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on the basis of a decision
by the German Bundestag

Corridor for new Mobility Aachen – Düsseldorf

Test Field Setup for the Development and Testing of
Automated Mobility

19.11.2021

Laurent Kloeker



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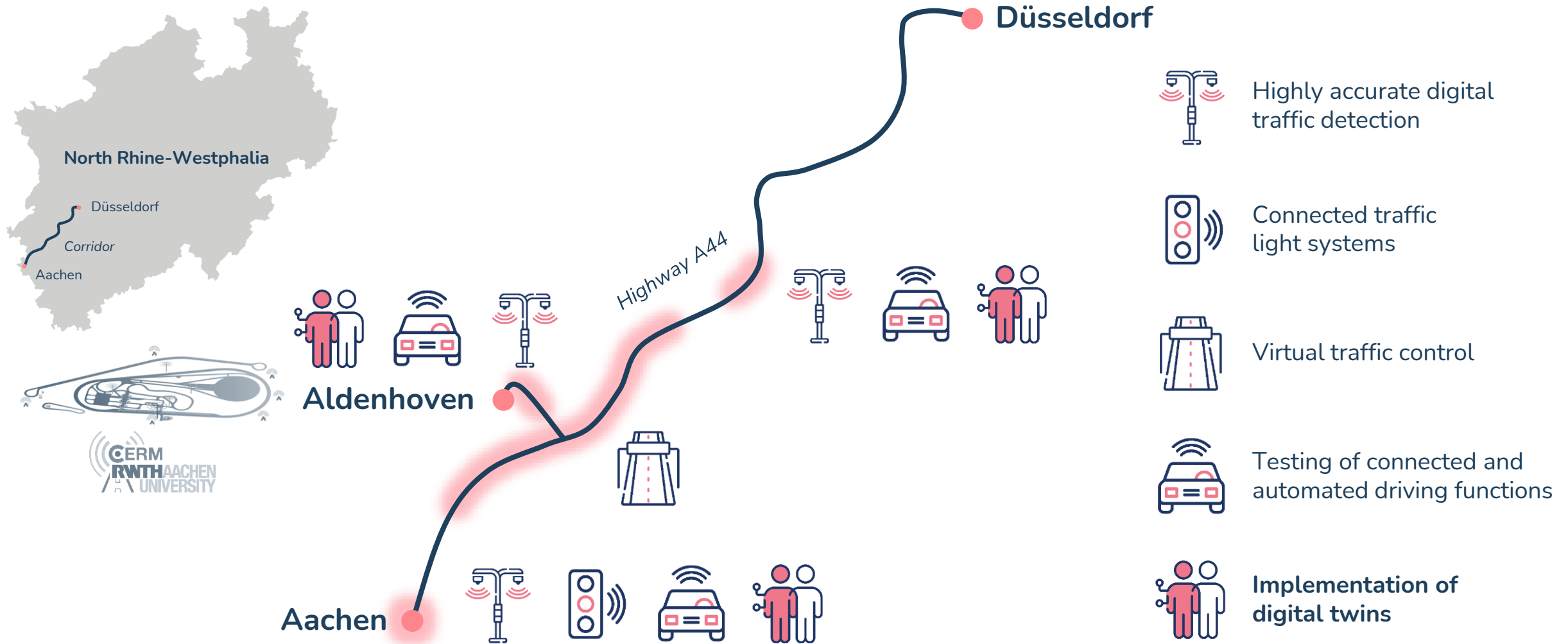
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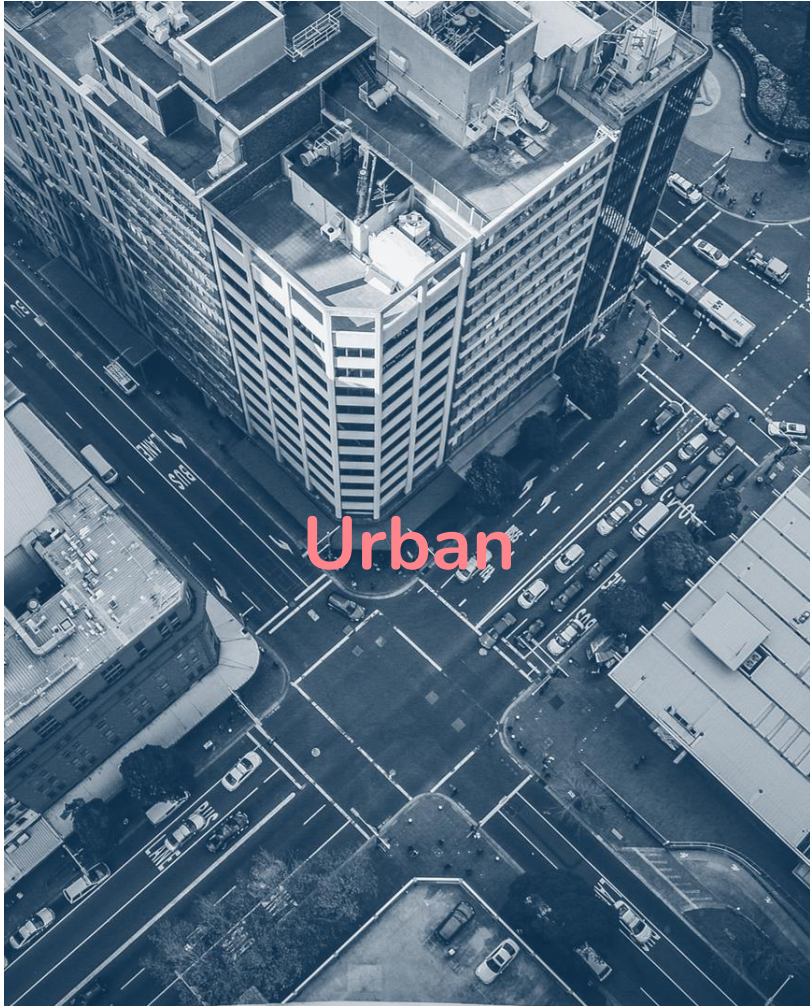
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Overall Objective of the Project



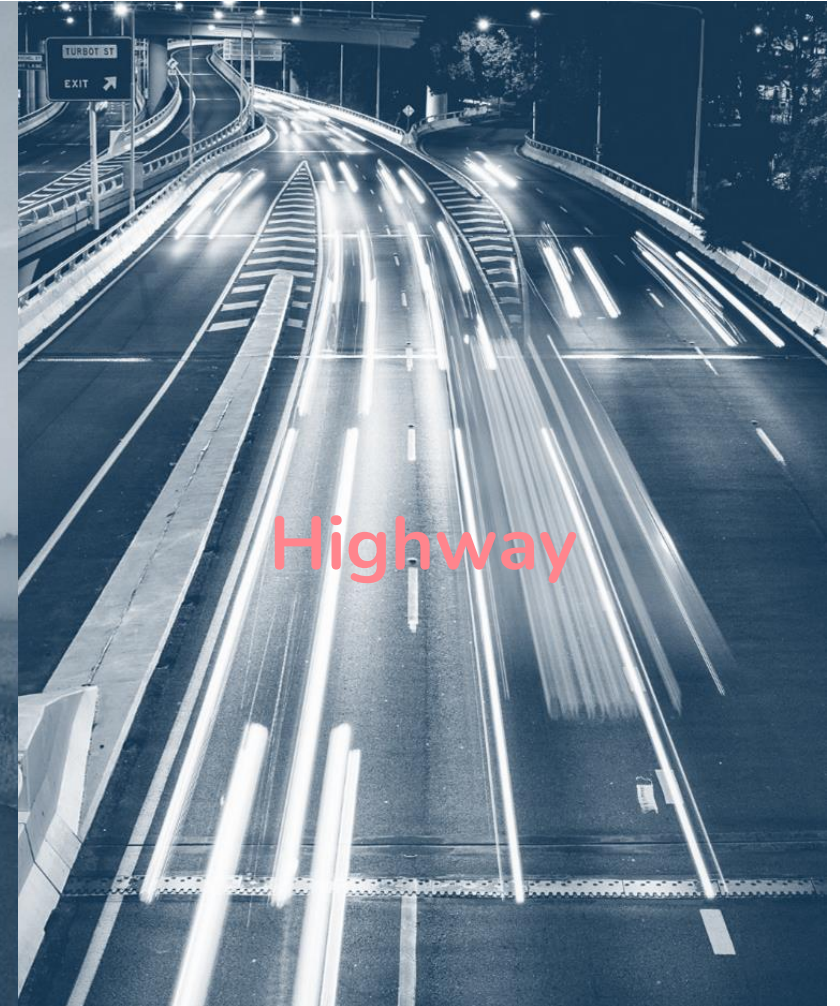
Test Fields for Automated and Connected Mobility



