

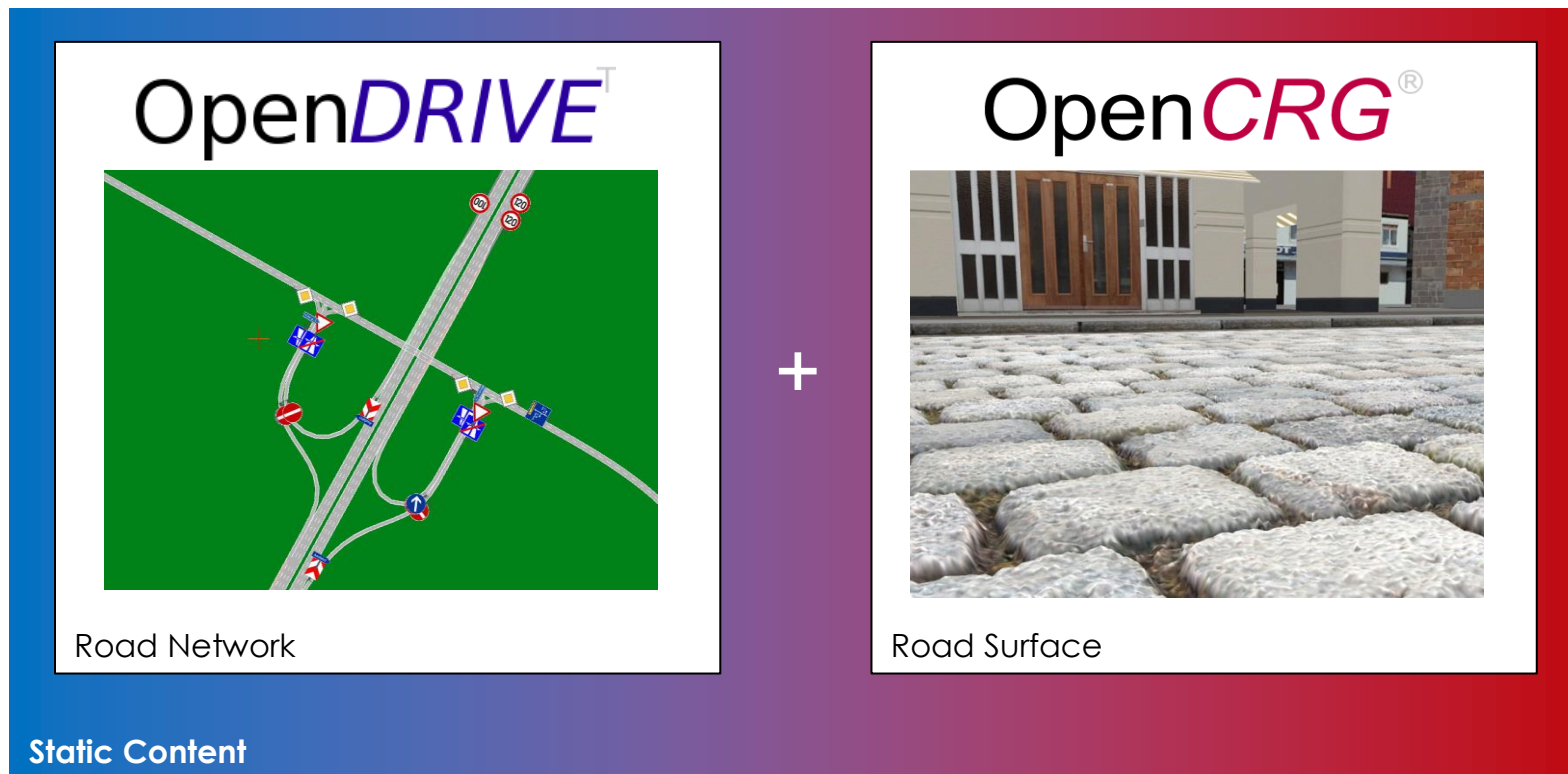
OpenSCENARIO

Standardisierung "auf hohem Niveau"

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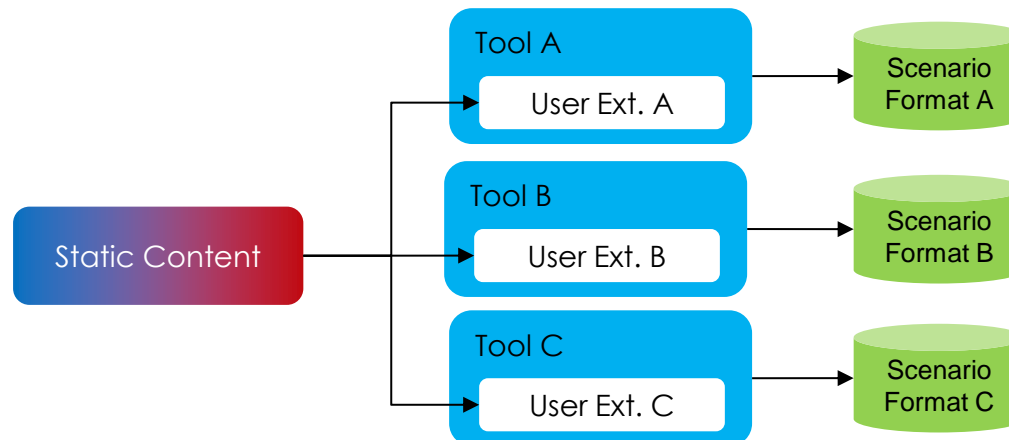
*IBS-Workshop
Automotive Software Engineering – Virtuelle Absicherung
June 09th, 2015*

