

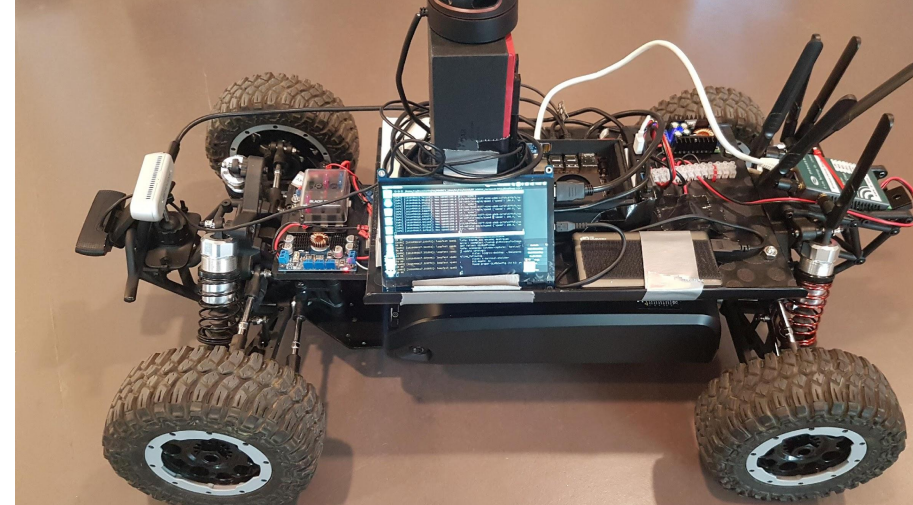
3GPP Delivery robot project

Stig Persson



Enabling novel digital-twin applications for autonomous and connected vehicles

- Establishment within Kista's Automotive Trial Site of the world's first "living lab" for testing and demonstrating connected sensors
 - Supporting applied research explorations
 - Enabling novel and compelling demonstrators with partners
- Exploring how real-time "digital twins" and HD mapping can increase safety, reduce costs and enable new business models
 - Control types: ADAS, Remote control/driving, AD
 - Service types: People, Goods
 - Settings: Open roads, Dedicated areas (bike lane, sidewalk)
- Number of exploratory projects/cooperations for "bootstrapping" the Trial Site with real world data and services



The underlying vision:



“Off-board sensors will be an essential technology for (semi)autonomous vehicles driving”

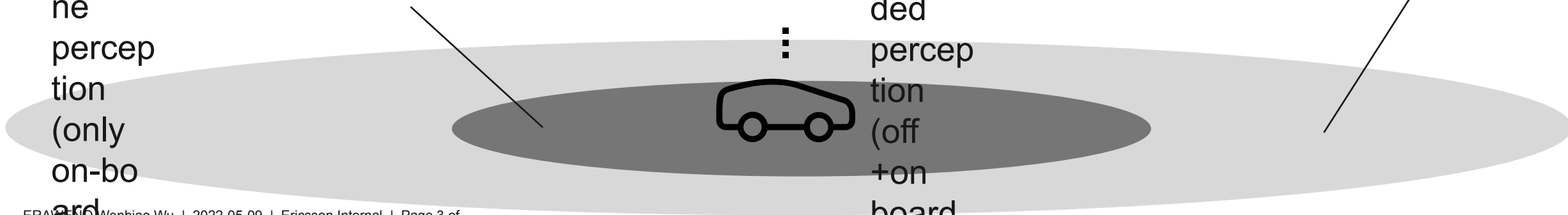
Potential gains:

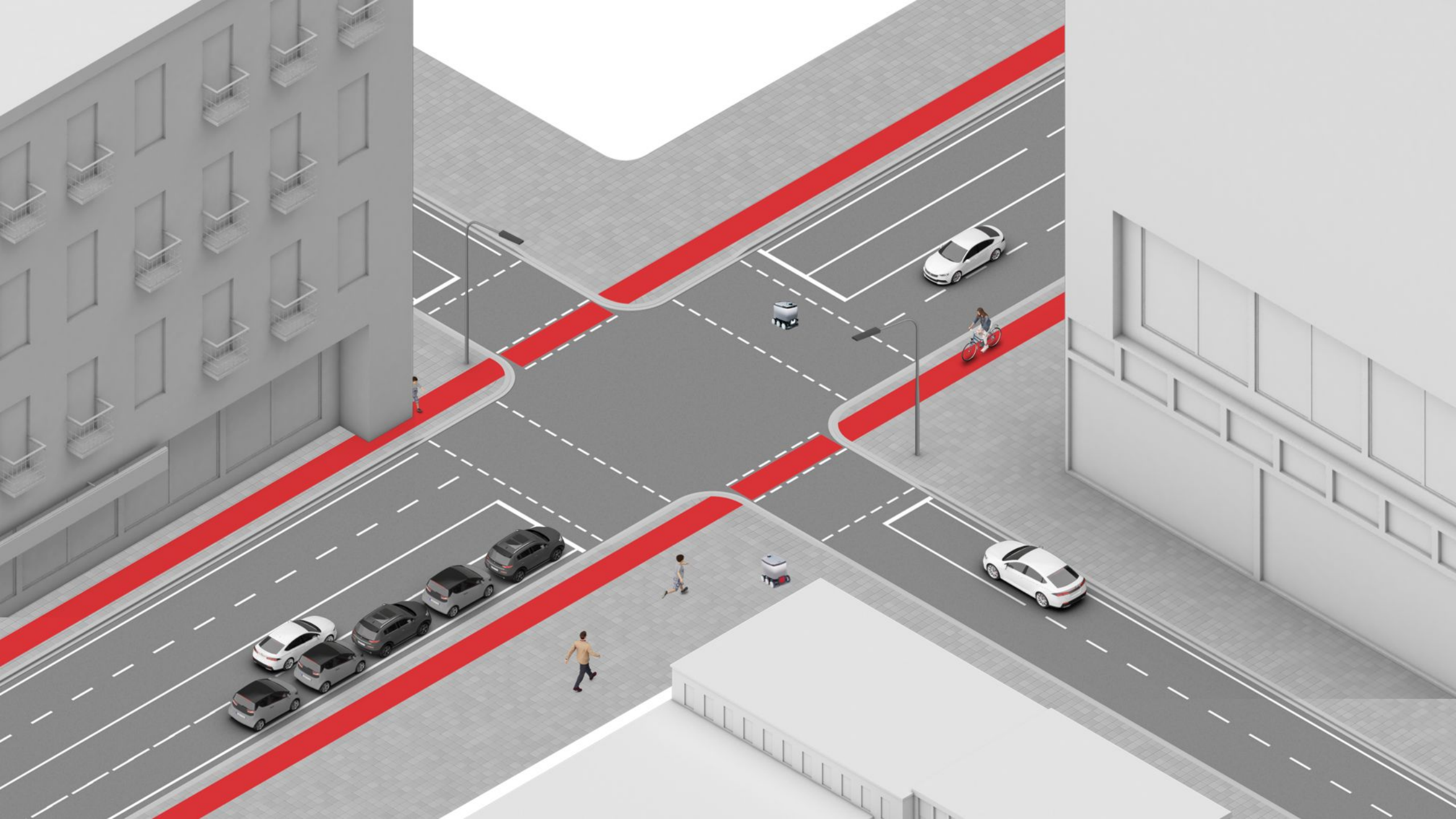
- Complementary Fields of View extend vehicle performance
- Cross-sensors validation for safety, and fault detection
- Reduction of device cost and complexity without lowering system reliability

