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Software solutions for autonomous driving

20 September 2022

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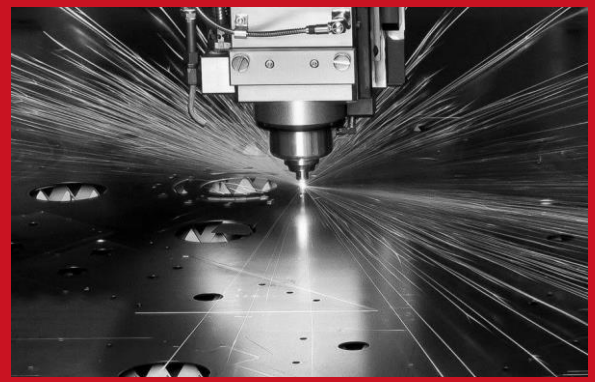
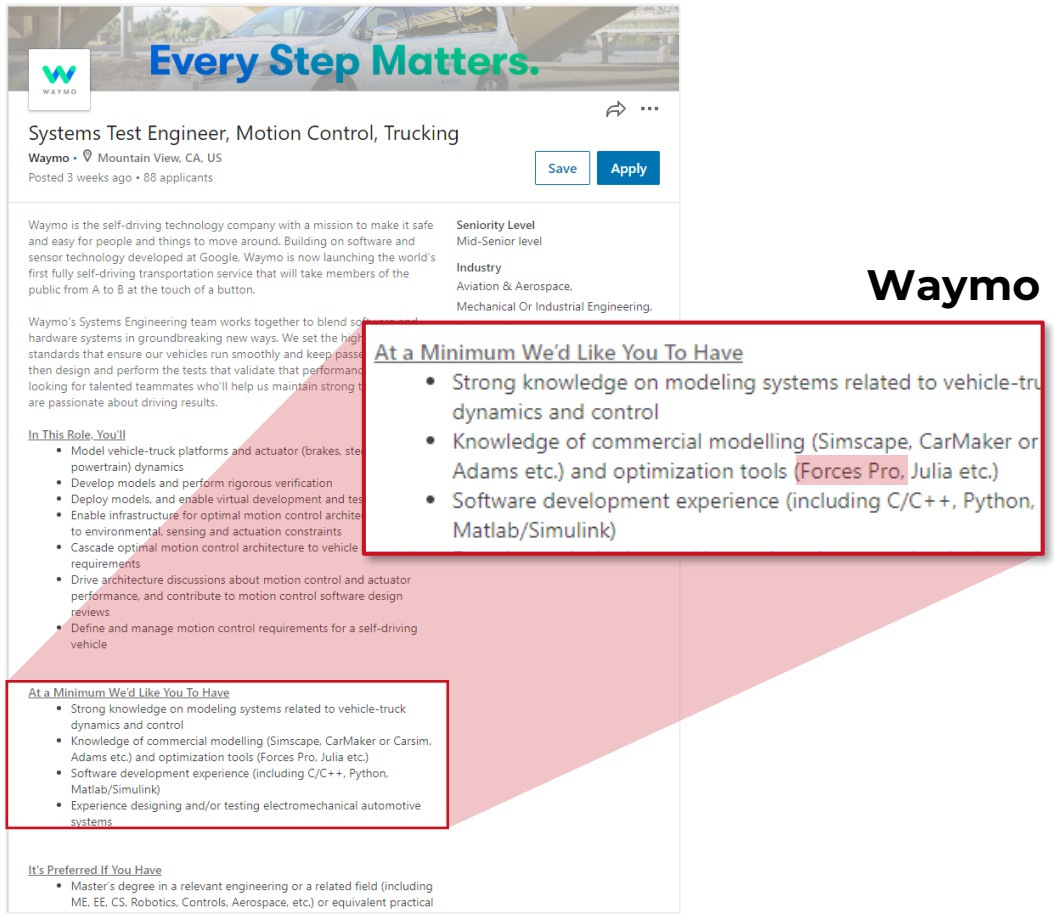
EMPOWERING AUTONOMOUS SYSTEMS TO MAKE BETTER DECISIONS



Real-time decision-making software for autonomous vehicles and industrial robotics