- **Fact:** De-facto standardization has been realized on lower levels



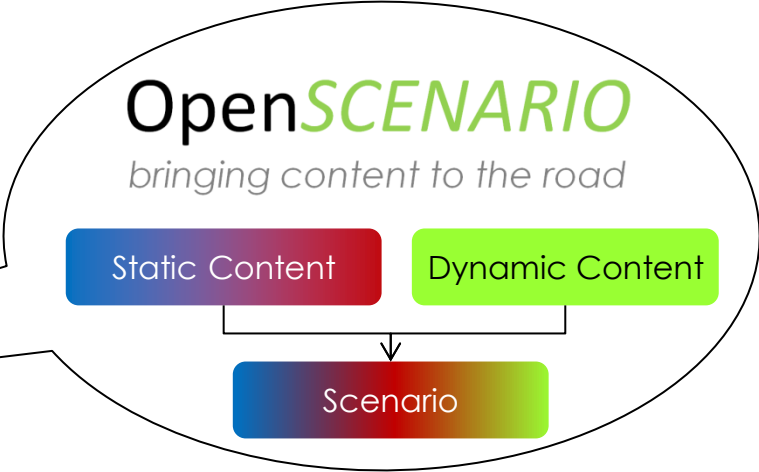
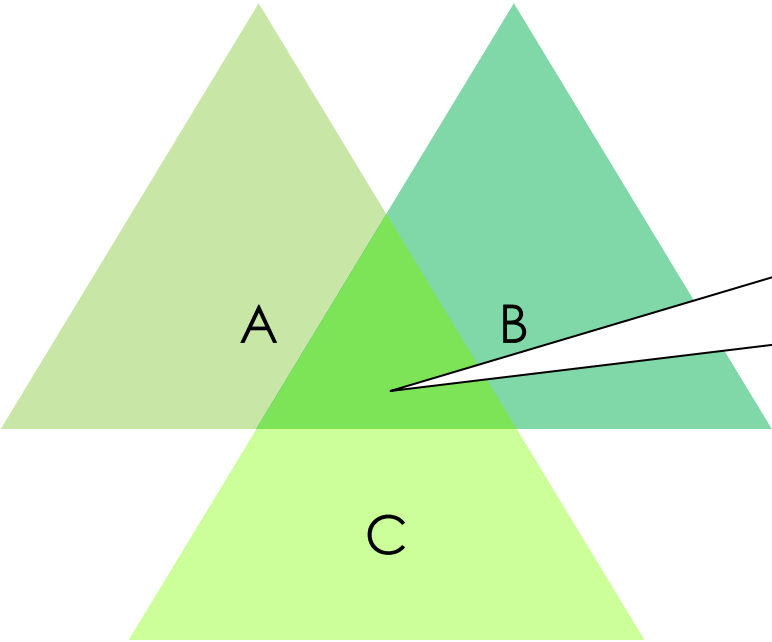
- **Result:** Road Files may be transferred between various simulation tools

- ADAS functionality requires **extensive testing** in various environments
- **Feature sets** of various tools are highly different
- Each tool is well suited for its **specific purpose**
- **Migrating** scenarios from one tool to another one requires high effort
- Independent **3rd parties** (e.g. authorities) are not able to provide scenario definitions in a format compatible with multiple tools
- **Result:** Dynamic content may not yet be transferred in a standardized way and depends highly on the tools involved



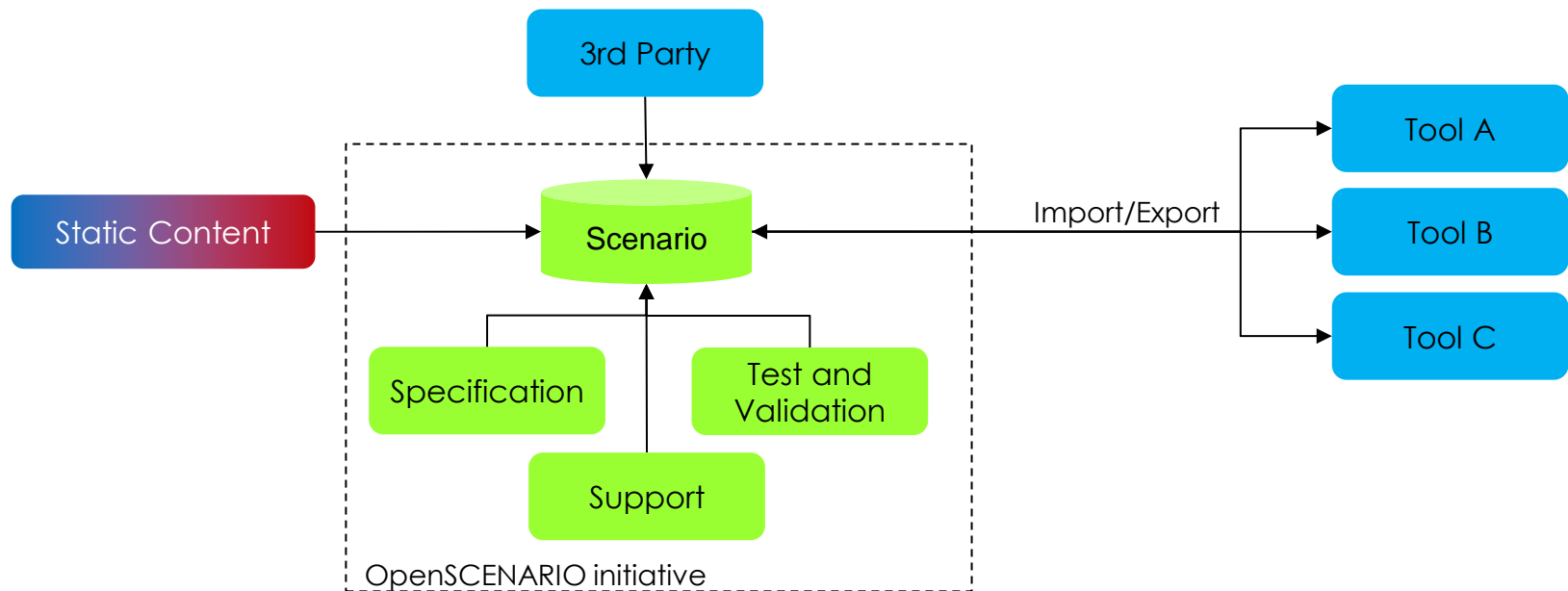
Assumption
All tools share a considerable fraction of **common functionality**

