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# **OPENPASS**

**WORKSHOP FUTURE ROADMAP** 10<sup>TH</sup> JANUARY 2022



### **AGENDA**



- 1. Current developments
- 2. Release procedure
- 3. Requirement collection
  - a. Repository structure
  - b. Functionality and tasks of the core, the scenario engine and the API
  - c. Modularity and standards on component level



## 1. CURRENT DEVELOPMENTS

### 2. RELEASE PROCEDURE



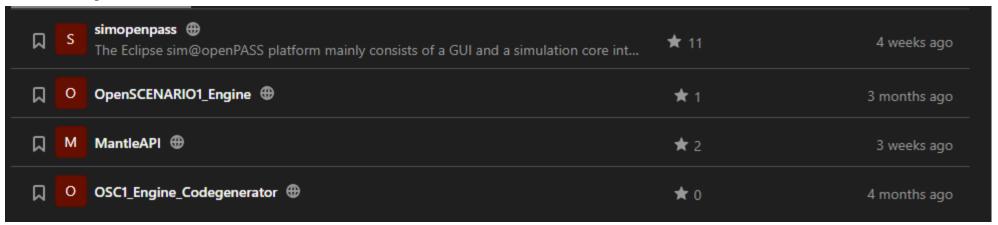
Strong delay in the publication of the latest releases

- → More releases with smaller changes
- →SC/AC decides whether a new release should be published

## 3.A) REPOSITORY STRUCTURE



#### **Status quo**



#### **Proposal**

- simopenpass
- simopenpass\_core
- simopenpass\_GUI
- simopenpass\_models (bicycle model, modular driver, AEB, ...)
- OpenSCENARIO1\_Engine
- MantleAPI
- OSC1\_Engine\_Codegenerator
- YASE

# 3.B) FUNCTIONALITIES AND TASKS OF THE CORE, THE SCENARIO ENGINE AND THE API



#### Current functionalities and tasks of the simulation core:

The core consists of the simulation manager and the simulation executable

- Simulation manager (opSimulationManager.exe):
  - collects and organizes input data
  - triggers one simulation process for each configured scenario/experiment
  - can start several experiments simultaneously
- The simulation executable (opSimulation.exe) is the one performing the actual simulation:
  - run several simulations for one stochastically changed scenario / experiment
  - Read all configuration files and provide the data to the corresponding modules / components
  - Load all needed / configured libraries (agent components, core modules)
  - Instantiate all configured agents and ensure the correct data exchange between the components and modules
  - schedule / trigger each component and module in the correct order
- Core components: spawner, driver, vehicle components, stochastics, world, collision, ...
- Agent/model components: sensor, algorithm, dynamics

# 3.B) FUNCTIONALITIES AND TASKS OF THE CORE, THE SCENARIO ENGINE AND THE API



#### TÜV SÜD

#### Core

- Credibility assessment

#### **Scenario Engine**

- Parameter variation through an integration of OpenSCENARIO 1.1
- Short/Mid term: Parse OpenSCENARIO V1.0.0, V1.1.0 and V2.0 into an openPASS readable format
- Long term: Parse any scenario description language into an openPASS readable format

#### **API**

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#### General

- Visualization



## 3.C) MODULARITY AND STANDARDS ON COMPONENT LEVEL

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