

Simulator Training Eco Driving Safety Exclusion Criteria (T1)

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A) This programme is limited to skills training only. The driving activities are practiced until they are carried out perfectly.
B) The programme is clearly aimed at sporting ambitions, such as improving the average or maximum speed in real road traffic.
C) There are no exercise variations of any kind that would make it more difficult to succeed by applying the trained behaviours, such as manoeuvres with selecting a different gear, accelerating in heavy traffic, changing distances.
D) Practical driving exercises are performed away from real road traffic situations. Simulation is carried out for its own sake and not for real traffic purposes.
E) The training is carried out exclusively by applying the instruction method. At no point during the training are the participants given the opportunity to work out driving problems themselves and, for instance, to develop alternative behaviours themselves and try them out.
F) Trainers do not undergo any qualification.
G) Trainers do not undergo further training at regular intervals.
H) The trainers are not supervised during their practical work, for instance by colleagues or external supervision.
I) The trainers are not provided with any instructions or a plan of procedures to conduct the simulator training.
J) Not applicable
K) There is no access to toilets during the simulator training.
L) "First aid" is not guaranteed in case a training accident occurs. On the part of the organiser, there is nobody on site who can furnish proof of a "first aid" training, nor is anybody instructed or integrated in the emergency management of the implementing organisation.
M) More than 8 participants per trainer are permitted.
P) For the participants of the training it is generally not possible to observe exercises. This, however, does not apply when not all of the participants are able to observe the scene due to limited space as a situational circumstance.

Simulator Training Eco Driving Safety

Quality Dimension "Content"

Criteria	Explanations / Examples
1.1.1 Are participants given the opportunity to talk about situations they have experienced themselves, where certain manoeuvres played a role?	The participants are asked, for instance, whether they have ever thought about their own driving style in the context of ecology, and/or the participants are asked about experiences with ecological driving styles and their application in day-to-day work.
1.1.2 Are familiar road traffic situations simulated for the participants?	For instance, acceleration processes in urban driving are simulated.
1.1.3 Is there discussion as to what extent a manoeuvre that was simulated can be implemented 1:1 in road traffic?	For instance, the influence of traffic density ("rush hour") is discussed.
1.1.4 Are participants given the opportunity to try out certain behaviours directly?	For instance, shifting at low RPM, principles of ecological driving.
1.2.1 Is the topic of distraction covered in theory with its effects on perception and behaviour?	Potential distraction factors - such as time pressure, stress, emotions, telephone, navigation systems, MP3 player, vehicle warnings - and their influence on behaviour are addressed in the theoretical training component.
1.2.2 Is the topic of distraction covered in practice with its effects on perception and behaviour?	For instance, an additional task is provided while driving. The driver is called on the mobile phone; passengers (pillion riders for motorcycle safety training) are given tasks in order to distract the driver.
1.2.3 Is the psychological-physical state of the driver with its effects on perception and behaviour covered in theory?	The influence of the psychological-physical state (fatigue, stress, emotions such as anger, frustration and joy, residual alcohol, the influence of drugs and medications, the state of health etc.) on perception and driving behaviour is covered.
1.2.4 Is the psychological-physical state of the driver with its effects on perception and behaviour covered in practice?	Exercises are performed in which for instance stress (time pressure) is induced, passengers encourage a faster driving style or cause distractions, or the driver is distracted by secondary activities. This is addressed also the other way round: What is the effect of a defensive, forward-looking, fuel-saving driving style on the driver (stress avoidance, driving enjoyment)?
1.2.5 Is the process of an emergency response such as, for instance emergency braking, covered from recognition to the end of the reaction?	The steps that follow each other (sensorimotor functions) are made clear.