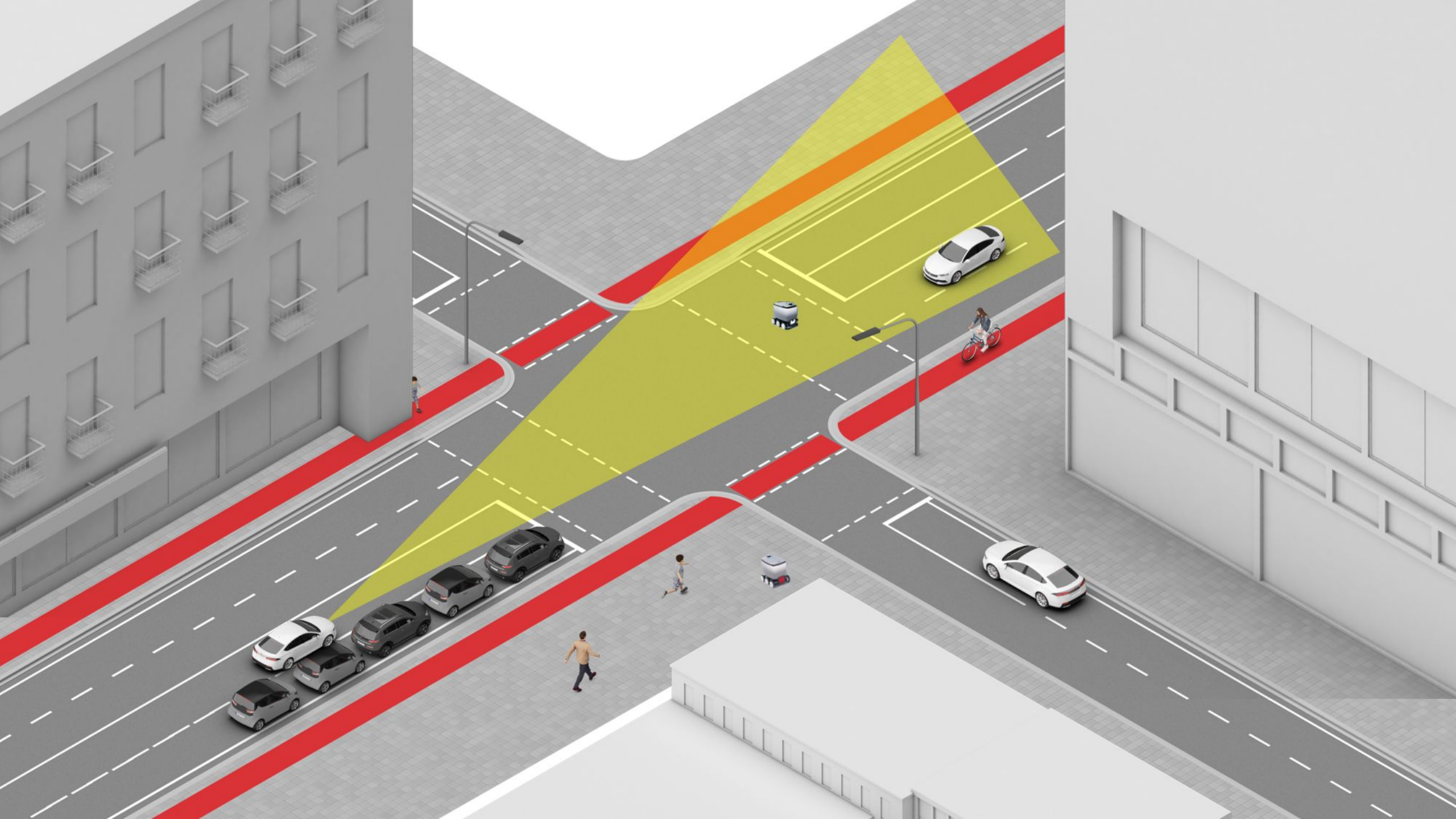
“Perception as a Service” (PaaS) business opportunities

