

# Results of Operations for Fiscal 2021 (Ended March 31, 2022)

**Nihon Dempa Kogyo Co., Ltd.**

**May 27, 2022**

[Note]

Statements made in this presentation with respect to our current plans, estimates, strategies and beliefs and other statements that are not historical facts are forward-looking statements about our future performance.

These statements are based on management's assumptions and beliefs in light of information currently available to it. We caution that a number of important risks and uncertainties could cause actual results to differ materially from those discussed in the forward-looking statements, and therefore you should not place undue reliance on them.

You also should not rely on the belief that it is our obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Risks and uncertainties that might affect us include, but are not limited to, fluctuation of currency exchange rates, overall supply and customer demand in the industry, product development and production capacities, performance of affiliated companies, and other risks and uncertainties.

- 1. Results for FY2021 (Ended March 31, 2022)**
- 2. Outlook for FY2022 (Ending March 31, 2023)**
- 3. Medium-Term Management Plan  
(FY2022—FY2024)**
  - (1) Summary**
  - (2) Business Strategies**

– As of March 10, 2022 –

**Presented by Hiromi Katoh,  
Representative Director and President**

# Consolidated Financial Results (Fiscal year)

- Operating income (excluding temporary factors) turned to a positive ¥4.5 billion for FY2021
- The operating income ratio improved markedly to 10.0% (excluding temporary factors)

(Million yen)	FY2020 Result	FY2021 Result	YoY	FY2021 Outlook (as of Nov. 9)
<b>Net Sales</b>	39,195	45,408	+6,213	44,500
<b>Operating Income</b>	2,844	5,180	+2,336	4,900
<b>Operating Income Ratio</b>	7.3%	11.4%	+4.1%	11.0%
<b>Operating Income/Loss (Excluding temporary factors)</b>	▲443	4,536	+4,979	4,255
<b>Operating Income/Loss Ratio</b>	▲1.1%	10.0%	+11.1%	9.6%
<b>Income before Income Tax</b>	2,592	4,920	+2,328	4,400
<b>Net Income*1</b>	1,976	5,455	+3,479	4,000
<b>Exchange Rate (against the U.S. dollar)</b>	106.17	112.86	+6.69	110.97

\*1: In FY2021, due to the recording of deferred tax assets of ¥1,917 million, the Income taxes–deferred of ¥1,665 million was recorded.

<Temporary factors> \*2

Cost of structural reform	▲1,118	▲492
Grant from Suzhou government		1,136
SAW device business related revenue	4,406	
<b>Temporary factors</b>	<b>3,287</b>	<b>644</b>

\*2: Income shown as a positive figure, cost shown as “▲”

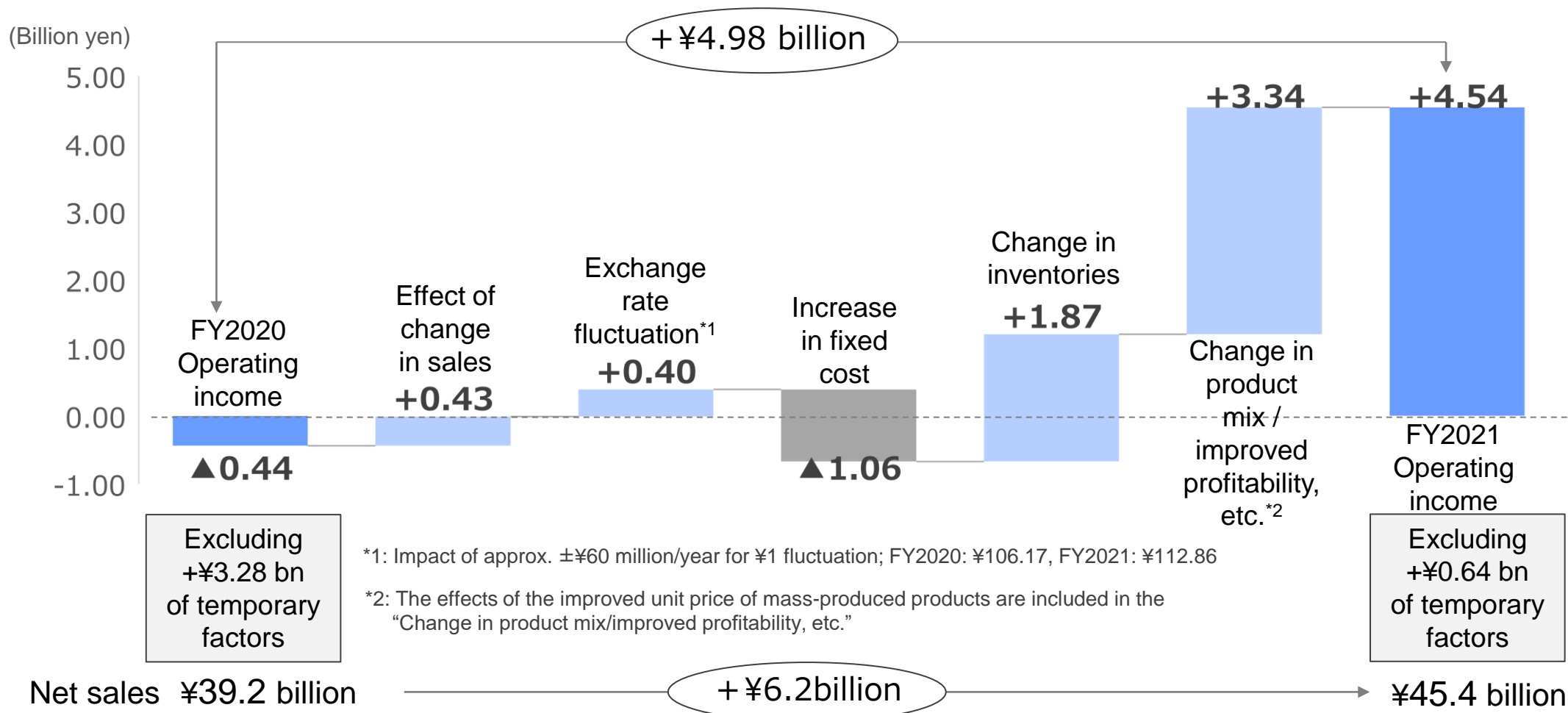
# Sales by Application (Year on Year)

- Sales vastly increased, particularly for automotive electronics

(Billion yen)	Net Sales			Factors of Increase/Decrease
	FY2020	FY2021	YoY	
Automotive electronics	18.3	22.5	+4.3	Demand has risen sharply since 2Q FY2020. Strong orders from Tier 1 manufacturers continues in FY2021.
Industrial equipment	3.7	3.6	▲0.1	US government export restrictions on shipments to Chinese telecom equipment manufacturers had a negative impact of ¥400 million on sales to the Company, but overall sales were down only slightly thanks to increased 5G base station-related demand from the US and other countries.
Mobile communications	8.7	8.8	+0.1	Sales rose substantially for 76.8MHz crystal units with built-in thermistors for 5G smartphones. Overall sales grew slightly, as sales of TCXO and other low-margin products were reduced.
IoT	1.2	1.7	+0.5	Sales increased for communication modules for wearables and other applications.
Consumer	4.0	4.3	+0.3	Sales increased for tuning fork crystal units for computers and other applications.
Medical equipment	0.9	1.3	+1.1	Sales increased for medical equipment, factory automation, and other applications.
Synthesizers/Sensors	0.5	0.6		
Other	1.9	2.6		
<b>Total</b>	<b>39.2</b>	<b>45.4</b>	<b>+6.2</b>	

# Operating Income – Analysis of Changes in Profit from FY2021 –

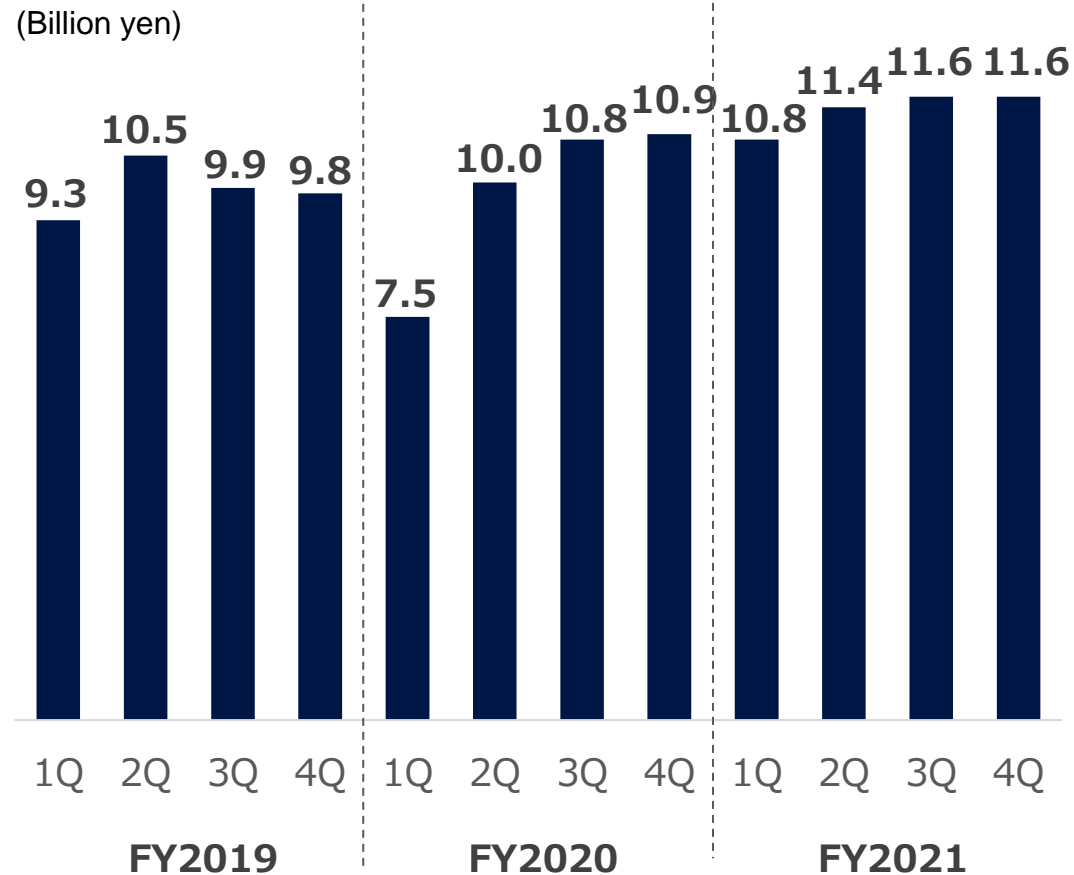
- Profitability improved substantially due to the profit contributions generated by the improving terms of trade in the automotive electronics market and the increased sales of 76.8MHz crystal units with built-in thermistors for 5G smartphones