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Quality Dimension "Content"

Criteria	Explanations / Examples
1.3.1 Is consciously dealing with, for instance, speed, RPM, distance, or consumption encouraged?	At what RPM do you normally shift up to the next higher gear etc.? What does the gear selection mean for fuel consumption?
1.3.2 Are the participants asked about their usual driving style, for instance at the beginning of the course?	The participants are not only asked about dangerous situations, but also about positive experiences.
1.3.3 Is the function of additional motives discussed, such as: What is the function of a vehicle beyond its transportation function?	The influence of additional motives such as driving enjoyment, experiencing independence, mastering technology, competition and rivalry, prestige and status etc. on driving behaviour is covered.
1.3.4 Are the participants asked about their emotional state after manoeuvres or routes?	After a challenging exercise or route, the participants are asked how they felt at that time while driving.
1.3.5 Are passengers or outside observers given the opportunity to talk about the driving style of the driver?	Passengers or outside observers are asked to observe and to talk about the performance of the driver.
1.3.6 Is there discussion on the required safety distance?	What distance is normally maintained? What does that look like from the outside? From the driver's perspective? And in the rearview mirror?
1.3.7. Does the training include "lightbulb moments", for instance through demonstrations?	This refers to demonstrations or exercises that lead to surprising results, so for instance consumption measurements, the distance-time problem, time saved by higher speed.
1.4.1 Is the conflict between speed and the frequency of errors discussed?	For instance, the loss of information due to higher speed is made clear.
1.4.2 Are (strategic) plans developed to avoid risks?	Collecting the planned behaviours of the participants, for instance: What can I do in advance in order to defuse a dangerous situation at the outset, such as inducing the readiness to brake?
1.4.3 Is the risk of shorter distances (in reference to the presumed time savings) covered?	For instance, discussion of the following situation or putting it into practice: If the vehicle in front were to brake right now, would the chosen distance be sufficient?
1.4.4 Is the topic of "speed and risk" discussed?	How does the risk of an accident increase along with increasing the speed. To give examples: Double the speed, and you get four times the braking distance. What is the effect of forces in curves?

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Quality Dimension "Content"

Criteria	Explanations / Examples
1.5.1 Is the influence of speed and/or higher RPM (load changes) on fuel consumption and driving stability discussed?	For example, driving in traffic situations in a "low" gear (load change responses), comparison of consumption measurements at high and low RPM.
1.5.2 Is increasing the speed with the effects on response time, braking distance and stopping distance covered?	The response times, braking and stopping distances for various speeds are displayed on the simulator for the participants.
1.5.3 Is the relationship between the speed in km/h and the distance covered in metres per second made clear?	Rule of thumb: $(v/10) \times 3$. To give an example: Travelling at 50 km/h, a vehicle covers around 15 metres per second.
1.5.4 Is the benefit of longer distances on fuel consumption discussed?	Ability to compensate for speed fluctuations in the flow of traffic.
1.6.1 Are the topics of Occupational Health and Safety discussed in training?	Breaks, fatigue, biorhythm, duration of sleep, lifting and carrying of objects etc.

Simulator Training Eco Driving Safety

Quality Dimension “Methodology”

Criteria	Explanations / Examples
2.1.1 Are the course objectives made transparent for the participants?	The trainer explains the objectives to the participants at the beginning of the course.
2.1.2 Is the course sequence made transparent?	The trainer explains the organisation and time sequence of the course.
2.1.3 Are the participants' wishes, interests and needs taken into account in planning the training?	The trainer asks the participants to name some “driving problems”, for instance by asking questions such as: What is the best way to brake in a curve? Then he records them in writing. “Driving problems” can also be developed directly before an exercise.
2.1.4 Are the participants' wishes, interests and needs taken into account during training?	The defined “driving problems” help the trainer and participants to structure the training.
2.1.5 Are the participants' wishes, interests and needs dealt with again after training?	After the course or exercise, the trainer asks whether the defined driving problems were resolved or if anything remains unanswered.
2.1.6 Are the participants given the opportunity to look for strategies to solve driving problems themselves?	The trainer does not determine the “optimal” strategy, but invites the participants to develop (various) strategies.
2.1.7 Are the participants given the opportunity to try out the solution strategies?	The participants try out the various strategies and develop the “optimal” solution.
2.1.8 Are there learning objectives for the training which are documented in writing?	
2.1.9 Are there learning objectives for the individual training elements which are documented in writing?	
2.1.10 Are there exercises which are suitable to make participants aware of habitual behaviour patterns?	Self-observation assignments while performing a manoeuvre, such as: Observe yourself. What exactly do you do when you have to brake hard?
2.1.11 Are different methods applied during training?	Reasonable switching between instruction, moderation, self and third-party observation assignments, group exercises, guided conversation in class, use of media etc.

