



INTER ACTION Corporation

Medium-Term Business Plan

2024-2028



July 2023

Agenda

① Where Inter Action Stands and its Purpose

② Medium-Term Plan: Concrete Initiatives

1. IoT Related Business
2. Laser Processing Business
3. AI Image Processing Business
4. Vibration Solutions Business

③ 5-Year Financial Targets

Where Inter Action Stands (2008-2023)



- We began restructuring in 2008 and grew in leaps and bounds until 2019. (FY 5/2019 ➡ Sales: Y7.99bn; profits Y1.98bn)
- Since 2020, we have been up against a growth ceiling ➡ **We aim to move our focus from solely seeking sales and OP as we enter a stage of company evolution and growth**

2008-2019

Company restructuring ➡ completion ➡ stable growth

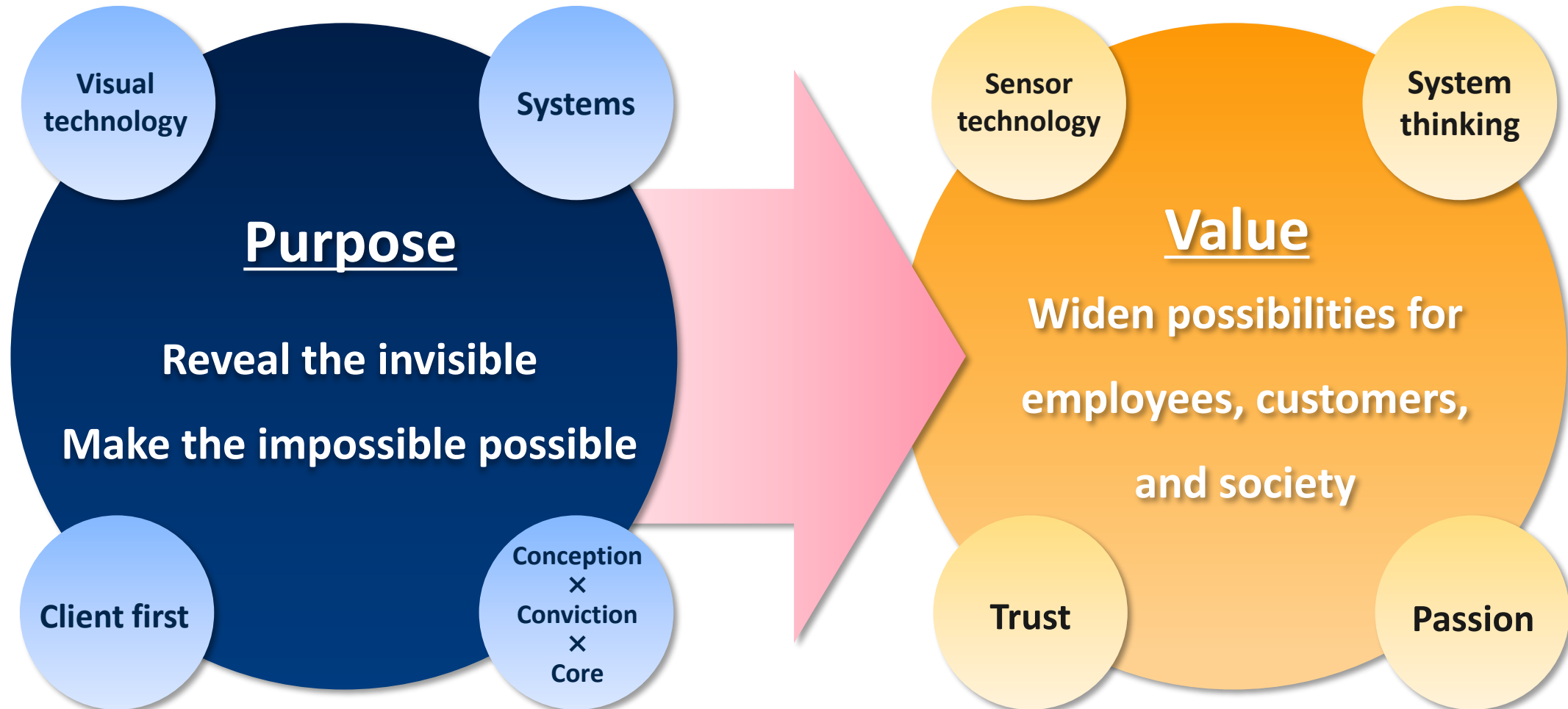
2020-

Existing business growth ceiling



Inter Action's purpose → reveal the invisible; make the impossible possible.

As part of that process, we will widen the field of possibility for our employees, customers, and society.



By implementing our MTP we will break through the growth ceiling → We will build “KAKUSHIN” to create future industry

INTER ACTION has taken three meanings of the word ‘kakushin’ to characterise its growth: conviction, conception, core

Building KAKUSHIN to create future industry

Conviction in a future for society, for all of us

Conception – conceiving the future

Core in supporting industry

Firm faith in our stakeholders

Firm trust from society and our clients

1 . IoT Related Business

We will grow our company value even further with **existing business growth** + initiatives in new fields

Purpose

Reveal the invisible
Make the impossible possible

Value

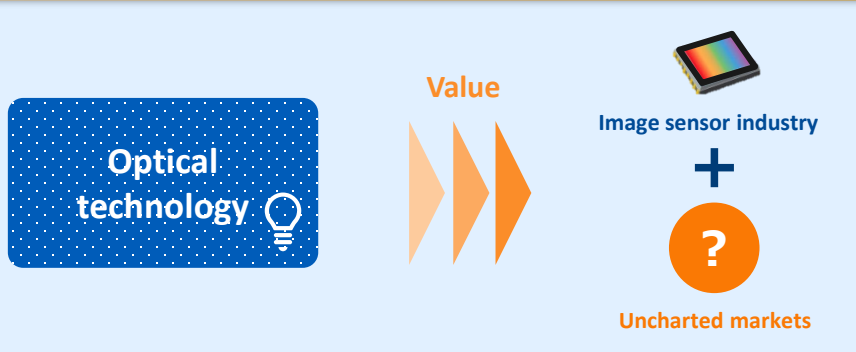
Widen possibilities for employees, customers, and society

We will acquire customers in the image sensor industry and succeed in **expanding our sales channels**



