

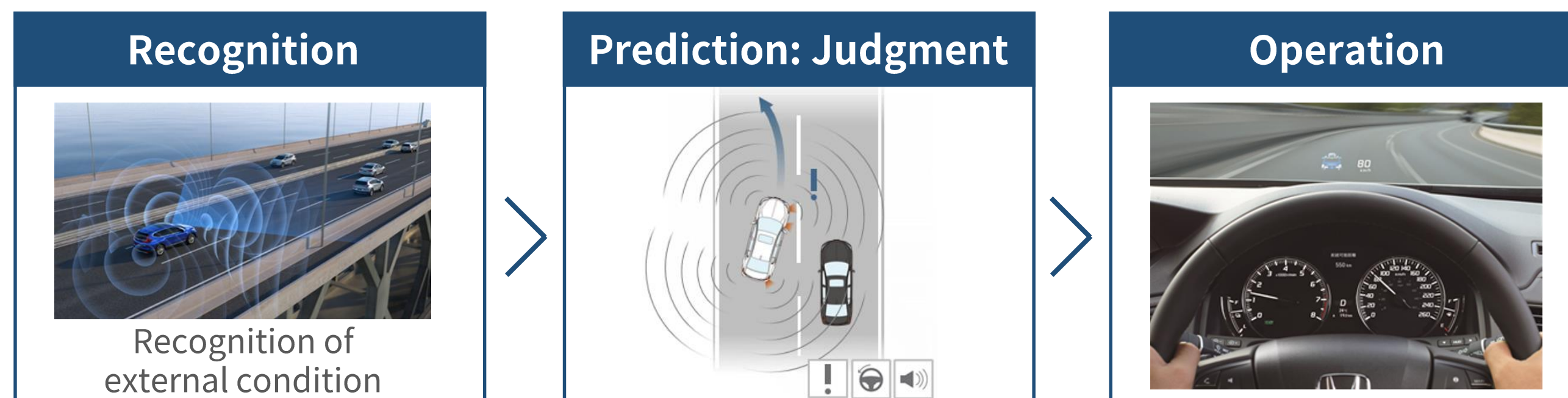
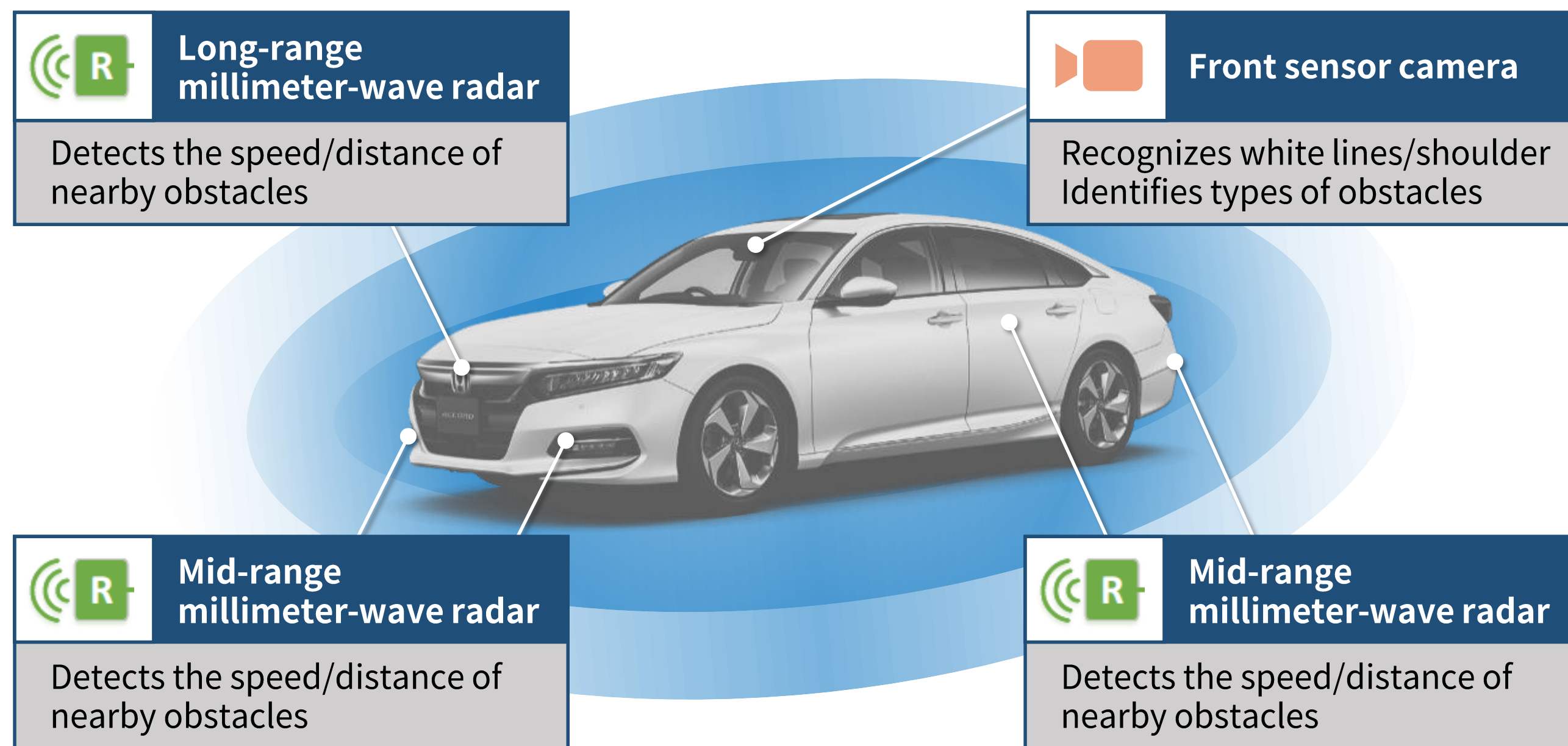
# Honda SENSING 360

## Objective

To use multi-directional sensing to cover blind spots around the vehicle, which have been difficult to confirm visually in conventional driving, and to support the avoidance of collisions with other vehicles and pedestrians and the reduction of the driver's load due to driving.

## Technical Content

Supports safe driving by integrating the external world conditions obtained through each sensor used in Honda SENSING and performing recognition, prediction, and judgment.



## Technical features

Evolution of accident avoidance support functions utilizing the knowledge and know-how cultivated in the research and development of automated driving Level 3 technology

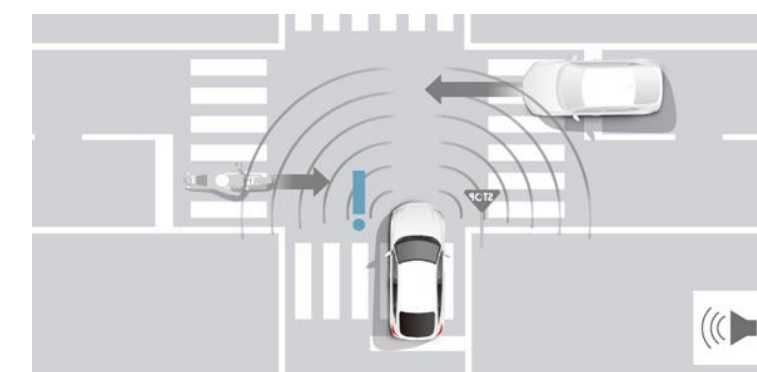
- Based on accident analyses from each region, analyzes priority issues related to intersection/lane deviation/pedestrian/motorcycle/rear side accidents and creates countermeasure specifications.
- Expands the recognition range in all directions and improves predictive judgment capability.