Simulator Training Eco Driving Safety

Initial Qualification and Further Training for Trainers

Criteria	Explanations / Examples
Are there reasonable qualification criteria for potential trainers, documented in writing?	
List of reasonable qualification criteria - Affinity for traffic safety topics - Experience in adult education and/or adult training - Experience in traffic safety work and/or with traffic safety topics - Interest in human interaction - Ability to interact with people in a friendly, engaging, confident and assured manner - Ability to listen and to structure questions and suggestions - Interest in and enjoyment of organisational matters - Technical understanding - Holder of a valid driving license - Completion of First aid training or training on "emergency measures at the accident site" less than two years ago, and knowledge of the provider's emergency management	No (for 0 criteria) Not really (for 1 to 2 criteria) Somewhat (for 3 to 4 criteria) Yes (from 5 criteria)
3.2.1 Is there a documented qualification plan for future trainers?	The training content, tasks, requirements, time schedule, training steps etc. should be listed in the training plan.
3.2.2 Are there internship phases for the candidate?	The candidate should accompany and observe the training sessions of his instructor. In doing so, the candidate should not be in the position of a supporter and certainly not that of a participant.
3.2.3 Is there co-training provided for the candidate?	The candidate conducts training sessions together with the instructor.
3.2.4 Are there demonstration lessons that are evaluated?	One of the co-trainings should be performed as a demonstration lesson, with the instructor evaluating the candidate.
3.2.5 Are trainer candidates trained on communication and/or conversation techniques and on behaviour inside the simulator (simulator illness or motion sickness)?	Training should not be limited exclusively to the topics of technology, driving dynamics and driving techniques, but also address participant behaviour in the simulator.
3.2.6 Are trainer candidates trained on the handling, operation and maintenance of simulators and on the applicable safety regulations?	
3.3.1 Is further training available with a focus on vehicle technology and driving techniques?	Vehicle technology, driving physics, driving techniques

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Initial Qualification and Further Training for Trainers

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3.3.2 Is technical instruction or further training provided for in case of simulator updates?	
3.3.3 Is further training offered with a focus on behavioural science?	Behavioural science expertise, accident research, traffic psychology, traffic education, etc.
3.3.4 Is further training available that covers the aspects of occupational safety and health protection - especially in regards to driving activities?	Inspection of the vehicle for traffic and operating safety, cargo securing, seat settings (also under the aspect of a secure seating position during emergency braking), correct mirror adjustment, knowledge of blind spots, mandatory seat belt usage. General information about dashboard without storage, no loose parts that could get under the brake pedal, pre-departure check, driving time and rest periods.
3.3.5 Is further training available focussing on various methodological and didactical aspects?	Seminar planning, adult education methods, such as moderation or visualisation, etc.
3.3.6 Is there a quality assurance of further training that is offered on vehicle technology, behavioural science and methodology & didactics?	External instructors, instructor evaluation, quality certificate of the instructors, inclusion of current research results etc.
3.3.7 Is there a process in place to ensure that the trainers, when choosing further training units, keep a balance between units that focus on vehicle technology, behavioural science and methodology & didactics?	
3.3.8 Is there a sanctioning system if a trainer fails to meet further training obligations?	The sanctions should extend all the way to exclusion.