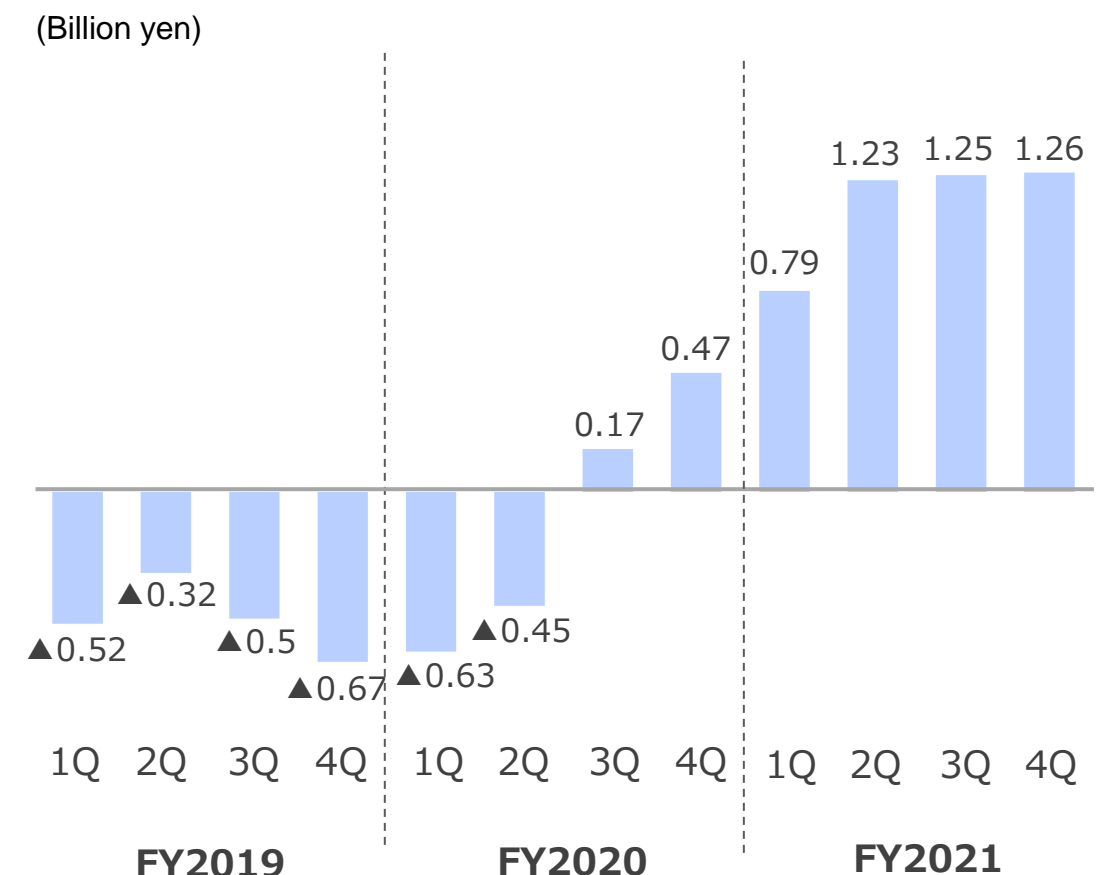
# Consolidated Financial Results (Quarterly)

- Automotive electronics sales have been fueling a sales recovery since 2Q of FY2020
- Earnings performance has vastly improved due to the combination of the streamlining of the corporate structure and the improved business environment

**Net Sales**



**Operating Income (Excluding Temporary Factors)**

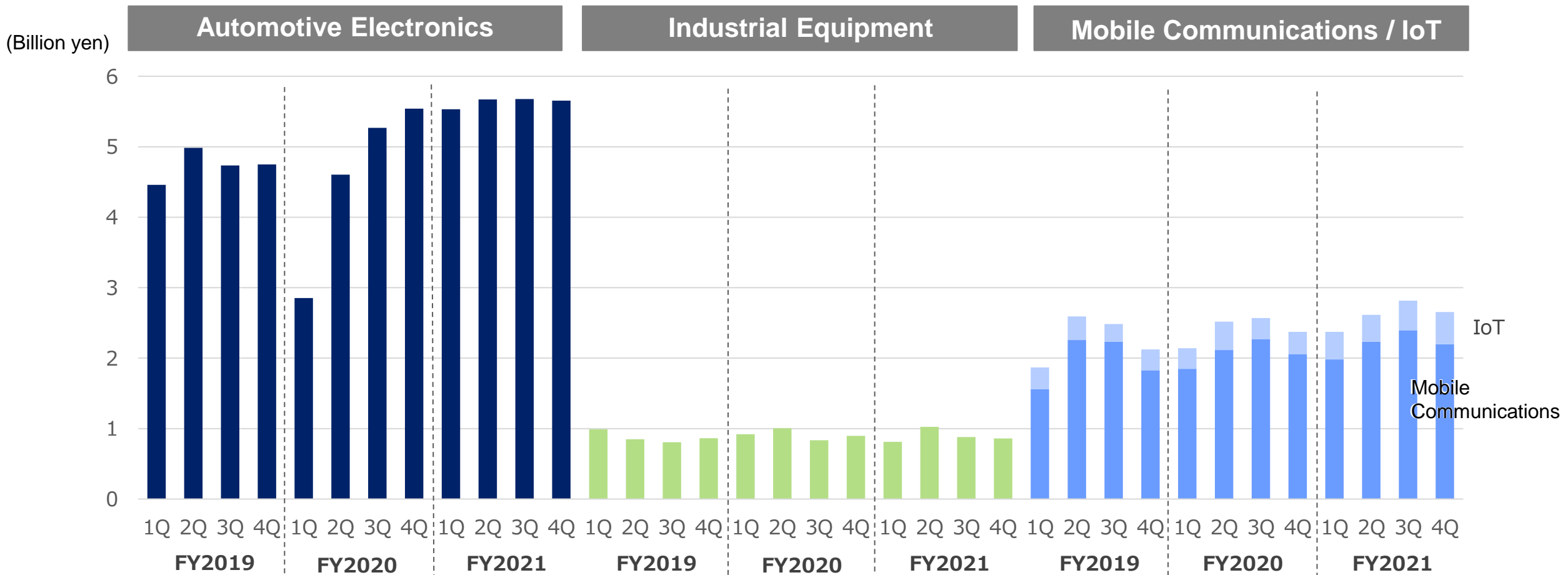


# 1. Results for FY2021 (Ended March 31, 2022)



## Sales by Application – Sales by Main Application –

- Orders of automotive electronics remain strong and sales are solid
- Industrial equipment sales are flat for products for base stations
- Mobile communications sales are strong for 5G smartphone

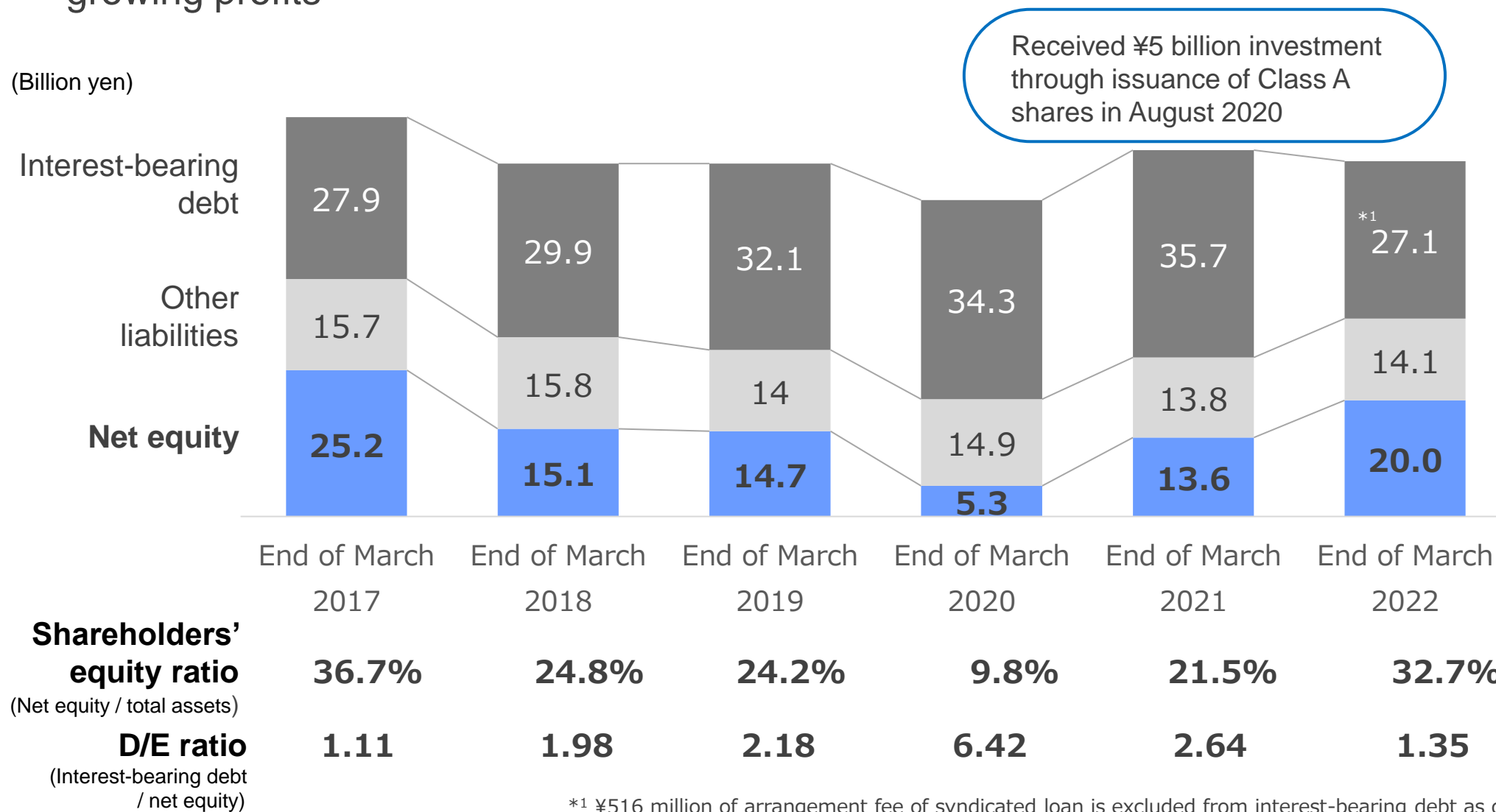


# 1. Results for FY2021 (Ended March 31, 2022)

## Consolidated Financial Position

- Financial position is improving from the reduction of interest-bearing debt and growing profits

(Billion yen)



\*1 ¥516 million of arrangement fee of syndicated loan is excluded from interest-bearing debt as of end of March, 2022



1. Results for FY2021 (Ended March 31, 2022)
- 2. Outlook for FY2022 (Ending March 31, 2023)**
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## 2. Outlook for FY2022 (Ending March 31, 2023)

# Consolidated Financial Forecast



- Forecast for ¥5.0 billion in operating income for FY2022  
⇒ Profit expected to increase year on year in real terms (profit in FY2021 includes a one-off profit of ¥640 million)

(Million yen)	FY2021 Full Year	FY2022 Forecast			YoY
		1H	2H	Full Year	
Net sales	<b>45,408</b>	<b>24,200</b>	<b>25,800</b>	<b>50,000</b>	<b>+4,592</b>
Operating Income	<b>5,180</b>	<b>2,300</b>	<b>2,700</b>	<b>5,000</b>	<b>▲180</b>
Operating Income Ratio	<b>+11.4%</b>	<b>+9.5%</b>	<b>+10.5%</b>	<b>+10.0%</b>	<b>▲1.4%</b>
Operating Income (Excluding temporary factors*)	<b>4,536</b>	<b>2,300</b>	<b>2,700</b>	<b>5,000</b>	<b>+464</b>
Operating Income Ratio	<b>+10.0%</b>	<b>+9.5%</b>	<b>+10.5%</b>	<b>+10.0%</b>	<b>+0.0%</b>
Income before Income Tax	<b>4,920</b>	<b>2,100</b>	<b>2,500</b>	<b>4,600</b>	<b>▲320</b>
Net Income	<b>5,455</b>	<b>1,800</b>	<b>2,200</b>	<b>4,000</b>	<b>▲1,455</b>
Exchange Rate (against the U.S. dollar)	112.86	115.00	115.00	115.00	+2.14
Depreciation	2,974	1,540	1,610	3,150	+176
R&D Expenses	1,500	800	850	1,650	+150
Dividends per share (Yen)	5	10	10	20	+15