## Honda SENSING on-board function+5 functions

### Collision mitigation braking

#### Function expansion

- Intersection
- Pedestrian
- Head-on collision
- Vehicle side/opposing direction C/M

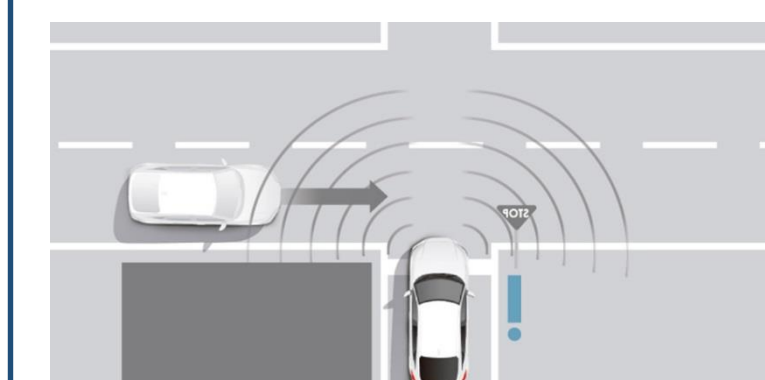


Motorcycle/automobile crossing vehicle C/M



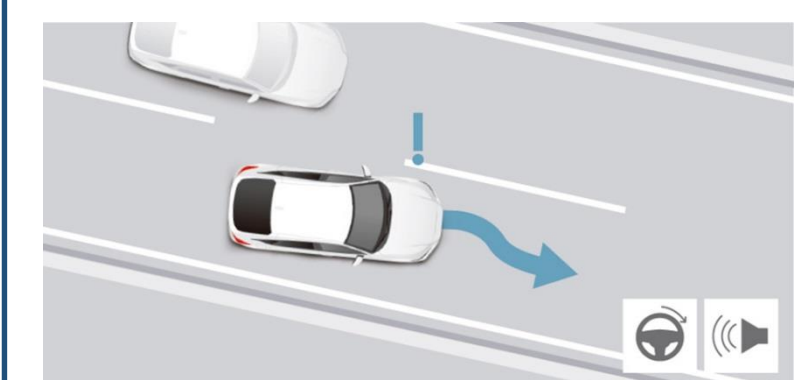
C/M for pedestrian crossing when turning left/right

### Front cross traffic warning



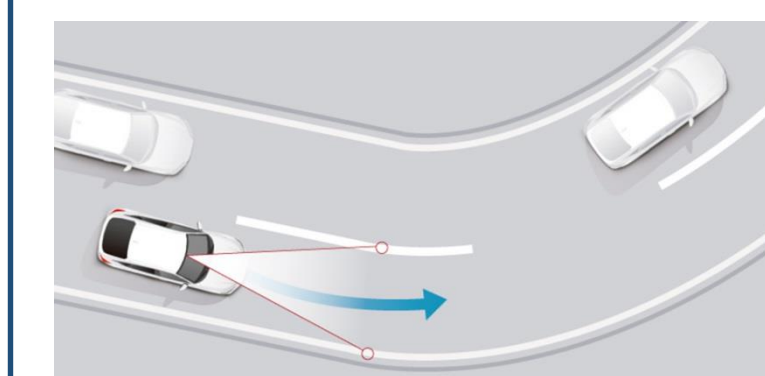
Crossing vehicle alert when driving at low speed or starting

### Lane change collision mitigation



Assists steering operation to avoid collision

### Cornering speed assist



Reads the curvature of the lane right before the curve and adjusts vehicle speed

### Active lane change assist



System assists with steering for lane changes

# Honda CONNECT 4.0

## Objective

Through the constant evolution of Honda CONNECT, Honda is working to transform the car into a personalized, smart travel partner that customers can trust and that will grow and develop with them.

## Technical Content

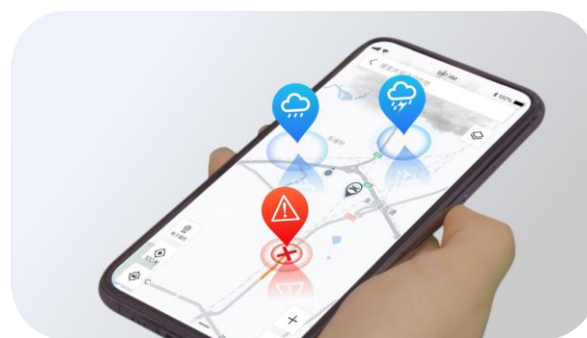
## Technical features

Honda CONNECT 4.0 uses Big Data and AI smart analytical technology to provide a driving experience with a higher level of safety and peace of mind, realizing “advance notification and advance protection to keep drivers safe” through a three-fold approach: monitoring the external environment, safeguarding the driver and passengers within the car, and providing vehicle status diagnostics. The system also uses facial recognition to automatically implement personalized settings for devices in the car interior. It supports multi-dimensional connectivity, seamlessly connecting driving with other aspects of life. In addition, Honda CONNECT 4.0 provides a richer variety of entertainment content, making driving not only more comfortable and convenient, but also more enjoyable.

### Improved safety and peace of mind, with risks detected in advance, and constant protection

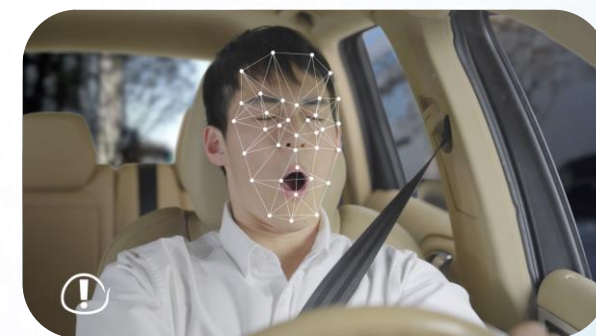
#### Monitoring the surrounding environment

- Collects environmental data (weather, natural disasters, road conditions, etc.) to plan the optimal route
- Proactively recommends Honda SENSING driving assist functions
- Real-view navigation function



#### Monitoring the driver and passengers

- Smart driver warning system
- Real-time car interior monitoring



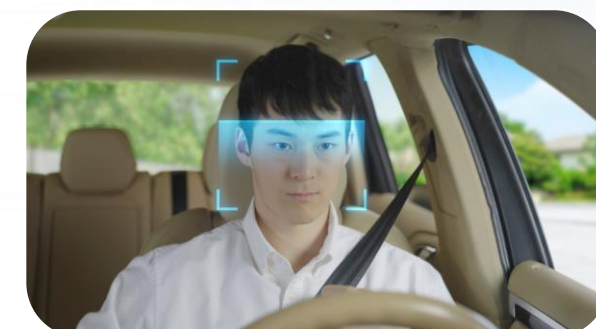
#### Vehicle status diagnostics

- Vehicle health checks
- Provides reports on how safely the driver has been driving