Conclusion
Description of dynamic content may be **harmonized**

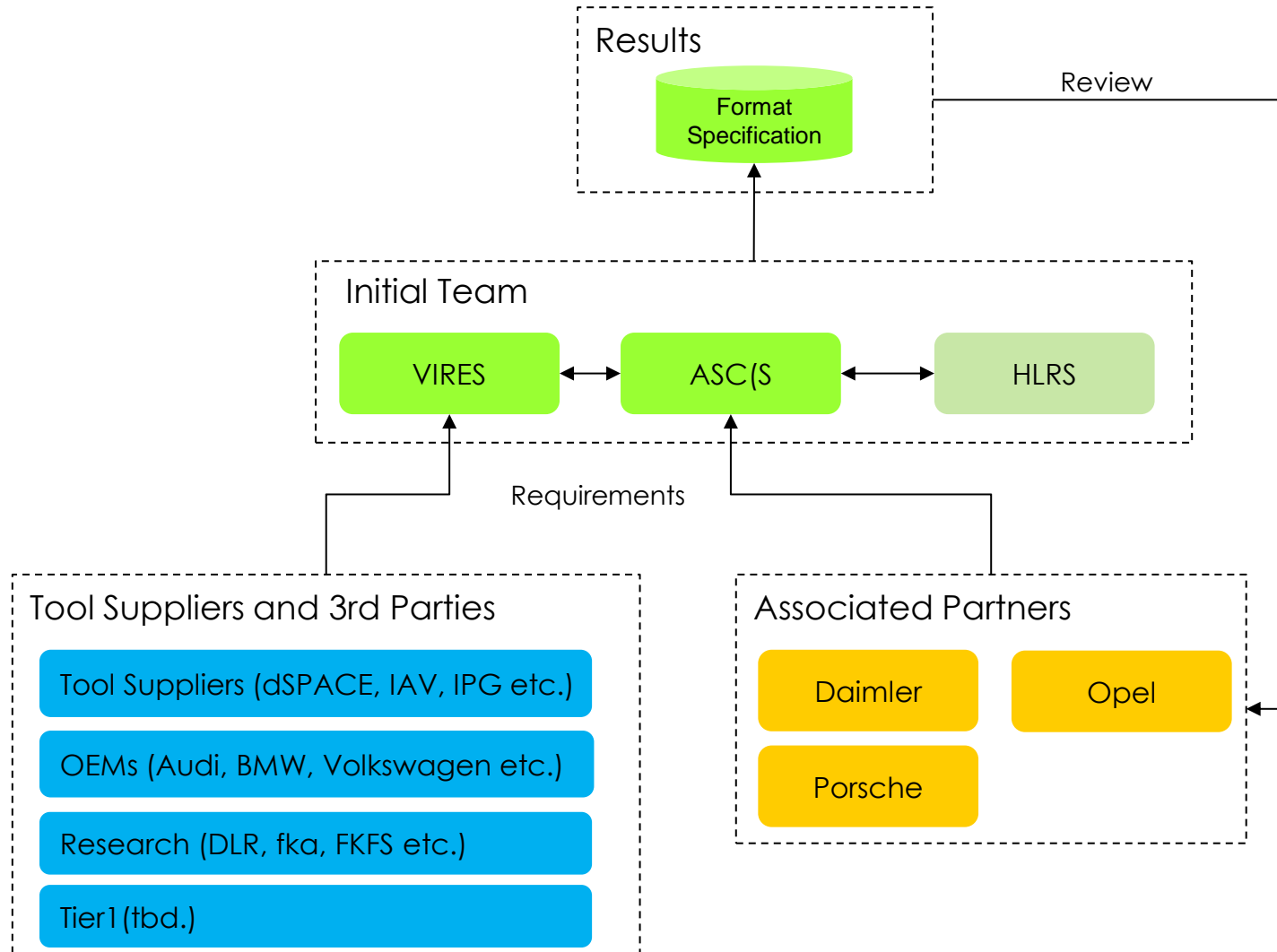


Objection
Same dynamic content does not implicate identical results!