+

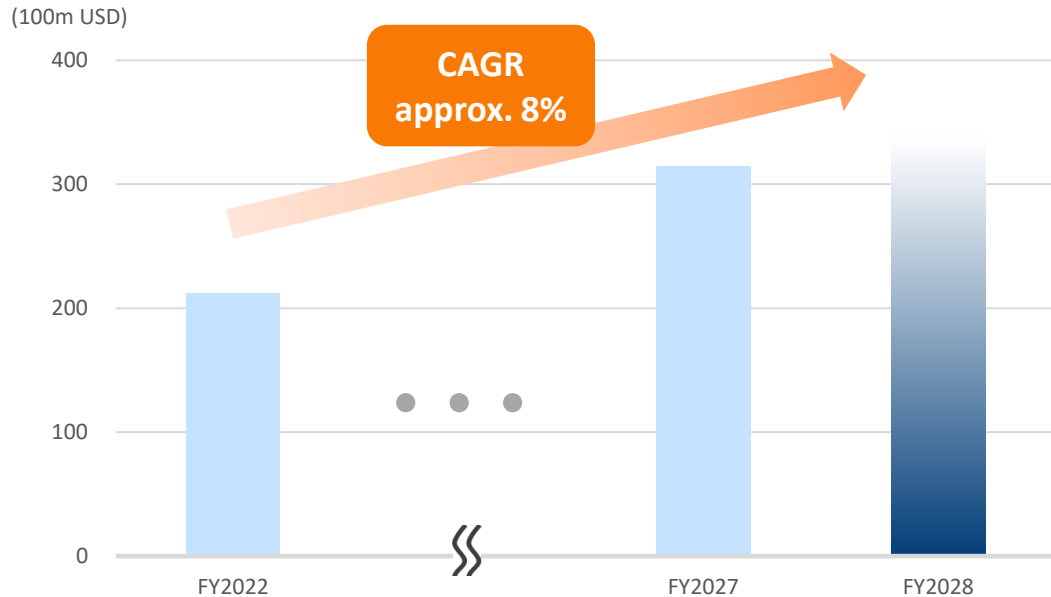
We aim to **offer new value** beyond the image sensor industry



Grow company value

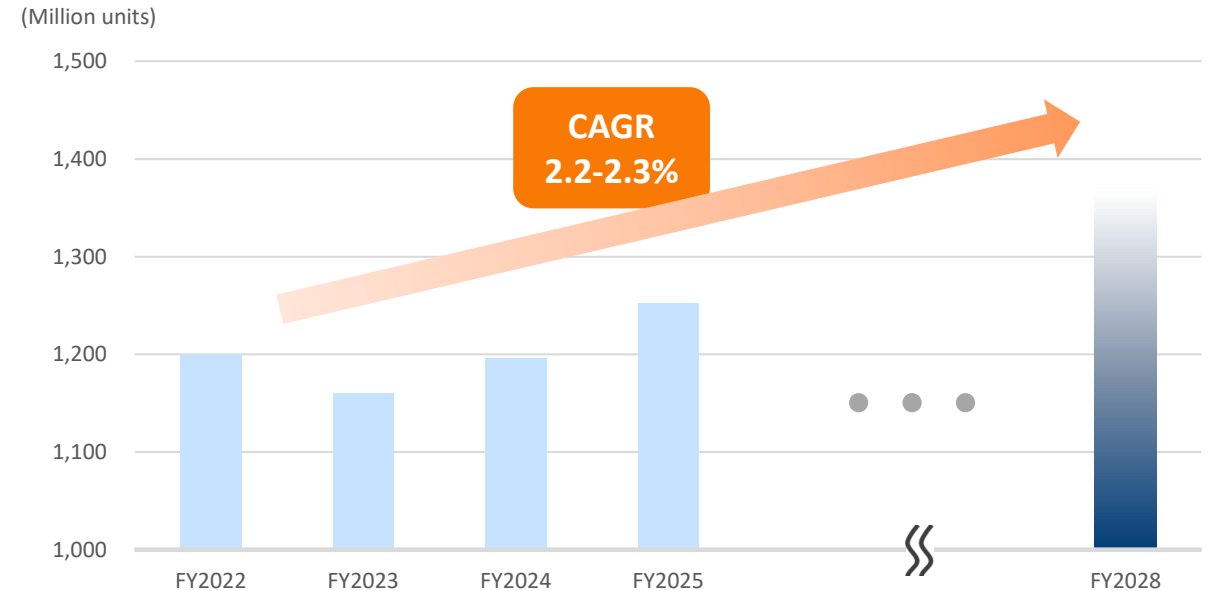
Temporary image sensor market stagnation → But trending toward mid- to long-term expansion

Image Sensor Market Outlook (monetary basis)



(Source: YOLE 3/2023)

Smartphone Production Trends (forecast)



(Source: INTER ACTION Research 5/2023)

The expansion of image sensor applications and added value are set to lead stable monetary market growth



Market expansion to continue long-term

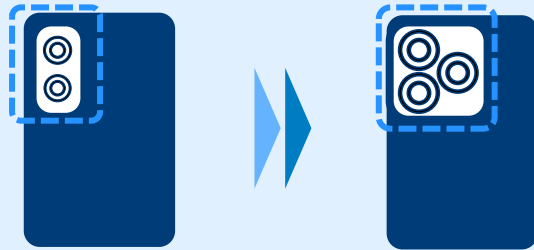
Smartphone production is set to stagnate in the coming years



From 2025 comes stable growth

Mobile camera technology continues to advance → We will further our development of technology to capture sector trends

① Increase in Mobile Camera Aperture Size and Lens Count



Camera number and size
UP

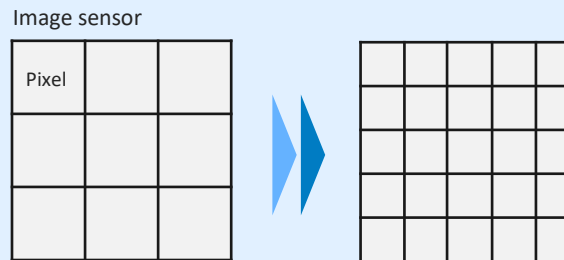
➤ Increase camera number

• Image sensor production volume will increase. Improved inspection efficiency is the key.

➤ Increase image sensor size

- With current illuminators, the number of DuTs* will go down.
- We will sell new illuminators with increased DuT and efficiency (by enlarging the illuminated area etc.)

