without adapting his driving.

Test 4

Male, early 20s. I think he already had a Californian driving licence.

Conditions: dry, bright.

Duration: 15 second briefing, 36 minutes on-road, 30 second debriefing.

The briefing was friendly. The test drive proceeded much as before, but the level of examiner feedback was lower than on the previous tests.

The candidate was asked about overheating, and about why one should not stop here normally (answer - because it impedes access). He was also asked to locate the brake fluid reservoir under the bonnet, and to say what was the risk of the brake fluid being low. The candidate was also asked to wash the rear screen while driving.

The special manoeuvres were a parallel reverse park on the right, and a long reverse round a bend and along a track. (My notes are unclear here - there may have been a turn in the road as well.)

The instructor gave feedback on three or four occasions during the test: use the necessary information, don't hesitate to adapt to the conditions, etc.

My assessment of the candidate was that he drove smoothly and carefully, controlled the vehicle well most of the time, and showed generally good observation skills. His rear observation during the reverse park was poor for a moment. He drove rather slowly on the motorway section, and the examiner prompted him by telling him not to hesitate to adapt to the conditions.

The candidate passed the test.

3. Auditor

The auditor had a stopwatch, and I noted that he had to work hard at times during the drive. In Table 2A, column 1, the Auditor used a 'five bar gate' tally system to record number of events. He did not appear to make much use of column 3 to record errors

during the drive, though errors were certainly being made, and M. Fougère 'failed' the test. I noted that in both the simulated tests the examiner gave the candidate a much longer debriefing than in the four real tests.

The auditor said that the task was very demanding, and that he needed to take time at home to cross-check the information.

4. General comments

These tests provided an interesting and thought-provoking example of the use of feedback during the test itself. In two, possibly three, of the tests observed, it appeared that this feedback was providing positive reminders to the candidate - reminders that could improve both the likelihood of passing the test, and the candidate's post-test driving. (The question of whether improving the likelihood of passing in this way is a good thing for road safety is worth further consideration.)

However, in one test, the feedback seemed to become intrusive, such that I do not think it was helping the candidate to perform better during the test. Much of the feedback was certainly merited by this candidate, who repeatedly failed to adapt her driving to the conditions, and to position the car correctly. But continuing to remind her of this might well have placed her under increasing stress, and increased the likelihood of her making further errors. On the other hand, the examiner may have already failed the candidate, and may have decided that he would then do his best to use the remaining time on test to improve her driving. In fact, I think that the examiners in France are required to comment each time the candidate makes an error.

On a number of other occasions, the feedback concerned, not faults with her driving, but her failure to respond quickly enough to the examiner's instruction (e.g. to pull up, or to immobilise the car). I do not think this behaviour was very relevant to her driving competence, and the feedback may have served only to put the candidate under increased pressure and make the test a negative experience for her. On the other hand, it might have encouraged her to respond faster to the examiner on her next test!

The foregoing raises the question of what the purpose of providing examiner feedback during a driving test is. For example, it might be:

- To improve the candidate's performance during the test
- To ensure that the candidate is aware of what the test requires
- o To improve the candidate's performance post-test
- To show the observing instructor what the candidate's shortcomings are, and what the test standards are
- To check whether a candidate really cannot achieve an acceptable performance even when reminded of a desired behaviour.
- To give a failing candidate information on aspects of driving that need to be improved before the next test
- To make the test more demanding
- To reduce stress levels during the test and thereby help candidate's show their true capability

Not all these objectives are necessarily compatible with improving road safety. For example, it could be that using feedback to improve test performance results in candidates passing before they have reached an acceptable standard for unsupervised driving.

A comparison of the French practice regarding feedback, with that of other countries, would be instructive. This is particularly so, in view of the fact that the TEST project is to consider the extent to which assessments of levels 3 and 4 in the GADGET matrix can be built into practical driving tests. Assessment of performance at these levels is likely to require increased interaction between candidate and examiner - for example, to establish the reasons for the candidate's behaviour, and the candidate's awareness of risk increasing situations. Such developments will place new demands on the skills of the examiner.

ANNEXE 8: EXAMINER QUESTIONNAIRES





ANNEX 8: EXAMINER QUESTIONNAIRES

Questionnaire for examiners concerning practical driving test

TEST (Towards European Standards for Testing) is a project funded by the European Commission and managed by CIECA (the International committee for driver testing authorities). The purpose of the project is to discover whether the driving test provides sufficient opportunities for examiners to make a confident decision about a candidate's skills and approach to driving.

We will be studying 3500 tests in 6 different countries. Specially selected auditors in the various countries will fill-out a form for each driving test they sit in on.

We can only collect a limited amount of information on those forms, so we would also like you to tell us more about what you think by completing this short questionnaire. (You only have to do this once – we do not need one of these questionnaires for each test.) The aim of this questionnaire is to collect information concerning examiners' views on the length, locations, contents and methods of the practical driving test as it is conducted at your own test sites. We are especially interested in whether the test allows you to assess whether candidates will be safe drivers after they pass the test. The questionnaire is anonymous.

Name of test centre:

1. What is the average length of service of examiners at the driving test centre?

2. Do the contents of the test allow you to make a correct overall decision about the candidate's safe driving abilities and skills? (please tick one box)

Yes completely	\square \square	No	, not at all
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Please describe what elements should be added or removed and why

3. Does the location of the test centre (test routes and traffic conditions at this centre) allow you to make a correct overall decision about the candidate's safe driving abilities and skills? (please tick one box)

Yes completely \square \square \square \square No, not at all

Please explain why





4. Does the test allow you to pass candidates who you think will be safe drivers, and fail those who you think won't be safe? (please tick one box)

Yes completely		🗌 🗌 No, not at all
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5. How well is the time divided up (time spent with the candidate from the moment he is received by the examiner at the test centre)?

The time is well divided (between the reception, eye test, technical check, driving time on the road, giving the result)

The time needs to be divided up differently

Please, describe what things need more time and what things could be given less time.

6. Is the total duration of the test sufficient (i.e. from the moment the candidate is received by the examiner to the announcement of the result)? (please tick one box)

Yes completely \square \square \square \square No, not at all

If you think the duration of the test should be changed, please show how:

→ ______ should be increased to ______ minutes
→ ______ should be decreased to ______ minutes

Please, explain why, saying what the extra time should be used for or what elements could be covered in less time:





6. How much on-road driving time do you consider is needed during the test to enable a valid assessment to be made?

_____minutes

Please explain

8. Is there anything else you would change in the practical driving test to help improve candidates' SAFETY after passing the driving test:

9. Any other comments

Thank you for your contribution.

ANNEXE 9: NUMBER OF AUDITED TESTS PER COUNTRY AND TEST SITE

Name test centre	Test centre number	Frequency
BRISTOL (SOUTH MEAD)	10	96
ABERYSTWYTH	11	41
MILL HILL	12	92
BROADSTAIRS	13	40
SOUTH YARDLEY	14	90
SPALDING	15	35
KENTON BAR	16	100
MALTON	17	44
ANNIESLAND	18	103
FRASERBURGH	19	59
MOSTOLES (MADRID)	20	70
BARCELONA	21	70
SEVILLA	22	70
CASTELLÓN	23	70
VALLADOLID	24	70
QUINTANAR DE LA ORDEN (TOLEDO)	25	70
TERUEL	26	70
SEGOVIA	27	70
HELLÍN (ALBACETE)	28	70
MONFORTE DE LEMOS (LUGO)	29	70
VILLAINES LA JUHEL (MAYENNE)	30	50
ALENCON (ORNE)	31	79
ROSNY SS BOIS (SEINE ST DENIS)	32	60
RENNES SUD (ILLE ET VILAINE)	33	81
REIMS SERBIE (MARNE)	34	80
PONTARLIER (DOUBS)	35	78
LUEUIL LES BAINS (HAUTE-SAÔNE)	36	87
LE MANS ADELET (SARTHE)	37	80

ETAIN (MEUSE)	38	51
CRETEIL (VAL DE MARNE)	39	59
AMSTERDAM	40	67
ASSEN	41	70
EINDHOVEN	42	63
GORINCHEM	43	78
LICHTENVOORDE	44	70
ÄLMHULT	50	60
UMEÅ	51	69
SOLLETUNA	52	71
LINKÖPING	53	74
GÖTEBORG	54	74
DRIVING SCHOOL LÄMMERHOFER	60	72
VERKEHRSAMT WIEN, BUNDESPOLIZEIDIREKTION WIEN	61	58
DRIVING SCHOOL SAUER; ING. REINHARD MADER	62	74
DRIVING SCHOOL GRUBHOFER ENNS/ ROTHBAUE IRENE	63	35
DRIVING SCHOOL ING. EDUARD WALLNER	64	71
FAHRSCHULE RAUCH	65	28
	Unknown	3
	Total	3142