\* Temporary factors for FY2021 include ¥1,136 million in grant from Suzhou government and ¥492 million in expenses associated with the termination of the Niigata NDK business. (+¥644 million in net)

## 2. Outlook for FY2022 (Ending March 31, 2023)

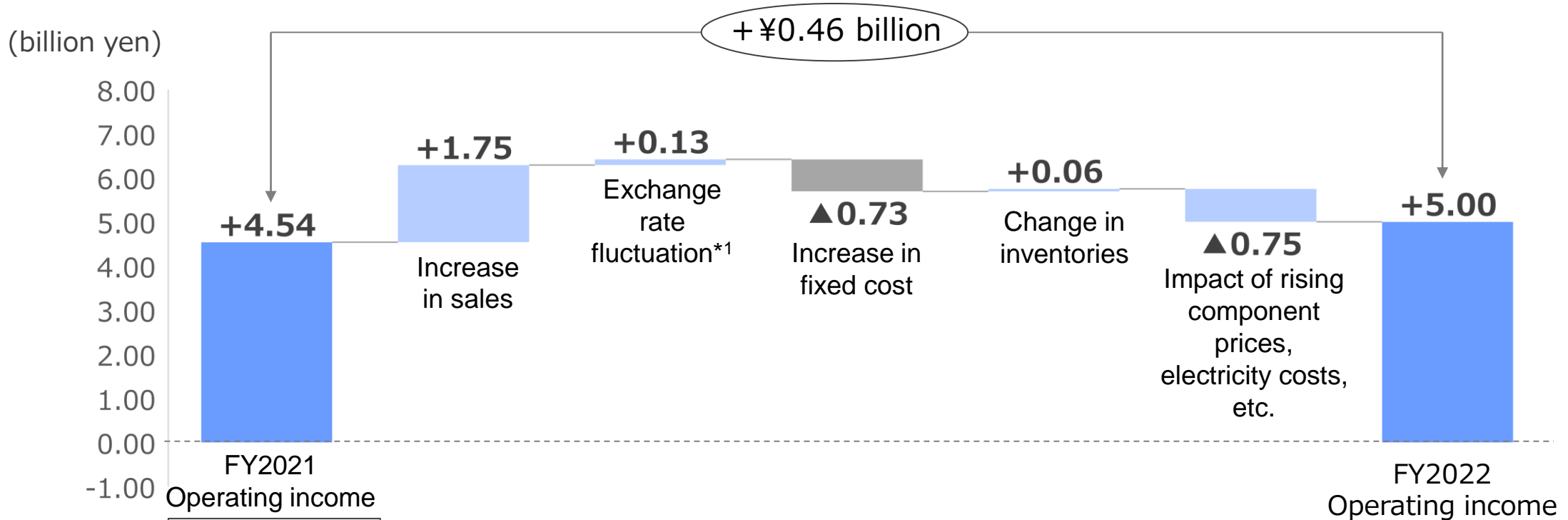
# Sales Forecast by Application

- Net sales are expected to increase by ¥4.6 billion from FY2021, mainly for automotive electronics

(Billion yen)	Net Sales			Factors of Increase/Decrease
	FY2021	FY2022 Forecast	YoY	
Automotive electronics	22.5	25.8	+0.33	Sales are affected by the lockdown in Shanghai. However, due to continuous strong demand, full-year sales are forecast to grow about 14% year-on-year.
Industrial equipment	3.6	3.8	+0.2	Sales growth is expected for OCXO for 5G base stations and clock oscillators used in optical telecom devices for data centers
Mobile communications	8.8	9.4	+0.9	Although sales for smartphones in China are expected to remain sluggish, sales of 76.8MHz crystal units with built-in thermistors are expected to grow further due to the shift to higher frequencies for 5G smartphones in the market as a whole. Sales of ultra-compact crystal units for 5G smartphones and wearable devices are also expected to increase.
IoT	1.7	2.0		
Consumer	4.3	4.6		
Medical equipment	1.3	1.3		
Synthesizers/Sensors	0.6	0.6		
Other	2.6	2.5		
<b>Total</b>	<b>45.4</b>	<b>50.0</b>	<b>+4.6</b>	Forecasting growing sales for mirrorless cameras and other consumer products

# Operating Income – Analysis of Changes in Profit from FY2021 –

- Profit expected to increase with the growth in sales, even amid higher parts prices and fixed costs



Excluding +¥0.64 bn of temporary factors

\*1 : Impact of approx. ±¥60 million/year for ¥1 fluctuation; FY2021: ¥112.86, FY2022: ¥115.00

Net sales ¥45.4 billion

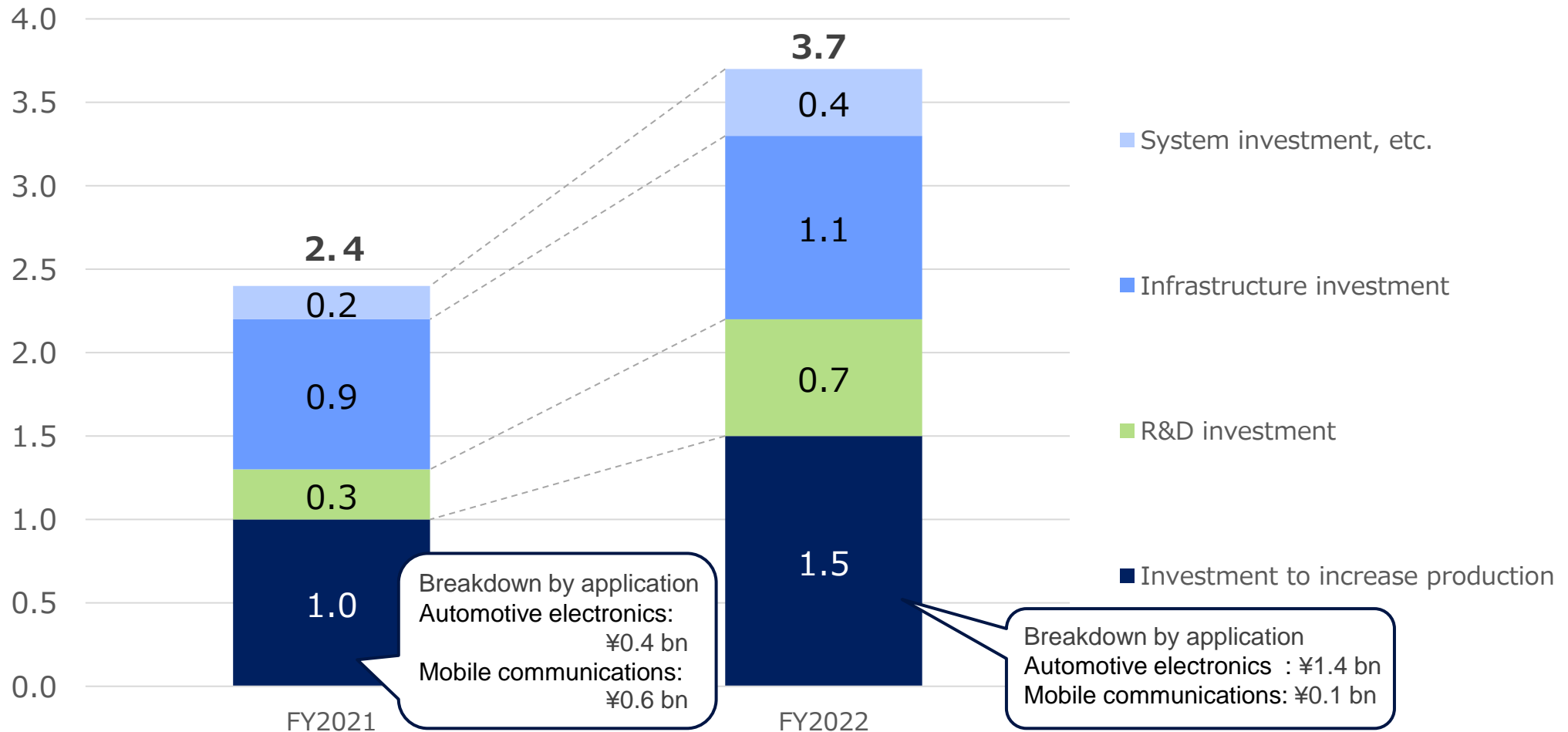
+ ¥4.6 billion

¥50.0 billion

# Capital Investment Plan

- Expand production capacity to meet growing demand for automotive electronics and mobile communications applications
- Increase investment in R&D for photolithography processing

(Billion yen)



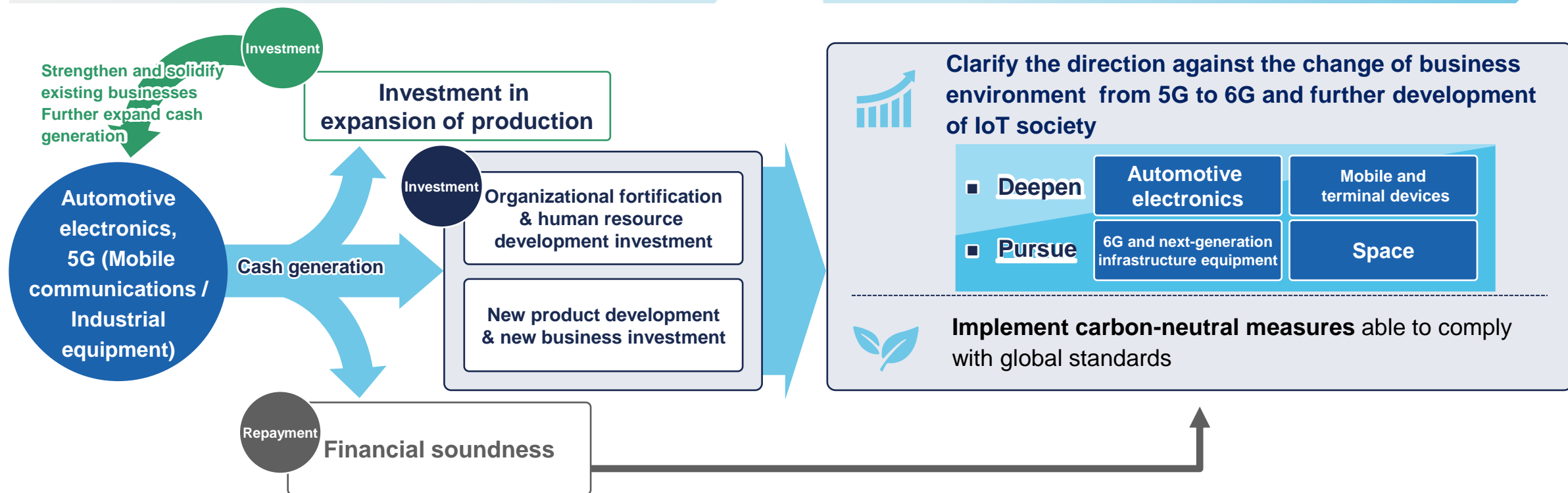
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# Positioning and Aims of the Medium-Term Management