② Increase in Image Sensor Pixel Count



Pixel count UP

➤ Increase pixel count in image sensors

- More measurement accuracy is required as pixels are miniaturized.
- We will improve the position measurement accuracy (focal accuracy) of the Pupil Lens Module™ (PLM™)

③ ToF Sensor Technology Improvement



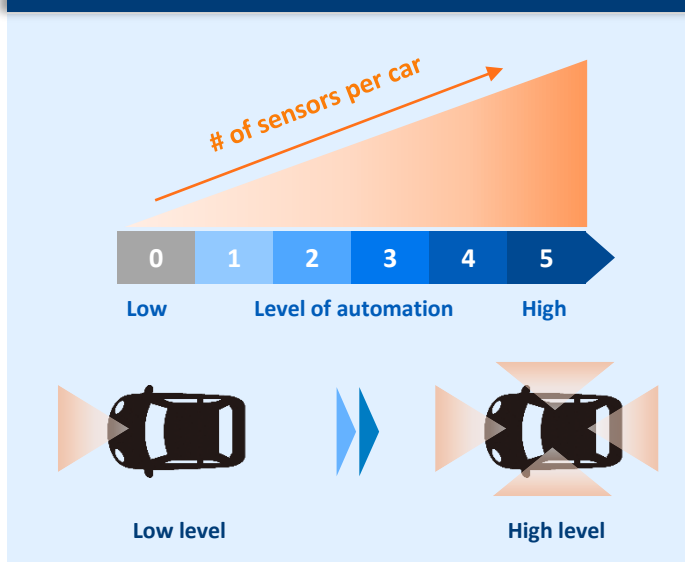
Accuracy of distance
measurement UP

➤ Increase accuracy of distance measurement in ToF sensors

- More advanced technology makes higher accuracy distance measurement possible. We will improve the accuracy of our illuminators to join the trend.
- This is pioneering technology, so the key is in pioneering development.

Fresh image sensor demand will follow developments in self-driving car tech → Demand for technology different to mobile image sensors

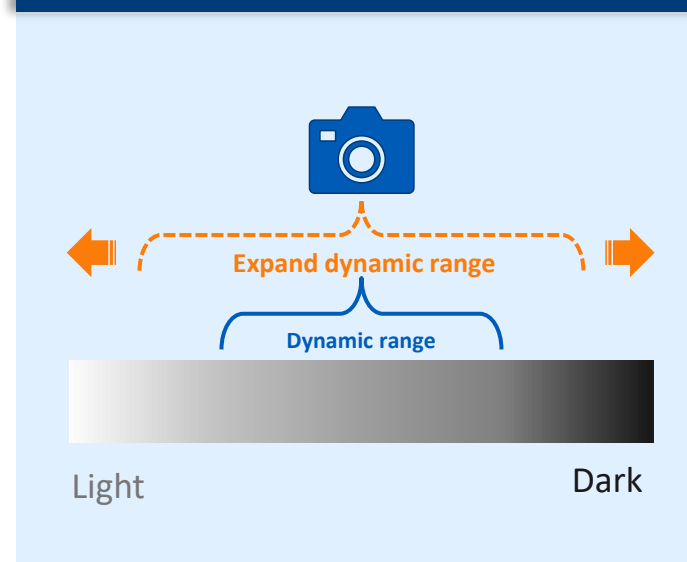
① Increase In Sensors Per Car



➤ Increase in sensors per car

- The number of necessary sensors per car will trend upward with the level of automation in self-driving cars.
- Sensors will be needed at the front, side, rear, etc., each type requiring different technology.

② Dynamic Range* Enlargement



➤ Dynamic range enlargement

- Auto sensors are likely to be used in environments with starker light/dark contrast than mobile sensors, so the range of brightness a sensor can sense will increase.
- Illuminators that emit large amounts of light will be necessary at inspection.

③ Product Reliability Improvements



Quality/safety improvements

➤ Product reliability improvements

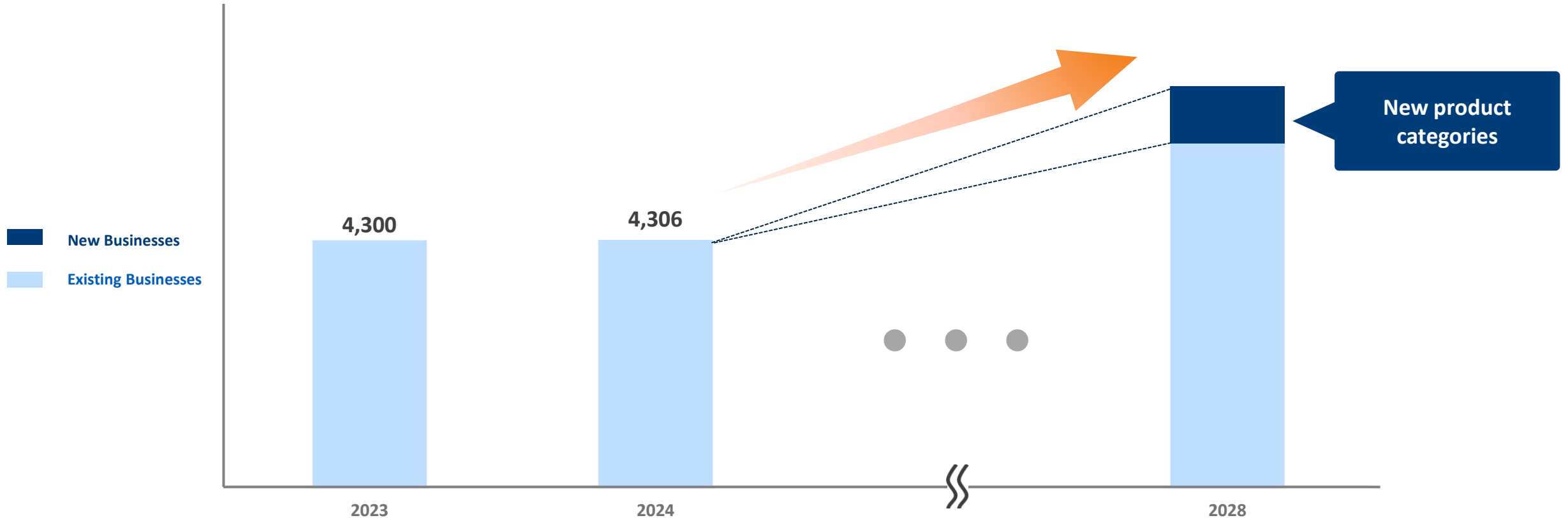
- To avoid accidents, there will be a heavy focus on the infallibility of quality tests. More accurate and reliable measurements will be required.
- Testing equipment that works even in extreme temperatures will be required.
- We aim to develop highly stable illuminators and PLMs™

