

Welcome

NISSAN ADVANCED TECHNOLOGY CENTER



The Nissan logo is displayed in a bold, red, sans-serif font. It is positioned on the left side of the slide, which has a white background. The right side of the slide features a red background with a faint, abstract image of a car's interior and exterior lines.

NISSAN

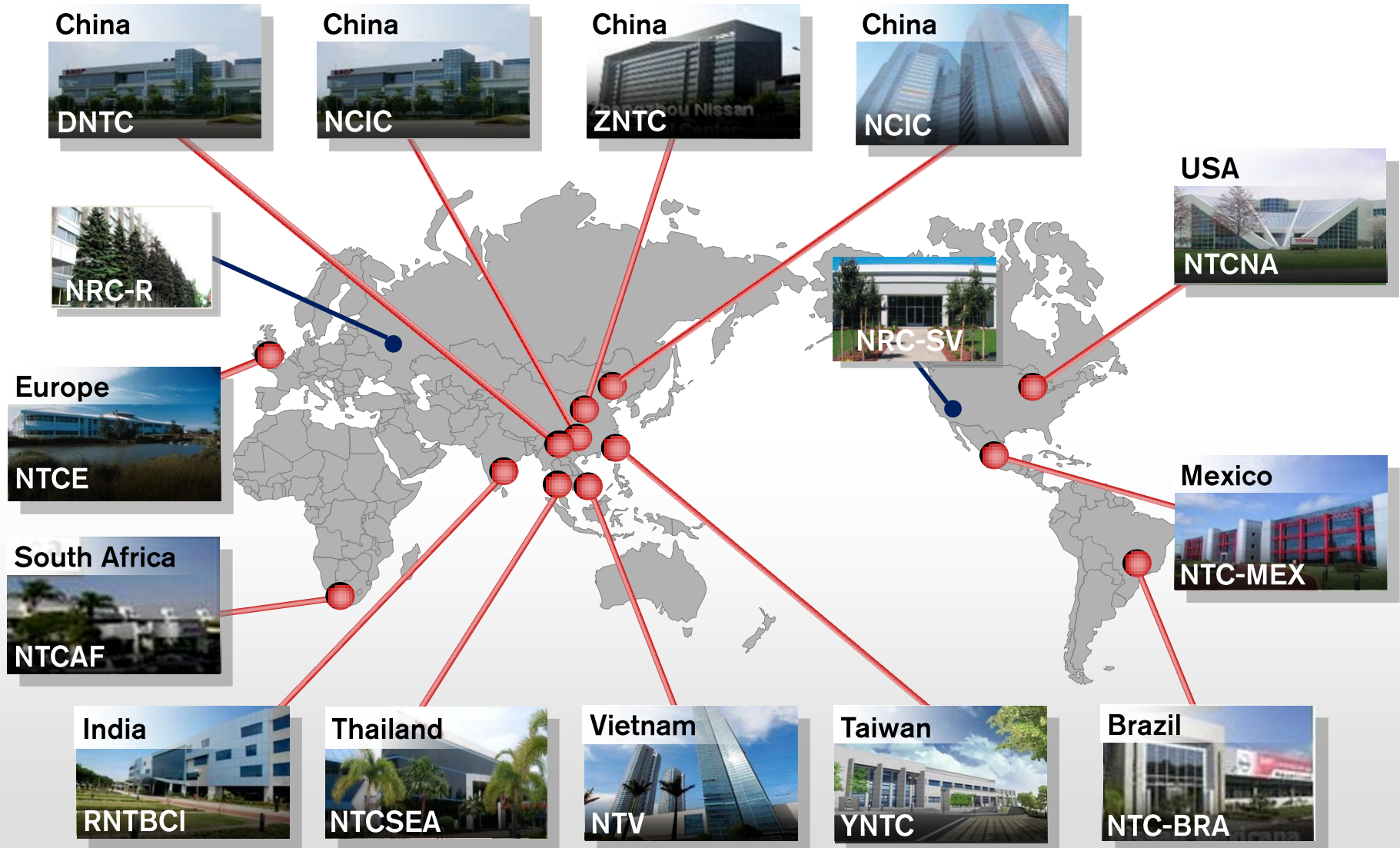
Future Mobility Vision

Nissan Motor Co., Ltd,

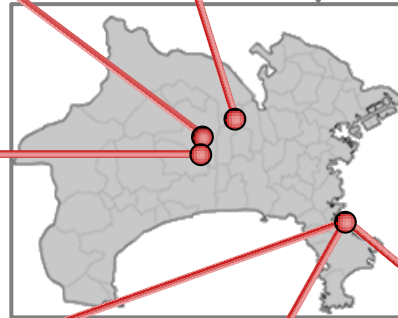
1. Nissan Research & Development

Global R&D Formation

■ 13 overseas operations, 29 sites, 20,000 employees



Domestic R&D Facilities



Nissan Advanced Technology Center

- Established in 2007 1,400 employees
- Invoke collaboration in/outside of Nissan



