



Medium-term Management Plan



JAPAN PURE CHEMICAL CO.,LTD.

Securities Code: 4973

July 28, 2022





Establishment of Long-term Vision

The Company has built up a record of achievements specializing in noble metal plating as a company that works in fabless-type R&D-oriented company with a few of selected and skilled workforce.

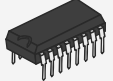

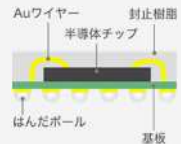
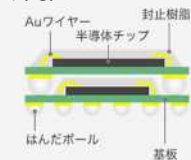
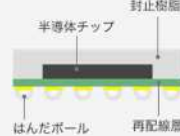
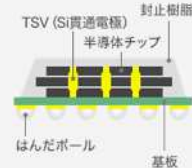
Today, 50 years after our establishment, in an electronic components industry that is rapidly expanding with the COVID-19 pandemic and the shift towards DX, it has become clearer that our technologies can also provide solutions for social issues outside of our existing markets.

With a view to grasping needs in new business domains and market, and providing solutions to the social issues, we aim to evolve into the company that is appreciated in new markets as well as our existing ones, dividing the period through to 2030 into three phases.



1. Our Strength

Technological Transition

Electronic devices	Calculators Color TVs Radios	Mainframes Video game platforms	Video game platforms PC Mobile phones	Notebook computers Digital cameras Flat-screen TVs Smartphones	Smartphones Tablets HEV / PHEV / EV	Products beyond 5G HEV / PHEV / EV Automatic driving
Package technology	DIP 	Ceramic PGA QFP 	PPGA QFN CSP BGA TAB 	FC-BGA PoP FC-LGA 3D Sip 	TSV FOWLP 	TSV FOWLP 
Printed circuit boards (PCB)	Multilayer PCB Single-sided flexible PCB	Ultra-multilayer PCB Single-sided flexible PCB	Build-up PCB Double-sided flexible PCB	Build-up PCB Rigid-flex PCB	Any-layer PCB Multilayer flexible PCB	Embedded PCB

1970s

1980s

1990s

2000s

2010s

2020s

Electrolytic gold plating
Electrolytic silver plating

Electroless gold plating
Electrolytic palladium plating

Electroless palladium plating

Cyanide-free electroless gold plating

Nickel barrier gold plating

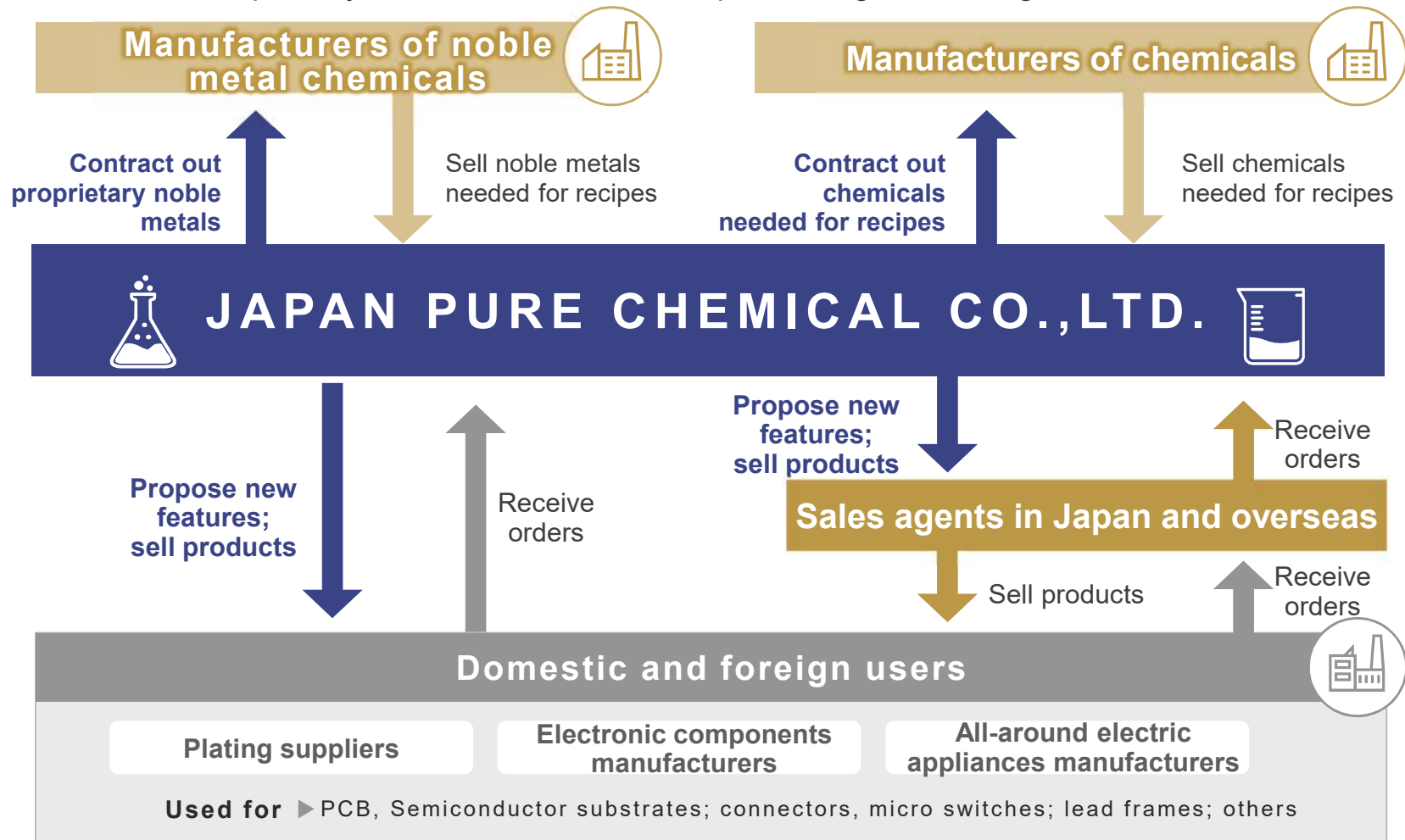
Nickel-free processes

- Since its establishment, JPC has supplied noble metal plating chemicals used for the final surface treatment of electronic components.
- We have adapted to change with the times to offer technologies for miniaturized electronic components with higher pin counts and higher density.

