

WG2 conclusions/recommendations on testing on open roads:

1) The testing of vehicles is already possible in Member States. It was confirmed that the 1949 Geneva and 1968 Vienna conventions on road traffic that these tests comply with the conventions.

Testing on open road is important to make progress on automated and connected vehicles both for manufacturers and regulators.

The group identified that testing is already possible on open roads in several Member States (NL, DE, ES, F, etc.). The UNECE working party 1 (Road Safety Forum) confirmed that *“amendments to the 1949 and 1968 Conventions are not necessary for public testing of driverless vehicles ...”* where there is a person who is ready, and able to take control of the experimental vehicle(s) and that; this person may or may not be inside the vehicle

[<http://www.unece.org/fileadmin/DAM/trans/doc/2016/wp1/ECE-TRANS-WP.1-153e.pdf>]

2) There is no need to harmonize the national testing requirements at this stage

The conditions set by member States may be different (pre-approval or code of practice for testing). This was not felt as a problem by the group. On the contrary, national assessment procedures were preferred over European harmonization of assessment procedures. It is also important to be able to test the vehicles under different conditions. The results of these assessments should - in case of testing explicitly dedicated to cross border traffic – become available for other Member States to prevent double testing. Cross border testing across all the 28 MS is not a priority at this stage and there is a preference to perform cross border testing on a bi- or multilateral basis.

3) There is a need to exchange on lessons learnt during testing

To take the full benefit of testing over Europe, the group recommends encouraging the exchange on main common lessons learnt from testing. The form of such exchanges needs to be further discussed.

4) MS could further work to identify common building blocks (including the items to be documented) for possible mutual recognition of the authorization/approval of vehicles for testing on open roads.

The group already identified common building blocks which could help for the mutual recognition of the approvals/authorisations granted for testing and could help for cross border testing (see Annex). Some Member states (e.g. The Netherlands, Spain) already apply this mutual recognition principle unilaterally. This exercise could be further developed in a next stage of WG2.

In the meantime, on a case – by – case basis, bi-national authorities (national, regional or local) granting authorisations, can define common assessment questions they require from an explicitly cross-border test.

Annex

	Netherlands	Germany	Sweden	Denmark	Belgium	Spain	UK	California	NHTSA
Applicant:									
The applicant is the owner of the vehicles	x							x	
Contact details of the applicant	x	x	x	x	x	x	x		
Is sufficiently insured against accidents	x	x			x	x	x	x	
Driver/monitor									
is employed by the applicant								x	
has been trained to use the system	x	x						x	x
is able to intervene/has experience of dealing with risky situations	x	x						x	
is known by name	x				x			x	
has had a driving licence for X number of years	x	x	x	x	x		x	x	
has not been banned from driving in the past X years								x	
A human driver is always present							x		
Vehicle									
Unique vehicle identification number (VIN + licence plate)	x							x	
Description of the vehicles	x	x	x	x	x				
Basis complies with the legal rules	x	x	x	x	x				
Specific equipment requirements (indicator light, warning panel, striping)		x							
Prototype licence plate			x						
Software version known						x			
Infrastructure / route									
Description of route to be followed	x	x	x		x				
Authorised for all roads				x					
Driving behaviour									
Transition of control (HMI)	x								
Interaction with other traffic	x								
Documentation									
Risk analysis	x	x			x	x	x		
EMC requirements	x	x				x			
Description of the vehicle + functions	x					x			
Test scenarios known						x			
Test scenarios which must be avoided are known						x			
Licensing tests									
Vehicle licensing on the basis of existing rules	x					x			
Safe operation is demonstrated / HARA	x	x				x			
Cybersecurity requirements	x					x	x		
Testing the changeover from manual to automatic and vice versa						x	x		
Testing by an independent testing body	x	x			x	x			
Testing the recognition of infrastructure (signs etc.) / depending on the infrastructure required						x			
Exemption									
Exemption necessary	x	x						x	x
Restricted validity of the waiver	x	x	x	x	x			x	
Exemption can be withdrawn unilaterally	x							x	
Self-certification			x	x					
An authorisation						x			
Maximum number of trips		x							
Exemption not transferable	x	x						x	
Exemption must be present in the vehicle	x	x	x		x				
Extension of exemption possible		x							
Test areas described	x								
Type of practical tests are described	x								
Costs for testing and exemption	x	x				x		x	
Field Operational Tests									
Accidents must be reported		x						x	x
Errors in the system must be discussed in detail								x	x
Error message if system fails							x		
Updating software versions	x	x			x		x	x	x
Applicant sends periodical reports/keeps a log		x							
Log can be consulted for up to two years after testing									
Maximum speed of 100 km/h		x							x
System must indicate when it is not working well									
It must be possible to turn off the system	x							x	x
Sensor data available 30 seconds before accident								x	
Switches on only when safe		x		x					
Switches off under certain conditions (e.g. slippery road, restricted view, traffic queue, roadworks, etc.)	x	x			x				
Code of practice									
Complies with traffic rules	x	x							x
Is aware of (local) traffic rules	x								
Does not pose a danger to other road users	x								

x: stated
empty: not stated or not known