

Sanden Corporation

Mid-term management plan 'SHIFT2028' explanation

26 February 2024.
Sanden Corporation Director
Director & Executive Vice President
Hideyuki Kobayashi

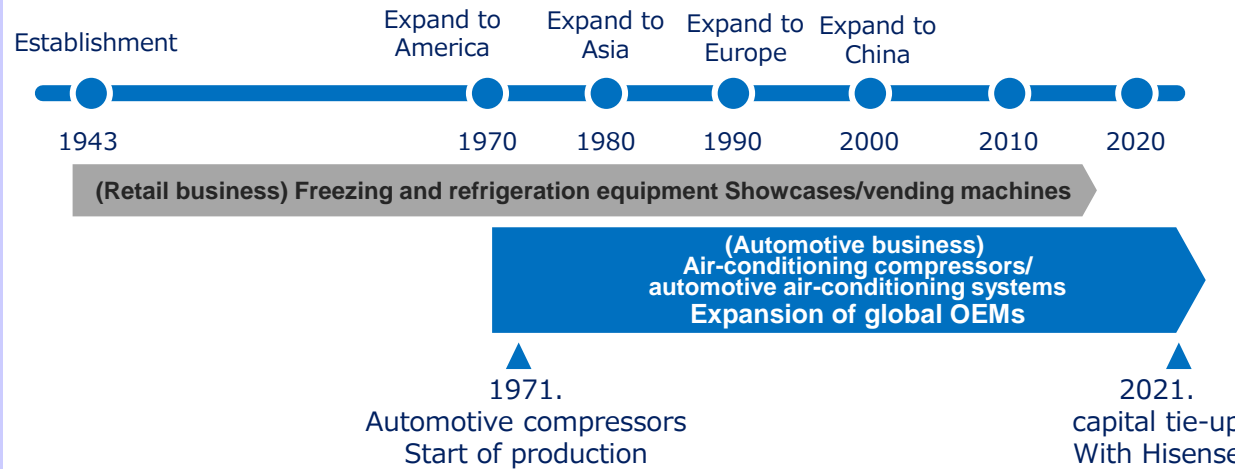
Table of Contents

- 1. Company profile**
- 2. Basic strategy**
- 3. Priority measures**
- 4. Financial strategy**
- 5. Conclusion**

① Company profile

1. Company profile

History



Numerical values Highlights.

capital stock
21.7 billion.

Number of employees
*As of December 31, 2023.
Consolidated 5,587
Percentage of overseas employees 76%.

Global Locations
46 sites in 22 countries

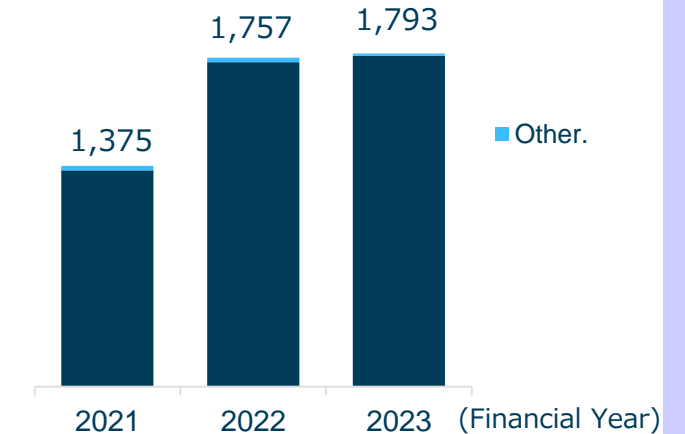
Business activities

Business activities
Automotive equipment systems business
We manufacture and sell products globally, mainly OEM products (original equipment manufacturing) for automobile manufacturers and other customers around the world. Aggressive deployment of high-quality products that respond to the electrification of automobiles

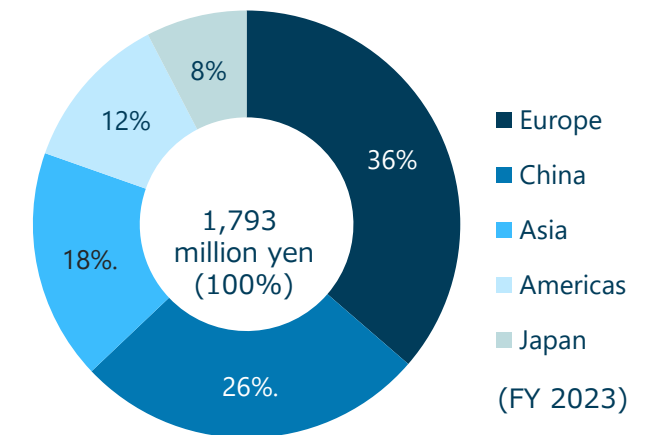


Consolidated Net sales

(100 million yen)

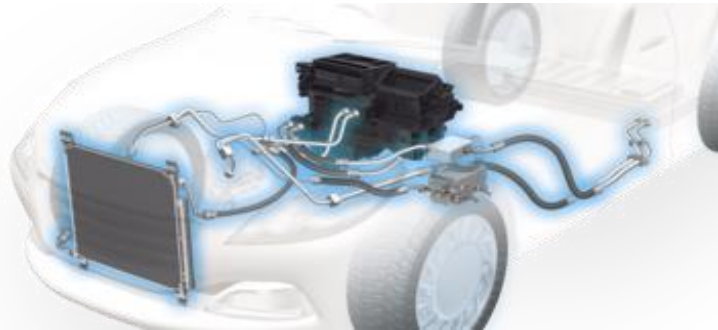


By region Net sales



2. Overview of the company's main products

air-conditioning system



Automotive air conditioning systems

The company manufactures and sells various components that make up car air-conditioning systems on a global scale, and has won the trust of major car manufacturers, construction machinery and agricultural machinery manufacturers, using environmental technology as its core technology.



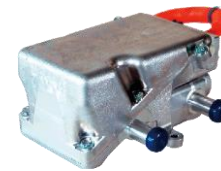
Heat pump system



HVAC units



ITMS Integrated Thermal Management System
Integrated heat management systems
 (for new energy vehicles)

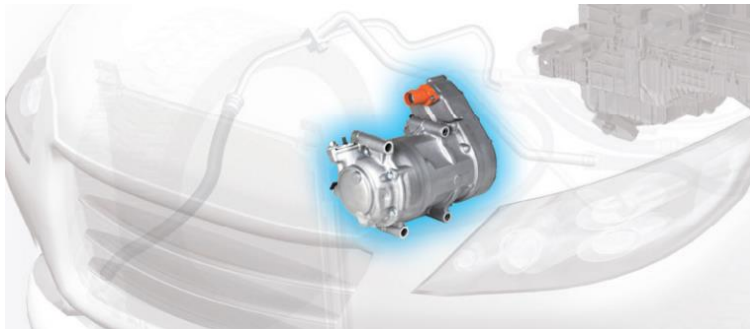


Electric Coolant Heaters
 (for new energy vehicles)



condenser

Heart of the air-conditioning system Components



Compressors for automotive air conditioning

The company manufactures and sells compressors, the heart of car air-conditioning systems, on a global scale. In recent years, the company has also gained credibility in environmental technology, with a wide range of products for electric vehicles and other applications.



Electric compressors (EC)



Swash Plate Type
 Variable Displacement
 Compressors



Wobble Plate Type Fixed
 Displacement Compressors



CO₂ compressor



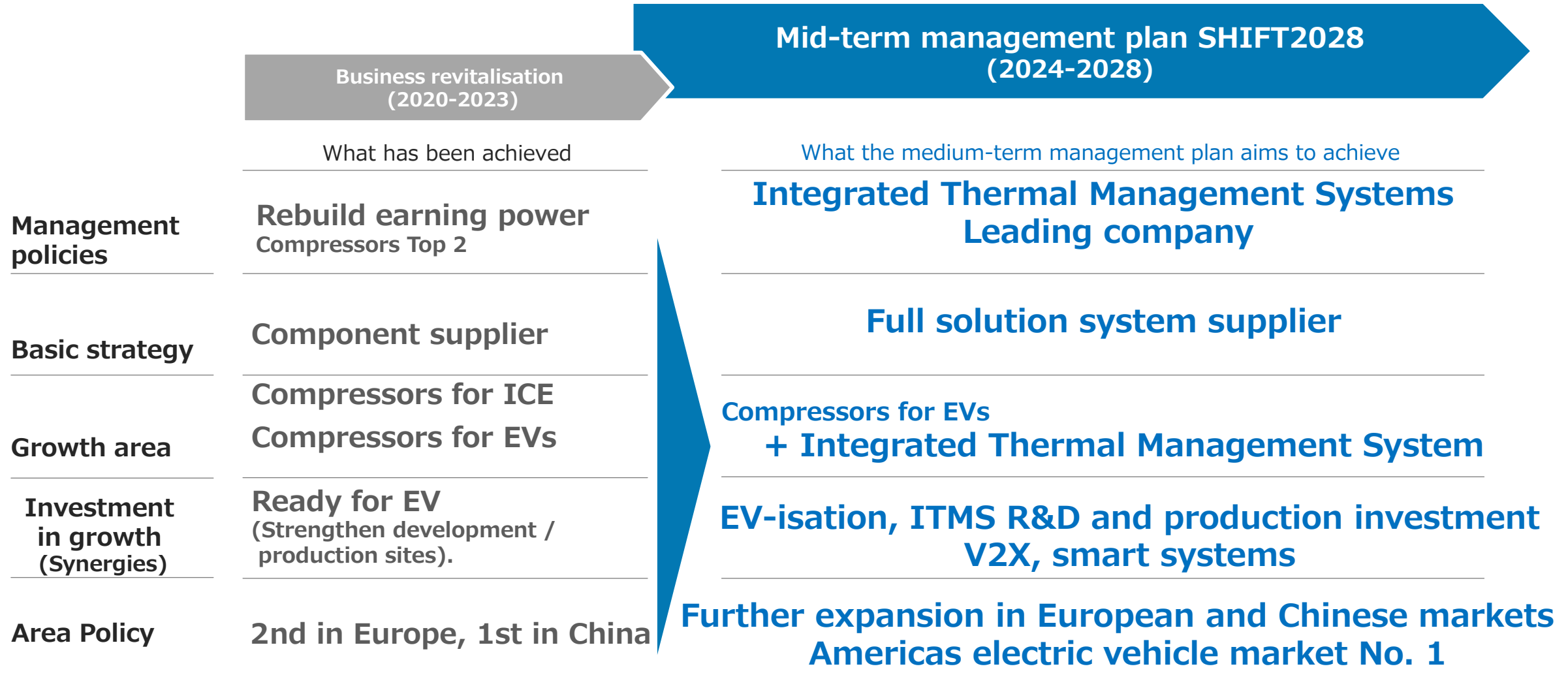
World No.2

**Cumulative production
 Over 400 million units**

② Basic strategy





3. New mid-term management plan SHIFT2028

From component supplier to 'Full solution system supplier'.
Grow as a leading company in integrated thermal management systems based on an accumulated business platform.



