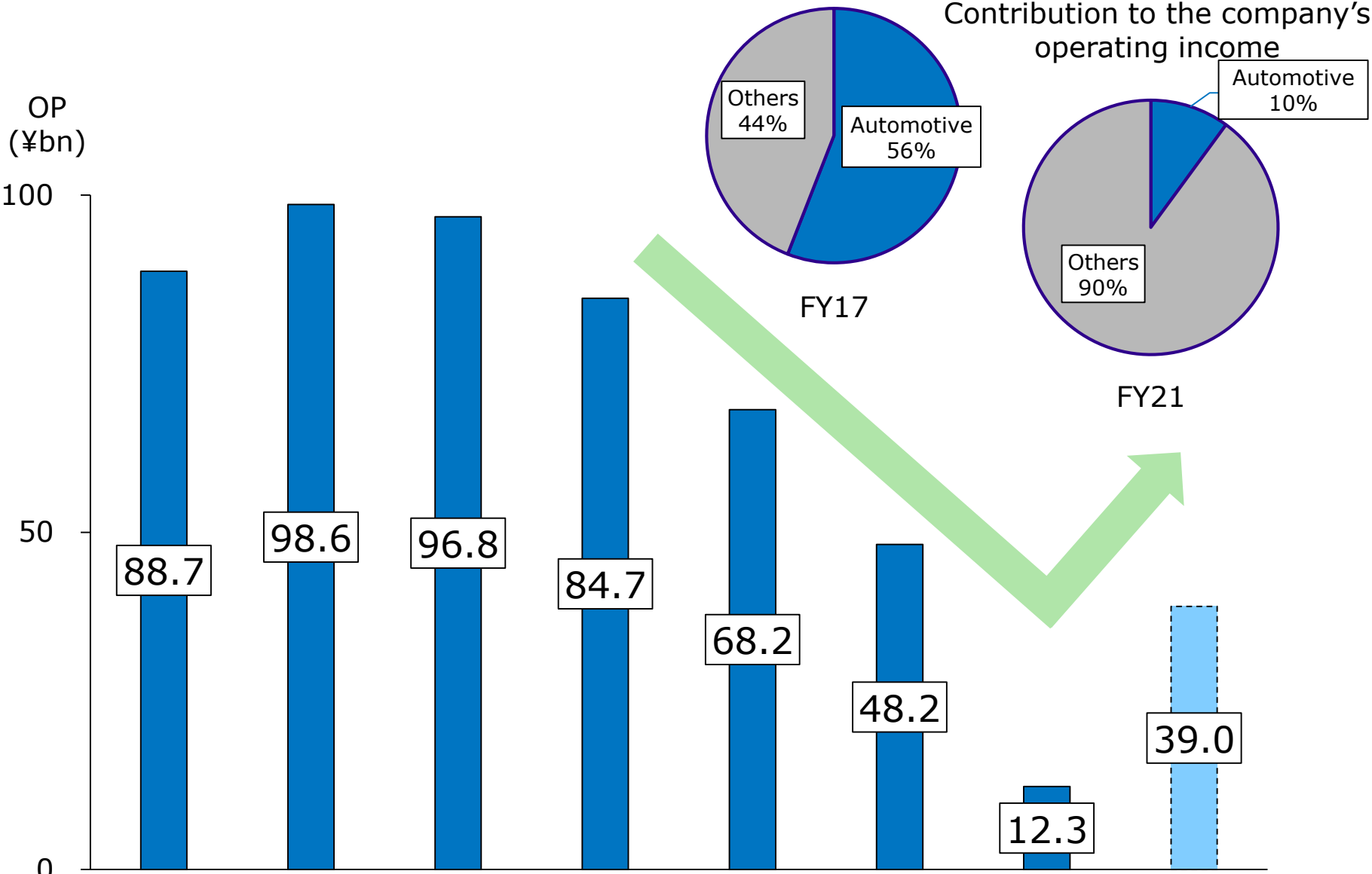


# How to recover earnings in the automotive segment

Sumitomo Electric Industries, Ltd.  
2022年11月17日

# Changes in earnings in the automotive segment



# FY2022 2H priority issues

## 1 Contribution to profit

- **Recovery of earnings from current performance**  
Negotiations with customers regarding soaring ocean freight and material prices,  
sure capture of rebounding customer demand in the 2nd half
- **Out-and-out efficiency of assets**  
Reduction of inventories,  
stringent selection of capital investment
- **Secure earnings from existing businesses**

## 2 Improvement of reliability

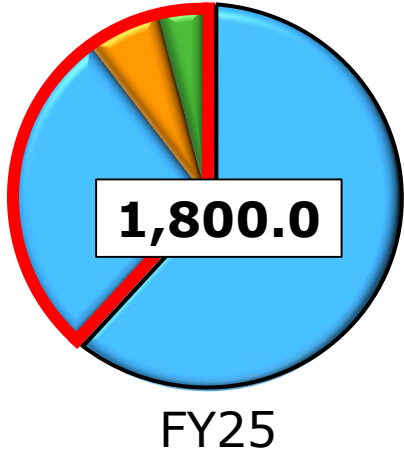
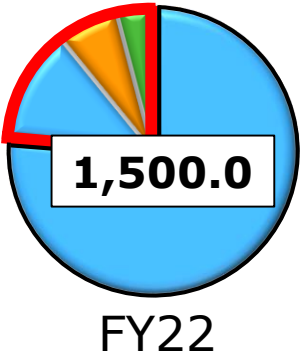
- Further strengthening of manufacturing capabilities
- Strengthening of partnerships with OEMs that focus on CASE