Urban

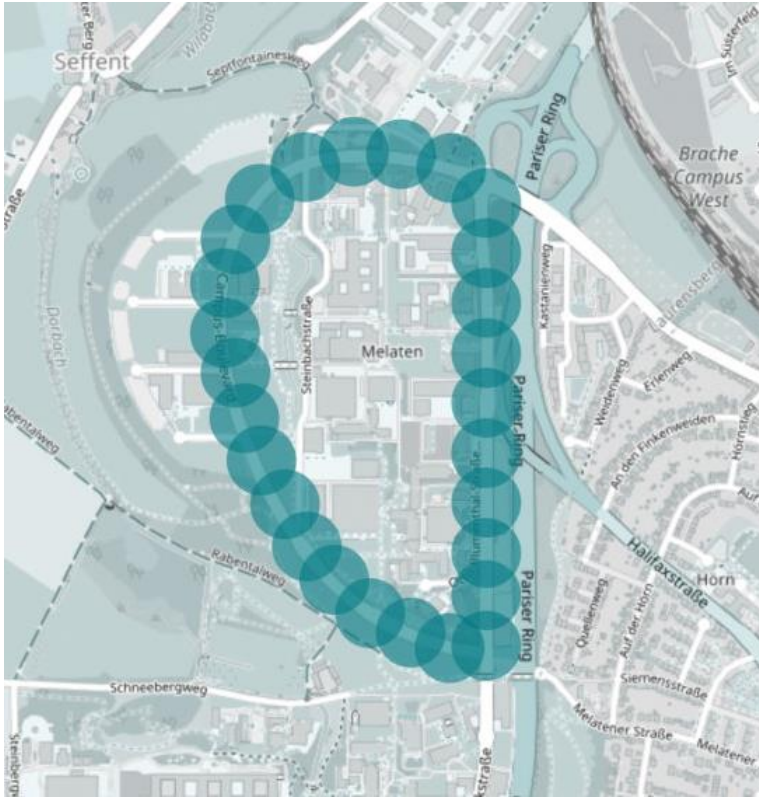


Rural

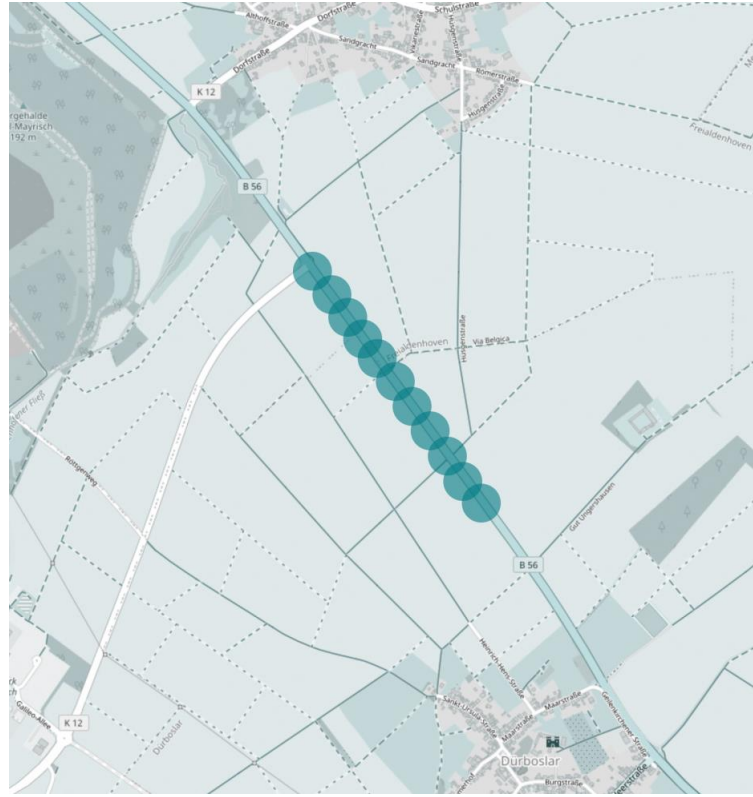


Highway

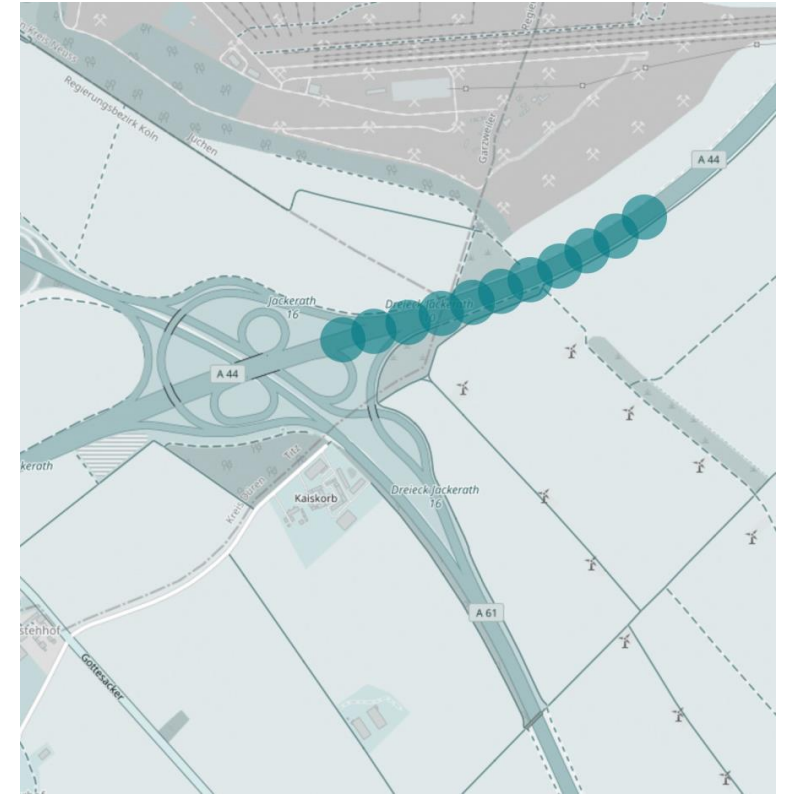
Test Fields for Automated and Connected Mobility