### More personalized, and with a more comfortable driving environment

Using face recognition, the system implements personalized device data synchronization, automatically setting devices to match drivers' individual preferences



### More multi-dimensional connectivity, making travel more convenient

#### AI voice assistant

- The AI smart voice assistant is more accurate, making communication smoother and friendlier, with no need for a “wake-up” instruction
- The visual depiction of the AI smart voice assistant is more expressive, allowing livelier communication



#### Supports connectivity with smartphones and smartwatches, realizing remote control of the vehicle



#### Smart activation of popular mini programs

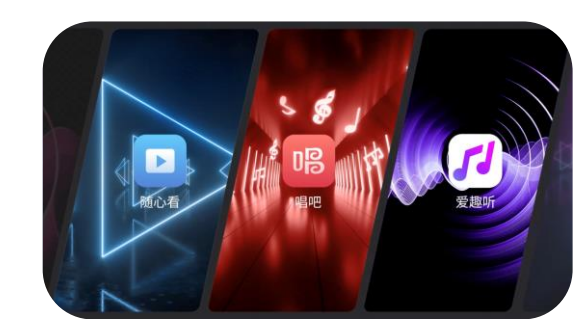
#### Supports vehicle-home connectivity



#### Supports a wide range of integrated payment types, including facial-recognition payment

### An even wider range of entertainment options, making travel more exciting and enjoyable

- New feature: Tencent's “Aiquting” audio entertainment app
- New feature: Baidu's “Suixinkan” video entertainment app
- New feature: Changba-based in-car karaoke function



# Road Hazard Condition Monitoring System

## Objective

We aim to perform maintenance and degradation prediction considering the current road situation by utilizing mass-produced vehicles to constantly monitor the road conditions. That will enable road management with lower costs and greater timeliness.

## Technical Content

Detects and recognizes the road situation by utilizing mass-produced vehicle data: pothole detection, road surface degradation estimation and degradation prediction

### Driving information

- Location information
- Vehicle speed

### Moving information

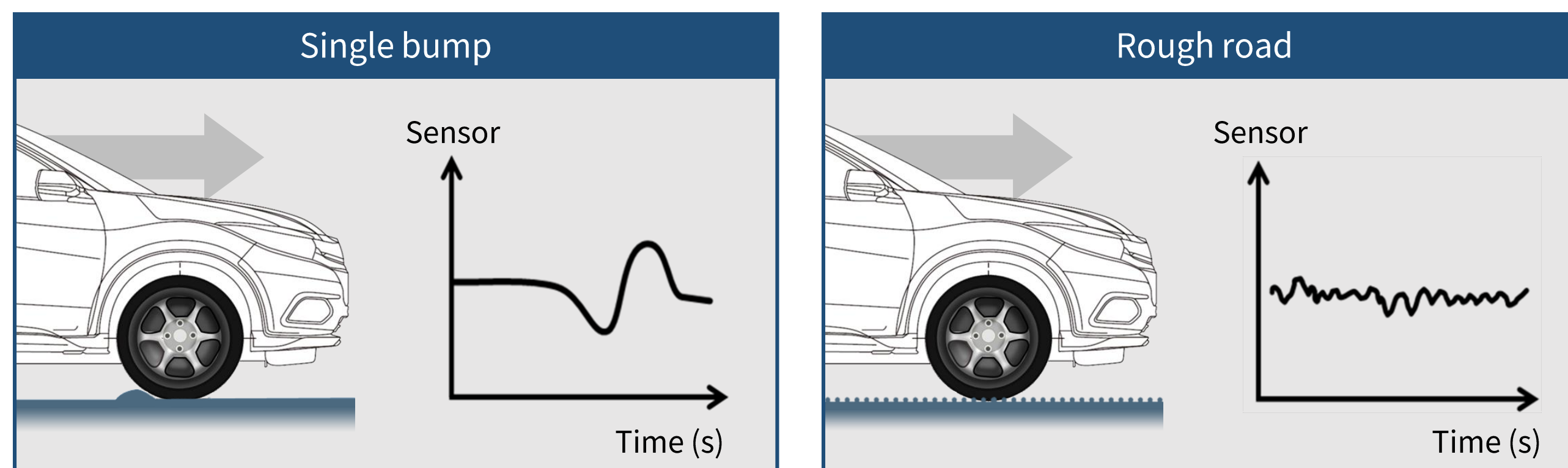
- Left and right G
- Steering operation

### Some of the vehicle conditions

- Turn signal, etc.



Estimates the road surface conditions utilizing G sensors and other technologies



## Technical features

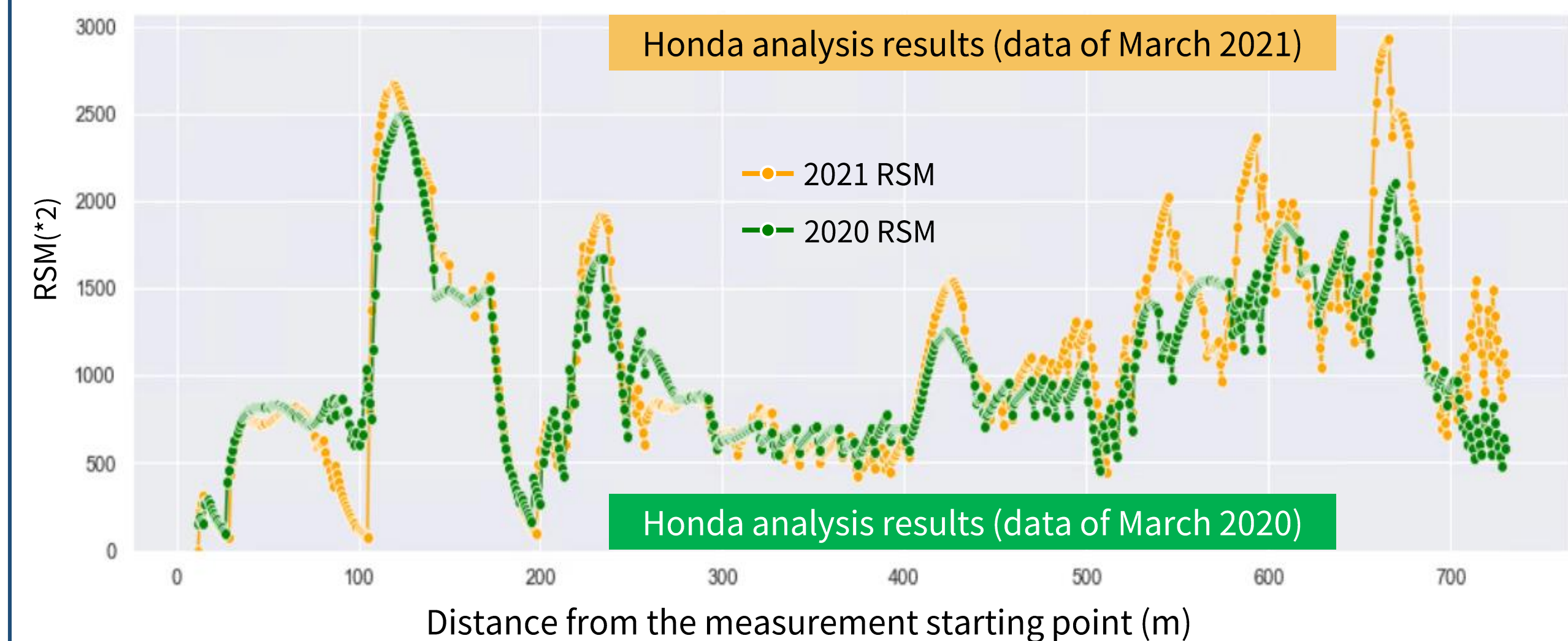
The system is strongly related to the IRI<sup>\*1</sup> international standard index for road management. The technology provides constant monitoring, so the following forms of analysis are possible.