## 3 Demonstration of originality

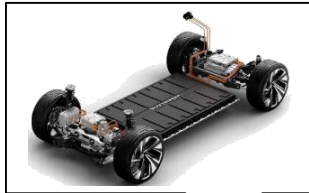
- Strengthening and further cultivation of our unrivaled technology in the existing wiring harness business
- **Manufacturing innovation**
- Further development of Sumitomo-style work methods (work-style reforms, DX promotion)

# Sales target for 2025 and 2030 (wiring harness)

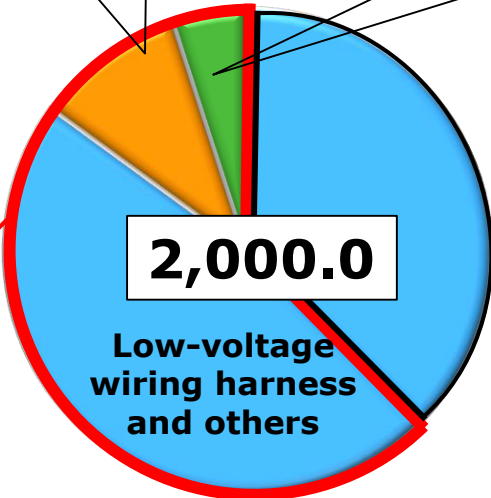
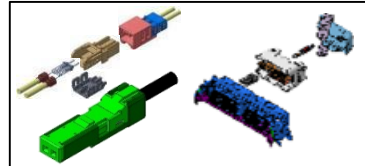
(¥bn)



Electrification  
(high-voltage compatible parts)



Connected  
(high-speed communication parts)



Sales of electric vehicle-related products

Sales of gas vehicle-related products

- With an increasing trend of electrification in the overall market toward 2030, **our sales of electric vehicle-related products have also expanded.**
- In addition to the improvement of our mainstay business (low-voltage wiring harnesses and others), **we also need to expand sales of CASE-related products (particularly in the electrification and connected areas).**