【Existing Businesses】

- We expect the image sensor market to grow medium- to long-term, an outlook shared by image sensor manufacturers
- We forecast an accompanying medium- to long-term increase in our customers' image sensor test process capex
- Conversely, we expect the next 2-3 years to see caution in capex due to the slump in smartphone production largely driven by a Chinese economic downturn

【New Businesses】

- New product categories likely to take 2-3 years for preparation and development. We aim to begin sales in the 4th or 5th year



We foresee stronger relationships with customers thanks to our new center

➔ We will speed up the development and order fulfillment processes

Nagasaki Development Center



Opened April 2023

Leads to



Strengthening Customer Relationships

PLM™

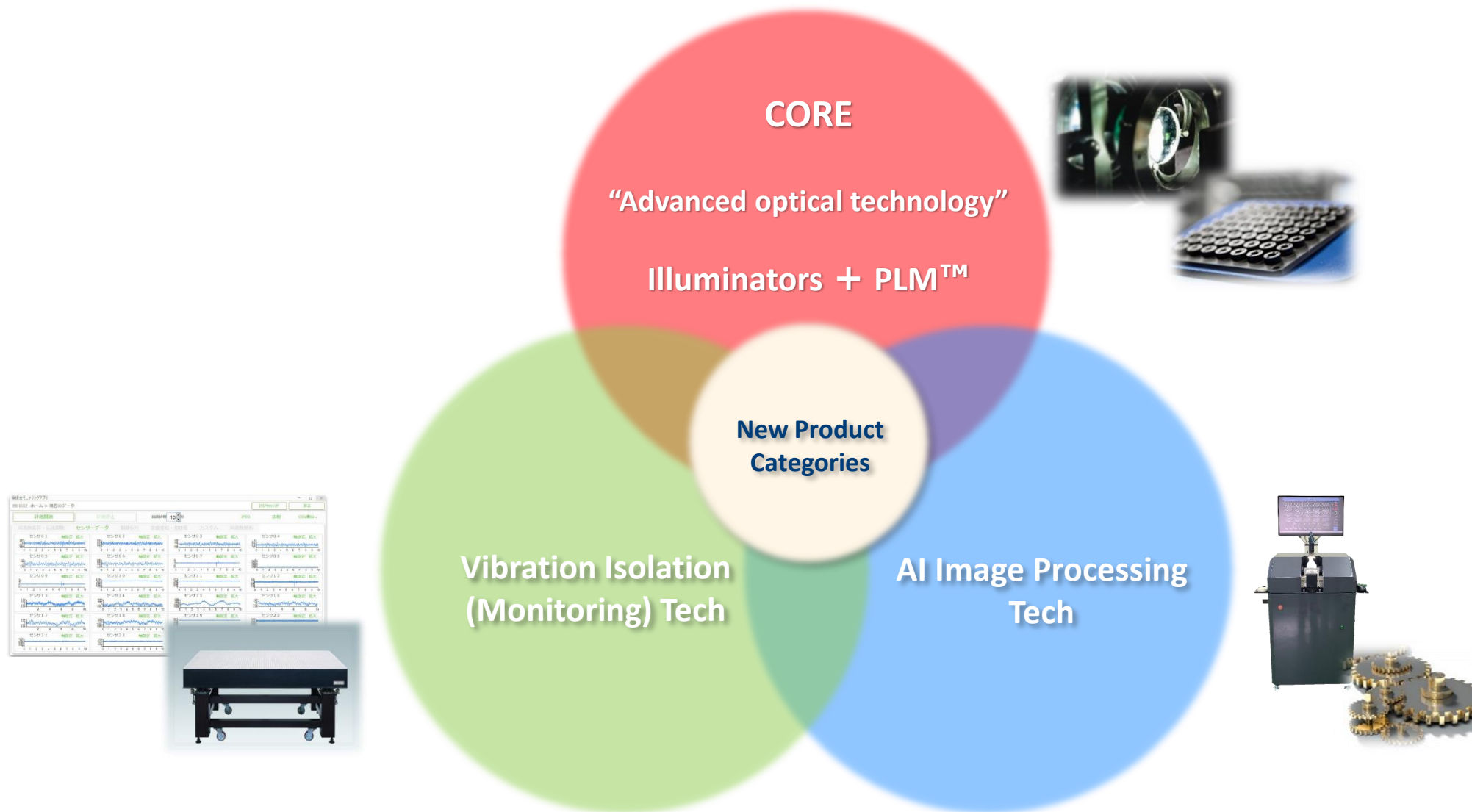


Strengthening our development process

+

Shortening lead-times

We will consolidate all kinds of tech that can reveal the invisible → We aim to leverage the synergies to create product categories new to our line-up



2. Laser Processing Business

As we exit the initial verification stage, we enter the product creation and expansion stage

05/12/2020

Announcement of Lastech as a subsidiary



08/02/2022

Joint research started with Nagasaki University

Research into processing methods for highly brittle materials



11/08/2022

Planned to establish new office in Nagasaki



03/02/2023

Announcement of Nagasaki Center opening

Began development on a SiC dicing machine project



03/28/2023

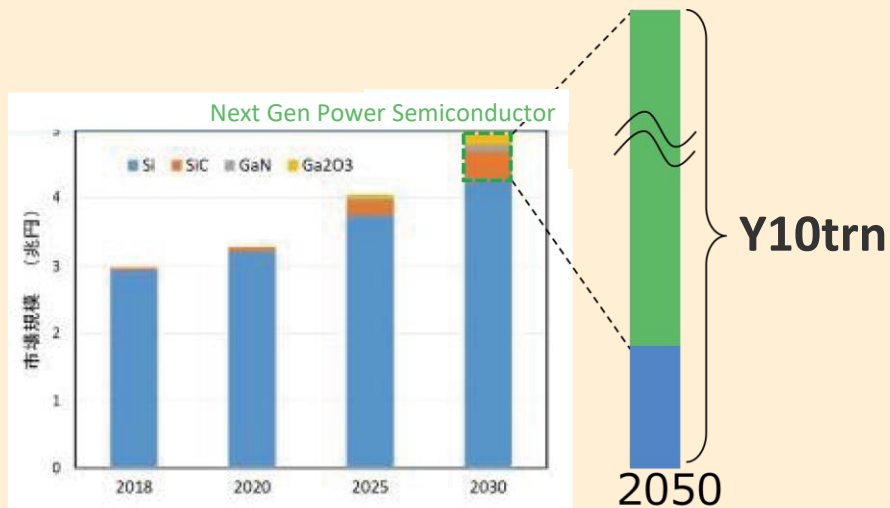
Nagasaki Center signing ceremony



We will pay close attention to industry trends, including costs, and respond to trends and technological innovations by keeping ahead of the curve with next level processing technology