- The Medium-Term Management Plan clarifies our shift from structural reforms to a growth phase
- Long-Term Management Strategy—Vision 2030 looks ahead to the year 2030 and clarifies the direction we should proceed in the medium to long term. The long-term management strategies will start during the Medium-Term Management Plan period

**Period of the new Medium-Term Management Plan (FY2022–FY2024)**  
 Achieve a balance between solidifying existing businesses and building a foundation for future growth

**Long-Term Management Strategies—Vision 2030**  
 (Elaborate concrete strategies)

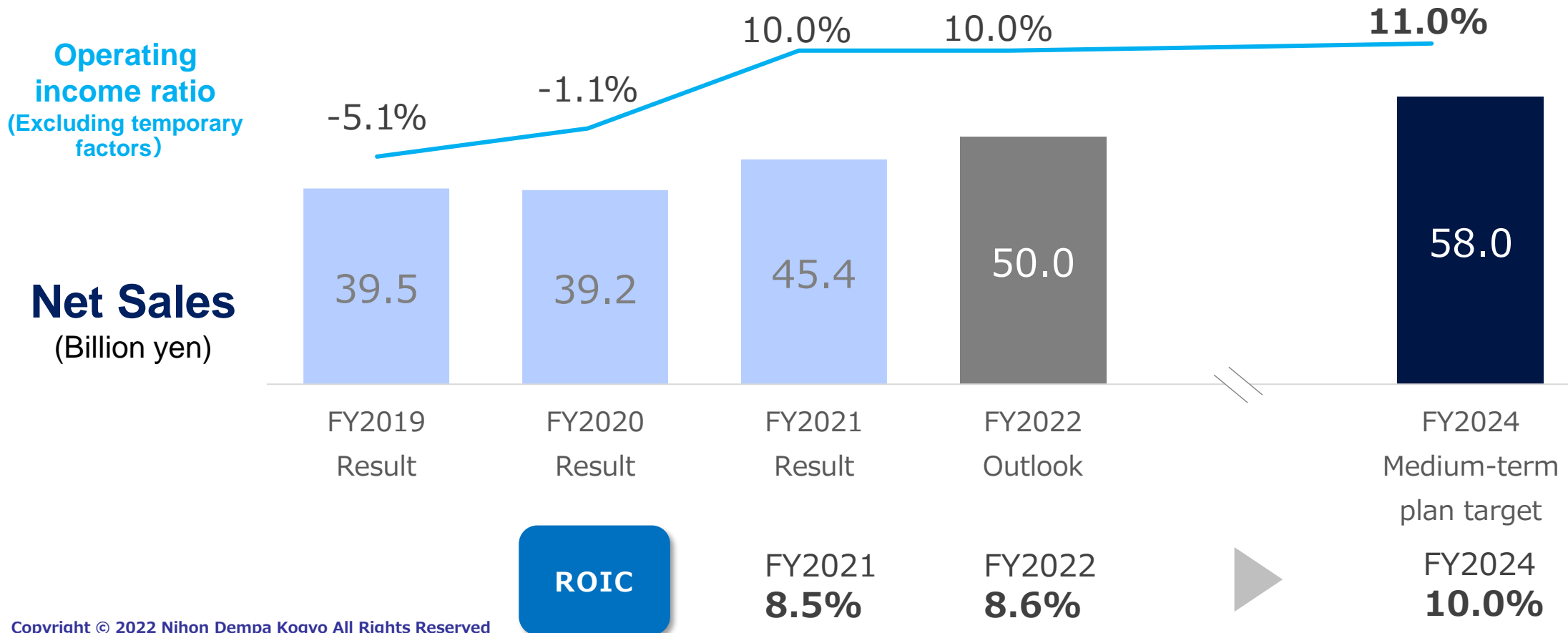


### 3. Medium-Term Management Plan (FY2022–FY2024) (1) Summary



## Management Objectives of the Medium-Term Management Plan

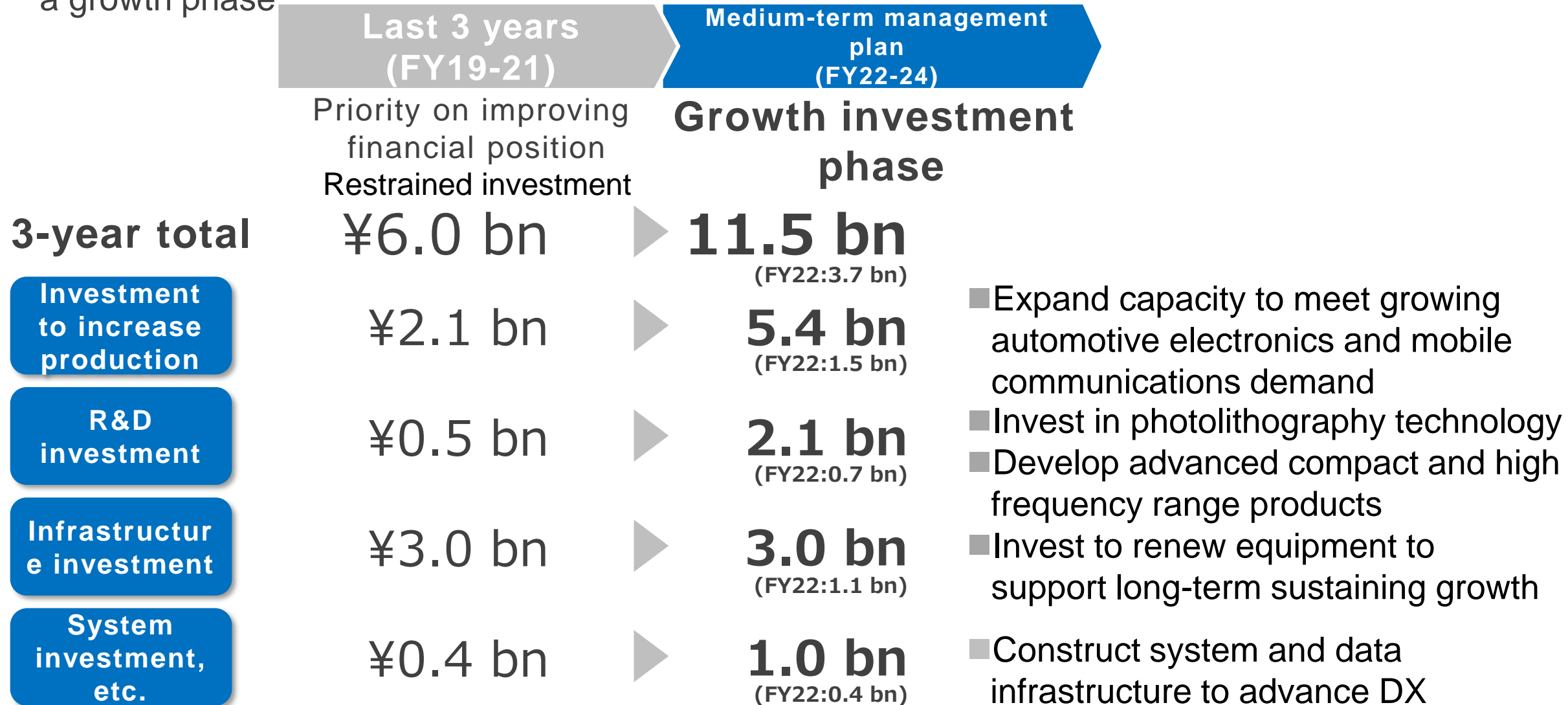
- Increase sales centering on automotive electronics and mobile communications applications
- Boost profitability by increasing sales of compact high-frequency crystal devices in line with the full-fledged adoption of 5G
- The plan anticipates higher prices for parts (such as IC)





## Investment Strategy

- Plan a capital investment of ¥11.5 billion over 3 years accompanying the transition to a growth phase



# Financial Strategy

## Increase shareholders' equity

- Raised roughly ¥4 billion through public offering
- Redeemed of all Class A shares
- Steady accumulation of profit through increased income

## Lower the loan balance (Improve the D/E ratio)

- Lower the loan balance to an appropriate level

## Increase dividend

- Plans to increase dividend after full redemption of Class A shares
- Transfer to retained earnings to maintain stable dividends after public offering

## Shareholders' equity ratio

End of FY21	▶	End of FY24
<b>32.7%</b>		<b>40.0%</b>

## D/E ratio

(Interest-bearing debt / shareholders' equity)

End of FY21	▶	End of FY24
<b>1.35</b> times		<b>0.80</b> times

## Dividends per share

End of FY21	▶	
<b>¥5</b> / half year		<b>¥10</b> / half year

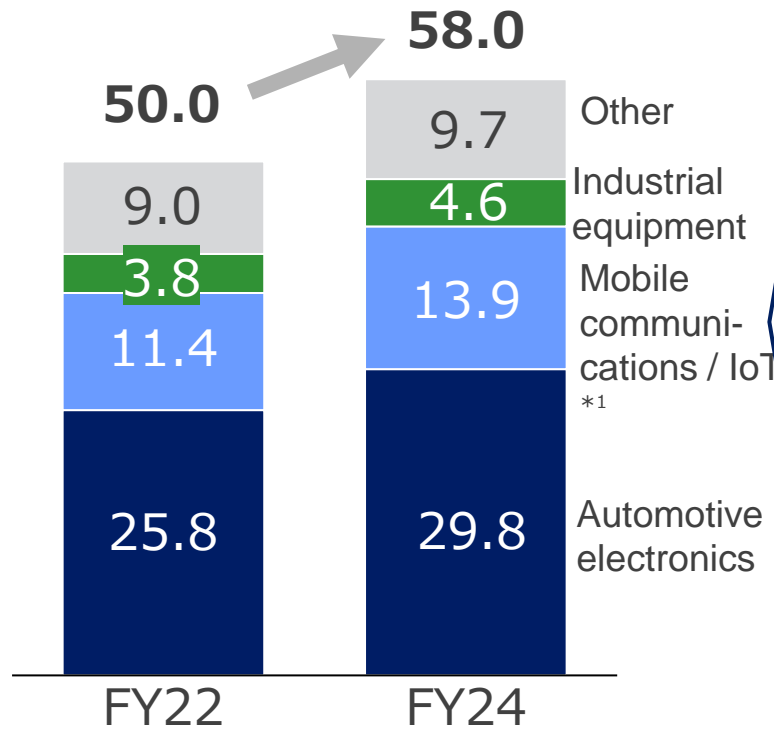
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# Business Summary and Strategy

■ Plan to increase sales mainly for automotive electronics and mobile communications to ¥58.0 billion in FY2024



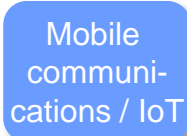





## Medium-term sales target

(Billion yen)



\*1: ¥1.2 billion for some of the uses included in the "Other" were transferred to mobile communications and IoT uses. (Revised materials published on March 10, 2022)