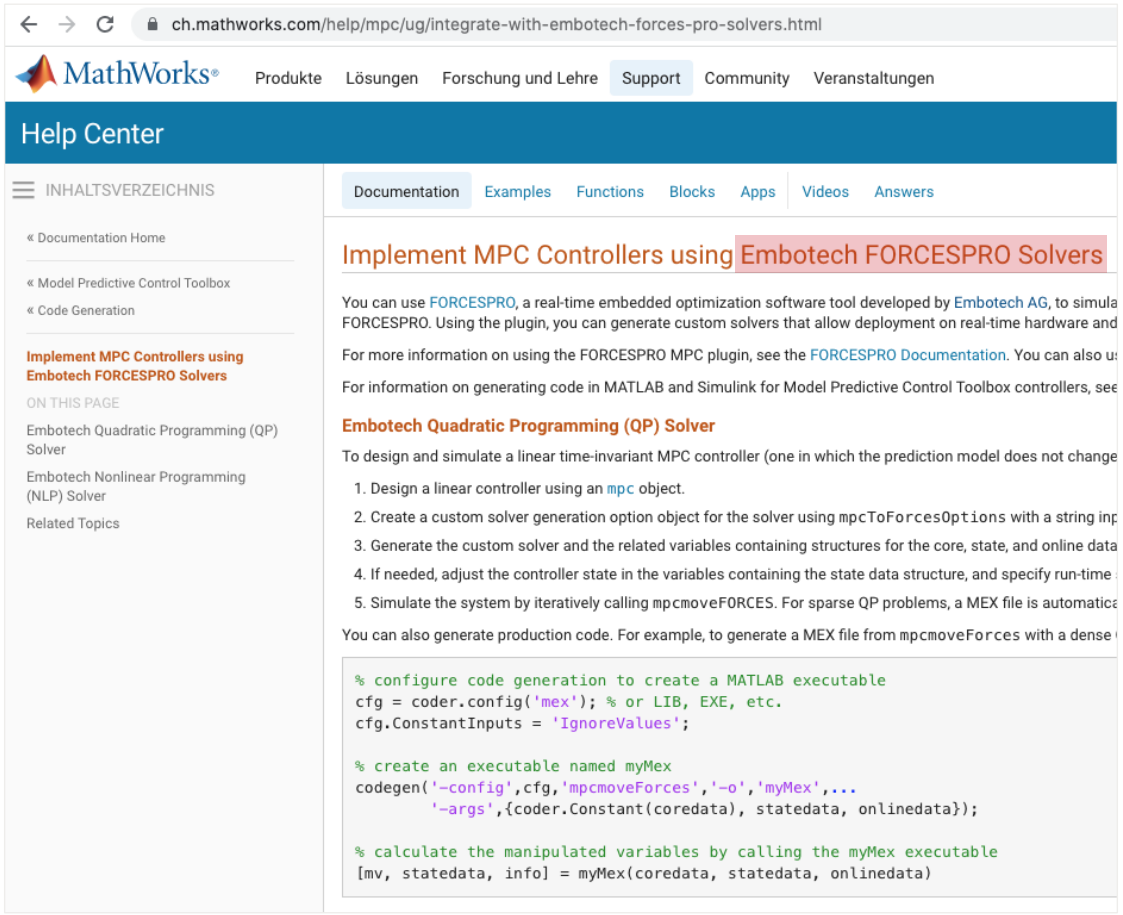
OUR SOFTWARE SETS THE INDUSTRY STANDARD



Waymo

At a Minimum We'd Like You To Have

- Strong knowledge on modeling systems related to vehicle-tru dynamics and control
- Knowledge of commercial modelling (Simscape, CarMaker or Adams etc.) and optimization tools (Forces Pro, Julia etc.)
- Software development experience (including C/C++, Python, Matlab/Simulink)