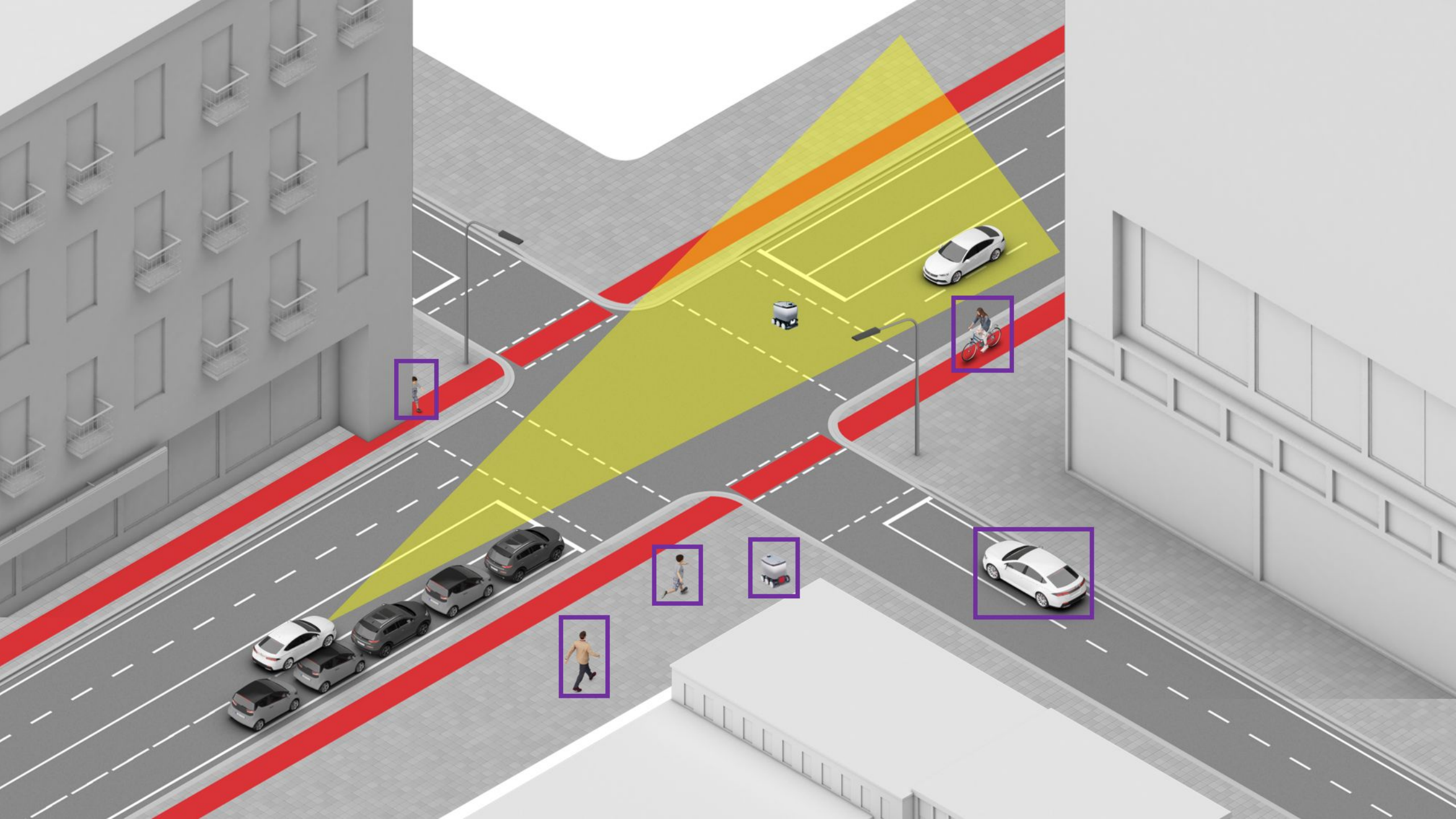
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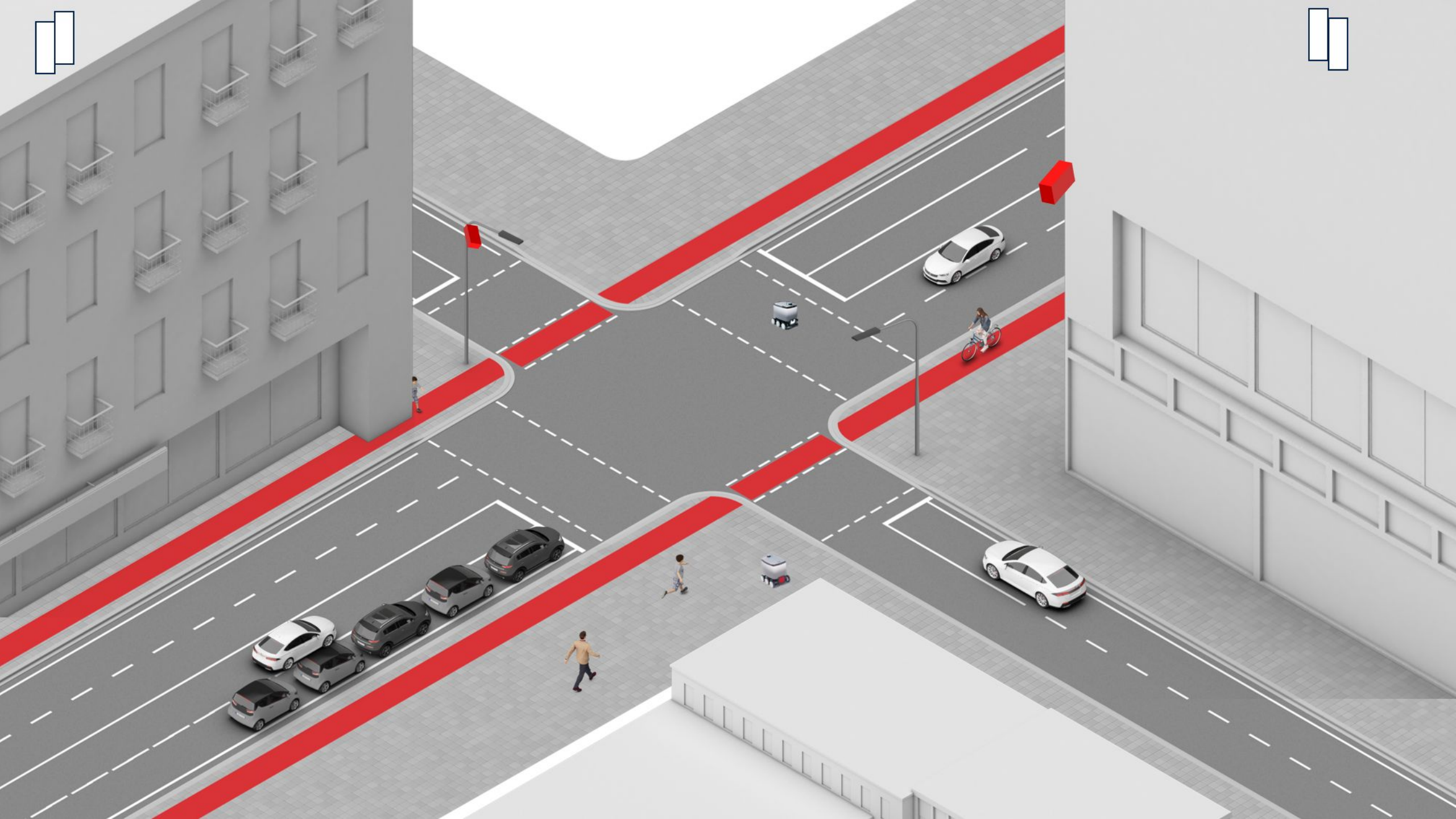