Urban
Campus Melaten, Aachen
2.4 km, 46 Road Side Units

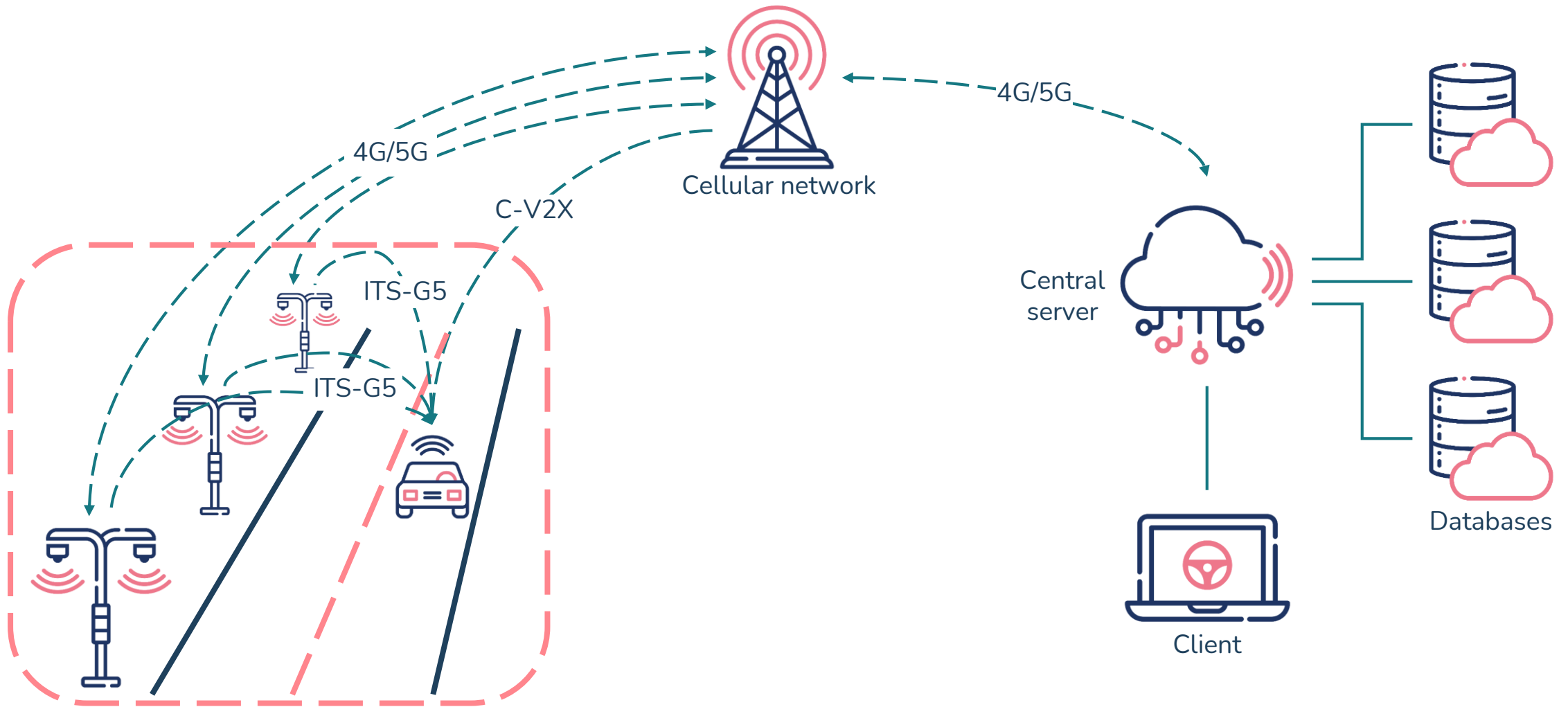


Rural
B 56, Aldenhoven
1 km, 11 Road Side Units



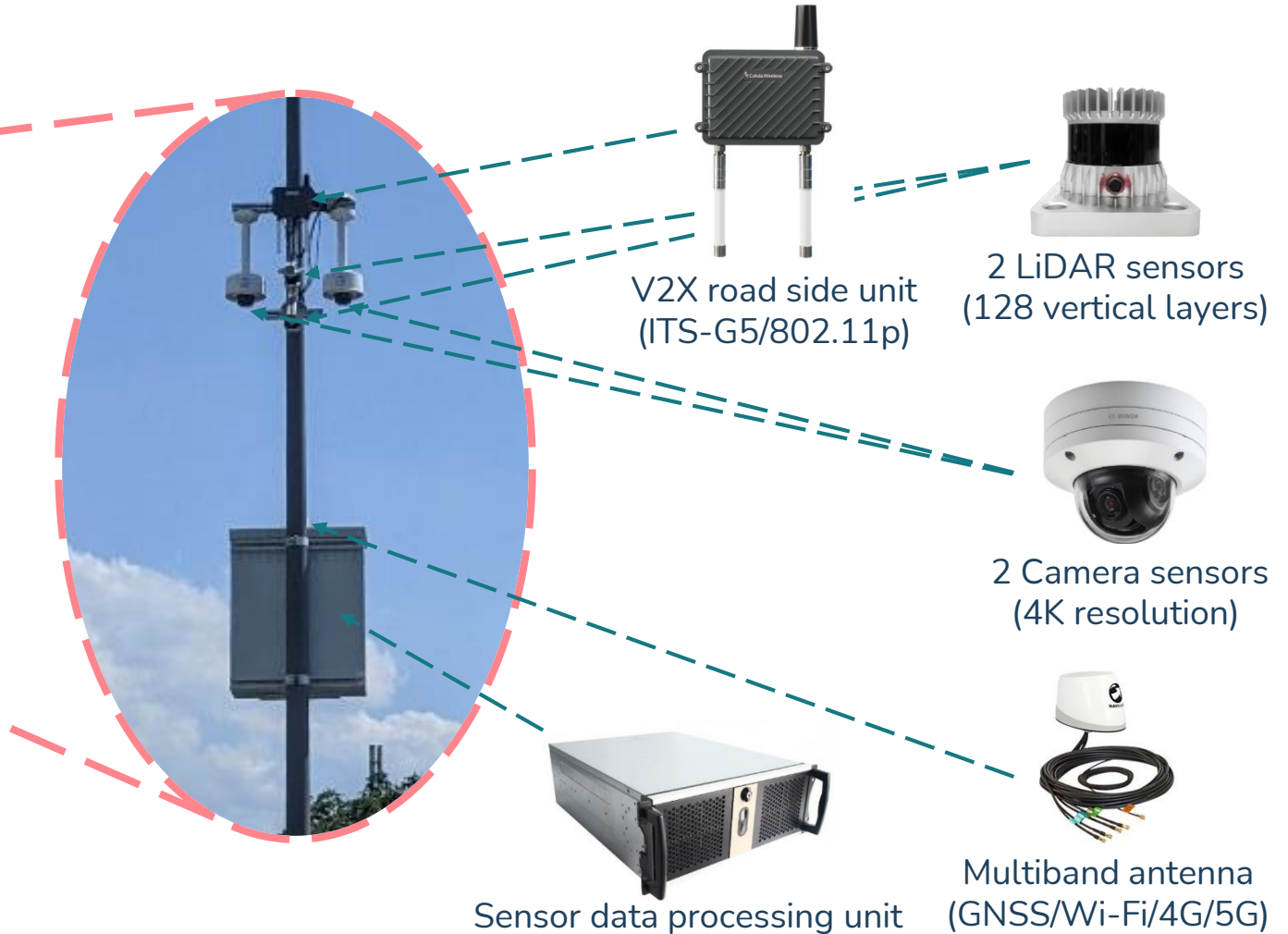
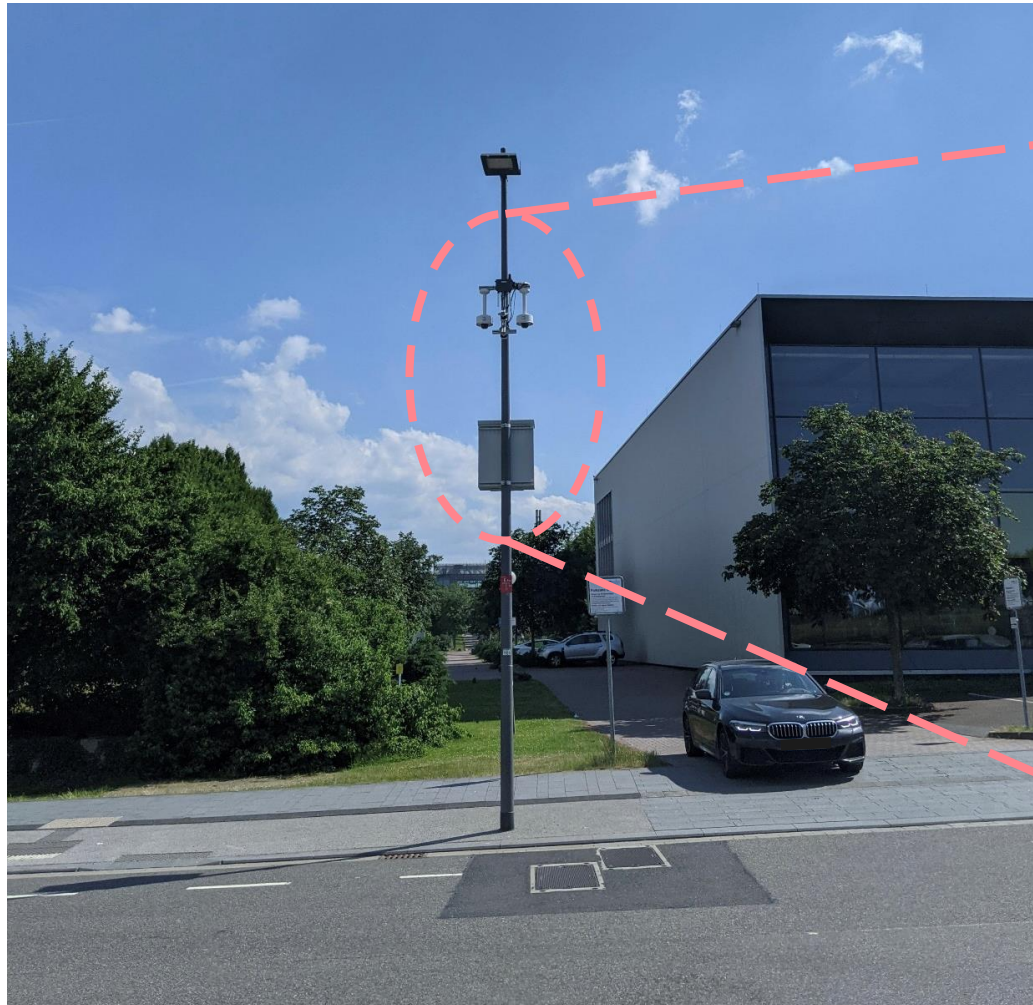
Highway
A 44, Jackerath
1 km, 11 Road Side Units

Traffic Detection Concept

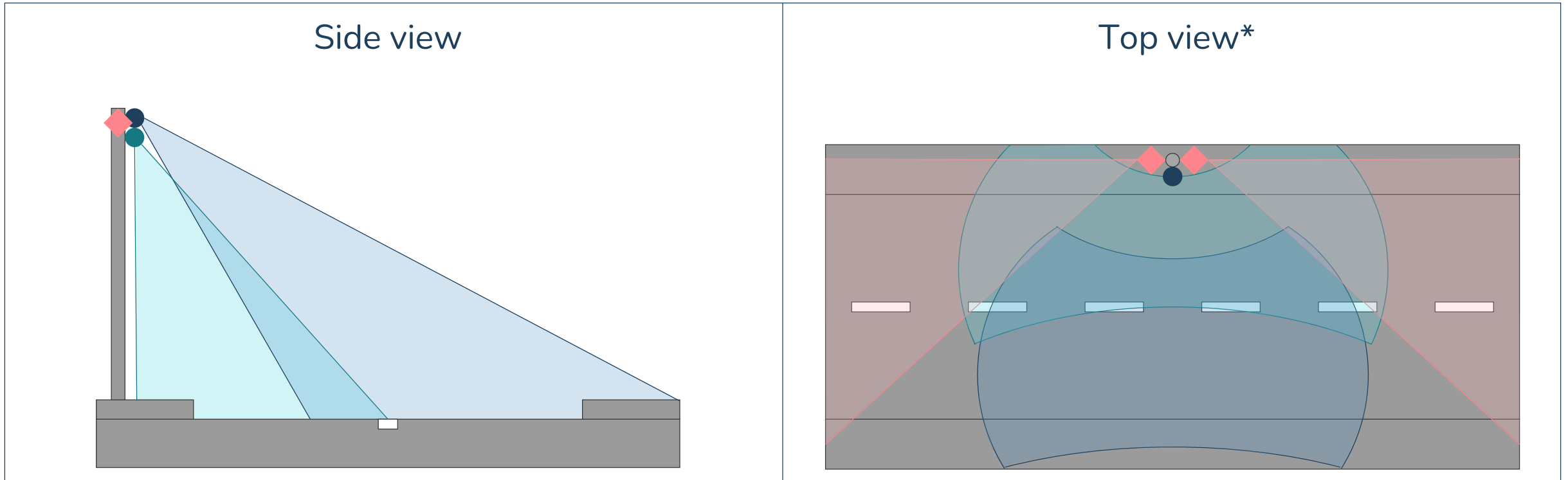


Corridor for new Mobility Aachen – Düsseldorf – Test Field Setup for the Development and Testing of Automated Mobility