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GLOBAL CUSTOMER BASE

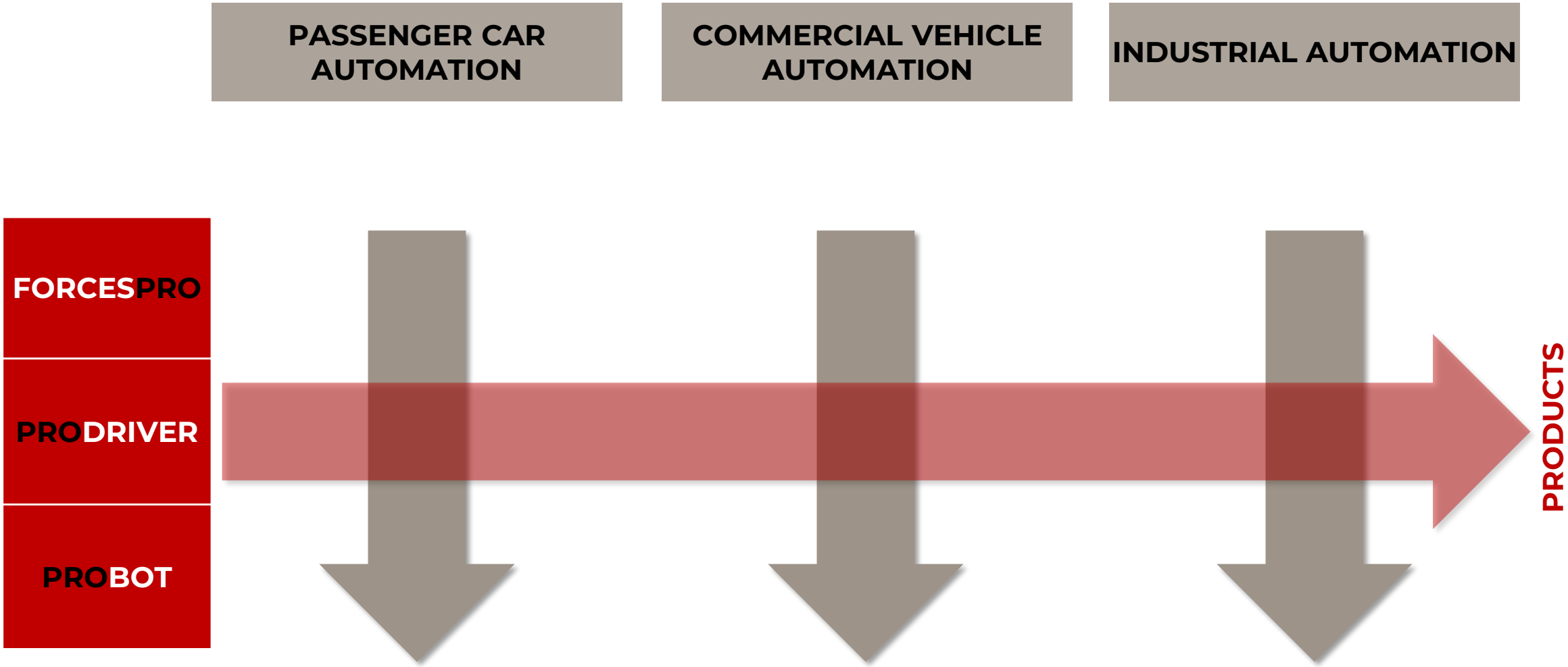
SERIAL DEALS SIGNED:

- US Tier 1 for Robotaxi application
- EU OEM for factory vehicle logistics
- Laser cutting machine tool provider

OTHER NOTABLE CUSTOMERS:

- 5 large EU automotive OEMs
- 2 major German automotive Tier1s
- 2 large US automotive Tier1s
- 4 Asian automotive Tier1s
- 1 large US BigTech with AD program
- 2 Japanese tech conglomerates
- 1 Australian mining company
- NASA, ESA and other agencies

EMBOTECH BUSINESS UNIT SETUP



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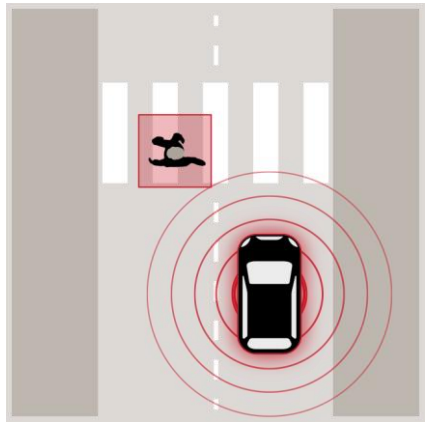
PRODRIVER