5G related

	Environmental awareness	Growth Directions
 	<ul style="list-style-type: none"> <li>Recovery in number of completed vehicle and increasing in number of crystal devices installed as number of vehicle equipped with ADAS increases</li> </ul>	<ul style="list-style-type: none"> <li>Supply high quality, reliable products to maintain high market share</li> </ul>
 	<ul style="list-style-type: none"> <li>Smartphone unit shipments have peaked, but the 5G installation ratio is rising</li> </ul>	<ul style="list-style-type: none"> <li>Capture 5G demand by using our advantages in compact and high frequency technologies (photolithography blank)</li> </ul>
 	<ul style="list-style-type: none"> <li>Number of small base stations (RU) is increasing rapidly due to expanding 5G communications networks</li> </ul>	<ul style="list-style-type: none"> <li>Aim to expand sales by introducing a compact OCXO for 5G base stations (RU)</li> </ul>
 	<ul style="list-style-type: none"> <li>Consumer: Growing market for professional cameras</li> <li>Medical devices and synthesizers/sensors: Gradually increasing</li> </ul>	<ul style="list-style-type: none"> <li>Consumer (cameras): Offset the decline in consumer products with professional products</li> <li>Medical devices: Increase sales to new customers</li> <li>Synthesizers/sensors: Continue developing contract proposals and increase new orders</li> </ul>

\*2 : Other includes consumer, medical devices (hearing aids, ultrasonic devices, etc.), Synthesizers/sensors 20



# Business Overview and Strategy: Priority Focus Fields

- Focus on automotive electronics and 5G-related areas



- Supplying products for automotive applications since the early 1970s
- Holding 50% or higher market share\*1 for many years

\*1: NDK estimates based on data from research companies

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- Began development of photolithography blanks around 2008
- Began mass production of high-precision products required for 5G products ahead of competitors

# Automotive Electronics

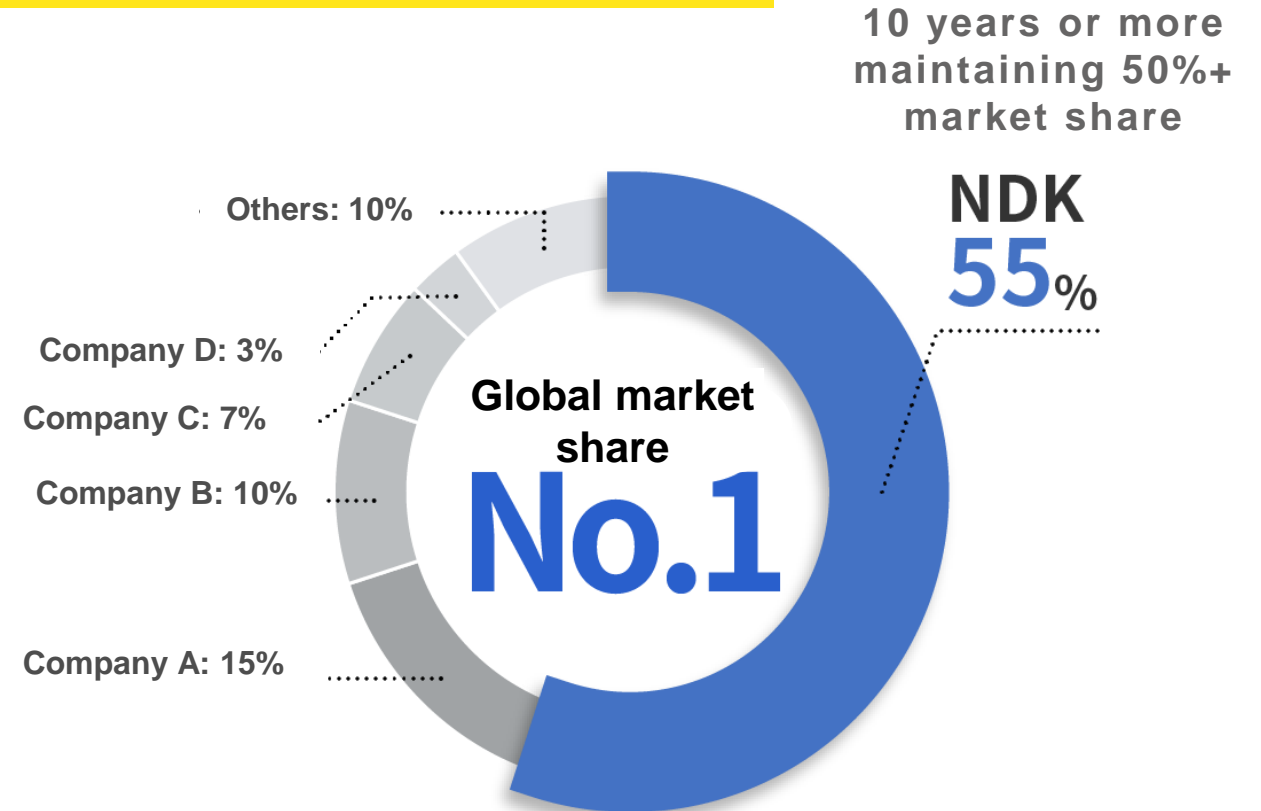


**NDK's uncompromising approach to high quality required to automotive product**

**NDK receives steady trust from tier 1 customers**

### ■ NDK's comprehensive support capabilities

<b>Planning</b>	Ability to propose high quality products that anticipate needs
<b>Development</b>	Design technology to meet required specifications
<b>Prototypes</b>	Verification capability to prevent defects before they occur
<b>Mass production</b>	Ability to supply high quality and highly reliable products
<b>Shipping</b>	Full-fledged support in the unlikely event of a defective product

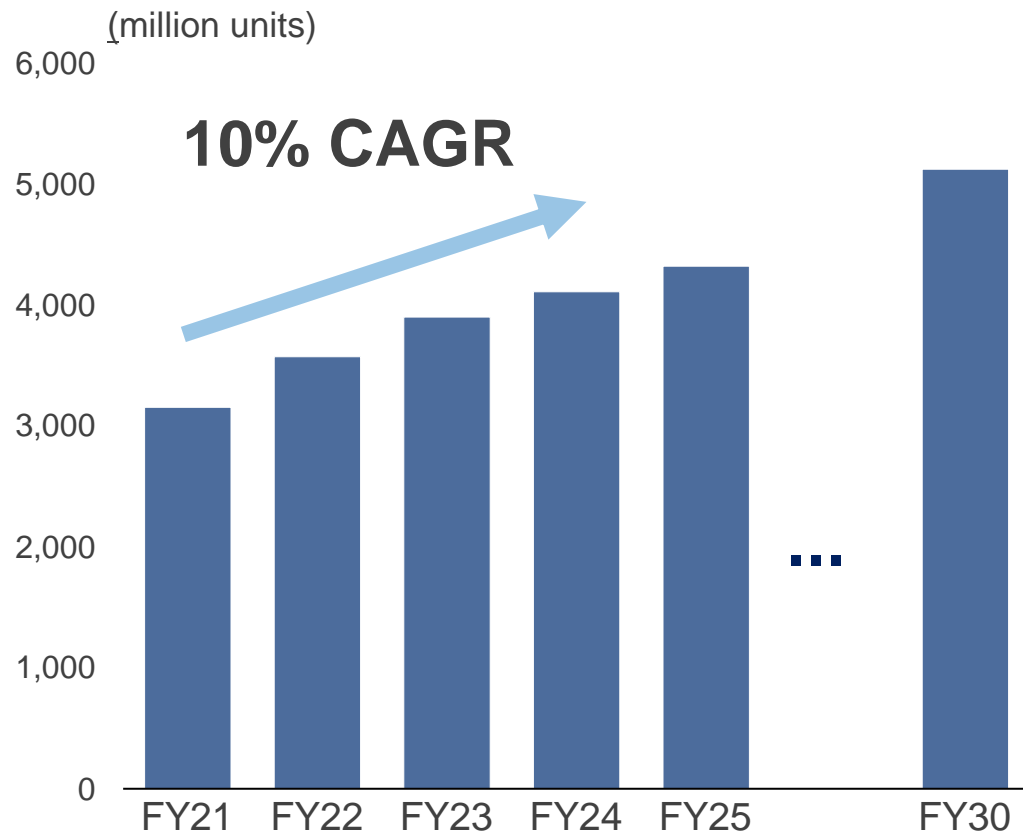


Source: NDK estimates based on data from research companies (Market share as of CY20 forecast)

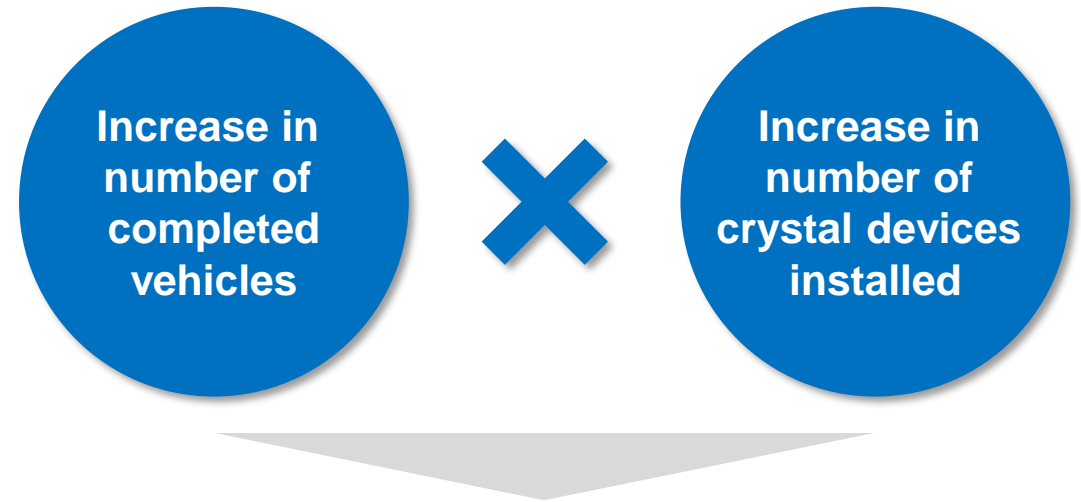
# Automotive Electronics (Market Environment (1))

- Market potential for crystal products is expected to increase due to an increase in the number of completed vehicles and the number of crystal units installed

## Crystal Product Potential for Automotive Electronics Applications



Source: NDK estimates from FY21 are based on forecast data from research companies



**Market size is expected to increase significantly during the Medium-Term Management Plan**

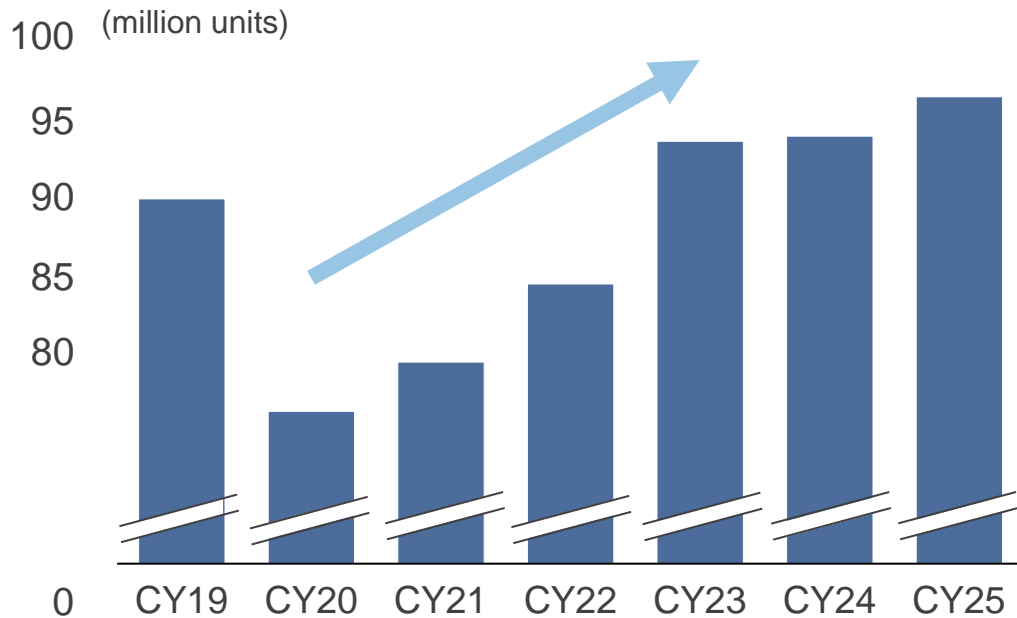
No impact on the number of crystal devices installed is expected accompanying the shift to EVs