Quick prototyping lab



Test ride area

Accelerate advanced technology development
Create new values on future mobility



Collaboration Garage



Testing lab

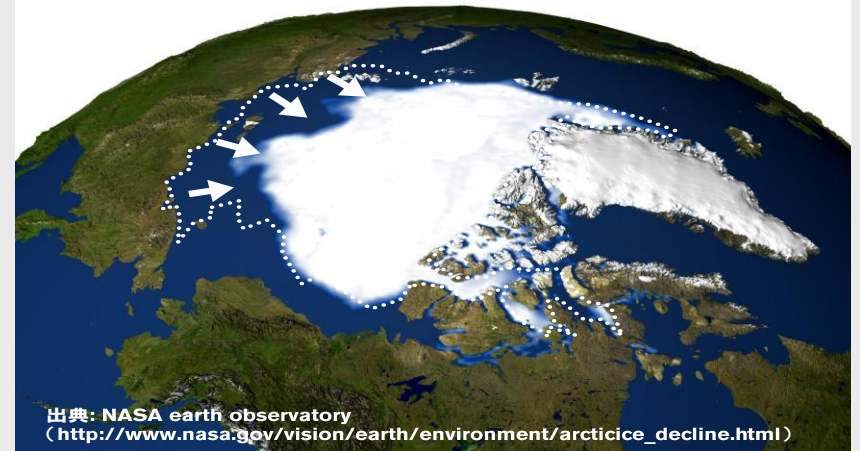
2. Future Mobility Vision

Four Issues for Sustainability

Energy



Global warming



Congestion



Traffic Accident

Challenges of Nissan

Energy

Global warming

Zero Emission



th/environment/arcticice_decline.html)

Zero Fatality

Congestion

Traffic Accident

Keys for Breakthrough

Energy

Global warming

Electrification



th/environment/arcticice_decline.html)

Vehicle Intelligence

Congestion

Traffic Accident

Energy

Global warming

Electrification



th/environment/arcticice_decline.html)