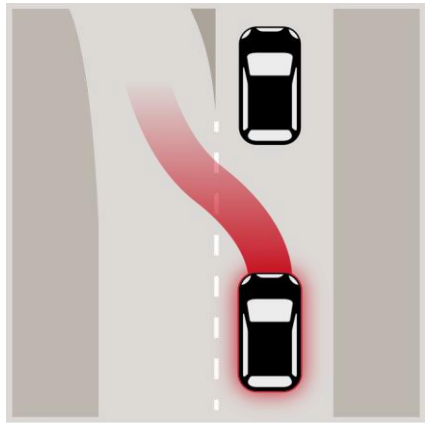
WHAT PRODRIVER IS

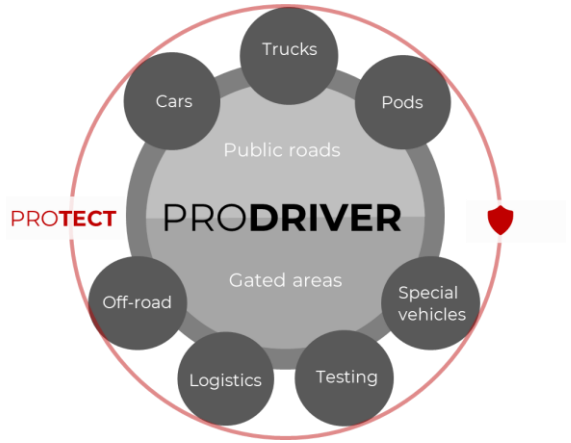
SENSING
What's around me?



LOCALIZATION & MAPPING
Where am I? Where can I go?

MOTION PLANNING
This is where I should go





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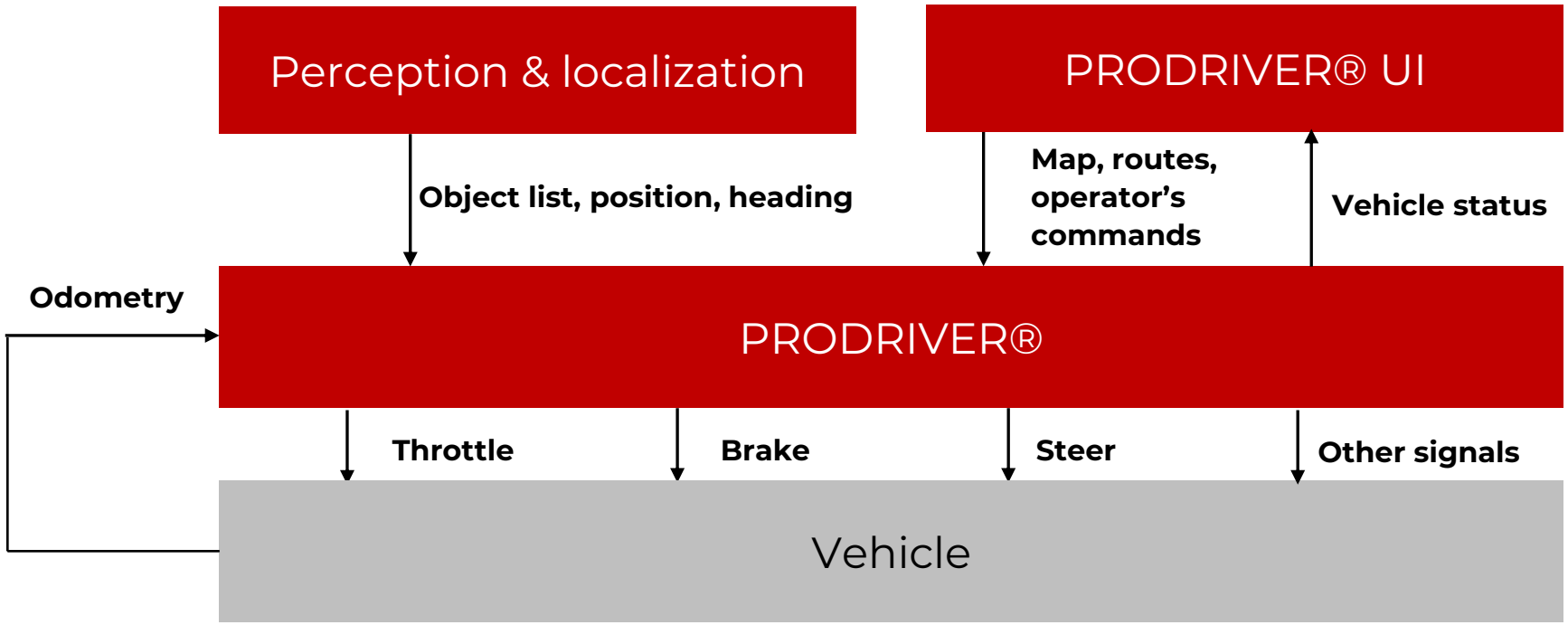
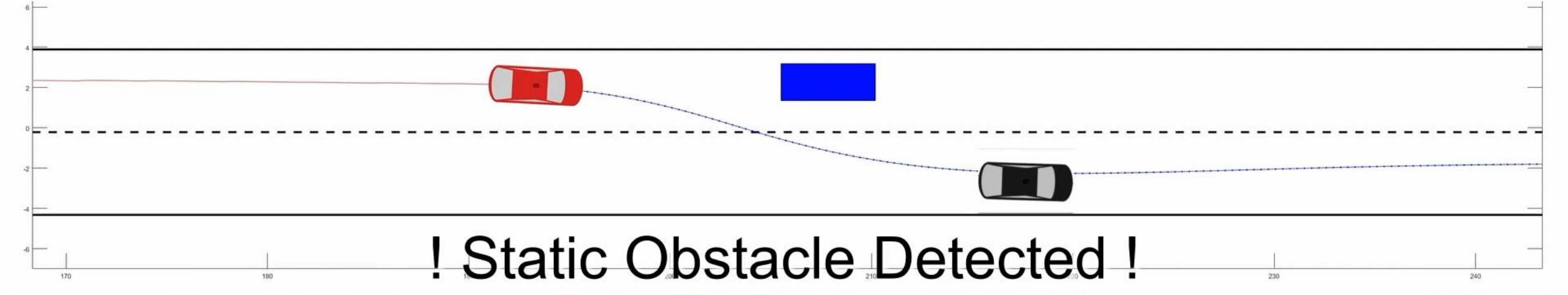
SIMPLIFIED I/O





