

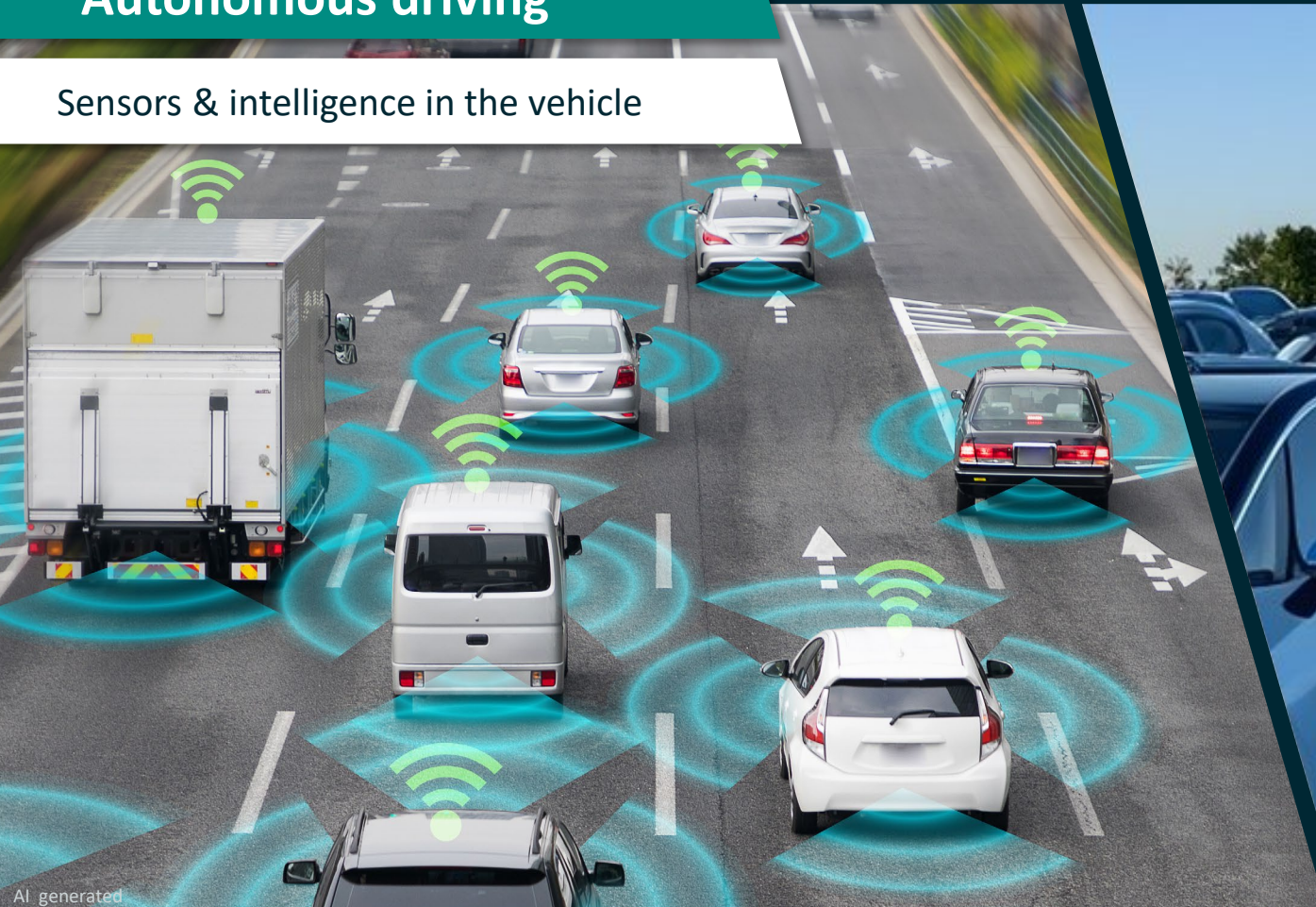
Volkswagen Group Logistics

ECG Panel Meeting | 15.10.2026 | Public

Automated driving enables the automation of vehicle movements for various vehicle models.

