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# Scenario Catalogue for Automated Driving Systems

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# Catalogues in WP.29

- WP.29 has worked for years on a catalogue
  - ▶ The Database for the Exchange of Type Approval Documentation (DETA) is a catalogue
  - ▶ The DETA effort has good lessons for WP.29 to take into account in the consideration of any new WP.29 effort about a catalogue
- WP.29 groups have interest in possible new catalogues
  - ▶ An organized method is needed for the exploration of possible new catalogues
  - ▶ Catalogue creation and operation is a major IT undertaking
  - ▶ Both user and IT expertise should be part of any expert group on possible WP.29 catalogues

# Scenario Catalogue

- The VMAD and FRAV draft documents envisage a scenario catalogue, which can be a central database or distributed
  - ▶ Although time and scope for VMAD and FRAV did not allow for creation of a scenario catalogue, there is support from contracting parties and industry to create a scenario catalogue
- There has not been time and expertise to determine how a scenario catalogue will be created, maintained, operated, used, paid for, etc.
- There will be many relevant scenarios for a scenario catalogue
- A scenario catalogue will evolve over time
  - ▶ Information from ISMR might identify new scenarios that should be added to a scenario catalogue
  - ▶ New functionalities and new ODDs might identify new scenarios that should be added to a scenario catalogue

# Observations

- The amount of time necessary to create and maintain catalogue entries is often mis-estimated until a design is done
  - ▶ Creating a scenario entry might only take hours but there are many scenarios relevant to ADS products
- There are existing scenario catalogues
  - ▶ A common format needs be defined to meet the needs of the vehicle manufacturers and authorities
  - ▶ If a central scenario catalogue is chosen, their content needs to be consolidated for use by all authorities and vehicle manufacturers in all markets
- The effort and cost needed for a scenario catalogue can only be determined by analysis by experts

# IT Decision Approach for Determining Whether to Create a New WP.29 Catalogue

- The creation, maintenance, and operation of a data catalogue is a common IT computer system activity
- The usual steps include
  - ▶ 1. Define the need
  - ▶ 2. Define the content of a catalogue element
  - ▶ 3. Determine whether the catalogue is centralized or distributed
  - ▶ 4. Define the structure of the way that catalogue elements will be created and maintained through computer system input devices
  - ▶ 5. Define how the content of the catalogue will be accessed and used
  - ▶ 6. Determine the required service levels for catalogue use
  - ▶ 7. Estimate the development cost of the IT system and the cost of the people doing the element entry
  - ▶ 8. Determine the computer system operation and costs
- These steps should be completed before a decision is made whether to proceed with a catalogue

# User Decision Approach for Determining Whether to Create a New WP.29 Catalogue

- For any possible new WP.29 catalogue, a group of potential users supported by IT experts should be created to carry out the steps necessary to properly decide whether a new WP.29 catalogue be created
  - ▶ How will the catalogue be paid for
  - ▶ How will catalogue entries be created and updated
  - ▶ How will the catalogue be operated
  - ▶ How will catalogue entries be accessed and used
  - ▶ What will be the governance, including stakeholders, rights, responsibilities, etc.

# Possible Timing to Initiate the Analysis to Determine if a WP.29 Scenario Catalogue Should Be Created

- GRVA task interested stakeholders to convene a workshop to explore what WP.29 should do with the scenario catalogue issue
  - ▶ If the conclusion of the workshop is that WP.29 should proceed with the analysis of creating a scenario catalogue (centralized or distributed) interested stakeholders should create a draft ToR for an informal working group on a possible WP.29 scenario catalogue, possibly for the May 2024 meeting
- If a ToR is adopted, GRVA task the IWG carry out the items in the ToR to determine if a WP.29 scenario catalogue makes technical, business, and economic sense