! Static Obstacle Detected !

EXAMPLE – PRODRIVER CAR (VIDEO LINK)

FACTORY / LOGISTIC SOLUTIONS

EMBOTECH'S SOLUTION FOR OUTDOOR LOGISTICS

ONBOARD VS INFRASTRUCTURE-BASED AD

HYBRID AD

Combination of sensing & intelligence onboard and offboard

- Combines the advantages of both variants
- More redundancy for safety

EGO-AD

Sensing & intelligence on board

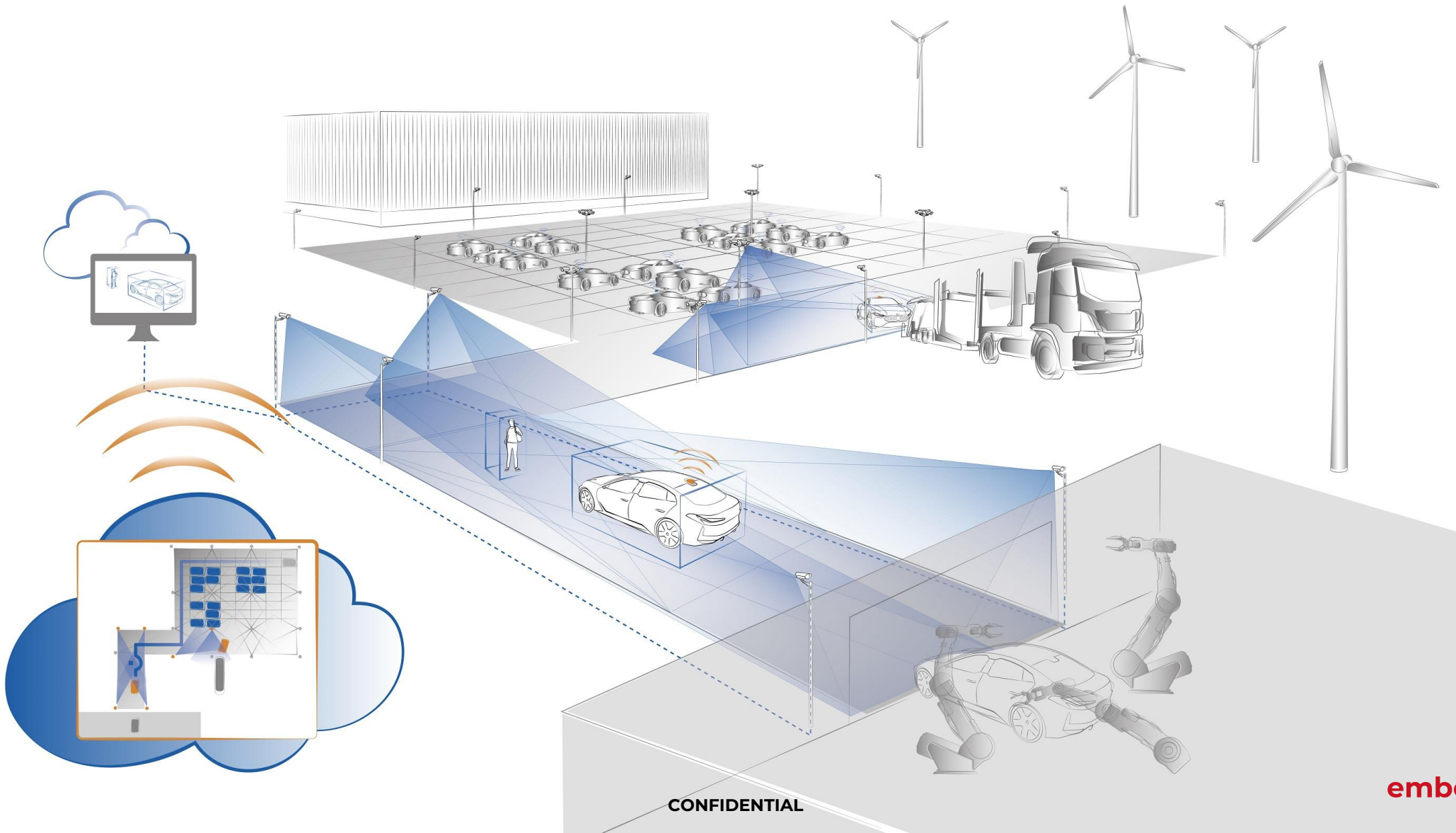
- Optimal for few vehicles / large areas
- Quick deployment