Autonomous driving

Sensors & intelligence in the vehicle



Automated driving

External sensor infrastructure



With automated driving, intelligent infrastructure controls vehicle movement in an efficient and flexible way on logistics areas.

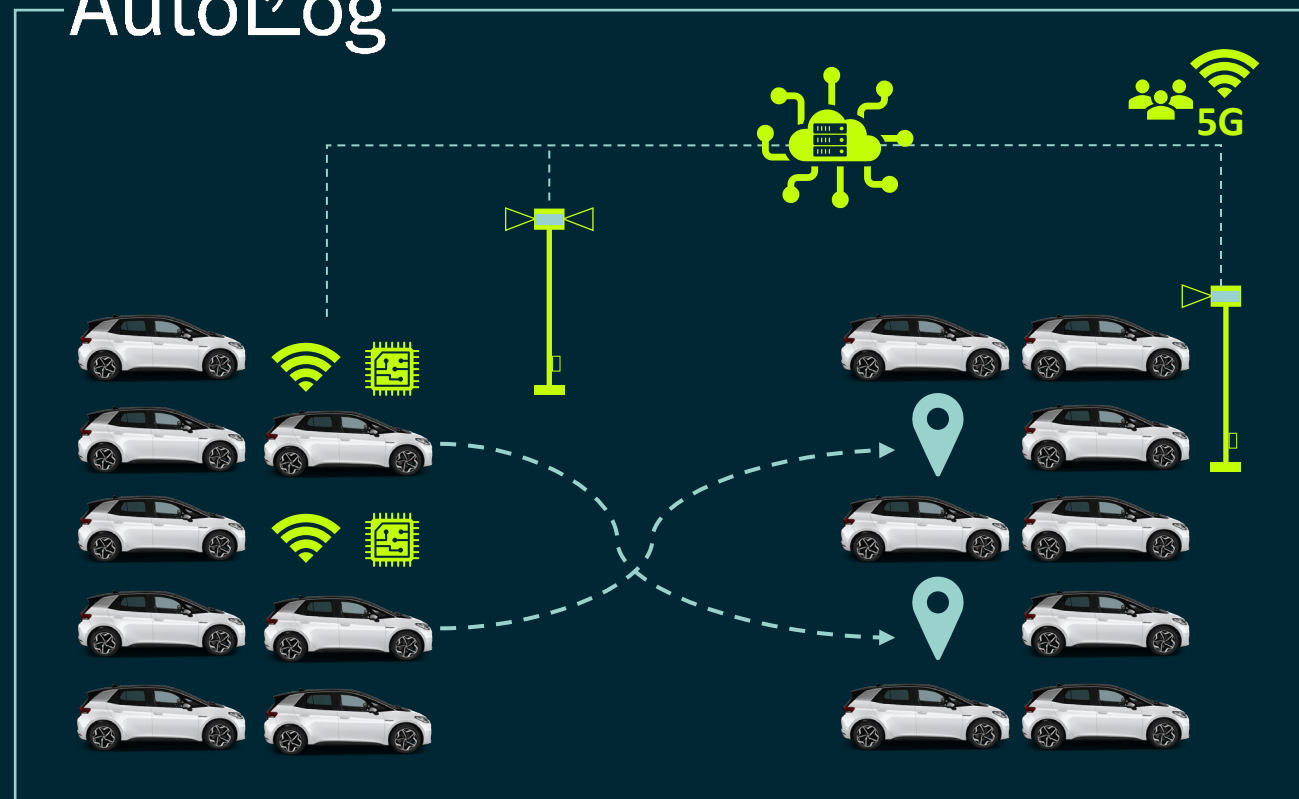


An intelligent, infrastructure-based overall system monitors and controls all automated vehicle movements in the public 5G network.