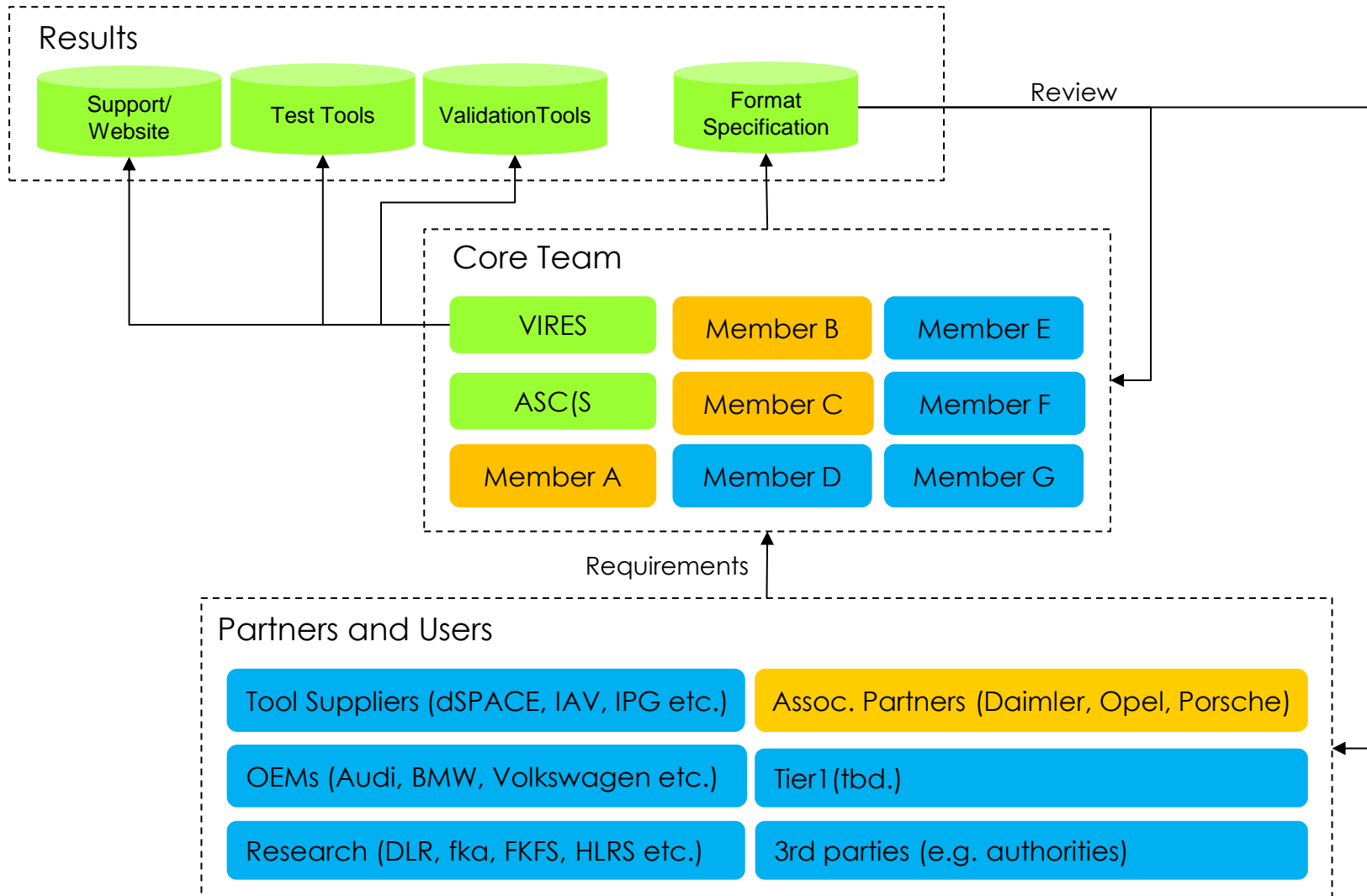
- Provide transferable XML **scenario definition** for various use cases
- Use **OpenDRIVE / OpenCRG** as basic layers
- Allow for independent content provision by 3rd parties
- Provide standardized / open **tool-sets** for validation of scenario definitions
- Establish **support** services