ANNEXE 10: COMPARISON BETWEEN DIRECTIVE 91/439 AND DIRECTIVE

<u>2000/56</u>

Directive 91/439 - Annexe 2	Directive 2000/56 - Annexe 2
I KNOWLEDGE, SKILL AND BEHAVIOUR FOR DRIVING A	II. KNOWLEDGE, SKILL AND BEHAVIOUR FOR DRIVING A
POWER DRIVEN VEHICLE	POWER DRIVEN VEHICLE
1. Preamble	+ Member States may implement the appropriate measures to ensure
	that drivers who have lost the knowledge, skills and behaviour as
	described under points 1 to 9 can recover this knowledge and these
	skills and will continue to exhibit such behaviour required for driving a motor vehicle.
2. Knowledge	I. MINIMUM REQUIREMENTS FOR DRIVING TESTS
(II. MINIMUM REQUIREMENTS FOR DRIVING TESTS lists which	A. THEORY TEST
points are relevant for the different aspects)	2. Content of the theory test concerning all vehicle categories
7. Theoretical test	
$\rightarrow 2.2$	+ 2.1.7 audible warning device.
$\rightarrow 2.9$	+ 2.1.8 head restraints
	+ 2.1.6 Precautions necessary when alighting from a vehicle
8. Test of skills and behaviour	B. TEST OF SKILLS AND BEHAVIOUR
8.1.2 Category B+E	5.2 Category B+E
	+ the cargo compartment of the trailer shall consist of a closed box
	body which is at least as wide and as high as the motor vehicle; the
	closed box body may also be slightly less wide than the motor vehicle
	provided that the view to the rear is only possible by use of the external
	rear-view mirrors of the motor vehicle; the trailer shall be presented
	with a minimum of 800 kilograms real total mass;
8.2.2 Technical control of the vehicle	7. Skills and behaviour to be tested concerning categories B, B1
A selection of the manoeuvres referred to in points	and B+E

 3.2.4, 3.2.5 and 3.2.7 shall be tested (at least two manoeuvres for the three points, including one in reverse gear). 3. Skills 	 7.2 Categories B and B1: special manoeuvres to be tested with a bearing on road safety A selection of the following manoeuvres shall be tested (at least two manoeuvres for the four points, including one in reverse gear): 7.1 preparation and technical check of the vehicle with a bearing on road safety
	+ 7.1.4 fluids (e.g. engine oil, coolant, washer fluid) + 7.1.2 and head restraints
 3.2 Drivers must be able to use the vehicle controls, i.e.: -steering wheel, -accelerator, -clutch, -gears, -handbrake and footbrake, under the following conditions: 3.3.Under the conditions set out in 3.2 drivers must be able to use the secondary controls of the vehicle: windscreen wipers, windscreen washers, demister and air-conditioning, lights etc. 	9.3.1 Controlling the vehicle; taking into account: proper use of safety belts, rear-view mirrors, head restraints; seat; proper use of lights and other equipment; proper use of clutch, gearbox, accelerator, braking systems (including third braking system, if available), steering; controlling the vehicle under different circumstances, at different speeds; steadiness on the road; the weight and dimensions and characteristics of the vehicle;
 3.2.2.accelerating to a suitable speed while maintaining a straight course, including during gear-changes; 3.2.3.adjusting speed to negotiate left or right turns at junctions, possibly in restricted spaces, while maintaining control of the vehicle; 	9.3.7 Speed: not exceeding the maximum allowed speed; adapting speed to weather/traffic conditions and where appropriate up to national speed limits; driving at such a speed that stopping within distance of the visible and free road is possible; adapting speed to general speed of same kind of road users
<i>3.2.6 braking accurately to a stop, if need be by performing an emergency stop</i>	7.2.4. Braking accurately to a stop; however, performing an emergency stop is optional.
 <i>4. Behaviour</i> Especially in this section the structure of the new Directive is very different. Directive 91/439 states : Applicants must perform all the following manoeuvres referred to in 	7.4 Behaviour in traffic Directive 2000/56 makes a distinction between what the actions an applicant should perform and what is part of the marking and assessment done by examiners. As such, the manoeuvres described under point 4 of Directive 91/439 have been reworded and can be found

paragraph 4 of this Annexe in normal traffic situations, in complete safety and taking all necessary precautions: points 4.1.1, 4.1.2, 4.1.3, 4.1.4, 4.1.5, 4.2.1, 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.2.9 and 4.2.10 plus the manoeuvres mentioned points 4.2.6, 4.2.7 and 4.2.8 if the opportunity is given	under point 7.4 or point 9 (Marking of the test of skills and behaviour). The biggest differences are described below.
4.1.1 observing (including the use of the rear-view mirrors)	9.3.3 Observation: all-round observation; proper use of mirrors; far, middle, near distance vision
road alignment	9.3.5 Correct position on the road: proper position on the road, in lanes, on roundabouts, round bends, suitable for the type and the characteristics of the vehicle; pre-positioning
markings, signs	9.3.8 Traffic lights, road signs and other indications: acting correctly at traffic lights; obeying instructions from traffic controllers; acting correctly at road signs (prohibitions or commands); take appropriate action at road markings
4.2.3 keep the right distance between vehicles	
4.2.10 turn right and left at junctions or to leave the carriageway;	9.3.6 Keeping distance: keeping adequate distance to the front and the side; keeping adequate distance from other road users
	7.4.6. Approach/exit of motorways or similar (if available): joining from the acceleration lane; leaving on the deceleration lane;
	+ 7.4.7 being overtaken by other traffic (if appropriate);
	+ 7.4.8special road features (if available): roundabouts; railway level crossings; tram/bus stops; pedestrian crossings; driving up- /downhill on long slopes;
	+ 9.3.4 Priority/giving way: priority at crossroads, intersections and junctions; giving way at other occasions (e.g. changing direction,

	changing lanes, special manoeuvres);
	+ 9.3.9 Signalling: give signals where necessary, correctly and properly timed; indicating directions correctly; taking appropriate action with regard to all signals made by other road users
	+9.3.10 Braking and stopping: decelerating in time, braking or stopping according to circumstances; anticipation;
11. Marking of the test of skills and behaviour	 9. Marking of the test of skills and behaviour + 9.2 During their assessment, driving examiners shall pay special attention to the fact whether an applicant is showing a defensive and social driving behaviour. This should reflect the overall style of driving and the driving examiner should take this into account in the overall picture of the applicant. It includes adapted and determined (safe)
	driving, taking into account road and weather conditions, taking into account other traffic, taking into account the interests of other road users (particularly the more vulnerable) and anticipation.
13. Location of the test	11. Location of the test
The part of the test to asses the applicant's technical control over the	The part of the test to assess the special manoeuvres may be conducted
vehicle may be conducted on a special testing ground. Wherever	on a special testing ground. Wherever practicable, the part of the test
possible, the part of the test to assess behaviour in traffic should be	to assess behaviour in traffic should be conducted on roads outside
conducted on roads outside built-up areas, expressways and	built-up areas, expressways and motorways (or similar), as well as on
motorways, as well as on urban streets which should represent the	all kinds of urban streets (residential areas, 30 and 50 km/h areas,
various types of difficulty likely to be encountered by drivers. It is also	urban expressways) which should represent the various types of
desirable for the test to take place in various traffic density conditions.	difficulty likely to be encountered by drivers. It is also desirable for the
	test to take place in various traffic density conditions. The time spent
	driving on the road should be used in an optimal way to assess the
	applicant in all the various traffic areas that can be encountered, with
	a special emphasis on changing between these areas.

ANNEXE 11: MINUTES PROJECT MEETING



Kick off meeting Analysis of the Contents, the Location and the Duration of the practical driving test for obtaining a category B driving licence

Thursday, 30 January 2003, Brussels

<u>Participants List</u>

Present:	Mr. Chris Baughan	TRL, Great Britain
	Mr. Robin Cummins	DSA, Great Britain
	Mr. Jean-Pierre Fougère	Ministry of Transport, France
	Mrs. Heleen Groot	CIECA
	Mr. Nils Petter Gregersen	VTI, Sweden
	Mrs. Martina Hendrix	CIECA
	Mr. Frits Jansen	European Commission
	Mr. Esko Keskinen	University of Turku, Finland
	Mr. Fernando Muñoz-Pelaéz	Ministry of Transport, Spain
	Mr. Han Rietman	CBR, The Netherlands
	Mr. Herald Ruyters	European Commission
	Mr. Josef Schnitzhofer	Land Salzburg KFZ – Prüfstelle, Austria
	Mr. Daniel Vandenberghe	CIECA
	Mr. Willem Vanbroeckhoven	CIECA

Absent: Mr. Örjan Ellström

Swedish Road Traffic Inspectorate, Sweden

1. **Opening and welcome**

Mrs. Groot opens the meeting and welcomes so many familiar faces.

She explains that Mr. Ellström was taken ill during the night and is therefore unable to be present.

She underlines her confidence in this team and this scientific committee. A special welcome is made to Mr. Muñoz, as Spain is currently playing such an active role in the area of road safety, participating in projects such as this and Nov-Ev.

2. <u>The European Commission's point of view (annex 1)</u>

The European Commission believes that this is a very important project that will have a large impact on driver testing in the future. It is important to determine what the standards of the driving test are now in the various countries in the European Union so that high but fair standards can be demanded of all new countries that join the European Union. The Database developed in this project should be available for a longer period and to all those who find it useful.