Driverless vehicle movements enable a paradigm shift in logistics process design
e.g., higher space utilization and flexible process control

AutoLog



Profitability



Scalability

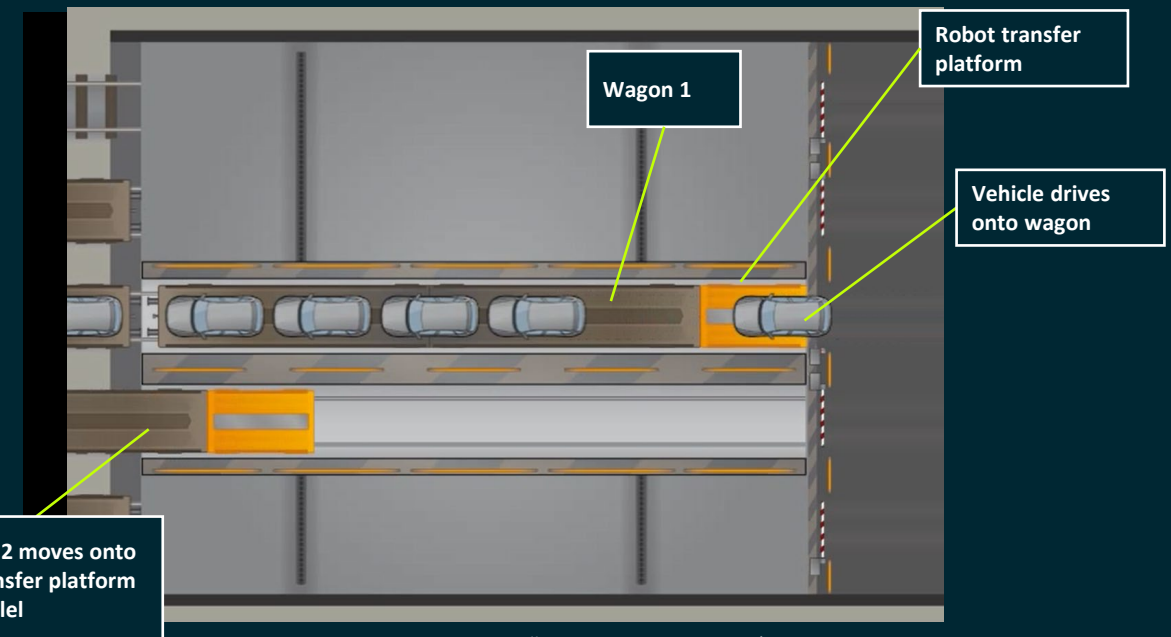


Transferability

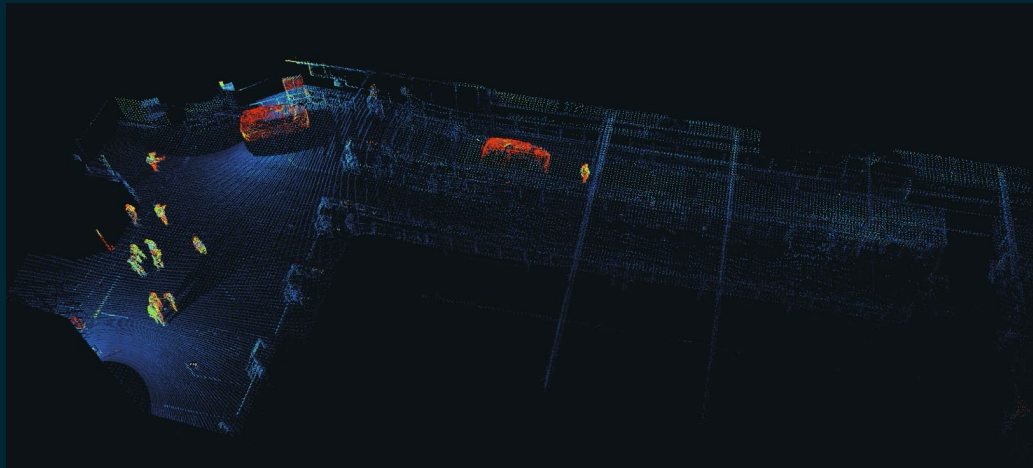
Use Case Rail Loading / Transfer Platform



- › Vehicle moves from the lifter **onto the wagon** and along the wagon to the end position – on the upper and lower loading levels respectively
- › The **technical complexity** of the rail loading use case due to several possible y-positions of the transfer platform, parallel loading of several wagons, and shading, especially in the lower loading level
- › The aim of the project is to **prove that it is suitable for series production** – a mere demonstration of rail loading is not sufficient



The rapid setup of the rail test site in Ingolstadt enabled testing to proceed quickly.




