FUJITSU Future Mobility Accelerator
MaaS Fuses Mobility and Energy Starting with EV Batteries

Advanced Technology

Creation of energy infrastructure, a key to the spread of EVs

Creation of energy infrastructure for EV expansion We aim to be a platformer of "battery LCM (Life Cycle Management)" which connects EV battery information through primary to secondary use to its disposal. Furthermore, we will accelerate to realize an energy infrastructure that enables renewable energy to be widely used not just for EV but also for other purposes.

Service Overview

Utilizing high-dimensional statistical analysis of AI technology, we will contribute to the spread of EV by offering "Battery Profile" service which manages battery history, degradation and detect anomaly beforehand, and "Energy Consumption Map" service which estimates driving distance and reserves / navigates Evs for power supply station.
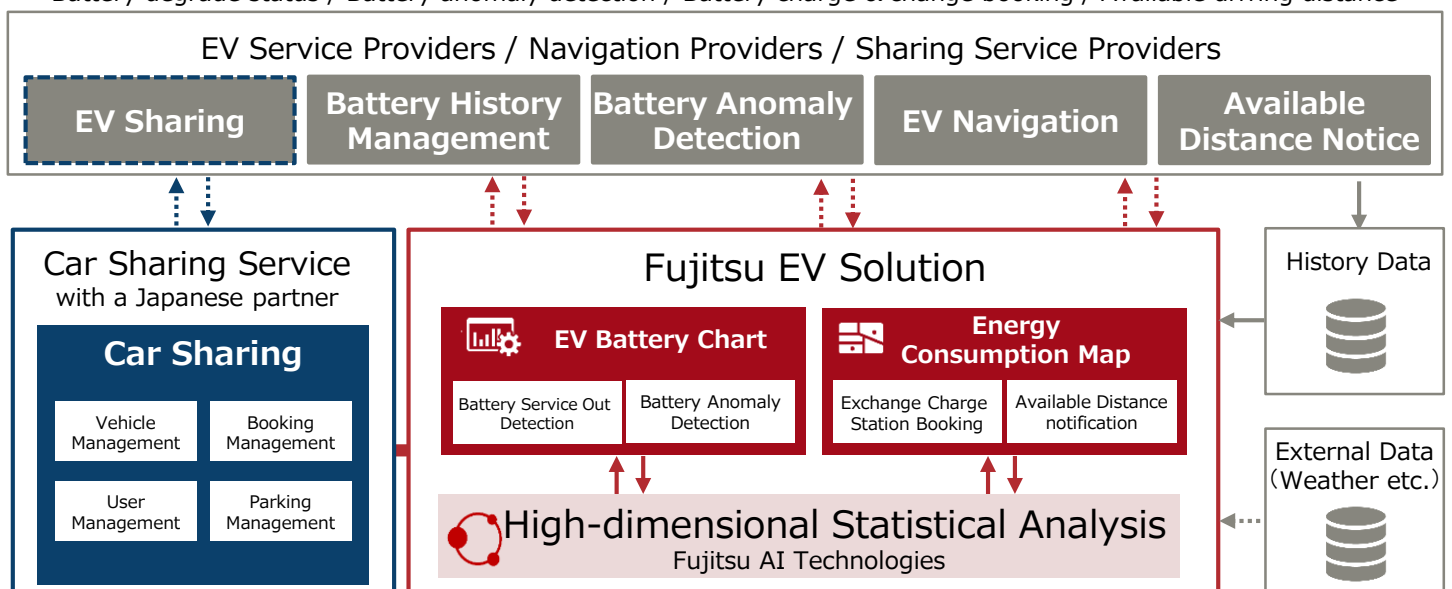
EV   Driver   Battery Charger   Administrator