4. Competitive advantage of Sanden

Chinese OEMs leading the NEV space (Global South market) while maintaining and capturing growth in existing European markets
Unique position able to focus on emerging EV OEMs

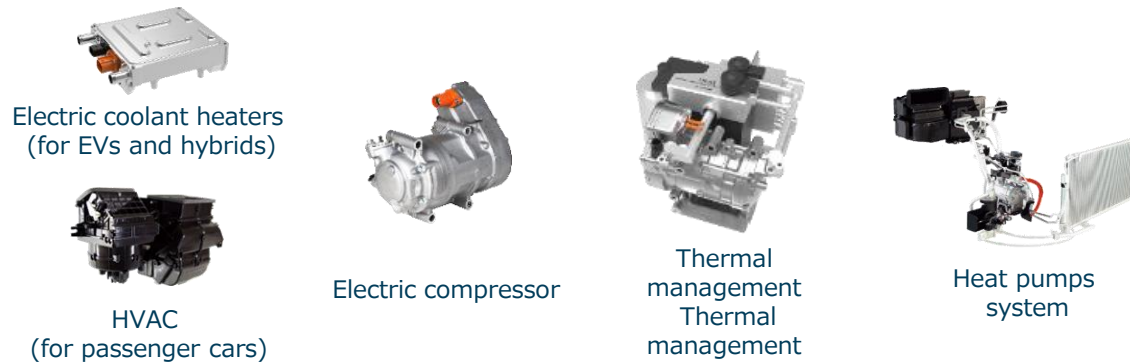
			Product advantage	Existing market share	Market size (2023)	Market growth potential (2028)	high-growth customer
NEV	EC		<ul style="list-style-type: none"> Extending the range of electric vehicles by 140%. Product line-up for a wide variety of refrigerants Global production structure 	Global: 3rd.	Approx. 400 billion yen Of which: China 46%. Of which: Europe 20%.	Approx. 800 billion yen Of which: China 50%. Of which: Europe 28%.	Accelerate sales to Chinese and European customers enjoying growth in the NEV market (existing expansion, new acquisitions).
	ITMS			Growth markets from CY25	Approx. 200 billion yen Of which: China 58%. Of which: Europe 20%.	Approx. 1.0 trillion yen Of which: China 47%. Of which: Europe 21%.	
	HVAC		<ul style="list-style-type: none"> Technology and reliability based on a production record of 400 million units Cost competitiveness through procurement synergies with Hisense Global production system 	Asian share: 9%.	Approx. 1.7 trillion yen Of which: China 32%. Of which: Europe 20%.	Approx. 1.8 trillion yen Of which: China 34%. Of which: Europe 19%.	in the situation that the competition is in active, Selecting and concentrating on quality customers by utilising existing production and logistics assets and customer relationships
ICE	MC			Global: 2nd.	Approx. 700 billion yen Of which: China 27%. Of which: Europe 20%.	Approx. 400 billion yen Of which: China 22%. Of which: Europe 17%.	

5. Overview of the ITMS strategy

**World No.1 competitive advantage in Thermal management systems, which is the backbone system in NEVs.
Providing integrated thermal management system solutions to emerging EV OEMs in China, Europe and the Americas, which are experiencing significant growth, is a core part of the growth strategy**

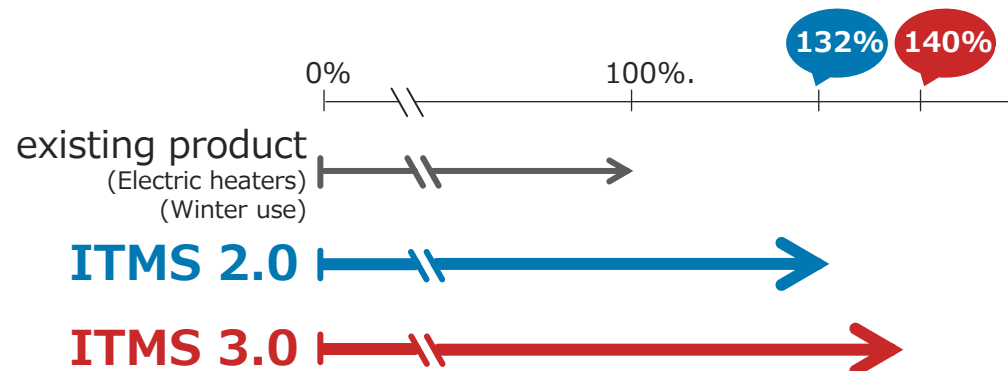
ITMS hardware x software

Possesses ITMS components on both EC (core components) and software sides



Technological superiority

High cost-efficiency compared to the competition (extended range).

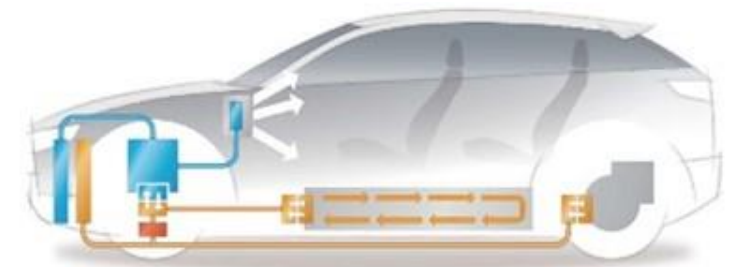


Flexible compliance with PFAS regulations.

Two direct/indirect systems allow systems using propane gas as refrigerant to be realised safely.

ITMS 2.0

ITMS 2.0 is a **direct system** and puts refrigerant directly into the air conditioning unit, giving it a response advantage.



ITMS 3.0

ITMS 3.0 is an **indirect system**, which enables large-scale reductions in the amount of refrigerant in propane gas refrigerant systems that are the scope of **environmental regulations of PFAS**



6. The composition of electrification products in Sanden

From compressor-centric supplier to full solution supplier

Provide Thermal management solutions (systems, modules and components) and follow a speedy 'customer first' policy

customer needs

social responsibility

- electrification
- automation
- decarbonation
- energy conservation

Required devices

E-Devices
sensing device
green material
Competing devices
(e.g. HP)

core competence

Fluid mechatronics:

Sanden provides passengers with a safe and comfortable space based on its core technologies related to refrigeration systems. This technology and know-how will be extended to other fluid control systems and equipment.

in-house technology

Core technology

- Fluid Machinery
- heat exchange
- air control
- electronics

Products and equipment

compressor
Heat exchangers, ECH
HVAC, cooler
Motor, inverter

heat transfer

- ECH (Electric Coolant Heater)
- HEX (heat exchanger)



Electric coolant heater
for EV and Full Hybrid
vehicles



Heater core



Condenser and
Outer heat
exchanger



Pipe

In-vehicle air control

- HVAC
- Spot cooler



HVAC unit
For Passenger Vehicles

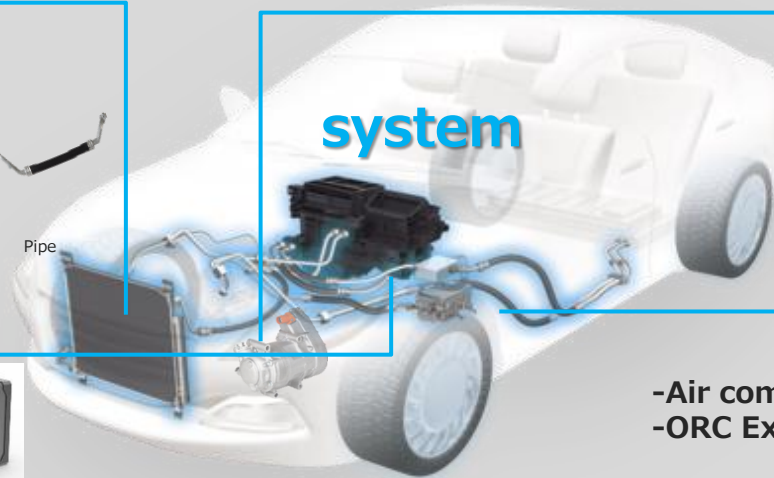


2layer HVAC



Spot Cooler

system



fluid control

- Compressor
- ITMS
- Refrigerant units



MC



EC



ITMS



Refrigerant
Integrated Module

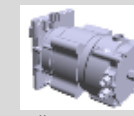
drive control

New products based on core technologies

- Air compressors
- ORC Expander



Scroll Expander.



