Technology to Understand People

● Objective

Aim for zero human errors that cause accidents.

Respond to the different needs of each person depending on the situation while focusing on peace of mind in daily driving.

Decreased functions/
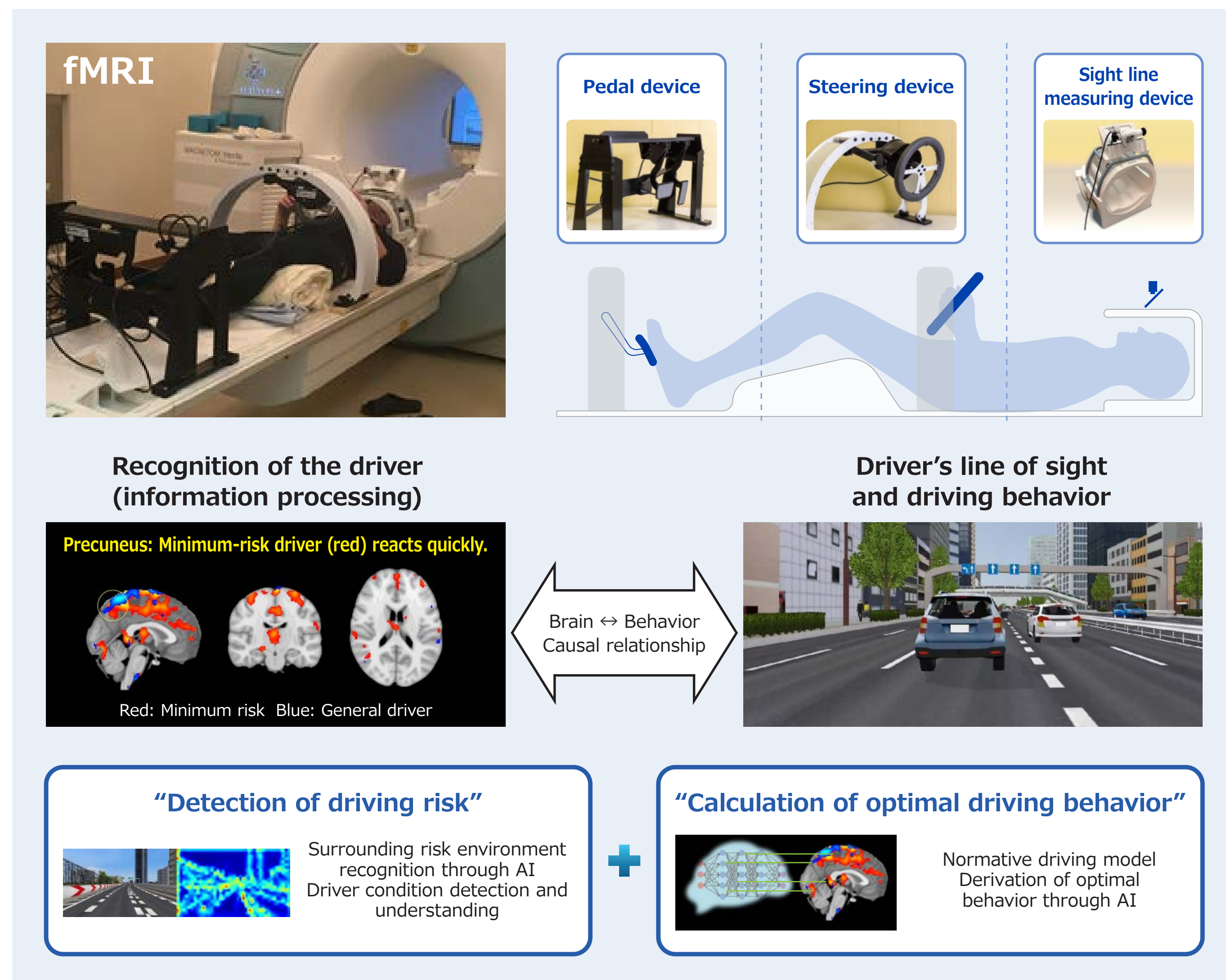Changes in physical condition

Self-control

Dashing out onto the street

● Technical Features

Technology to understand people: Understanding human error

Reveals the true cause of the error through causal analysis of brain activity and risk behavior while driving.

Since the field of view is narrow for inexperienced drivers, provide support that results in driving with a wide field of view like that of a minimum-risk driver to aim at reducing human error and expanding driving capability that makes the driver feel like they've gotten better at driving.

● Technology Content

fMRI

Pedal device

Steering device

Sight line measuring device

Recognition of the driver (information processing)

Precuneus: Minimum-risk driver (red) reacts quickly.

Red: Minimum risk Blue: General driver

Brain ↔ Behavior Causal relationship

Driver's line of sight and driving behavior

"Detection of driving risk"
Surrounding risk environment recognition through AI
Driver condition detection and understanding

+

"Calculation of optimal driving behavior"
Normative driving model
Derivation of optimal behavior through AI

Comparison of the recognition behaviors of beginners and minimum-risk drivers

[Line of sight heat map]

Above
Left — Right
Below
Front center

[Brain activity]
Insufficient recognition

Beginner

Above
Left — Right
Below
Wide range

Higher recognition

Minimum-risk driver

Comparison of the driving behaviors of beginners and minimum-risk drivers

Brake operation
Sudden operation→
←Relaxed operation

Beginner

Minimum-risk driver

←Few   Close calls while driving   Many→

Driver eye movement and driving operation

Does not see a dangerous location

Turns the steering wheel excessively

Applies the accelerator excessively

AI
The AI system compares them with the normative driving model

Normative driving model

Support so that it approaches the normative driving model

HONDA