LiDAR sensors

On-prem Cabling


Edge-Cloud

Industrial Grade Connectivity

(Fiber-Network, private APN, Public Mobile Network)

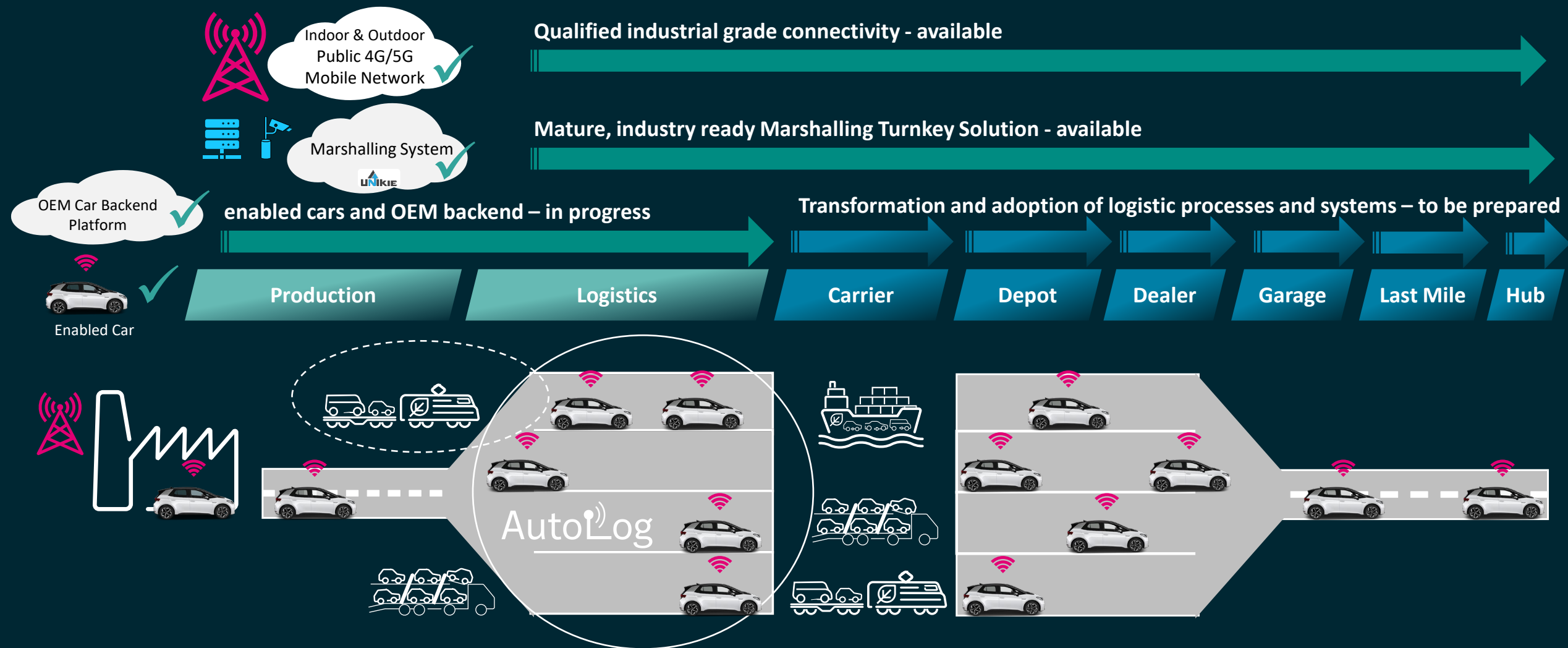


1. LiDAR sensors transfer perception data of the area.