- It is possible to detect potholes in real-time.
- It is possible to analyze degradation over time with high precision.

\*1: International Roughness Index

## Example of the Analysis of Degradation over Time Through a Comparison with Past Data

It is possible to visualize the state of progress of degradation over one year by comparing data of 2020 and 2021.



\*2: RSM value – Honda's own evaluation value  
Value of the road surface data related to the flatness of the road calculated using the data from the on-board sensors



In collaboration with the Japan Ministry of Internal Affairs and Communications

# Honda SENSING 360 Next Generation

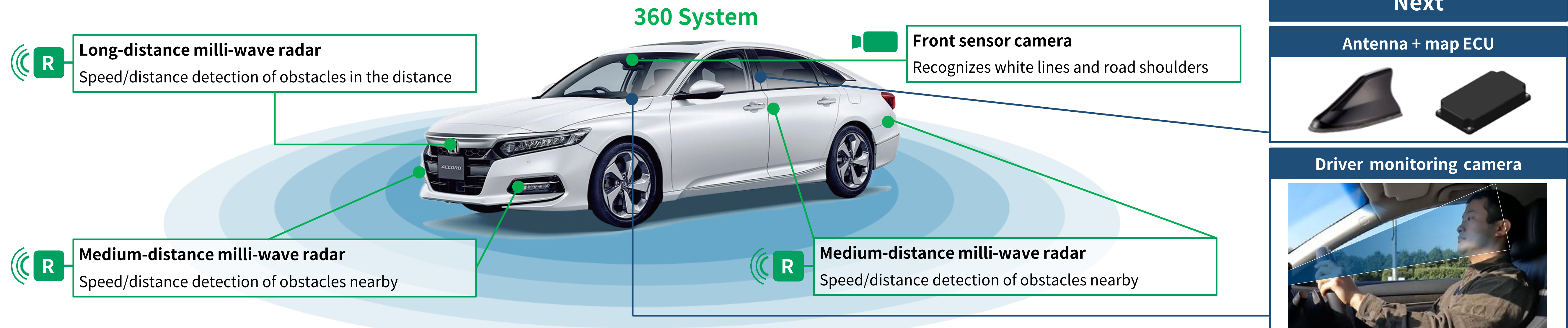
## Objective

We have added advanced safe driving support functions with Honda SENSING 360.

## Technical features

It helps prevent accidents and further reduces the burden of driving on the driver by accurately detecting driver abnormalities and the surrounding environment

## Details of the Technology



## Features included ※

※ This function is compliance with the laws in each country

<p><b>Hands-off driving in the same lane</b></p>	<p><b>If you set the destination on the car navigation system, it will support a change of lane when exiting a junction</b></p>	<p><b>System to respond to driver abnormalities</b></p>	<p><b>Vehicle approach warning when getting out of the vehicle</b></p>
--	---	---	--

**Original to Honda**

**Warning Alert and Collision Warning Alarm**  
Ensures recovery from a state of reduced attentiveness with bodily sensation notifications

- State of reduced attentiveness detection and risk ahead prediction
- Centering and deceleration (about 0.1 to 0.2 G)

Approx. 3 to 4 seconds before collision

With driver operation

**Emergency Avoidance Steering Support Technology**

Supports steering by the driver

Without driver operation

**In-lane Avoidance Support Technology**

Automatic avoidance in the same lane

# Honda SENSING Elite Next Generation

## Objective

This is an innovative safe driving system that aims to realize a zero-accident society.

## Details of the Technology

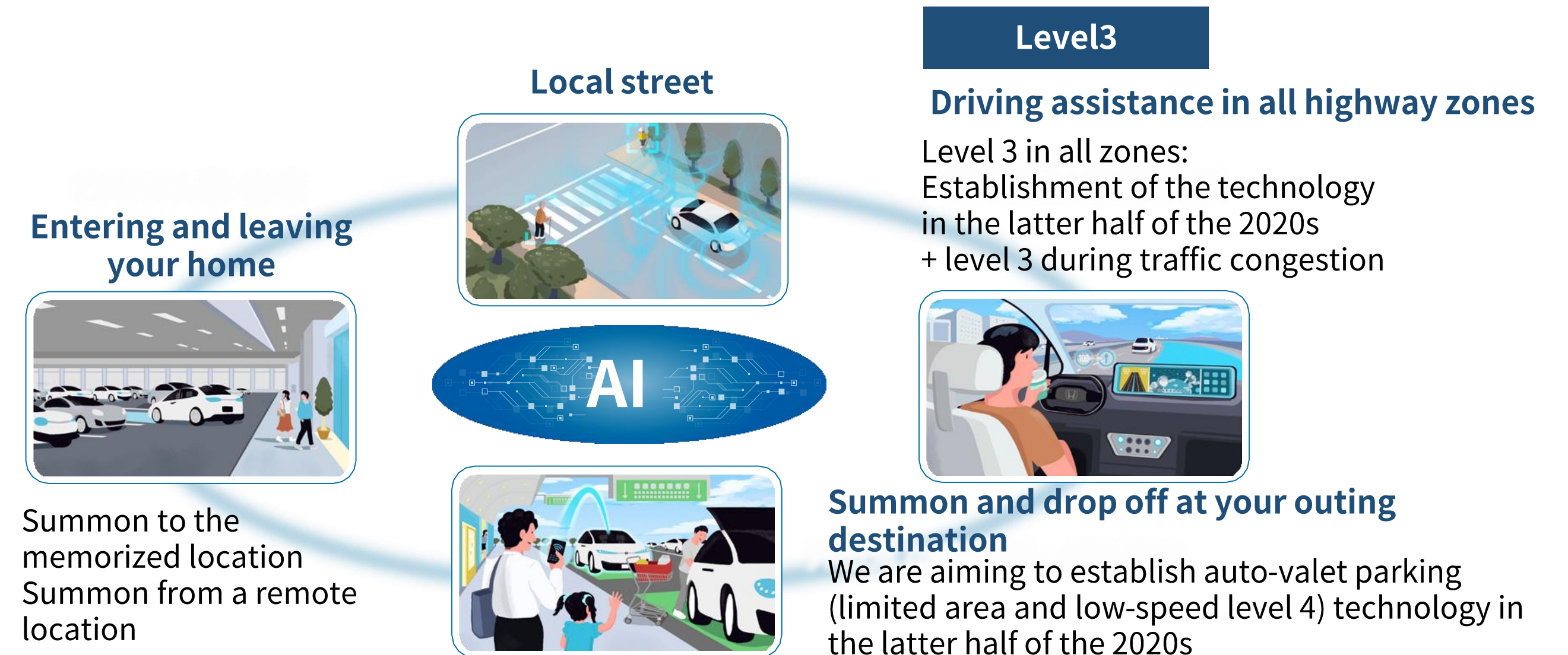
※ This technology is applied according to the laws of each country