Scroll air compressor



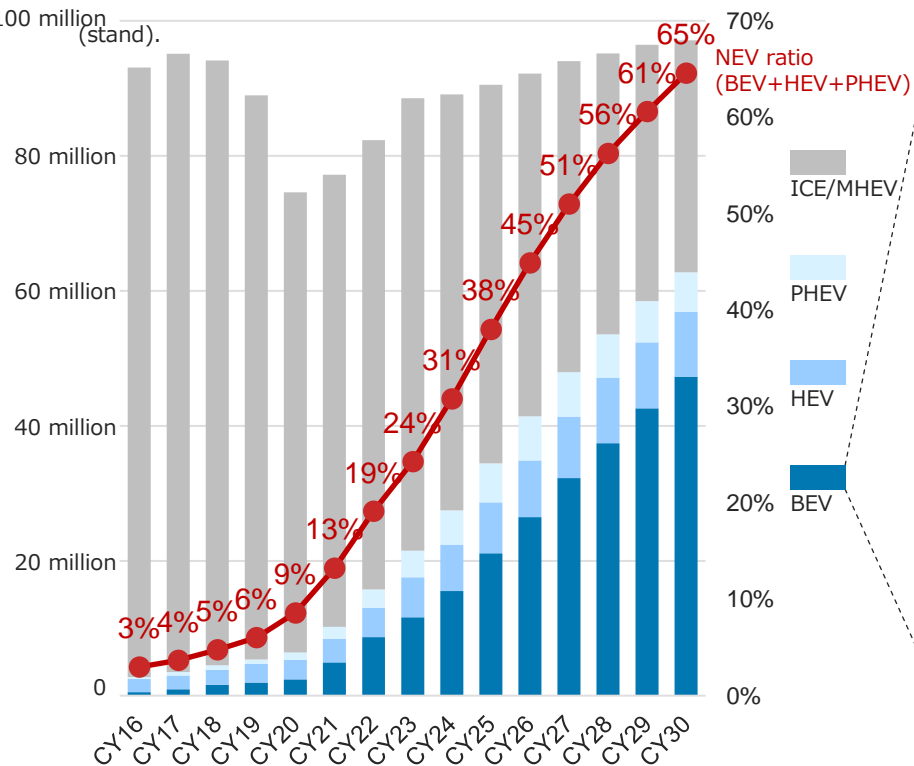
Turbine air compressor

7. The external environment during SHIFT 2028

NEVs are expected to account for 65% of the total market by 2030; market opportunity lies in NEV growth
China is the largest and fastest growing NEV market, followed by Europe and the Americas

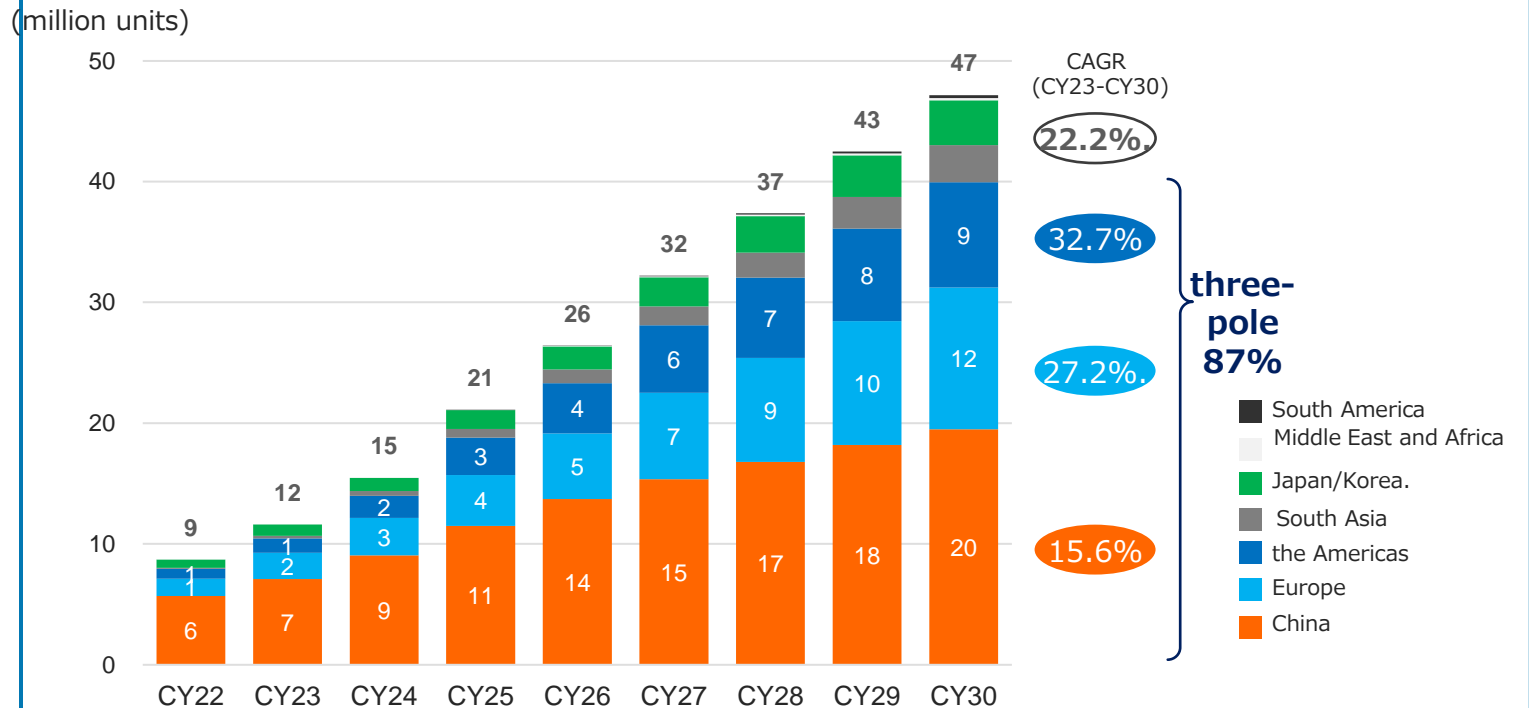
Global vehicle production forecast by powertrain.

- The global NEV ratio is increasing year on year.
- BEVs (battery EVs) make up the majority of NEVs



BEV production forecast.

- China is the largest BEV market by region. Europe and the Americas are the trailing markets (87% in the three regions).



8. Expansion of global OEMs in China with regard to BEV production, and overseas expansion of Chinese OEMs

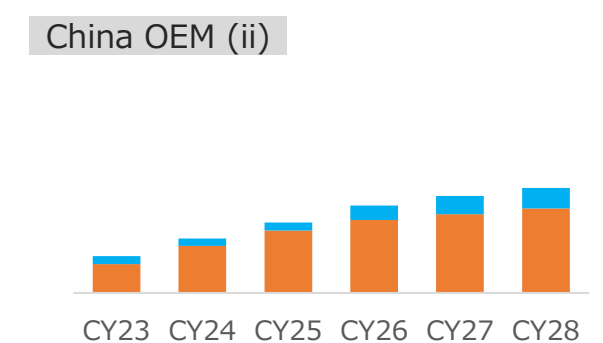
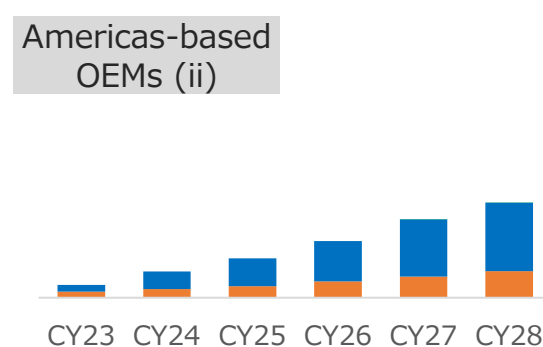
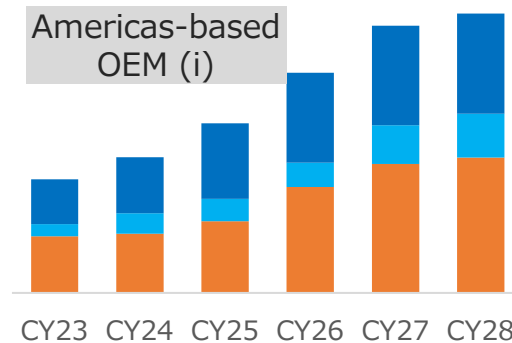
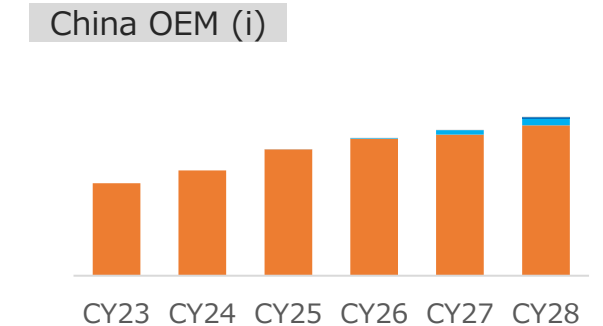
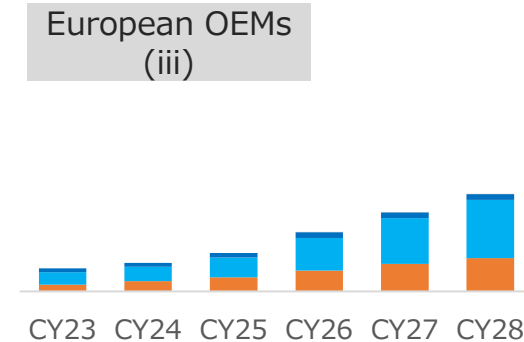
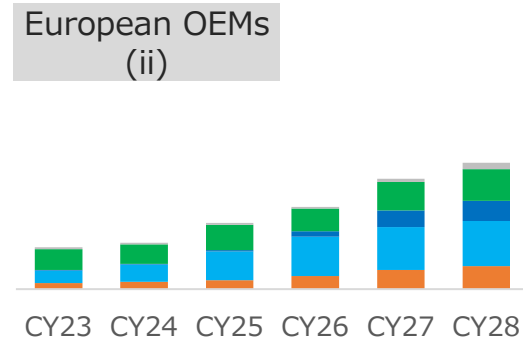
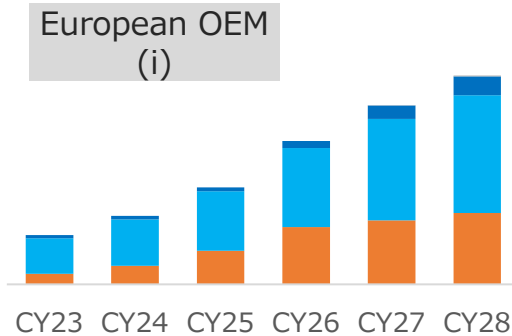
In terms of BEV production, global OEMs are expanding in China, while Chinese OEMs are moving overseas. We have a production base in China and a sales track record and presence in China and can respond favourably this.

Global OEMs' regional expansion in BEV production.

