ADS-IWG Phase 1
Virtual Credibility Assessment

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Summary on Credibility section

- 5 meetings held between the 3rd (Brussels) and 4th (London) IWG-ADS:

1. Transposition of VMAD-SG2 guideline document into regulatory text:
    - Extract part of the guideline text containing explicit and implicit requirements
    - Rephrasing to match the “who shall do what” format
2. Restructuring of the document to match regulation’s structure:
    - **4. General Requirements**: general obligation for the manufacturer to demonstrate suitability of the simulation toolchain through credibility assessment
    - **5. Requirements/Specification:** lists requirements for credibility (management, analysis, V&V) which address the manufacturer
    - **6. Assessment:** role of the auditor

Summary on Credibility section

- General agreements on most requirements transposed from the guideline
- Open items:
    1. Possibility of using more than a simulation toolchain and whether the current text (using wording *“toolchain(s)”*) is clear in this regard:
    2. Possibility of re-using only a tool part of a simulation toolchain for a different use-case
    3. Add additional clarification details to overcome vagueness on specific requirements.
- Future work (Phase 2/3) :
    - *Role of the assessor:* limited supporting text from guideline, new text to be developed
    - Need to find the right balance in providing clarity without overengineering requirements
    - Link with SMS (e.g., competency of the personnel, interaction with suppliers)

Open item 1

- **Dealing with multiple toolchains**
- **Rationale**: manufacturers might wish to use different simulation toolchains to cover different aspects of the ADS assessment (e.g., HIL for failure scenarios and MIL to complement some physical tests/parameters exploration…).
- **Options:**

1. (current) Use notation "*simulation toolchain(s)*" throughout the requirements' list
2. add specific requirement in the specification section that clarifies the point, ex:

5.X.Y. [*tentative*] The manufacturer may use multiple simulation toolchains provided that each simulation toolchain is suitable for the specific use case

Open item 2

- **Dealing with tool(s) from another toolchain(s)**
- **Rationale**: manufacturers might wish to use an already developed tool from a toolchain for a different use-case with potentially different criticality
- **Option:** suggested definition for simulation toolchain that might fit better:
  - [OLD] *"Simulation toolchain"* means a combination of simulation tools that are used to support the validation of an ADS
  - [NEW] "*Simulation toolchain*" means a simulation tool or a combination of simulation tools that are used to support the validation of the ADS safety case
- The new definition has the following clarifications:
  1. it makes clear that a simulation toolchain might be made up of a single tool;
  2. it ties the scope of a toolchain to the safety case (requirements + AoUR).

Open item 2

- **Level of detail in requirements**
- **Rationale**: original guideline document listed approaches to document the credibility and its sub-pillars (e.g., criticality based on ISO 26262). The guideline nature affords to be more exhaustive but in the regulatory text a suitable *trade-off* between level of detail and flexibility for the manufacturer is needed.
- **Options:**

1. (current) relatively open text derived from guideline where provisions which could potentially force explicit approaches towards credibility assessment have been removed
2. Develop new content/add examples in the body of the text
3. Move discussion to interpretation document

Thank you