

# Management Strategy for Future

**November 16, 2021**

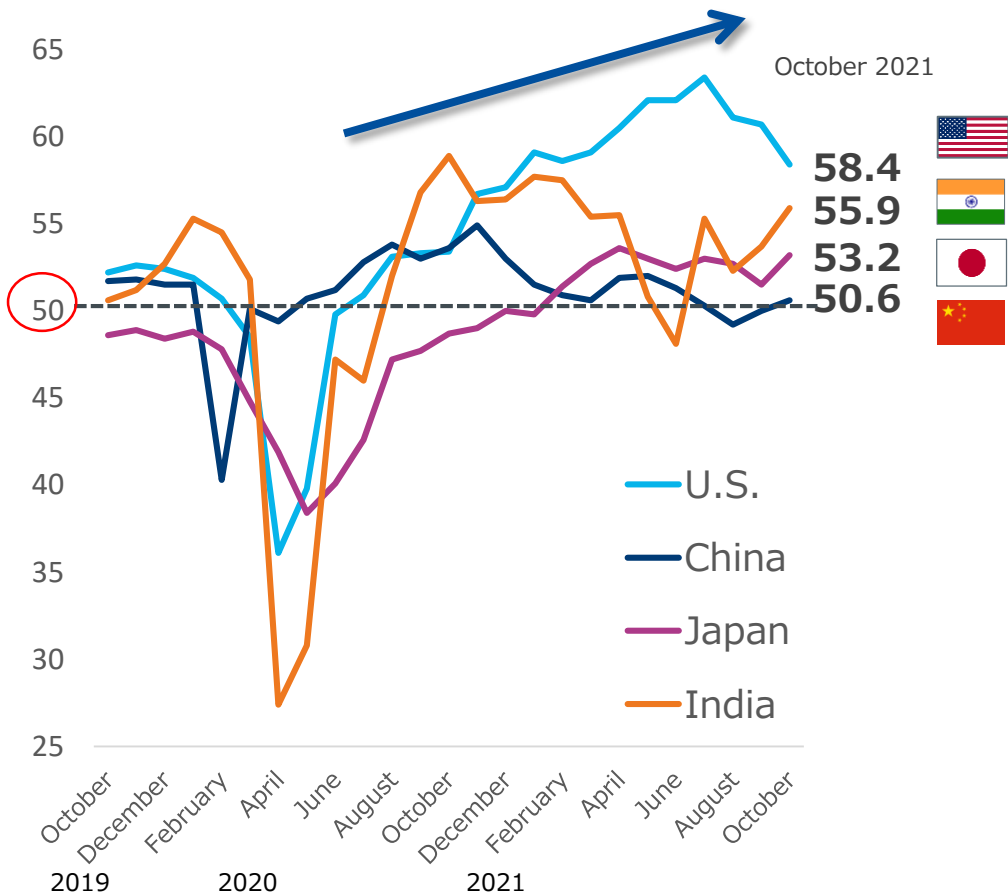
**SHIBAURA MACHINE CO., LTD.**

# Management Strategy for Future

- 1) Business Environment
- 2) Progress of "Management Reform Plan"
- 3) Commitment to ESG

# External Business Environment

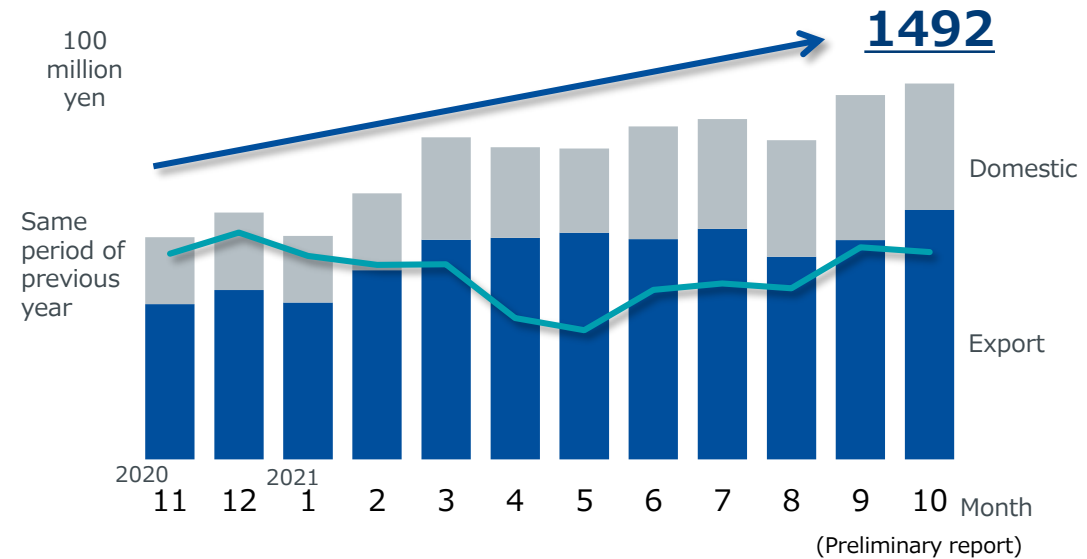
## ■ Manufacturing Industry PMI trend (reference: 50)



✓ **Business conditions were robust despite several risk factors including COVID-19, difficulty in procurement of parts/materials and increasing procurement cost.**

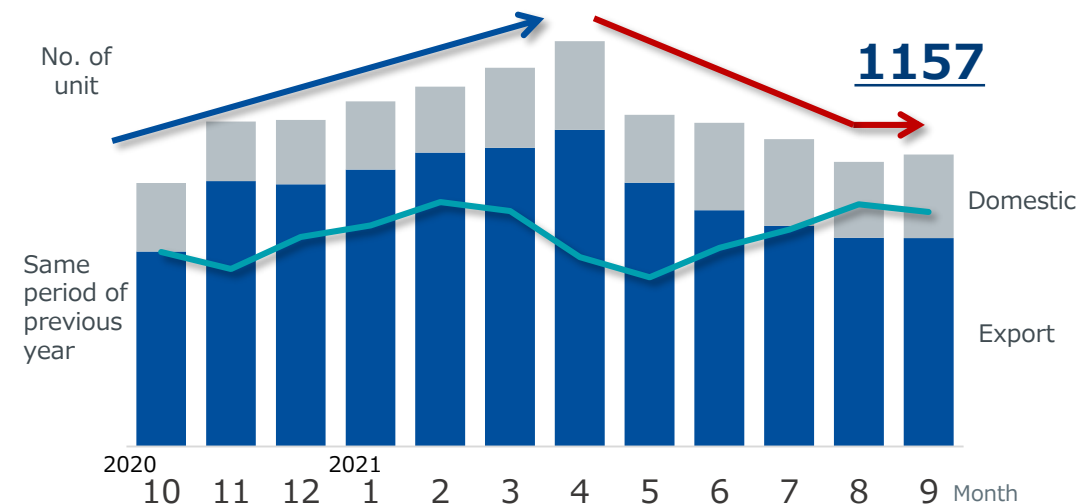
## ■ Amount of orders received for machine tools