The most important aims of this project are:

- To find out whether the driving test covers the contents as listed in the Directives
- To be able to say when mistakes are made by the candidates
- To find out if what is supposed to be done is actually done in practice
- To develop a kind of norm

Mr. Ruyters states that he wishes to be present at all full project meetings and will be visiting countries involved in this project himself. He would therefore like to have a schedule from all test centres where audits will be conducted (to be able to make unannounced visits).

3. <u>CIECA's objectives and plans for the project (annex 2)</u>

4. Presentations test centres (annexes 3-7)

Locations test centres

Generally all countries had selected a variety of test centres spread over the country and representing different traffic density situations. It is important that each country takes this into

consideration when determining the final list of test centres to be used. An aid in this could be the typology as used in the French presentation.

Number of test days per centre

Since the tests will be conducted in various types of test centres, it is important to determine whether the same number of tests should be conducted at each test centre, as it would be difficult to plan tests on different days of the week at test centres that were only opened parttime. The most relevant results would probably come from test centres offering the most ideal test conditions, making it important to do more audits in suitable centres. As there is nothing in the project plan specifying that the number of tests done at each test centre must be the same, it is decided that it is up to the country representatives to decide how many tests they wish to plan in the various test centres, as long as the number of tests per centre is sufficient to provide a valid result. This means that a minimum of 40 tests should be conducted at each test centre (this number includes tests done before and tests done after the implementation of Directive 2000/56).

Timing of the audits

- An important factor to consider in planning the number of days needed for the audits is that in certain countries there are no tests at certain times of the year (e.g. France no tests in June or August, Spain no tests in August or May (centres are closed) and a high concentration of tests in July).

- It is necessary to take into consideration that the circumstances in which a driving test takes place are not only dependent on the day of the week but also on the time of year. In Belgium, for example, July and August offer very different traffic conditions than the rest of the year because that is when the school holidays take place and traffic density tends to be much higher.

The only test centre that could be affected of those presented is the one in Wales, which is located in a holiday and university town and is therefore very quiet now, but will be much busier over the summer when the tourists visit this town..

Visits members of the scientific committee

The project plan allows for each country to receive one visit from a member of the scientific team. The member of the scientific committee will have one day to visit the sites and should be able to see a number of different types of site and a number of different audits. Once the

schedule for the tests has been set, the members of the scientific committee will have to arrange these visits directly with the country representatives, informing the project office of what has been decided. The budget for these visits is very tight so one day per member of the scientific committee is all that is realistic at the moment.

5. Presentations auditors (annexes 3 - 7)

General requirements and comments

Several issues need to be taken into account when selecting the auditors:

- The workload of the auditors, especially if there are only a limited number of auditors available.

It is necessary from a scientific point of view to ensure that the results of the audits are not dependant on the opinion and system of one auditor. As the protocol forms will probably include a scaling from 1-5 for some issues, it is important that each test centre is covered by different auditors to ensure a valid scientific result. This might mean that the test centres originally selected and presented earlier would need to be changed to make it easier for auditors to cover different test centres by selecting test centres that are closer together.
It is important to find a way to eliminate bias as much as possible. One way to do this would be to make sure that auditors from one particular region audit tests from another region. An added advantage in this is that the variety of auditors filling out the protocol forms again increases and that the locations covered by the auditors vary (making the results more valid). Another way to prevent bias is to avoid auditors who have a strong hierarchical relationship to the examiners as much as possible.

- It is important that the auditors have experience with driving tests and as such are able to interpret what the examiner is thinking and what is happening in the driving test.

- The auditors will all require training in the use of the protocol form.

The Netherlands

In The Netherlands, the Chief examiners supervise, normal examiners conduct driving tests and quality checkers have an "in-between" position. By using these quality checkers as auditors, there would be no bias to take into account.

There are 5 per region, so a maximum of 25 could be used as auditor.

Great Britain

There will be 2 main auditors who will coordinate the work. Except for these two, work will be passed on to traditional auditors who are doing it anyway, but in a different context. As there are 10 sites being looked at in Great Britain, there would be 10+2 auditors The rural sites would be covered by the two main auditors; the 6 remaining sites would be covered by normal auditors. The two main auditors could also do some audits in various centres for control reasons. For large sites there would therefore be three auditors per test site

<u>Austria</u>

It is difficult to find sufficient auditors, especially if more than one auditor is required per test centre. Another issue is that as there is no quality control system in place in Austria, we will be dependent on examiners and therefore colleagues of those taking the tests. It therefore becomes even more important that the auditors do not do the audits in the regions they are originally from, but that they travel to other regions.

<u>Spain</u>

There are three possibilities for the auditors: Examiner coordinators, Head of service of exams or instructors from the training centre for examiners (available for only 2 months) The second group is preferable as there would be no danger of bias, they are independent and available on different days and at different time of day. The problem in this is that there would not be sufficient heads of service to allow for more than one auditor per site. The best possible solution would therefore be to have a combination of all three groups as auditors. This would ensure that there are enough auditors and would limit the bias as much as possible.

France

There would be 2 auditors per area, the delegates of the Formation du conducteur, who could do audits at test centres in various locations (not only in their own region). The proposed schedule for the audits would be 5 per day, 3 tests in morning (Beginning of the morning, middle of the morning end of the morning), and 2 in afternoon (beginning of the afternoon, end of the afternoon).

6. Possible Acronyms

The acronym selected is TEST (Towards European Standards for Testing)

7. Auditor Protocol (annexes 8 and 9)

In developing the protocol, we need to consider what we can realistically expect the auditor to notice: should the auditor be conducting a parallel driving test or do we want something completely different from him.

To be able to evaluate the test, it is necessary to know the philosophy behind the test: does passing a test depend on making less than a certain number of mistakes, on not making certain types of mistakes or is it the result of the general opinion of the examiner after the test has been completed (how safe he felt, how confident he feels about the candidates skills, etc). It will also be important to find a way to make it clear to the examiner that he is not being audited but the driving test is. The examiner will act differently with an auditor in the car but this needs to be limited as much as possible.

Proposal

The protocol will be split into 2 parts, one to be filled in during the test by the auditor and one to be filled out after the test by the auditor and possibly the examiner as well. The second part would contain questions requiring grading on a scale 1-5 and would cover elements from paragraph 9 of the Directive (overall assessment criteria applied to specific situations as described under paragraph 7 with one addition: ecodriving) and II of the Directive (global assessment applying to entire driving system and skills). The second part could provide some useful insights into how examiners perceive the test and whether this is different than how an outsider views the test.

Additions

- Another element that should be checked during the audits is when the faults / errors made during the driving test occur. There could be a concentration of errors at the beginning or there could be collection of errors at the end. Maybe a change of environment leads to errors. This is useful information to collect, perhaps through the use of a time scale. A recent lengthening of the driving test in Great Britain did not lead to the expected result that people failed in the extra time that had been added. In fact they failed when they encountered hazards or situations that would have bothered them anyway. In other words, the variety and not the length was the problem.

- An additional source of information that should be considered is a test result form, listing the errors a candidate makes during the driving test (in The Netherlands this is only true if the

candidate fails, but in Great Britain the errors are always recorded). The test form should be easy to find afterwards if the auditor notes down the candidate name or number before or during the driving test, so that the test form can be found in the archives of the test centre at a later stage, copied and attached to the protocol form.

- Several countries have a lot of information already about the faults made, routes (same level of hazards), etc. because of the regular quality controls. This information could also be useful for the project.

- It would also be interesting to include a description of the type of directions given to the candidates. Is the candidate told to drive to a certain place, selecting the most suitable route himself or is he told at every crossroads whether he should turn right or left or go straight.

Collection of information

After the protocol forms have been filled in, they will be scanned and transferred to SPSS (statistical package for social sciences). Trials will be done to see whether the information can be transferred to Access as well from SPSS to make it more accessible. Once in SPSS, the data will be easy to analyse, compare, etc.

Protocol trials

Once the protocol has been developed, there will be trials to check whether what is expected of the auditors is realistic and whether the protocol forms provide us with the kind of information we expect. The protocol forms will be adapted on the basis of these trials.

Schedule

According to project plan, each country will have 6 months for the pre 2000/56 tests and to achieve this, the protocol should be ready by April. This means that a first draft should be ready by the beginning of March and the protocol trials should be conducted in March, leaving time for the partners to comment and the scientific committee to make the necessary adjustments both before the trials and before the actual audits begin.

8. Administrative matters (annex 10)

Contractual possibilities partners

There are two main options for partners in this project:

- Subcontracts with all partners stipulating exactly what they will get
- A total invoice at end of the project

Travel costs

Note that all original travel receipts are required. The project management has contacted the European Commission about this and was informed that copies of travel receipts would only be accepted if the Commission has received an official statement from the tax authorities stating that the original tickets must be kept in the countries themselves.

9. Dates Project meetings

Full project meetings:

- 17 +18 November 2003: Spain (exact location to be determined at a later date)
- 8 + 9 June 2004: Salzburg, Austria

Meetings scientific committee

The dates in the project plan are not fixed and can be changed as needed. It now seems that the scientific committee will require more meetings than was originally planned and an application for an additional meeting should be sent to the European Commission as soon as possible.

