

# Extending the Scope of Future OpenSCENARIO Releases

Kick-Off Workshop ASAM OpenSCENARIO  
Jupp Tscheak, RD/ASE, Sindelfingen, 13.11.2018

Mercedes-Benz  
The best or nothing.

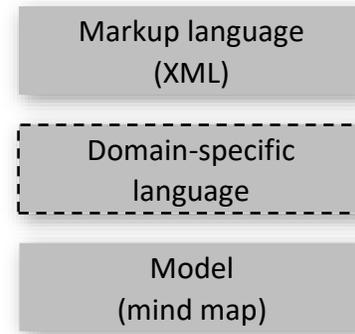


# Status Quo

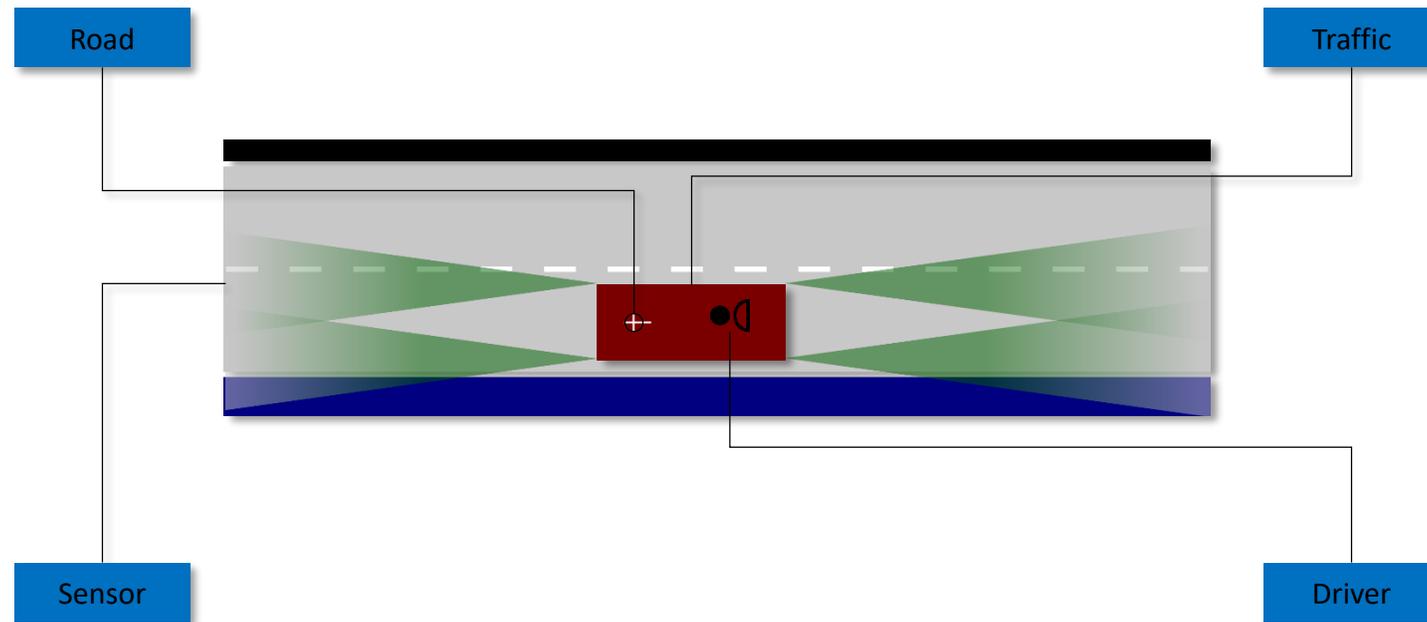
Markup language  
(XML)

Model  
(mind map)