It supports safe and seamless mobility with peace of mind including on ordinary roads from your home to your destination with recognition and understanding technologies in the complex environment of ordinary roads

We will realize driving support including on ordinary roads by developing advanced recognition and control that also supports complex environments

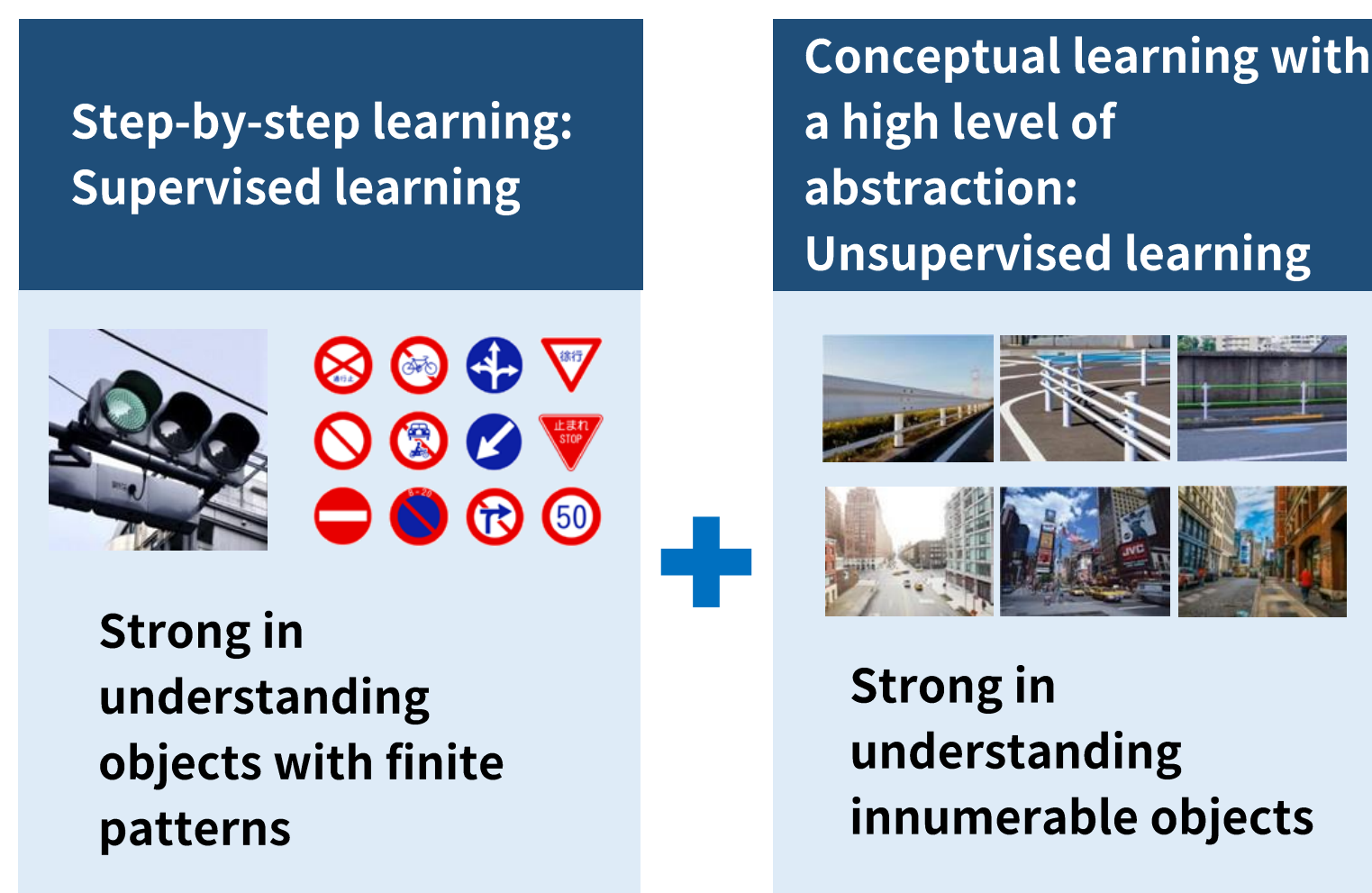
## Technical features

- Accident avoidance with risk prediction
- Reduction in the burden of driving on ordinary roads with course understanding



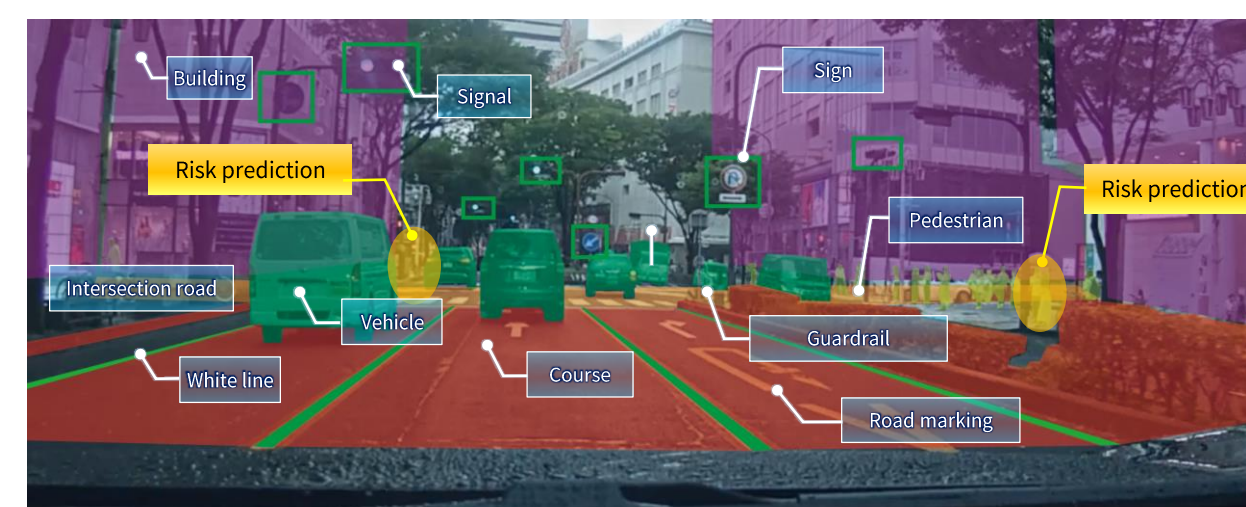
Introducing AI technology into recognition and understanding technology in the complex environment of local street  
Can lead to a further reduction in accidents in all settings

## Honda's Original AI It is possible to understand, like humans, even objects with infinite patterns with original AI technology to understand the target conceptually