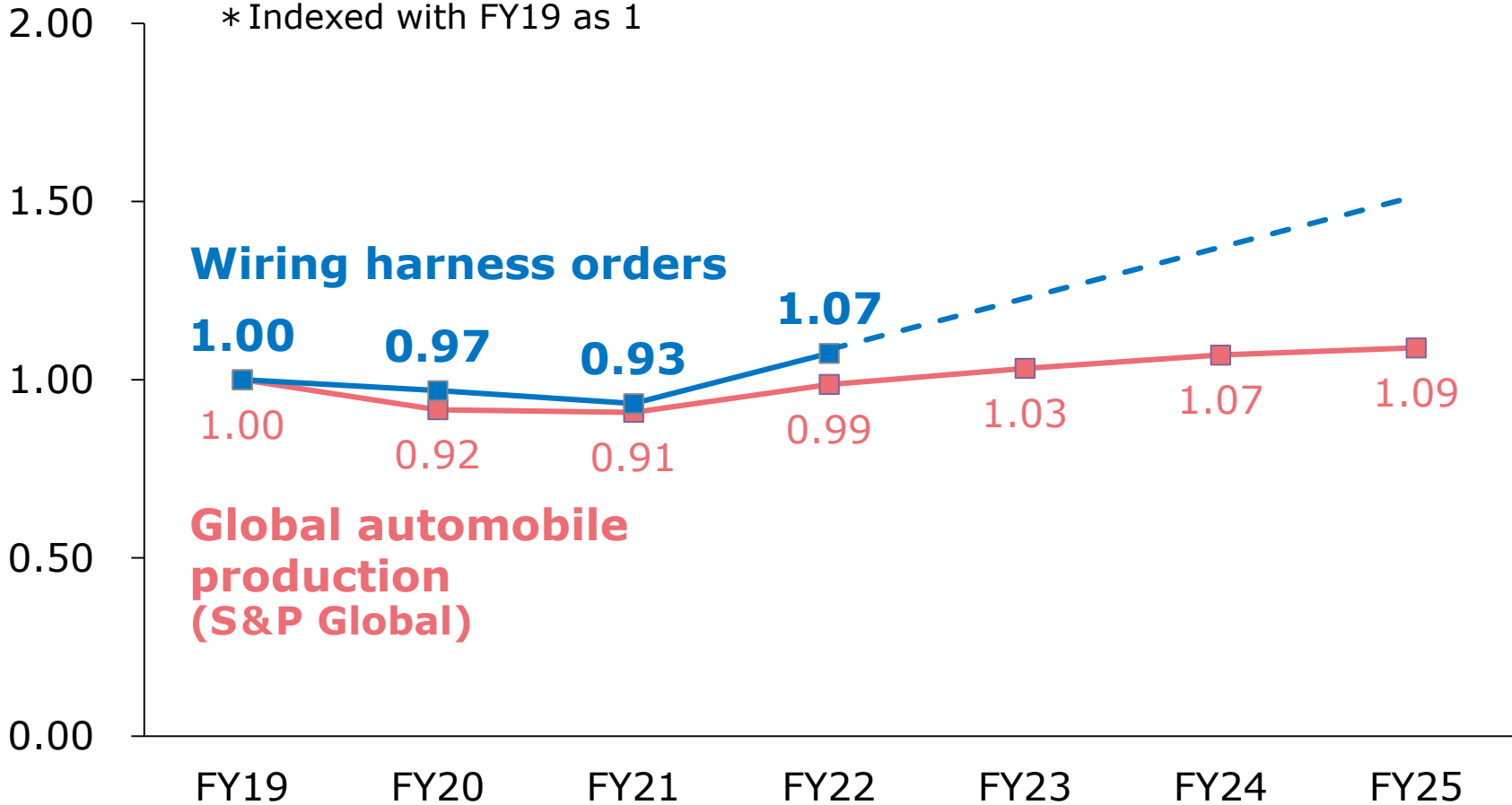
# To recover earnings

We formulated the following three strategies:

- 1 Expansion of existing business by deepening our core technology**
- 2 CASE-related product**
- 3 Our group collective strength**

# **1. Expansion of existing business by deepening our core technology**

# Changes in volume of automobile production and wiring harness orders



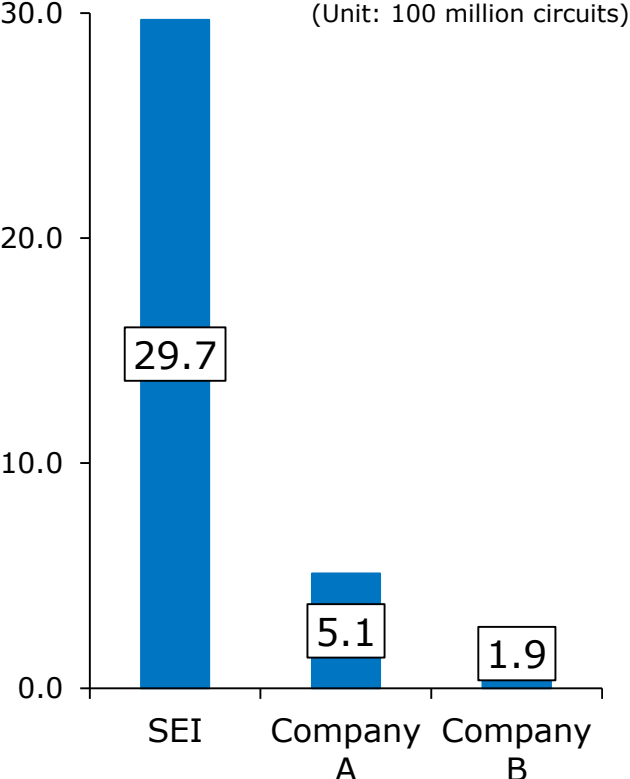
**The wiring harness order volume is expected to increase at a faster pace than market growth.**

