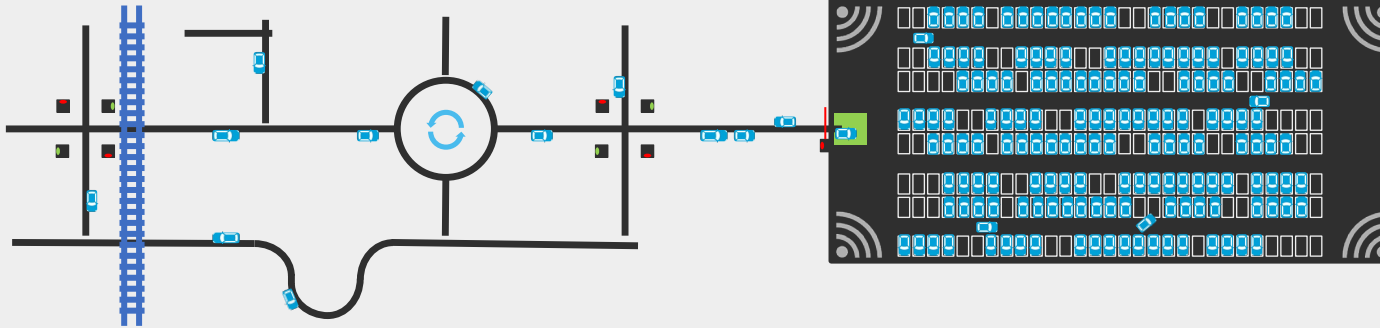


An aerial, top-down view of a two-lane highway running parallel to a rocky coastline. The ocean is on the right, with white foam from waves crashing against the shore. The land on the left is covered in green vegetation and rocky terrain. Two cars are visible on the road: a red car in the upper lane and a dark car in the lower lane.

**WE DRIVE  
THE CHANGE**

# AUTONOMOUS DRIVING IN PUBLIC ROADS VS. PRIVATE/MANAGED GROUNDS



## PUBLIC ROAD

- Public traffic rules
- Manually driven vehicles
- Vehicles driven by automation
- Adjacent transportation methods

## PRIVATE/MANAGED AREA (DRIVING/PARKING) e.g Parking, OEM Plant, Rental Cars, Local Fleets

- Individual traffic rules and management
- Business purpose and strategy
- Digital Check-in / Check-out
- Local infrastructure
- Manually driven vehicles
- Vehicles driven by automation

*Technology is already there – validation & legislation takes still time in public roads – however in managed areas this can be implemented now with quick ROI*

<https://www.youtube.com/watch?v=4aqqaaQJRAU>

# **AUTOMATED FACTORY PARKING**

In Unikie's solution the vehicle does not need to have the capability for autonomous driving, because the control of speed, maneuvering, situational awareness and reaction to unexpected events is managed by the external system.

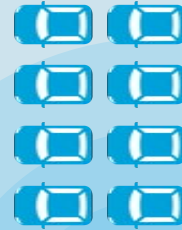
# BUILDING BLOCKS FOR AUTOMATED FACTORY PARKING

## MPE – MAPPING OF PHYSICAL ENVIRONMENT

- Map creation & real-time updates
- Infrastructure connected sensors
- Lidars, Cameras, Radars etc.

## DIGITAL TWIN

- Based on CARLA open source simulator
- Simulations based on real maps
- Weather condition simulation
- Moving obstacle models
- AD Vehicle model simulation
- Sensor models



5G

- Private 5G
- Qos
- Security



## CONTROL HUB

- ISO standard compatibility
- Planning & Operations
- Traffic Management, traffic rules
- Secure vehicle Control & Trajectory planning
- Parametrisation
- Analytics & AI &MLP
- User interaction / Communication interfaces
- Visualisation

## AI VISION

- Private cloud based realtime 3D Situational Awareness – Environmental model
- Sensor fusion
- Object Detection, Tracking, Classification
- Positioning & SLAM
- Weather condition compensation

# UNIKIE SOLUTIONS FOR THE AI ENABLED FUTURE

**VEHICLE CONTROL  
& ANALYTICS**

**CONNECTIVITY**  
V2X, Mobility

**COMMUNICATION**  
Voice & Messaging  
Apps & SDK

**SENSING**  
Lidar, Radar, Camera



## UNIKIE

- Mastering Automotive Disruption
- Offering SW Engineering Services and Solutions
- Autonomous Driving, ADAS
- Digital Mobility Services
- Digital Cockpit



# THANK YOU!

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