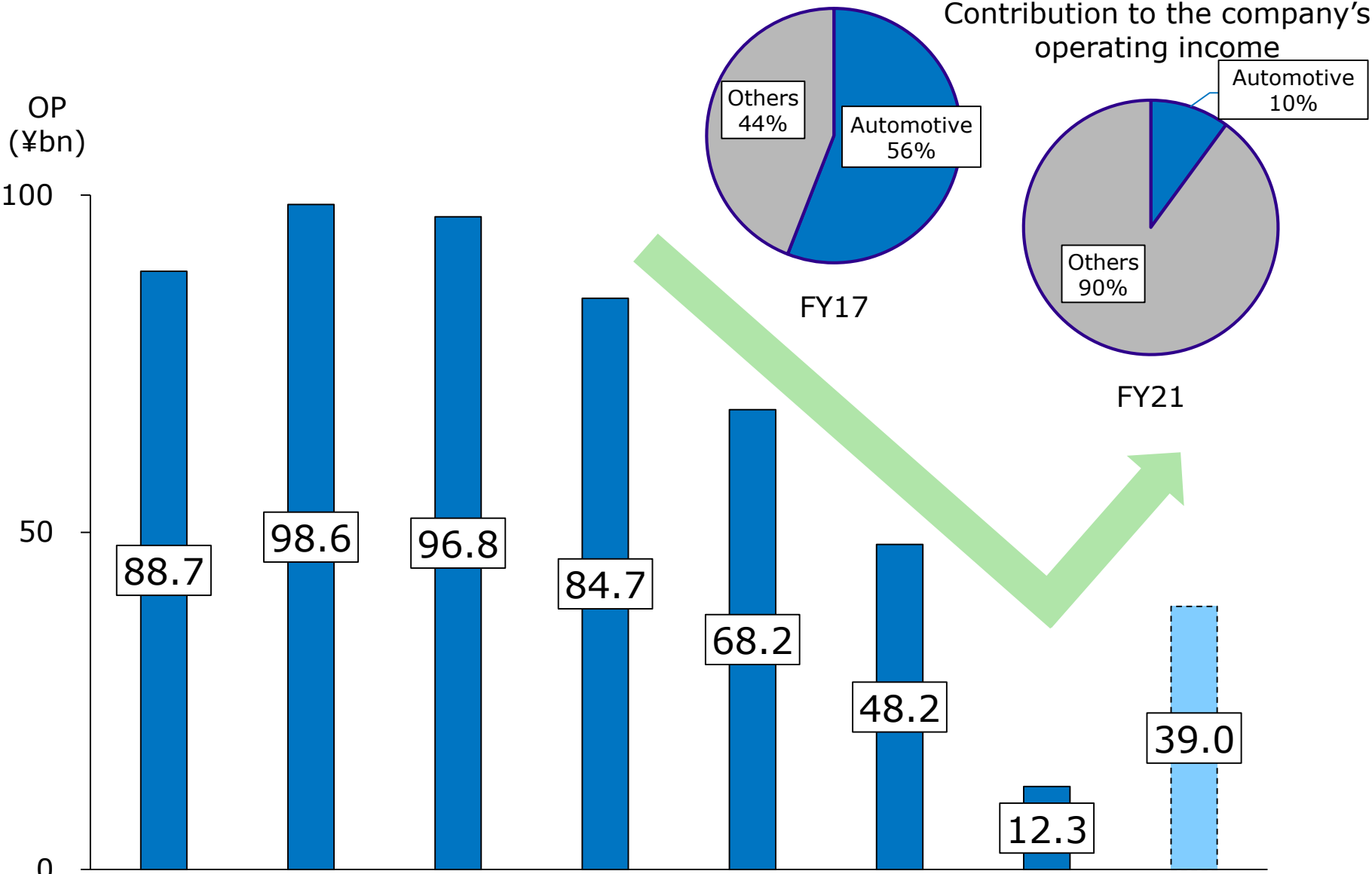


How to recover earnings in the automotive segment

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

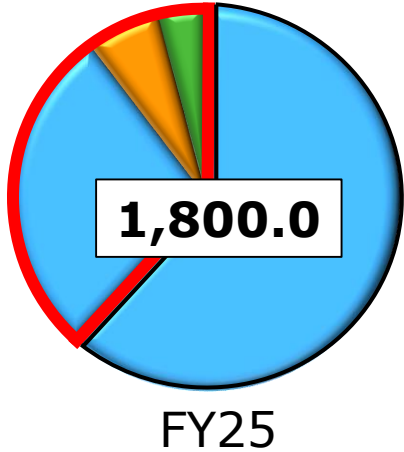
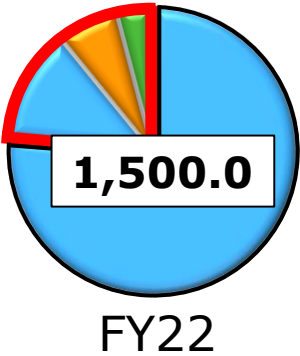
- Further strengthening of manufacturing capabilities
- Strengthening of partnerships with OEMs that focus on CASE

3 Demonstration of originality