Statistics by Japan Machine Tool Builders' Association

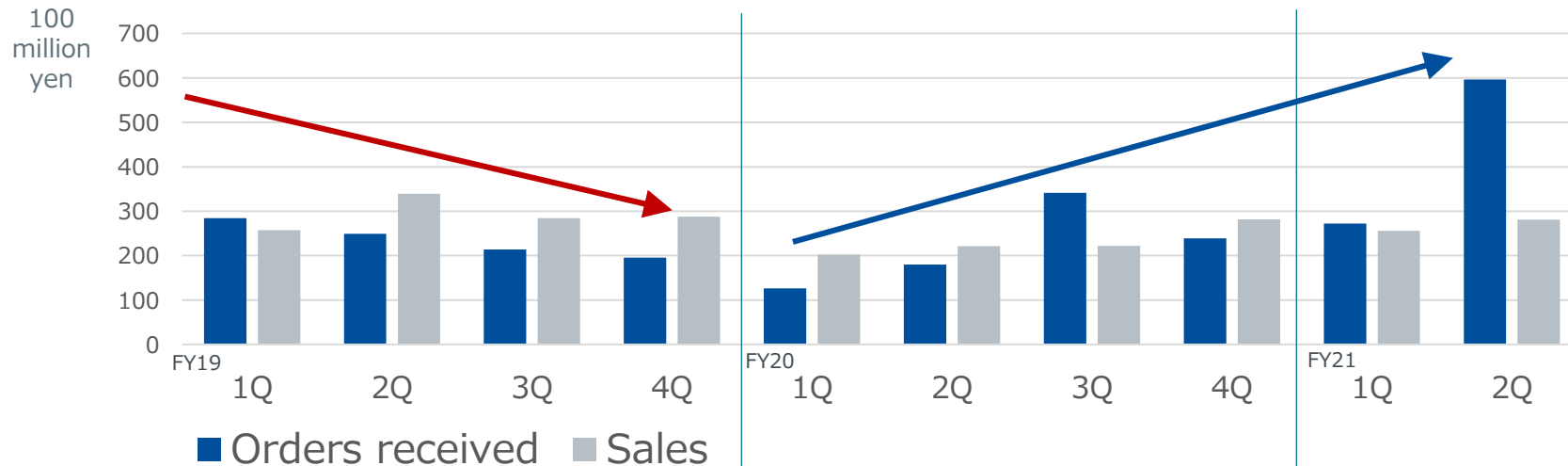


## ■ Orders received (units) for injection molding machines

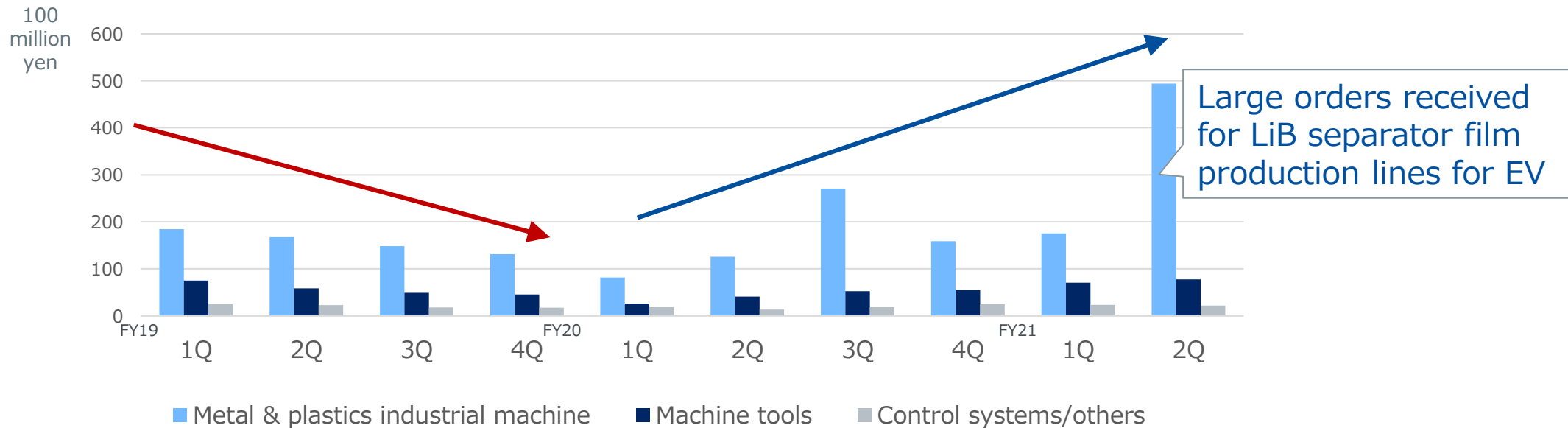
Statistics by The Japan Society of Industrial Machinery Manufacturers (nation-wide/13 companies)



## Consolidated Orders Received/ Consolidated Sales



## Amount of orders received by segment



# Progress of "Management Reform Plan"

# Framework of "Management Reform Plan"

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## Quantitative targets

Target value for FY2023  
Consolidated basis

Sales  
**135 billion yen**

Operating profit ratio  
**8.0%**

payout ratio  
**Prospect of 40%**  
(During the period of  
"Management Reform Plan")

ROE  
**8.5%**

## Specific measures

### 【Management reform centered on reorganization】

- ① Abolish the "division system" and employ "company system" to further promote total optimization even.
- ② establish an "R&D Center" and "Production Center" which bear enhancement of production efficiency and QCD\* as common.
- ③ Conduct personnel relocation and voluntary retirement toward optimal resource allocation and reduction of fixed costs.

### 【Promotion of growth investments aimed for expansion of purposes to fields expected to grow in the future】

- ④ Promotion of growth investments aimed for expansion of purposes to fields expected to grow in the future.



\*QCD: Quality, Cost and Delivery

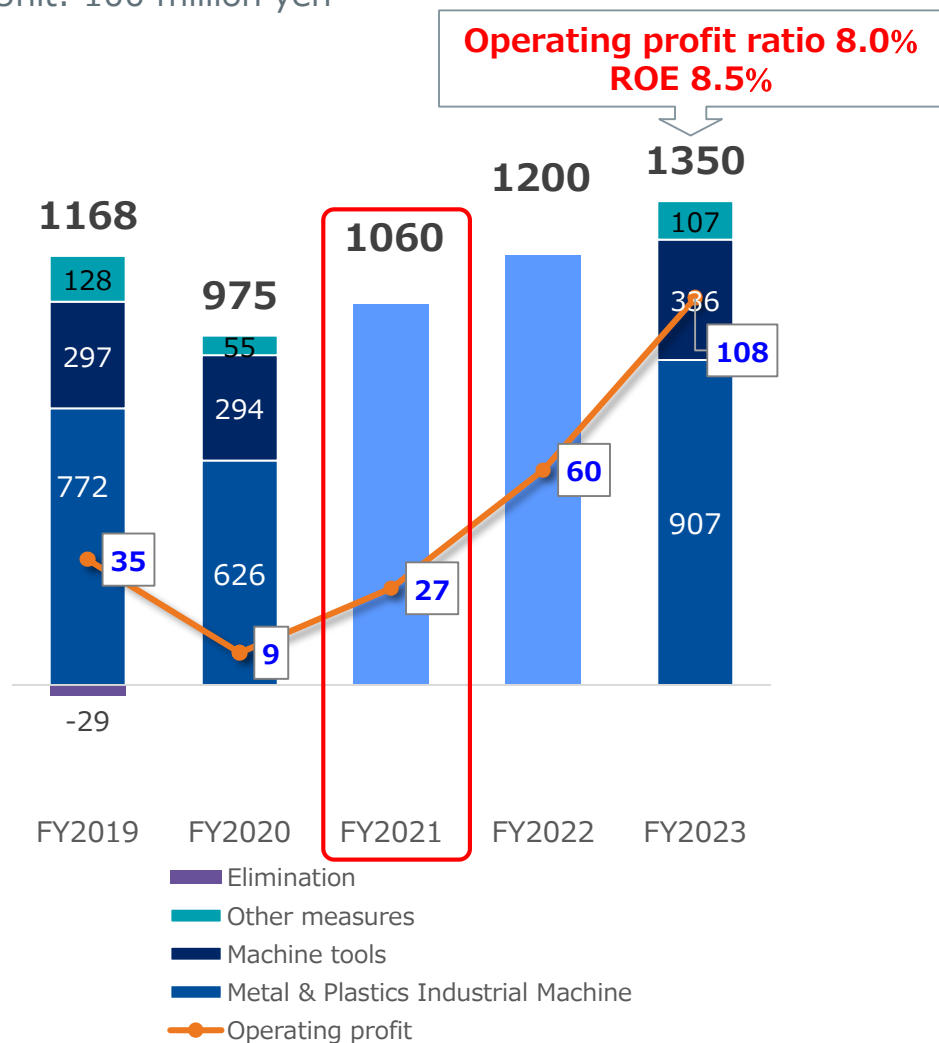
## Investment plan/ Financial strategies