# Suggested Extension: DSL



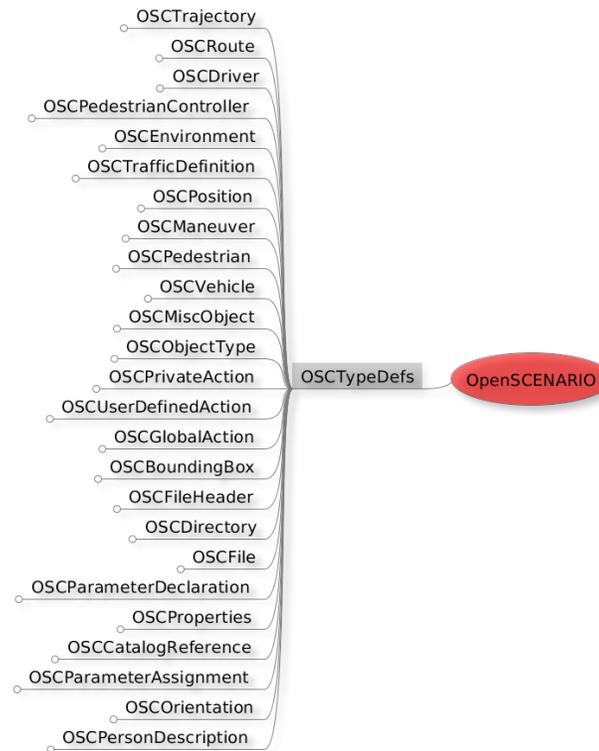
# A Really Simple Example



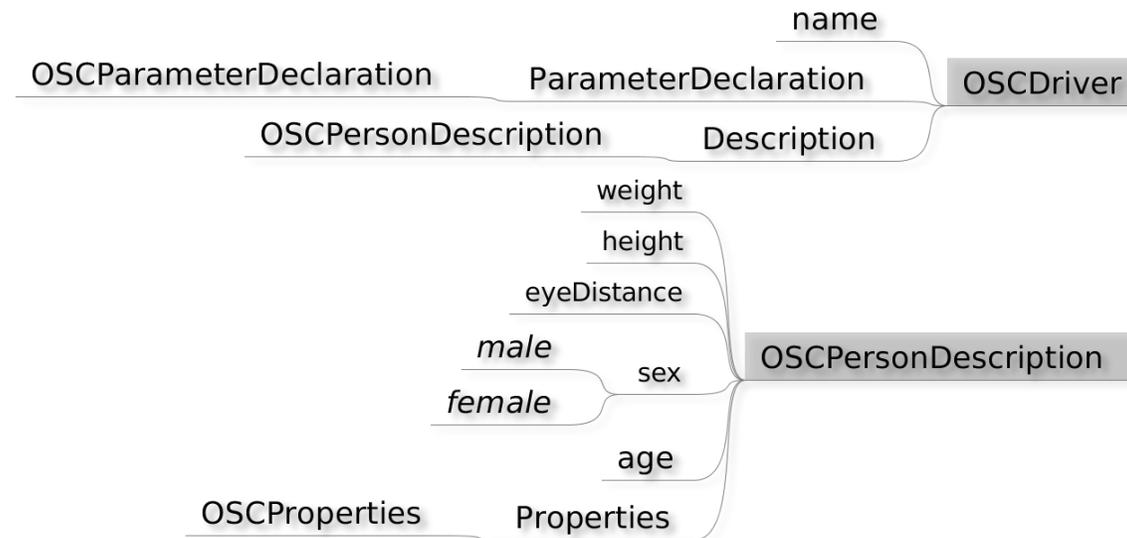
# The Virtual World



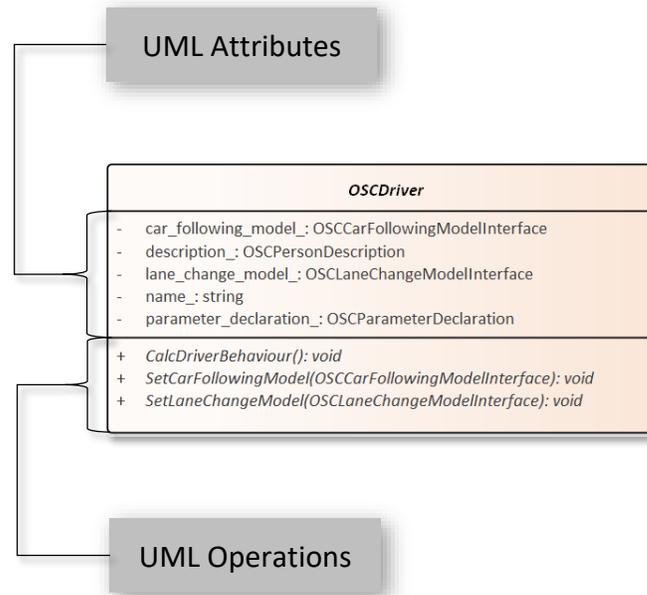
# Types Modelled Using A Mind Map



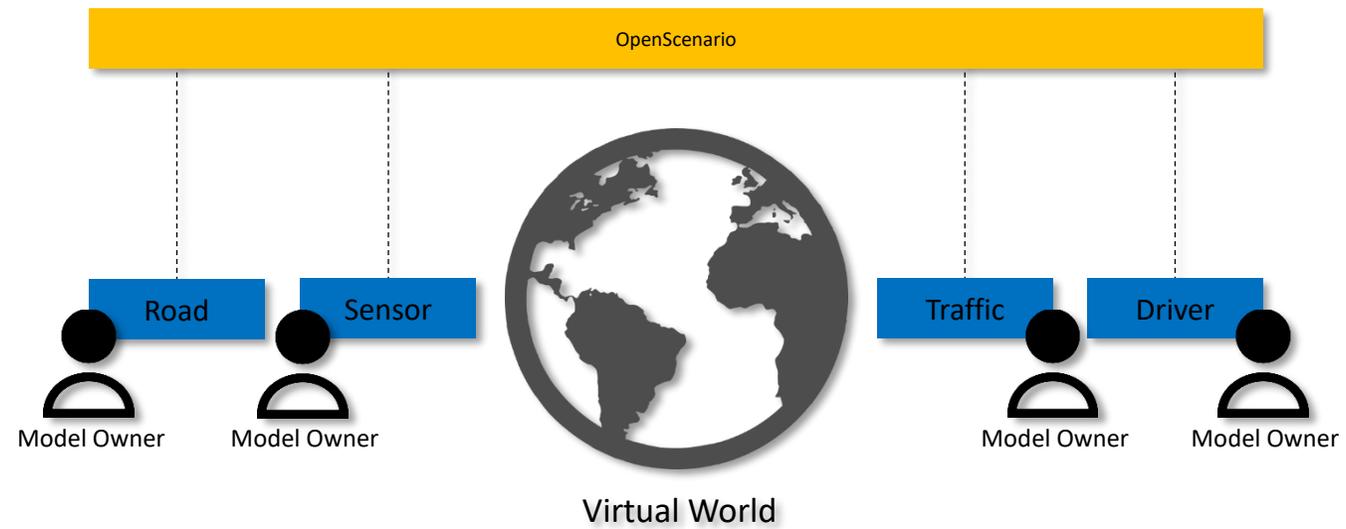
# The OSCDriver Type: Mind Map



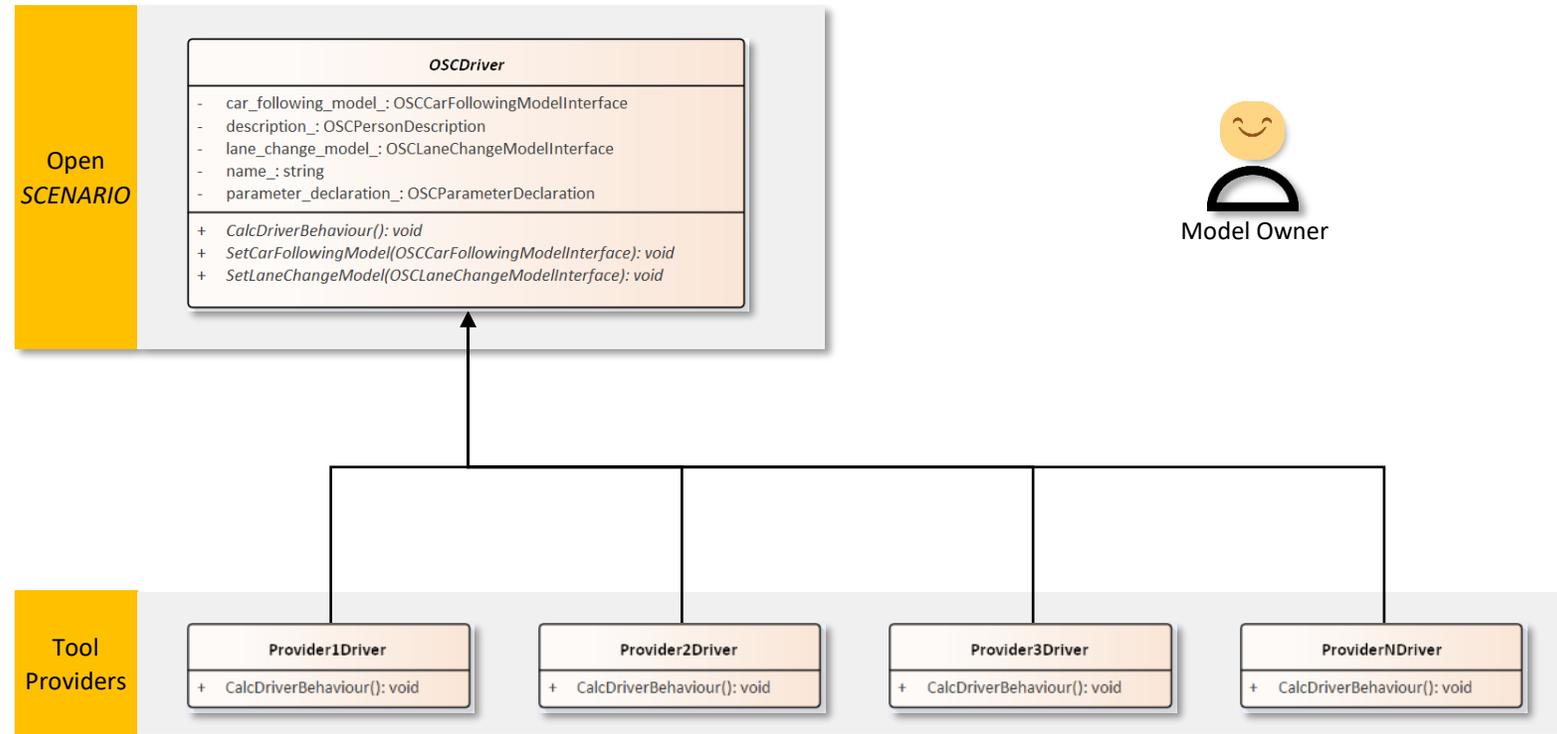