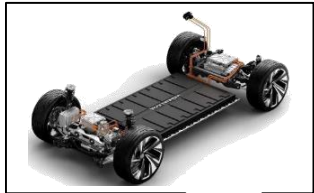
- Strengthening and further cultivation of our unrivaled technology in the existing wiring harness business
- **Manufacturing innovation**
- Further development of Sumitomo-style work methods (work-style reforms, DX promotion)

Sales target for 2025 and 2030 (wiring harness)

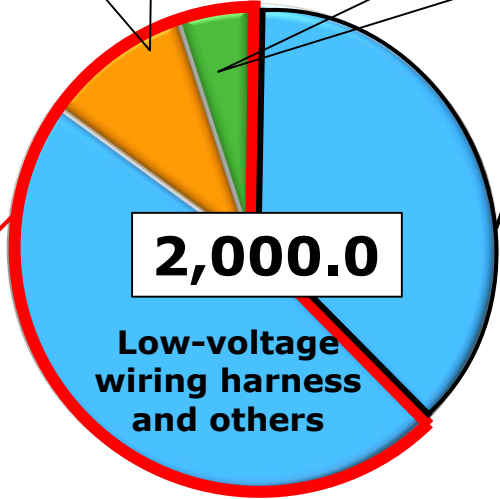
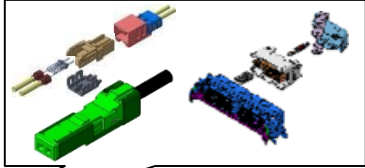
(¥bn)