### 【Implement a financial strategies aimed for enhancement of return on equity (ROE)】

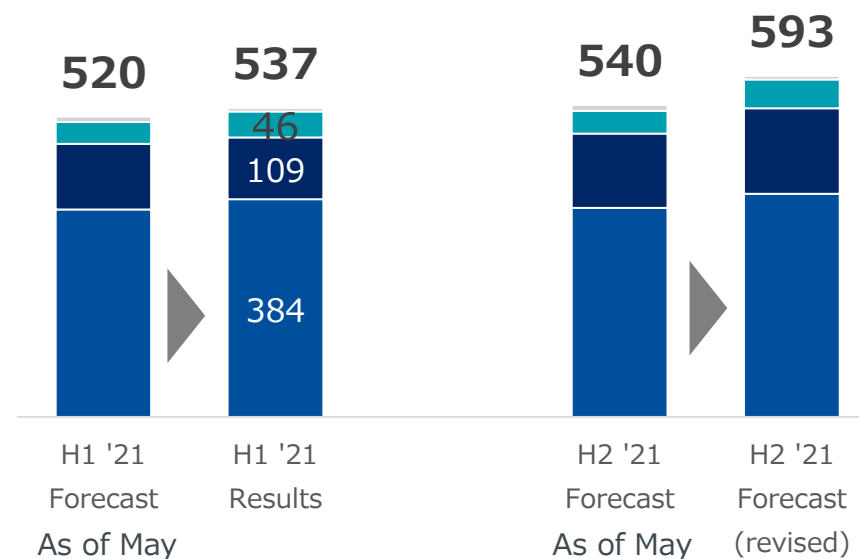
- ⑤ Allot cash-on-hand to investments towards change into a profitable company, and enhance profitability and capital efficiency

## Management Reform Plan

Unit: 100 million yen

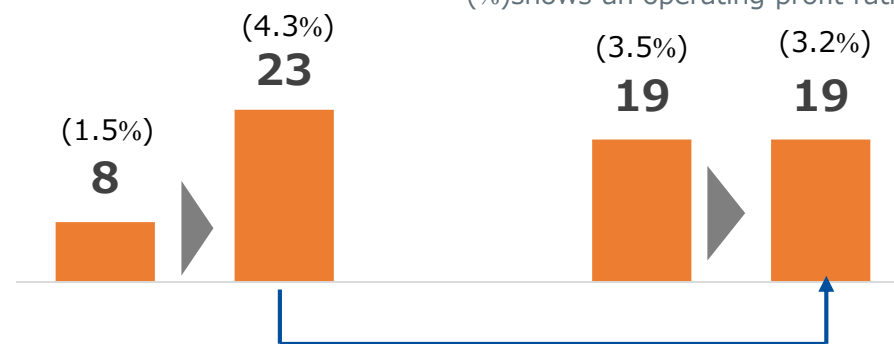


## FY2021 sales (half term)



## FY2021 operating profit (half term)

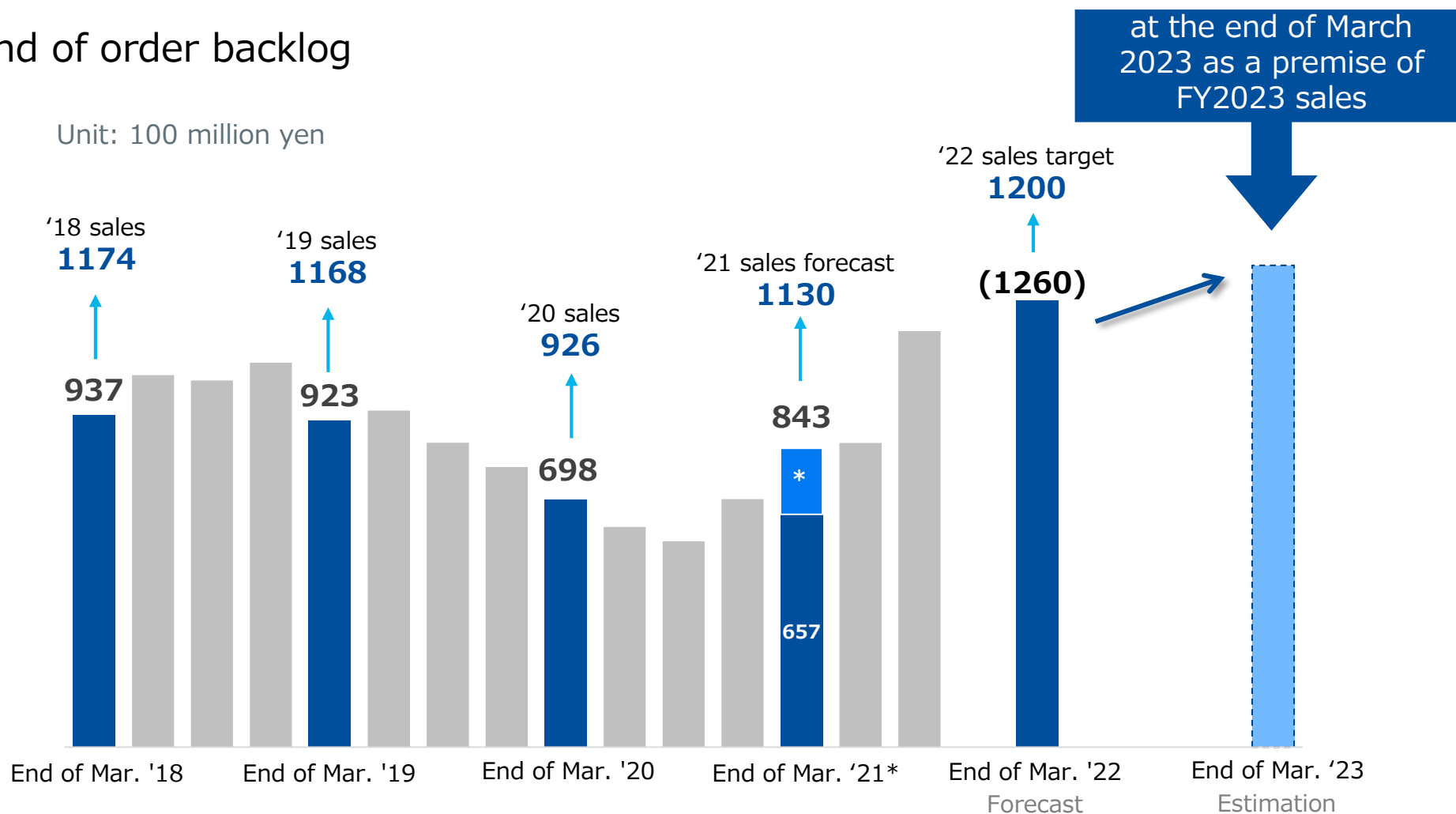
(%) shows an operating profit ratio.