10. Action Points

Country Representatives

Action	Deadline
- Inform the project management if you require subcontracts	14 February
- Send a description of the auditors to the project management including a	24 February
description of the normal tasks of the proposed auditors, their professional	
background, their relationship to the examiners	
- Check if the test centres proposed are suitably located to allow auditors to	24 February
do audits at at least two different locations (preferably half / half)	
- Check if the number of man days allocated for auditors is sufficient	24 February
- Send the final proposals for auditors to the project management. Remember	24 February
that there should be a minimum of 2 auditors per site (if possible); meaning	
that there should be 20 auditors for Spain, France and GB (GB has proposed	
an alternative system with 12 auditors) and 10 auditors for Austria, Sweden	
and The Netherlands	
- Send reactions to project management for proposed typology for describing	26 February
test centres (the draft proposal will be sent to all by the project management	
by 21 February)	
- Send a description of how the driving test is intended; what is the	28 February
philosophy behind the test; do examiners focus on the number of errors made	
or do they consider the whole picture; are mistakes recorded even if a	

candidate passes the test (the best source for this is probably the guidelines	
for examiners)	
- Complete descriptions of all test sites using typology developed in the	7 March
project and send these to the project management	
- Send reactions and comments on draft protocol	10 March
- Complete translation draft protocol (to be received by 14 March)	21 March
- Complete training of auditors in how to fill in the protocol forms	21 March
- Conduct 2-day Protocol tests and send the results to the project management	March (24-28)
- Check if you have information about the number of errors made during a	31 March
test (on average); where the errors are made; what the errors are; is there a	
difference in the type of errors made by candidate who pass and candidates	
who fail	
- Complete translation of final protocol	11 April
- Begin with first tests	14 April
- Send a schedule of the tests to be audited to the project management	18 April
- Arrange dates for the visits of the scientific committee and inform the	25 April
Project management	

Scientific committee

Action	Deadline
- Send reactions to project management for proposed typology for describing	26 February
test centres	
- Complete draft proposal protocol and send to all country representatives and	5 March
the Project Management	
- Propose procedure for protocol tests	5 March
- Finalise draft protocol	14 March
- Make all necessary changes made to protocol and send final version of	4 April
protocol to project management	
- Arrange dates for the visits to the test centres and inform the Project	25 April
management	

Project Management

Action	Deadline
- Check possibilities concerning original flight vouchers etc.	Done
- Prepare and complete any necessary subcontracts	21 February
- Develop proposal for typology to be used when describing the different test	21 February
centres and send this to the scientific committee and country representatives	
for approval	
- Make required changes and finalise typology for test centres	28 February
- Apply to the European Commission to budget in another meeting for the	14 March
scientific committee	





Project Meeting TEST

17 and 18 November 2003, Madrid

PARTICIPANTS LIST

Present:	Mr. Chris Baughan	TRL, Great Britain
	Mr. John Bridge	DSA, Great Britain
	Mr. Jean-Pierre Fougère	Ministry of Transport, France
	Mrs. Heleen Groot	CIECA
	Mr. Nils Petter Gregersen	VTI, Sweden
	Mrs. Martina Hendrix	CIECA
	Mr. Esko Keskinen	University of Turku, Finland
	Mr. Fernando Muñoz-Pelaéz	Ministry of Transport, Spain
	Mr. Per Olof Nilsson	Swedish National Road Administration
	Mr. Eric Wesselius	CBR, The Netherlands

Excused:	Mr. Josef Schnitzhofer	Land Salzburg KFZ – Prüfstelle, Austria
	Mr. Herald Ruyters	European Commission

1. OPENING AND WELCOME

The Vice Secretary General of the Spanish General Traffic Directorate welcomes all partners to Spain. She explains how important it is for Spain to be a part of this project and wishes everybody a good meeting.

Mrs. Groot thanks the Vice Secretary General of the Spanish General Traffic Directorate for the warm welcome and the opportunity to plan and organise this meeting in Madrid. She explains that Spain was a logical country to include in the TEST project, as Spain is playing an increasingly active role in Road Safety.

2. MINUTES LAST MEETING AND ACTION LIST

The minutes are approved.

A few of the items on the action list are still open:

- Information about errors

The country representative of Great Britain is thanked for this information.

All other partners are asked to check whether or not they have this information and to pass this information onto CIECA as soon as possible (and to inform CIECA if they do not have this information)

- Visits scientific committee to all countries:

2 visits took place instead of 3 because the schedules for the tests were only passed on at a very late stage. Please make the arrangements for the remaining visits as soon as possible. There should be 1 visit per country, each visit lasting one day. The aim of the visit is for the member of the scientific committee to see a driving test and to be able to see a TEST audit to determine whether or not the auditor is capable of carrying out the task.

3. PRESENTATION SPANISH DRIVING TESTS

Some information is provided about the Spanish driver testing system. To be able to receive a driving licence, candidates in Spain must complete a practical test, a theory test and a medical test.

The Theory test

To pass the theory test, candidates must answer 90% of the questions correctly. The test is written and is available in English, French, German, Basque, Catalonian, Galician and Spanish. Oral tests are available in exceptional circumstances (for candidates with reading or hearing difficulties) for categories A, A1 and B. There is a proposal to change the theory
test to a computer based test but for now this is not yet possible as a result of lack of funds and safety measures at the testing centres.

The theory test consists of 3 different parts:

- a test common to all categories

This test consists of 40 questions, of which 36 must be answered correctly. The test lasts 45 minutes.

- a test of the mechanical knowledge and simple vehicle maintenance knowledge (for categories C and D only).

This test consists of 32 questions of which 29 must be answered correctly.

- a category specific test

For Category A this test consists of 16 questions of which 14 must be answered correctly.

The fee for the theory test is $20 \in$. For this fee, candidates are allowed to take the theory test twice. Candidates can apply for the theory test directly or through a driving school. If they apply through a driving school, the costs tend to be much higher.

The fee for the practical test is \notin 72.20. Again, for this fee, candidates are allowed to take practical test twice. Candidates can only apply for the practical test through a driving school. The costs added by the driving schools to this fee tend to be considerable and vary greatly vary but can be anything up to \notin 150.00.

In general the questions seem to be testing the candidate's knowledge of the rules only and not the candidate's insight into the rules and their ability to apply the rules.

The practical test

An examiner conducts 16 driving tests per day. Most test centres are opened from 8 am to 3 pm and examiners test 4 candidates per 1.5 hours. In addition, some test centres are also open from 4 pm to 6 pm. At the test centre in Madrid up to 1200 candidates can be tested per day.

For Category B, the special manoeuvres are included in the on-the-road test and are performed in traffic; for the other categories there is a separate off road test for the special manoeuvres

There are 3 levels of faults:

- Eliminatory faults:

o If a candidate makes 1 eliminatory fault he fails

- Medium faults:

If a candidate makes 2 or more medium fault he fails
Light faults:

- If a candidate makes 8 or more light faults he fails
- If a candidate makes 4 or more light faults in combination with 1 medium fault he fails

There is no obligatory minimum number of practical lessons before the candidate can take the practical test. However, if he fails, he will be required to take the following number of lessons:

After having failed twice, the candidate must take 5 extra lessons

After having failed three times, the candidate must take 8 extra lessons

After having failed four times, the candidate must take 12 extra lessons

Advantages and disadvantages of an obligatory minimum number of lessons

Defining a minimum number of lessons before the test

The experiences of countries who have introduced a minimum number of lessons tend to be negative. Learner drivers often demand to take the practical test after having completed the required number of lessons, whether they have achieved the necessary levels of competence or not. And because the minimum number of lessons is recorded in the law, there is political pressure on the examiners to pass candidates who have completed this minimum number of lessons whether or not their driving skills are adequate. There is also often political pressure to keep the price of getting a driving licence low, again encouraging examiners to pass candidates whose skills are not sufficient.

In addition, there is a danger of setting the minimum number of lessons too low.

On the positive side, combining a minimum number of lessons with a description of the material that should be covered in these lessons appears to have a positive effect in Germany. It is possible that candidates require more lessons to grasp the material, and if the material has been defined as a minimum as a minimum requirement, and not just the hours, learner drivers are more likely to accept that they need more lessons than the minimum requirement.

Defining a minimum number of lessons after failing the driving test

A minimum number of lessons after having failed the practical test a certain number of times seems a logical step. However, the number of lessons required by one candidate to bring his / her driving skills up to the required level will be different than the number of lessons required by another candidate. Consequently, a set minimum number of lessons for all candidates who fail is very difficult to determine as each candidate will have a different problem and require different training to solve the problem. The minimum number of lessons the candidate must take after failing the test should therefore be determined by the examiner who conducted the test. However, this will require a lot of insight from the examiners.