Vehicle Intelligence

Congestion

Traffic Accident

2013-07-18 09:00:00 Thu

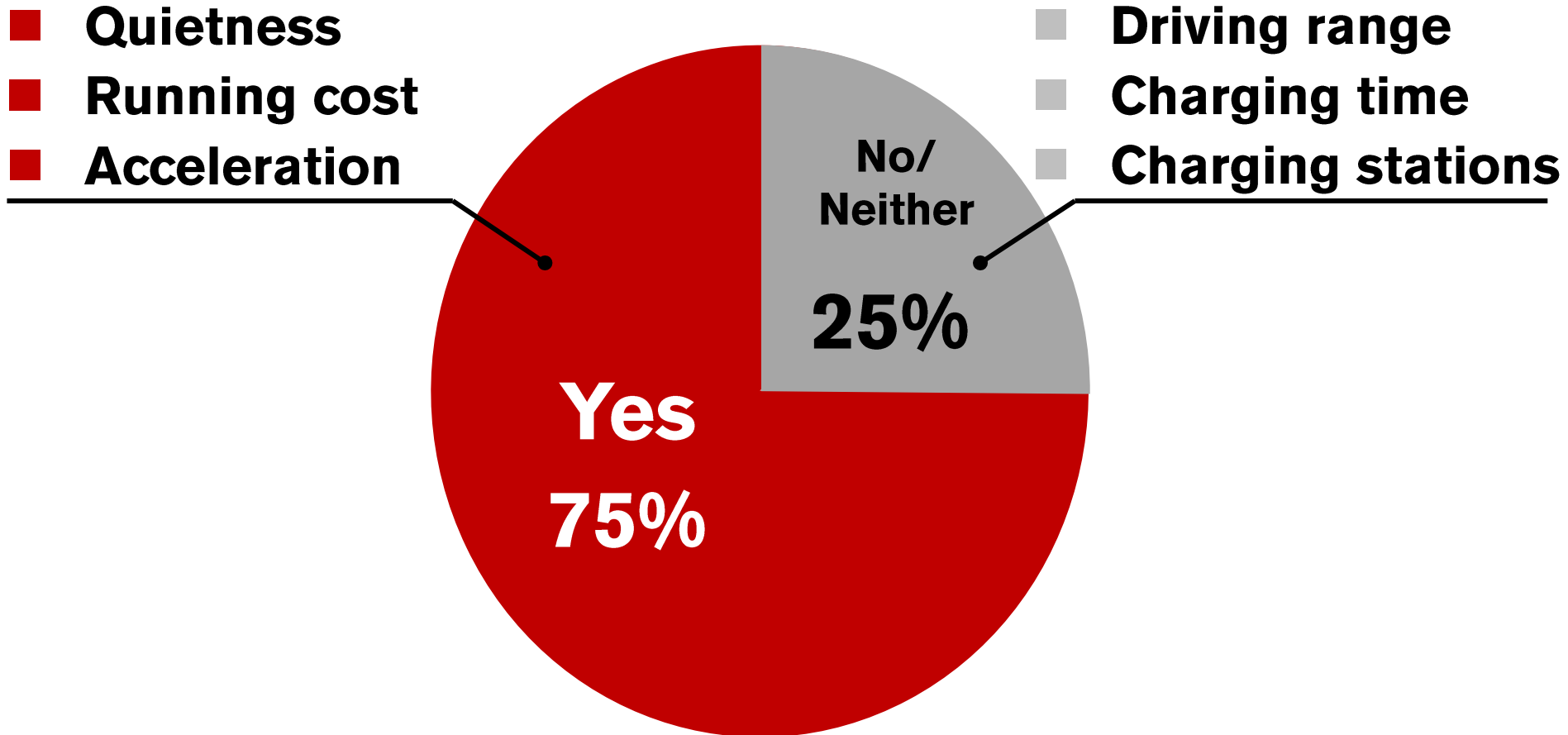
LATITUDE 36.092853 LONGITUDE 138.179269

ZOOM LEVEL 6

195k units

Customer's Voice of Nissan LEAF

Repurchase intention



Nissan LEAF owner's survey (Japan)