Business Model

JPC specializes in developing the recipes of our products used for plating as a fabless company consisted by a few of selected and skilled workforce, which offers added value.

- Explore 100,000 types of chemicals available on the market to find the best ingredients and combinations.
- Outsource the plant synthesis and intermediate processing of each ingredient.





2. External Environment

External Environment

Unclear and uncertain current management environment

Environmental risks

- Pandemics
- Natural disasters
- Climate change

Geopolitical risks

- Customs and trade restrictions
- Terrorism, conflict, and war

Economic risks

- Shortage of key raw materials
- Shortage of key components

Technological risks

- Cyberattack
- Inadequate transport infrastructure

Unchanging megatrends

Lifestyle changes due to COVID-19

Decarbonization/Resource saving/Energy shift

Rapid increase in data communication traffic and capacity

Multiple social issues to which the Company can contribute

Business opportunities utilizing the Company's originality and intellectual property

Expanding demand for IoT devices for DX



Spread of remote work and online learning



Continued shift to EVs



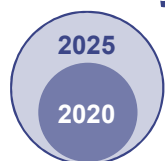
Expansion of data center-related demand



Printed circuit boards and Semiconductor substrates/ Connectors and Micro switches/ Lead frames /Battery materials, etc.

Market Outlook for Existing Fields

As the demand for final products grows, the electronic components market as an existing field is also expected to stably grow.



USD in billions
The size of a circle
indicates the market size.

<Source>

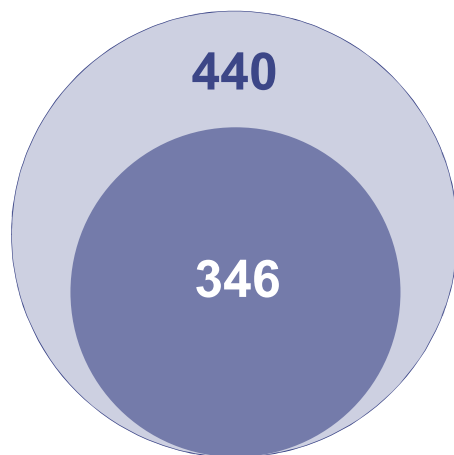
*1 FY2021 Survey of Infrastructure Development Status for Data-driven Society in Japan (Survey of Market and Policy Trends in the Electronic Device Industry and Other Related Industries)

(INFORMA UK LIMITED, survey report commissioned by the Ministry of Economy, Trade and Industry)

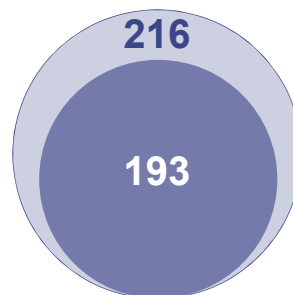
*2 Connectors Market 2021 (Sangyo-Joho Limited)