2. The Unikie application calculates safety features and trajectories in the cloud.

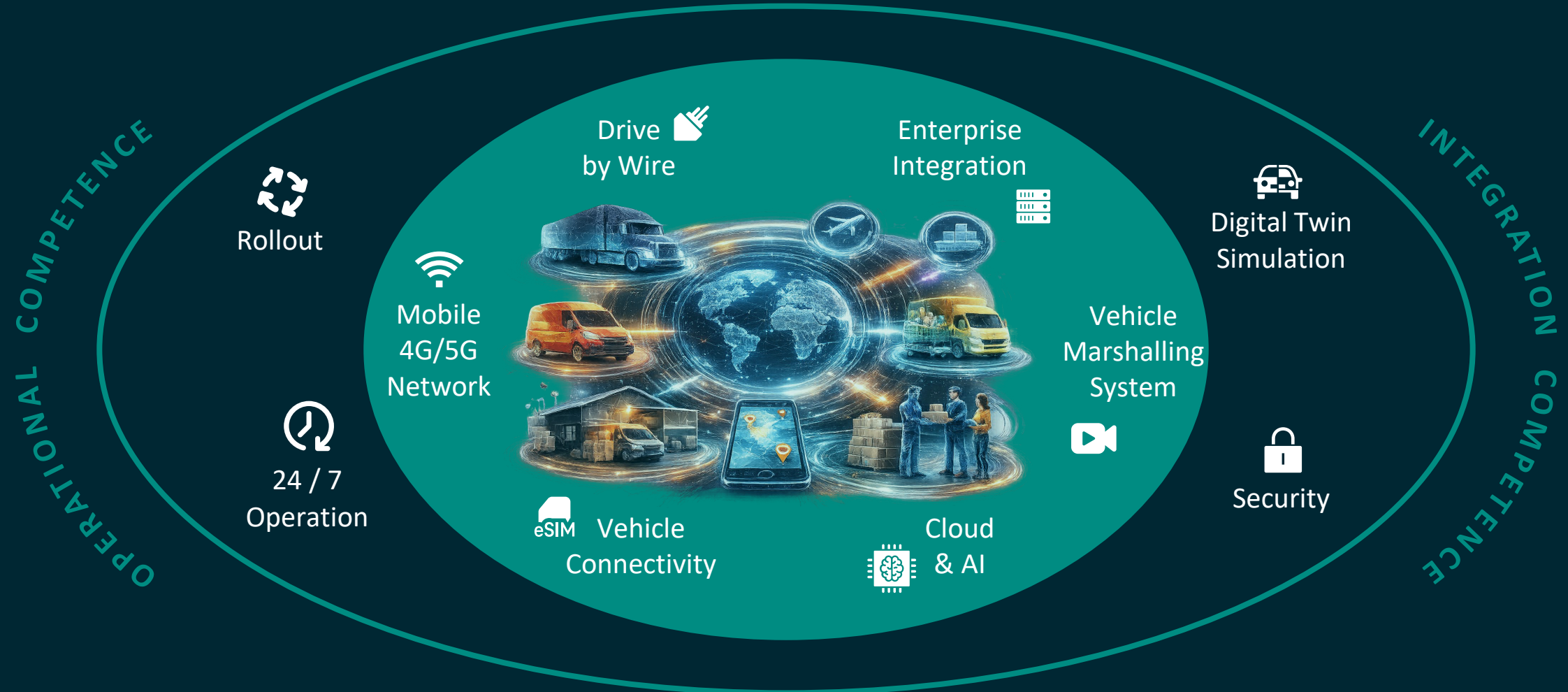
3. Driving missions are transferred to the vehicle.

AutoLog shows the Automated Marshalling Solution from Telekom and Unieke, targeting significant benefits along the value chain.