«Cause of the deteriorated profit ratio in H2 of FY21»  
 Because of an impact of rising procurement costs as a result of increased sales of general purpose machines (Injection, die casting and machine tools)

## ■ Trend of order backlog

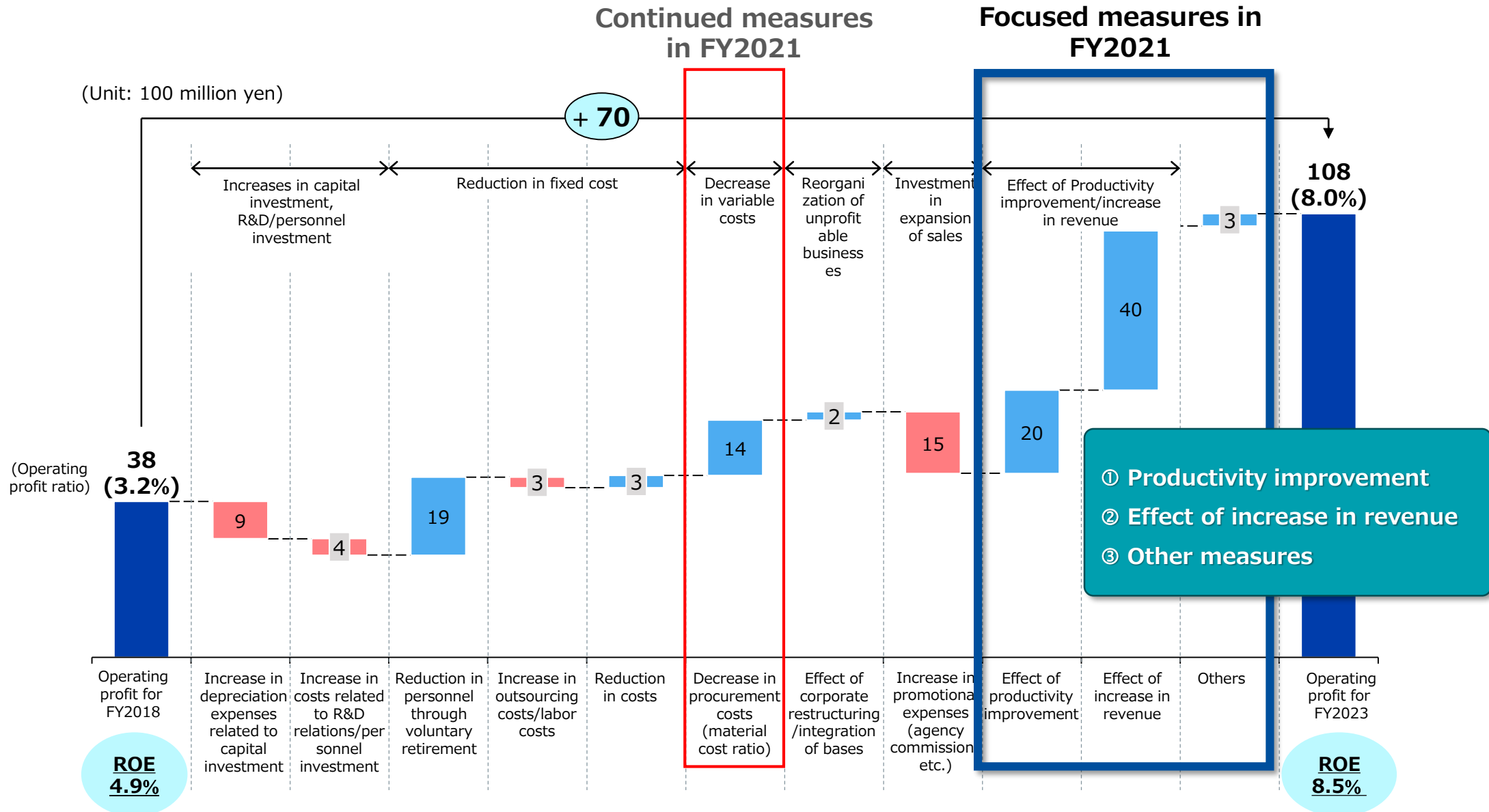
Unit: 100 million yen



Order backlog formation is strong toward achieving FY2023 sales of 135 billion yen.