Global OEMs are expanding into China.
We are in an advantageous position as we have a production base in China and a track record of sales to China.

on BEV production. Regional expansion of Chinese OEMs

Chinese OEMs are expected to expand overseas in the future.
Business approvals can be obtained through a presence in the home country (China) to support supply in other parts of the world



9. Our presence in the three main BEV market regions

**Of the top 10 OEMs in each of the three main regions in the BEV market - China, Europe and the Americas.
The company has already acquired business relationships with eight companies (including nominations)**

China	
BEV market order	OEM
1	Byd.
2	Tesla.
3	General Agreement on Tariffs and Trade
4	Geely.
5	SAIC
6	Changan
7	Lixiang Auto
8	SAIC-General Motors-Wuling
9	Dongfeng
10	Volkswagen

China Top **8** companies
out of 10

Europe	
BEV market order	OEM
1	Volkswagen
2	Stellantis
3	BMW
4	Mercedes-Benz
5	Renault-Nissan-Mitsubishi.
6	Tesla.
7	Geely.
8	Hyundai
9	Ford (car)
10	TOGG (trademarked development name of mifepristone)

Europe Top **8** companies
out of 10

The Americas	
BEV market order	OEM
1	Tesla.
2	Ford (car)
3	General Motors
4	Mercedes-Benz
5	Volkswagen
6	Rivian.
7	Renault-Nissan-Mitsubishi.
8	Lucid Motors
9	Hyundai
10	Stellantis

Americas Top **8** companies
out of 10

③ Key measures

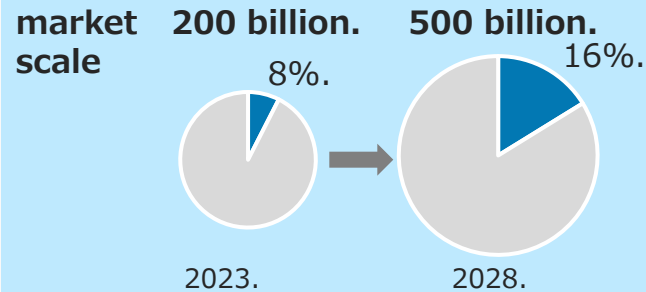
10. Overview of the new medium-term plan (1/2)

Deliver competitive and flexible Integrated Thermal Management system solutions

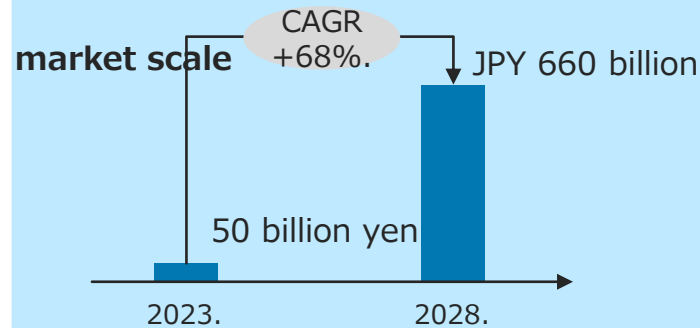
Focusing on the NEV market, always close to the customer, with a focus on product competence in electric compressors

area
strategy

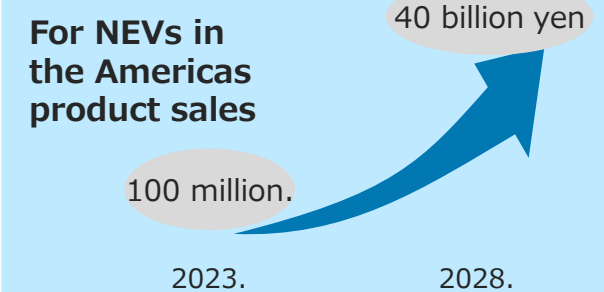
- 1.** [Europe] Expand market share by strengthening **sales of NEV-related products to European global OEMs.**



- 2.** [China] Maximising **synergies with Hisense** to capture the **rapid growth of China's Thermal Management market.**

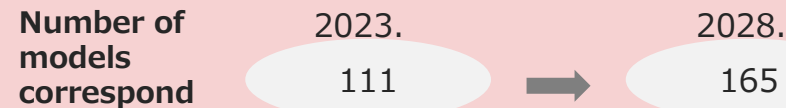


- 3.** [Americas] Accelerate expansion of products **for NEVs in the Americas**



strategy
theme

- 4.** [Development/Products] Multi-client support with the strength of an independent system.
Flexibility to meet customer needs through platforming Semi-customised product development



- 5.** [SCM/Sustainability] Opytimisation of **Global Production Layout and Supply Chain** /Realization of **Sustainability**

Systems (HVAC/ITMS)
Production sites

3 Area (current) Expansion to five Area

• China	• China	• Japan
• Japan	• Europe	(augmented)
• Asian	• the Americas	• Asian

foundation
reinforce

- 6.** [Human capital and digitalisation].
Strengthening human capital development and efficiency of organisational management

investment

- Investment in research and development
- Investment in information technology

development, training

- Acquisition of key human capital.
- Retention, selection and development of human capital
- Systematic management development
- Optimisation of incentive schemes

project management

- Formation of cross-functional teams (CFTs) and their input into projects
- Systematic management of project progress and profitability

10. Overview of the new medium-term plan (2/2)

The management target for 2028 is set at sales of JPY 300 billion and ordinary income of JPY 9 billion.

Regeneration period (2020-2023)

Rebuilding earning power.

- 1 Extensive customer reach as an independent company
- 2 Synergies with Chinese joint venture partners
Strengthening our presence in the Chinese market
- 3 Advanced technology development of integrated thermal management systems.
- 4 Achievement and trust in the cumulative production of 400 million compressors.
- 5 Reinforcement of global production system
Optimisation of mature product production and four-area electric compressor system
- 6 Strengthen cost competitiveness through procurement synergies with Hisense

Mid-term management plan (2024-2028)

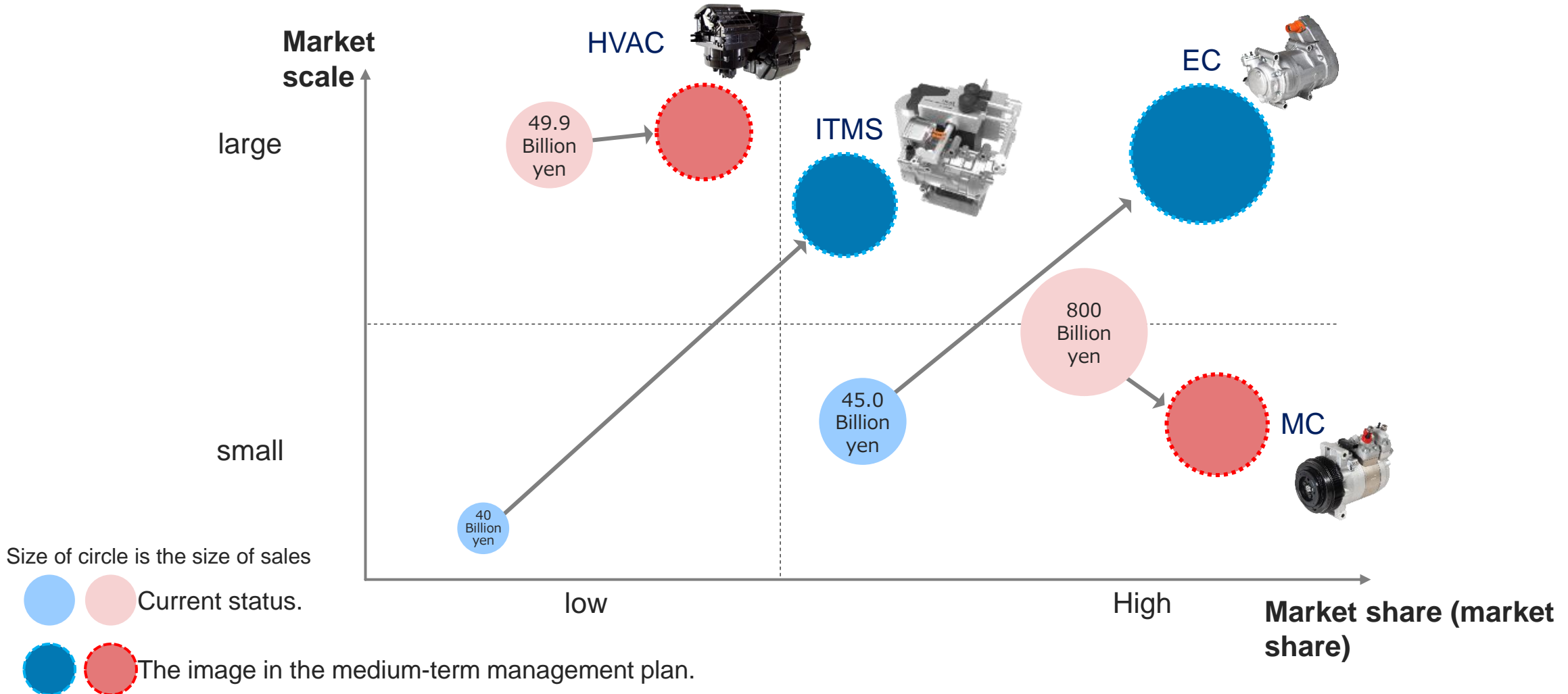
Provide **competitive** and **flexible integrated thermal management system solutions**

NEV	Area strategy <ul style="list-style-type: none"> ■ Develop area-based marketing by utilising the strengths of independent companies. ■ In addition to existing joint venture partners in China, synergies with Hisense will create the foundation for competitive advantage in China, the world's largest automotive market, Support Chinese OEMs to grow and global OEMs to enter the Chinese market
	Enhance resources for integrated thermal management systems. <ul style="list-style-type: none"> ■ Evolving from a component supplier to an integrated thermal management supplier ■ Realisation of a high added value business model ■ Increased flexibility by promoting product platforming
	Future growth areas through Hisense technology synergies <ul style="list-style-type: none"> ■ V2X, smart systems.
ICE	Thorough utilisation of existing production systems and supply chains <ul style="list-style-type: none"> ■ Optimise utilisation of existing assets to reduce investment and secure stable income ■ Building partnerships with strategic suppliers
Foundation Reinforcement	Sustainability. <ul style="list-style-type: none"> ■ Carbon neutrality as well as biodiversity initiatives. ■ Enhance disclosure of non-financial information as part of global corporate social responsibility, including compliance with CSRD.