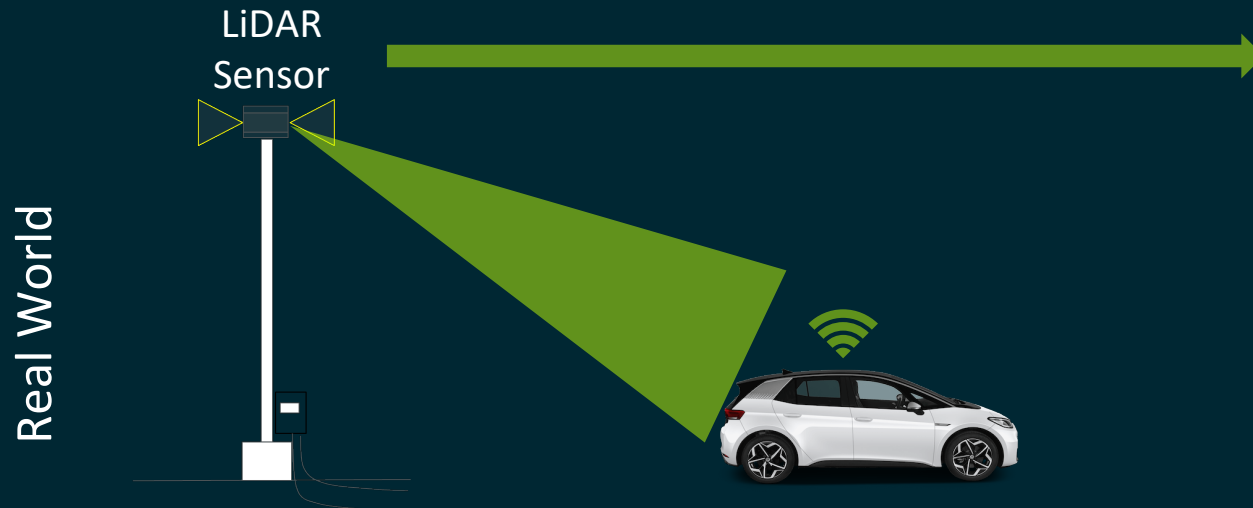


Vehicles and Logistics Ecosystem

Transformation into the Automated Eco System is about to start with Process-, System-Design and Simulation

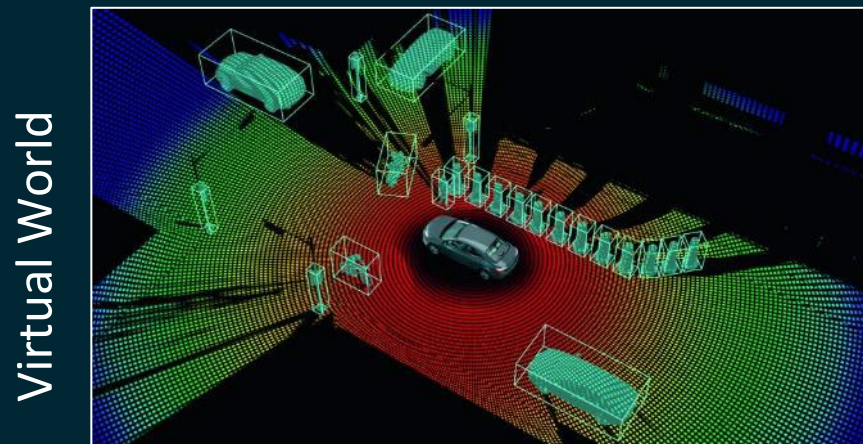


LiDAR sensors capture their surroundings as a point cloud rather than as images



Main function of LiDAR-Sensors

- Detection of dynamic & static objects in a 3D point cloud
- Transfer of this data into the RVO-System