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).**

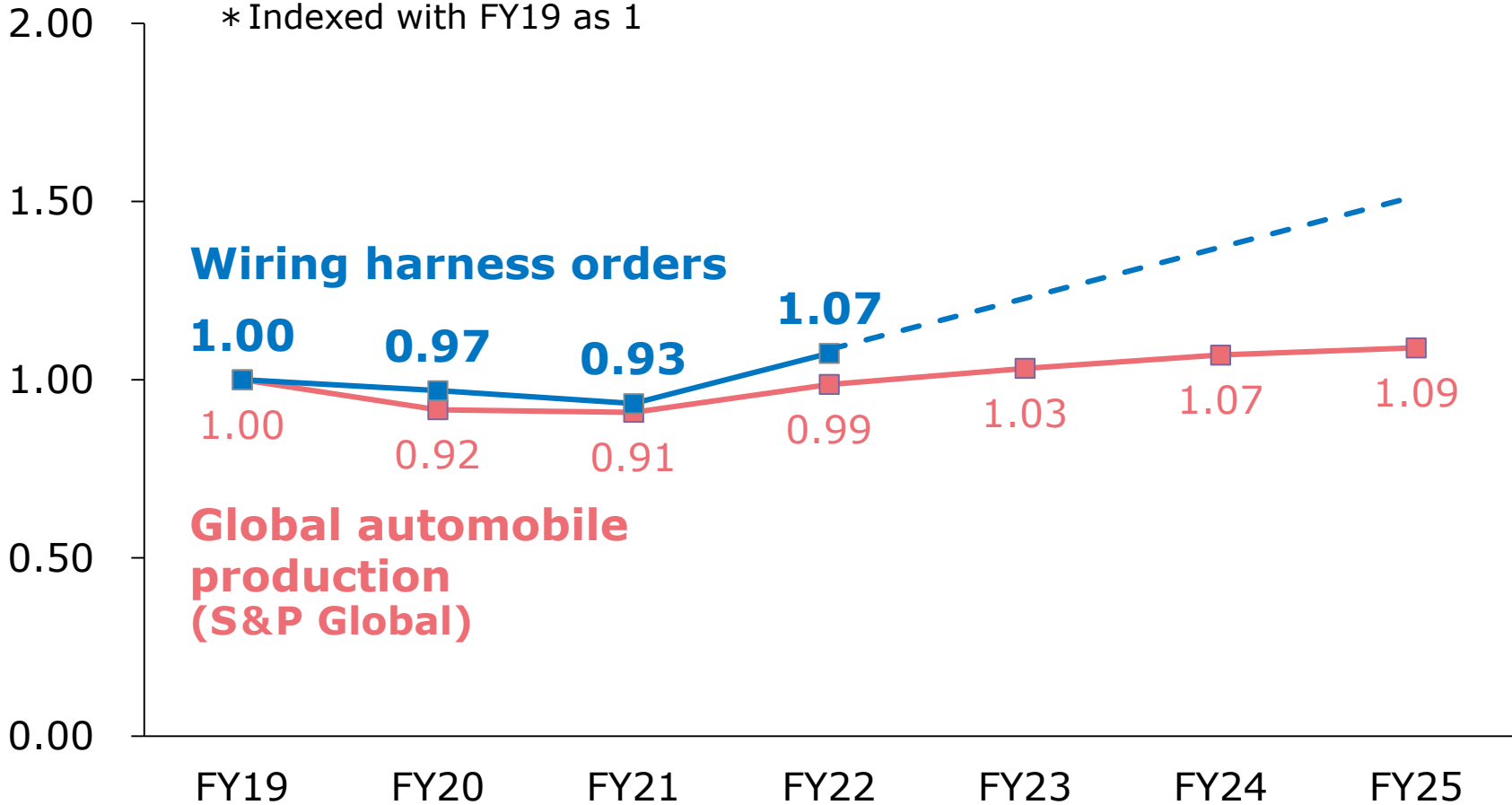
To recover earnings

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



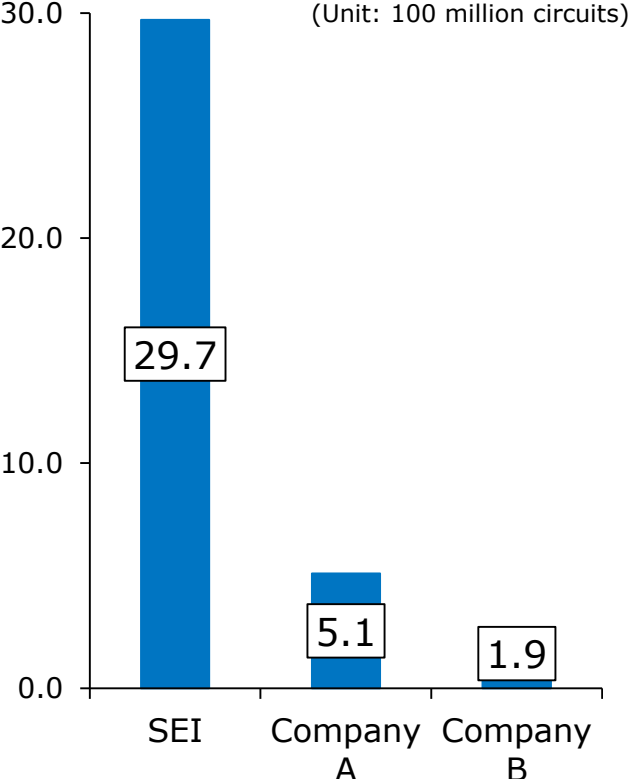
The wiring harness order volume is expected to increase at a faster pace than market growth.

