Hazard perception test and training material

ANNEX A:

Terms of Reference

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1 Introduction

1.1 Background, Statement of Purpose & Objectives

Each year nearly 1.3 million people die as a result of a road traffic crashes — more than 3000 deaths each day—and more than half of these people are vulnerable road users: pedestrians, cyclists, and motorcyclists. 20 to 50 million more people sustain non-fatal injuries from crashes. These injuries are an important cause of disabilities worldwide. 90% of road traffic deaths occur in low and middle-income countries, which own approximately 54% of the world's vehicles. Unless immediate and effective action is taken, road traffic deaths are predicted to become the seventh leading cause of death in the world by 2030, resulting in an estimated 1.9 million deaths each year. The World Health Organization and the United Nations released a global plan for the second Road Safety decade of action 2021–2030 with the goal of reducing by 50% the amount of road traffic fatalities and injuries around the world by increasing activities conducted at the national, regional, and global levels. One of the requirements of that global plan is the adaptation of technologies to the road safety system which is also one of the UNHCR's goals.

It has been estimated that around 10% of the serious traffic within UNHCR operations are related to limited hazard perception. UNHCR has been working on the implementation of countermeasures for reducing the rate of traffic crashes with injuries and fatalities, and now UNHCR is considering the implementation of hazard perception tests and training for drivers.

The main objectives of this initiative are:

1- Develop a computer-based on the UNHCR driving knowledge test and include hazard perception tests based on African conditions.
2- Develop hazard perception training material that the defensive driving instructors could include in the lessons provided in the African context.
3- Develop hazard perception training exercise that trainees could take in self-study driver training courses.

2 Requirements

2.1 Deliverables

The service provider shall:

2.1.1 Provide a 20-min the hazard computer-based test shall comply with the next specifications:

a. Store the candidates' information: name, last name, and score.
b. Have questions related driving techniques.
c. Have questions related to understanding different traffic signs.
d. Provide editable files, so UNHCR could adapt the questions related to driving techniques and the meaning of traffic signs.

e. Have a separate section on hazard perception video-based exercises developed on the African context including covering the circumstances indicated in the sections 2.2.2.a to 2.2.2.c, 2.2.3a to 2.2.3.d and 2.2.4.a (highlighted with **bold characters**) of this ToR.
f. The videoclips most comply wit the characteristics indicated in the section 2.3 of this ToR.
g. The hazard perception computer-based test shall provide clear and simple instructions to candidates.
h. The test must be compatible with Windows 10 and 11.

2.1.2 Provide a Three-hour hazard perception training material based on videoclips complying with the sections 2.2 and 2.3 of this ToR to support in person defensive driving lessons. The videos must be in English.

2.1.3 20-min hazard perception training material based on videoclips complying with the section 2.3 and the circumstances described in the sections 2.2.2.a to 2.2.2.c, 2.2.3a to 2.2.3.d and 2.3.4.a (highlighted with bold characters) of this ToR, to be included as an activity of a defensive driver video-game-style online course developed on Articulate Rise and compatible with Windows 10 and 11.

2.1.4 Provide a two-year warranty for the training and testing material.

2.2 Circumstances to be represented on the hazard perception computer tests and training material.

2.2.2. Dual carriageway:
a. Joining slip road with traffic on slip road and on nearside lane of dual carriageway.
b. Merging traffic from slip road driven vehicle in nearside lane.
c. Overtaking situations with driven vehicle in nearside lane, possibly boxed in and need to anticipate suitable gap.
d. Overtaking situations with driven vehicle in outside lane and traffic on inside lane which need to also overtake lorry or an obviously slow vehicle.

2.2.3. Country roads:
a. Motorcyclists driving counterflow.
b. Pedestrians walking giving the back to the vehicle flow.
c. Unattended little kids walking down the road.
d. Obstructed corners with oncoming traffic/cycles/cows/ motorcycles.
e. Restricted roads due to parked vehicles and oncoming traffic - i.e. need to slow in order to round parked obstruction due to oncoming traffic.
f. Corners where oncoming traffic can be seen ‘through’ the corner and so driver can anticipate.

g. Obstructed junctions with traffic emerging from the minor road and 'spotted' prior to joining the major road.
h. Cattle in the road.
i. Two-way roads converging into one lane roads without signalization.
j. Little kids walking with their parents down the road.
k. Interacting with motorcycles in dusty conditions.

2.2.4. Urban roads

a. Driving in places with high interactions with pedestrians and with obstructed visibility due to informal markets operating on the sidewalks.
b. Driving in roads with high interactions with motorcycles weaving through traffic.
c. Driving in roads with high interactions with motorcycles driving counterflow.
d. Sharing the roads with minibuses being driven aggressively: sudden lane changes without indication and harsh braking.
e. Parked vehicles moving off - showing indicators.
f. Parked vehicles backing out.
g. Merging traffic from side roads.
h. Traffic slowing for junction ahead, anticipate because; rear lights showing on vehicles ahead.
i. Pedestrians hesitating at side of road and maybe then crossing.
j. Pedestrians crossing from behind obstructions and using pedestrian.
k. Sharing the roads with vehicles loaded unsafely.

2.2.5. Suburban roads

a. Driving in roads with high interactions with pedestrians without sidewalks.
b. Parked vehicles and on-coming traffic requiring anticipation and slowing down to avoid meeting adjacent to parked vehicle.
c. Cyclists having to overtake parked vehicles.
d. Motorcyclists having to overtake parked vehicles.
e. Cyclists on pavements/sidewalks/road and then joining road.
f. Motorcyclists on pavements/sidewalks/road and then joining road.
g. Children playing (ball games, skate boarding, street roller hockey, etc.).

2.3 Videoclip characteristics

a. Videos should be filmed from a drivers' normal eye point.
b. In right hand traffic flow, the videos must be filmed from a left-hand drive car with a camera mounted on the right-hand side, and in left hand traffic flows the videos should be taken the other way around.

c. Include a little of the instrument panel to indicate that the view is from within a car.
d. Only show 'correct' driving, i.e. not too close, not too fast, etc.
e. Be filmed during daylight hours and fairly dry conditions.
f. Be filmed in broadcast quality Betacam format or better.
g. Videos should be edited to blur faces of road users filmed.

3 UNHCR Responsibilities

3.1. Indicate locations where hazard perception video-clips could be taken.

3.2. Provide the UNHCR guidance for testing candidates for driver positions.

3.3. Provide technical feedback on the product during the development process.

4 Responsibilities of the supplier

4.1. Providing technical support through on the services provided.

4.2. Include the UNHCR Road Safety Unit in the product design process.

4.3. Include the corrections requested by the UNHCR Road Safety Unit before delivering the final products.

5 KPI's

The service and the technologies will be assessed by measuring the next KPI's:

5.1. Hazard perception test results.

5.2. Number of drivers trained on hazard perception.