# Action in FY2021

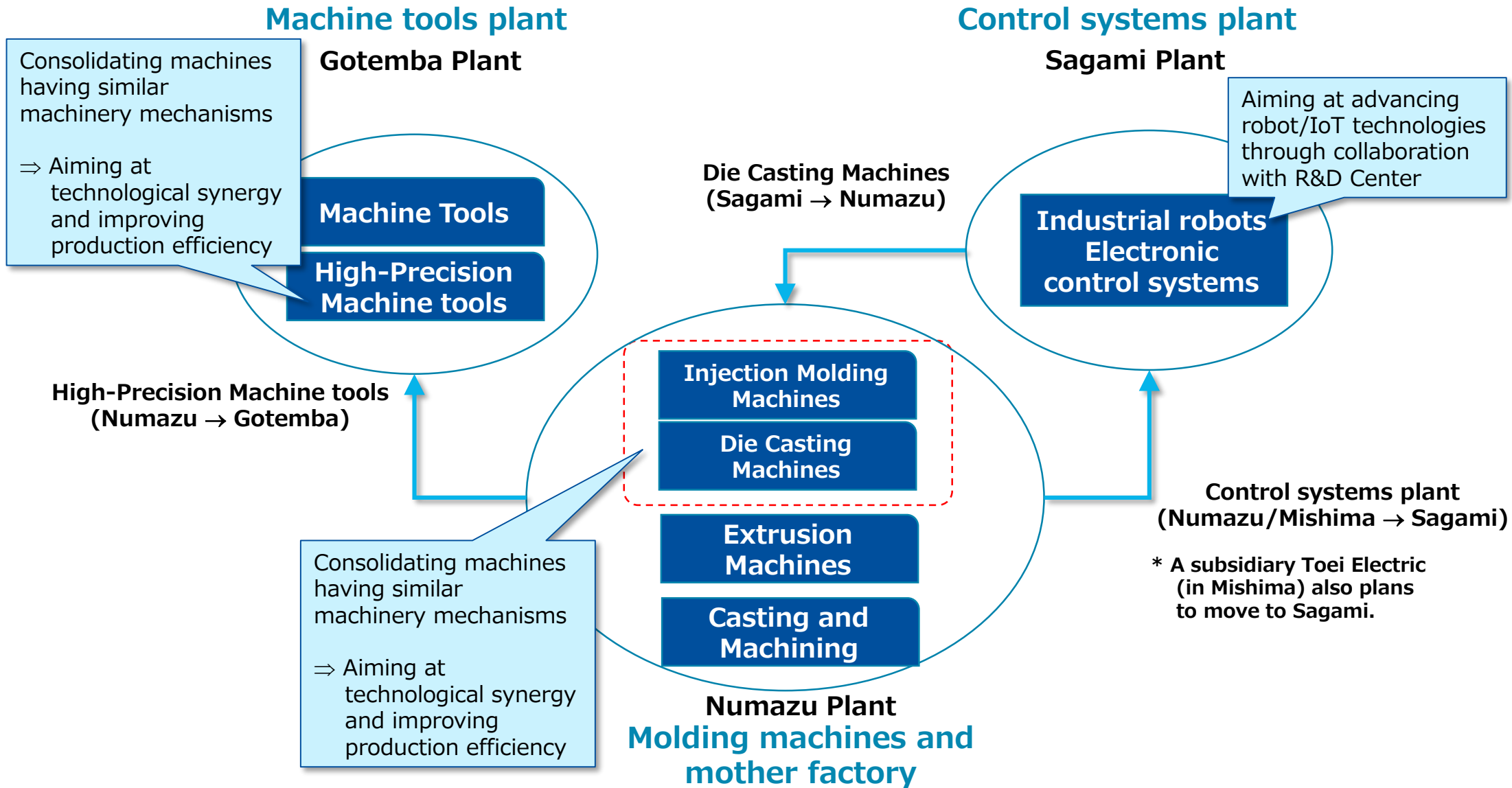


# Reorganization of domestic offices in Japan (policy)

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① Productivity improvement

Plants reorganization along with the shift from divisional system to internal company system



# Progress of production sites reorganization

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## ① Productivity improvement

Company	Policy
Metal & plastics industrial machine Company	<ul style="list-style-type: none"> <li>Consolidating electric small- and medium-sized injection molding machines in China and Thailand</li> <li>Consolidating hydraulic injection molding machines in India</li> <li>Consolidating small die casting machines in China and Thailand</li> <li><b>Plants in Japan specialize in large injection molding machines, large die casting machines and extrusion machines.</b></li> </ul>
Machine tools Company	<ul style="list-style-type: none"> <li>Reviews the production system of general purpose machines.</li> <li><b>Specializes in large special purpose machines and high-precision machine tools.</b></li> </ul>
Control systems Company	<ul style="list-style-type: none"> <li>Transfers production of SCARA Robots to China.</li> <li>Expands system engineering business.</li> </ul>
Common	<ul style="list-style-type: none"> <li>Establishing a new machining factory (smart factory) in Numazu.</li> </ul>

Targeted effect as of FY2023

**+ 2 billion yen**


### [Progresses]

- **Transfer of overall production of small molding machines and SCARA Robots to overseas facilities**
  - ⇒ Effect of reduction in outsourcing costs in Japan and cost reduction as a result of small variety mass production in overseas production facilities
  - ⇒ Starting SCARA Robots production in China from January 2022 due to delay of procurement of semiconductors (local procurement rate is 75%).
- **New plant is currently under construction on the site next to the India Plant.**
  - ⇒ After COVID-19 infection subsides, production volume will increase leading to larger production scale.

# Progress of overseas production sites reorganization

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① Productivity improvement

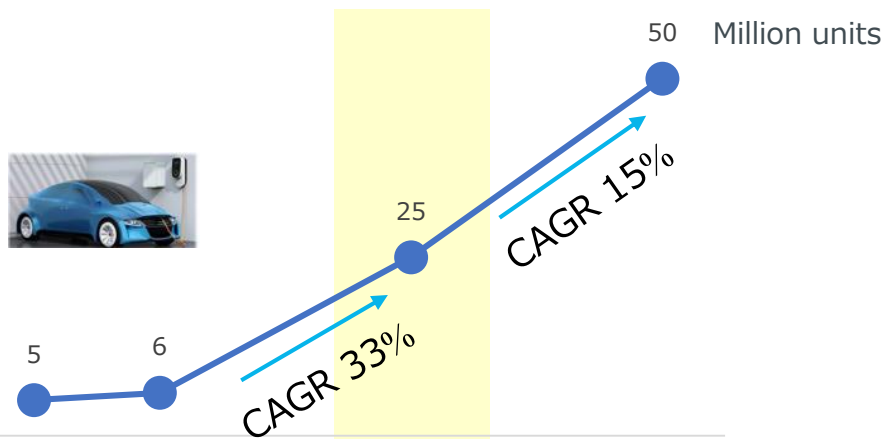
		H2 '20	H1 '21	H2 '21	FY2022
<b>China Plant</b>	Transfer of SCARA Robots production			From January 2022	Small SCARA Robots
	Increased local procurement ratio			From Q2 of 2022	Medium to large SCARA Robots
<b>Thai Plant</b>	Effect of production increase	Transfer of production of injection molding machines of 180 t class	Transfer of production of injection molding machines of 50 to 350 t class		
		19 units production/month	29 units production/month	50 units production/month	60 units production/month
<b>India Plant</b>	Consolidation of hydraulic injection molding machines		Consolidation of hydraulic machines 	Plant investment plan	Plant construction
		Acquiring a neighboring site			

# Expansion of Extrusion Machines Business

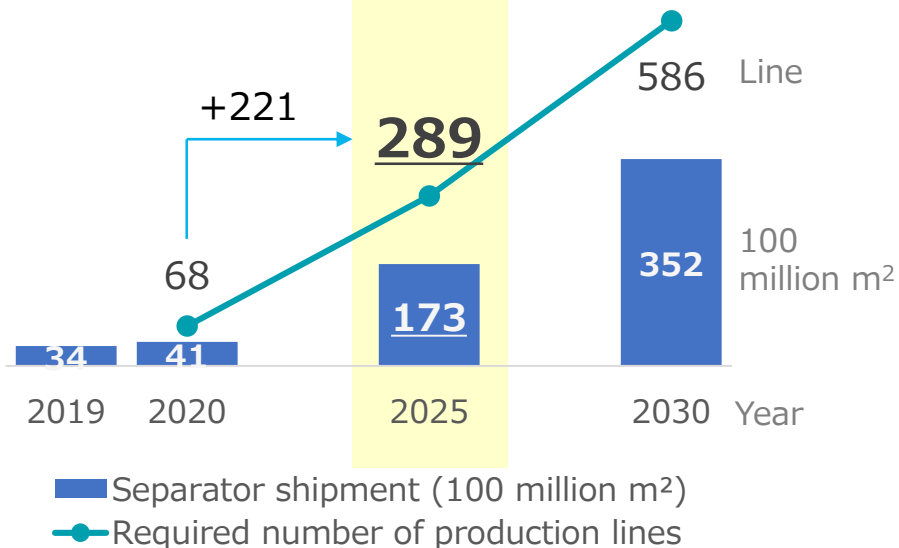
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② Effect of increase in revenue