# Widespread use of aluminum wiring harnesses

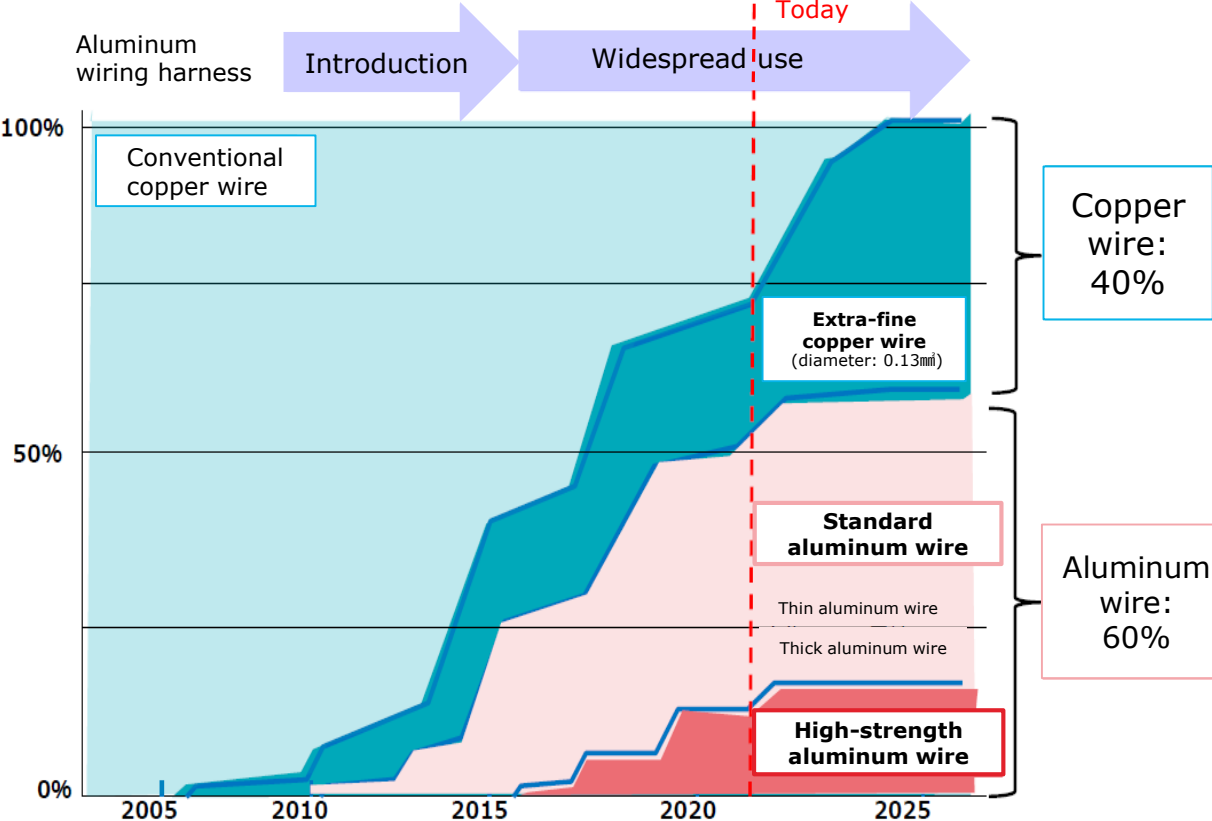
## [Why they are becoming popular]

**(1)Track record, (2)Competitive price, (3)Compatibility with existing parts**

■ Cumulative number of circuits using an aluminum wiring harness (Cumulative numbers for 2010–2021 based on our estimation)



■ Changes in wiring harness circuit types (Japanese OEM new vehicle model)



**We will further expand sales toward 2030 and establish the de facto standard.**



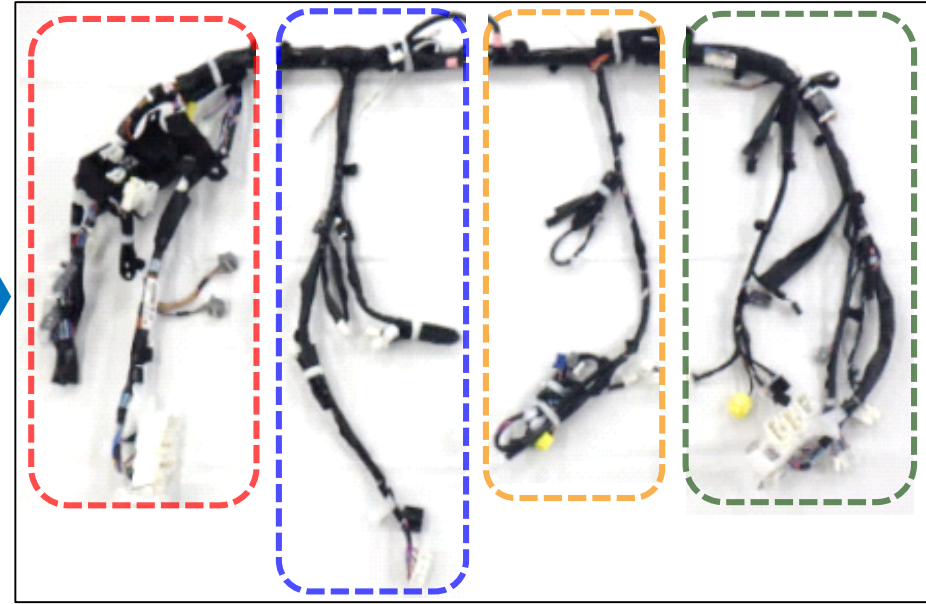
# Manufacturing innovation: Split wiring harness

Existing integrated wiring harness



【Number of parts: 250】

Split wiring harness (4-5 sections)