INFRA-BASED AD

Sensing & intelligence on infrastructure, vehicles remote controlled

- Optimal for small areas / many vehicles
- Minimum requirements on vehicle
- High operational flexibility

AUTOMATED DRIVING IN OEM FACTORIES



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BMW AUTOMATED DRIVING IN FACTORIES

Watch online: https://youtu.be/DSGIcSVseHU?t=727

OBSTACLE HANDLING AND LINE PARKING

AUTOMATED VALET PARKING @ IAA'21

AUTOMATED VEHICLE CHARGING

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Confidential

USE CASE TYPES

PORT TERMINALS

- Semi-trailers
- Shuttle use cases
- Trailer shunting
- Long stretches with high speeds
- Medium to heavy mixed traffic
- Harsh weather

LOGISTICS CENTERS

- Mostly swap bodies
- Trailer yard and shuttle use cases
- Heavy mixed traffic
- Frequent small movements
- Small areas

FACTORIES

- Mostly fix body and semi-trailer
- Trailer yard and shuttle use cases
- Heavy mixed traffic (Small city)
- Narrow passes, construction sites, tall buildings and hanging structures

OUR TECHNOLOGY IS VEHICLE AGNOSTIC

FIX CHASSIS

SEMI-TRAILER

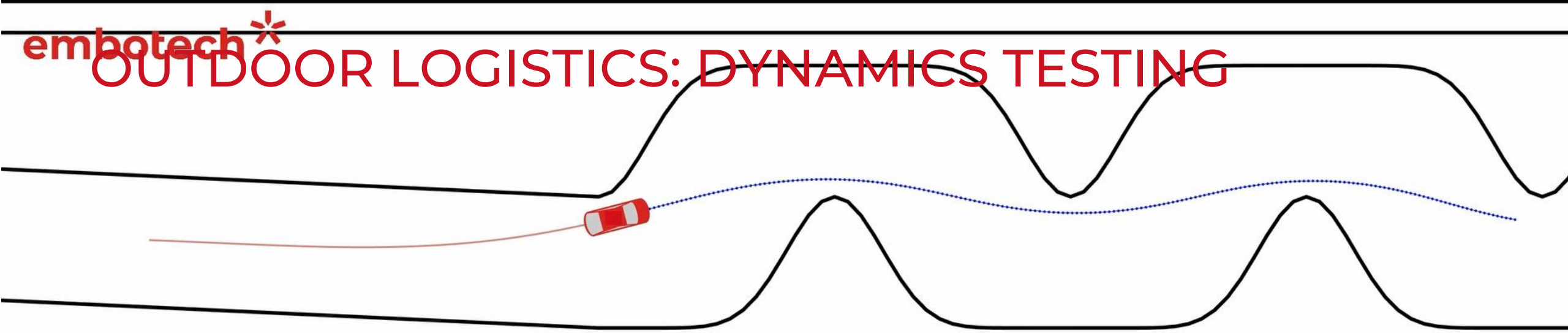
BODY CARRIER

30 Km/h, mixed traffic, interference zones, ego system, backwards maneuvers, coupling maneuvers

ELECTRIC TRUCK RECORD ON TOP GEAR TRACK

VEHICLE TESTING

OUTDOOR LOGISTICS: DYNAMICS TESTING



MINING SOLUTIONS

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MINING: AUTOMATION OF LIGHT VEHICLES

ARTICULATED VEHICLES

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