

Organising & Merging Safety Elements and Industry Proposal

Vision statements	European Union	United States	Canada	Japan
	To make Europe a world leader in the deployment of connected and automated mobility, making a step-change in Europe in bringing down the number of road fatalities, reducing harmful emissions from transport and reducing congestion.	To improve quality of life and enhance the mobility and independence of millions of Americans, especially older Americans and people with disabilities. To increase productivity and facilitate freight movement. To impact safety significantly, by reducing crashes caused by human error, including crashes involving impaired or distracted drivers, saving lives.	To have the safest and most efficient movement of people and goods by road in the world. Hope that the technologies will lead to a significant reduction in traffic collisions and thereby result in corresponding reduction in fatalities and injuries.	To realise a society where traffic accidents caused by Automated Driving Systems resulting in injury or death become zero.

1 <u>System Safety</u>	<ul style="list-style-type: none"> Design & Validation Processes (best practices, design principles, standards) Testing methods Operational Design Domain setting and recognition Minimal Risk Manoeuvre Take over of DDT (if required, based on level of automation) Risk Analysis & Mitigation <ul style="list-style-type: none"> Failures Inadequate Control
a <u>Human Machine Interface</u>	<ul style="list-style-type: none"> User (Driver / Passenger) information <ul style="list-style-type: none"> Take-over request System status Malfunction Communication of critical messages Minimum risk manoeuvre in operation Automated mode active Driver availability and override possibility (if required, based on level of automation) Signalling driving intentions to other road users
b <u>System Performance</u>	<ul style="list-style-type: none"> Performance in critical / complex situations (includes response to priority vehicles) Response to scenarios and recognition of the OEDR Scenario recognition (object and event detection) Understanding the system limits and boundaries Dynamic behavior in road traffic Adherence to rules of the road (Federal and local laws) Vehicle behaviour predictability
c <u>Safety of in-use Vehicles</u> <i># existing regs have to be complied with</i> <i># for ADS a review needs to be initiated</i>	<ul style="list-style-type: none"> Inspections / Repair / Modifications processes Software / system update process Maintenance of existing level of crashworthiness (for vehicles carrying occupants) Vehicle state monitoring Post-crash behaviours <ul style="list-style-type: none"> collision notification to occupants and emergency services, return to a safe-state,
d <u>Cybersecurity</u>	<ul style="list-style-type: none"> Risk Analysis & Mitigation strategies Incident management Documentation strategies/changes/testing Cyberattack events
2 <u>Consumer Awareness/Education</u>	<ul style="list-style-type: none"> Training programmes System Operational domain/limits Systems prescribed use
3 <u>Data Recording & Storage System</u>	<ul style="list-style-type: none"> Protocol, recording intervall, data elements Recording capacity / standardised access