# The OSCDriver Type: UML



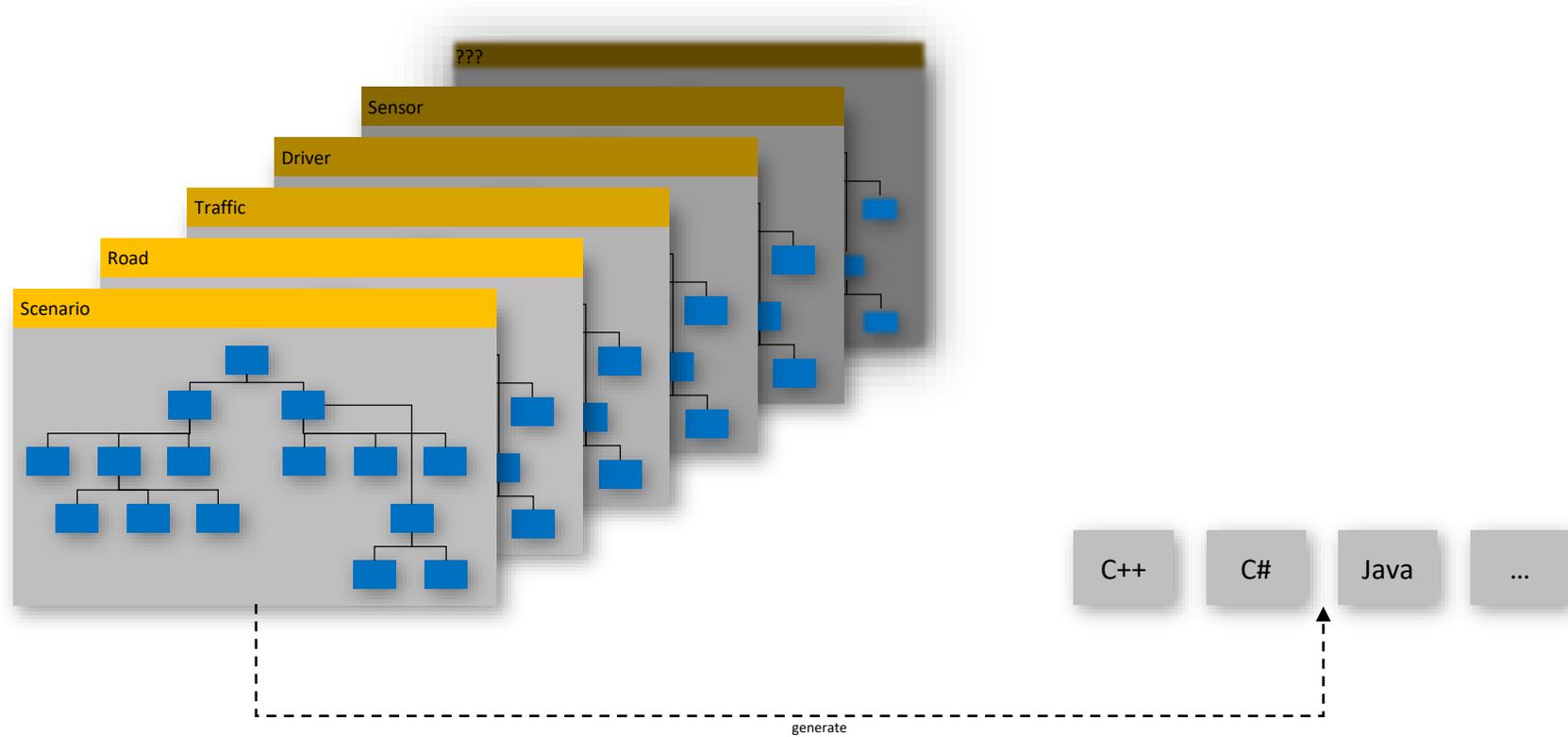
# Model Ownership



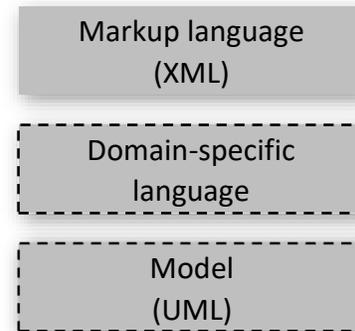
# Making The Model Owner Happy



# Virtual World As UML



# Suggestion: Change Of The Modelling Language



# A Really Simple C++ Script

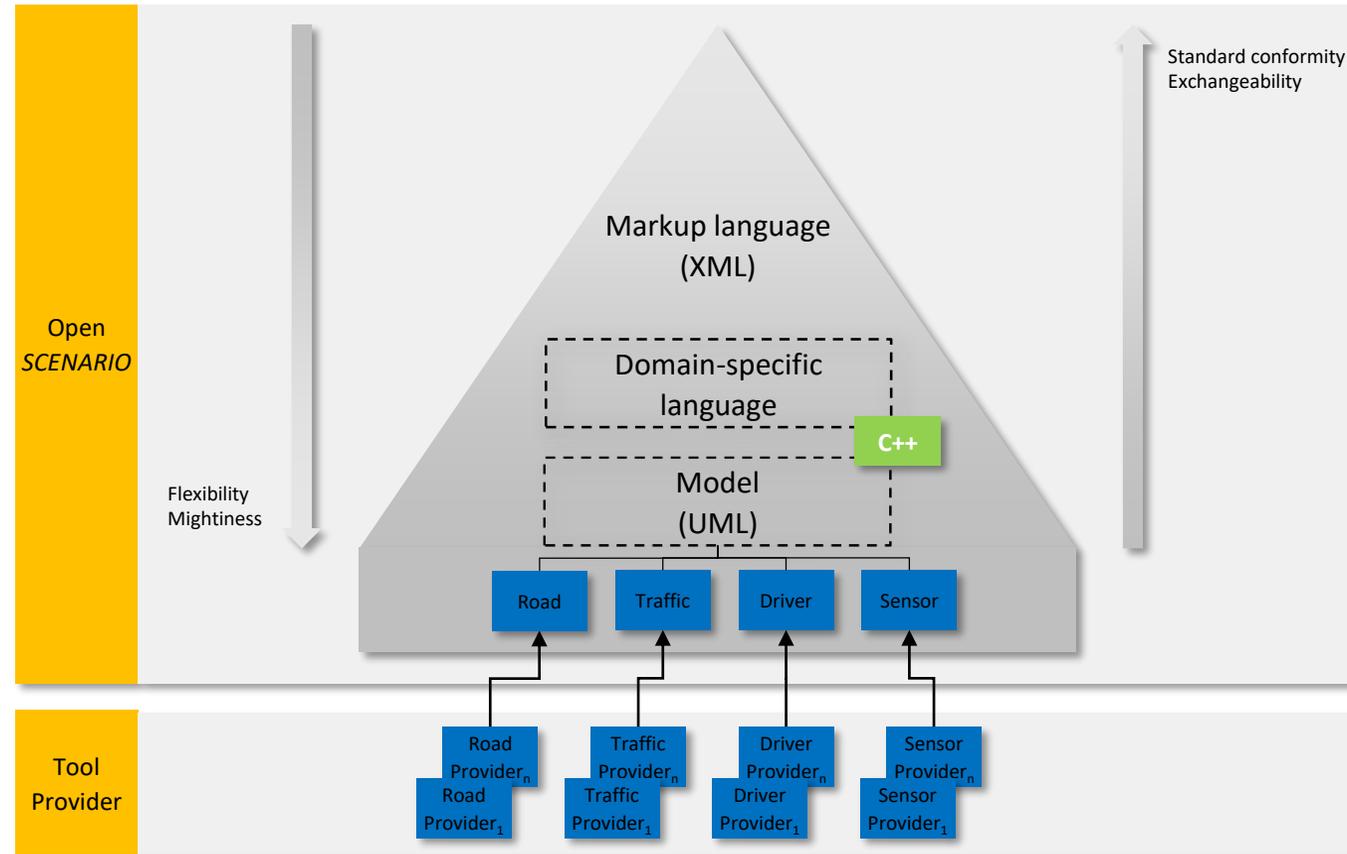
```
OSCRoadNetwork* road_network = new ODRRoadNetwork;
OSCTrafficController* traffic_controller = new OSCTrafficController(new Provider1EntityFactory);
OSCDriverController* driver_controller = new OSDriverController(new Provider1DriverFactory);

double route_pos = 100;
LanePosition lane_pos = road_network->CreateLanePosition(route_pos, LaneRightmost);

OSCAbstractVehicle* vehicle = traffic_controller->CreateVehicle(lane_pos, new OSCVehicleDatabaseEntry);
vehicle->SetVelocity(0.0);

OSCAbstractDriver* driver = driver_controller->CreateDriver(new OSDriverDatabaseEntry);
driver->SetDesiredVelocity(100 / 3.6);
vehicle->SetDriver(driver);
```

# The Whole Picture



# Summary

We would like to ask the community

*to change the used modelling language to **UML** so that there is*

- an API like abstract model of all Virtual World entities,
- the possibility to get implementations of the model from tool providers as a library, independent of the used target language (C++, Java, C# etc.),
- the possibility to describe OpenSCENARIOS in high-level programming languages in addition to the already existing XML and perhaps DSL.

# The Whole Picture

Thank you 😊