Simulator Training Eco Driving Safety Quality Dimension “Quality Assurance”

Criteria	Explanations / Examples
4.1.1 Can the provider be reached by telephone?	Professionalism is demonstrated by having a contact person available to the potential participant directly by telephone.
4.1.2 Is detailed telephone consultation provided?	The contact person should be able to offer a comprehensive consultation regarding the training offered.
4.1.3 Can the provider be reached by internet and/or e-mail?	The website should provide details about the courses and seminars offered, and also contact details.
4.1.4 Is there a contact person at the office or directly at the simulator?	Even during regular operation of the simulator training, it should be possible to find a contact person who may forward information or accept a registration.
4.1.5 Is the potential customer treated in a friendly and respectful manner?	The customer should not feel like a supplicant or an annoyance.
4.2.1 Was there an internal information and communication system established?	Information is available to the employees via intranet, internet and/or e-mail. Written information and regular briefings are provided for.
4.2.2 Are there defined responsibilities and areas of competence?	Organisation chart, responsibility matrix, definition of quality-related tasks such as decision-making, participation or execution models, and responsible organisational units such as the company management, an authorised person or a person in charge, and an administration are established.
4.2.3 Has a complaints and claims management been established?	Are complaints taken seriously, are they forwarded, is there feedback?
4.3.1 Are there regular participant surveys conducted immediately after training?	A brief questionnaire is distributed to capture initial impressions of the training. There is an opportunity to express appreciation and criticism of the trainer, the training, the infrastructure, the organisation etc.
4.3.2 Is there a follow-up scheme addressing participants in writing or by telephone?	There is a general “follow-up” by asking questions like: ‘Were you satisfied with us?’ or by providing information about other seminars or courses offered, upcoming dates or events etc.
4.3.3 Are participant surveys conducted later to determine lasting effectiveness?	Questions are asked like: What have you shared with others? What are you still thinking about today? What did you come away with personally? What do you consider your personal benefit of the course? What are you still applying today? What impressed you, what surprised you?
4.4.1 Do one or more scientifically based evaluation studies exist regarding the simulation version in question?	Formative or summative evaluation.

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4.4.2 Are "feedback systems" used for developing further the simulation?	Feedback systems such as evaluation, participant survey, mystery tester as a training participant, focus group etc.
4.5.1 Is there a set of simulation versions documented in writing?	Different versions in order to adequately respond to participant requirements including basic and advanced simulations for "repeaters".
4.5.2 Is the set of simulation versions which are documented in writing suitable for the trainer or multiplier to enable him to conduct training versions independently?	
4.5.3 Does written information exist for the trainer or multiplier regarding simulation methodology versions?	See above. Methodology versions are suitable for various target groups.
4.5.4 Is the written information regarding simulation methodology versions suitable for the trainer or multiplier to enable him to independently apply different methodologies in training?	
4.5.5 Does written background information exist regarding driving physics and/or vehicle technology?	Information should always be up to date, so for instance on ABS, ESP, occupant protection system, brake assistant, "Adaptive Cruise Control" etc.
4.5.6 Is the written background information regarding driving physics and/or vehicle technology content for the trainer or multiplier prepared in such a way that this content is easy to understand for the respective target group?	
4.5.7 Does written background information exist regarding traffic pedagogy and/or traffic psychology findings?	Information on the latest behavioural science findings should be available, too, in addition to technology innovations.
4.5.8 Is the written background information regarding traffic pedagogy and/or traffic psychology provided to the trainer or multiplier prepared in such a way that it is easy to understand for the respective target group?	
4.5.9 Do participant brochures exist for the training offered which describe the essential simulation content?	
4.5.10 Is the essential simulation content described in such a way that it is understandable for the participants?	

Simulator Training Eco Driving Safety Exclusion Criteria (T2)

Exclusion Criteria (T2)
R) There are significant and serious grounds for suspecting that the training which was reviewed is not a realistic, everyday training offered by the provider, but was constructed or influenced especially for the Quality Seal appraisal. So, for instance, were the participants chosen purposefully and informed of the certification and their resulting behaviour in advance. The participants were informed regarding their (driving) behaviour, vehicles were prepared especially for training regarding cargo securing, and similar topics.
S) Less than 60% of the documentation described in the appraisal documents, for instance, regarding the qualification or further training of the trainers, is available as documentation accompanying the application for the Quality Seal.
T) Less than 60% of the practical driving exercises described in the appraisal documents were carried out in the training which was reviewed.