Industry Trend Backdrop 1

Power Semiconductor Global Market Growth



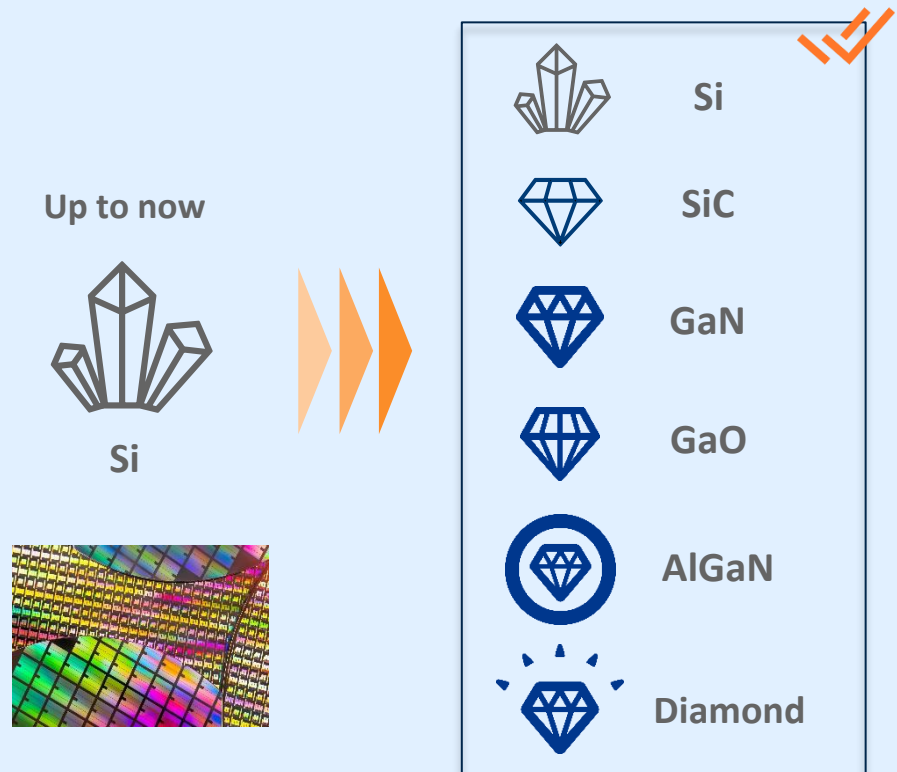
Source: NEDO, "Next-Generation Power Electronics Project to Realize a Low-Carbon Society"

*METI, Outline of R&D and Social Implementation Plan Formulated for the "Next-Generation Digital Infrastructure Construction" Project (draft) 7/2021

https://www.meti.go.jp/shingikai/sankoshin/green_innovation/industrial_restructuring/pdf/003_04_00.pdf

Industry Trend Backdrop 2

Developments in Materials for Power Semiconductors



We will create equipment that can handle various materials, prioritizing user convenience → 3 themes

Theme 1

“Cover many materials”

- We will expand our target from wafers to allow the processing of a variety of materials
- We will increase the types, wavelength, optical systems and other laser specifications we cover



Theme 2

“Turn processing recipes into data”

- We will accelerate research into expanding processing data and our accumulated know-how
- We will build a database of processing conditions and optimal process recipes



Theme 3

“Equip inspection functions”

- We will equip post-processing inspection functions using diagnostic imaging (processing width, roughness etc.)
- We will improve yield and throughput on the user side



With semiconductor-quality equipment as a base, we will develop equipment fit for general processing in future

We will imbue the equipment with not just processing capabilities but **tech to reveal**, and with usability we will put the **client first**

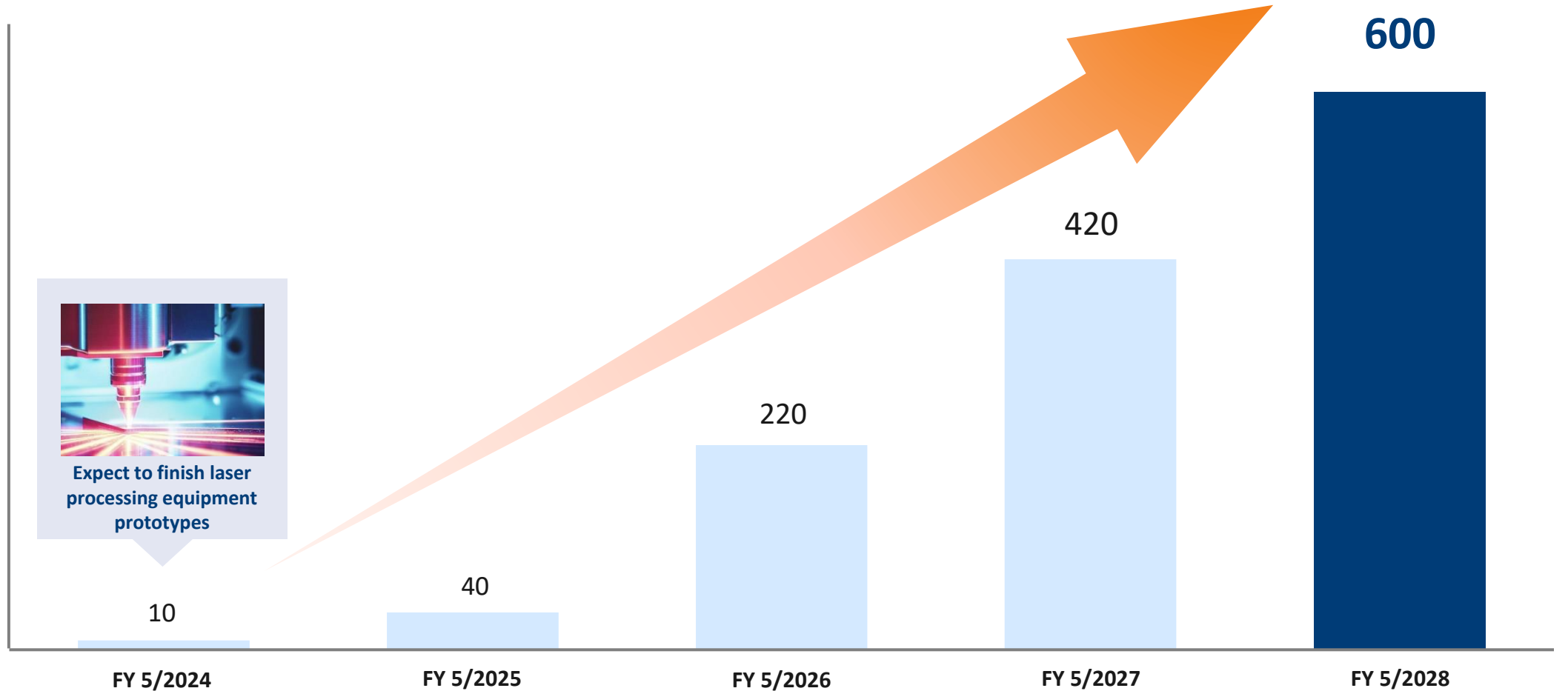
④ Laser Processing Business: Medium-Term Sales Plan

