Automatic Valet Parking Service based on V2I Communications

Autonomous Vehicle Operationg System

Dynamic Map

AIoT sensor-based precise positioning |
Road safety score | Pedestrian detection |
Optimal parking spot recommendation |
Optimal route guidance | Driving Policies

Infrastructure

ZeroCruising™

V2I Solution

For Smart City & Autonomous Driving

VESTELLALAB

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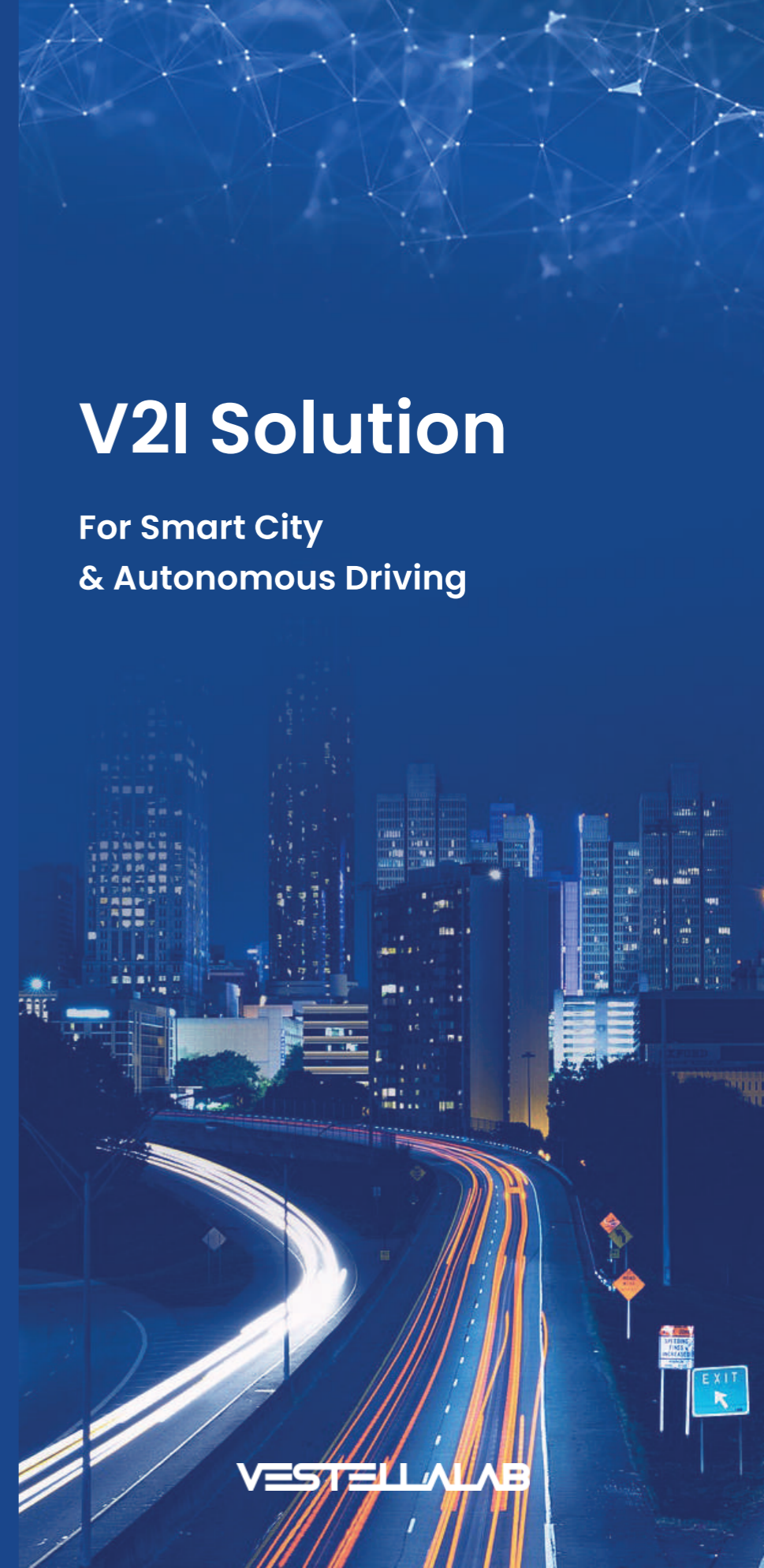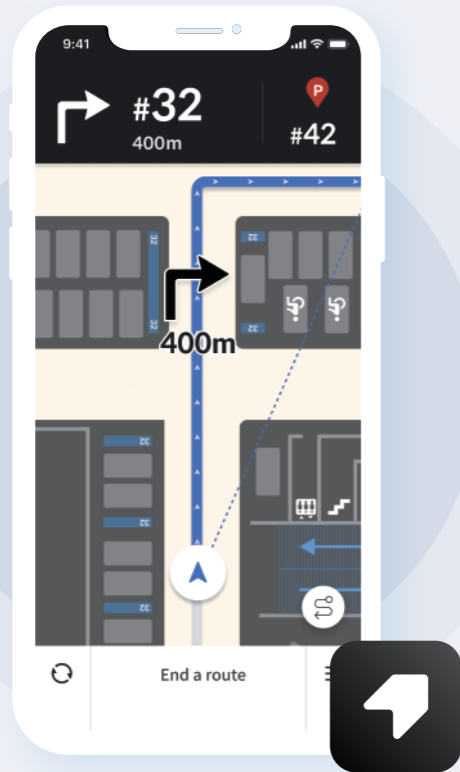✉ contact@vestellalab.com