Real-time information collecting and providing

"Battery degrade status / Battery anomaly detection / Battery charge & change booking / Available driving distance"
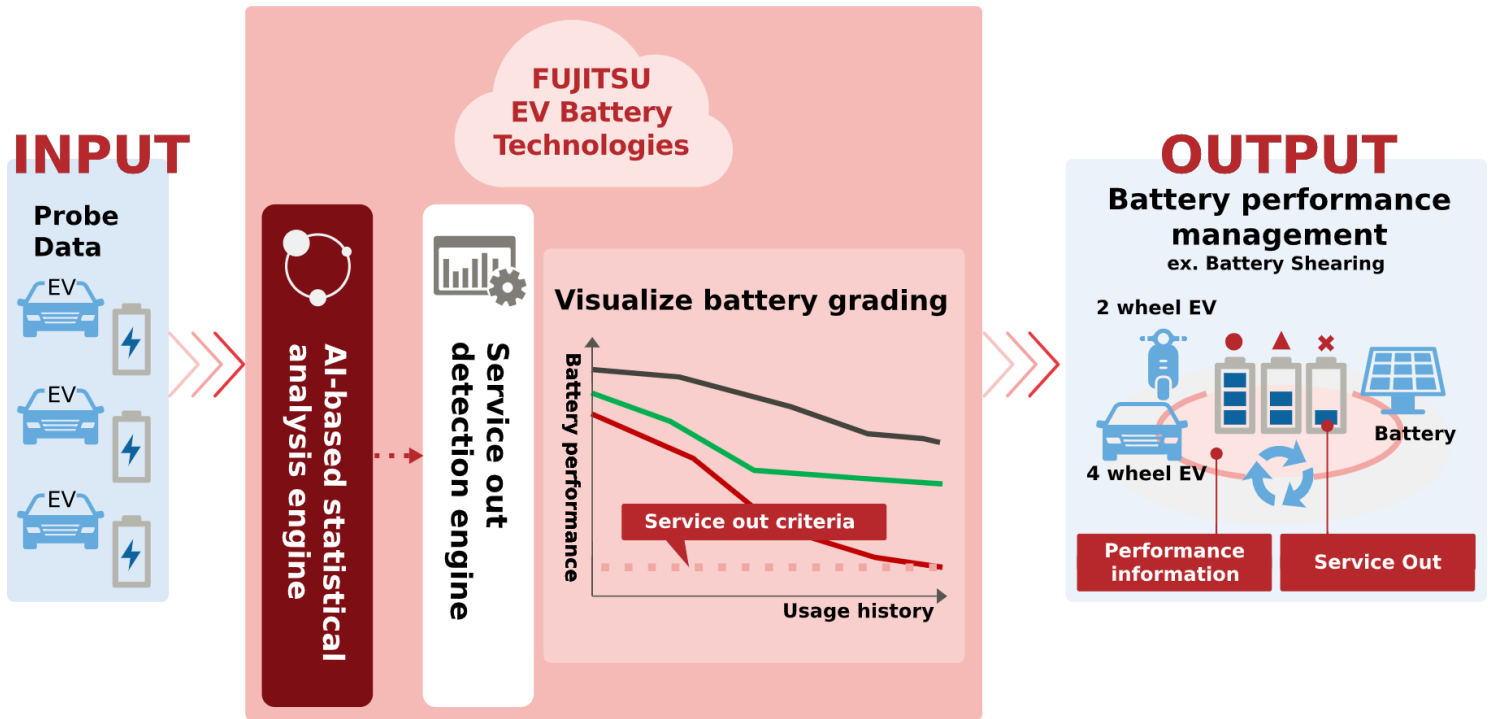
EV Service Providers / Navigation Providers / Sharing Service Providers

EV Sharing	Battery History Management	Battery Anomaly Detection	EV Navigation	Available Distance Notice

Car Sharing Service
with a Japanese partner

Car Sharing

Vehicle Management	Booking Management
User Management	Parking Management

Fujitsu EV Solution

EV Battery Chart

Battery Service Out Detection	Battery Anomaly Detection

Energy Consumption Map

Exchange Charge Station Booking	Available Distance notification

High-dimensional Statistical Analysis
Fujitsu AI Technologies

History Data

External Data
(Weather etc.)