We will start with custom products, use customer feedback to improve processing functions, and enrich with further features

Focus on working as a laser equipment trading company

Continue + sell laser processing machines

(Million JPY)



The ripples spreading from progress in the Laser Processing Business, and our goals for the business

Purpose
Reveal the invisible
Make the impossible possible

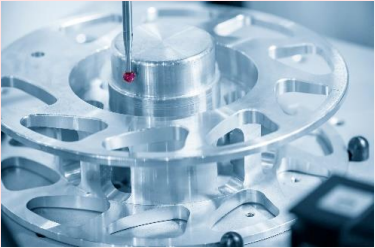
Value
Widen possibilities for employees, customers, and society

Internal product development and use in production



- Reduce development time
- Improve product accuracy and quality

Increase processing freedom with the ability to handle a variety of materials



- Solve supply chain problems
- Progress life science
- Solve societal problems like skill inheritance
- Create new tech and businesses



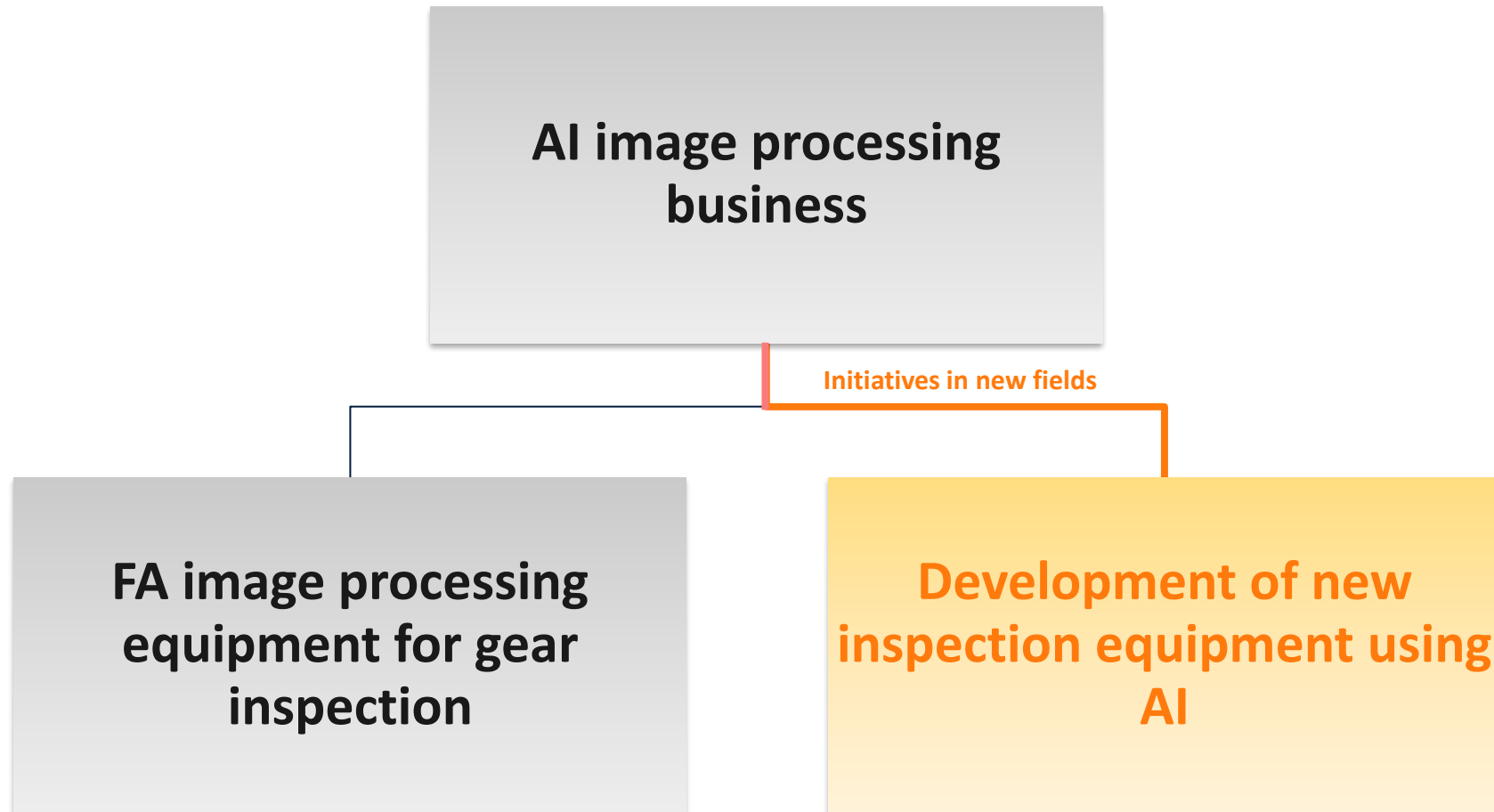

Improve customer satisfaction


Grow company value


Contribute to developments in industry and research

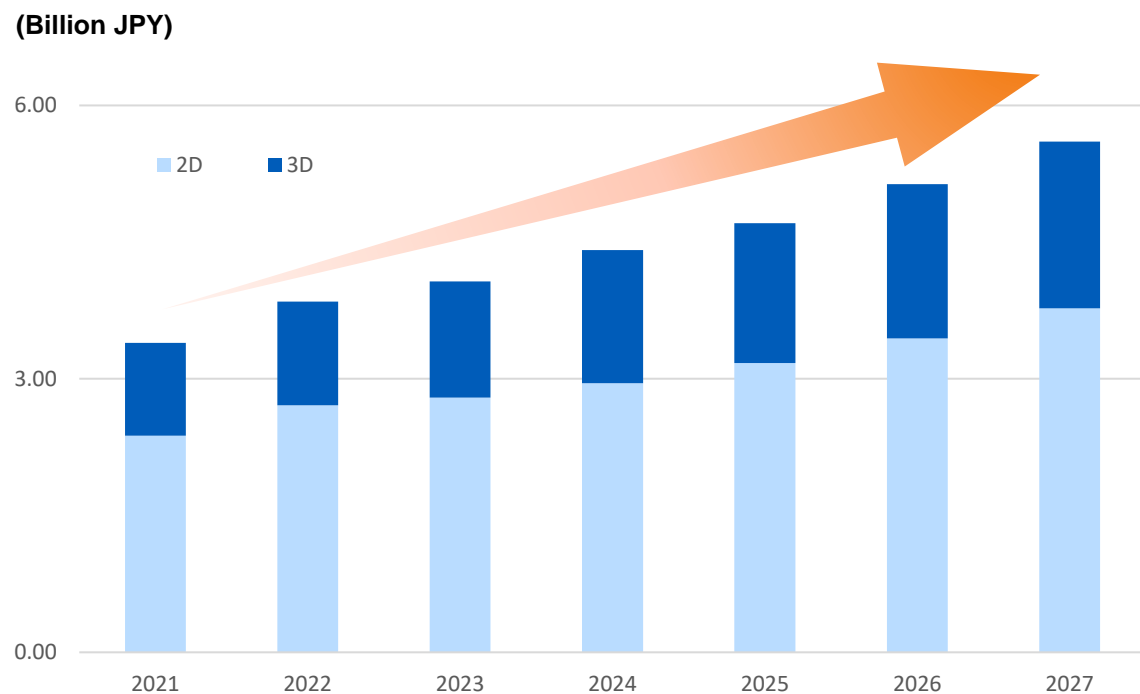
3 . AI Image Processing Business

- Comprising the development, production, and sale of equipment designed to improve automation and efficiency of the product inspection process