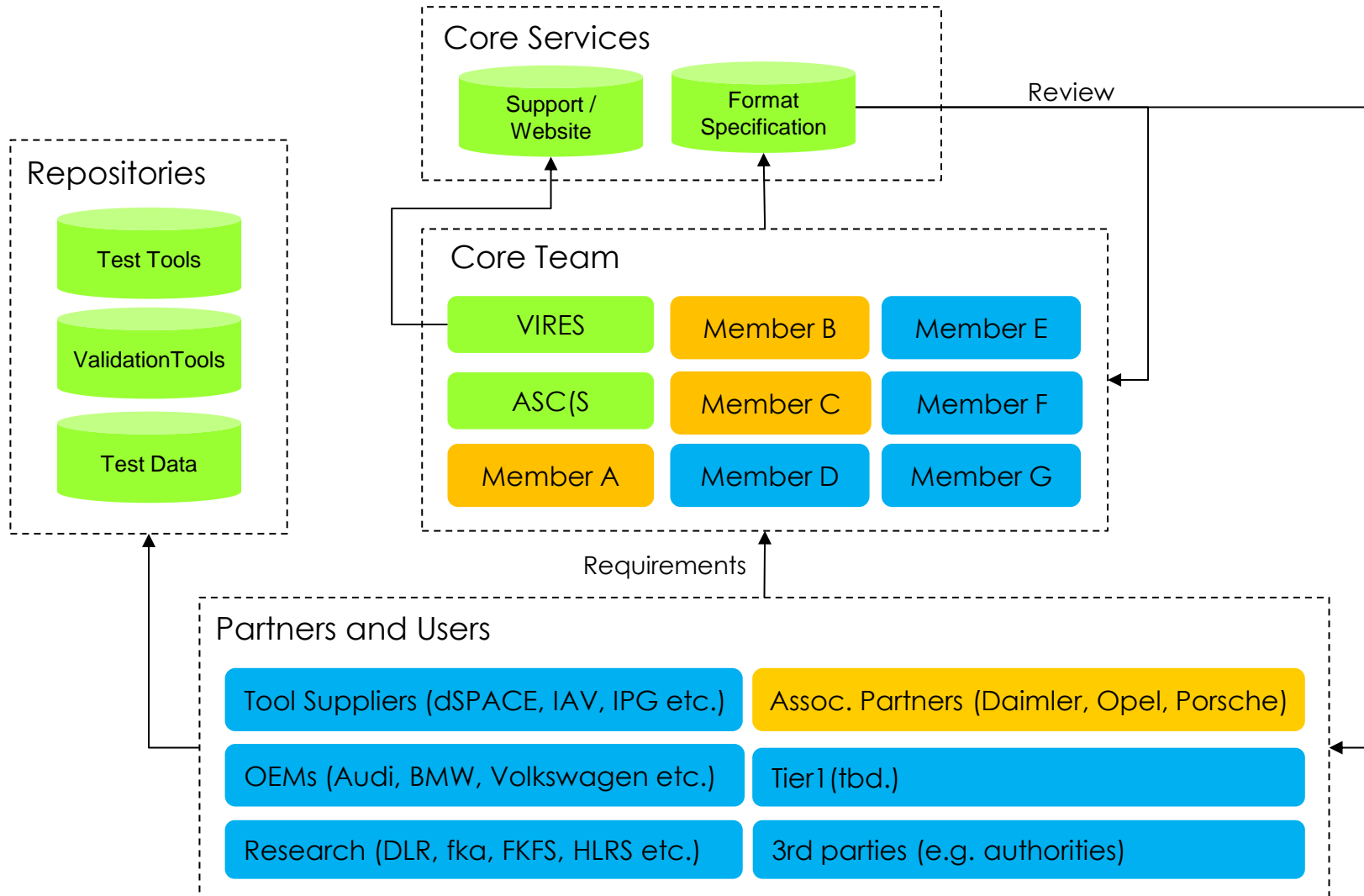
Definition Phase, Stage 1



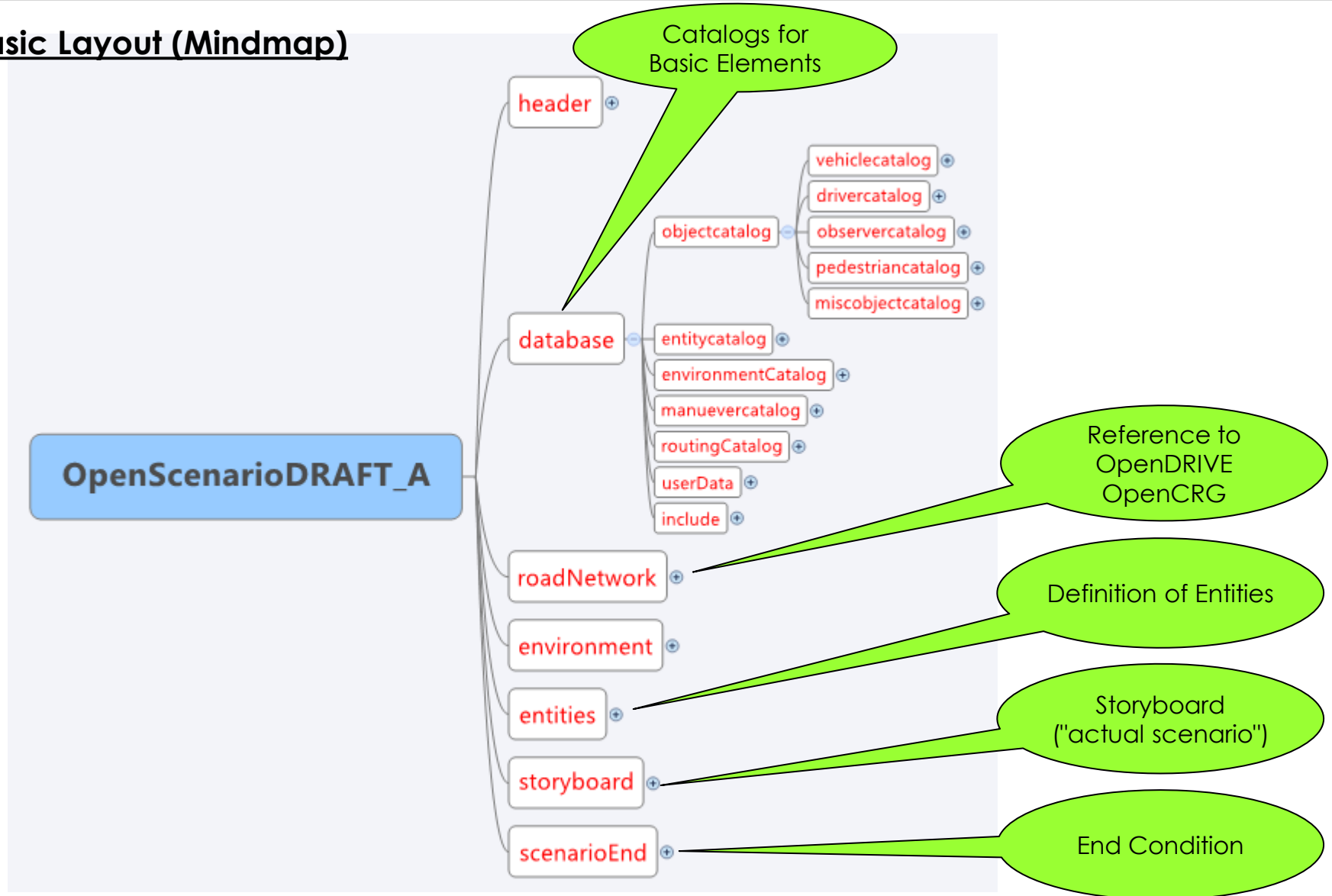