Widespread use of aluminum wiring harnesses

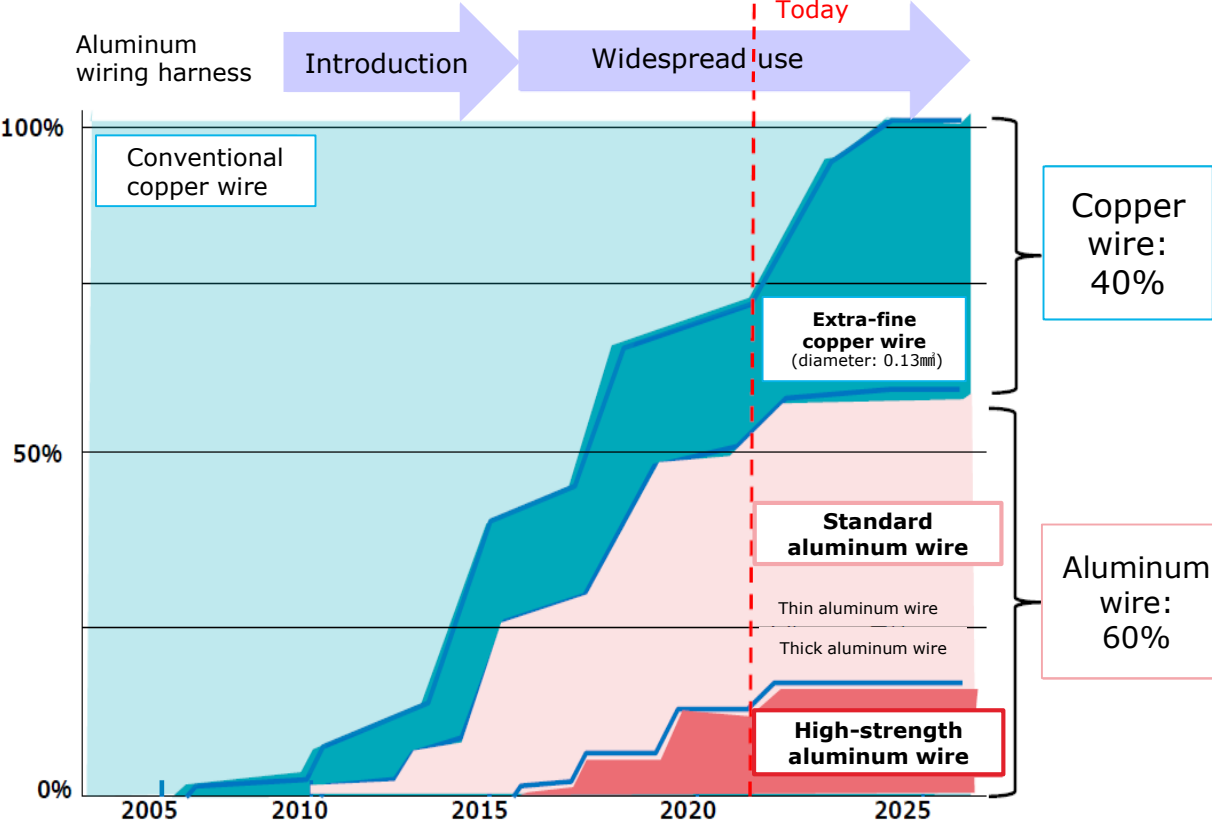
[Why they are becoming popular]

(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)