The fact that a candidate gets 2 opportunities to take the practical test per payment is likely to encourage students to see the first test as a trial run, so that learner drivers who are in actual fact not yet ready will come to the test just to "see what it is like". Instead of punishing candidates who have failed the test a number of times, we should be trying to delay the stage at which candidates take the test, encouraging them to get as much training as possible before actually taking the test for the first time. Combining the possibility of taking two tests for one price with a mandatory number of lessons seems contradictory.

Driver training

Candidates who wish to do private training (not do their driver training through a driving school) must have passed their theory test (the minimum age for taking the theory tests is 17). There are 14 learner drivers in Spain who follow this system.

There is no minimum age to start training at a driving school, but in general, learner drivers start training at the age of 17.5.

Driving schools tend to determine the number of lessons required on the basis of the age of the learner driver (1 lesson per year, so that a 17 year old will get 17 lessons).

There is no quality control system for the driving schools. However, if a driving school, has a pass rate that is 20% under the average pass rate of the region in which it is located, it will be penalised (first a warning, then if it has not improved within 3 months a fine, and finally a possible suspension). Once the new regulation has been accepted, the reasons why driving schools have such low pass rates will be taken into consideration so that driving schools that have "difficult" candidates are not penalised for this.

4. VISITS SCIENTIFIC COMMITTEE

Visit Nils Petter Gregersen to Spain (see annex 1)

It appeared that even though the environment offered numerous opportunities for testing, these were not all being used in the test. The factors that were tested were tested effectively, but there is a lot of space for improvements.

The examiner did not use a seatbelt. This is not an exception; it has proved to be very difficult to convince the Spanish examiners to use seat belts, as they claim they feel safer without them.

The Testing centre combined a lot of different things (vehicle registration, vehicle checks, theory test, practical test, etc.)

Visit Esko Keskinen to Austria (see annex 2)

There is a very big difference between the driving tests in the different Länder and between the driving tests in the different test centres within the Länder.

The examiners work on a freelance basis and are paid per driving test.

Driving schools "hire" examiners and can choose where to let the driving test take place. The Austrian driving schools association is very powerful. All driving schools are members of this association.

All observations were extensively discussed with the country representative who was aware of the problems but has no tools to tackle the problems. The different examiners and various Länder have too much independence, a highly sensitive political situation.

It was difficult to fit a member of scientific committee in the car along with the candidate, the auditor, the examiner and the instructor. It is possible that in certain countries it will not be possible at all. In these cases, the scientific committee member can discuss the test with the auditor after the driving test outside the car as the most important thing is that h gets an impression of how the auditors are managing the TEST audits.

5. <u>EXPERIENCES COUNTRY REPRESENTATIVES WITH AUDIT</u> <u>FORMS</u>

The Netherlands (see annex 3)

The instructions and the audit forms were provided to all the auditors in both English and Dutch. Each auditor did a number of a practice runs after having received a 1 day training. There were some minor corrections and close contact has been maintained with all the auditors throughout the audits.

All auditors find it difficult to complete the entire form in the car and need additional time after the test. This means that the auditor does not do 8 audits per day but 4-5. The extra time and costs are being covered by the CBR.

Great Britain (see annex 4)

There was extensive 1 day training for all auditors. There were some minor corrections and close contact has been maintained with all the auditors throughout the audits. The comments from the project secretariat were dealt with immediately and as such problems were solved very quickly through private discussions with auditors individually and also by sharing all of the information with all the other auditors

There was no real problem with the completion of the form but some small problems with the understanding of the codes.

Auditors tend do an audit and then sit out the next test to complete the rest of the form. This means that the auditor does 4 audits per day on average.

The extra time and costs are being covered by the DSA.

Sweden (see annex 5)

The auditors needed more time than was originally expected to complete the forms. As such the auditors are doing 4 audits per day instead of the originally intended number of 7. It is difficult to cover these extra costs but it is being discussed.

Problems:

- Driving and sitting posture:

It is difficult to judge the driving and sitting posture of the candidates as candidates who apply through driving schools come in driving school cars and the driving and sitting posture has already been fixed.

Most private candidates rent cars form the SNRA, and are told where the controls are so they can adjust their sitting position.

- Straight / curvy roads:

It is difficult to determine when a road is "straight" and when it is "curvy"

- Approach and passing intersections:

It is difficult to count all intersections and determine which ones are relevant

- Long slopes:

It is difficult to determine which slopes are long

- Getting out of the vehicle:

This is difficult to test because it is not a part of the test any longer. Those who have indicated on the form that they tested this have made a mistake and these forms will have to be corrected.

- A number of elements in table 5 are difficult to asses as there are no set parameters for this' like ecodriving for example. One approach in evaluating ecodriving could be to consider whether the candidate plans his trip. The evaluation of these elements should be based on a general impression clarified by asking the candidate why he is doing certain things.

<u>Spain</u>

There was no general training for the auditors but training for a few "main" auditors who then trained the other auditors. Auditors also refer to these "main auditors" when they have questions.

Problems:

- Normally during a practical test there are 2 candidates in the car; one drives out, the other drives back. For the TEST project this is not possible as the car would be too full (2 candidates + the instructor + the examiner+ the auditor). Therefore, this "normal" situation is not included in the TEST project.

- The items that are on the test result form in Spain are not the same as the items on the TEST audit form and the auditors had to get used to this.

- The auditors have some practical problems to complete the form as a result of lack of space in the car (both examiner and auditor are writing)

- It is not possible to check the driving and sitting position of the candidates because they are already seated when the driving test starts

- The examiner and the candidate are negatively influenced by the presence of the auditor, despite explanations of what the aims of the TEST project are.

As a rule, pass rate have gone down where TEST project is running.

E.g. In Barcelona the pass rate is normally 43.2%, but for the driving tests that were part of the TEST project, the pass rate is only 28.6%

There could be several reasons for this:

- in Spain there is no quality control system for the driving tests. As a result, candidates,

examiners and instructors are not used to having an additional person in the car so an auditor in the car probably makes everybody a bit nervous

- it could be that the examiner is now conducting the test as it is meant to be conducted and as a result the required standard is higher and more people are failing

- there are big differences between the pass rates of the various examiners in Spain. It could be that the selection of examiners for the tests audited was "unfortunate" leading to lower pass rates.

France (see annex 6)

Problems:

- Because the driving test in France is so short, auditors have very little time to complete the forms.

- Straight / curvy roads:

It is difficult to determine when a road is "straight" and when it is "curvy"

Possible solutions

It is decided that a short document will be written listing all the problems that have been brought up by the country representatives and possible solutions for these problems. The country representatives will plan a meeting with their auditors to discuss the various problems and the possible solutions. The auditors will be asked to always complete as much of the form as possible, even if they are not completely sure that they are filling in exactly what is expected. To try to solve the problem of straight and curvy roads, the country representatives will discuss this with the auditors, explaining the instructions to them again and answering their questions about this. The scientific committee will take this problem into consideration in their analysis of the data.

Completion table 5

There seems to be some confusion about how table 5 is to be completed. At the moment, auditors are recording what the tests they see actually check, not what they could be checking. The initial aim of the table was to record what the possibilities of the test were and not so much what is actually being done.

It is decided that the country representatives (or especially trained auditors) will do an additional 20 audits in the various test centres in their countries during which table 5 is completed as it was meant to be. In other words, in these audits the country representatives are to record what the possibilities of the test are; not what is being done in practice. They will use 4 - 5 of the days allocated to them in the project plan.

It is important for uniformity that the auditors who do these additional audits are not the same auditors who are used in the rest of the project.

These additional audits will be used to help the scientific committee determine how they should interpret the other forms and should be completed by the end of January. A short instruction leaflet will be developed explaining exactly what is expected.

In addition to these extra audits, it is decided that after all the audits have been completed, the country representatives will plan a meeting with all the TEST auditors in their respective countries to discuss how they viewed the forms and how they completed the tables.

6. <u>PROCEDURE FOR DATABASE INPUTTING (SEE ANNEX 7)</u>

The scientific committee agree that the auditors should be advised how to correct their mistakes, even if this means that the data collected in the second round might not be completely uniform with the data collected in the first series of audits. This is to be done because some of the data being inputted now is not usable and it is preferable to have a slight shift in the method of completing the forms than to have a lot of unusable data.

The country representatives are asked to check all technical aspects (the total time, distance, percentages, etc.) carefully before sending the forms to CIECA. In addition, they are asked to

send the forms in small groups instead of sending them in large piles. In this way, if there are problems they can be dealt with quickly and corrected and discussed with the auditors before the next series of forms are completed. The scientific committee asks for an overview of how the forms were sent and entered as this will also influence how they are completed (because of the comments that were made each time a series of forms had been received).

7. THE TEST PROJECT AND THE DRIVING TEST

The Netherlands (see annex 8)

Most of what was learned was already known. However, the average length of the test appears to be rather short and the fact that independent driving is tested so little is news. Aspects like changing lanes and driving on motorways are very closely linked to the geographical location of the test centre.

Great Britain (see annex 9)

Sweden (see annex 10)

<u>Spain</u>

Examiners tend to arrive at an assessment easily but find it difficult to say that they feel they can make a robust assessment about the different elements.