Definition Phase, Stage 2



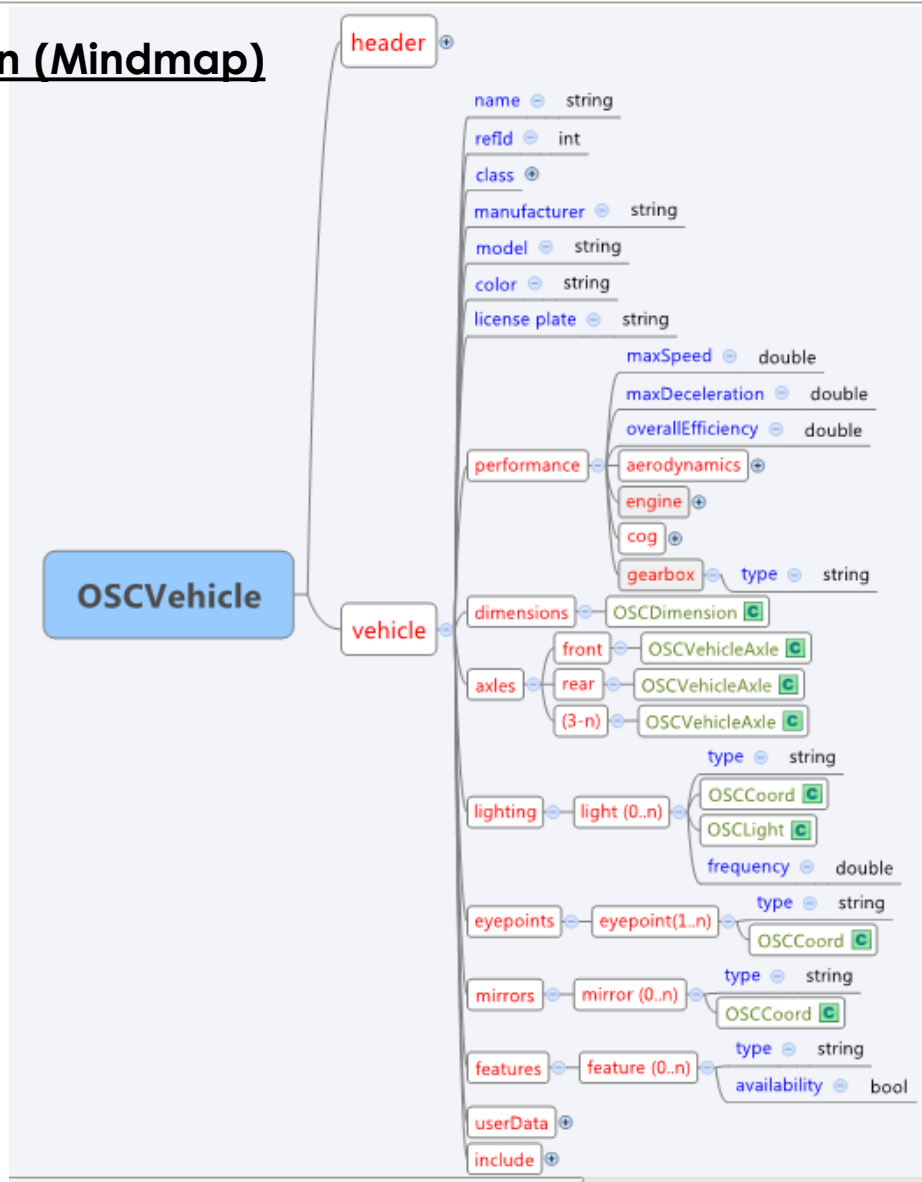
Maintenance Phase



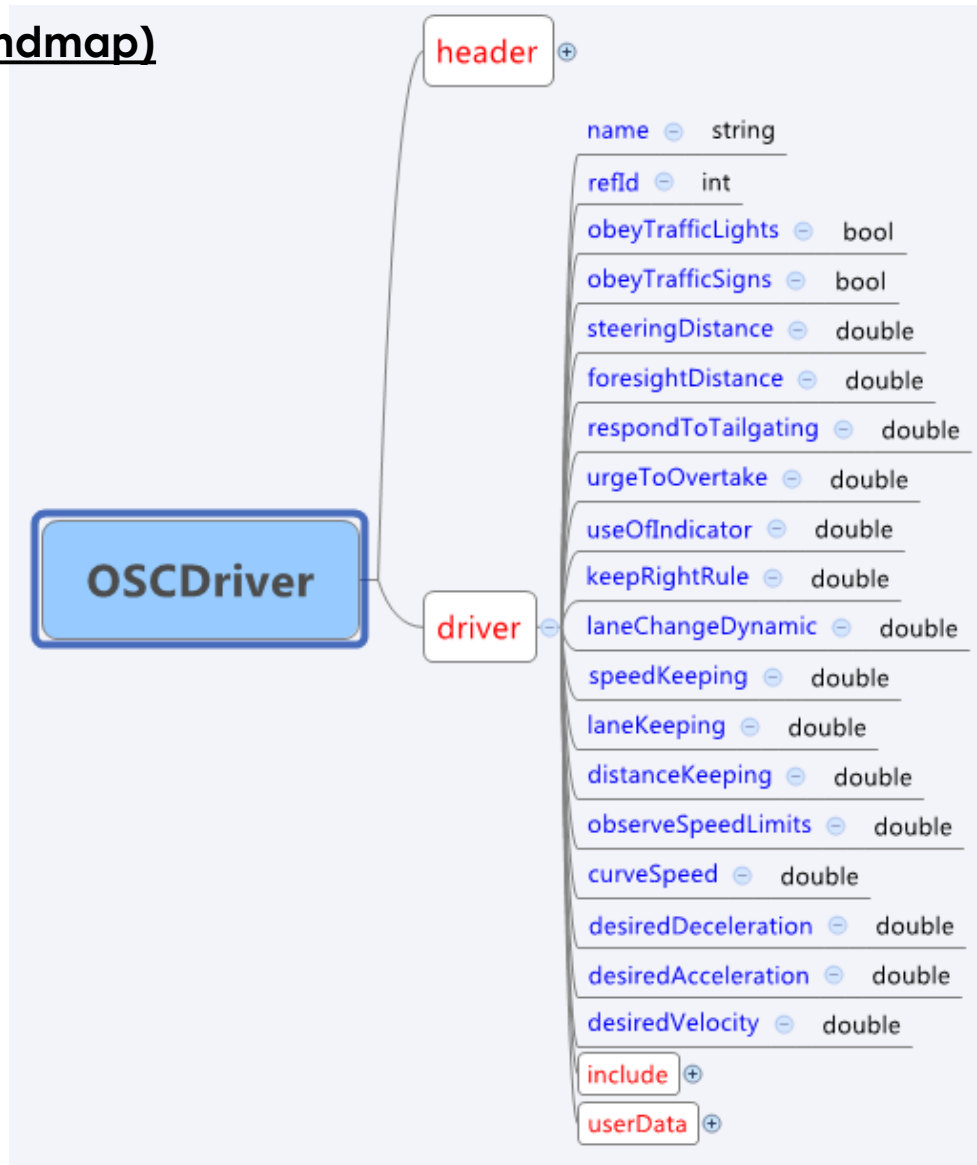