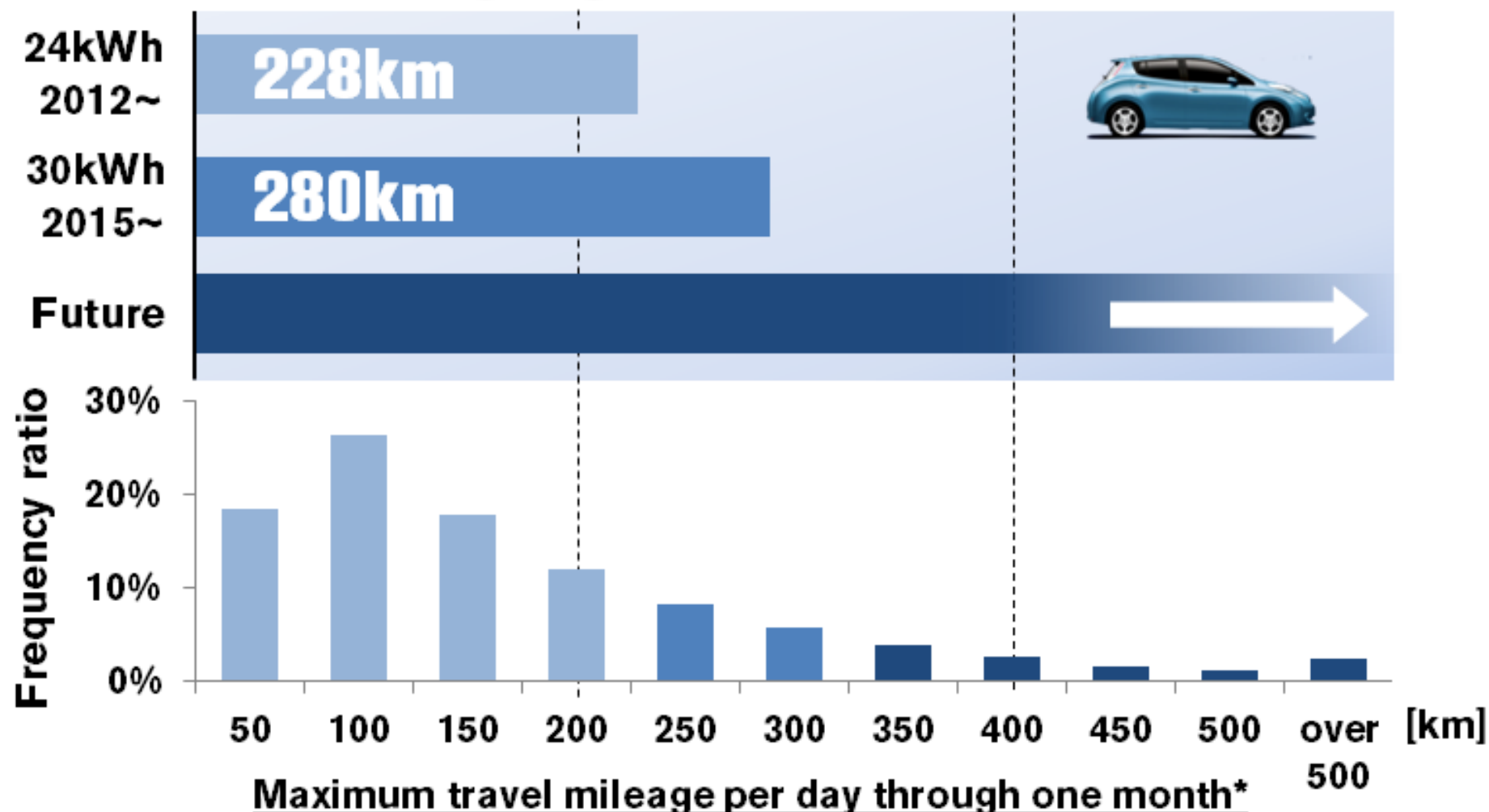


Source: Nissan

280km Driving Range with New LEAF

- 280km covers 85% of customers use case

Driving range of Nissan LEAF [JC08 mode]