There is big difference between the test centres

France

A test lasting only 22 minutes test is too short

Many examiners have "habits" because of the short net driving time and fail the candidates very quickly. At times examiners even "cause" mistakes. Once the candidate has made a "fatal" mistake, the test is broken off and the next candidate starts. This is a very different approach than in for example Great Britain and The Netherlands where the test is completed, even if the candidate has made a "fatal" error in the first minute (so long as the candidate is not dangerous).

8. INITIAL RESULTS (SEE ANNEX 11)

Once the project has been completed, as much relevant feedback as possible should be given to the country representatives about various aspects of the driving test, even if this information is not included in the final report. The fact that candidates in Great Britain seem to be making errors at the end of the test can be explained by the fact that the candidate can be asked to perform a parking manoeuvre at the end.

The Scientific Committee needs to start considering exactly what conclusions they hope to be able to draw from the data and what analyses need to be performed to do this.

9. <u>SCHEDULES FOR THE POST 2000/56 AUDITS</u>

Please send the schedules as soon as possible to CIECA. The schedules are needed for the Scientific Committee to plan the remaining visits, and for the European Commission to be able to plan possible visits as well. Schedules have already been received from Great Britain and Sweden.

10. <u>MEETING THE NEEDS OF YOUNG LEARNER DRIVERS</u> (SEE ANNEX 12)

The driving test should be considered as doing 2 things:

- determining whether the candidate is a safe driver and can drive on his / her own, the predictive validity

- diagnosing the skills of the candidate allowing the examiner to give feedback about the candidate's driving skills and aspects that need to be worked on to make a safe driver, the diagnostic validity

Evaluation systems

An important aspect here is the difference between the reliability of a test and the face validity. The first is important for road safety and the second is especially important for the candidate.

Increasing the number of elements recorded by the examiner affects face validity and could affect reliability as examiners are asked to carefully consider more different aspects and make an evaluation of a variety of elements, each of which will be considered in determining whether a candidate fails or passes.

However, experience in The Netherlands teaches that the driving test evaluation became more uniform and reliable when examiners were asked to evaluate more general aspects of driving and not numerous specific elements. Different interpretations of these more general aspects can be prevented by training.

Examiner Questionnaire (see annex 13)

The aim of the examiner questionnaire is to evaluate how the examiners feel about their work and improvements they feel could be made to the driving test. It is not an indication of the "predictiveness" of the driving test itself.

11. <u>HIGHER LEVELS OF THE GADGET MATRIX AND THE DRIVING</u> TEST ^(SEE ANNEX 141)

This topic needs to be discussed extensively by all partners. For now all partners are asked to consider the presentation and send any ideas to CIECA.

12. <u>ADMINISTRATION AND FINANCE</u> (SEE ANNEX 15)

It is important that all partners keep all the original invoices for the reimbursement of the travel expenses and send these to CIECA as soon as possible.

13. DATE AND PLACE NEXT MEETING

The next meeting will take place on 14 and 15 June 2004 in Amsterdam The extra meeting of the Scientific Committee will take place on 30 January 2004 in Sweden.

¹ To be able to open this document you need to download a programme called mindmanager which you can do through http://www.mindjet.com/uk/download/index.php

14. ACTION POINTS

Country representatives

Action	Deadline
Plan meeting with auditors to pass on the information about the errors made	As soon as
when completing the forms	possible
Send original invoices from the travel agent for the flights to Madrid and all	1 December
other invoices for travel expenses to CIECA	
Plan visits of the scientific committee members (Mr. Wesselius, Mr. Bridge,	1 December
Mr. Nilsson and Mr. Fougère)	
Send information about errors in the driving test to CIECA	1 December
Send Schedule of post 2000/56 tests CIECA	1 December
Mr. Josef Schnitzhofer	1 December
Send invoice from travel agency for flight to Brussels in January for the kick	
off meeting to CIECA	
Mr. Munoz-Pelaez	1 December
Send invoice from travel agency for flight to Brussels in January for the kick	
off meeting to CIECA	
Consider presentation Chris Baughan about incorporating upper levels of the	12 December
gadget matrix into the driving test and send all ideas and suggestions to	
	20.1
Do 20 audits in accordance to the instructions outlined in the leaflet to be $\frac{1}{10000000000000000000000000000000000$	30 January
Written by CIECA	N. 2004
Plan meeting with auditors after all Audits have been completed to discuss	May 2004
how they felt about the forms and how they interpreted the instructions	
(especially concerning table 5)	
Consider what kind of information and comparisons they wish to get from	May 2004
the data analysis and send ideas and suggestions to CIECA	

Scientific Committee

Action		Deadline
Send original invoices from the travel agent for the flights to Madrid and all		1 December
other invoices for travel expenses to CIECA		
Plan visits to the	Mr. Gregersen to Great Britain	1 December
different countries	Mr. Keskinen to Sweden	
	Mr. Baughan to The Netherlands and France	
Comment on leaflet outlining what is expected from the country		5 December
representatives during	the additional audits	
Consider presentation	Chris Baughan about incorporating upper levels of the	12 December
gadget matrix into the		
CIECA		
Start considering the p	oossibilities for data analysis	Ongoing
Mr. Nils-Petter Greger	rsen	28 November
Send invoice from travel agency for flight to Amsterdam for the meeting of		
the scientific committee		

CIECA	
Action	Deadline
Write leaflet outlining what is expected from the country representatives during the additional audits	1 December
Write short paper summarising the mistakes that are made when completing the forms and possible solutions	1 December
Make an overview for the scientific committee of how the audit forms are received from the various countries and what comments are made	5 December
Finalise leaflet and send to country representatives	12 December





Project Meeting TEST

14 and 15 June 2004, Amsterdam

PARTICIPANTS LIST

Present:	Mr. Chris Baughan	TRL, Great Britain
	Mr. John Bridge	DSA, Great Britain
	Mr. Robin Cummins	DSA, Great Britain
	Mr. Jean-Pierre Fougère	Ministry of Transport, France
	Mrs. Heleen Groot	CIECA
	Mr. Nils Petter Gregersen	VTI, Sweden
	Mrs. Martina Hendrix	CIECA
	Mr. Esko Keskinen	University of Turku, Finland
	Mr. Fernando Muñoz-Pelaéz	Ministry of Transport, Spain
	Mr. Per Olof Nilsson	Swedish National Road Administration
	Mr. Han Rietman	CBR, the Netherlands
	Mr. Josef Schnitzhofer	Land Salzburg KFZ – Prüfstelle, Austria
	Mr. Eric Wesselius	CBR, the Netherlands

OPENING AND WELCOME

Mrs. Groot welcomes all partners to Amsterdam and thanks everybody for coming. She explains that during the first day of the meeting the Dutch representatives will provide explanations of the Dutch driving test and all partners present will be able to see a number of practical tests for category B and take part in a theory test. On the second day the topics on the agenda will be discussed and presented.

Mrs. Groot also introduces Mr. Eric Mudde, a recent addition to the project office and the person responsible for entering the data collected through the audit forms into the TEST database.

1. PRESENTATION DUTCH DRIVING TESTS

Presentation current practical driving test for category B²

- The Dutch Category A test is split over 2 parts: one part for the special manoeuvres performed on a special closed off terrain and an on the road test.

The Learner Interim Test:

All candidates in the Netherlands have the opportunity to take the Learner Interim Test (LIT). This is an additional driving test conducted by an examiner from the CBR after the learner driver has completed about ³/₄ of his driver training. The test is conducted as if it was an actual driving test, including the special manoeuvres. After the Learner Interim Test, the examiner and the instructor (who has to be present during the test) give the leaner driver aextended feedback to improve his driving and indicate which areas need work before he / she is ready to take the final driving test. If the special manoeuvres are performed well, the learner driver receives an exemption for the special manoeuvres in the actual driving test. The LIT gives candidates the opportunity to become familiar with the testing procedure and has resulted in a 20% increase in the pass rates. In general 25% of all candidates for category B in The Netherlands take the LIT. In Amsterdam this number is much lower.

Information Amsterdam

The pass rate in Amsterdam is 36% (in comparison to 44.6% in the rest of the country)

² Annex 1: Dutch Driving test

Driver training

Driving training is not regulated by law in the Netherlands (there are no minimum requirements for candidates and no regulations about the driver training). There is, however, a website (<u>www.rijschoolgegevens.nl</u>) that can be accessed by anyone with the pass rates of all driving schools and this directs at least some learner drivers to "better" driving schools.

Lay instruction

Until 1974 there was private driver training in the Netherlands but this was changed so that only driving schools were allowed to provide driver training. There is now discussion about the reintroduction of lay instruction. There is a research project running at the moment to examine the possibilities. Candidates training through lay instruction would first have to take a course at a driving school and could follow this with driving with lay instructors. However, this would require a change in law as it is currently illegal to drive with a lay instructor without a license.

Fault evaluation

- If candidates get into dangerous situations, they will not pass. However, candidates can make a mistake once and still pass.

E.g. A candidate drives too close to parked or moving cars and the examiner takes action to avoid the cars. Following this, the candidate does not drive too close to other cars again and there are no other problems. The candidate will pass.

- Less than 10% of all tests are broken off.