11. Product portfolio strategy

EC and ITMS have a dominant position in the growing NEV market and aim to further increase their market share while enjoying market growth

MC and HVAC aim for continued residual gains in the ICE market

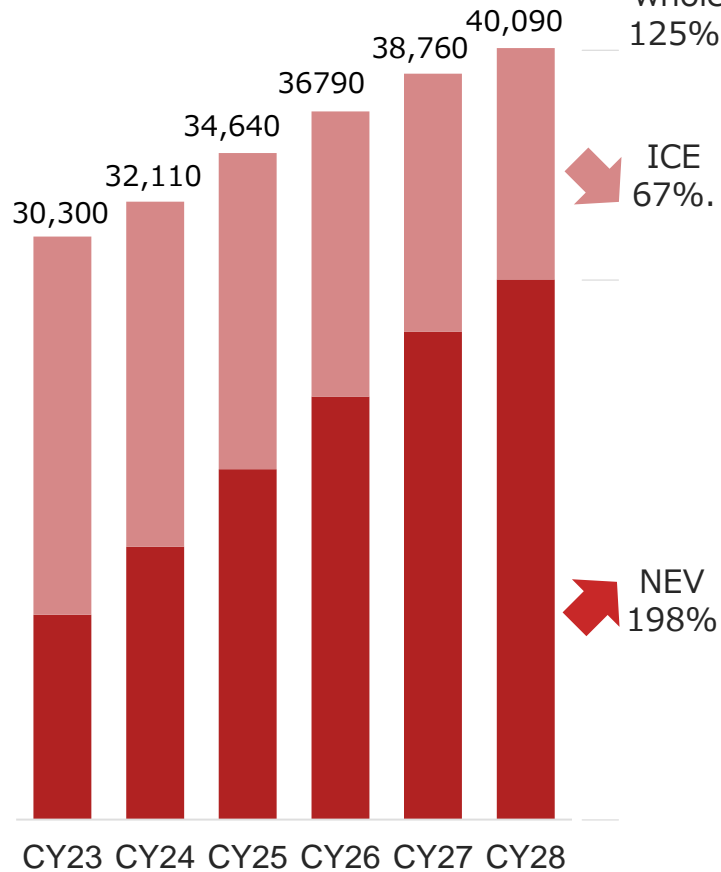


12. Expansion of the sales ratio of products for NEVs

By strengthening sales of NEV-related products to Europe and the Americas, and by capturing the expansion of the heat management market in China. Aim to achieve sales of 300 billion yen.

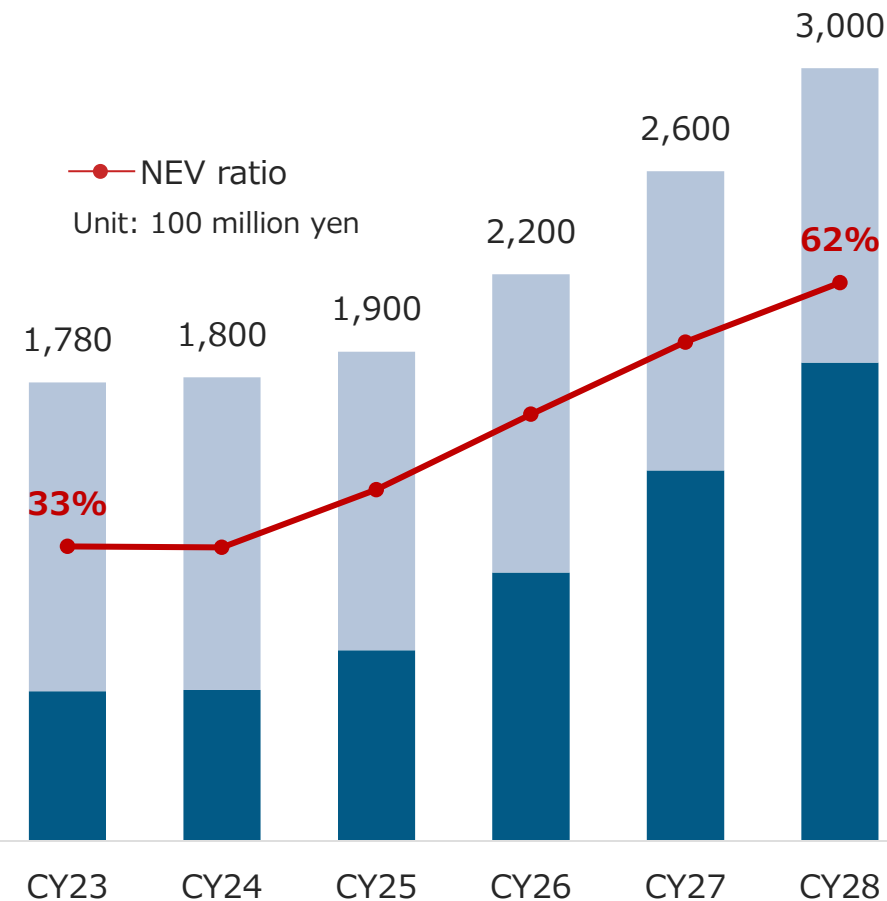
TAM (Total Addressable Market).

Unit : 100 million yen

Growth rate
(CY28 vs CY24)
whole
125%.**Sanden Mid-term plan ICE / NEV sales ratio trends**

—●— NEV ratio

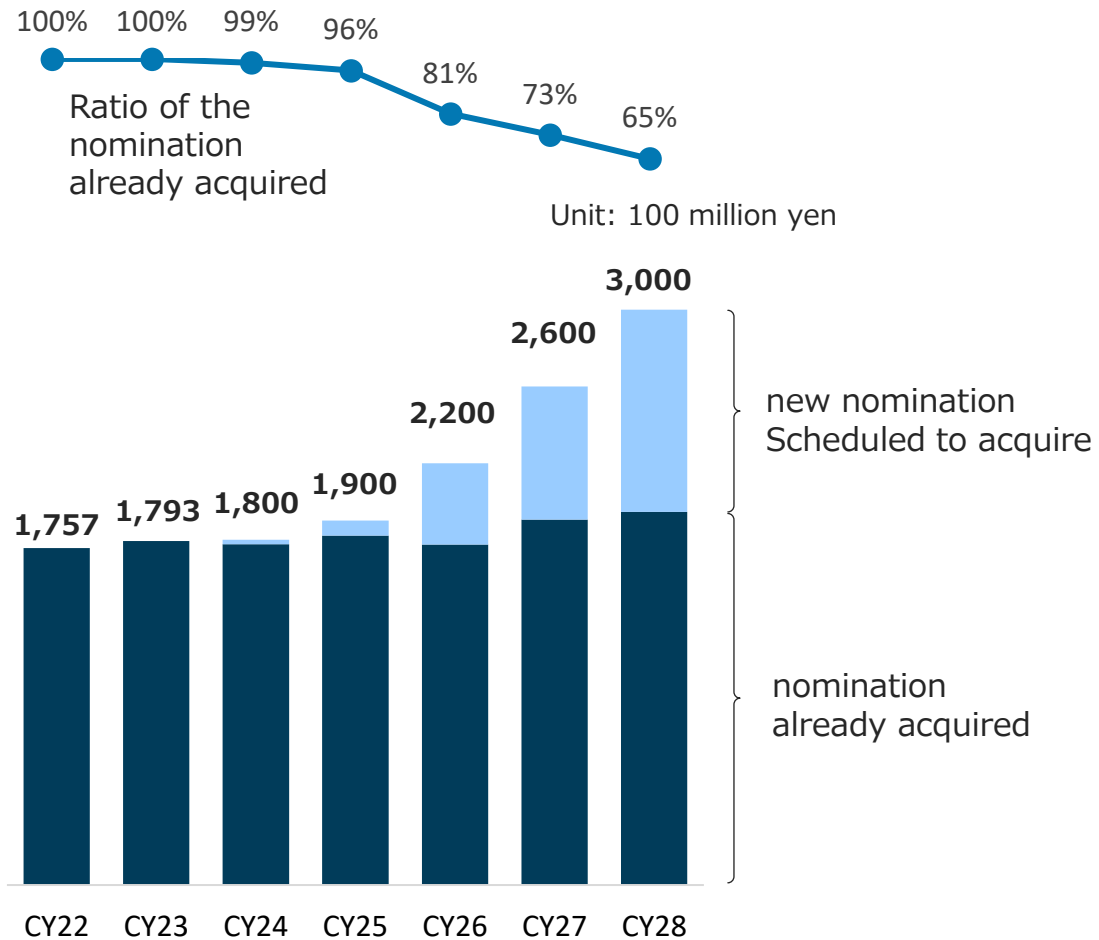
Unit: 100 million yen

Growth rate
(CY28 vs CY24)
whole
167%ICE
94%.NEV
317%

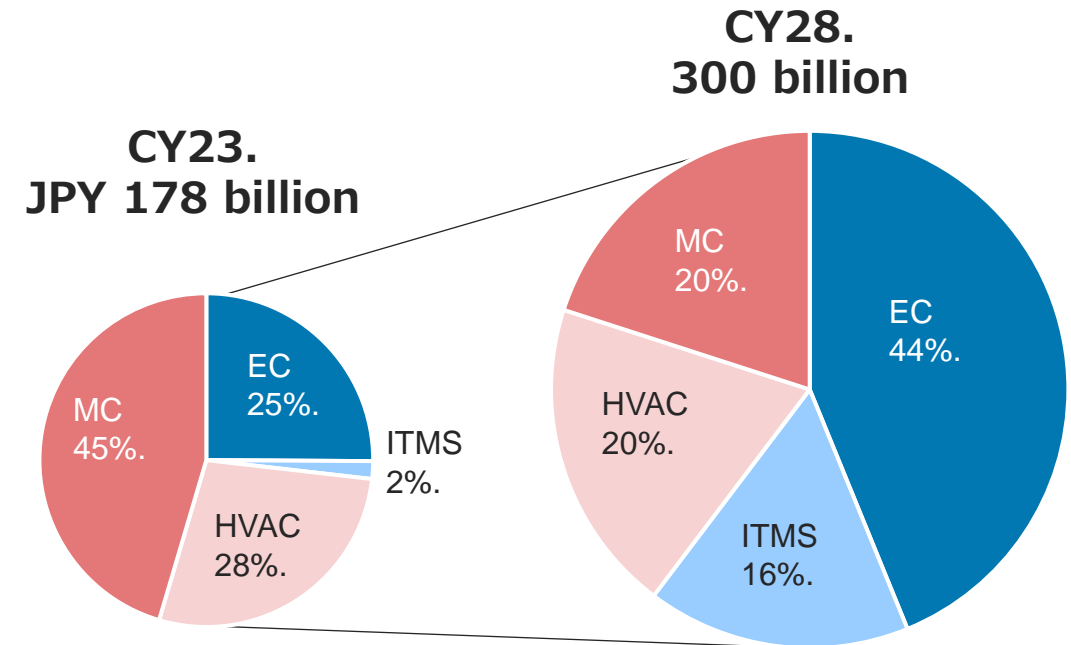
13. Future and future shift in business mix

In CY28, the final year of the mid-term business plan, 65% of nominations have already been received
At the same time, the aim is to dramatically increase the proportion of ITMS towards CY28

Sales plan and nominations received.