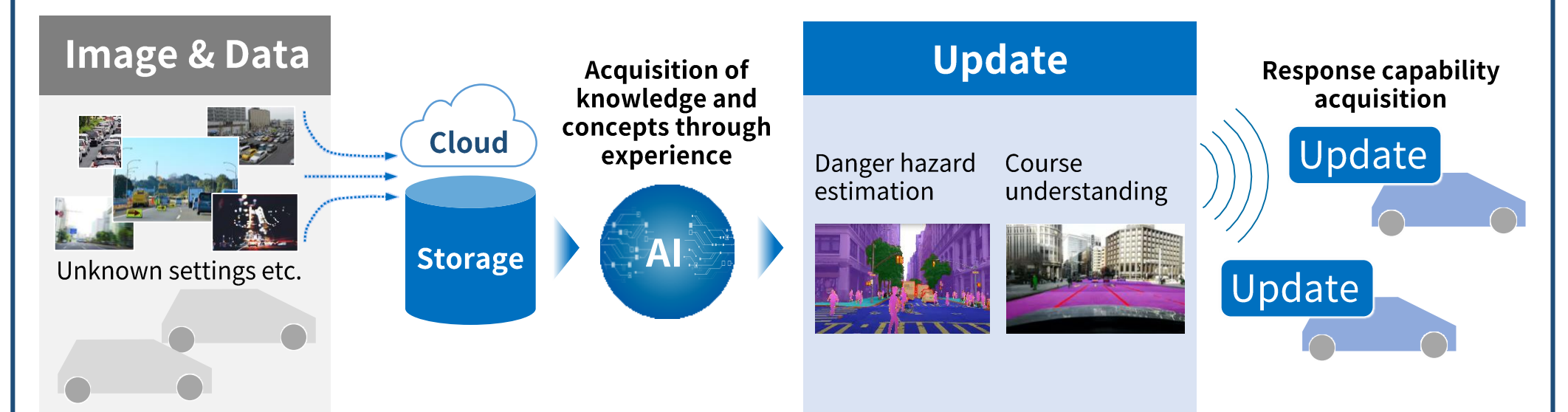
We are aiming to realize driving support on ordinary roads by predicting hazard risks at intersections and on roads with poor visibility

It is possible to recognize complex settings including buildings, guardrails and intersecting roads



## Growing AI Feedback of knowledge and concepts obtained through experience in the real world

AI captures unknown settings in various road environments with cloud information obtained from vehicles equipped with Honda SENSING. Updating hazard risks and course understanding leads to a continual improvement of the capacity to deal with ordinary roads.



# Honda e:N electric vehicle technology

## Objective

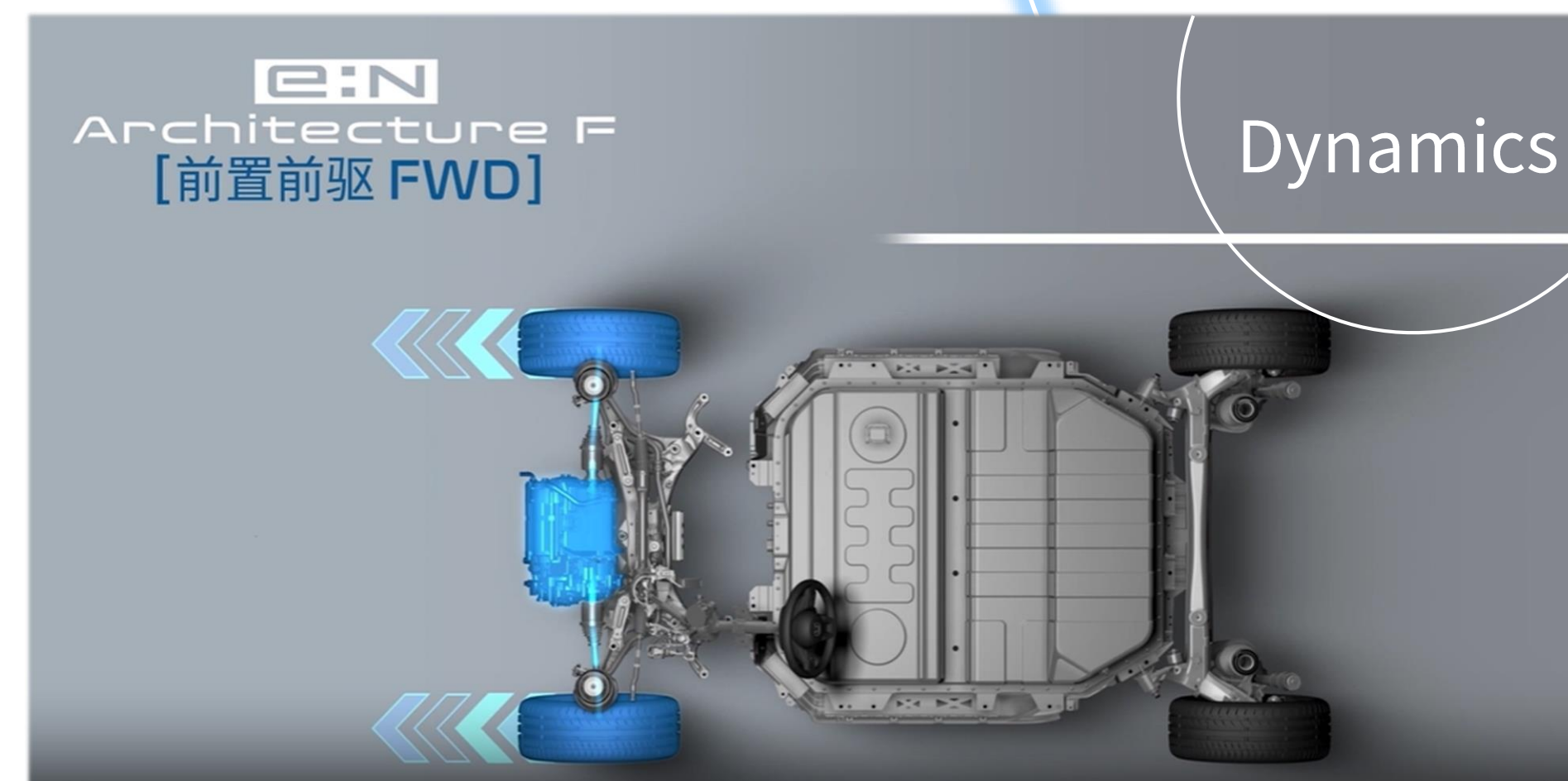
By continuing to develop the e:N series, we are aiming to accelerate the process of electrification in China, and to help bring about a carbon-neutral society as soon as possible

## Technical Features

Positioning “Dynamics, Intelligence and Beauty” as the shared core values of this series, Honda’s original technology is used to provide a new-generation “joy of driving”



Providing a “touching the future” global perspective in which you seem to feel the future just from seeing and touching the vehicle



Realizing a sense of being one with the vehicle that only Honda can deliver, and a sporty, exciting driving experience

**e:N Core Value**



Using Honda SENSING and Honda CONNECT to provide a smart mobile space that offers safety and comfort

# Honda Fuel Cell Systems

## Objective

We aim to realize a carbon-neutral society at an early stage by providing clean mobility and reliable electric power by developing fuel cell core technologies to multiple applications