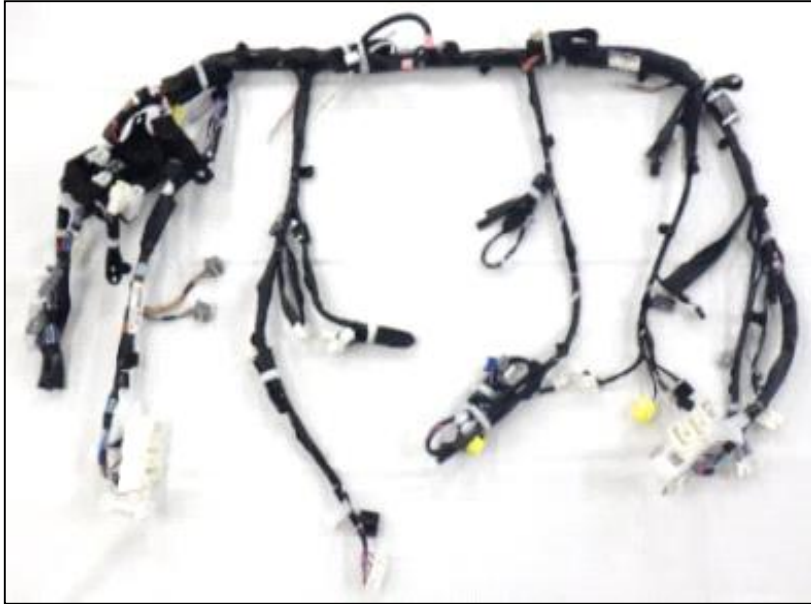
■ Changes in wiring harness circuit types (Japanese OEM new vehicle model)



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

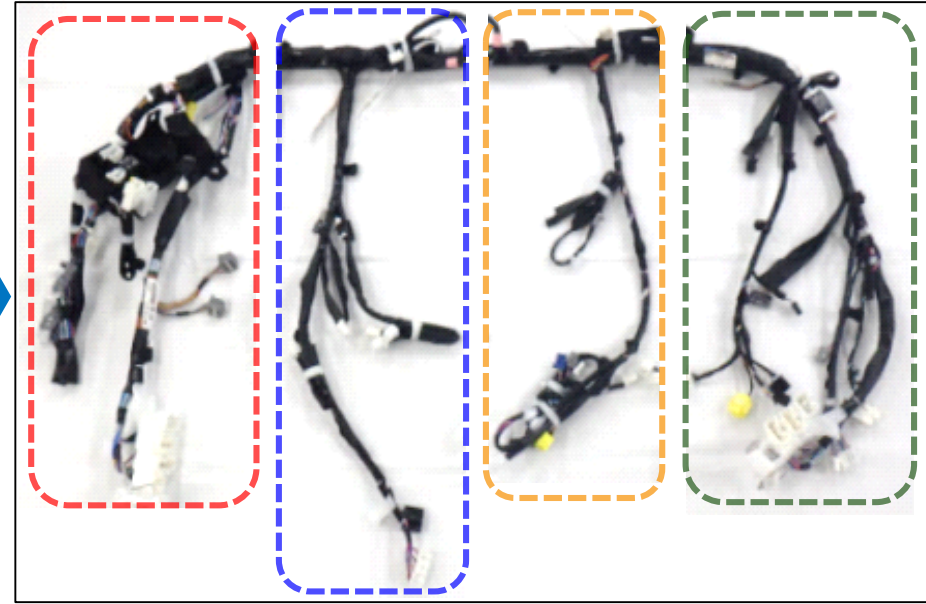
Manufacturing innovation: Split wiring harness

