Organising & Merging Safety Elements and Industry Proposal

1 System Safety
   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
   Inadequate Control

   a Human Machine Interface
      User (Driver / Passenger) information
      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 System Performance
      Performance in critical / complex situations (includes response to priority vehicles)
      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 Safety of in-use Vehicles
      Inspections / Repair / Modifications processes
      Software / system update process
      Vehicle state monitoring
      Post-crash behaviours
      Collision notification to occupants and emergency services, return to a safe-state.
      # existing reg have to be complied with
      # for ADS a review needs to be initiated

   d Cybersecurity
      Risk Analysis & Mitigation strategies
      Incident management
      Documentation strategies/changes/testing
      Cyberattack events

2 Consumer Awareness/Education
   Training programmes
   System Operational domain/limits
   Systems prescribed use

3 Data Recording & Storage System
   Protocol, recording interval, data elements
   Recording capacity / standardised access

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Vision statements:

European Union
- 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.

United States
- 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.

Canada
- 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.

Japan
- To realise a society where traffic accidents caused by Automated Driving Systems resulting in injury or death become zero.

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