Detection

Software

Decision

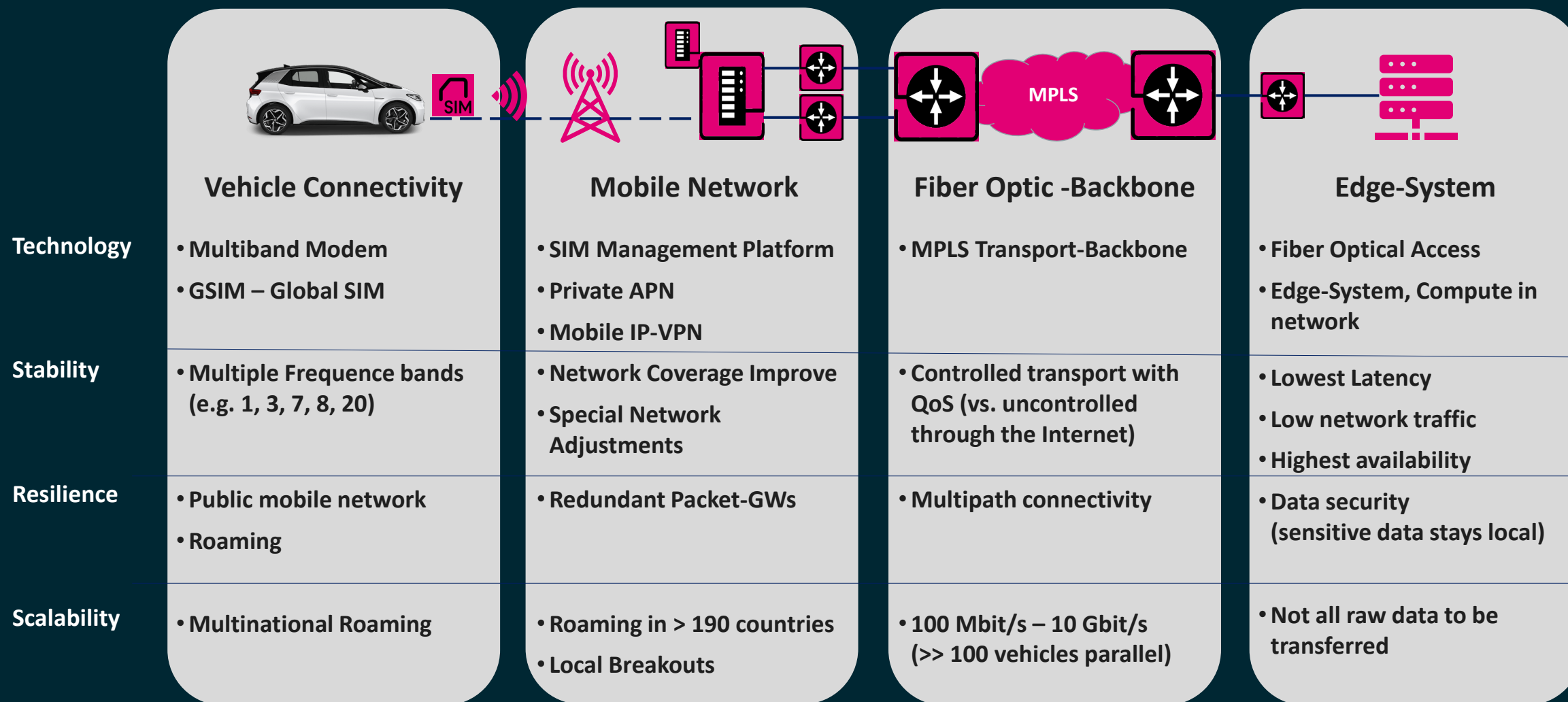
Dynamic Objects

e. g. vehicles, persons and other objects

Static Objects

e. g. Traffic Lights and EV Charging Stations

The Network Architecture is critical for stable, resilient and scalable operation – Industrial Grade Connectivity



Scale of Automated Marshalling Solution for Commercial Vehicles / Trucks

Autonomous movement of finished trucks



- Autonomous movement of finished trucks from EOL to yard parking
- Assignment to parking slots based on destination, configuration, or priority

Yard Orchestration & Smart Parking



- Automated parking, relocation, and retrieval of trucks in large yards.
- Dynamic prioritization (e.g., based on shipping schedule, customer urgency)

Pre-Delivery & Shipping Preparation Flow



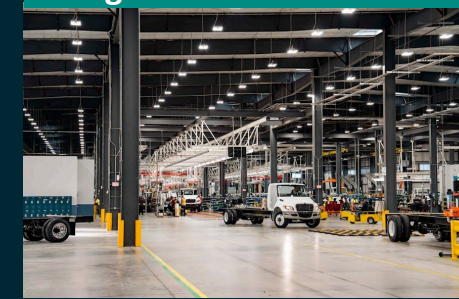
- Moving trucks through:
- Pre-delivery inspection,
 - Refueling / charging,
 - final configuration
 - washing stations

Inbound Logistics



- Autonomous truck movement to outbound loading docks or transport staging areas
- Sequencing trucks according to delivery routes or dealer priorities

Inter-Plant & Campus Logistics



- Movement of semi-finished trucks between:
- Assembly halls
 - Body/paint shops
 - Testing facilities
 - Storage areas