- The Dutch examiner bases his result of the test on an overall view at the end of the test. There are examiner guidelines of what is acceptable and what is not and of what is important for traffic assignments. For every traffic assignment, there are very important actions that the candidate must take.

Quality Control Systems

All examiners have a quality check (at least 2 times 5 tests / year); there is continuous training for examiners and the pass rates are monitored. If an examiner has pass rates that are very different to those of other examiners in the same area (a variation of more than about 5%), there will be more quality checks and / or additional training.

Routes

- In France examiners are advised not to put the candidate in very difficult circumstances very early in the test. This is the same in the Netherlands; usually the first 5-10 minutes of the test should be relatively easy. However, the testing centre in Amsterdam is located such that this is not always possible.

Giving the candidates the result

- After the test, the examiner explains to the candidate what he / she needs to correct and where his / her problems are.

- In Sweden there is a development that examiners want more time.

In The Netherlands the number of complaints from candidates and instructors went down when the time available to the examiner to explain the result of the test increased. It is also important to note that it is easier to explain why someone fails when this is based on a maximum number of permissible errors that are recorded during the driving test than when the result of the test is based on a general view of the candidate's driving skills throughout the entire test.

In Finland more time is spent on feedback. As a result of this customer satisfaction increased greatly. There was also a very slight increase in pass rates.

- It remains important, however, that the examiner does not teach the candidate when explaining what went wrong. This is the domain of the driving instructor.

In Great Britain it is very important that the examiners only tell the candidates what they did wrong and whether they passed or failed because otherwise they cross the line between training and testing and this is well guarded in Great Britain. In fact, because of the Data Protection Act in Great Britain, an examiner can only tell the candidate the result and the test can not be discussed with anyone (including the driving instructor) except candidate unless the candidate gives permission.

The TEST project in the Netherlands³

Comments Dutch auditors

The Dutch examiners that have been directly involved in the project (because their tests were audited) are all very exited about the project and very interested in the information collected on the form as they present very interesting information about how the routes are built up.

³ Annex 2: TEST in the Netherlands

E.g. a test in which 25 right hand turns were made and only 1 left hand turn (which was not performed correctly).

Using the audit forms

- It is very difficult to complete the forms and it takes some time to get used to. It would be useful if the timeline was split into 1 minute sections, not 5 minute sections.
- It is necessary to record some information on the back of the form as a reminder to yourself of the contents of the test
- It is very difficult to get used to completing a form and observing the traffic and test locations at the same time.
- It is difficult to see everything as you are sitting in the back behind the candidate. It is therefore a lot easier to complete the form if you are familiar with the area where the test is taking place (you know when and where faults are likely to be made)

The first impressions of the Dutch driving test on the basis of TEST:

- In Amsterdam very little of the test is conducted outside built-up areas (no rural roads, curvy roads, rural environments) and very little time is spent on the motorway. There are rural areas relatively close to the test centre but these are not used as it is more difficult to judge the candidate there. It is easier to put the candidate in very complicated situations where he is more likely to make mistakes (this is information that also came out of the quality control sessions). Most examiners tend to stay near the test centre and test almost the same routes nearly every time. Driving instructors and driving schools are aware of this and train in these areas.
- The beginning of the test is sometimes very difficult in these areas (the candidate does not get the opportunity to settle down before being asked to perform relatively difficult tasks)
- The average time spent on special manoeuvres is 90 seconds. Examiners often complain that they do not have enough time for the on-road test because they have to spend so much time on the special manoeuvres. This is obviously not true.
- Amsterdam is a very difficult location
- The length of the test is nearly always shorter than it is supposed to be.
- The final results of the tests are all valid.

Conclusions

- It would be interesting to take a completely different route than the "normal" routes to test the candidate
- Examiners should take the opportunity to make the test longer if they have extra time. It is interesting to consider how long a test should be and if the extra time is used correctly and effectively.

Giving feedback

- It is very important how you give the candidate the results. If a candidate is ready to hear the explanation, provide it. If not, do not force him to listen. It is important to gauge the feeling and emotions of the candidate. In fact, the last 10 minutes of the driving test is what makes you an examiner. The most difficult part of the job is not directing the candidate but how to give the candidate the information after the test (not what went wrong but why).

In the Netherlands this is trained with actors.

- It is important to note that the task of examiners is greatly influenced by the quality of the driver training and the acceptance of the results by the driving schools. In France the examiners talk as little as possible because driving schools and candidates do not want to know. In fact the results of the test are not given to the candidate directly but are sent to him by post.

Presentation RIS⁴

- Candidates select driving schools on the basis of pass rates and fees. At the moment, driving schools that provide RIS tend to be the more expensive schools as it is these schools that invest in offering the best product. In fact, the training and testing system of the RIS is not more expensive that the traditional training and testing system.
- Denmark introduced a very structured training system as well which has had good results⁵

Presentation Dutch theory test⁶

- All questions are formulated as must you / are you allowed and not are you going to/ will you. This is done to try and avoid ambiguity and discussions.

⁴ Annex 3: RIS

⁵ Annex 4: Denmark (this will be sent to everyone by post)

⁶ Annex 5: Theory test

It would be useful to include more traffic insight questions.
There is a project at the moment in the Netherlands about the revision of the driving test (also the theory test) and this could be changed in the near future.

2. EXAMINER QUESTIONNAIRES

France⁷

There are very big differences between the data collected from tests before the implementation of the new Directive and after. This is because the tests are very different and because the auditors received some additional training based on the comments from the Project Office.

In general, the information collected in the examiner questionnaires was very disappointing. The main suggestion from the French examiners was that they wanted more time.

<u>Great Britain</u>

The lessons learnt in the first phase of the project made the second phase easier. The biggest problem remained time pressure.

The information collected in the TEST project so far confirmed information that was already known (about routes, areas, the consistency of routes). The project provides a different way to look at testing (e.g. by specifying the time spent on certain skills) especially for the auditors involved. The examiner questionnaires in Great Britain were not sent to examiners but to the area managers because this is a politically sensitive issue and as such it was not possible to ask all examiners to complete a questionnaire. 50 questionnaires were completed at a very early stage that were not received by the project office. This needs to be looked into.

Netherlands⁸

200 questionnaires were sent out with a response rate of 80%.

The main points were:

- more driving time
- too many speed bumps
- overtaking should be tested more extensively
- there should be more time for independent driving
- great support for RIS

⁷ see annex 6: France

⁸ see annex 7: Netherlands

<u>Spain</u>

A new auditor came in in the second phase of the project as the original auditor had an accident. In general, there were fewer problems in the second phase.

Driver legislation in Spain has not yet been adapted to the new directive (there is currently a political problem) and as such there is very little difference between the information collected in the first and second phase of the project. The routes are the same; the technical vehicle control is still nonexistent; there is no time for evaluation after the test; the total time for the test is 25 minutes (includes driving time, introduction, manoeuvres).

In Spain, examiners tend to give their task of feedback to the instructor. The examiner will tell the instructor whether the candidate passed or failed and leave it to him to pass on the information to the candidate.

Sweden⁹

- There were no changes between the second and first phase; in second phase there was perhaps a bit more pressure to complete the forms on time.
- The examiner questionnaire was distributed only amongst examiners working at test centres involved in the TEST project.
- The definition of an urban area for examiners is very different than the definition used by the auditors. This could explain the difference between the answers to the examiner questionnaires and the audit forms.
- The results seem to indicate different net driving times at different test centres
- Many examiners indicate that STEFUS is a good development. STEFUS is a staged driver training with tests after each stage, a type of graduated training system like RIS but also for private training.

<u>Austria</u>

No changes were made in the system between the two phases. There was no retraining of the auditors between the two phases of the project.

One driving school blocked access to the candidates in the project and as a result a different driving school is now being used for the TEST audits

⁹ see annex 8: Sweden

So far only 8 examiner questionnaires have been returned to the project office from Austria. Many more need to be completed, if possible from a number of different locations. The deadline for these questionnaires has been extended to the middle of July for Austria.

3. EXAMINER QUESTIONNAIRES¹⁰

It is important to be careful when comparing the results of the questionnaires (different definitions for motorways, rural areas, etc.).

Once the coding system has been developed, there will need to be very close contact between Mr. Baughan and the project office about how the coding system works and how to deal with any questions or problems that come up.

4. VISITS SCIENTIFIC COMMITTEE

Visit Chris Baughan to the Netherlands¹¹

Visit Chris Baughan to France

- Very poor candidates receive an almost constant chain of feedback from the examiner. This reaches a stage where the feedback is no longer effective but is upsetting the candidate and making the driving level lower.

This is something that will need to be taken into consideration when discussing the possibilities of incorporating the higher levels of the GDE in driver training / testing

- Whether or not independent driving is included in the driving test is very dependant on the examiner

Visit Esko Keskinen to Sweden

The visit to the driving test was in Sollentuna, just outside Stockholm. There was 5-10 cm of fresh snow and many candidates had trouble even getting from the parking place to the road; most candidates seemed to have no idea of how to drive in the snow.