Basic Layout (Mindmap)



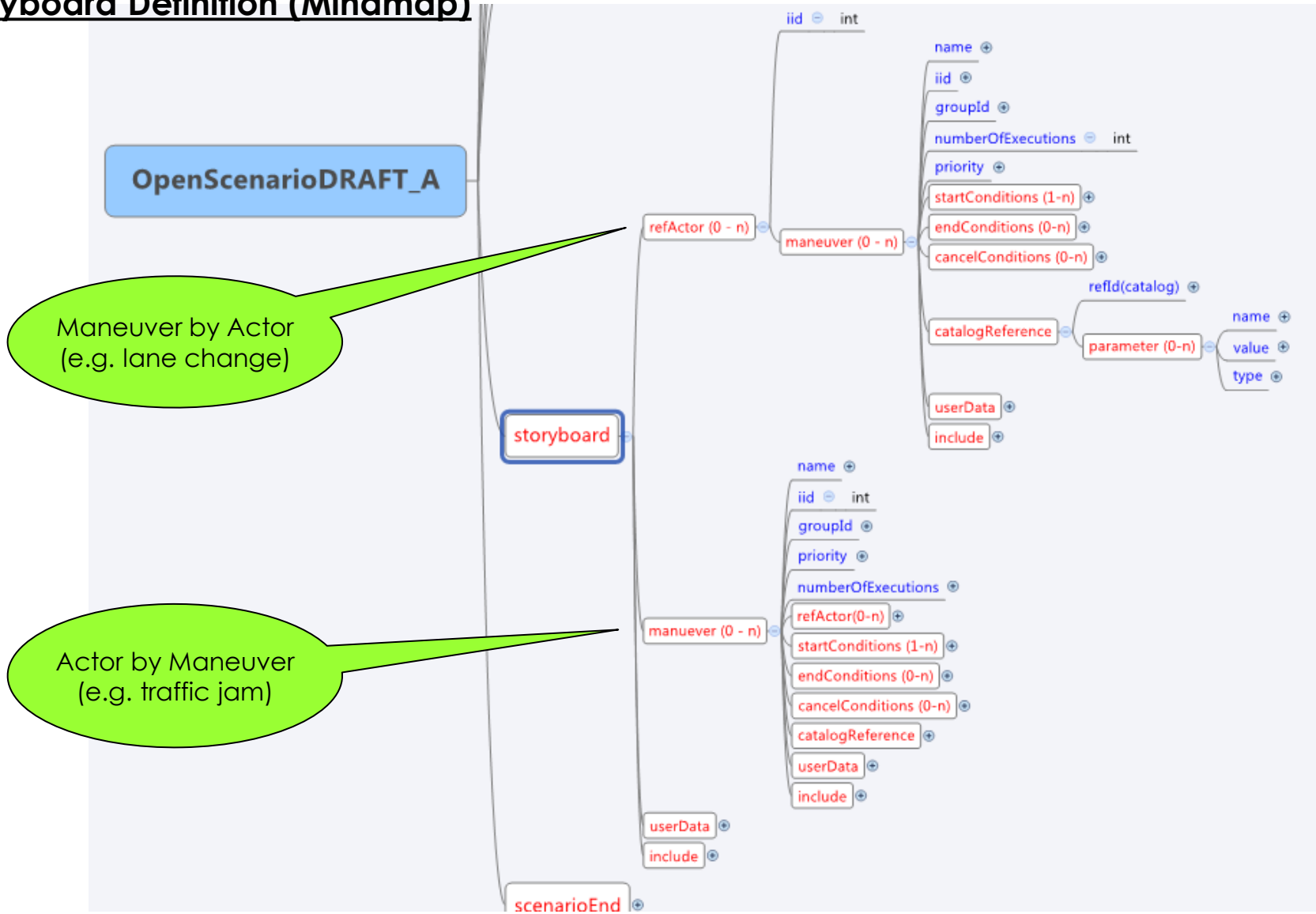
Vehicle Definition (Mindmap)