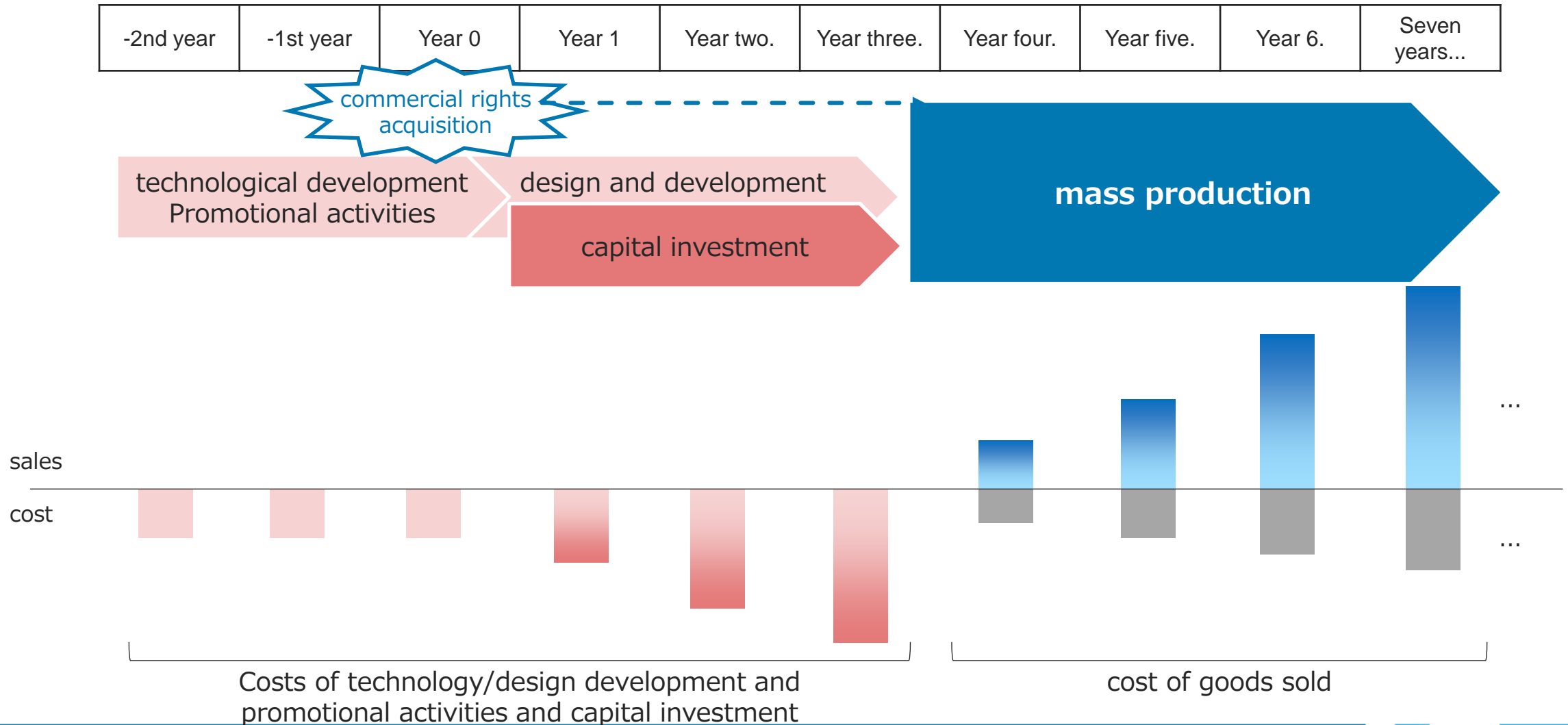


Change in sales and product mix



14. image from commercial rights acquisition to sales

Front-loading business model that requires upfront investment in development activities and recoups the investment through future sales after the mass production phase.



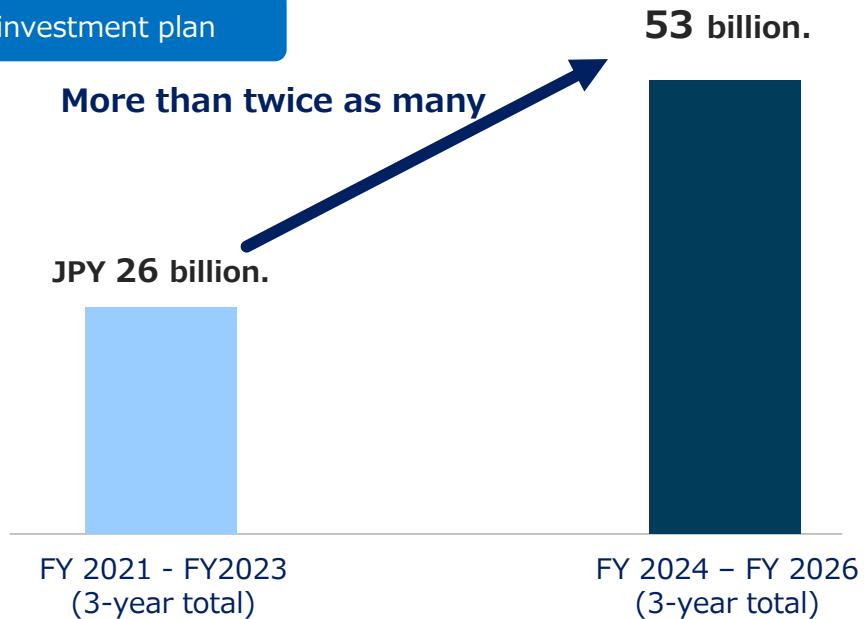
15. Factory and production area strategies

basic policy

Establish a structure to become a full solution supplier and
Produced and deliver close to the customer

Accelerate investment in mass production support
through the acquisition of new commercial rights.

investment plan

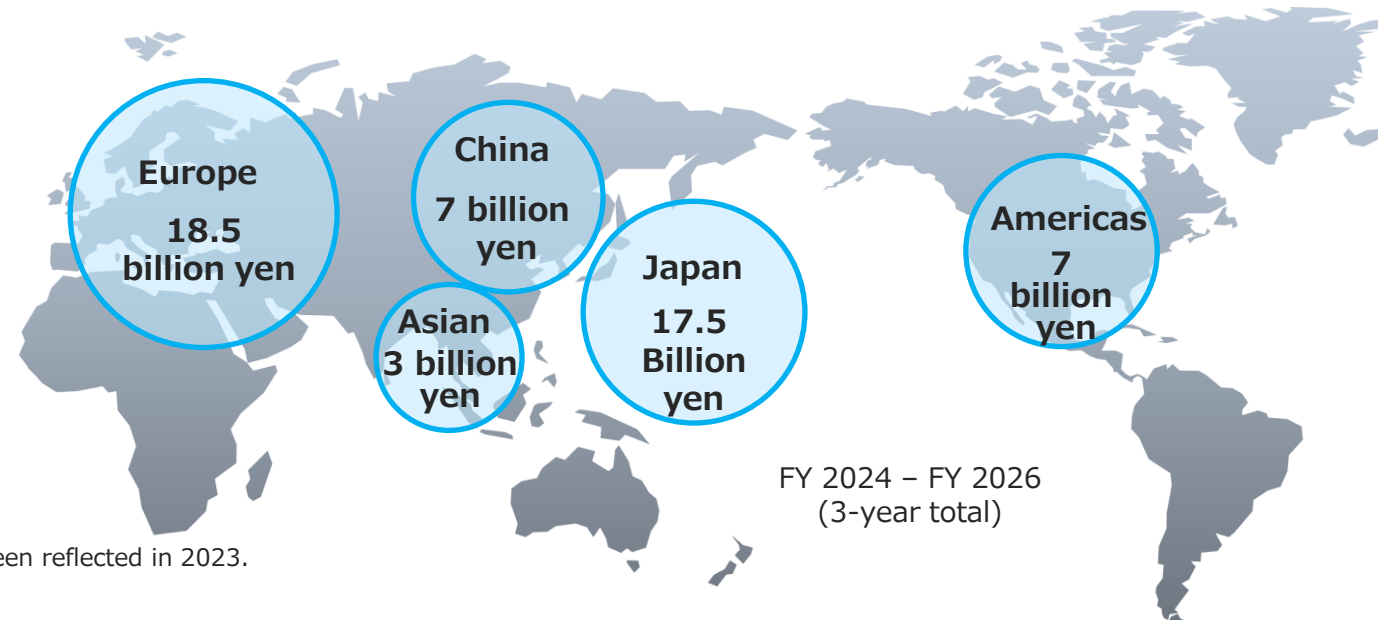
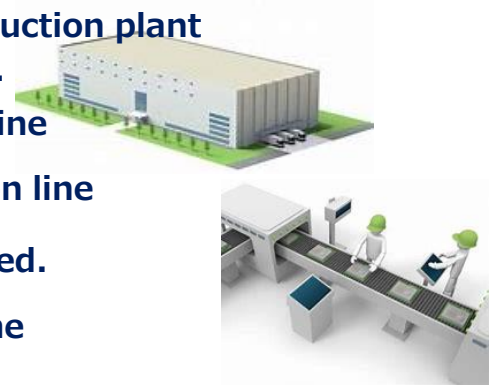


Investments in response to new commercial rights acquired in 2022 and 2023 have already been reflected in 2023.
 · Investments made in response to new commercial rights acquired so far in 2024 have not been reflected (as at end-December 2011).

Main capital investment

System production: establishment of a global five-pole production system.