Final Products

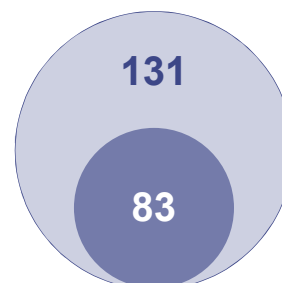
Smartphones: CAGR 4.9%^{*1}



PC: CAGR 2.2%^{*1}

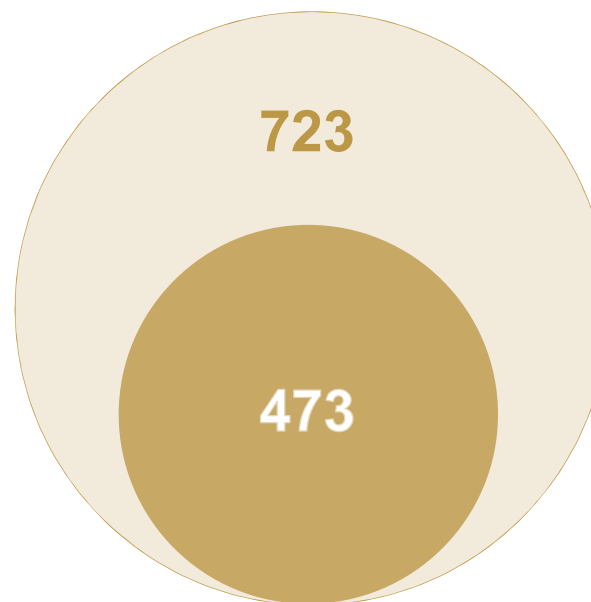


Servers: CAGR 9.6%^{*1}

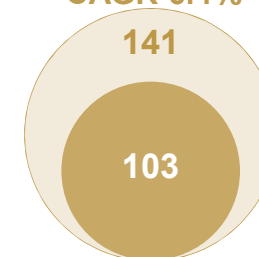


Electronic Components

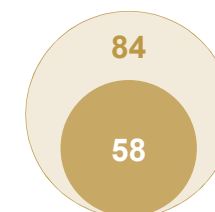
Semiconductors: CAGR 8.8%^{*1}



In-vehicle devices:
CAGR 6.4%^{*1}

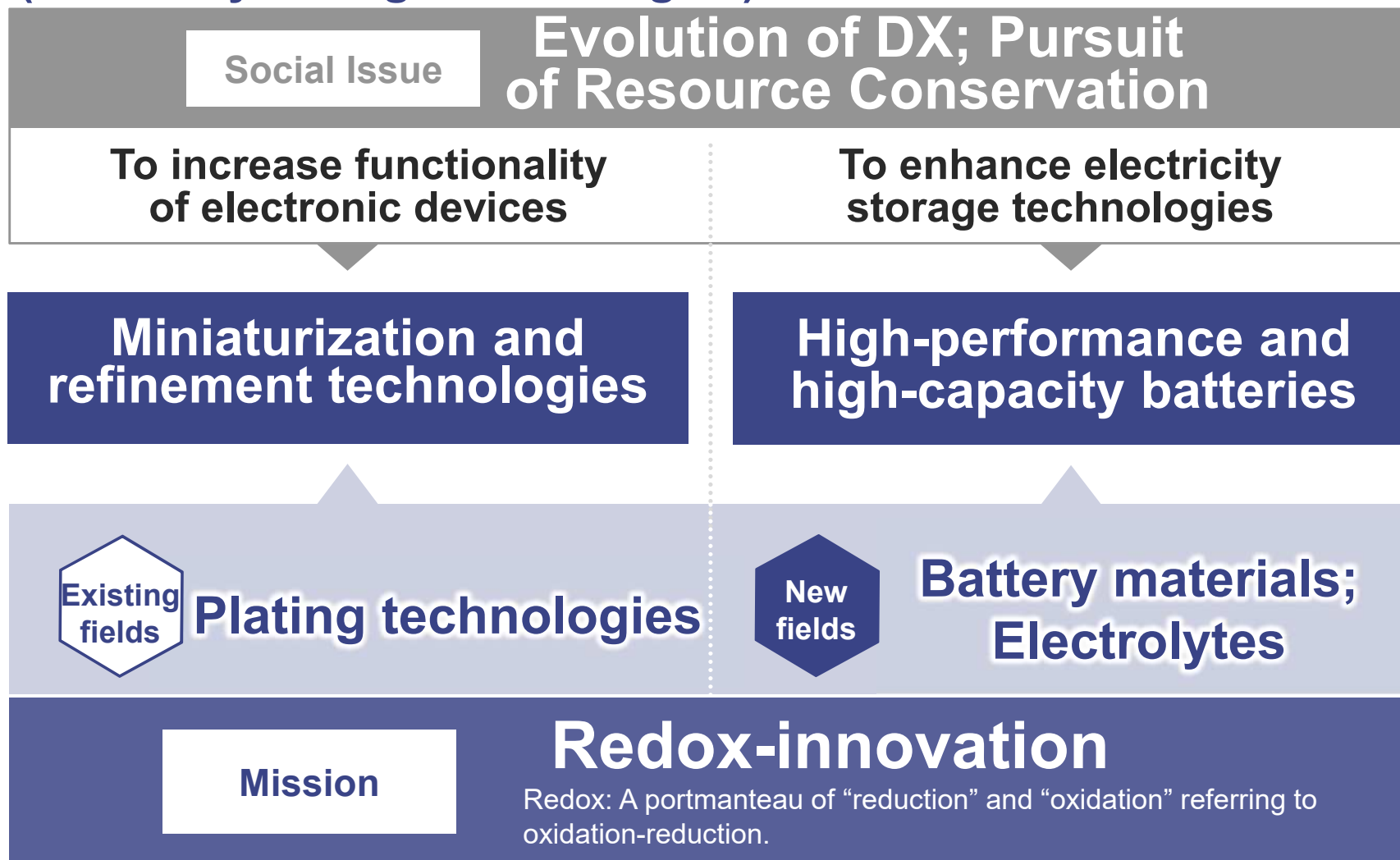


Connectors: CAGR 7.4%^{*2}



Plating and Batteries Share Principles - Redox Technology

Trying to solve energy issues to apply our plating technologies (electricity storage technologies)