## Automotive Electronics (Market Environment (2))

- The growth of ADAS installed into automotives will raise the crystal device demands
- The trend of standardization and mandatory of ADAS installation is expected to accelerate according to the development of automated driving technologies

### Forecast of global sales volume of completed vehicles

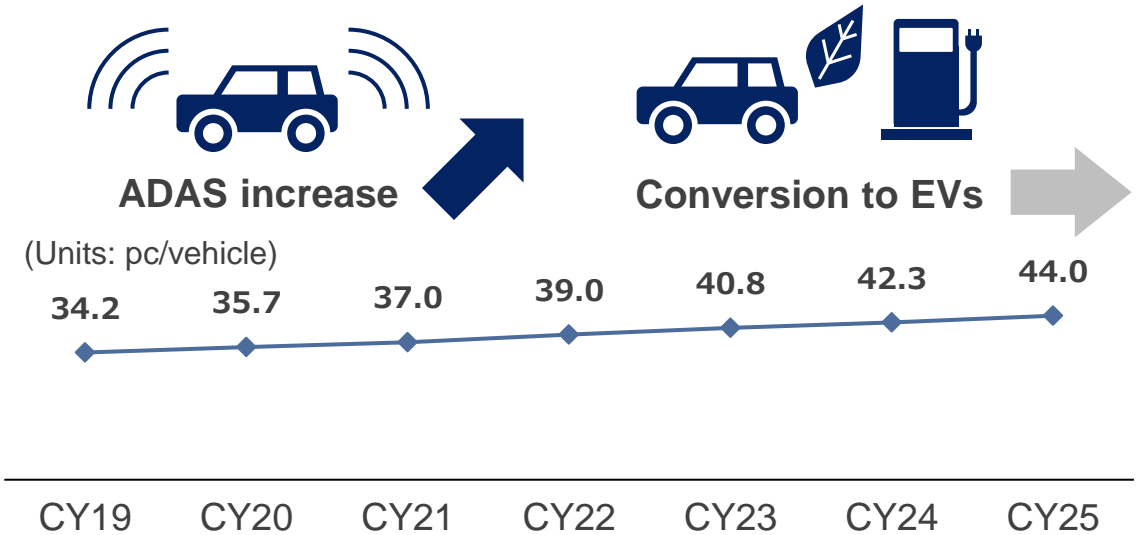
- The number of completed vehicles is expected to recover to the 94-million-unit level in CY24



Source: NDK estimates from CY21 are based on forecast data from research companies

### Estimated number of crystal devices installed

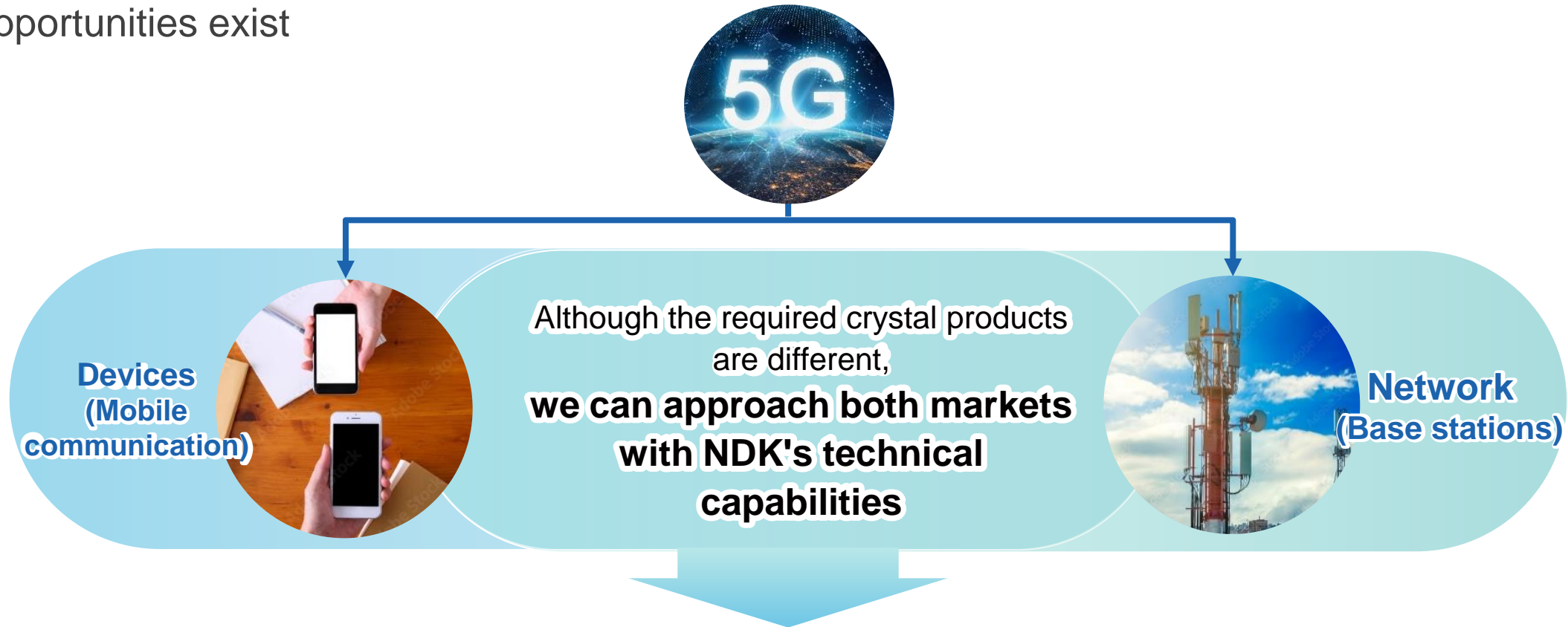
- The number of crystal devices installed is increasing significantly as ADAS are becoming more common
- No impact on the number of crystal devices installed is expected accompanying the shift to EVs





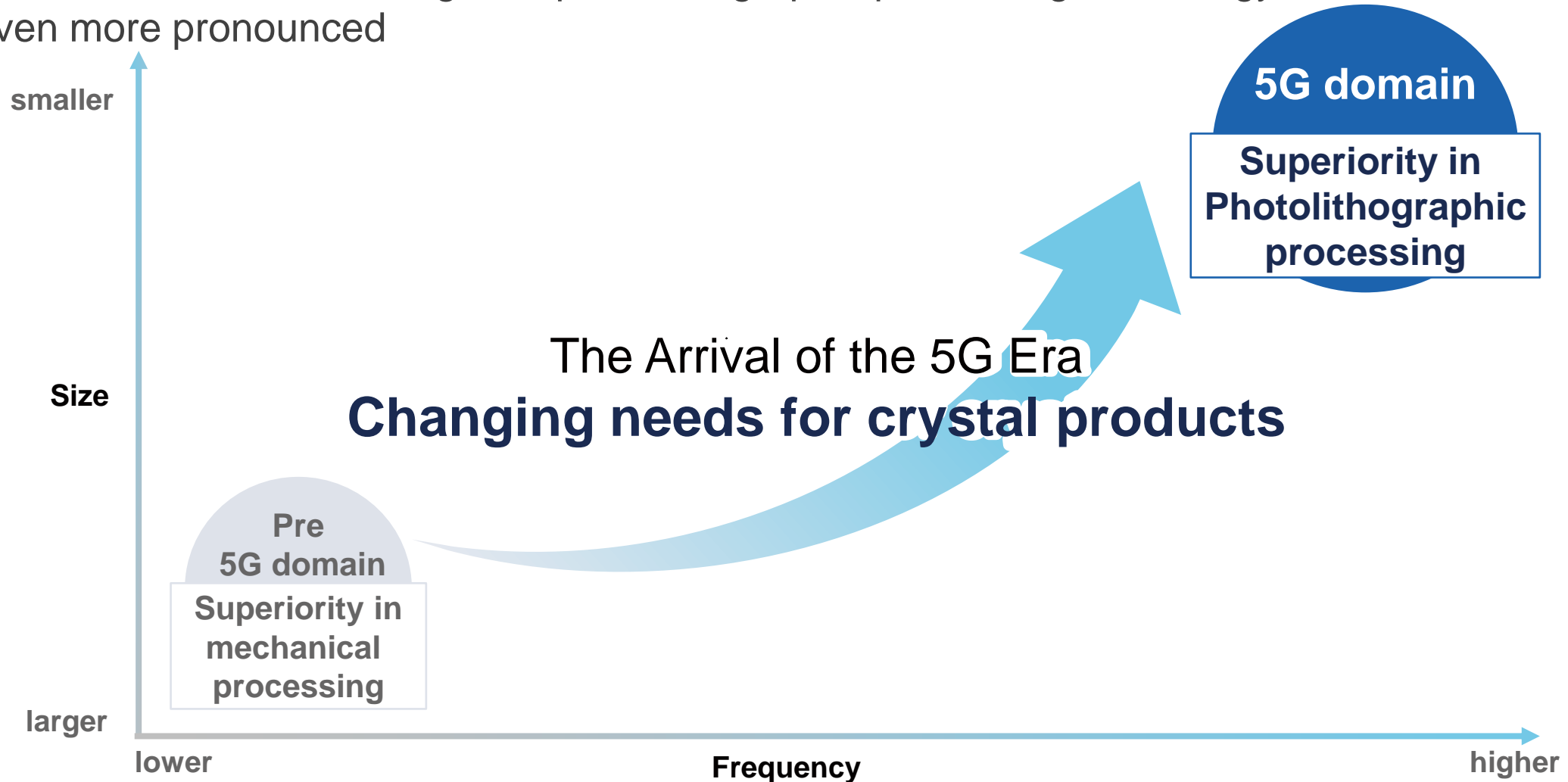
## Our Business Domain in 5G

- 5G has two main markets: the devices market and the network market, and NDK can approach both markets
- The 5G market is expected to have high growth potential and a wide range of business opportunities exist



There is a **wide range of business opportunities** in the **5G market**

- With the advent of the 5G era, the need for compact, high-frequency crystal devices will increase, and the advantages of photolithographic processing technology will become even more pronounced