Driver Definition (Mindmap)



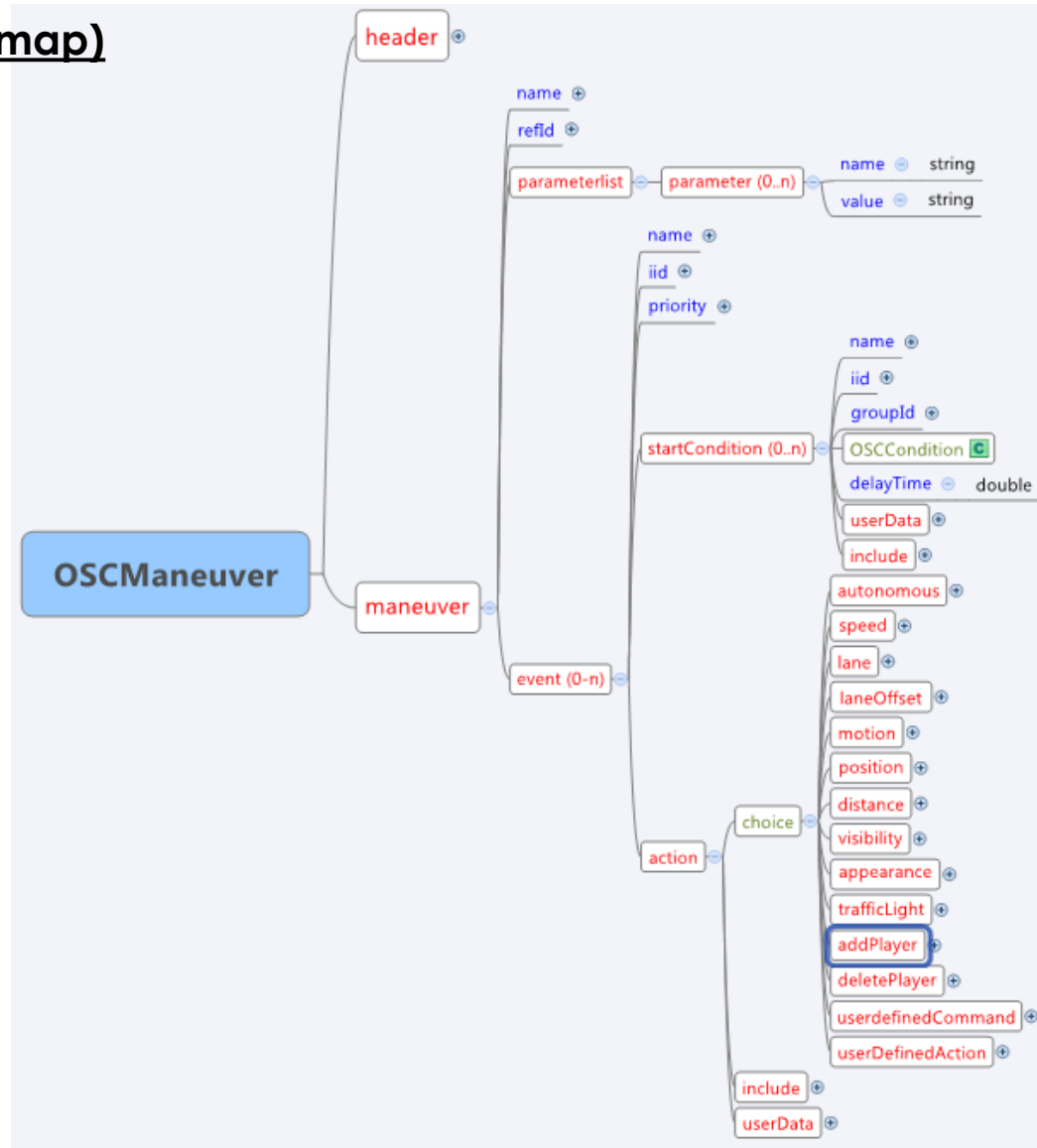
Storyboard Definition (Mindmap)



Maneuver by Actor
(e.g. lane change)

Actor by Maneuver
(e.g. traffic jam)

Maneuver Definition (Mindmap)



- OpenSCENARIO will serve as open file format for dynamic content
- validation tools and test data shall complement the format specification
- **initial user requirements have been collected**
- **a first draft of the structure is under review**
- a broad user base and a core-team shall contribute to the on-going development
- OpenSCENARIO is designed for becoming a **de-facto standard**
- Resources:
 - <http://www.openscenario.org>
 - <mailto:openscenario@openscenario.org>
 - <http://tracking.vires.com> (bug-/feature-tracking)

That's it!

Thank you for your attention!

Questions?