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

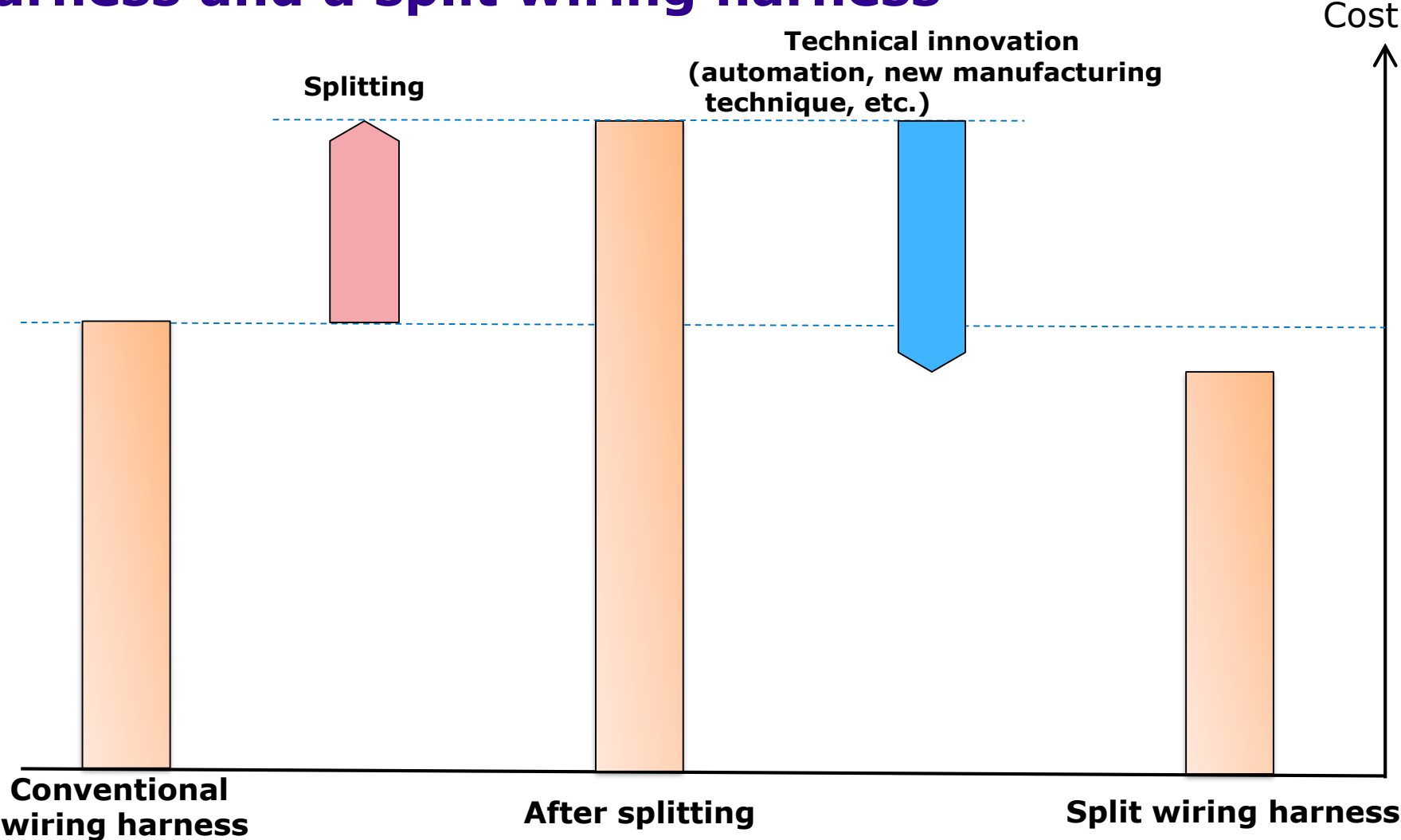
Number of parts:4

【 $4 \times 4 \times 4 \times 4 = 256$ 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

EV server **Storage battery for grid system**

Charging connector

Inlet

Off Board Charger

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

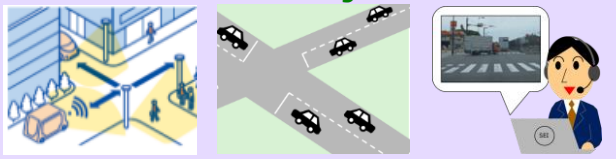
We will promote development by overviewing the electric system of the entire industry from infrastructure to vehicles. Sales target for new products in 2030: 200 billion yen

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

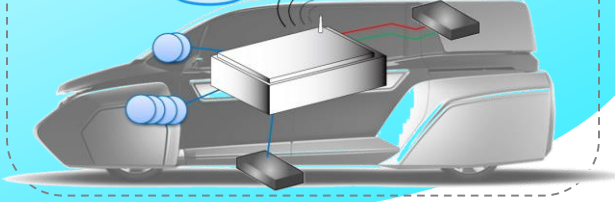
Red letters: mass produced




5G traffic signal
Infrastructure sensor
Intersection edge



Probe information



High-speed communication wiring harness



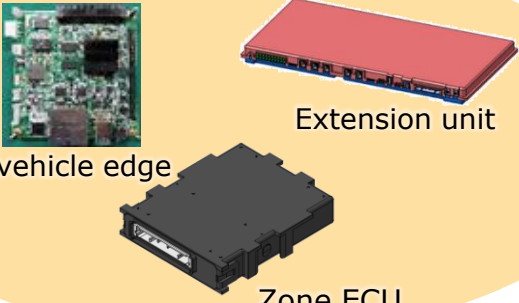
Multipolar and high-speed communication module