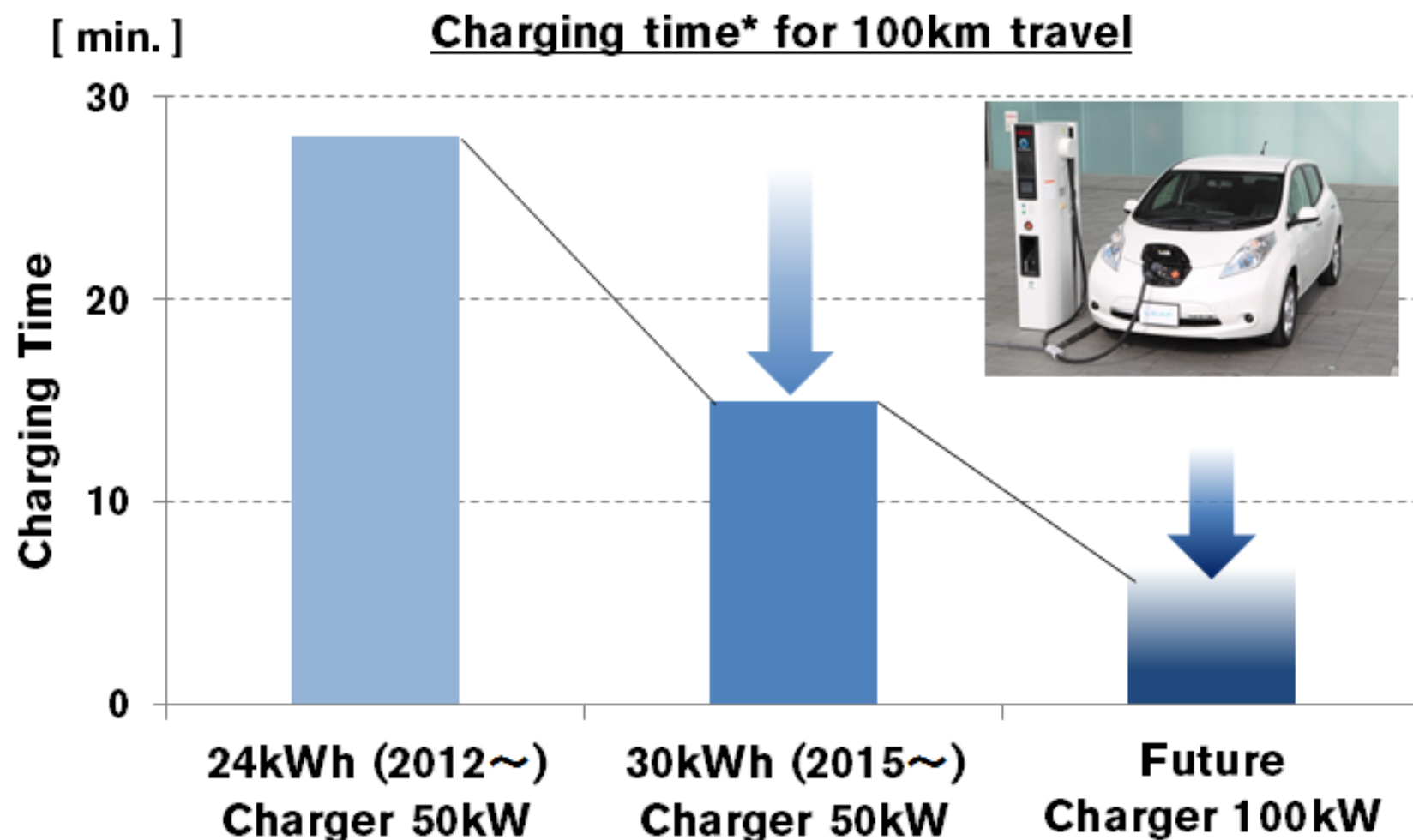


*100,000 Nissan conventional vehicles

Source: Nissan

Halved Charging Time

- Increased capacity *plus* shortened charging time



* Charging started from 30% charged. Performance depends on individual difference and environmental condition.

Source: Nissan

Energy

Global warming

Electrification



th/environment/arcticice_decline.html)

