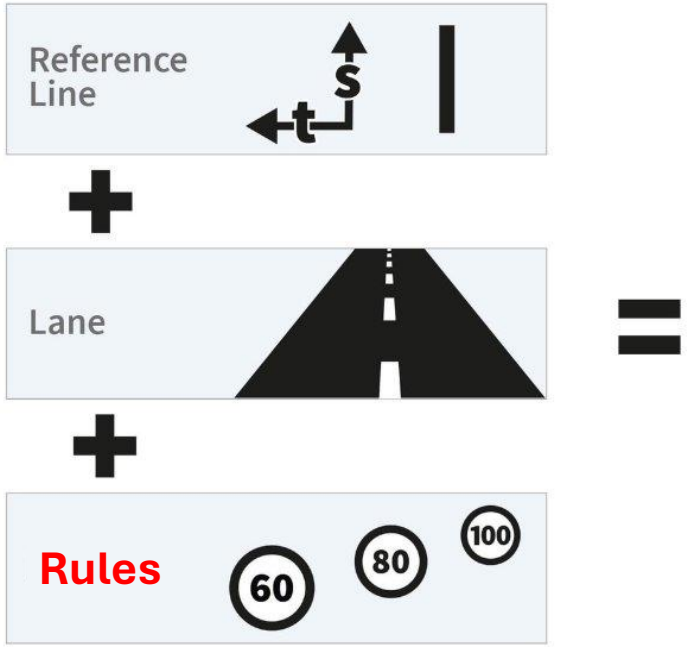
Proposal Idea

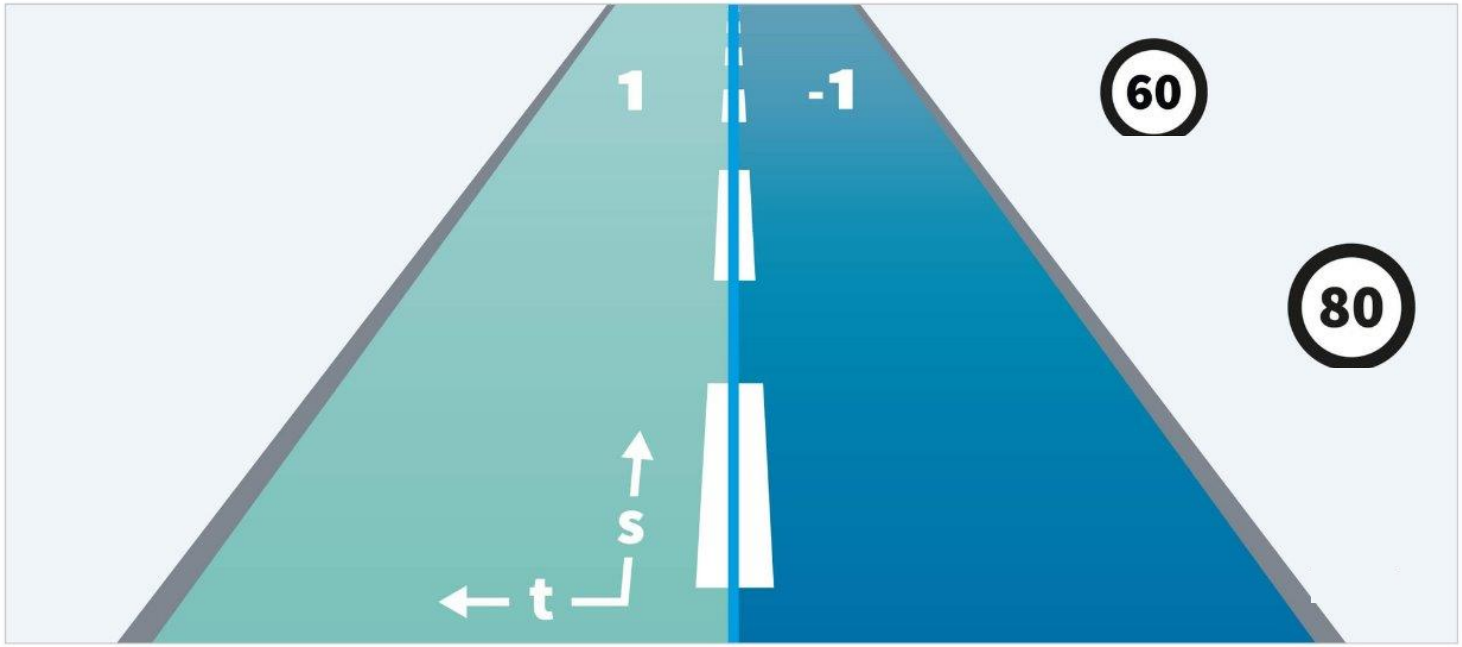
Description of road space using ASAM OpenDRIVE and CityGML

- Area Concept of the ASAM OpenDRIVE Concept project proposed a decoupling of road and environment description
- Establish a data model for a comprehensive, standardized and easily understandable description of drivable area street space and its environment
  - Reduce ASAM OpenDRIVE's role to defining the minimal viable driving area
  - Outsource further semantic and visual information to CityGML
  - Link information in a standardized manner

Components modelled in ASAM OpenDRIVE

- Course of the road
- Road lane definitions
- Lane linkages
- Temporary lane definitions (e.g., for construction sites)
- Traffic Rules





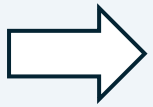
https://www.asam.net/standards/detail/opendrive/