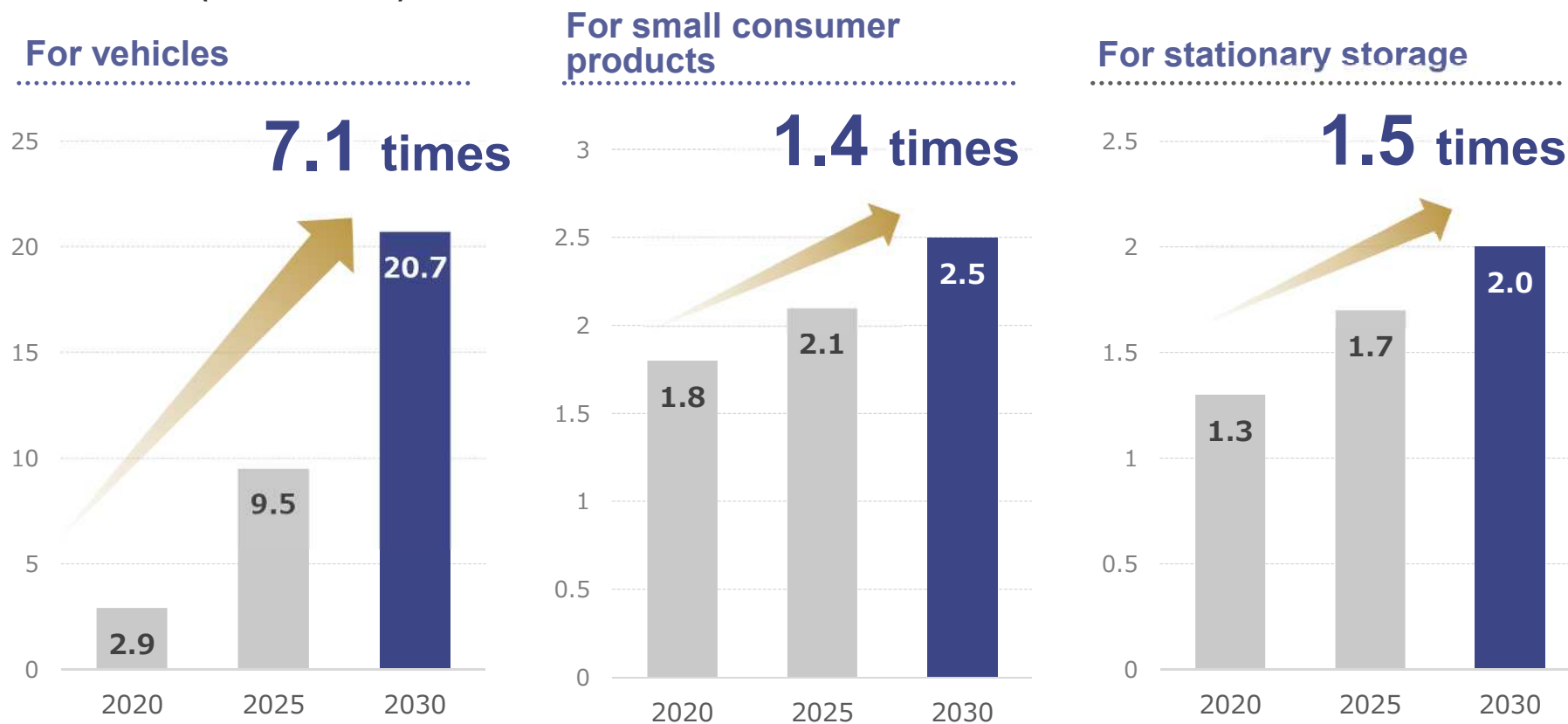


We create added value using redox technology cultivated in the field of plating

Secondary Battery Market Outlook

The markets, mainly in secondary batteries for vehicles, are expected to grow.

Market size (JPY trillions)



The figures in JPY trillions have been estimated referring to GWh-based market forecasts (the unit prices (JPY/kWh) researched by JPC)
<Source> Batteries for vehicles and small consumer products: "Battery Industry Strategy - Interim summary -," the Ministry of Economy, Trade and Industry (November 18, 2021)
For stationary storage: "Transition and Forecast of Global Stationary Energy Storage Systems (ESS) Market Size by Installed Location," Yano Research Institute Ltd. (September 14, 2021)

Applying Redox Technology for Plating to Batteries

We create added value using redox technology cultivated in the field of plating

Core technologies

Battery materials; Electrolytes

Our opportunities

Electroless plating

Nanoparticles

Electroless plating for nanoparticle creation

Apply the stabilization and reaction control technologies for plating components to nanoparticle synthesis

Electrolytic plating

Electrodes

Electrolytic plating for the creation of electrode materials

Expand the application of the technology for forming plated coatings to the surface modification of electrode materials

Plating solutions

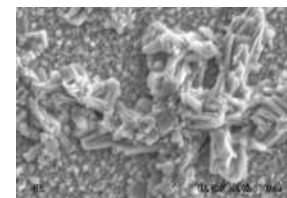
Electrolytes

Plating solutions applied to electrolytes

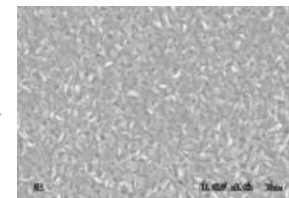
Apply the technology for combining components to the development of recipes for electrolytes

*Dendrites: Branched crystals

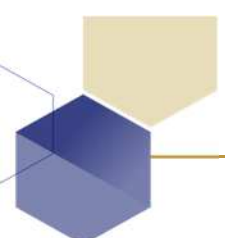
Dendrites that is developed while a lithium-ion battery is charged trigger a short circuit inside the battery, which causes the battery to deteriorate or catch fire.



Dendrites* develop



No dendrites



3. Mid-term Management Plan

Corporate Philosophy and Vision

Corporate
Philosophy

Contribute to electronics with curiosity about chemistry

As a linking bridge between fine chemicals and electronics, we will contribute to society globally with our ingenious products.

Vision

RDD2030

Become a fine chemical company that leads the electronics industries by addressing social issues and exerting diverse perspectives and unique creativity

RDD2030 Apply Redox Technology to Battery Materials!

Unite as Team JPC, we will create added value with the Redox technology cultivated through plating

RDD2030

Redox-innovation through Discovery & Development toward 2030

Medium-term
Management Plan

Medium-term Management Plan 2022-2024

As a development-oriented company, we will gather information on market needs and develop ingenious products

Redox: A portmanteau of “reduction” and “oxidation” referring to oxidation-reduction.