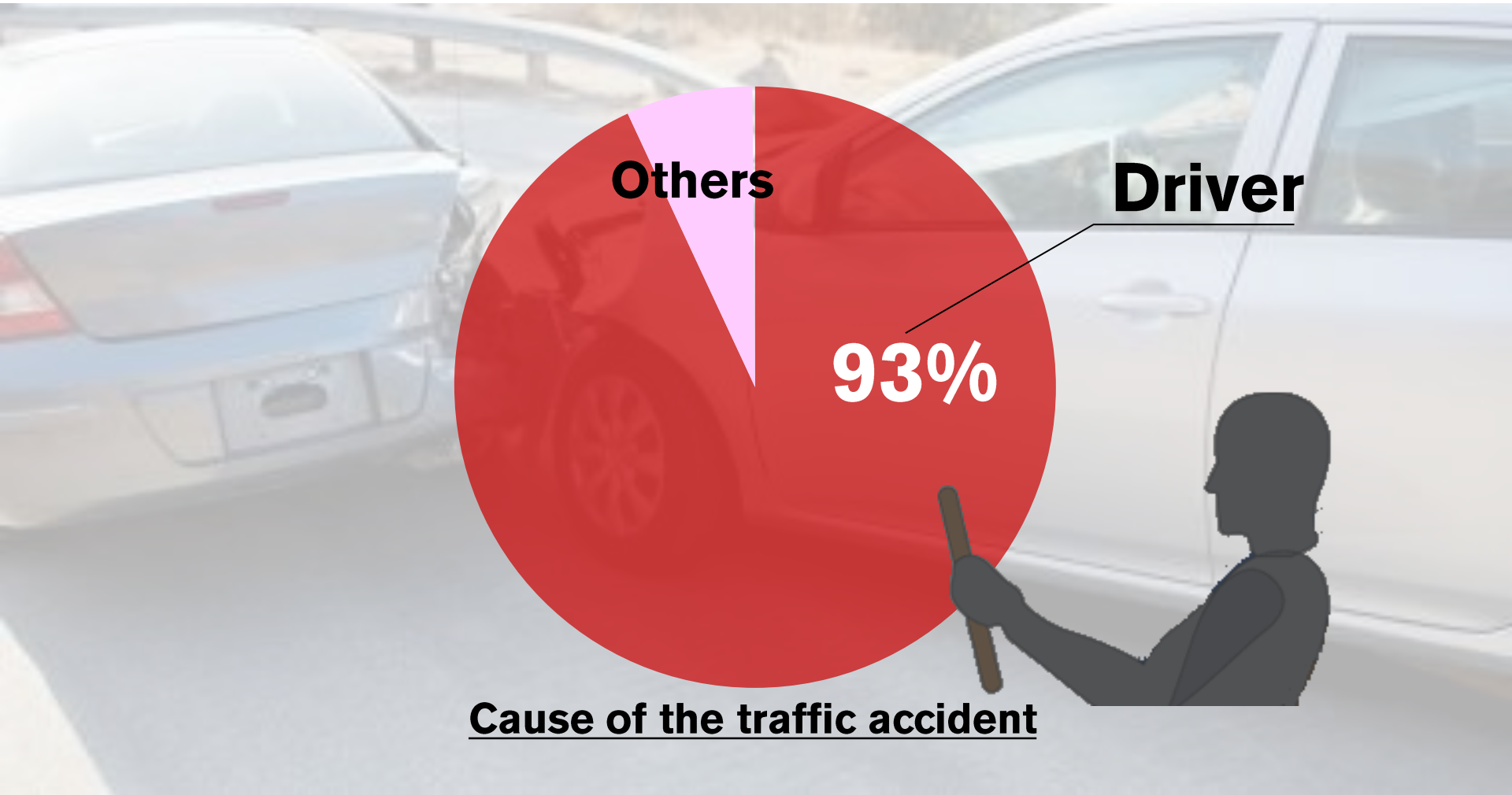
Vehicle Intelligence

Congestion

Traffic Accident

Cause of traffic accidents

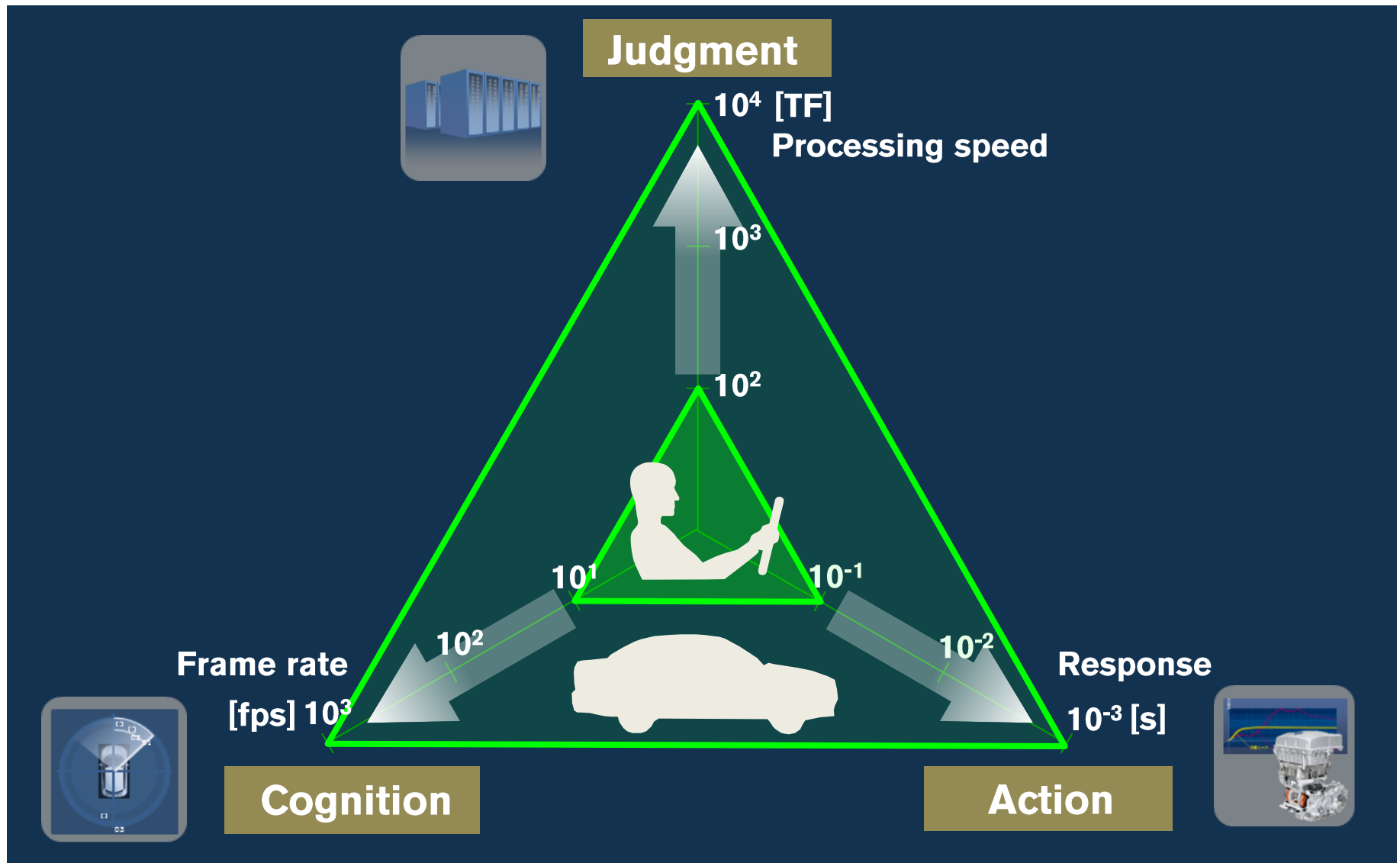
- More than 90% caused by driver



Cause of the traffic accident

Source: Treat, J., N. Tumbas, S. McDonald, D. Shinar, R. Hume, R. Mayer, R. Stansfin, and N. Castellen.
Tri-level Study of the Causes of Traffic Accidents. Report No. DOT-HS-034-3-535-77 (TAC), Indiana, 1977.