Stationary Smart Roadside Infrastructure Sensors



Sensors' Fields of View for Each RSU



● LiDAR 1

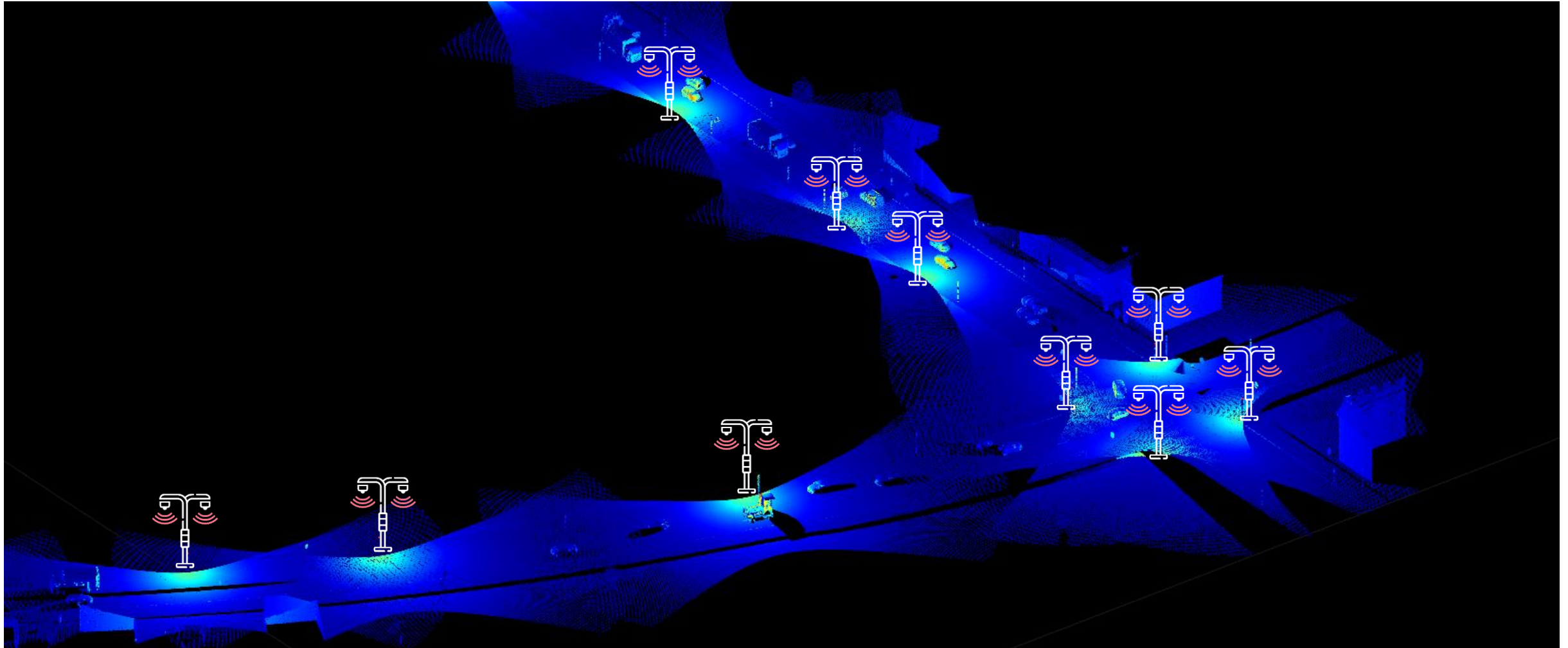
● LiDAR 2

◆ Camera 1

◆ Camera 2

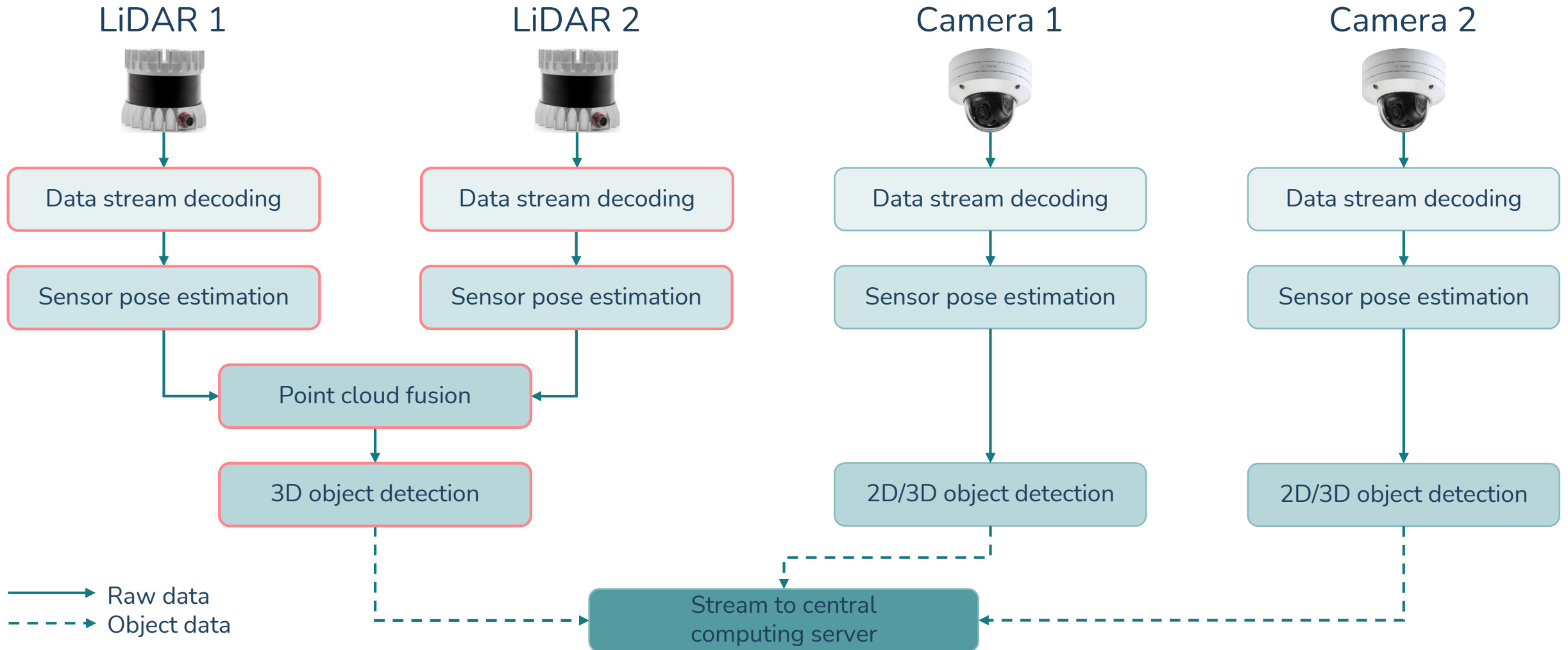
***Scales shown are not true to reality!**

Global Fused LiDARs' Fields of View

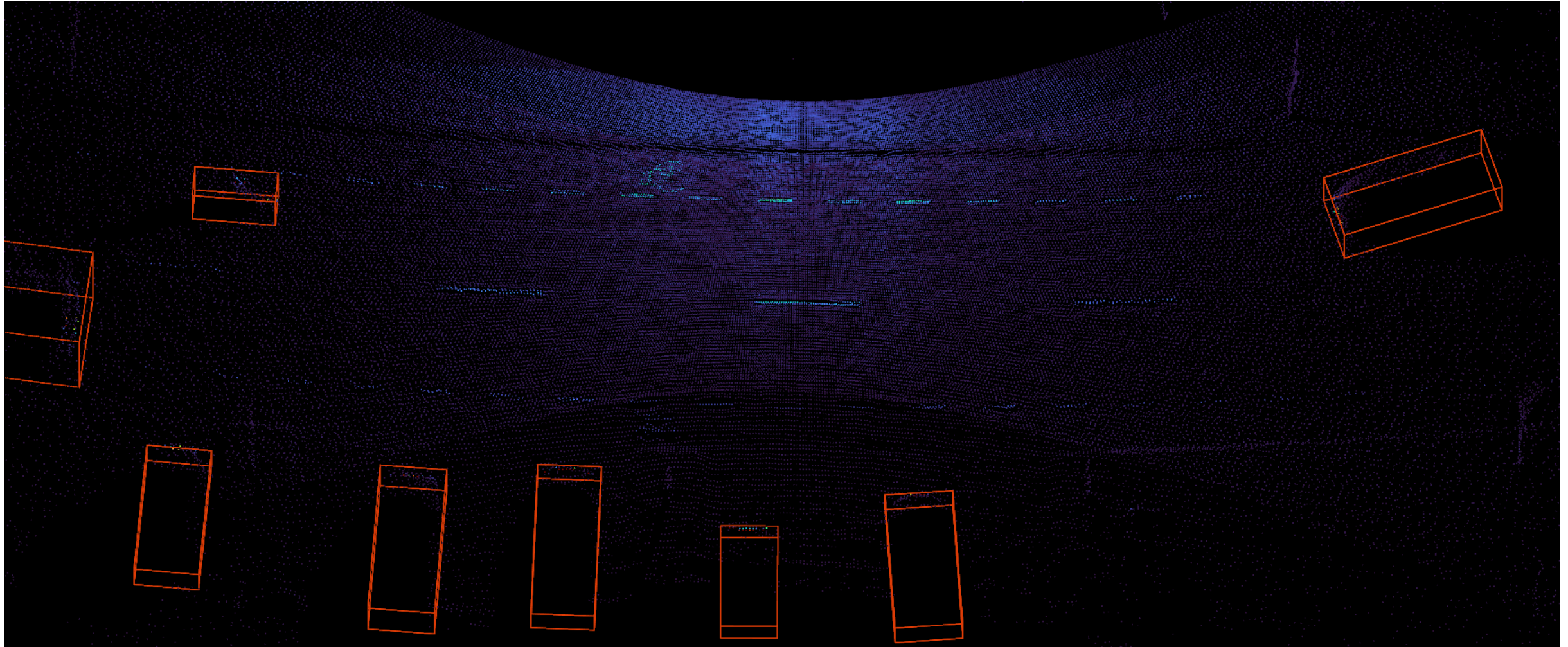


Corridor for new Mobility Aachen – Düsseldorf – Test Field Setup for the Development and Testing of Automated Mobility