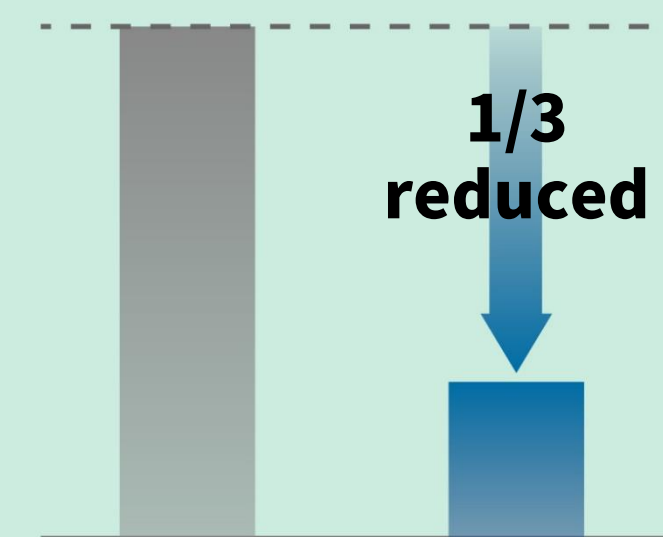
## Technical Features

- Output improvement is possible with a connection to an FC system
- It is possible to use it according to various applications in mobility and energy
- It is a system that we have significantly evolved in terms of lower costs, longer life and improved Cold-temperature resistance compared to the previous generation

### Evolution from the Previous Generation CLARITY FUEL CELL

■ CLARITY FUEL CELL  
■ Next Generation

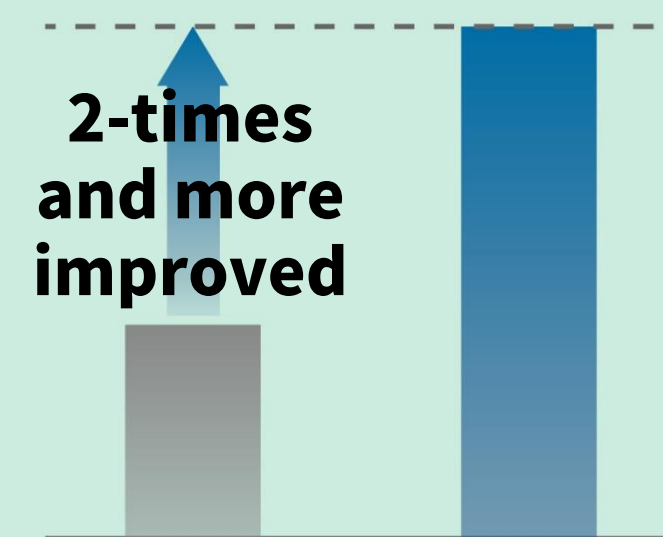
#### Cost



#### [Cost reduced]

- Advanced material for electrode
- Cell seal structure advancement
- Auxiliary simplification
- Stack productivity improvement etc.

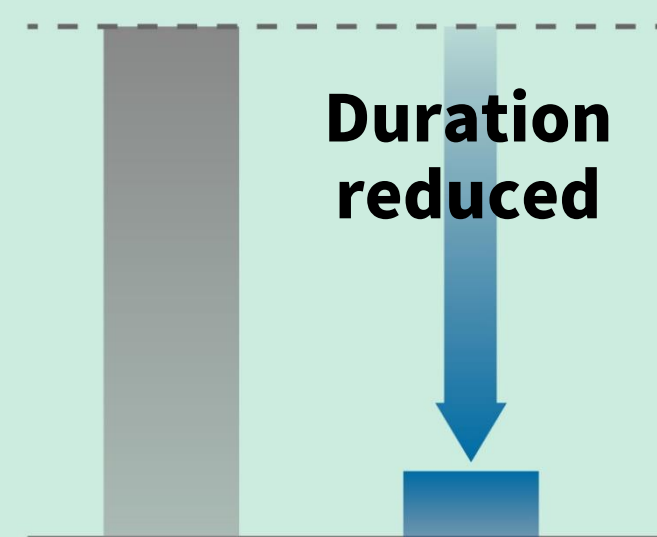
#### Durability



#### [Durability improved]

- Anti-corrosion material
- Degradation suppression control etc.

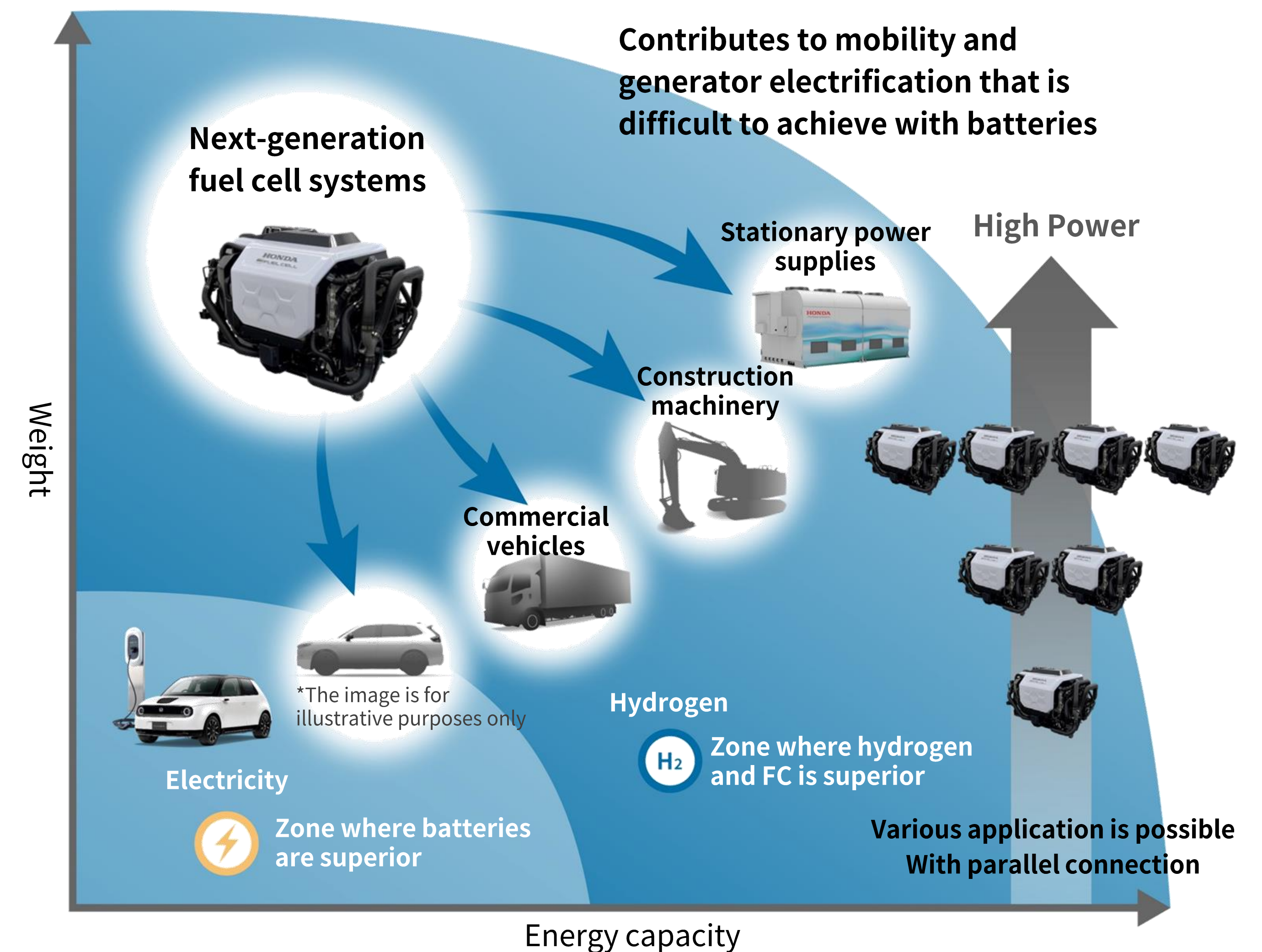
#### -30C Freeze Start Time



#### [Durability against cold temperature improved]

- Reduction in residual water when soak condition
- Warm-up control etc.