watchmile

ZeroCruising

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Non-GPS Indoor parking navigation

The minimal operation, indoor precise positioning, accurate information providing indoor parking route guidance service
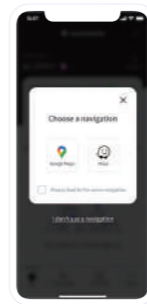

⚐ watchmile

Indoor-outdoor Parking Navigation	Parking Space Unit-based Digital Map	Smart Parking Vision AI
Applying non-GPS precision positioning technology, a key technology of VEStellaLab	Providing intuitive parking status and empty parking space location	Taking into account driver's preferences to recommend the optimal & nearest parking space

Service Flow

Destination guidance using commercial navigation
Maximizing convenience by automatically running Watchmile upon arrival at the destination

STEP 1 — **Departure**

Destination auto search & guide by using commercial navigation

① Use of commercial navigation
② Destination auto entry & guide
③ Arrival at destination
④ Automatically run Watchmile

STEP 2 — **Enter the parking lot**

- **Precise parking navigation through non-GPS precise positioning**
- **Providing service to the indoor, underground, multistory car park**

① Real-time parking status
② Recommending optimal parking space
③ AI Precise navigation
④ Parking ticket issued

STEP 3 — **Exit the parking lot**

Easily check parking tickets via the Watchmile application Provide parked location search

① Parking ticket confirmation
② Finding my car

Solution

V2I Communication technology solutions can be applied to various fields such as autonomous driving and smart logistics

① Indoor & outdoor parking navigation solution

- Information on parking status: Providing location information of available parking surfaces using a precise digital map
- Parking navigation: Displaying the indoor movement status and route to the driver using precise positioning
- Finding my car: Recording and providing a parking location cache for the driver

② V2I communication for autonomous driving & vector map solution

- Delivering essential safety information in the parking facilities with a vector map.
- Minimizing communication latency by calculating and lightening data and improving the stability of pedestrians and autonomous vehicles by securing real-time data
- Creating dynamic safety maps by providing dynamic information that recognizes vehicles and pedestrians

③ V2I solution for warehouse

- Installing V2I terminals exclusively for logistics warehouses in equipment such as small trucks and forklifts
- Minimizing blind spots by utilizing sensors/CCTV built into the warehouse
- Minimizing miswork and ensuring timeliness
- Creating a dynamic safety map by providing dynamic information to recognize forklifts and logistics robots in the warehouse