### 3. Medium-Term Management Plan (FY2022–FY2024) (2) Business Strategy

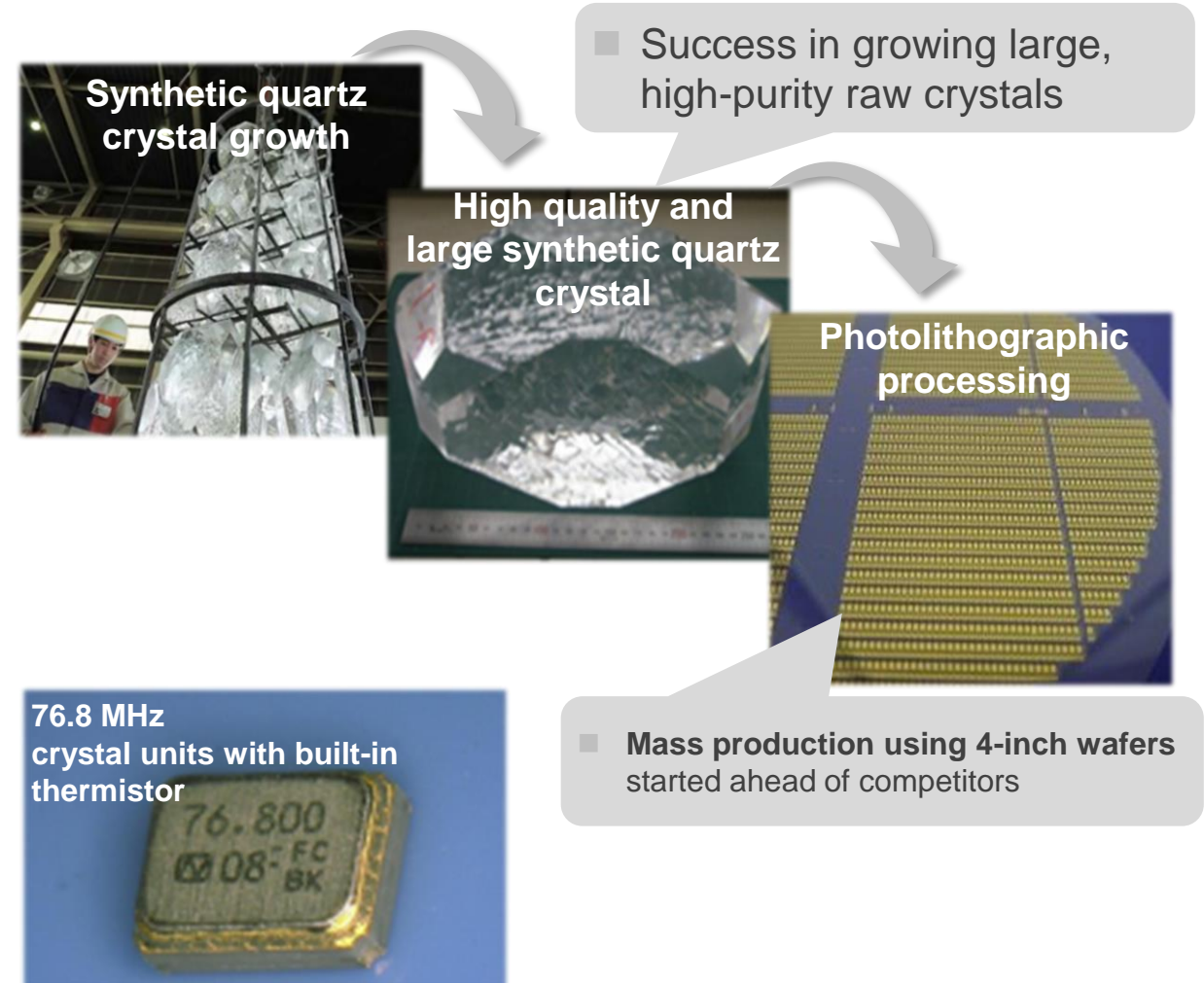
# Mobile Communications

(NDK's Strength: Photolithography Processing Technology (2))

- The technological know-how we have accumulated over many years has become the cornerstone of our integrated production of high-quality, high-performance photolithography blanks, giving us a competitive edge in 5G applications

## Initiatives and Results to Date

- We have been accumulating production know-how through repeated trial and error since around 2008
- Realization of high quality and high performance (compact size and high frequency) photolithography blanks with high productivity
- Successfully developed products for 5G ahead of other companies
- ✓ Acquired first certification of crystal unit (76.8 MHz) with a built-in thermistor from Qualcomm (mass production began in June 2020)

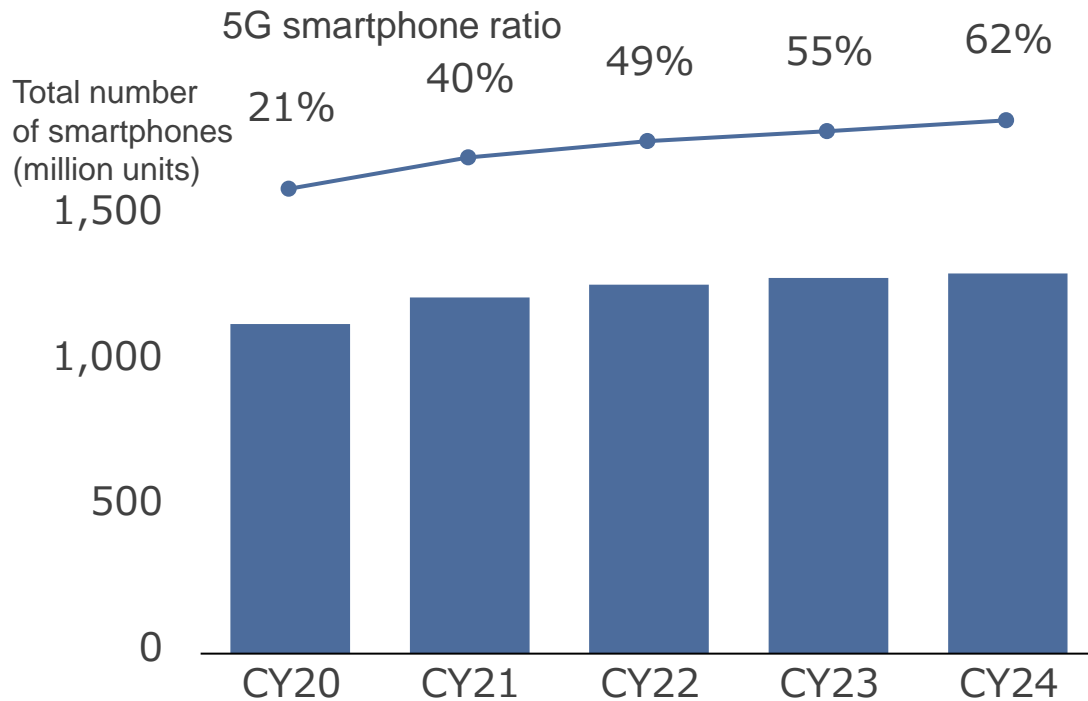


# Mobile Communications (Market Environment)

- Shift to the 76.8MHz band is proceeding along with the growth in demand for 5G smartphones.
- Company expands sales of ultra-compact crystal units (including 76.8MHz products) with photolithography blanks for 5G smartphones and wearable devices

## Smartphone unit volume potential

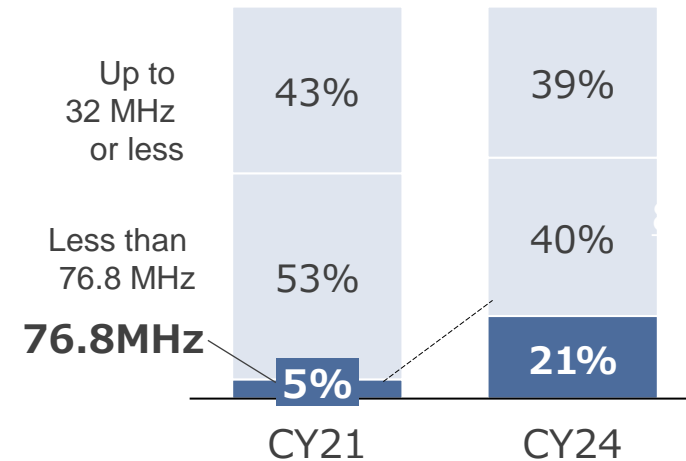
5G smartphone market CAGR 18%



## Potential ratio by smartphone and peripheral device frequency

- Crystal unit frequency is rising with the spread of 5G smartphones
- Ongoing shift to the 76.8MHz bandwidth

Expected transition of ratio by frequency band

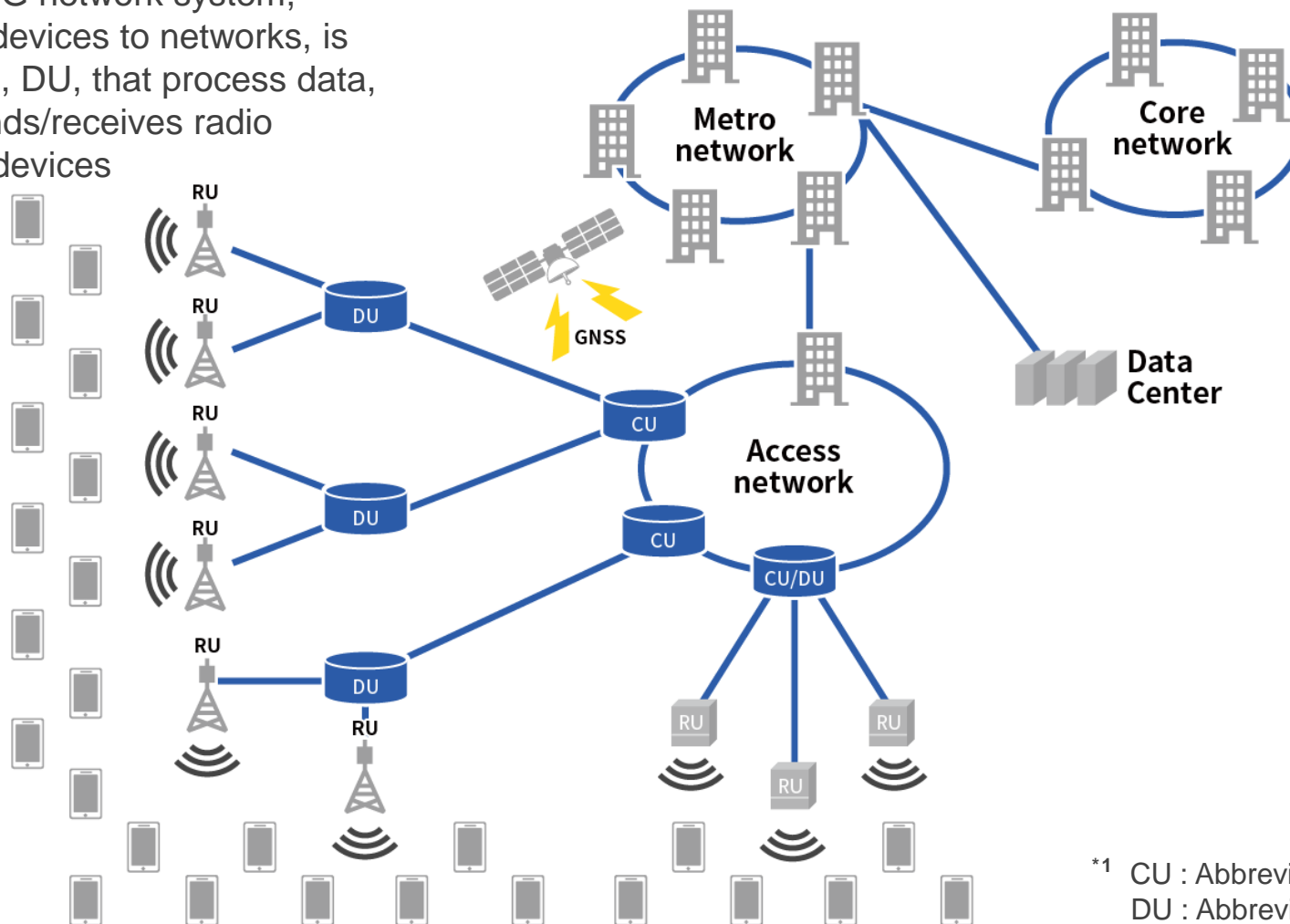


# Industrial Equipment: Base Stations (NDK's Strengths)

- NDK is the sole Japanese mass producer of OCXO for 5G base station

## 【5G Network system】\*1

Base station at 5G network system, which connects devices to networks, is composed of CU, DU, that process data, and RU, that sends/receives radio waves between devices