## Honda Fuel Cell Systems



# Application to Commercial Trucks

## Objective

We aim to realize a carbon-neutral society at an early stage by utilizing the strengths of hydrogen energy to provide clean, safe, and secured movement in commercial trucks with a long traveling range.

## Technical Features

High reliability cultivated through FCV development  
High-efficiency power unit suitable for long-distance driving

### JAPAN

**ISUZU**



Demonstration testing on public roads using a prototype will begin before the end of FY2024 (FY ending March 31, 2024)

### CHINA



Joint demonstration test driving has begun

**Heavy-weight, long-range commercial trucks will benefit significantly from the utilization of hydrogen energy**

**HONDA**



# Application to Stationary Power Stations

## Objective

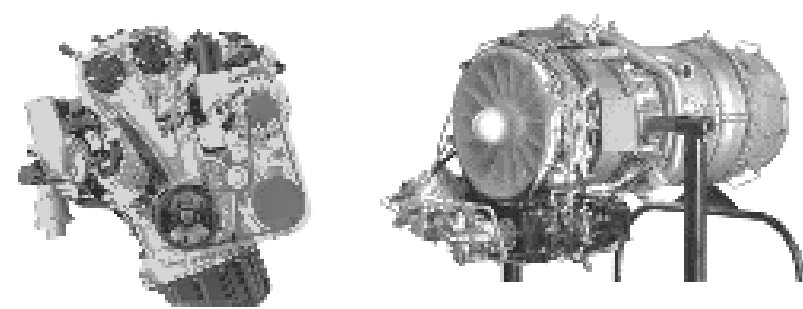
We aim to realize a carbon-neutral society at an early stage by applying fuel cell systems to stationary power supplies to provide clean, safe, and secured electric power.

## Technical Features

- Our fuel cell system can achieve to develop output variations by connecting fuel cell systems
- High responsiveness that adapts to output needs

### Fossil Fuels

Power stations that utilize internal combustion engines



Internal combustion engine (ICE)

### Hydrogen

Power stations that utilize fuel cells



Fuel cell systems (multiple units connected)

With the utilization of our fuel cell system, Honda will contribute to the realization of carbon neutrality for power stations

### In-house demonstration testing

Fuel cell systems

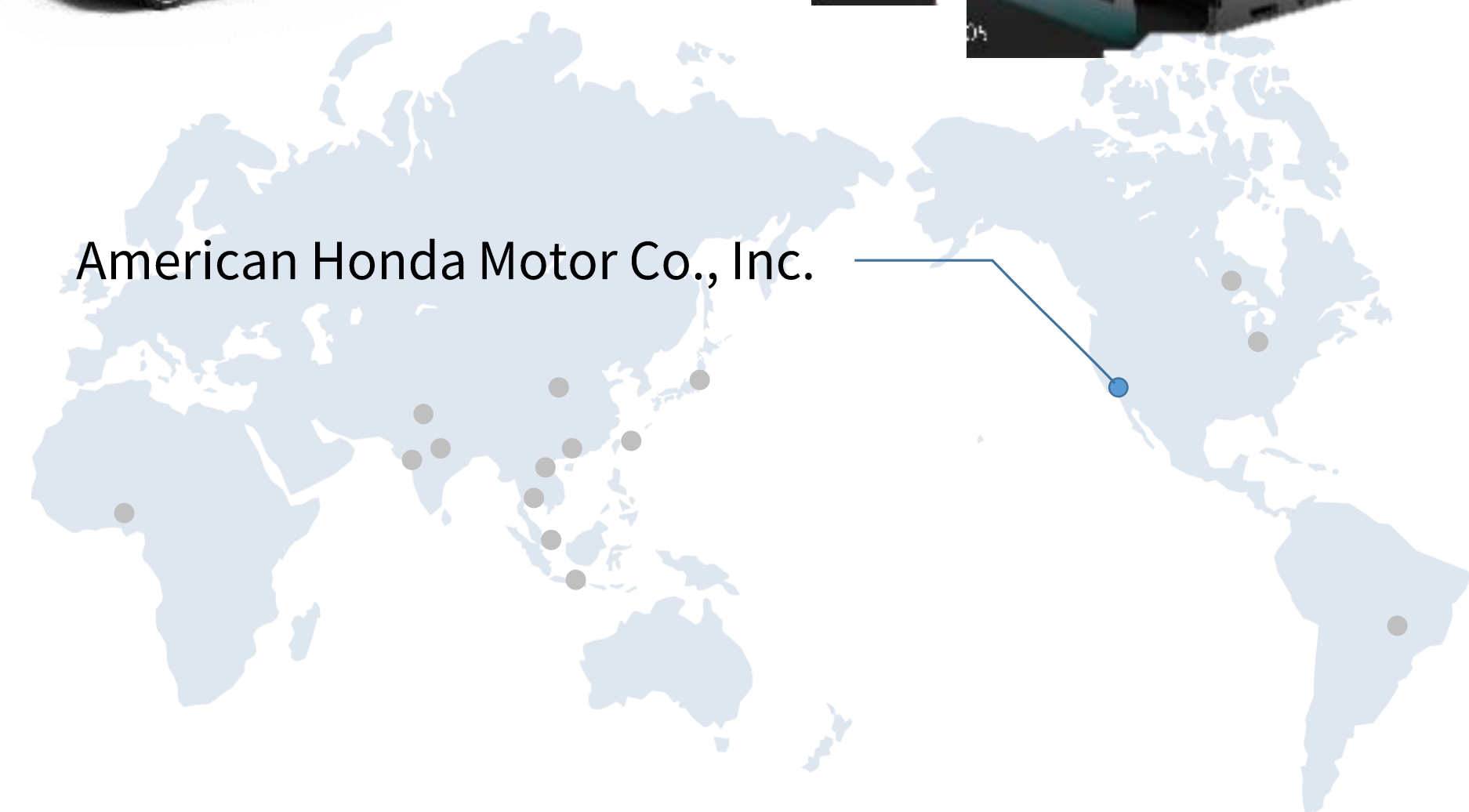


×8 units

Output: 576 [kW]  
Size: 6.5×2.6×2.6 [m]



American Honda Motor Co., Inc.



Installed on the corporate campus of American Honda, where in-house demonstration operation as a backup power source for its data center will begin