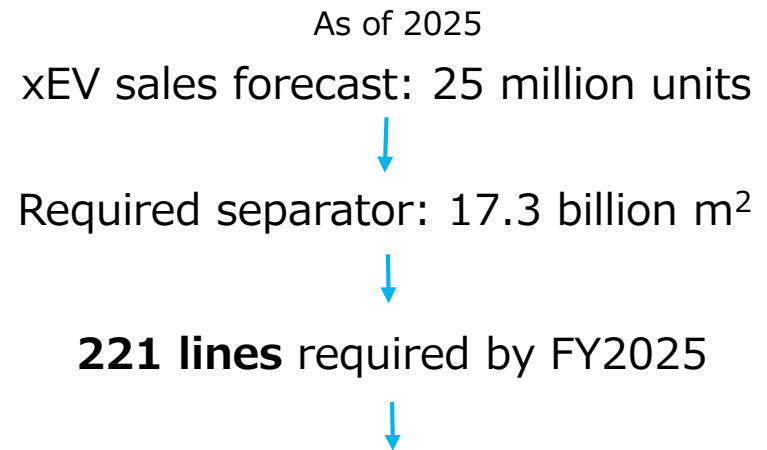
## ■ xEV Sales (EV + PHEV + HEV)



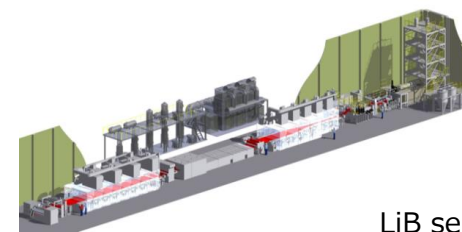
## ■ Equipment market outlook



xEV sales forecast is quoted from Yano Research Institute Ltd. (2021.9). On the assumption that separator use for 1 unit of xEV is 700 m<sup>2</sup> and that production capacity of 1 LiB separator film production line is 60 million m<sup>2</sup>, the number of lines required is calculated.



- Capable of providing **high-precision (thin and uniform) and full-line engineering** is our company's strength.  
 ⇒ Currently receiving **new inquiries for 100 lines**
- **Doubling present production capacity** (24 lines ⇒ **48 lines**)
- Continuing sales volume of **80 to 100 billion yen** in 2024 and after

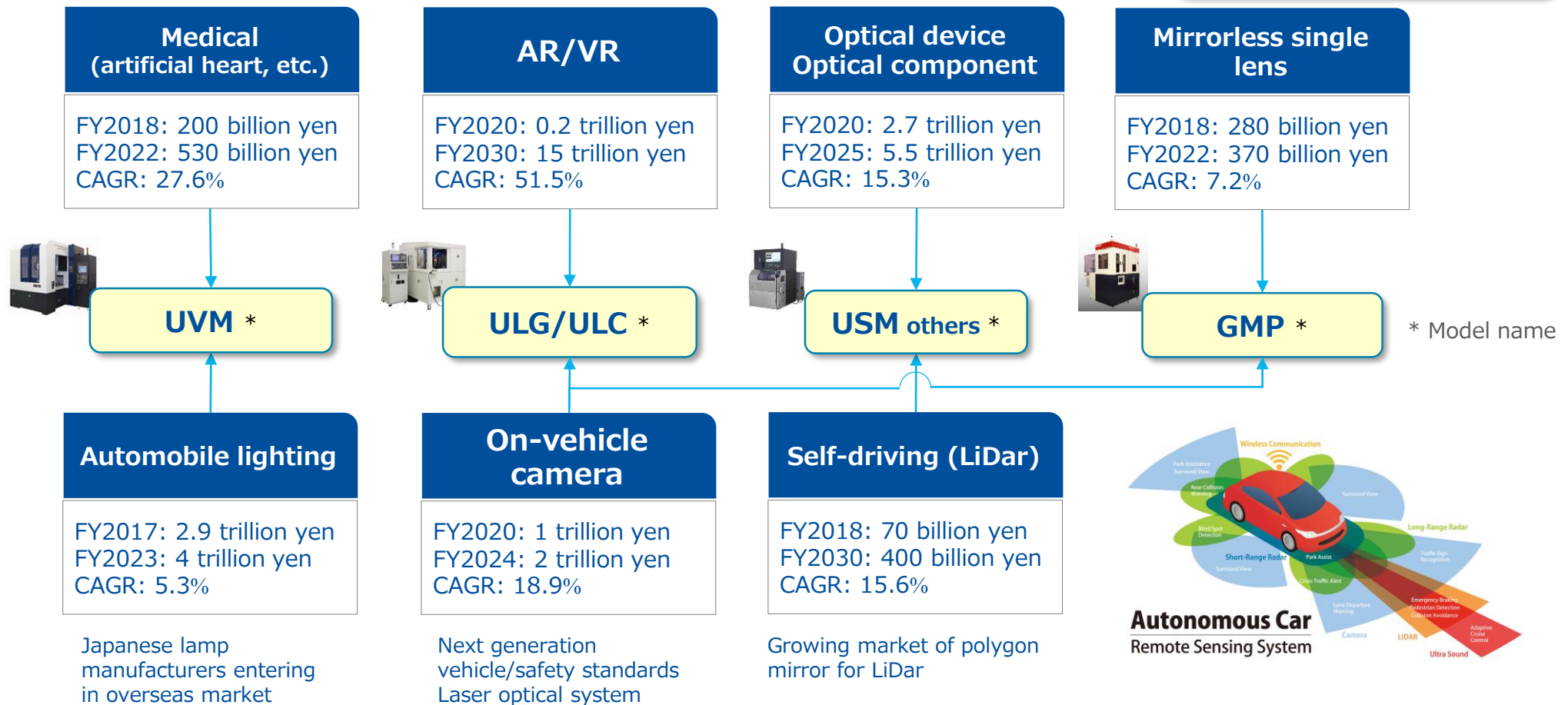


LiB separator film production line

# Expansion of High-Precision Machine Tools Business

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## ② Effect of increase in revenue



Order backlog: End of Mar. 2021 **4.2 billion yen** ⇒ End of Sept. 2021 **6.7 billion yen** [+ 2.5 billion yen]

Toward achieving FY2023 sales of 10 billion yen (FY2020 sales was about 5 billion yen), establishing a **thermostatic chamber dedicated to assembly** in Gotemba Plant 1 to start **increasing production and sales promotion from June 2022.**

	Policy	Progress in FY2021
<b>Production reform</b>	<ul style="list-style-type: none"> <li>• <u>Re-examination of processing plant</u> <ul style="list-style-type: none"> <li>➢ Completion of identifying issues of the entire production</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Transfer toward overseas production</li> <li>• Production reform of Metal &amp; Plastics Industrial Machine Company (Merger of injection molding machines and die casting machines)</li> </ul>
<b>Sales and marketing reform</b>	<ul style="list-style-type: none"> <li>• <u>Survey of current situation and extracting issues</u> <ul style="list-style-type: none"> <li>➢ Completion of extracting issues</li> <li>➢ Starting reconstruction of sales process</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Started operation of a system <b>to visualize sales activities.</b> (monitoring negotiated amount and negotiation stagers)</li> </ul>
<b>HR system</b>	<ul style="list-style-type: none"> <li>• <u>Establishment of a new HR system</u> <ul style="list-style-type: none"> <li>➢ Partly incorporating job-based HR system</li> <li>➢ Starting a system for management members (from April 2021)</li> <li>➢ Starting a system for union members (from October 2021)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Application of a system for management members (from April 2021)</li> <li>• Application of a system for union members ⇒ <b>Changed to start from April 2022</b> to provide targeted people with detailed explanations and promote dissemination</li> </ul>
<b>Visualization of business management</b>	<ul style="list-style-type: none"> <li>• <u>Establishment of a management accounting system</u> <ul style="list-style-type: none"> <li>➢ Starting automatic aggregation</li> <li>➢ Implementing multiaxial analysis function</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Automatic aggregation                             <ul style="list-style-type: none"> <li>➢ Actual figures aggregation (from April 2021)</li> <li>➢ <b>Budget and estimation calculation</b> (from October 2021)</li> </ul> </li> <li>• Multiaxial analysis                             <ul style="list-style-type: none"> <li>➢ Capable of grasping figures from unit sales to service sales <b>Taking measures in regions with weak sales and further reinforce activities in regions with strong sales</b></li> </ul> </li> </ul>