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

Storage battery for home use

Magnet wire

Magnet Core

Charging connector

Fusion area

Reactor

Busbar module

High-voltage wiring harness and connector

In-vehicle gateway

Low-voltage wiring harness and connector

In-vehicle ECU

Info-communications

FPC

10G terminal

High-speed communications

Optical communications

Traffic control System

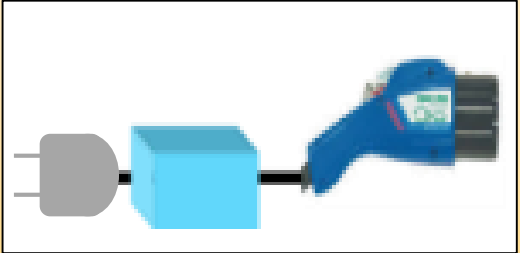
Mobility

V2I coordination demonstration project

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

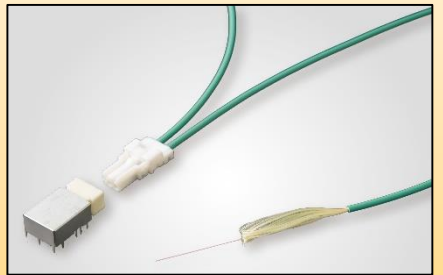
Info-communications

Next-generation network ECU



High-speed communications unit

Optical communications system

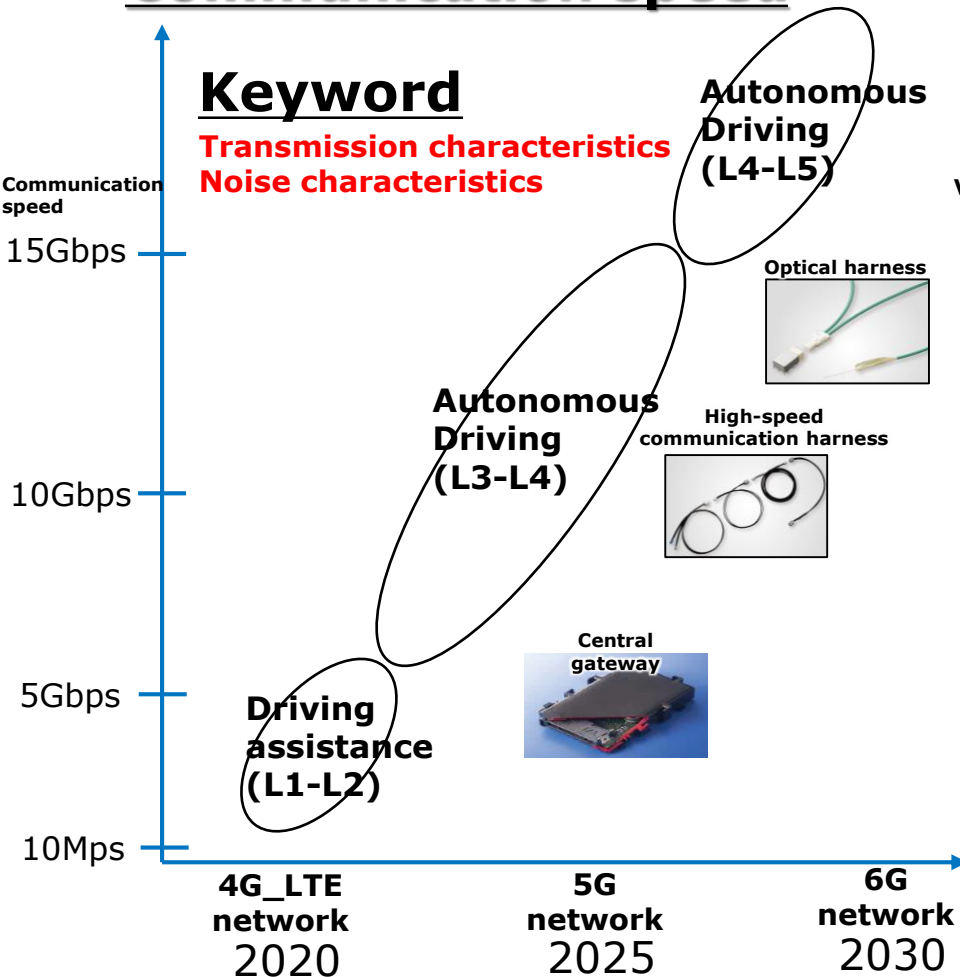


Optical wiring harness

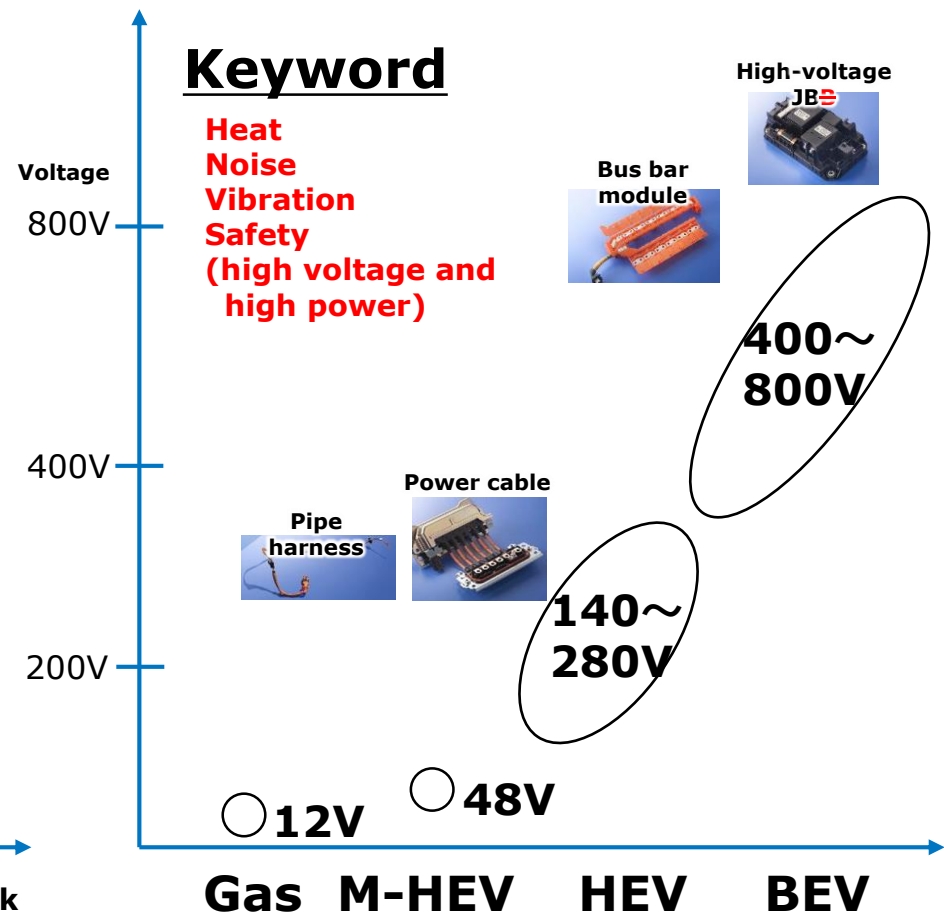
FPC
 10G terminal
 High-speed communications
 V2I coordination demonstration project
 Optical communications
 Traffic control

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

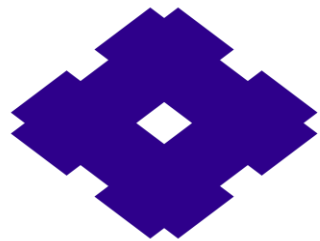


SUMITOMO
ELECTRIC

Connect with Innovation



Tsunageru. Tsunagaru.



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