Number of parts:4

Number of parts:4

Number of parts:4

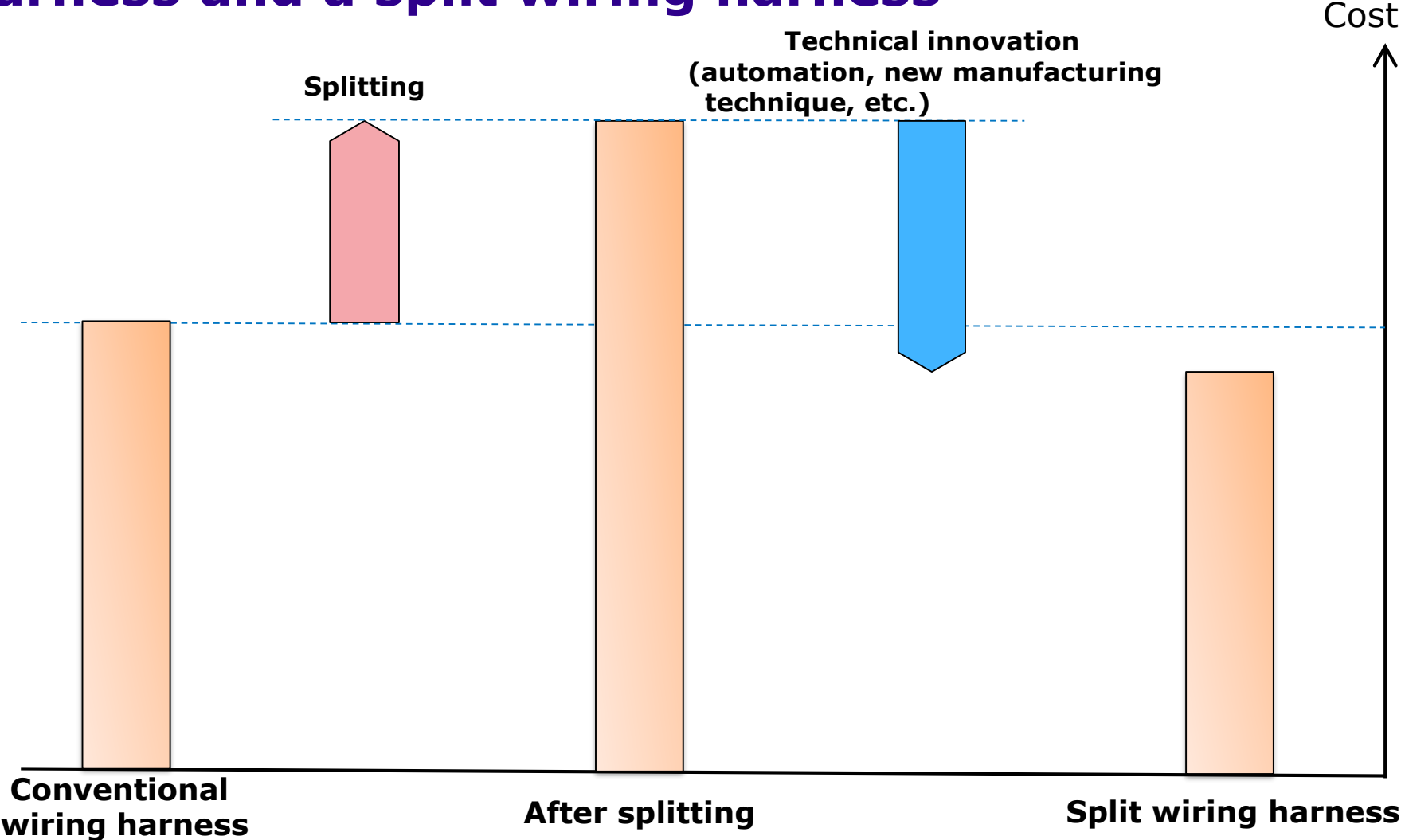
Number of parts:4

【 $4 \times 4 \times 4 \times 4 = 256$  varieties】

<Advantages of split wiring harnesses>

- ① Simple form that is easy to automate
- ② A wide variety of products can be created from a small number of parts.
- ③ Avoidance of concentrated production; **diversification of risks and promotion of local production for local consumption**

# Cost comparison between a conventional wiring harness and a split wiring harness



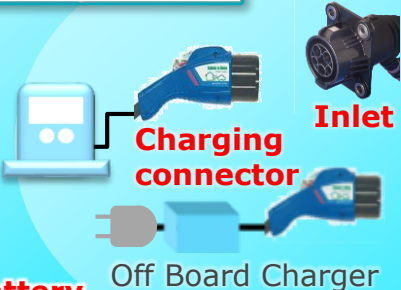
**Initially, the cost temporarily increased due to splitting, but total cost is reduced today due to technical innovation.**

## **2. CASE-related product**

# CASE-related product: Electrification

Our strength: infrastructure/communication/energy management, wiring, heat management, low/high frequency noise, vibration

## Charging/ infrastructure



Charging connector

Inlet

Off Board Charger



Storage battery for grid system

## battery components

Red letters: mass produced

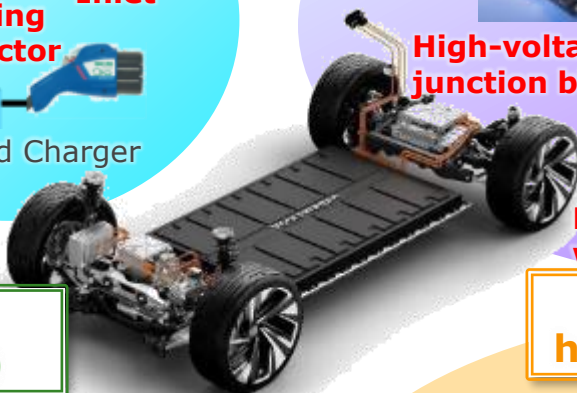


High-voltage junction block (JB)