Driving Capability Enhanced with Machine



Piloted Drive Milestones

- Vehicle offers more capability step-by-step

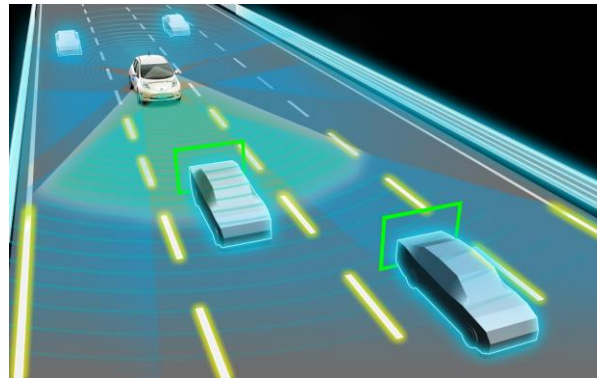
2016

- ✓ **Traffic Jam**
- ✓ **Single lane**



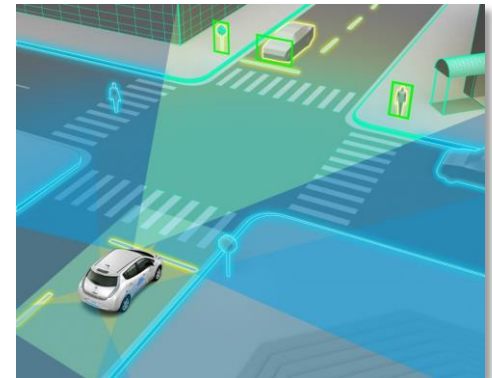
2018

- ✓ **Highway**
- ✓ **Multi-lane**



2020

- ✓ **City**
- ✓ **Intersections**

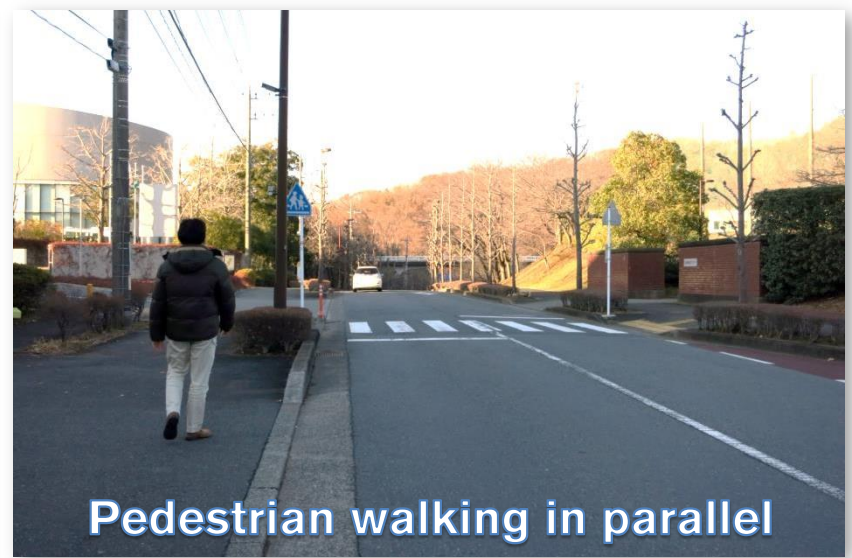
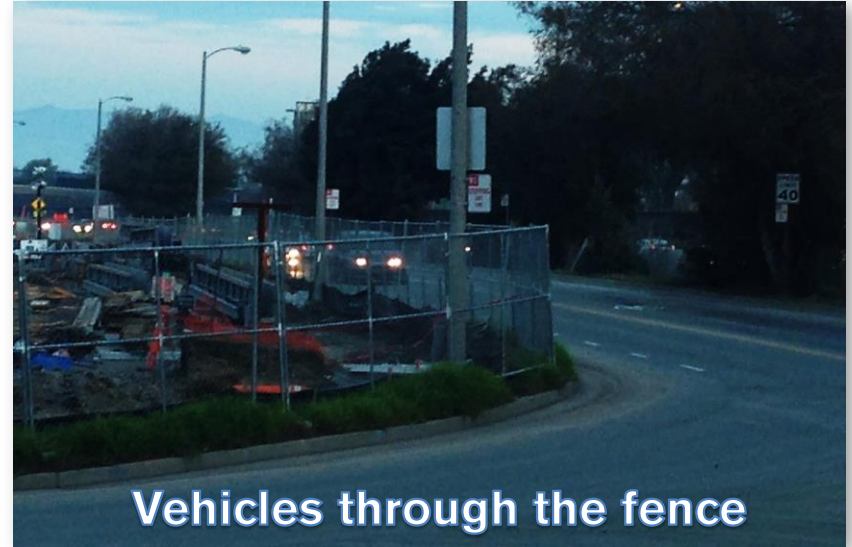