- ◆ Europe: construction of a new HVAC production plant
- ◆ Europe: EC new production line launched.
- ◆ Nippon: launch of new HVAC production line
- ◆ Americas: launch of new HVAC production line
- ◆ Americas: EC new production line launched.
- ◆ China: launch of new HVAC production line



16. Corporate governance initiatives

Compliance

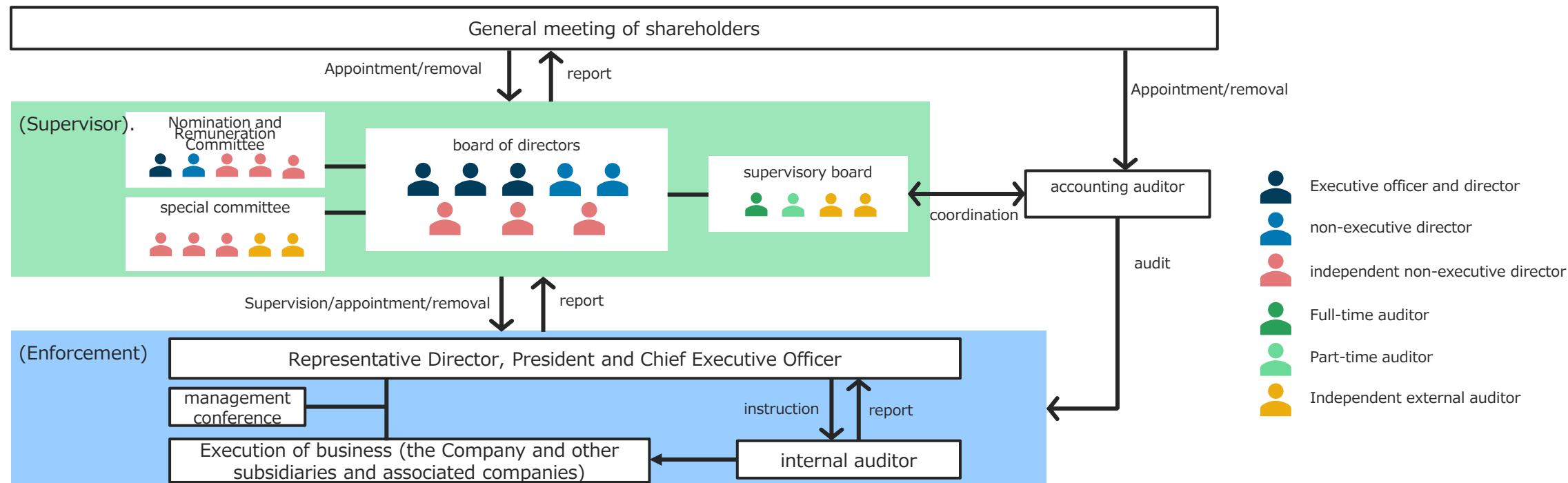
Establish and strengthen compliance and risk management systems, including setting up internal and external reporting and consultation offices as part of the internal reporting system.

Risk management

A system to ensure thorough risk management has been established to comprehensively assess company-wide risks from a medium- to long-term perspective, including geopolitical risks, in accordance with the Risk Management Regulations.

Positive communication

Off-site meetings with external directors, separate from the Board of Directors meetings, exchange information on automotive market trends and actively discuss strategies and policies related to the formulation of the medium-term management plan.

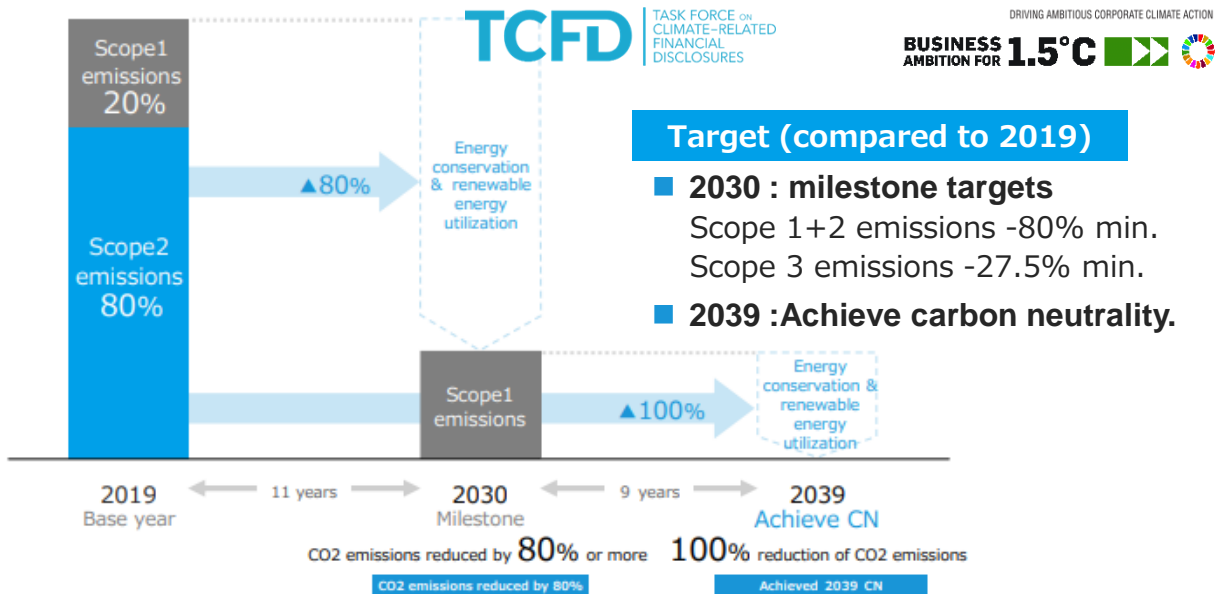
Governance structure

17. Promotion of sustainable management (1/2)

■ Greenhouse gas (GHG) emissions of the Group. Reduction targets gain SBT accreditation

As we move towards a decarbonised society, we are working on environmental impact reduction targets in line with social demands for fuel efficiency and emissions regulations and electrification in the context of climate change. The medium-term targets set for 2030 are in line with the Science Based Targets (SBT) initiative scenario of the Paris Agreement, which aims to reduce the increase in global average temperature to 1.5°C below the pre-industrial level. SBT certification was awarded to the company in October 2023.

The Sanden Group is a member of the TCFD (Task Force on Climate-related Financial Disclosures). The Sanden Group has expressed its support for the



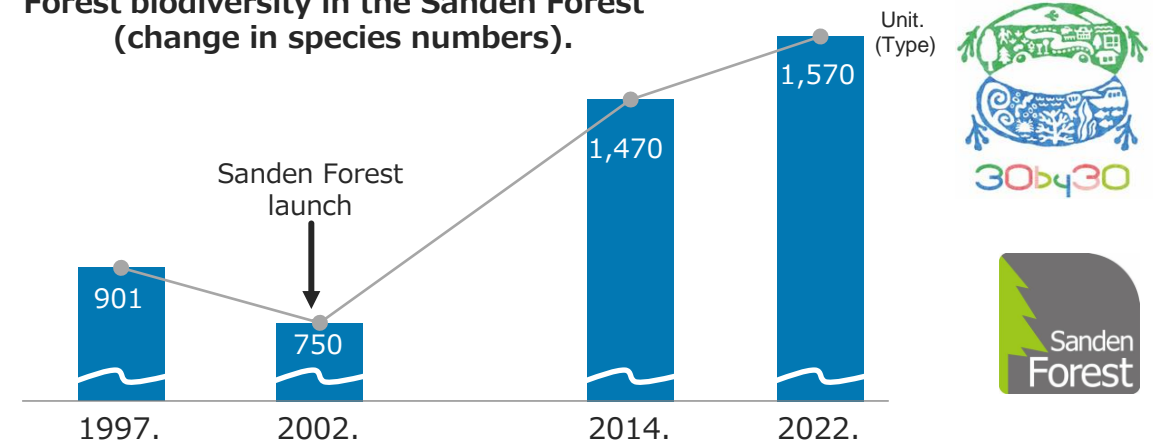
■ The Sanden Forest. Certified as a 'nature-friendly site' by the Ministry of the Environment.

The 'nature symbiosis sites' are government-recognised areas where biodiversity conservation is being promoted through private sector initiatives, etc. This certification system was implemented for the first time in Japan. Since April 2022, the company has been participating in the 30 by 30 Alliance for Biodiversity, an initiative to achieve the target of conserving and protecting at least 30% of Japan's terrestrial/marine areas by 2030 (30 by 30).



"Natural symbiosis sites".
OECD Trial Certification.
(Ministry of the Environment 2022.9)

Forest biodiversity in the Sanden Forest (change in species numbers).



17. Promotion of sustainable management (2/2)

■ European Sustainability Disclosure Regulation: compliance with CSRD.

The CSRD (Corporate Sustainability Reporting Directive) is the EU's sustainability disclosure regulation, which entered into force on 5 January, 2023. As the three overseas fronts based in Europe also meet the requirements of the Directive, we will disclose 2025 sustainability information on a consolidated basis along with the disclosure of our financial results scheduled for February 2026.

Activities towards disclosure started last year with the support of external consultants.

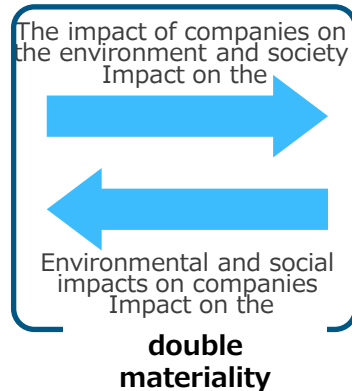
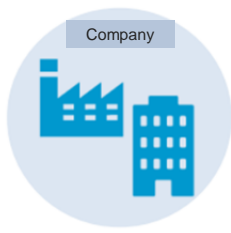
CSRD: Corporate Sustainability Report Directive.

cross-cutting
criterion

environment

community

governance



Mandatory disclosure of information.



■ The RBA (EICC) is expected to become an international standard for CSR.

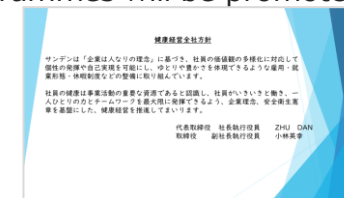
This year, for the first time in our company's history, an audit was carried out at the Yatsutajima Plant.

The RBA (EICC) scheme consists of five specific items ('Labour', 'Health and Safety', 'Environmental Protection', 'Management Structure' and 'Ethics') and will be voluntarily audited at each of our global sites to ensure that we meet our growing global social responsibilities and are sustainable.

We will contribute to the realisation of a society.

■ Promotion of health management
Announced 'Company-wide activity policy'

The Sanden Group is committed to ensuring that "all employees working in the Group live in good mental and physical health and To "create a workplace where people can work with vitality and maximise their capabilities", the entire company A health management action policy will be developed and health promotion programmes will be promoted.