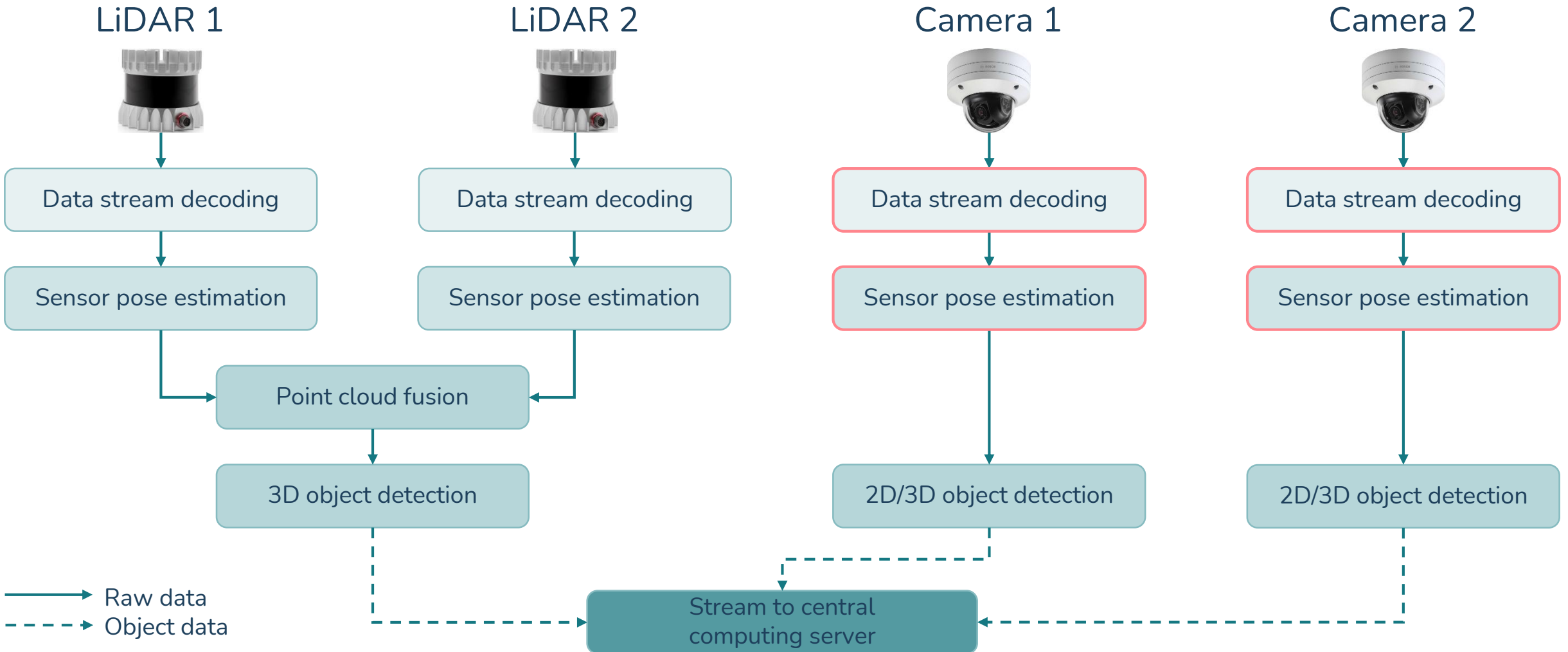
Data Processing Pipeline for Each Road Side Unit



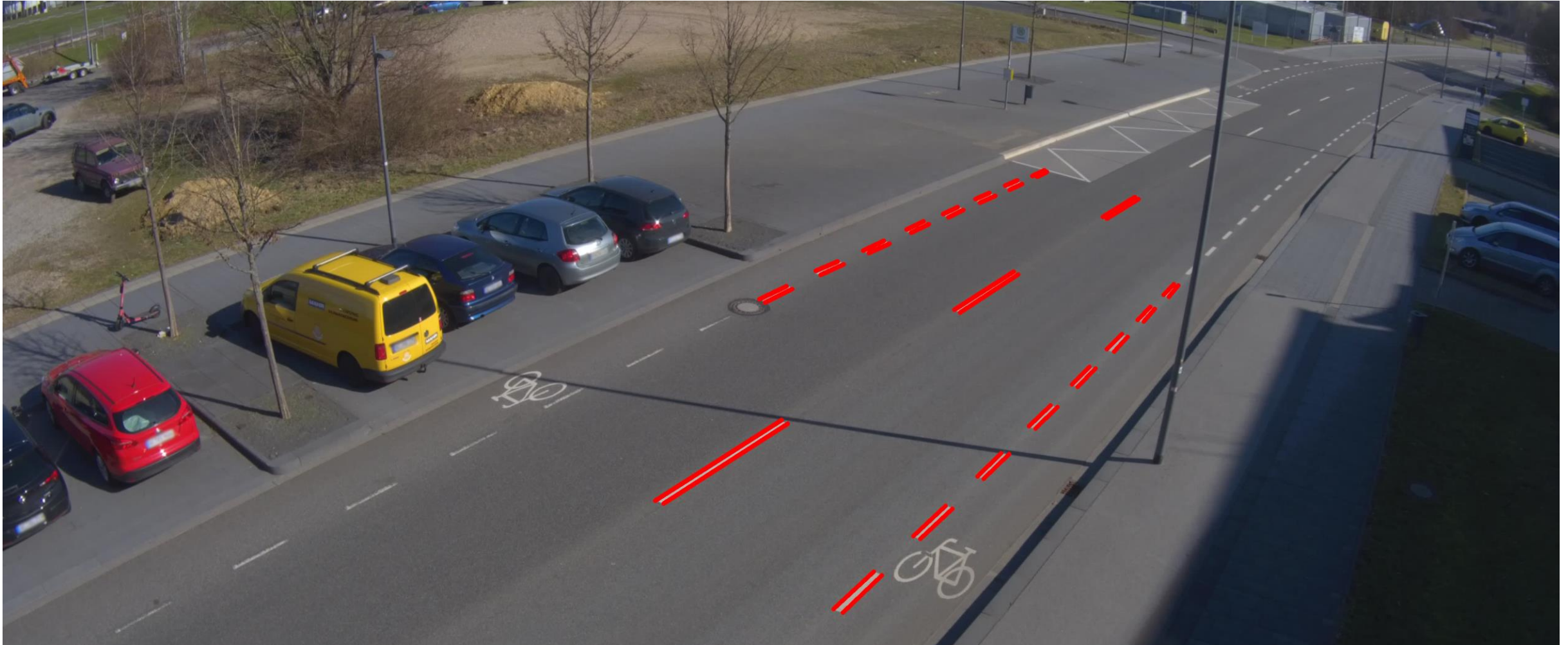
LiDAR Point Cloud Fusion for Each Road Side Unit



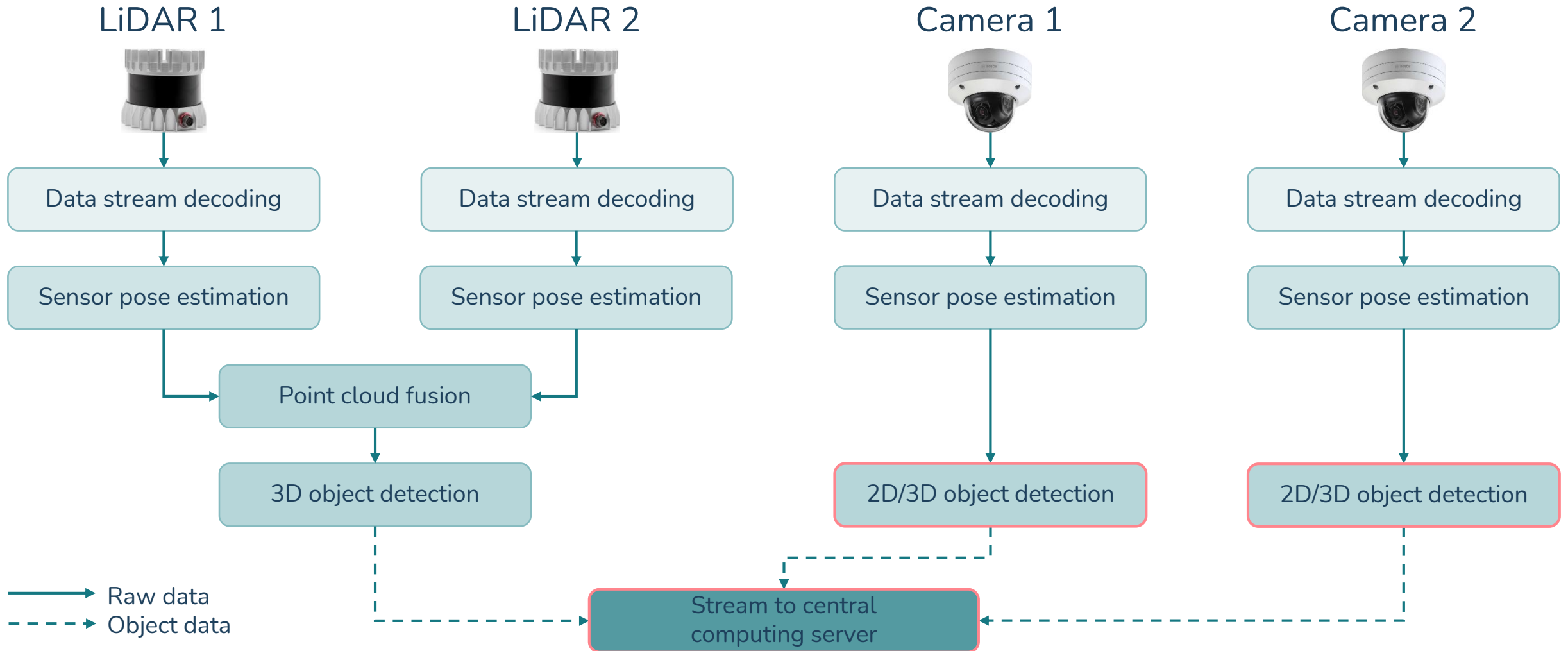
Data Processing Pipeline for Each Road Side Unit