NDK provides high-stable OCXOs using our own high-purity and high-quality synthetic quartz crystal



■ OCXO (25×22mm)

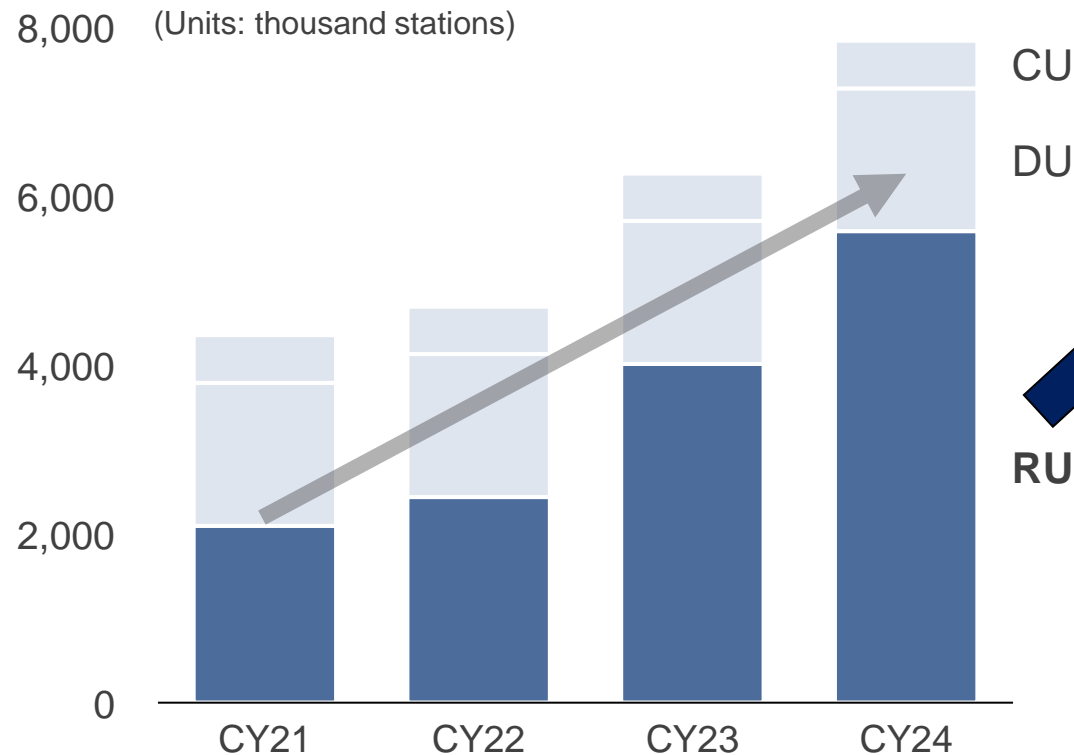
\*1 CU : Abbreviation for Central Unit  
DU : Abbreviation for Distributed Unit  
RU : Abbreviation for Radio Unit

# Industrial Equipment: Base Stations (Market Environment)

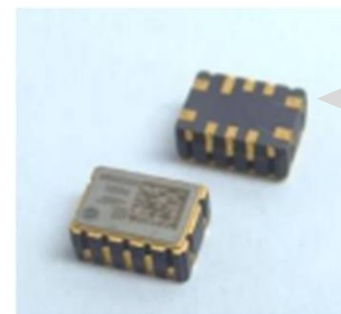
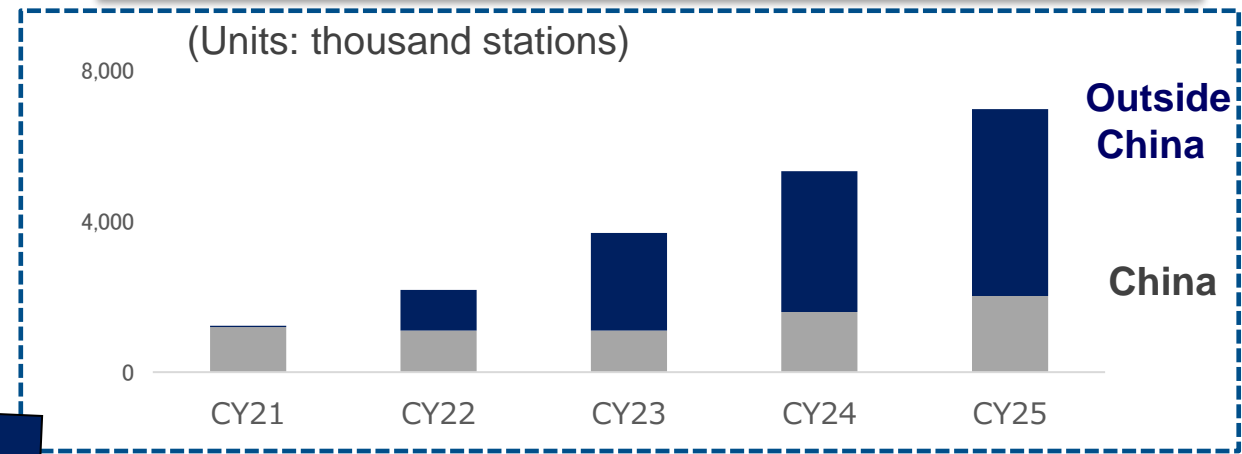
- 5G base stations are expected to need a large number of small wireless base stations called radio units (RU)
- NDK will aim to expand sales of compact OCXO

## Base Station Market Potential

**RU market: 38% CAGR**



## Forecast of RU Demand by Region



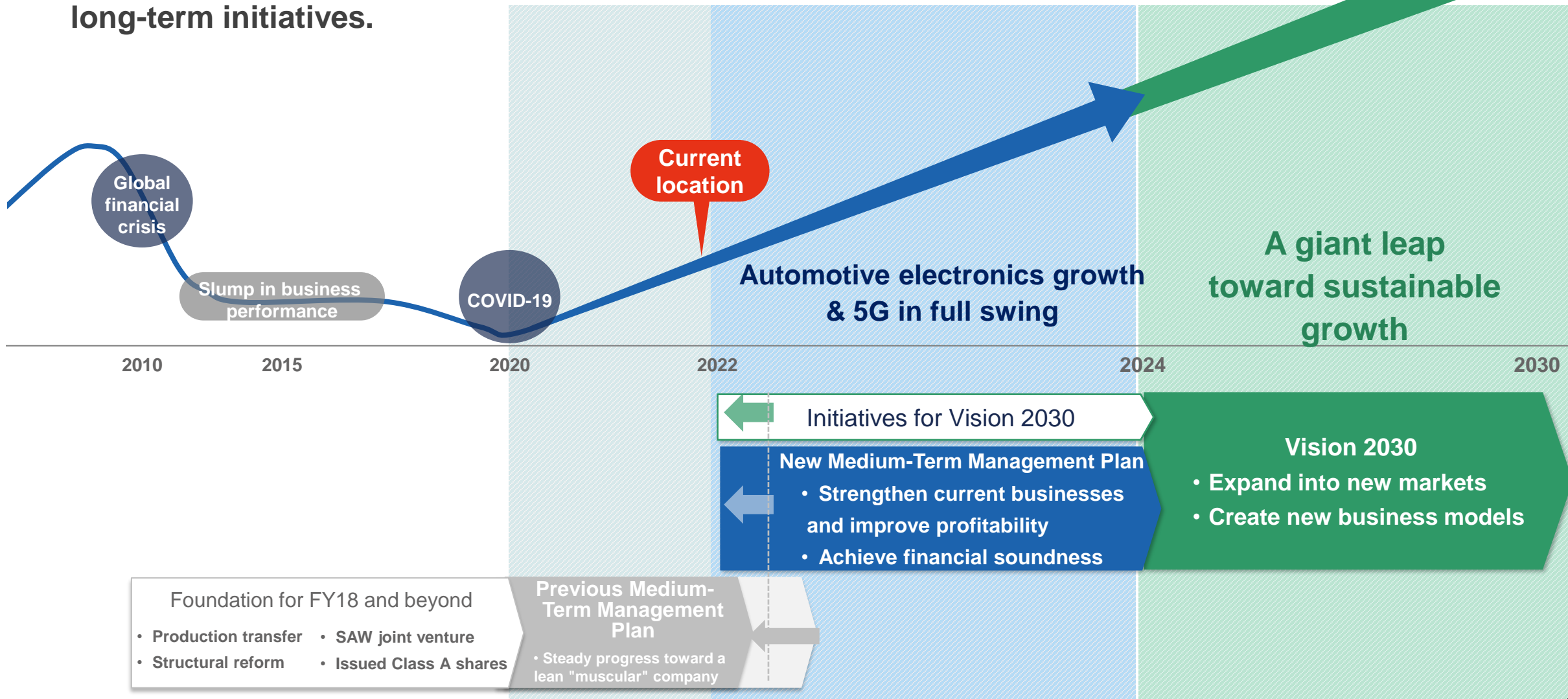
■ World's smallest (7×5 mm) compact OCXO

**Aim to provide compact OCXO that maintain stable performance even in harsh environments**



# Final Comments

- The New Medium-Term Management Plan has started one year ahead of schedule. Aiming for continuous growth by solidifying current business and taking medium- to long-term initiatives.



**Thank you everyone for your time**

**For IR inquiries:**

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Nihon Dempa Kogyo Co., Ltd.  
Mail: [irmaster@ndk.com](mailto:irmaster@ndk.com)**



# Sales by Application (Half Year)

(Billion yen)	FY2021 Result			FY2022 Forecast		
	1H	2H	Total	1H	2H	Total
Automotive electronics	11.2	11.3	22.5	12.5	13.3	25.8
Industrial equipment	1.8	1.7	3.6	1.9	1.9	3.8
Mobile communications	4.2	4.6	8.8	4.4	5.0	9.4
IoT	0.8	0.9	1.7	0.9	1.1	2.0
Consumer	2.2	2.1	4.3	2.3	2.3	4.6
Medical equipment	0.6	0.7	1.3	0.7	0.6	1.3
Synthesizers/Sensors	0.2	0.4	0.6	0.2	0.4	0.5
Other	1.2	1.4	2.6	1.3	1.2	2.5
<b>Total</b>	<b>22.3</b>	<b>23.1</b>	<b>45.4</b>	<b>24.2</b>	<b>25.8</b>	<b>50.0</b>

# Special IR Page on NDK Crystal Devices



From automated driving to 5G.  
NDK crystal devices support  
cutting-edge automobiles and communications

<https://www.ndk.com/en/ad/2021/index.html>