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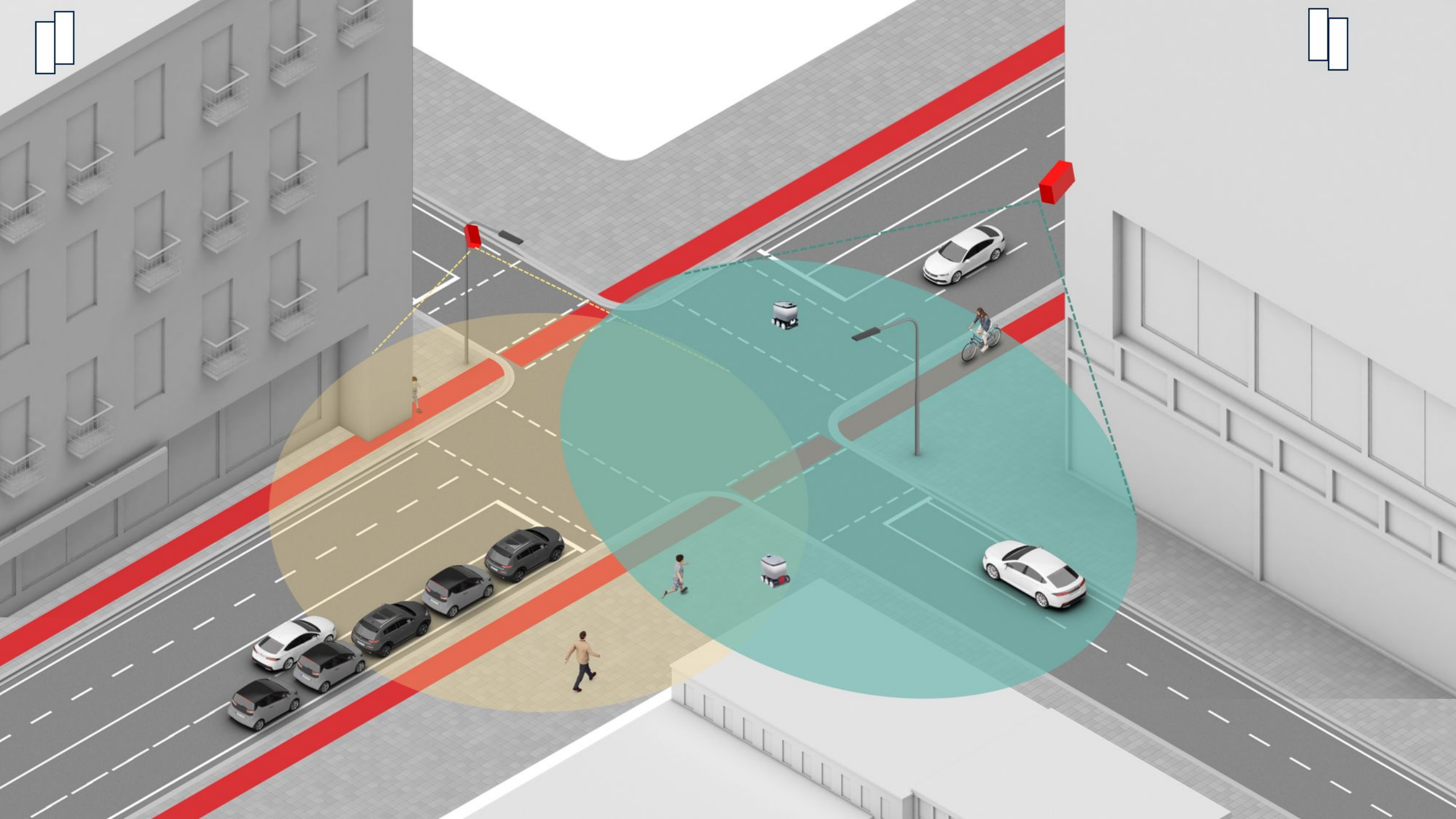