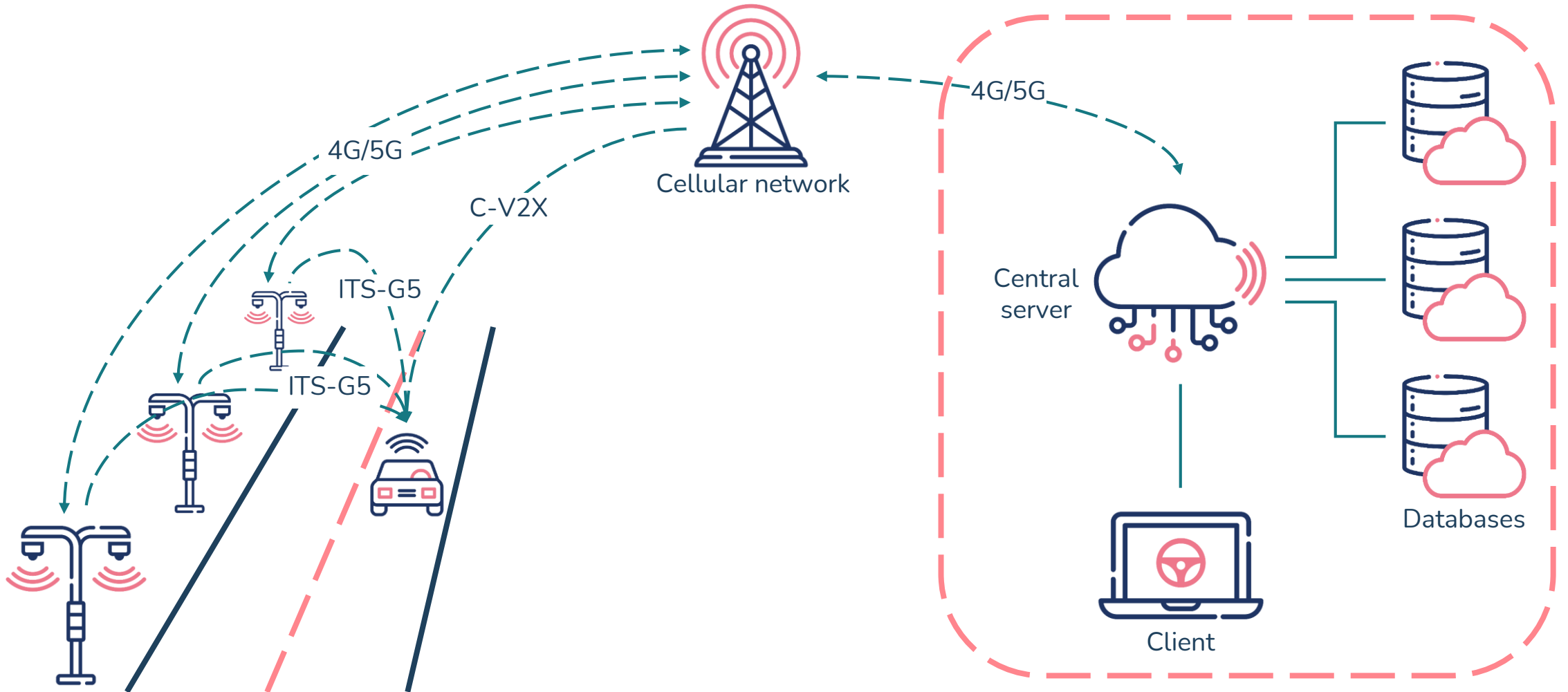
Camera Sensor Pose Estimation



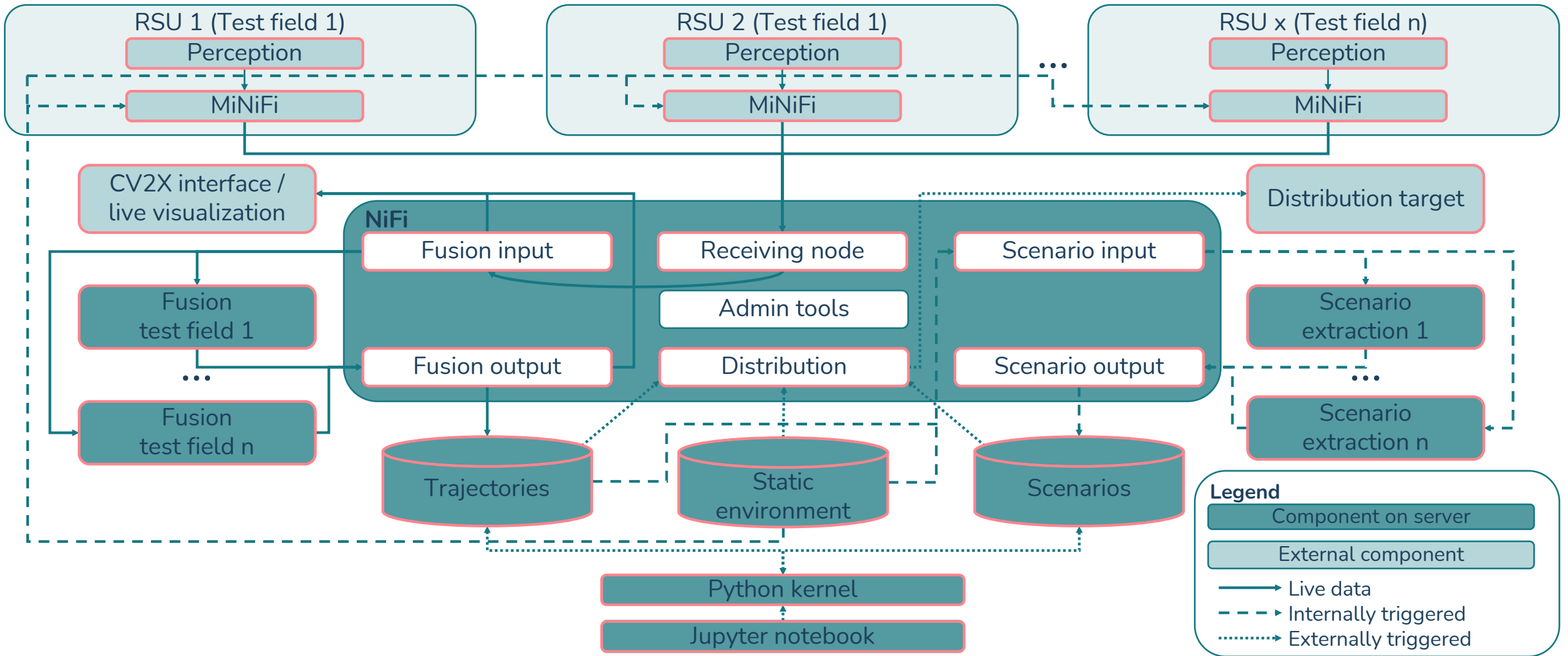
Data Processing Pipeline for Each Road Side Unit