BBM

Fire spread prevention and insulation material



Battery pack wiring harness



Tab lead

## Motor-inverter components (e-Axle)



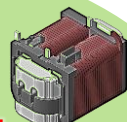
Magnet wire



Powder magnetic core



Terminal block



Reactor



Bus ring



Sensor wiring harness



Terminal module

## High-voltage wiring harness and connector



Large-current connector



Large-current wiring harness



Sub wiring harness



Aluminum pipe wiring harness

We will promote development by overviewing the electric system of the entire industry from infrastructure to vehicles. Sales target for new products in 2030: 200 billion yen

# CASE-related product: Information and Connected

**Our strength: infrastructure collaboration, electromagnetic noise, vehicle mounting technology**

## <Future mobility society>

**No accident**  
**No traffic jam**  
**Freedom of mobility**

Route guidance

**Cloud/infrastructure/service**

Red letters: mass produced

5G traffic signal  
Infrastructure sensor  
Intersection edge

**CLOUD**

**Probe information**



**High-speed communication wiring harness**

**Multipolar and high-speed communication module**

**Large-current and high-speed communication connector**

**High-speed communication wiring harness**

Small connector for zone ECU

**Electronics product**

**In-vehicle edge**

**Extension unit**

**Zone ECU**

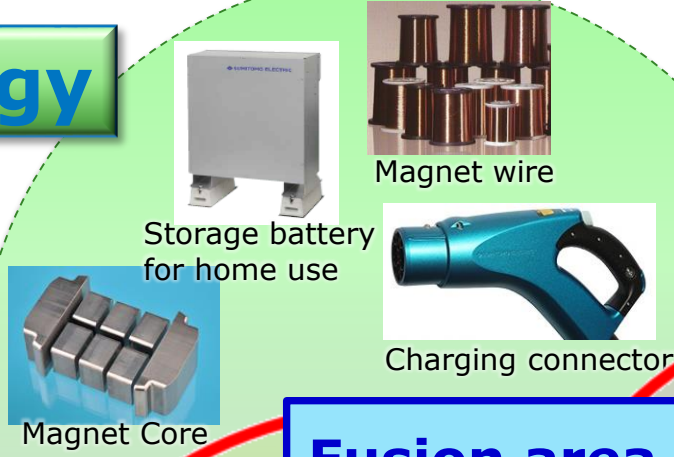
**We will promote comprehensive development from services to individual parts to realize a comfortable society. Sales target for new products in 2030: 100 billion yen**