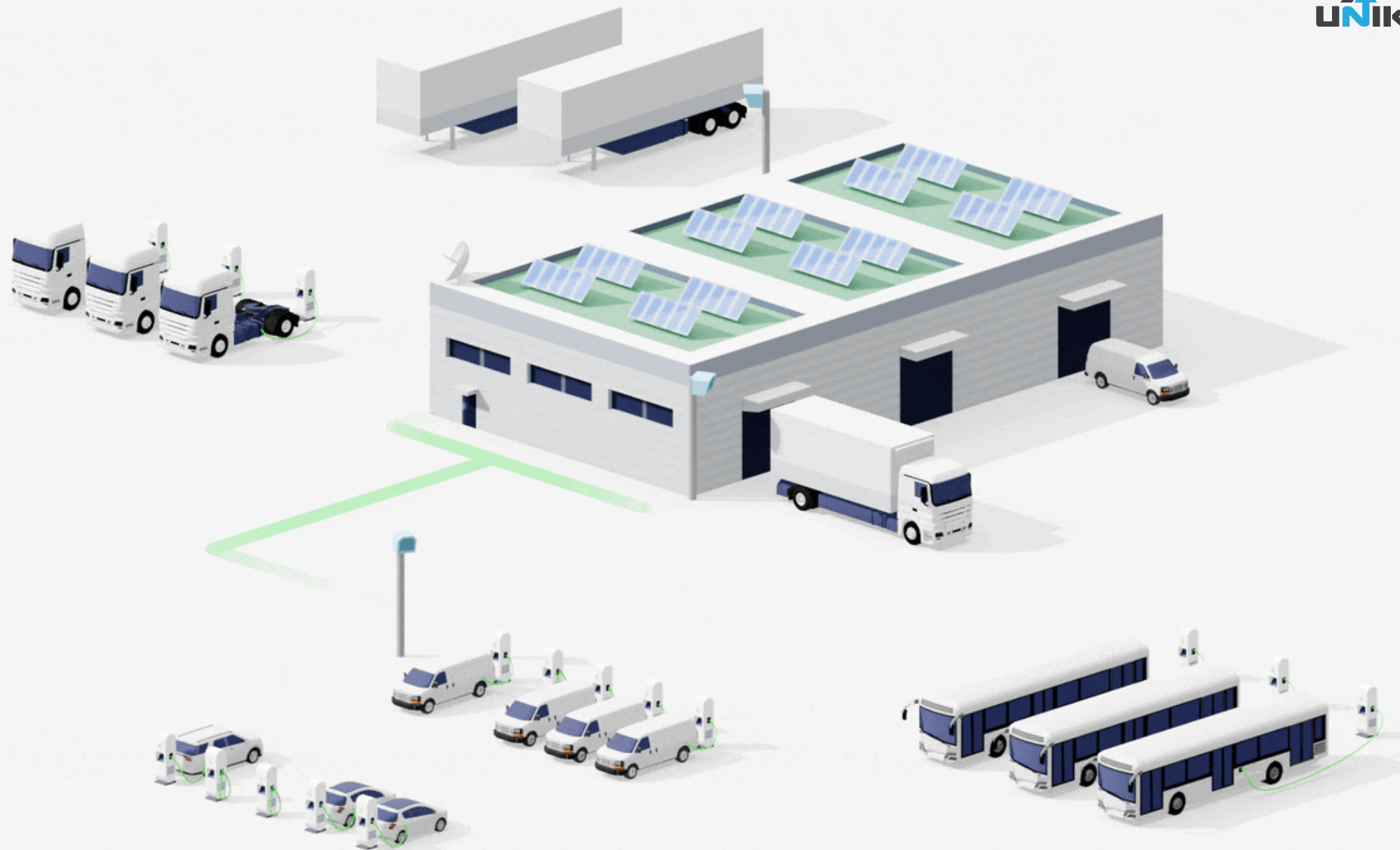
Higher Operational Efficiency



Improved Safety and Reliability



Lower Costs and Greater Sustainability



Thank you



✉ peter.hoerndlein@volkswagen.de



✉ Vesa.kiviranta@unikie.com



✉ borcherse@telekom.de



autolog-projekt.de