■ Actively implemented other sustainability assessments.

We will continue to actively carry out assessments of our sustainability activities and use the PDCA cycle to resolve issues arising from the assessment results in order to create a better working environment and fulfil our social responsibility.



18. Human capital development, training and evaluation

Developing organisations and people, and attracting and retaining people, in line with business needs in a customer-first manner then contribute to business goals and labour productivity

創業の精神
Founding Spirit

知を以て開き、
和を以て豊に

Let us Develop with Wisdom
and Prosper in Harmony



社是
Management Principles

一、顧客のためになるよい製品を作ります

Satisfy our customers needs with
high quality products.

一、仕事を通して
社会福祉と文化の向上に寄与します

Contribute to the social and cultural improvement
of the community through business activity.

一、自己啓発につとめ
誇り高き会社の建設に努力します

Build a company of which all are proud,
through the effort of self-motivated employees.



Incentive and remuneration schemes

Provide incentive programmes and reward structures that motivate employees to contribute to performance and the long-term value and growth of the business.



Human resource development and capacity building

Ensure succession of management and key positions by providing systematic training programmes and building capacity

labour productivity improvement



transformation

To provide human resources to support business needs within the Group, swift digital transformation and establish global standards



Optimal resource allocation

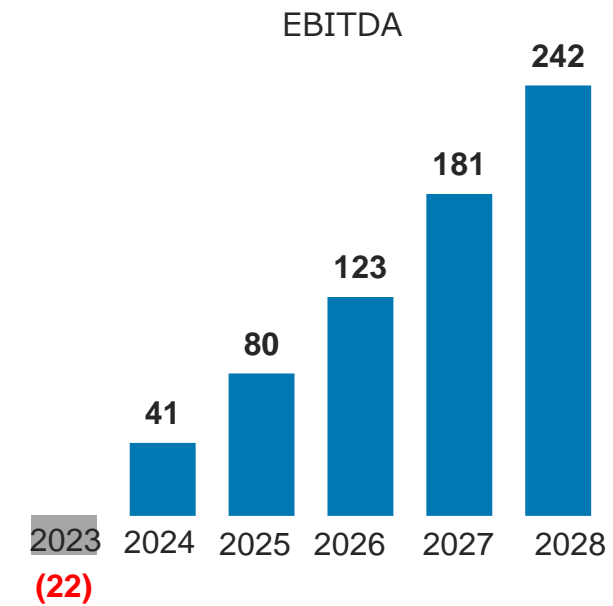
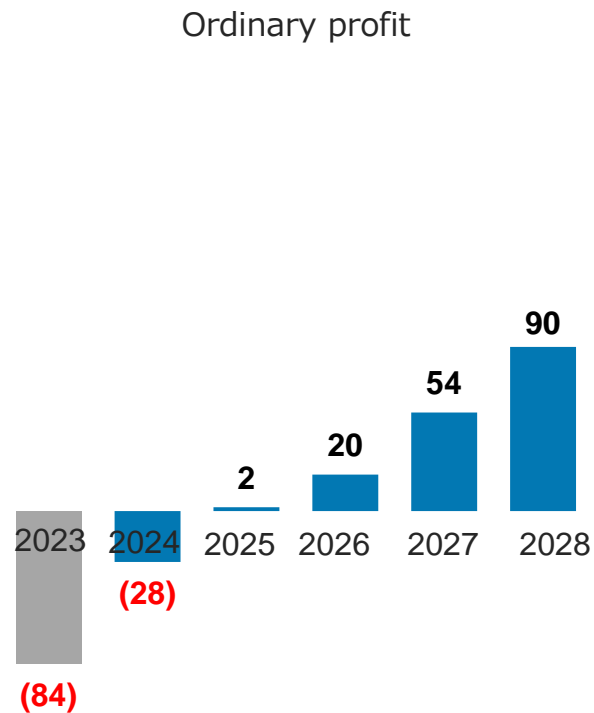
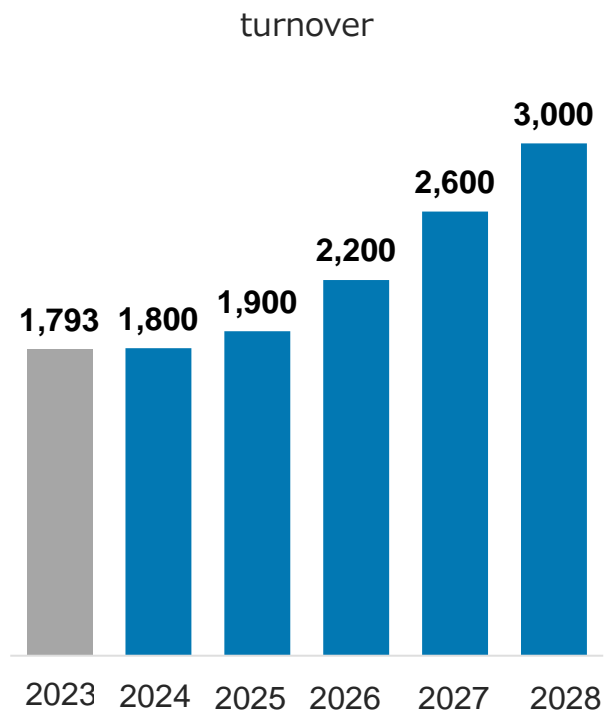
Improve labour productivity by optimising resource allocation through better resource management

④ Financial strategy

19. Summary of the medium-term management plan.

(data) item	2023.	2024.	2025.	2026.	2027.	2028.
turnover	1,793	1,800	1,900	2,200	2,600	3,000
Operating profit	-110	-68	-38	-23	8	42
Ordinary profit	-84	-28	2	20	54	90
EBITDA	-22	41	80	123	181	242

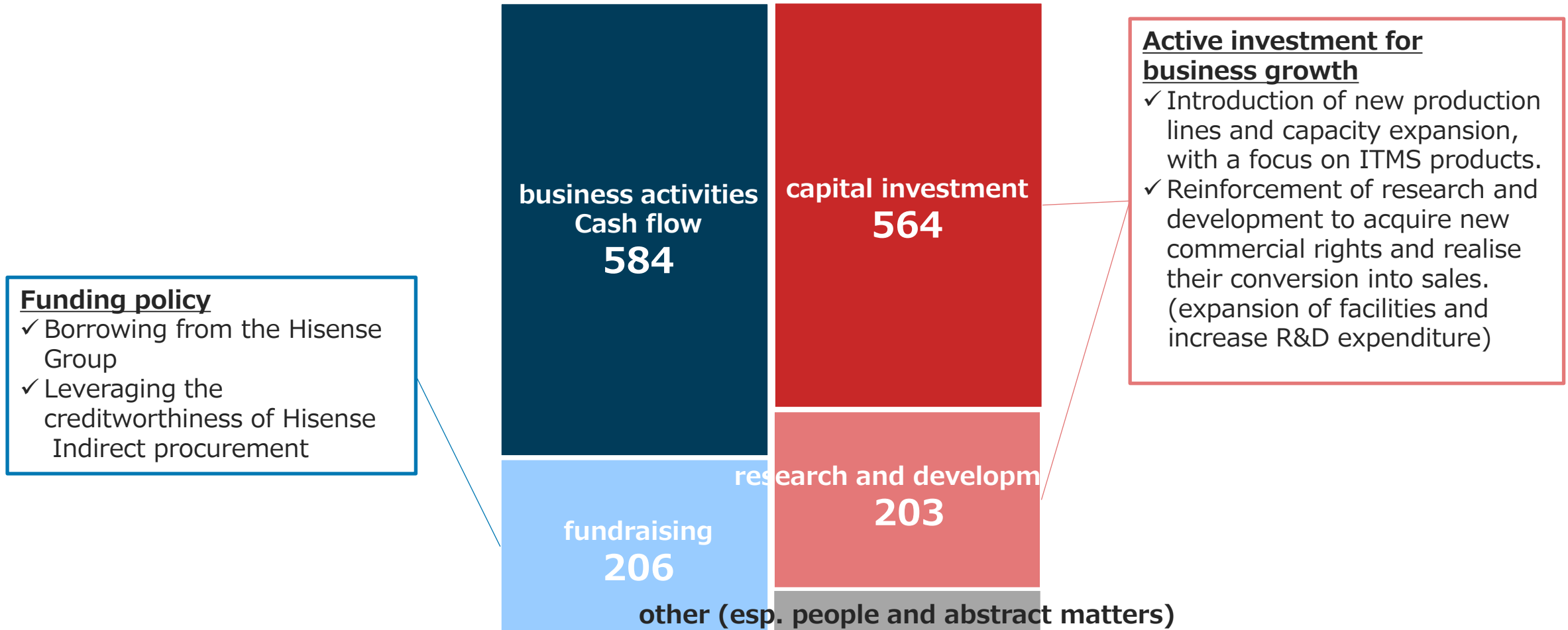
Unit : 100 million yen



20. Capital strategy for business growth.

Accelerate investment in growth areas by maximising the financial synergies and business platform with Hisense

Capital Allocation Policy



⑤ Conclusion

21. New corporate slogan

INNOVATING COMFORT

concept

Slogan concept: 'Become [a great company that provides comfort for cars and the planet] with innovative technology'.

To realise this, it is necessary to harmonise the conflicting issues of "for cars and " for the planet".

We expressed this concept by harmonizing two words which has different meaning "Innovating' and 'Comfort'

Innovating

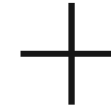
Innovative Technology
⇒ Strong Image

CONCEPT

Harmony of
strength
and gentleness

Comfort

Amenity
⇒ Gentle image



terms and conditions

Following in the footsteps of
Sanden's character.

+

Appeal **the new Sanden**

Slogan on its own: **it has a claim.**

+

When used with Sanden logo:
harmonious



INNOVATING COMFORT

Disclaimer

This material is intended to provide information on the Company's management policies, plans and financial situation and is not an offer to buy, invest or selling shares of the Company.

Forecasts and forward-looking statements in this document are based on information available at the time of publication and on certain assumptions and expectations. Therefore, actual results, outcomes and performance may differ materially due to various risks and uncertainties, including economic trends, market price conditions and exchange rate fluctuations. The Company is under no obligation to update any forecasts or forward-looking statements contained in this material.



For questions or enquiries about this matter,
please contact to below
Mail :sdhd.prcsr.jp@g-sanden.com