Piloted Drive Test Vehicle

- Piloted Drive on Highway and City/Urban Roads



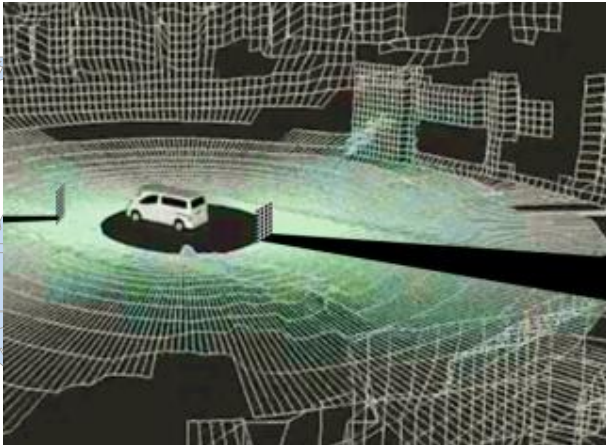
Challenges of City and Intersections



Global Research Network

- Global research collaboration for city driving such as cognition and AI

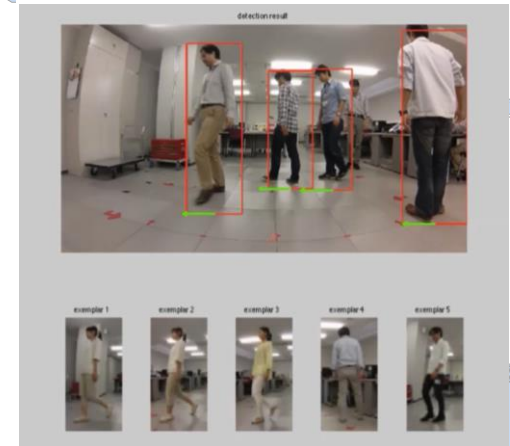
Map generation



High speed vision



Pause estimation



Future Mobility Vision



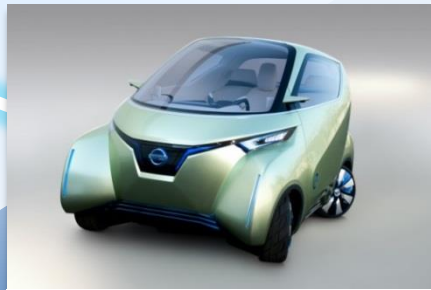
Dynamic performance



Smooth and Safe traffic



Mobility for All



Innovative Form



Productive traveling

Electrification

Vehicle Intelligence

44th Tokyo Motor Show Concept car

NISSAN IDS

CONCEPT



Nissan Intelligent Driving Solution

“Nissan IDS Concept”

<i><u>Overall length :</u></i>	<i><u>4,470 mm</u></i>
<i><u>Overall width :</u></i>	<i><u>1,880 mm</u></i>
<i><u>Overall height :</u></i>	<i><u>1,380 mm</u></i>
<i><u>Wheel base :</u></i>	<i><u>2,800 mm</u></i>

■ Long-range EV

- Newly-developed 60kWh battery
- Superior aerodynamics
- Light weight CFRP body

■ Wireless charging

■ City Piloted Drive capability

- 360-degree sensing
- High-speed/precise vehicle control

■ Attentive AI

■ Intention indicator for communication



3. Today's Items

EV Technologies



Prototype

➤ **High energy density battery**

➤ **Aerodynamics**

➤ **Light weight**

Prototype

➤ **Wireless charging**

Lab tour

➤ **LEAF to Building**

Facility tour

➤ **Energy management by reused battery**

Facility tour

Piloted Drive Technologies



- **Nissan Intelligent Driving
Piloted Drive test vehicle**
- **AI for driver assistance**
- **AI for harmonizing with road stakeholders**

Thank you for your attention