# 3. Our group collective strength

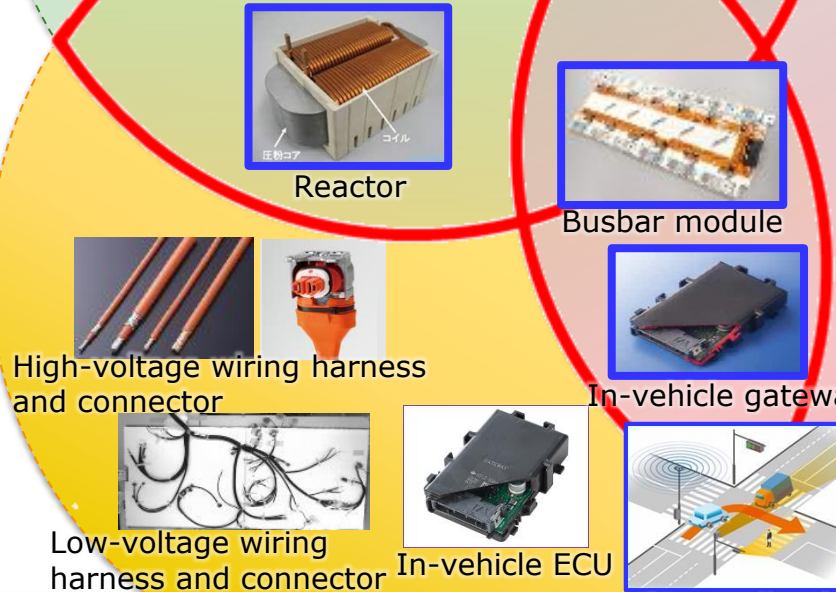


# Our group collective strength

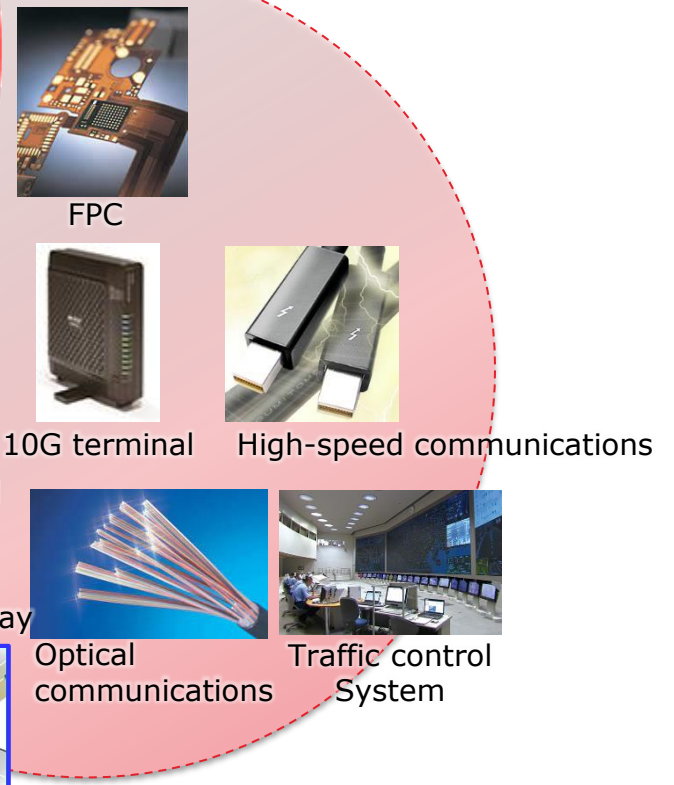
## Energy



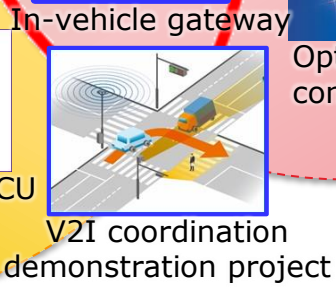
## Fusion area



## Info-communications



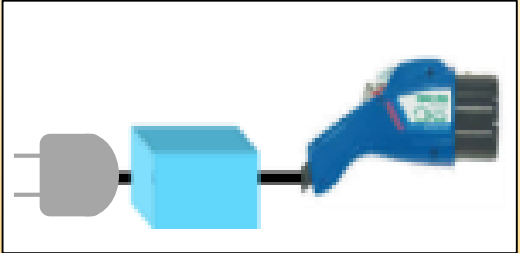
## Mobility



# New approach in the fusion area

## Energy

### Energy management system (EMS)



Charger/discharger

### Extension platform for MaaS vehicle



Extension unit

## Mobility

## Fusion area

Storage battery for household  
 Magnet wire  
 Magnet core  
 Charging connector  
 Reactor  
 Busbar module  
 In-vehicle gateway  
 In-vehicle ECU  
 High-voltage wiring harness and connector  
 Low-voltage wiring harness and connector