Components modelled in CityGML

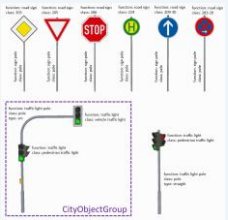
Terrain

Real-world objects

Road Markings



Traffic signs & signals



https://tum-gis.github.io/road2citygml3/guideline/guideline.html#roads

Linkage between ASAM OpenDRIVE and CityGML

Key considerations:

- Establishing a robust referencing system for accurate data representation across formats
- Bi-directional or one-directional interface to optimize data flow between CityGML and ASAM OpenDRIVE
- Utilizing CityGML Global Identifiers
- Incorporating CityGML global identifiers into ASAM OpenDRIVE to establish direct references, ensuring alignment between logical road network representation and spatial features

Linkage between ASAM OpenDRIVE and CityGML

Open questions:

- Defining the exact scope of ASAM OpenDRIVE content
- Identify objects requiring direct reference
- Identify objects that can be linked implicitly based on attributes or spatial relationships

Linkage between ASAM OpenDRIVE and auxiliary data layers

- Consider a more generic approach to link further road specific data
  - Regulation data
  - Fleet drive paths
  - Environmental impacts on road usage

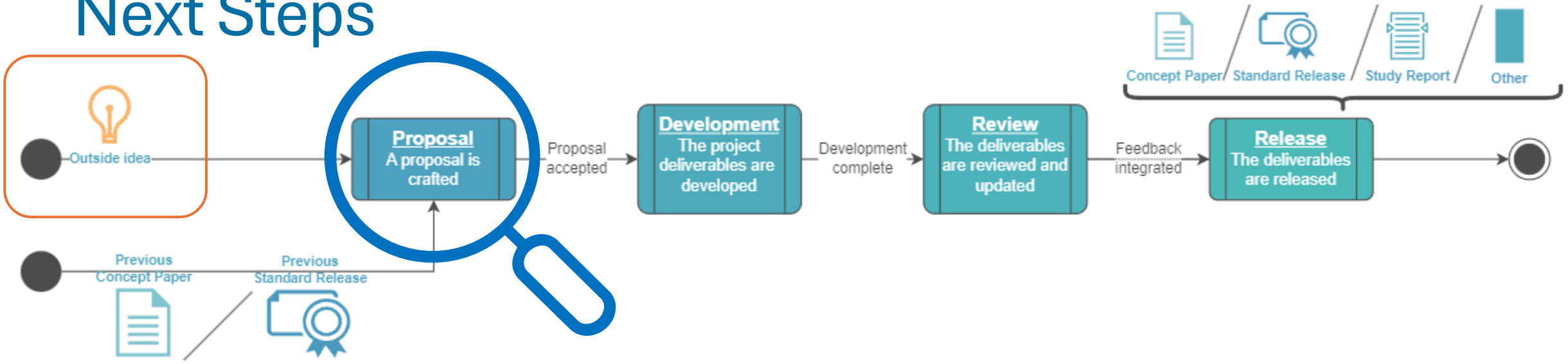
Summary of key features

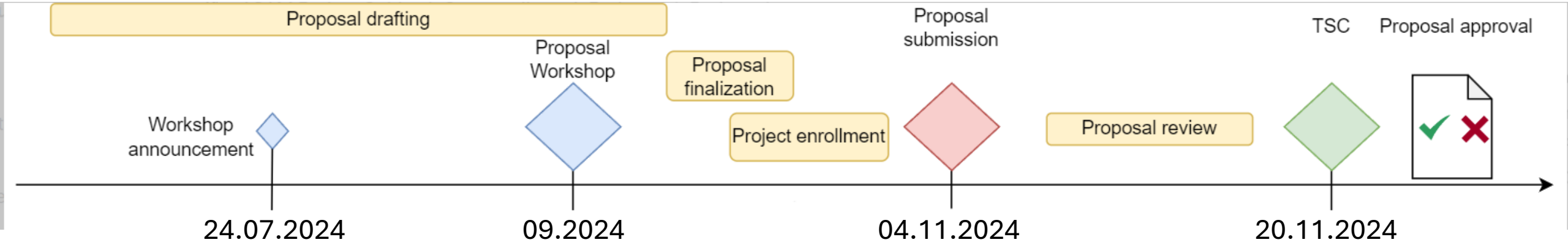
- A slim ASAM OpenDRIVE: Focuses solely on road network logics for enhanced efficiency.
- Non-redundant 3D Street Space Model in CityGML: Provides accurate urban environment representations.
- Improved Interoperability: Facilitates adoption across domains like simulation and urban planning.

Aims of the proposal

- Simplifying Street Space Modelling: Introducing new approaches to make the process more intuitive and versatile.
- Outsourcing of Non-essential Concepts: Streamlining ASAM OpenDRIVE by removing elements it was not originally intended to handle.
- Bridging the Gap Between Research and Real-world Data: Ensuring the standard can accommodate high-level research data as well as practical, end-user applications.
- Enhanced Interoperability and Extendibility: Creating defined interfaces to avoid misuse of non-standard data tags.

Next Steps


Outside idea
Proposal
A proposal is crafted
Previous
Concept Paper
Previous
Standard Release
Proposal
accepted
Development
The project deliverables are developed
Development
complete
Review
The deliverables are reviewed and updated
Feedback
integrated
Release
The deliverables are released
Concept Paper
Standard Release
Study Report
Other


Proposal drafting
Proposal
Workshop
Proposal
finalization
Proposal
submission
TSC
Proposal approval
Workshop
announcement
Project enrollment
Proposal review
24.07.2024
09.2024
04.11.2024
20.11.2024

Survey

Survey Link

Thank you for your attention

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