Medium-term Management Plan Road Map

Redox-innovation through Discovery & Development toward 2030

RDD2030

Apply Redox Technology to Battery Materials!

Unite as Team JPC, we will create added value
with the Redox technology cultivated through plating



- Creation of new business domains (Technology investment)
- Deeper relationships with business partners through DX (Sales investment)

Initiatives for sustainability management
Recruit and train active and autonomous human resources

Measures for New Business Development in the Existing Fields

Measures

1

Increase market recognition

Increase brand recognition in Japan and overseas, particularly in markets where our profile is still low, through fairs and advertising.

2

Propose green products

Propose energy-saving processes that use no cyanogen, poisonous or deleterious substances.

3

Propose comprehensive processes for higher performance

Boost performance through comprehensive collaborative processes that cover equipment, pretreatment, and aftertreatment.

Segment		Target Market	Measures	Detail
Printed circuit boards (PCB); Semiconductor substrates	PCB	Smartphones PC	2 3	Establish a framework that enables us to propose comprehensive processes for motherboards or FPC through collaboration with manufacturers of surface treatment chemicals and of equipment as well as sales agents. Propose new nickel-free processes (DIG and EPIG) to end users to make substantial progress toward certification.
	Package substrates	Servers Smartphones PC	2	Increase our market share by widely selling high-performance green products for package substrates designed for servers, smartphones, and PCs.
Connectors; Micro switches		Smartphones Automobiles	1	Based on the wealth of experience we have in the field of fine connectors for smartphones, offer the gold-saving process to European, North American, and Chinese manufactures, in addition to Japanese manufacturers.
Lead frames		Smartphones Automobiles	1	Increase the sales of silver plating chemicals (applicable to photomasks) that can be used for fine-pitch products that are expected to increase going forward.
Semiconductors		Smartphones Automobiles	1 2 3	Propose green products for high-frequency/power devices in the field of semiconductors where demand is expected to grow.

Information System-Driven Sales Strategies

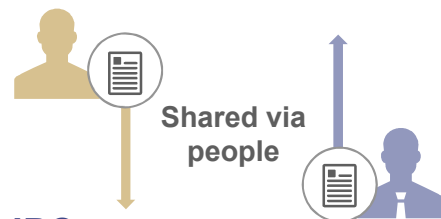
**Increasing one person's strength tenfold:
The technical support we offer in Japan is available all over the world**

Present state

Data and information are managed by servers and individuals at JPC and customers' offices, and shared via people

Customer

Servers and Individuals



JPC

Servers and Individuals



Issue

A complete handover of past experiences and know-how is difficult when it is done via people

After introduction

- Information is shared and centrally managed via a database
- Technical and sales support offered through a hotline

Customer



Manager/Leader

Advance process and quality control



Staff in charge

A multilingual hotline handled by multiple staff members

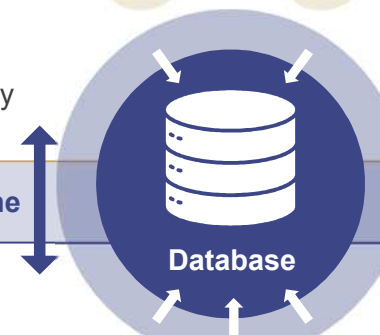
Product catalogue



Security data sheet



Hotline



Database

JPC



Technical team

Prevent individualization by sharing information



Sales team

Deliver updates on JPC

Information about analysis



Operation record



Technical support log



Solution

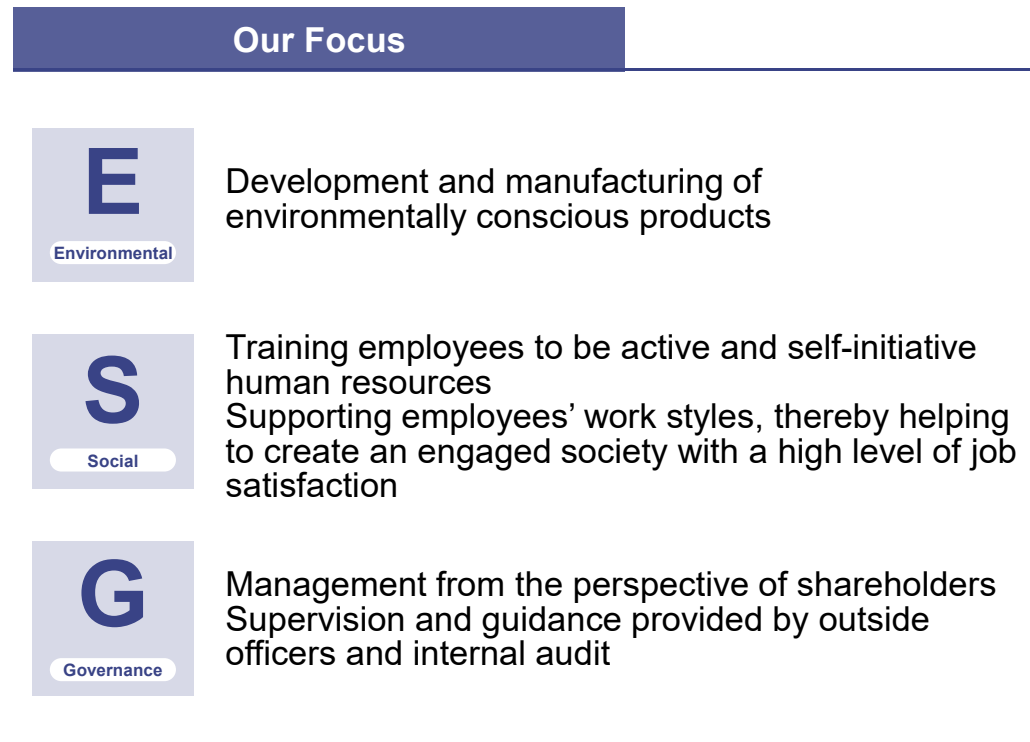
Centralized management of information via a database prevents problems and enables the proposal of solutions