Mobility Infrastructure for EV

Customer Benefits

- Our AI technology for pre-detection of battery anomaly and degradation management achieves appropriate replacement operation of batteries
- By forecasting driving distance accurately in consideration of battery level, terrain, and road conditions, enabling stress-free driving with the reservation and the navigation of power supply station
- Providing comfortable transportation based on the EV features（Energy Consumption, Eco Driving, Charging timing） by EV sharing service
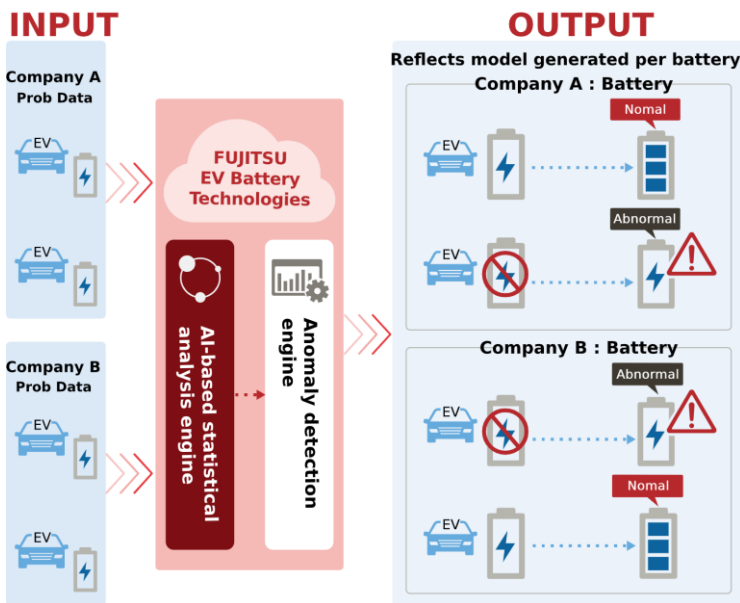
shaping tomorrow with you

Case① Model Independent Battery Performance management

■ Based on actual measurement data such as current and voltage values output from the battery, we can manage degradation of individual batteries and manage assets without loss.
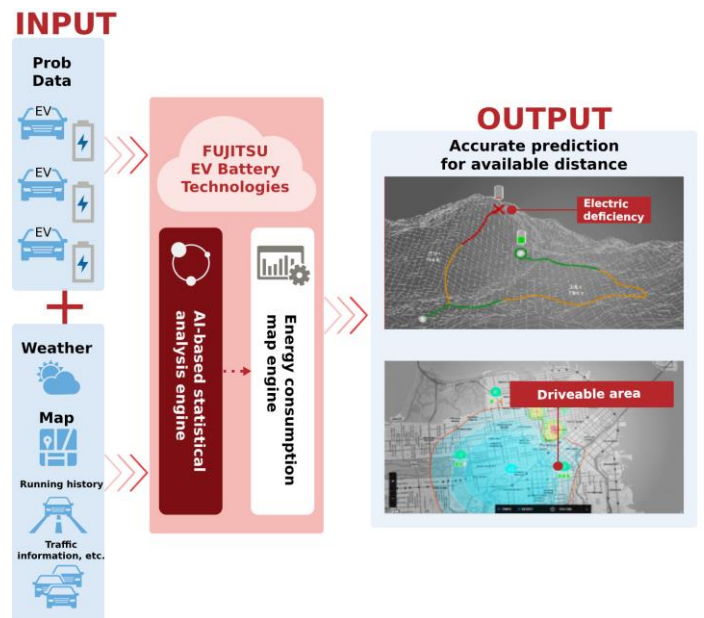

INPUT

Probe Data

EV / EV / EV

FUJITSU EV Battery Technologies

AI-based statistical analysis engine

Service out detection engine

Visualize battery grading

Battery performance
Usage history
Service out criteria

OUTPUT

Battery performance management
ex. Battery Shearing

2 wheel EV
4 wheel EV
Battery

Performance information | Service Out

Case②
Battery anomaly detection using AI Technologies

■ By learning various types of actual measurement data that affect performance using high-dimensional statistical analysis technology and determining the relationships between the data, we can discover anomalies in the battery that were difficult to find in the past.

INPUT

Company A Prob Data
EV / EV

FUJITSU EV Battery Technologies

AI-based statistical analysis engine

Anomaly detection engine

Company B Prob Data
EV / EV

OUTPUT

Reflects model generated per battery
Company A : Battery
Nomal
Abnormal

Company B : Battery
Abnormal
Nomal

Case③
Notification of cruising range using Energy Consumption Map

■ Based on the Energy Consumption Map (Electricity consumption by road) created from the accumulated actual measurement data, the accurate mileage for each vehicle is estimated, taking into account the current vehicle condition and grade information

INPUT

Prob Data
EV / EV / EV

+

Weather

Map

Running history

Traffic information, etc.

FUJITSU EV Battery Technologies

AI-based statistical analysis engine

Energy consumption map engine

OUTPUT

Accurate prediction for available distance

Electric deficiency

Driveable area