- FA image processing equipment for gear inspections is already a completed product at our subsidiary



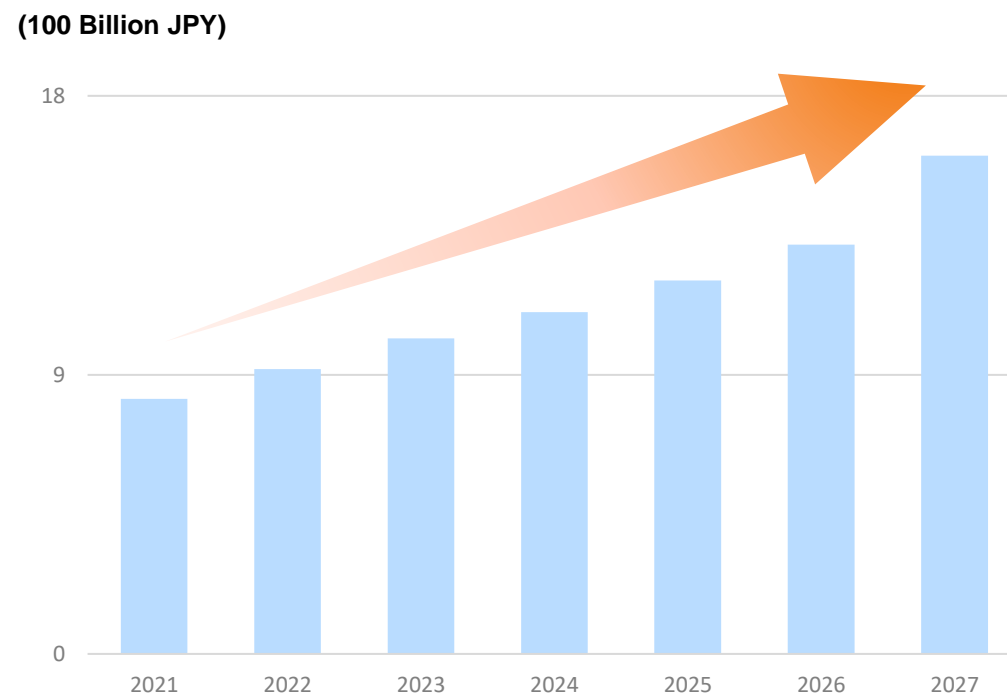
The surface inspection and non-destructive testing markets are expected to grow

Surface Inspection Market



(Source: kbvresearch 11/2021)

Non-Destructive Testing Equipment Market



(Source: Yano Research Institute 4/2023)

Visual inspection is the standard, but carries issues with it

Highly individualized visual inspection

- Visual inspection performed by several inspectors (manual)
- Sensory inspection
- High levels of experience necessary



Problems in the inspection process



Falling efficiency and inspection accuracy

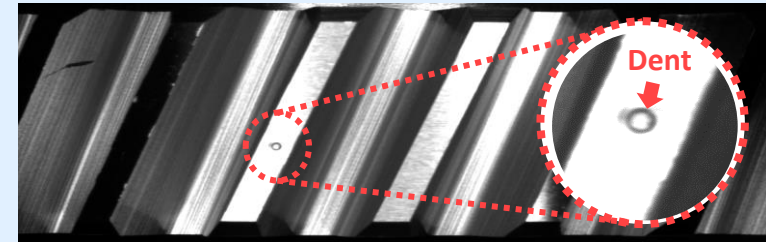


- Varied and complex shapes → **Handling is challenging**
- Reliance on individual judgement → **Hard to standardise quality**
- Manual checking → **Low inspection speed**



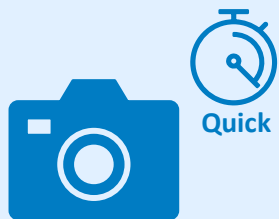
Problems related to personnel

Burdens on operations/health



- Defects on a tiny scale → **Leads to eyesight impairments**
- Labor-saving is difficult → **Personnel shortages mean more intense workloads**
- No room for error → **Mental stress**

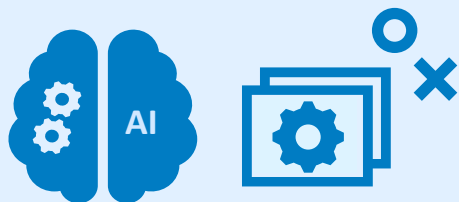
Detecting gear defects with speed • stability • accuracy