Sustainability Policy and Framework

Basic Policy on Sustainability














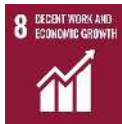


Under the corporate philosophy “Contribute to electronics with curiosity about chemistry,” we face social issues squarely, such as the world’s environmental risks, lifestyle changes, and the energy transition; connect more closely to stakeholders; and adopt diverse perspectives and harness our creativity, thereby aiming to serve as a linking bridge between fine chemicals and electronics.

Since we are a chemical manufacturer which uses noble metals and rare minerals and deals with many kinds of chemical substances, environmental consideration is a matter of high concern. Based on the premise that we must effectively utilize natural resources, preserve the global environment and contribute to sustainable society, we will conduct business activities and continuously reduce the environmental burden.



Initiatives to Meet ESG Criteria

We contribute to the creation of a sustainable society by responding to any changes in the business environment to pursue equitable corporate activities.

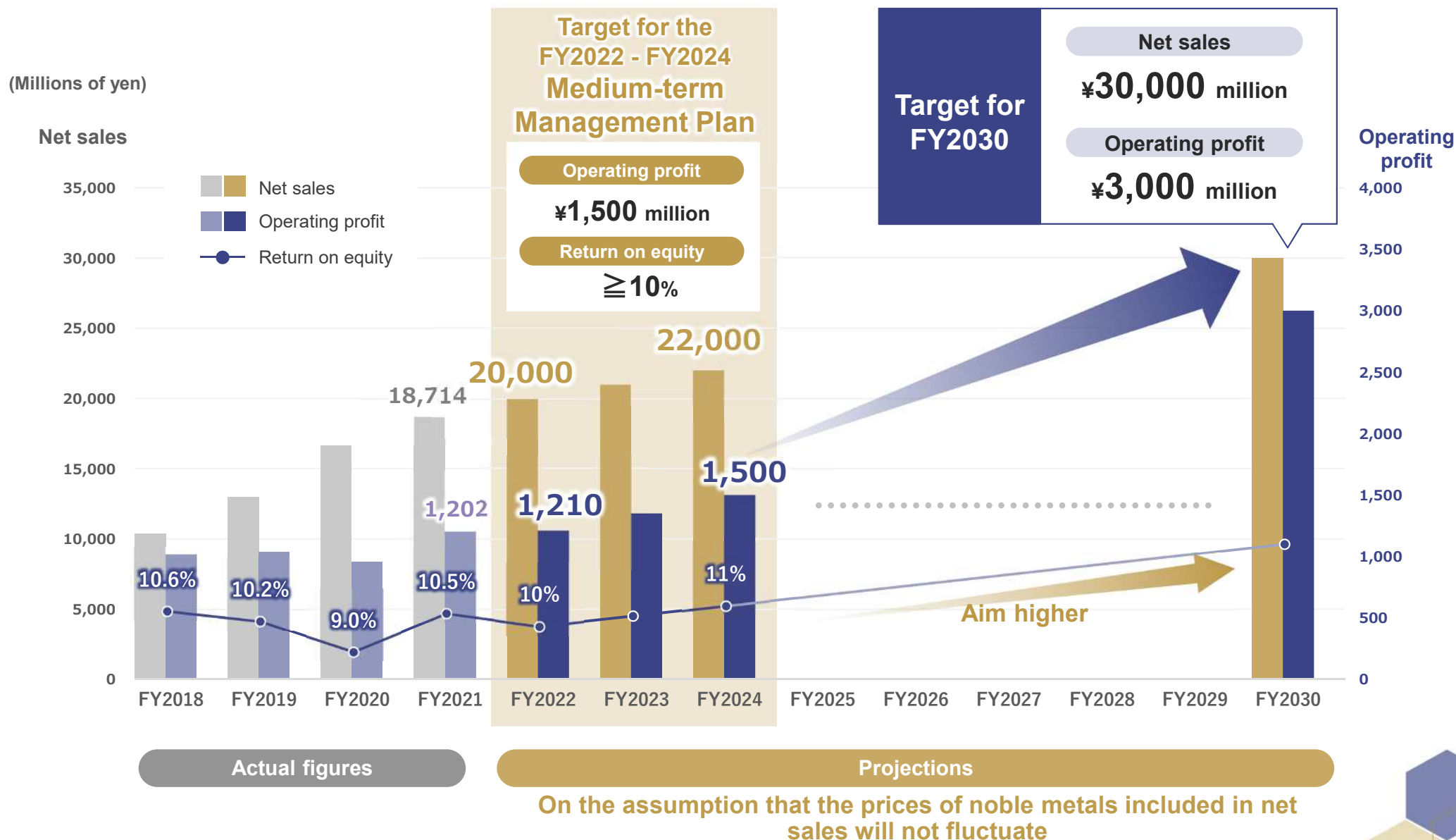
Objective	What we specifically do	Related SDGs
 <p>E Environmental</p> <ul style="list-style-type: none"> ● Create environmentally friendly products ● Create an alternative to grain-based materials ● Reduce CO₂ 	<ul style="list-style-type: none"> ● Development of cyanide-free gold plating chemicals ● Reduction in the usage of grain-based materials to help resolve the global food problem ● Reduction in energy consumption and discarded material; reduce the volume of plastic packaging 	     
 <p>S Social</p> <ul style="list-style-type: none"> ● Recruit and train diverse core talent ● Provide a good work environment ● Employee incentive programs ● Enhance the scholarship program (foundation) 	<ul style="list-style-type: none"> ● Recruitment in line with division's policies ● Active and autonomous talent training program ● Achievement of recognition as a Certified Health & Productivity Management Outstanding Organization by METI ● New theme promotion program in which all employees participate 	   
 <p>G Governance</p> <ul style="list-style-type: none"> ● Establish stricter business monitoring ● Deliver information to stakeholders ● Ensure to be in full compliance with all laws and regulations 	<ul style="list-style-type: none"> ● Advancement of corporate governance that consolidates outside officers and the executive leadership team ● Demonstration of JPC's uniqueness and growth potential through corporate survey reports ● Review of our business continuity plan ● Enhancement of information security 	  