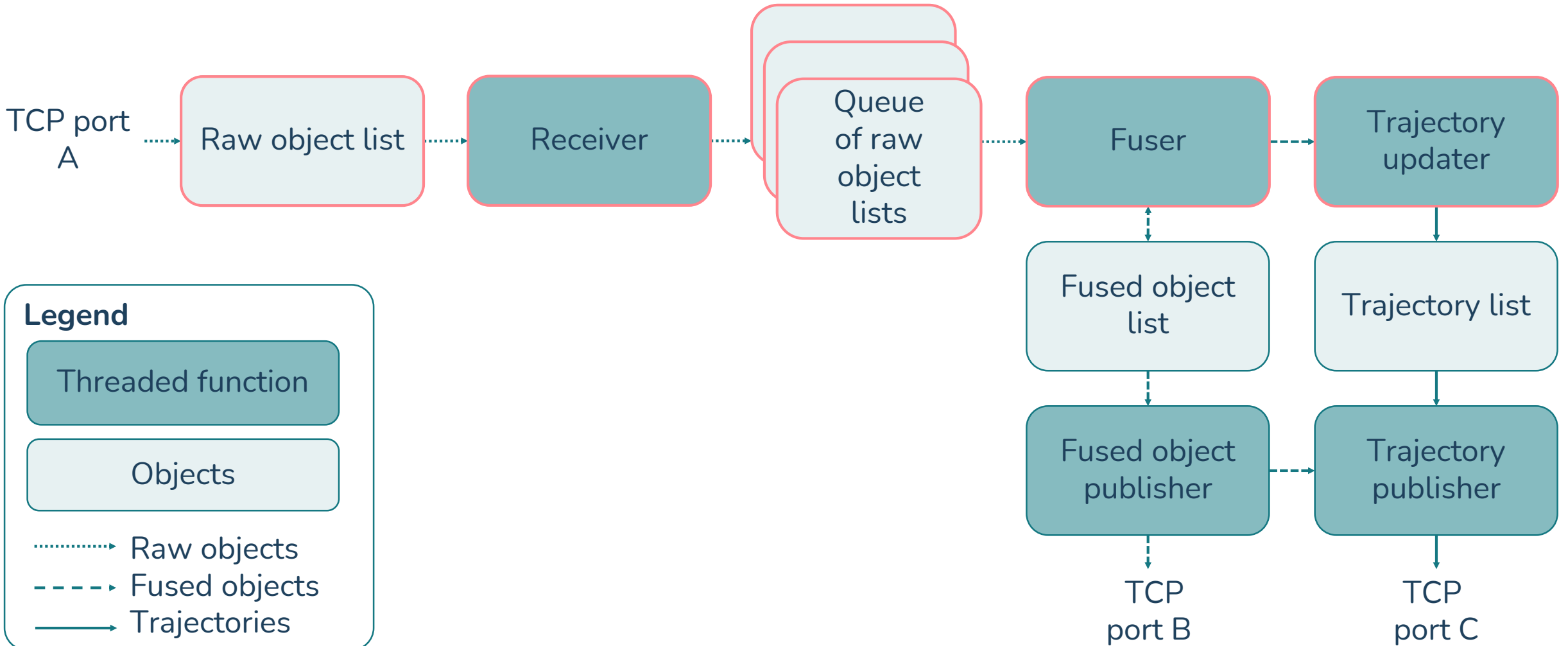
Traffic Detection Concept



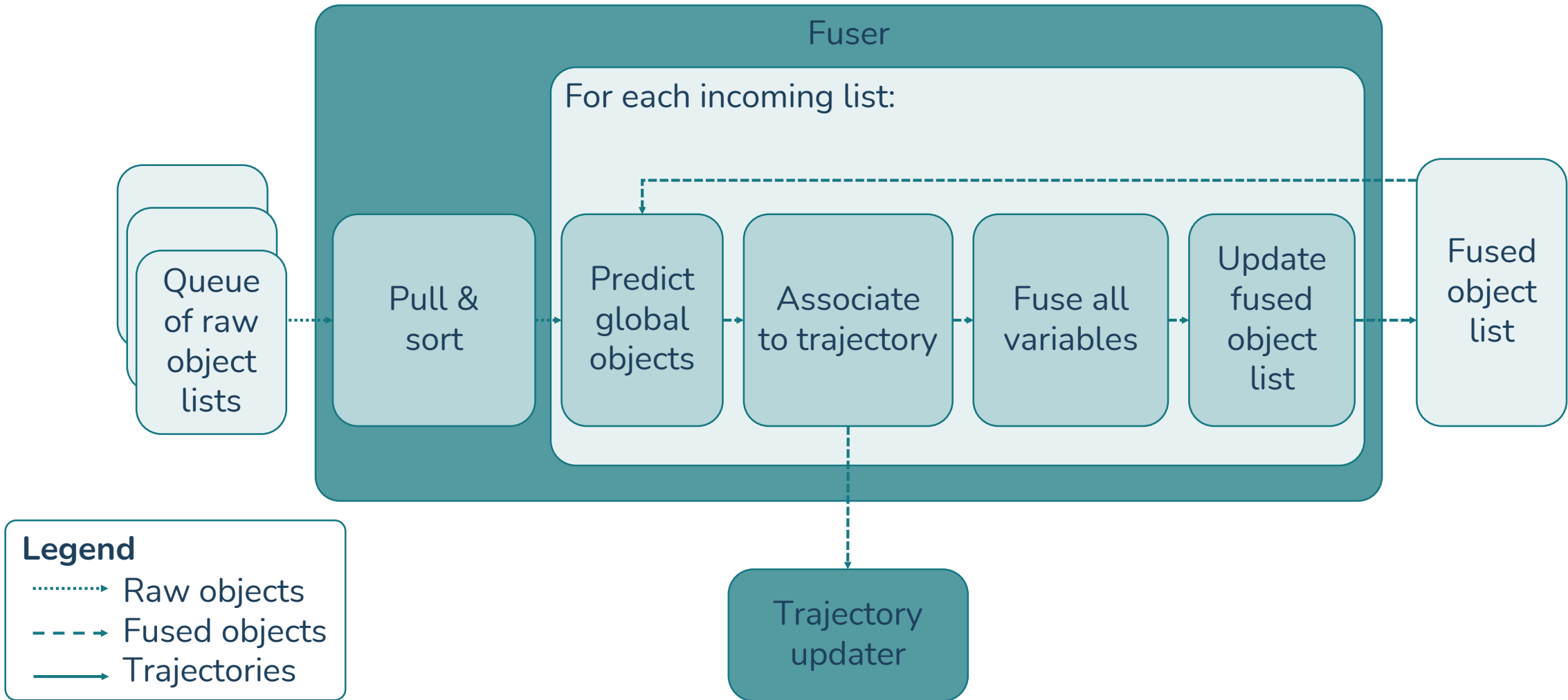
Data Management Concept



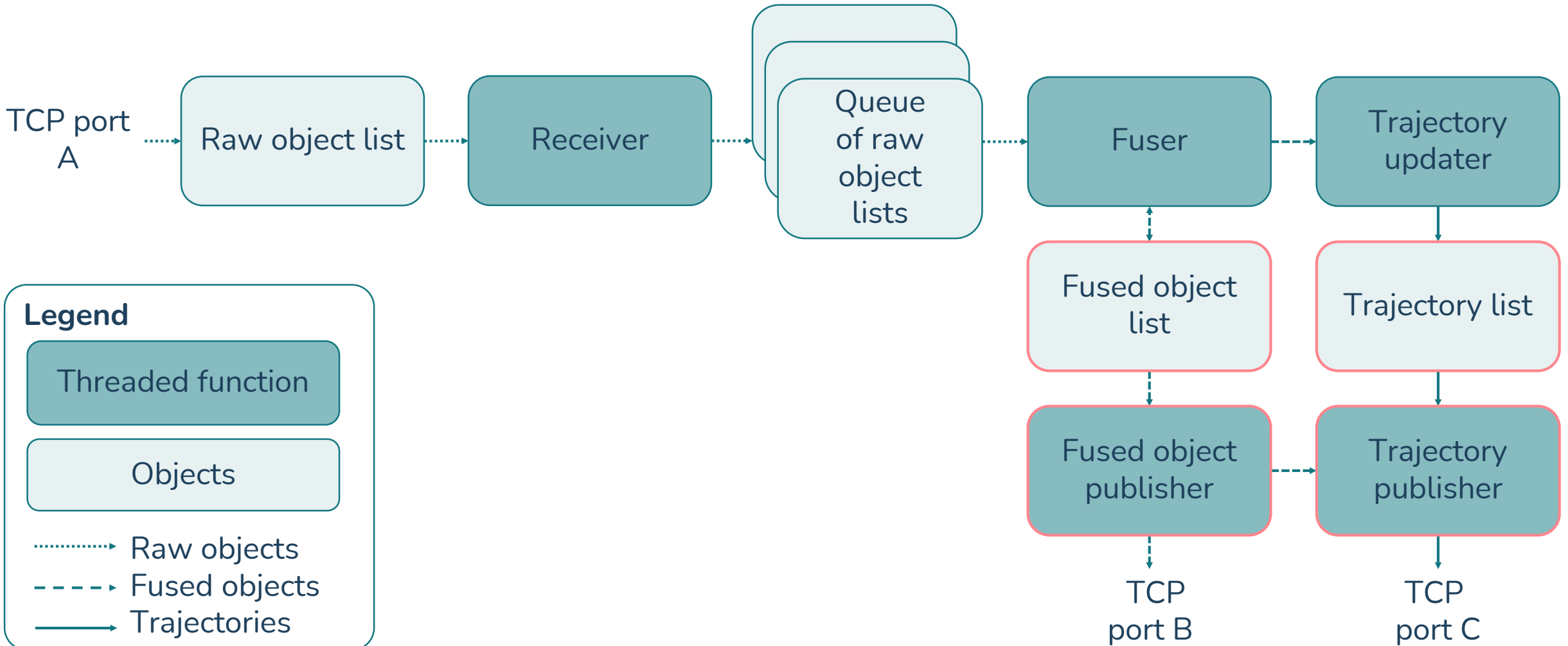
Data Processing Pipeline of Fusion Function