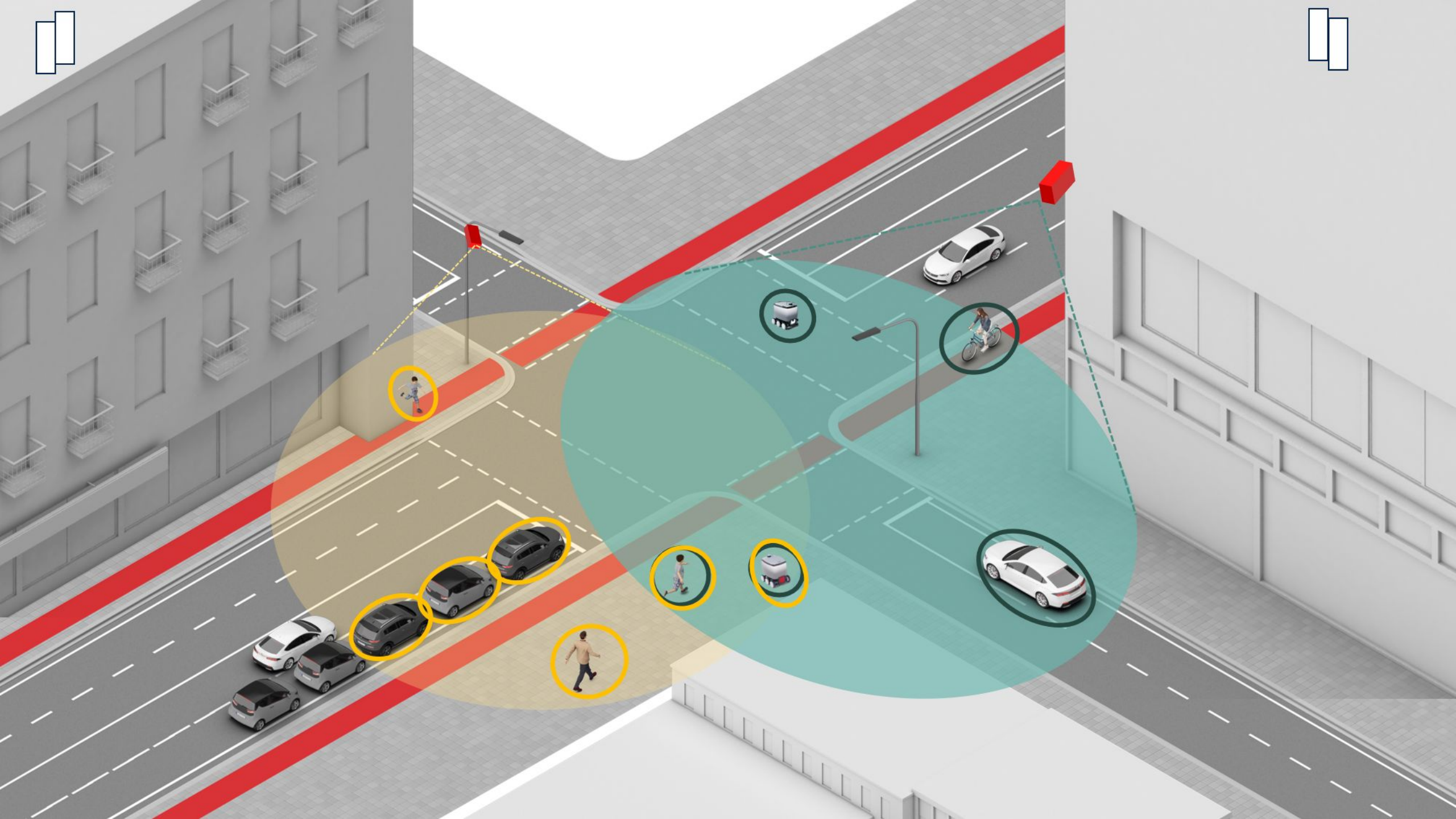


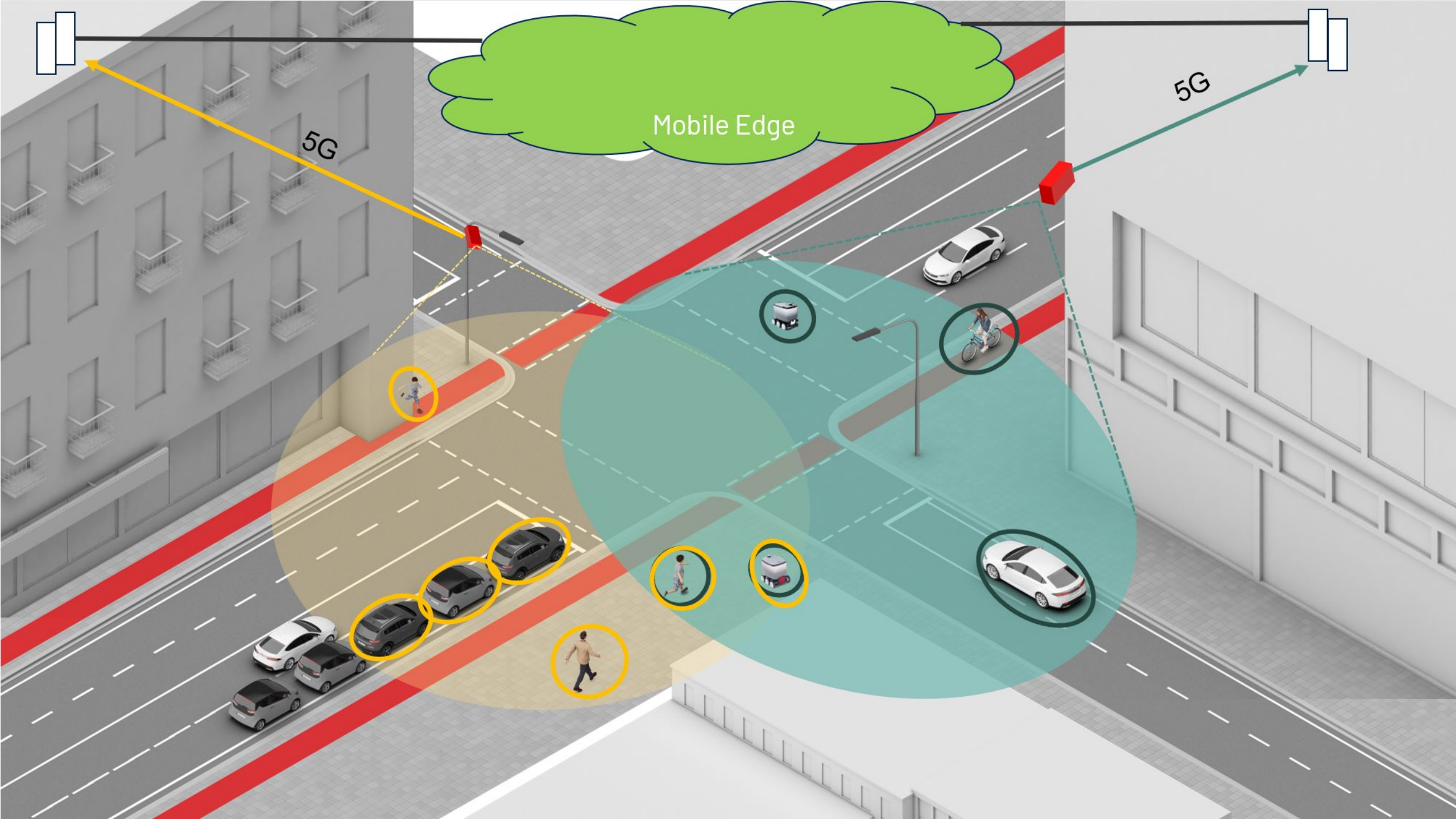


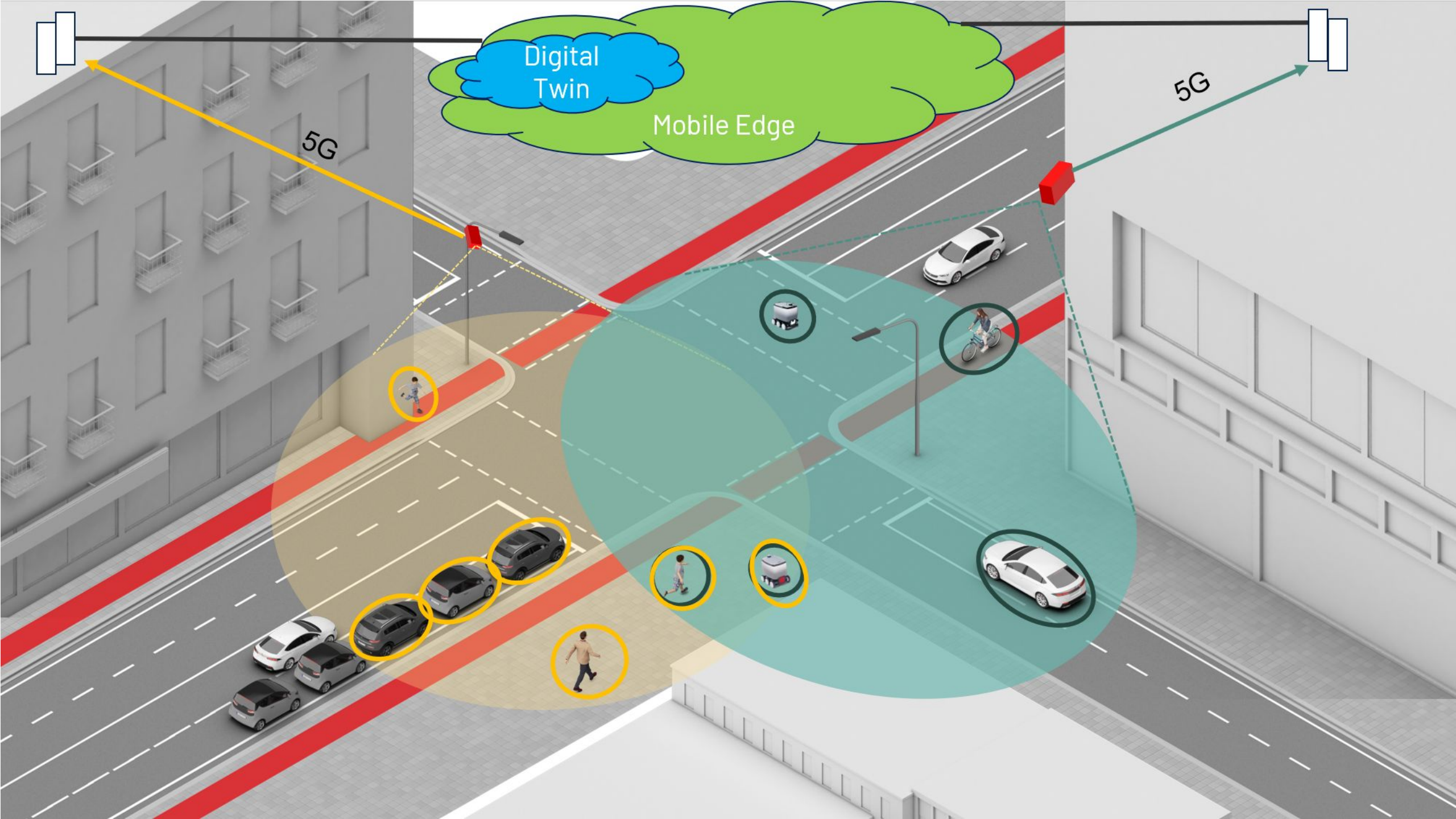


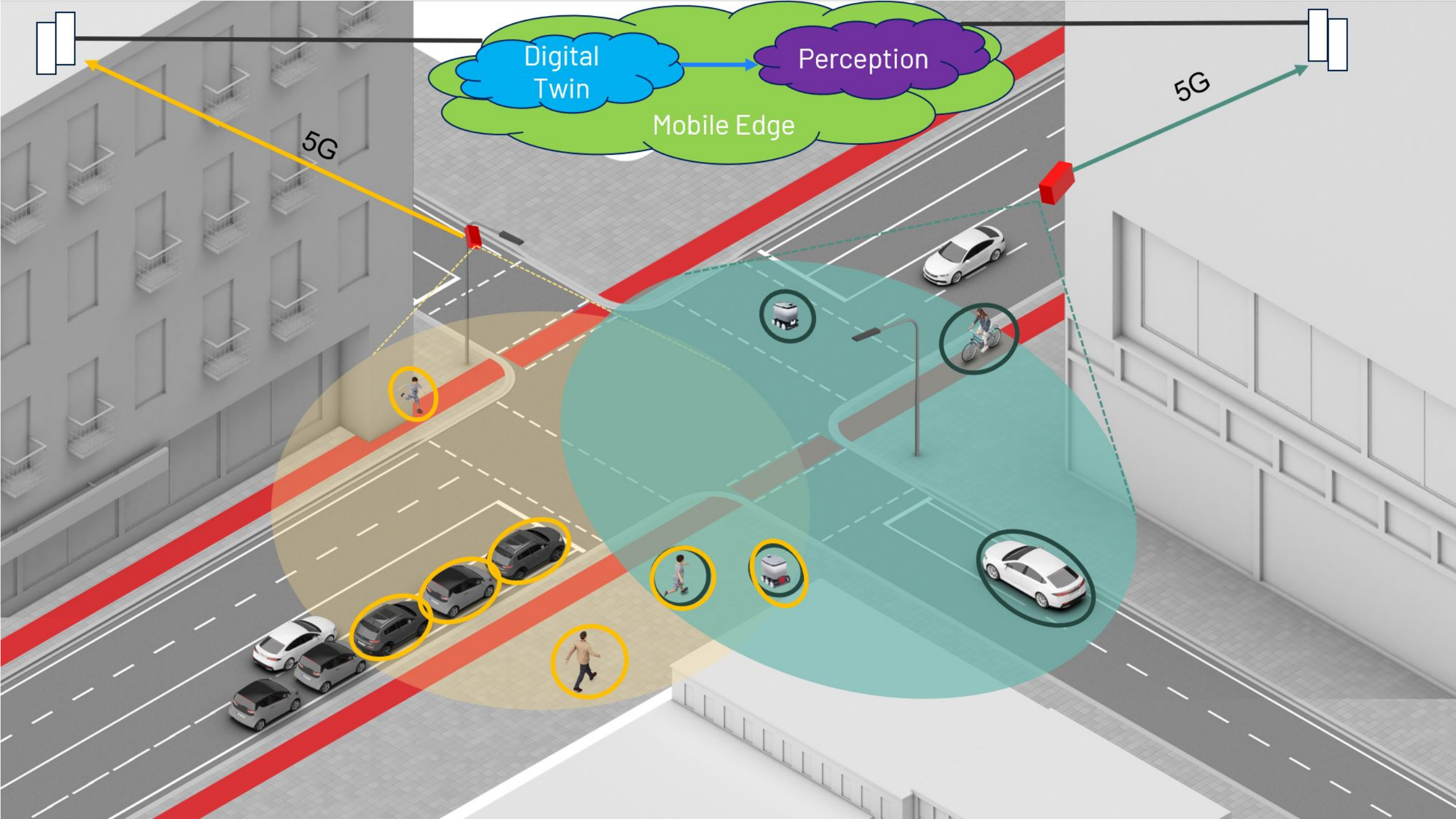


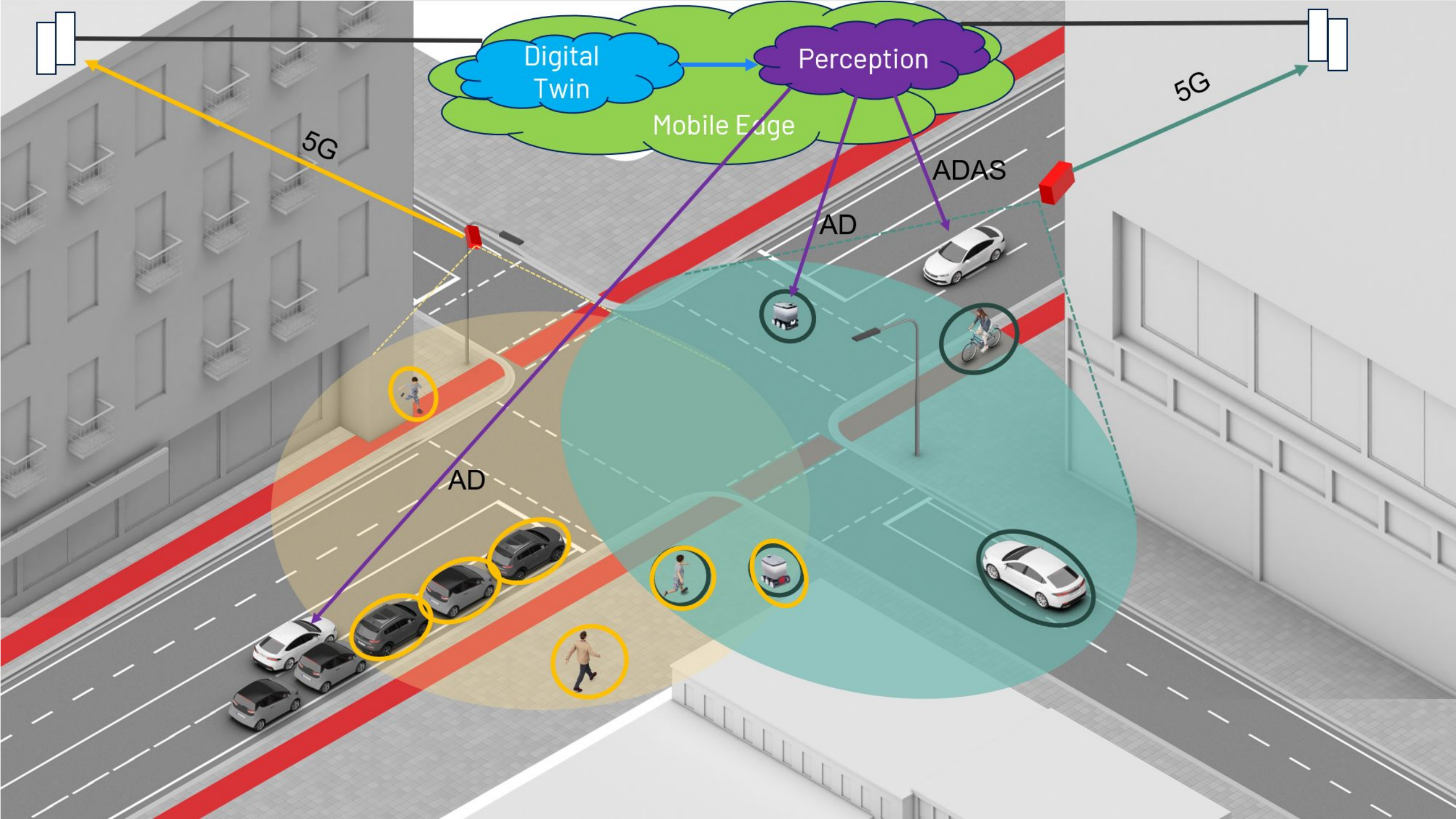










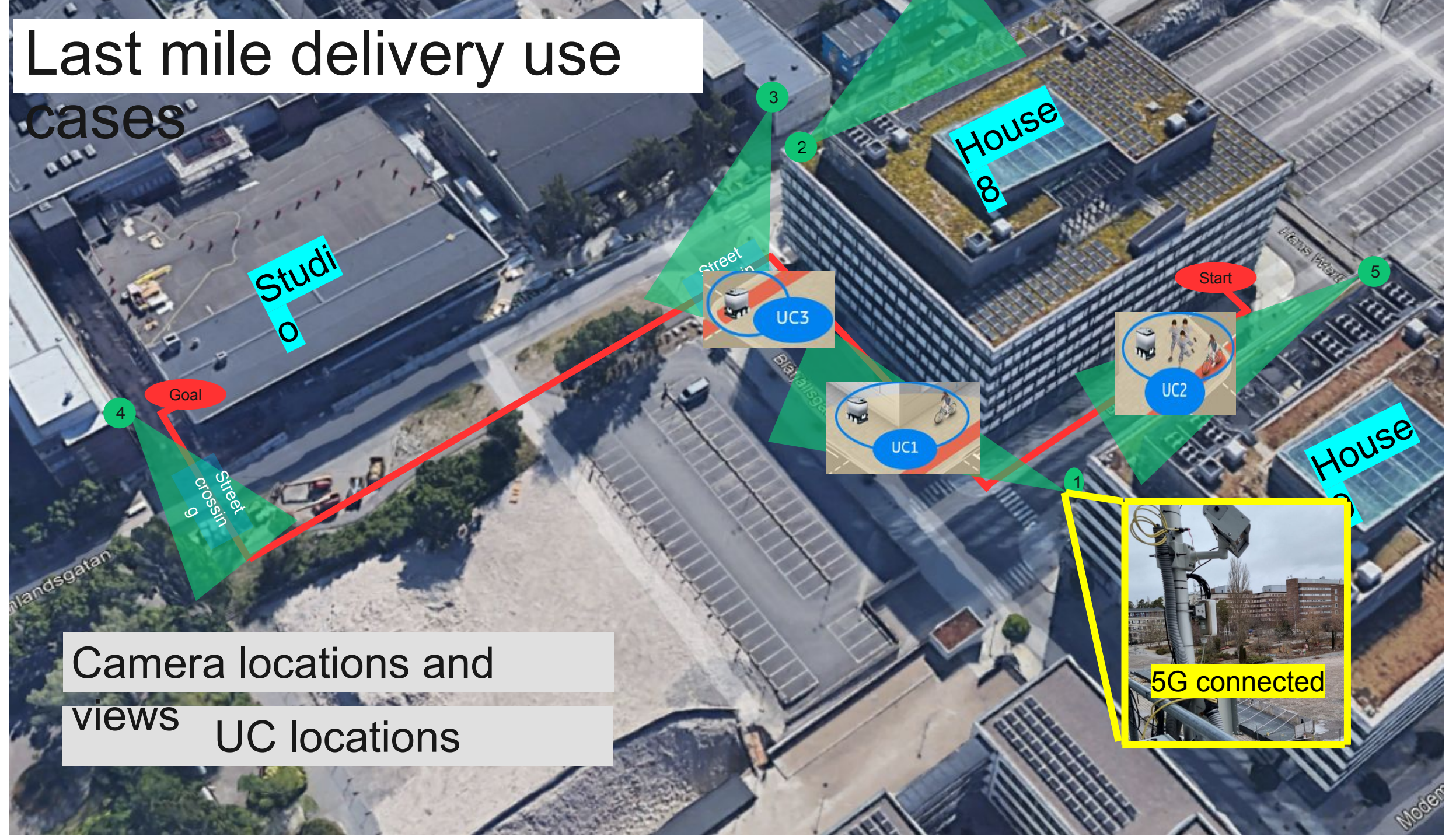