4. Management Goals

Financial Goal 1

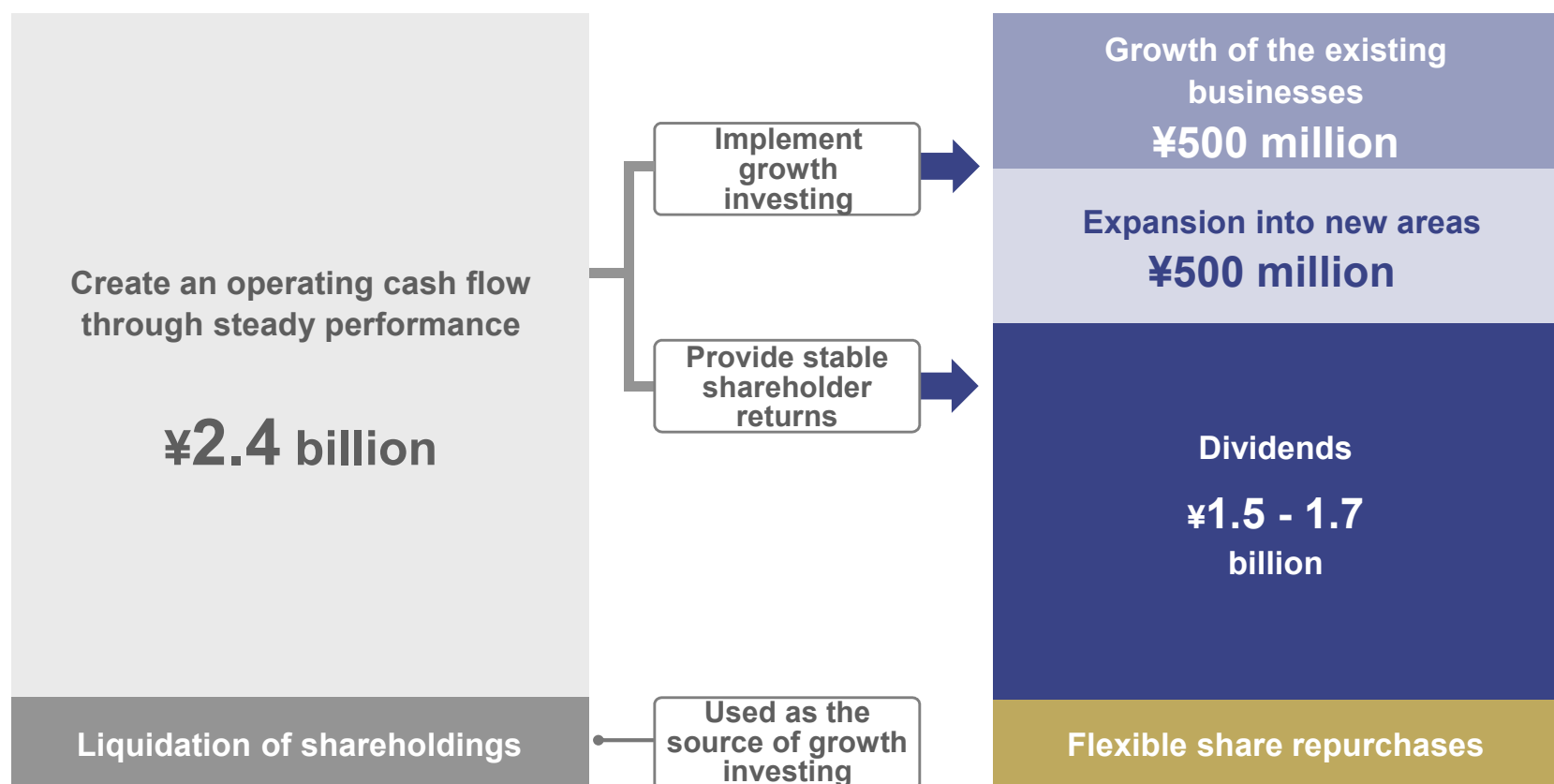
Achieve a continuous increase in operating profit that centers on new business development in the existing fields



Financial Goal 2

Create an operating cash flow of ¥2.4 billion over three years by ensuring steady performance in order to allocate the cash to growth investing and stable shareholder returns