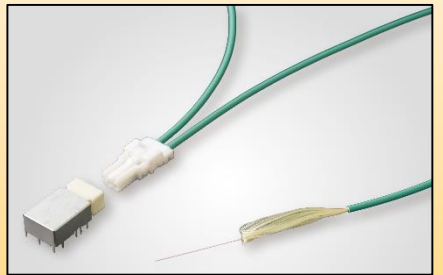
## Info-communications

### Next-generation network ECU



High-speed communications unit

### Optical communications system



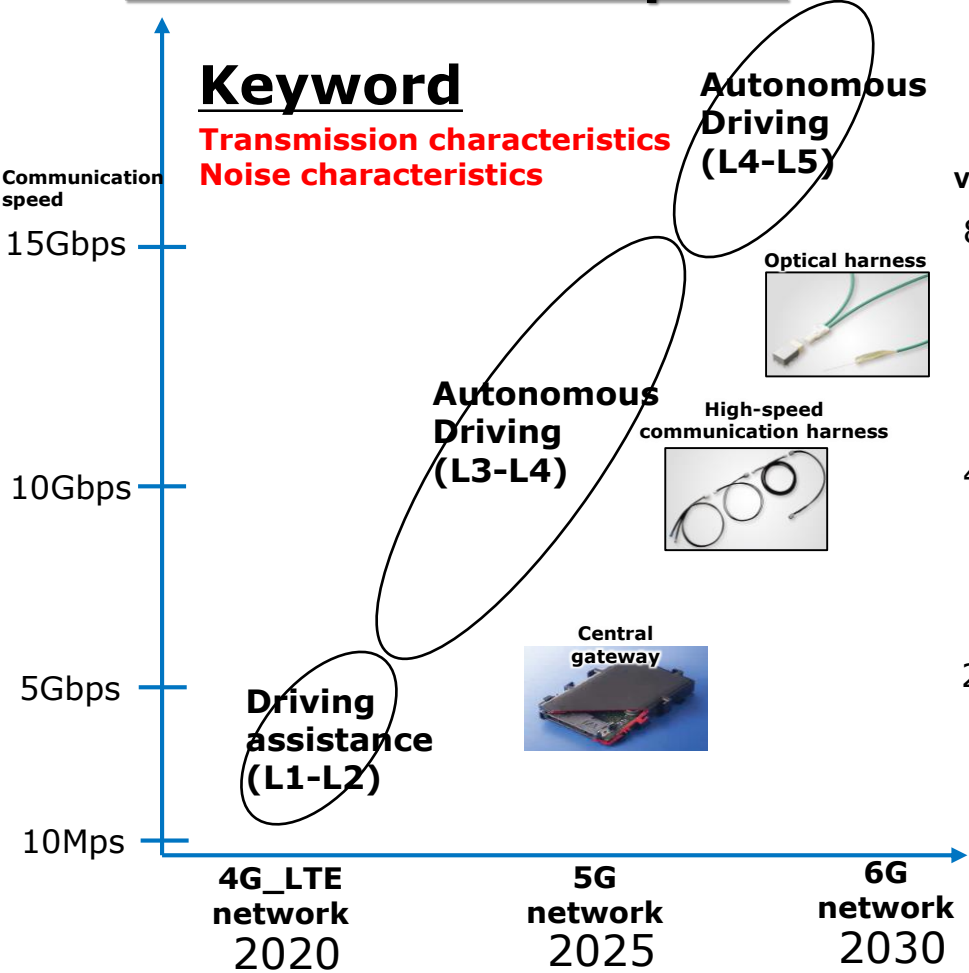
Optical wiring harness

FPC  
 10G terminal  
 High-speed communications  
 V2I coordination demonstration project  
 Optical communications  
 Traffic control

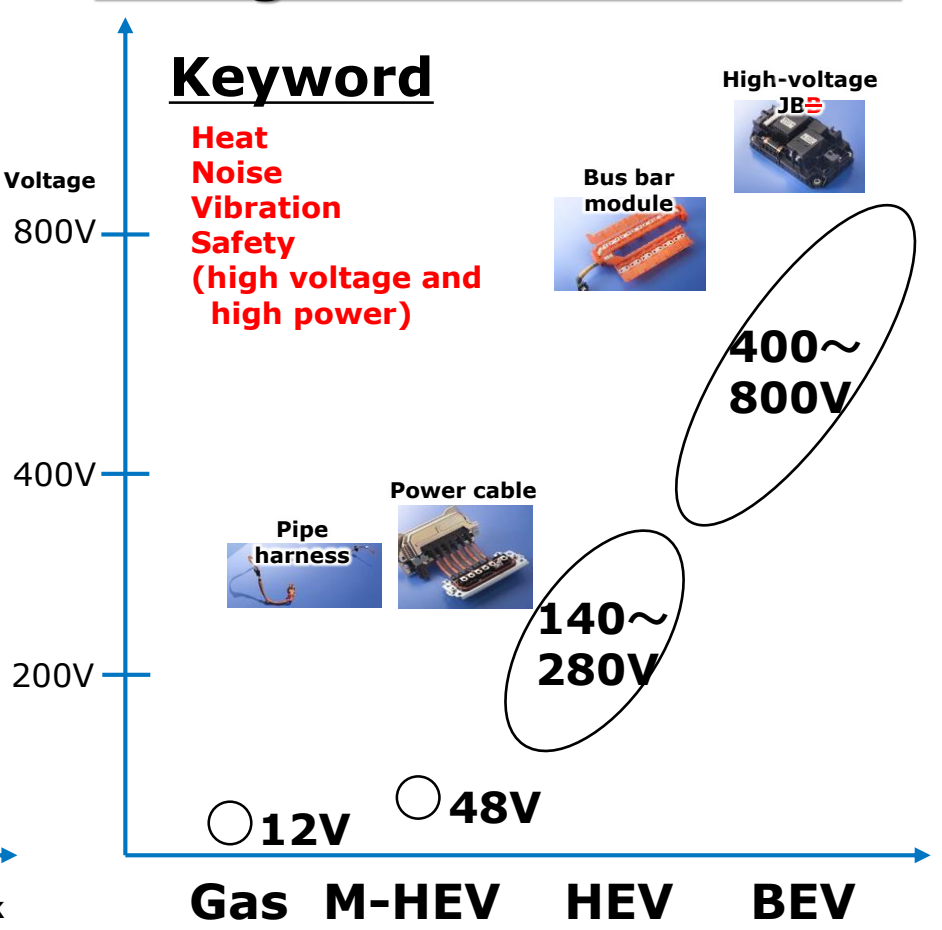


# Expansion of CASE-related businesses

## Communication speed



## Voltage of electric vehicles



**As the communication speed becomes faster and the voltage increases, our strengths will be shown.**

# Vision for 2030

## [Message line]

**We aim to expand the "Connected" business as a "Connecting" partner in mobility.**

## [Key words and key takeaways for the initiatives]

- **Secure earnings from existing businesses**
  - Extend the use of aluminum wiring harness
  - Innovate manufacturing methods  
(new design concept, new manufacturing technique)
- **Expansion of businesses in the electrification and connected areas**
  - Display our group's collective strength
- **Strengthening of partnerships with OEMs**

SUMITOMO ELECTRIC GROUP

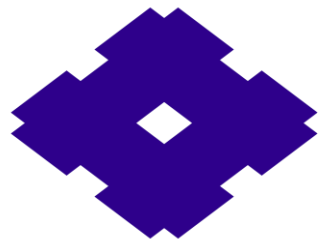


SUMITOMO  
ELECTRIC

Connect with Innovation



*Tsunageru. Tsunagaru.*



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