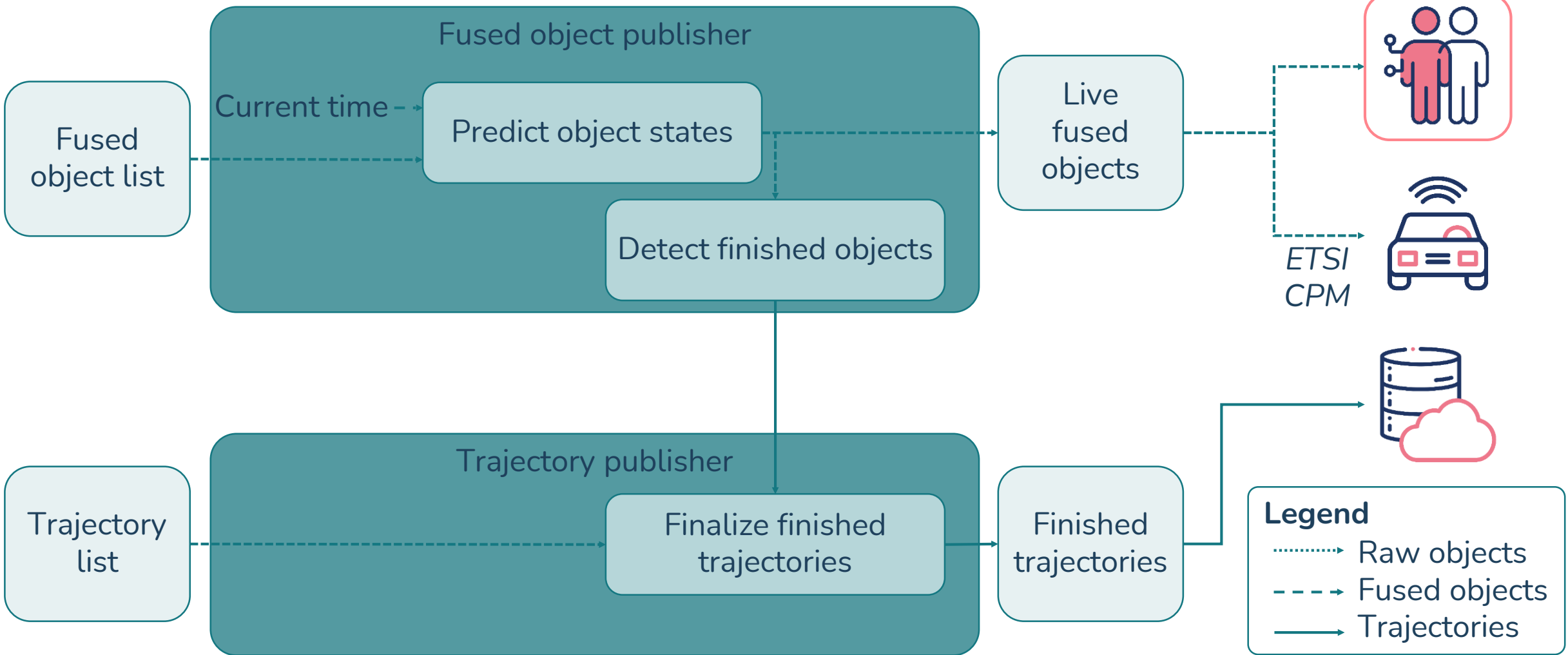
Data Processing Pipeline of Fusion Function

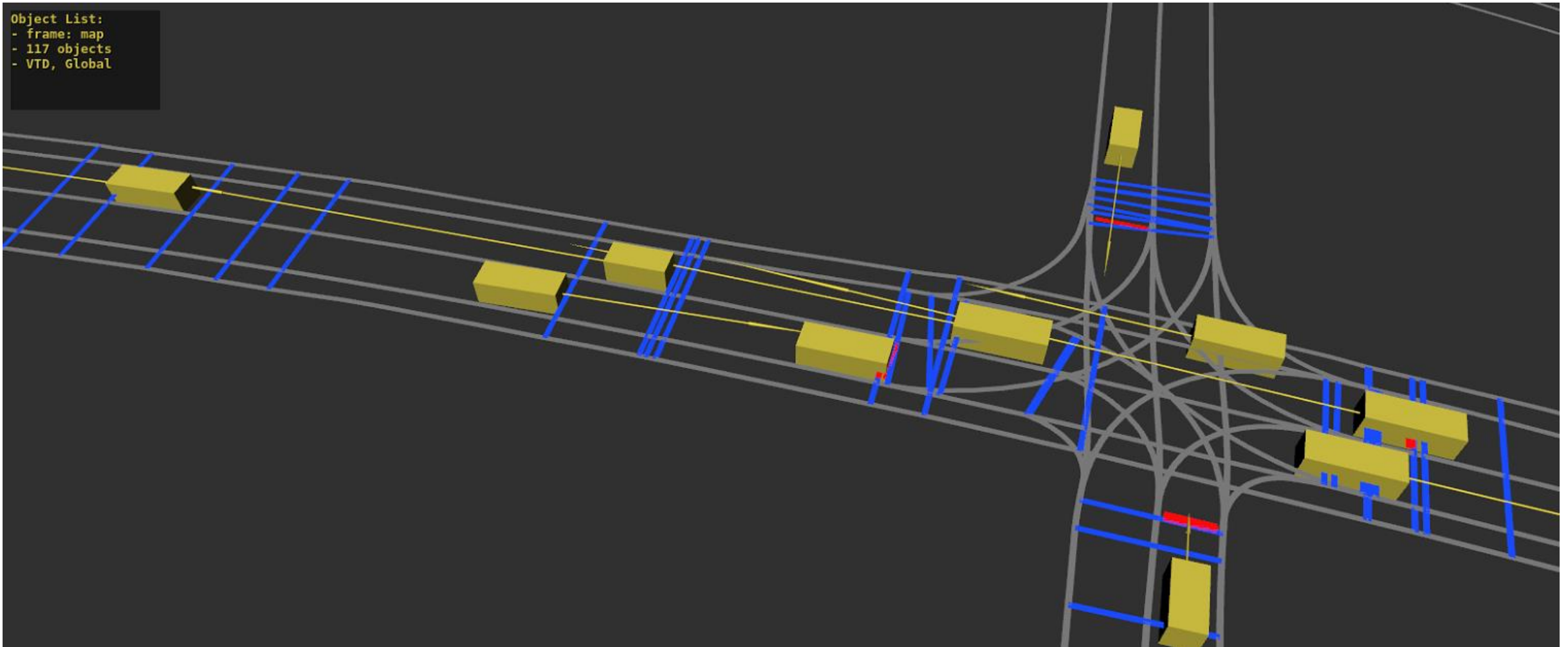


Data Processing Pipeline of Fusion Function

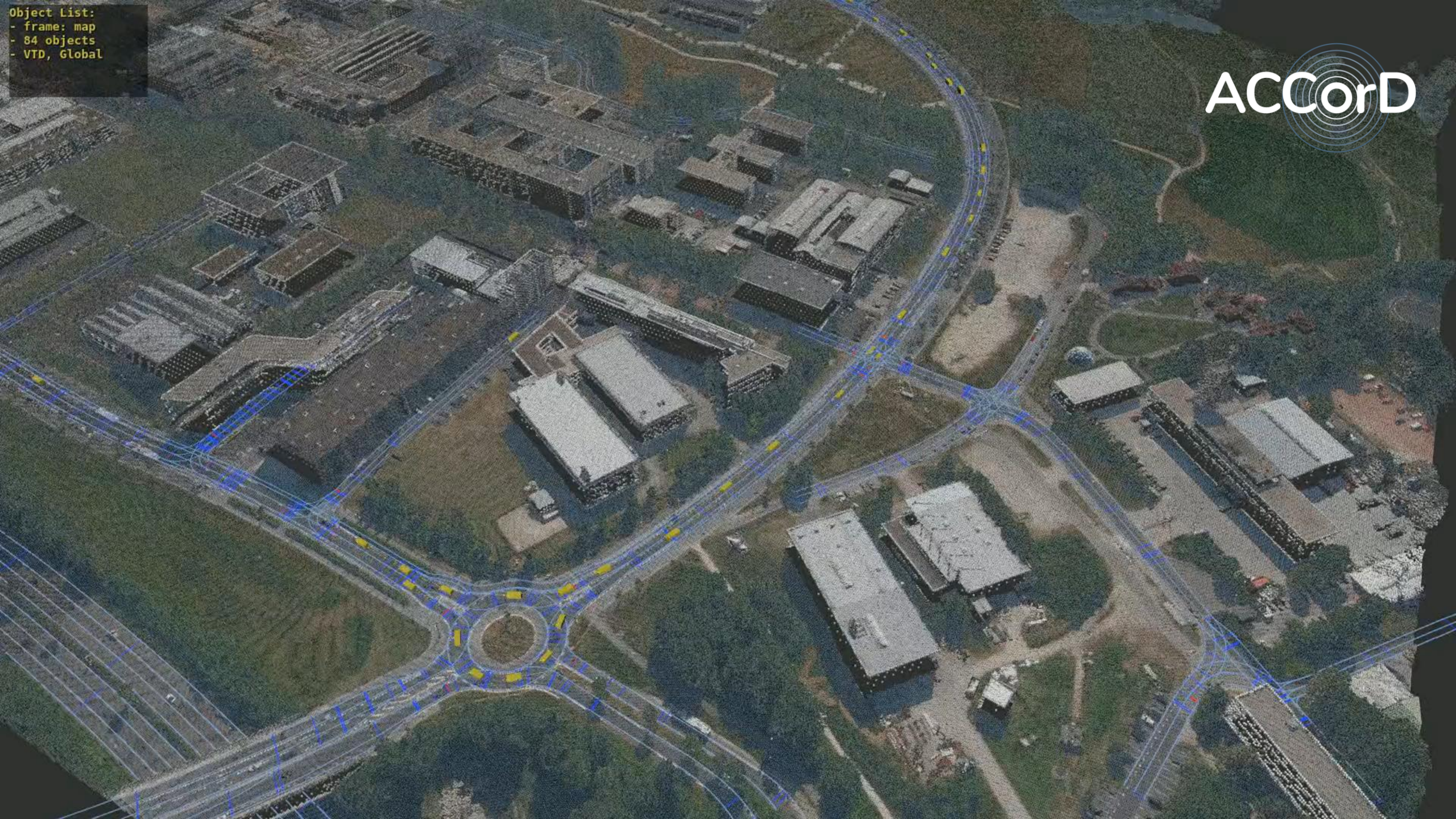


Data Processing Pipeline of Fusion Function





Object List:
- frame: map
- 84 objects
- VTD, Global





ACCORD

Address RWTH Aachen University
Institute for Automotive Engineering (ika)
Steinbachstrasse 7
D – 52074 Aachen

Contact Laurent Kloeker, M.Sc.
laurent.kloeker@ika.rwth-aachen.de
+49 241 80 26713

www.accord-testfeld.de