FY2022 - FY2024 Medium-term Management Plan



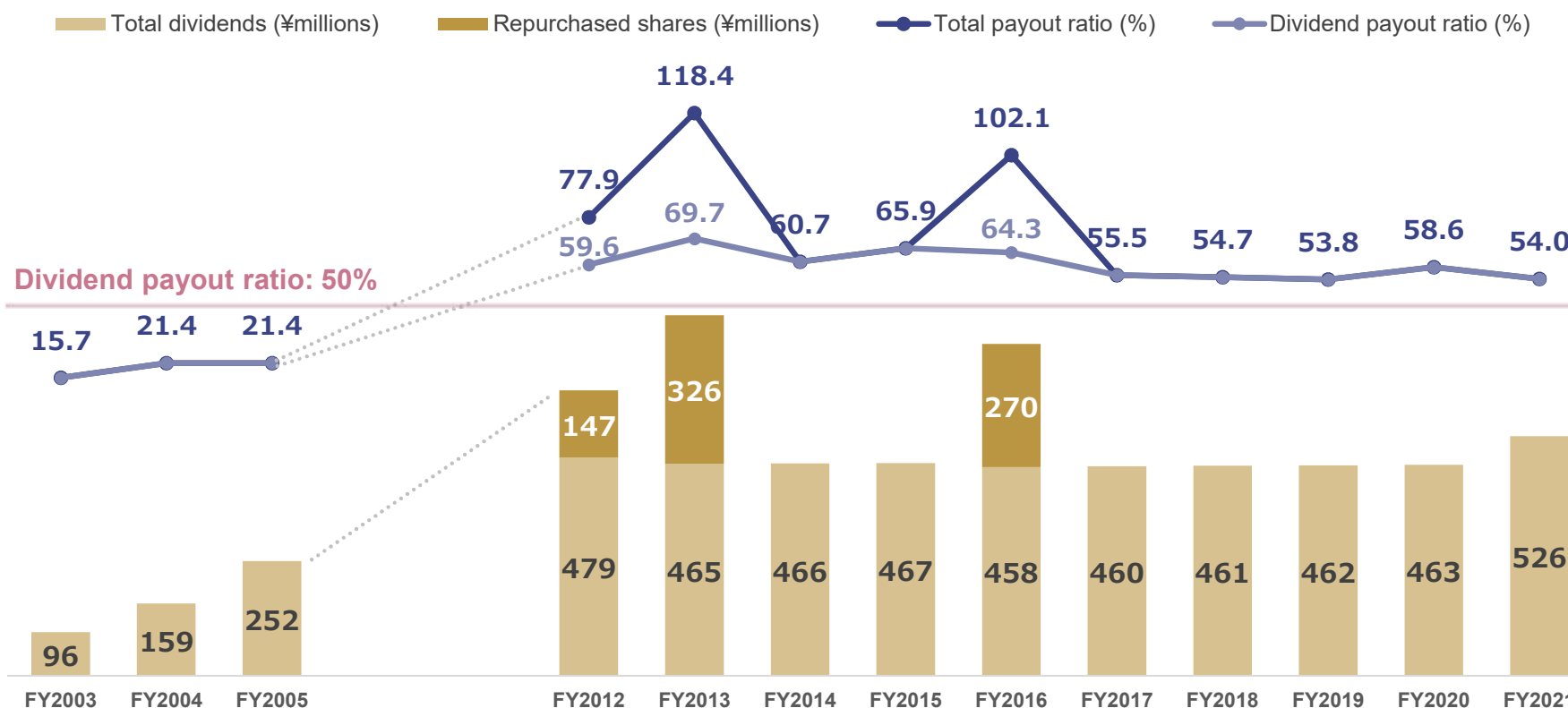
Scheme for Shareholder Returns

Key Principles (FY2022 - FY2024)

- Balance long-term growth and financial health
- Aim for continuous and stable dividends, taking into account all relevant factors, including business results, and retained earnings needed to operate businesses and strengthen our business foundation going forward
- Dividend payout ratio of 50% or higher (avoid cutting DPS as much as possible) + Flexible acquisition of treasury shares

Changes in dividend payout ratio, repurchased shares, and total payout ratio

*The figures are rounded down to the million.





Cautionary Statements about Projections

The materials used in the preparation of forecasts of results and predictions are based upon predicted trends in the industries related to the Company's operations. Accordingly, economic conditions both in Japan and overseas, fluctuations in exchange rates and other factors may influence forecasts of results. The predictions and forecasts made are based upon the information available as of June 2022.

There are a number of factors that cannot be predicted with certainty that may have an influence on these forecasts, including market conditions, competitors' actions, the performance of newly introduced products and services, and the global IT market and related markets. Accordingly, actual results may vary significantly from the forecasts presented in this document.

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For Further Information

TEL. +81-3-3550-1048 FAX. +81-3-3550-1006

Corporate Planning **Division**

<https://www.netjpc.com>



Appendix: Company Introduction

History

- July 1971 Establishment of JAPAN PURE CHEMICAL CO.,LTD.
 - November 1999 Implementation of MBO
 - December 2002 JASDAQ market listing
 - March 2004 Listing on TSE Second Section
 - March 2005 Listing on TSE First Section
 - February 2019 Establishment of General incorporated foundation, JPC Scholarship Foundation
 - April 2020 Certification as public interest incorporated foundation, JPC Scholarship Foundation
 - April 2022 Move to the Prime market on TSE
-

Business Summary

- Fine chemical company supplying electronic materials which support development of the electronic components industry
- Top share in the worldwide market by narrowing the business targets to noble metal plating process
- Construct sales and technical support systems that can respond quickly to the rapidly changing industry
- Fabless company that do not require large-scale manufacturing plants
- Provide technology to minimize the amount of noble metals used for connecting electronic components and contribute to effective use of mineral resources