# Management risks at the moment

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Item	Reason for price increase	Affected items within the company
Increasing costs of raw materials including steel and copper	<ul style="list-style-type: none"> <li>• Price hikes of materials including iron ore</li> <li>• Resurgence of Chinese market and automobile industry</li> </ul>	<ul style="list-style-type: none"> <li>• Machine structures casting</li> <li>• Sheet metals and frames</li> <li>• Hydraulic equipment, motors and piping parts</li> <li>• Fastening parts including bolts</li> </ul>
Increasing costs of raw materials for casting	<ul style="list-style-type: none"> <li>• Price hikes of raw materials and scrap iron</li> <li>• Rising crude oil price</li> </ul>	<ul style="list-style-type: none"> <li>• Machine structures casting</li> </ul>
Increasing prices of semiconductors and electric parts	<ul style="list-style-type: none"> <li>• Increasing demand for display units</li> <li>• Resurgence of automobile</li> </ul>	<ul style="list-style-type: none"> <li>• Parts of control panel and internal building (wiring kit)</li> </ul>
Increasing ocean freight	<ul style="list-style-type: none"> <li>• Lack of containers in the world</li> <li>• Lack of harbor workers</li> <li>• Rising crude oil price</li> </ul>	<ul style="list-style-type: none"> <li>• Import/export of products and parts</li> </ul>

Impact of **reduction by more than 1 billion yen** in FY2021 (based on operating profit)



**Sales prices increase by 3% for all models in all regions**



**Metal & Plastics  
Industrial Machine**  
(Injection molding machines  
and die casting machines)

**Expanding business base as the core to shape figures**

- Reallocation to use overseas production plants for different models
- Further promoting local production for local consumption

**Metal & Plastics  
Industrial Machine**  
(Extrusion machines)

**Positioned as additional business to shape figures**

- As the business size is expanding,  
establishing the structure including reallocation of resources

**Machine Tools**

**To be a source of profits**

- Focusing resources on high-value added areas (high-precision machine tools/large and special purpose machines)

**Control Systems**

**Expanding business base to shape figures**

- Implementing SCARA Robots production in China to intensively meet the automation needs of 5G smartphone parts manufacturing factories in China and Southeast Asia

# Business Portfolio Strategy (Long-term Vision 2030)

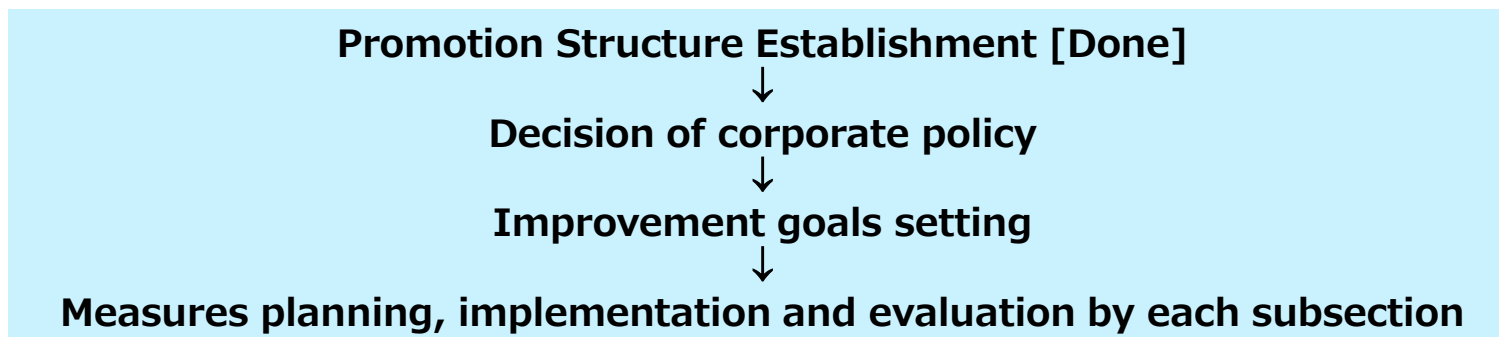
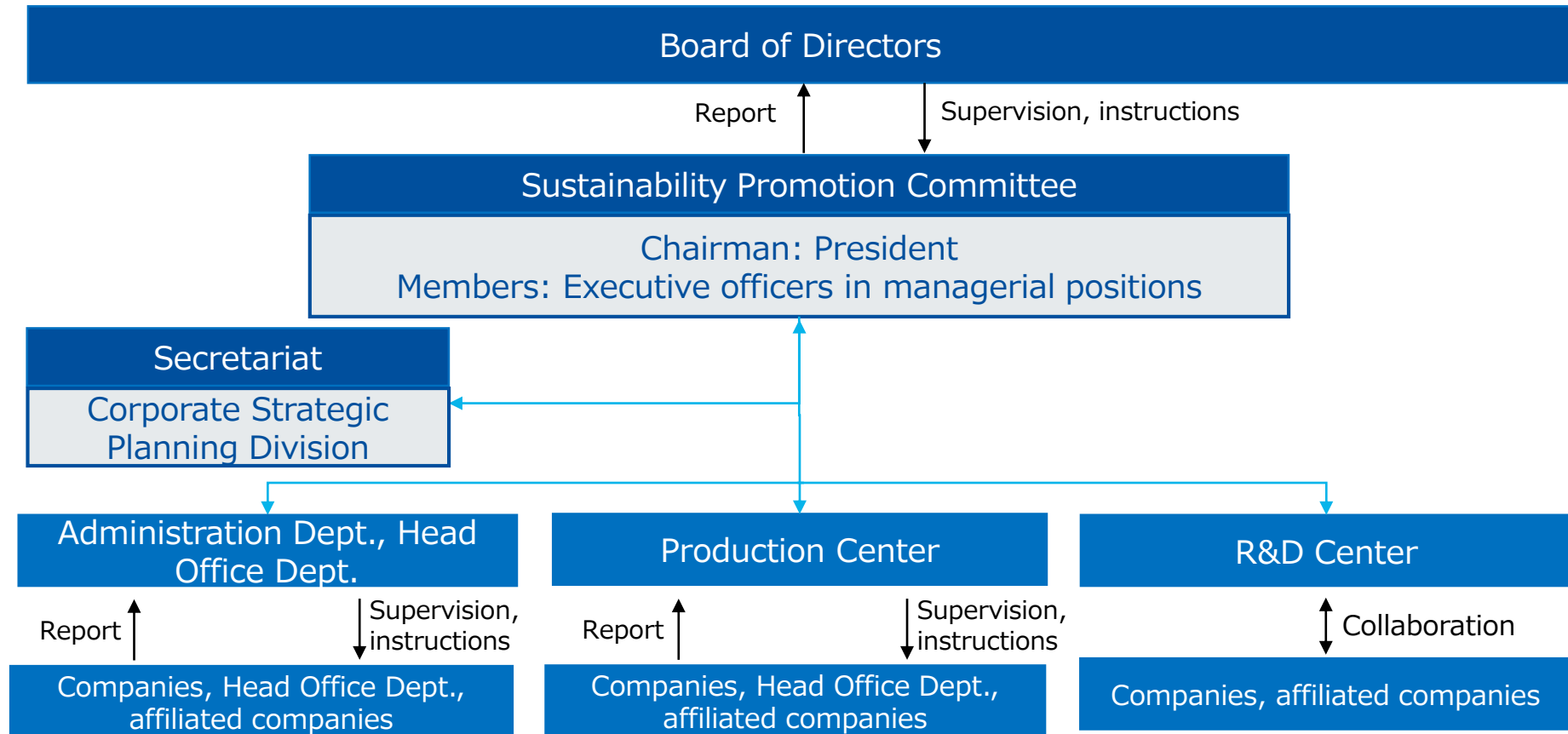
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Basic policy		High-value-added/market expansion areas		Reduce/withdraw	
		New	Expand/enhance		
Machine Tools Company	Focus on a specific domains by selection <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">Energy</div> <div style="border: 1px solid black; padding: 2px;">Aircraft</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">Optics</div> <div style="border: 1px solid black; padding: 2px;">Devices</div> </div>	<ul style="list-style-type: none"> <li>Multifunction machines</li> <li>Ceramic cutting machines</li> </ul>	<ul style="list-style-type: none"> <li>Large machines</li> <li>Special, dedicated machines</li> <li>Ultra-precision processing machines</li> </ul>	Digital transformation	<ul style="list-style-type: none"> <li>Small and general-purpose machines</li> </ul>
	Injection and die casting → Expand local production for local consumption overseas <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">Automobiles</div> <div style="border: 1px solid black; padding: 2px;">Resource-saving</div> </div>				
Metal & Plastics Industrial Machine Company	Extrusion machines → business expansion through investment <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">Energy</div> <div style="border: 1px solid black; padding: 2px;">Devices</div> </div> <div style="border: 1px solid black; padding: 2px; margin-top: 5px; width: fit-content; margin-left: auto; margin-right: auto;">New materials</div>	<ul style="list-style-type: none"> <li>Dissimilar material joining machines</li> </ul>	Extrusion machines		<ul style="list-style-type: none"> <li>Conical-type extruders</li> </ul>
	Specialize in external sales. Strengthen system engineering. <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">Automation</div> <div style="border: 1px solid black; padding: 2px;">Labor-saving</div> </div>	<ul style="list-style-type: none"> <li>High pressure continuous presses (all-solid-state batteries, etc.)</li> <li>Reactive extrusion machines (biomass, etc.)</li> </ul>			<ul style="list-style-type: none"> <li>Robots</li> <li>Servo motors, controllers</li> </ul>
Control Systems Company	Establish technology for adding new functions via surface structure control <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">Automation</div> <div style="border: 1px solid black; padding: 2px;">Devices</div> </div>	<ul style="list-style-type: none"> <li>Collaborative robots</li> <li>AGV</li> </ul>			
New Business Company		<ul style="list-style-type: none"> <li>Film casting equipment: Electronic circuit market (next-generation communications)</li> <li>Coaters: High-performance films, devices market (all-solid-state batteries, LiB ceramic capacitor, optical components, etc.)</li> <li>Imprint equipment: Water purification and sterilization market(Deep UV-LEDs)</li> </ul>			