Sensoring Network In Kista

Built For 3GPP Last Mile
Delivery Project

Last mile delivery use cases



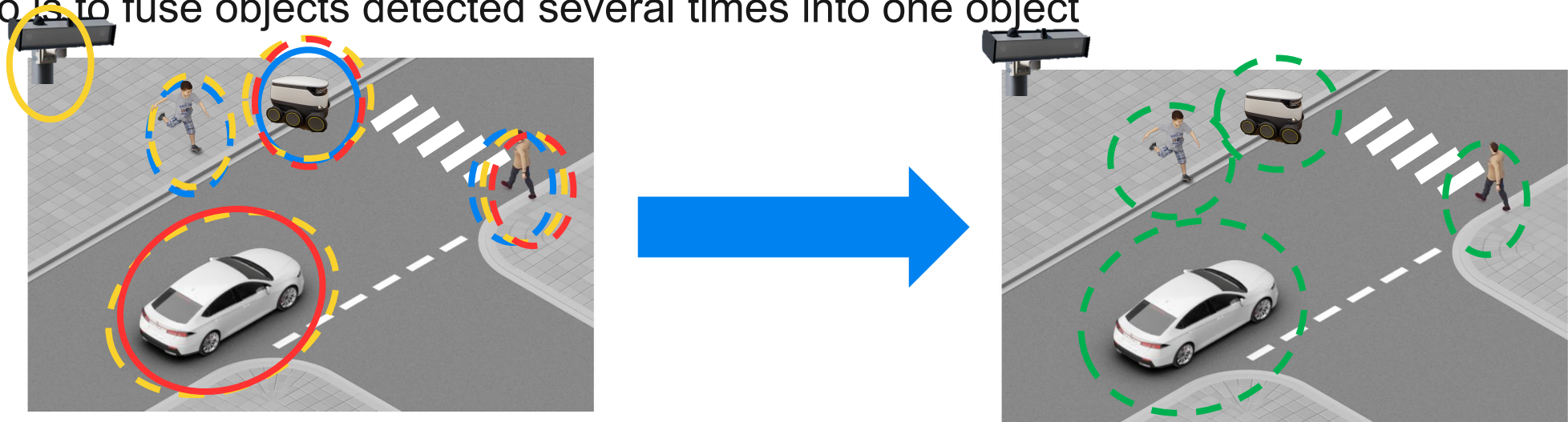
Camera locations and views UC locations

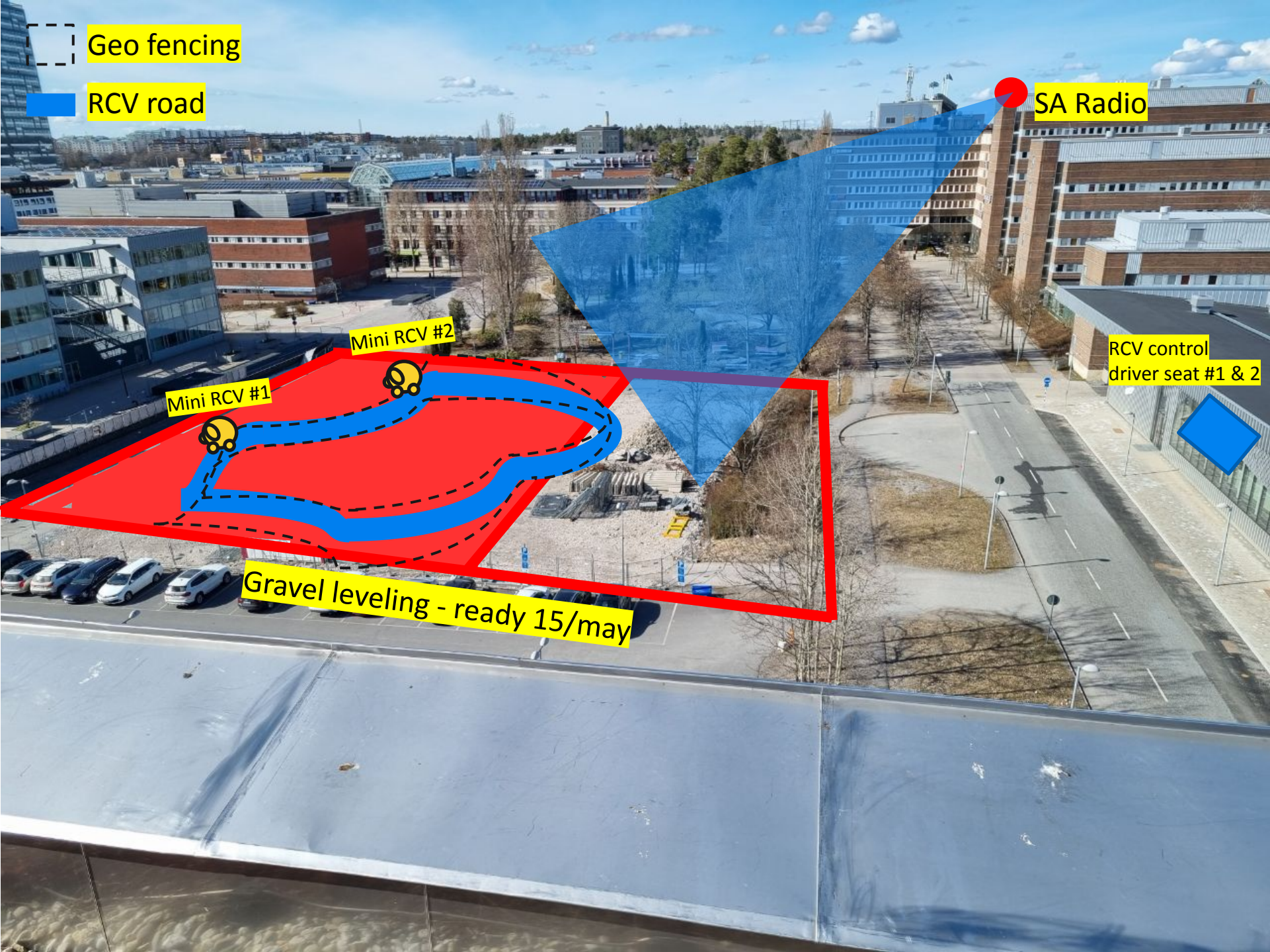


Sensor fusion



- We have several sensors streaming detected objects on individual MQTT topics
 - First step is to combine several sensor streams into one topic
- Some sensors will have overlapping coverage which will result in some objects detected twice
 - Step two is to fuse objects detected several times into one object





Geo fencing

RCV road

SA Radio

Mini RCV #2

Mini RCV #1

RCV control driver seat #1 & 2

Gravel leveling - ready 15/may



Video



- https://ericsson-my.sharepoint.com/:f:/p/pietro_lungaro/Eu8Leeh0iHdPh8KF9u6OG3wB35oK6kDE0O9T2K-0c_aZGQ?e=7BmVta
- Video2