During the visit, Mr. Keskinen saw a total of 5 driving tests (4 candidates from private training and 1 from a driving school). Only one candidate passed the driving test (there were many problems especially in the manoeuvres and vehicle control).

¹⁰ see annex 9: Examiner Questionnaire¹¹ see annex 10: Chris Baughan NL and F

The test begins with a quick check of identity (papers) followed by a safety check. The introduction is very detailed and the same for all candidates. In the introduction, the examiner covers the guidelines and requirements for the test.

The atmosphere in the car was pleasant and friendly.

The examiners explained that the route for the test is determined in the car park (depending on how competent the candidate seems, the examiner will turn left / right when leaving the car park to take a route that begins relatively easily or that is immediately quite difficult). The time used for the tests was 45 minutes (exactly 30 minutes in the car) and all tests included special manoeuvres. The level of the tests was the same During the test, comments are recorded on a form.

Following the test, comments and the results are given (a reasonable amount of time is spent on this).

The Traffic density was relatively low.

Many candidates had already come several times before and yet did not seem to have practiced much. Candidates pay the same fee for the test whether it's the first or 10^{th} attempt (€ 42.00). Candidates from private training tend to have a very low level.

Visit Nils Petter Gregersen to Birmingham

Mr. Gregersen only saw two tests. He was supposed to see more tests on the second day but it had snowed (2 cm) and the test centre was closed. The test were conducted by two different examiners; one candidate passed and one candidate failed.

The safety check in Great Britain is show me / tell me which means that the candidate either has to show the examiner something or explain something to the examiner. The introduction is done in the car. Examiners follow a fixed route but there are numerous different routes per test centre. In one of the tests the examiner seemed to put a lot more effort put into the special manoeuvres than in the other test and the examiner rechecked a number of different things. The examiners have the freedom to do this even though they use fixed routes.

The examiner made no comments about sitting posture even though both candidates had bad sitting posture.

The atmosphere in the car was quite friendly (one examiner was lot more friendly than the other).

The length of the test was 38 - 40 minutes

Comparison of the tests in the various countries as seen by the members of the Scientific Committee

Is the difference in pass rates in the 6 countries involved the result of different levels of testing or is influenced by the quality of the candidates?

The driving tests in Great Britain, Sweden and The Netherlands are very similar and the system in France is very similar to these (even if the time spent on the test is not). The driving tests in Spain and Austria seem to be at a different level.

None of the driving tests seem to be strikingly more demanding than others; candidates who passed one test would, generally, have had a chance to pass the other tests. However, the assessment levels to seem to vary even if the actual contents of the test do not.

The training of the candidates also plays an important role in this. It is important to realise that the lowest pass rate is not necessarily the result of the most demanding driving test but is also related to the candidate's attitude to the test

The tests in the different countries differ in formalities; contact with candidate; time spent on the road and on other items but they are all aimed at determining whether or not someone is capable of driving by himself / herself

5. <u>COMPLETION AUDITS¹²</u>

6. PRESENTATION ANALYSES FINAL REPORT¹³

- It is very important to clean all the data before beginning with the final analyses for the final report. This will include things like removing tests that were cut off half way through
- The occurrence of type 1 and 2 errors will have to be related to the duration of the test (in percentages) and not in relation to the actual time.
- Multiple regression analyses will be done. This is a tool to help determine how much the different variables influence one particular variable.

E.g. it should be possible to say which elements have the most impact on the robust assessment in a driving test and which have no effect. It will also be possible to see which combination has the greatest effect.

It will probably also be possible to calculate what effect extending the test by a certain time period would have on the errors.

¹² see annex 11: uncompleted audits¹³ see annex 12: analyses final report

- It will be very important to make a clear division between the conclusions and the recommendations of the final report

Expectations European Commission:

- Information about the length of the test
- Is it possible to test everything in the directive in this time frame
- Are all countries complying with the directive
- Comparison pre/post 2000/56

7. <u>TESTING LEVELS 3 AND 4 IN THE GDE MATRIX¹⁴</u>

Comments

- It is important to recognise that including items in the test does not necessarily mean that these items must be assessed and will automatically influence the pass / fail decision This is difficult because elements that are not evaluated are difficult to "sell" to the training sector. Once it becomes clear that it will not influence the result of the test, the issue is no longer incorporated into the training. Perhaps this could be dealt with by approaching the driving instructor directly and confronting him with the fact that he is not covering all the items in this training.
- A simulator could be invaluable as a training tool (not as a testing tool). Candidates could be put in a simulator so they experience certain aspects of the higher levels which they could then discuss with their instructors.
- To be able to train the higher levels of the GDE matrix, drivers need some experience on the road to be able to recognise the context in which the issues in the matrix are raised and how they relate to driving. Self evaluation of the influence on driving from outside (level 3) can not be evaluated until novice drivers have the experience of driving themselves. In Sweden, the combination of parents and driving school training proved problematic. Parents are not educators and are, as such, not capable of training the higher levels, this should be done by driving schools (who probably also need better training). Parents and other lay instructors could be approached to act as guides when the candidate is gaining on-the-road experience.

¹⁴ see annex 13: GDE and driver training / testing

- A project for a new Curriculum was recently approved in Sweden. The curriculum is based on the GDE framework and the aim is to give trainers and examiners broader goals and to develop a handbook with suggestions and ideas of how to deal with the issues raised in the higher levels of the GDE matrix.
- We need to incorporate as much as possible into the first phase (it is not at all certain that a second phase is good; in fact the results of NovEv so far seem to point in the opposite direction).
- The higher levels are something that each person needs to accept for himself and are not something that can be forced on people.
- Maximal and typical behaviour is important; it is easy to test maximal behaviour; to test typical behaviour it is probably necessary to accept that there are no right or wrong answers but more a series of acceptable answers and a series of unacceptable answers.
- Interesting to look at the results of NovEv and how these results can be used to improve the level 3 and 4 skills in novice drivers (politically this is very difficult to push through as there are extra costs and time involved)
- There is no actual proof that improved driver education results in fewer fatalities!! Politicians tend to only accept proven solutions.

<u>Concrete Ideas for incorporating the higher levels of the matrix into driver training /</u> <u>testing:</u>

- Using a navigational system to reach a certain location
- Self assessment: examiners are already applying this in passing / failing criteria but not naming it as such. It is now called overestimation of your own skills (candidates driving too fast to really control the vehicle). Candidates tend to have poor self-assessment skills; when does this change?

8. <u>CONTENTS FINAL REPORT</u>

There is a first proposal for the contents of the final report. This proposal will be sent to all project partners for their comments.

9. TEST INFORMATION DAY

It would be interesting to connect the information day for TEST to a meeting of the driving license committee (planned to take place in January) so that the TEST results can be presented

to decision makers and policy makers The European Commission will be contacted about the possibility of changing the date of the information day to a date after the end of the project.

10. ADMINISTRATION AND FINANCED

Second Payment

The project Office will apply for the second payment shortly.

Travel expenses

Repeated reminders have been sent to the European Commission for payment of the travel expenses and recently an overview was sent of all outstanding payments. All partners are asked to contact their financial departments again and ask them to please stop sending reminders for payment. CIECA is aware that there is a problem and as soon as the payments come in from the European Commission, they will be passed on to the various partners.

10.ACTION POINTS

Country representatives

Action	Deadline
Send original invoices from the travel agent for the flights to Amsterdam and	16 July 2004
all other invoices for travel expenses to CIECA	
Consider Table of contents and send comments to CIECA	16 July 2004
Consider what kind of information and comparisons they wish to get from	16 July 2004
the data analysis and send ideas and suggestions to CIECA	
Mr. Josef Schnitzhofer	16 July 2004
Send remaining examiner questionnaires and audit forms to CIECA	
Mr. John Bridge	16 July 2004
Send remaining audit forms to CIECA	
Mr. Jean-Pierre Fougère	16 July 2004
Send remaining audit forms to CIECA	
Mr. Per Olof Nilsson	16 July 2004
Send audit forms of extra audits to CIECA	

Scientific Committee

Action	Deadline
Send original invoices from the travel agent for the flights to Amsterdam and	16 July 2004
all other invoices for travel expenses to CIECA	
Consider the possibilities for data analysis	Ongoing
Mr. Chris Baughan	16 July
Complete coding system for examiner questionnaires and stay in close	
contact with the project office for the explanation of the coding system and	
any questions or problems that come up.	
Mr. Esko Keskinen and Mr. Chris Baughan	Ongoing
Work on the paper about the GDE in driver training / testing	
Mr. Nils Petter Gregersen	1 September
Make a proposal for analyses to be included in the final report	
Mr. Esko Keskinen and Mr. Chris Baughan	15 September
Comment on proposals for data analyses	

<u>CIECA</u>	
Action	Deadline
Make an overview for the scientific committee of how the audit forms are	1 August
received from the various countries and what comments are made	
Contact European Commission about changing the date for the information	16 July
day to coincide with a meeting of the Driving License Committee	
Send more examiner questionnaires to Chris to complete the coding system	1 July
Complete data entry and contact all country representatives about any	1 August
remaining questions	
Code examiner questionnaires and enter into a database	1 September