# Initiatives to ESG

# Sustainability Promotion Structure

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# Environmental Action Plan

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“Shibaura Machine’s CO2 reduction goal” Reduction of 50% or more by 2030 from the level of 2013

Reference fiscal year: FY2013

	Item to be addressed	The 2nd Environmental Action Plan FY2025	Long-term goal FY2030
<b>Prevention of global warming</b> CO2 reduction	<b>Provision of environment-conscious product (ECP)</b> * Products that are designed according to the “Environment-conscious product designing guide” that takes 3R into consideration	<p>Reduction of 21,000 t</p>	
	Plant energy saving	<p>Reduction of 14,000 t</p>	
	Scope 3 activities	Understanding environmental load (including overseas)	Reduction activities
	Use of renewable energies	Photovoltaic power generation accounting for 7.5% or more of the energy use	Renewable energy power generation accounting for 20% or more of the energy use
<b>LCA (Life cycle assessment)</b>	Biodiversity preservation	biotope, tree planting in domestic plant premises	Cooperation in foresting business
	<b>Effective use of resources</b> Reduction of waste emissions per unit of production (t/100 million yen)	2.0 (-58%)	1.2 (-65%)
	<b>Control of chemical substances</b> Reduction of chemical substance emissions per unit of production (t/100 million yen)	42.5 (-45%)	40 (-52%)
	Establishing a global EMS*	External survey of infrastructure, internal survey of overseas environment, fostering overseas plant environment leaders	

\* EMS: Environment Management System

# Activities with Various Products

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## これからの取り組み 素材の環境負荷低減への貢献



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### プラスチックに関わる問題と対策

※出所) 資源エネルギー庁  
<https://www.enecho.meti.go.jp/about/whitepaper/2019/html/2-2-2.html>

## 脱炭素の取り組み 循環型社会に向けた水素活用への貢献

脱炭素



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### 水素を活用した循環型社会

※水素と酸素の化学反応から電気を発生させる装置

2 ためる

つかう ①水素燃料電池 (FCV)

②水素製造 (水電解)

③水素貯蔵 (高圧ガス)

④水素輸送 (パイプライン)

⑤水素供給 (水素ステーション)

## 過去からの取り組み LIB (\*1) 量産への貢献

脱炭素



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電池の歴史 当社は'80年代から電池向けセパレータ\*製造で貢献 ※正極と負極を切り離しながら、イオン電導性を確保する部品

'80年代

'90年代

2000年代

現代

## 脱炭素への貢献 自動車の軽量化への貢献

LCA

脱炭素



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### 自動車を軽くしてCO2排出量削減

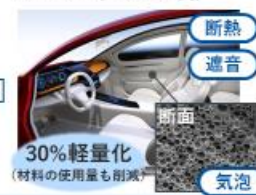
EV化 ⇨ 重量増加

機能向上 ⇨ 重量増加



### 樹脂成型 (発泡成形)

ドアトリム (ドアの内側)



断熱  
遮音  
断面  
30%軽量化  
(材料の使用量も削減)  
気泡

### アルミダイカスト

サブフレーム



空洞  
20%軽量化  
(材料の使用量も削減)

### 射出成形機



樹脂部品の軽量化



### ダイカストマシン



アルミ部品の軽量化



自動車の走行時におけるCO2削減により脱炭素社会に貢献してきました。

原油の代替となる新たな資源が必要、例えば、

鉱物

バイオ

製紙 × 芝浦機械



製品例

期待される用途	LIBの課題
電気自動車の普及 → 脱炭素	生産量拡大 → 需要増加の対応
再生エネの蓄電 → スマートグリッド	充電容量拡大 → 部品の薄肉化

### セパレータ成形用金型

溝間隔1.2mm  
溝深さ0.4mm

【普及の課題】  
生産性の高いプレス成形に、高精度な金型加工が必要

### 工程集約 (加工+検査)

高い生産性

機上測定システム

### 印刷機械のすべてを融合した技術

膜厚、幅の制御

原料の混練 (分散)

伸による膜の改質

二軸混練機

Information is published on the company website.

# Shibaura Machine

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