High-speed photography with specialized high-res cameras



Stable photography under high luminescence LED

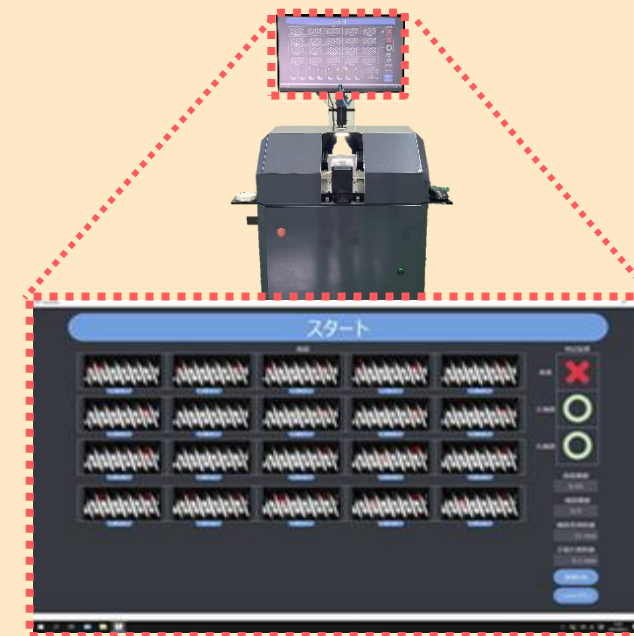


Highly accurate image analysis with cutting edge AI tech

+ Gear know-how



FA Image Processing Equipment



Yesterday's challenge, today's reality

Stable photography of specialized shapes

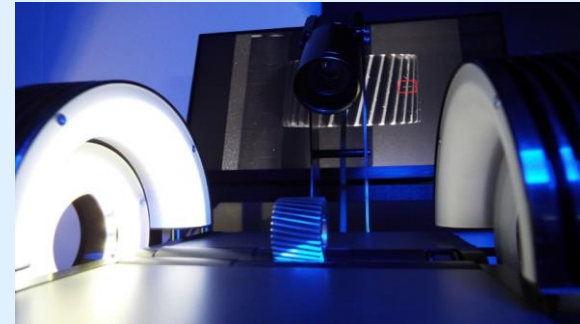
Highly accurate defect detection

Application in non-destructive testing systems

Optical technology



FA image processing equipment



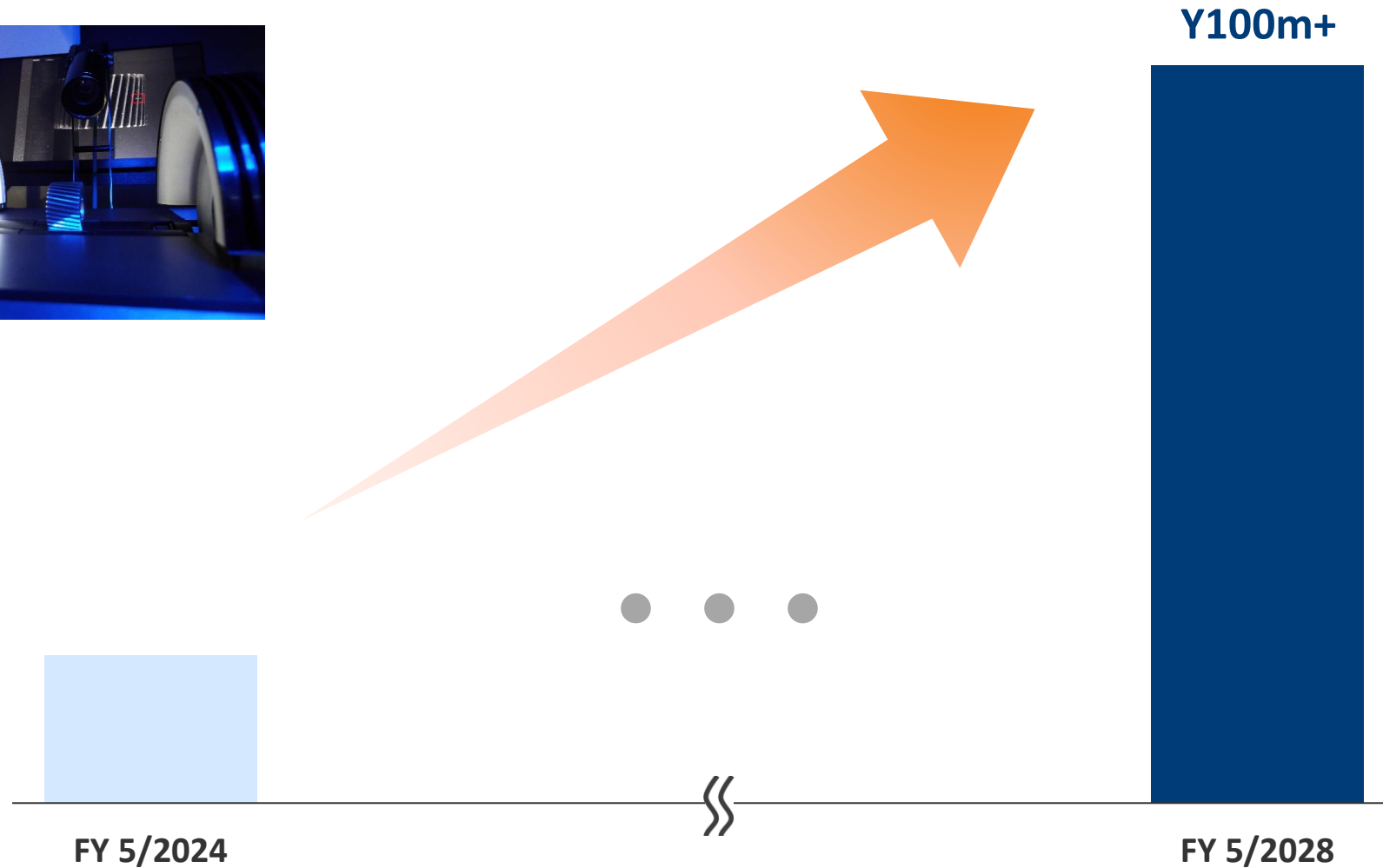
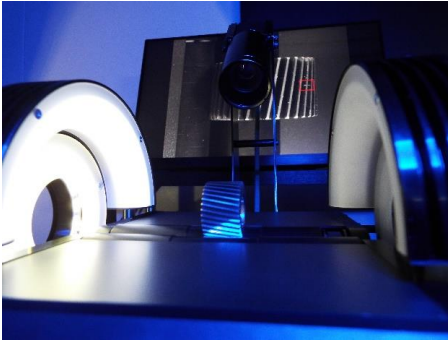
Non-destructive
testing systems

New AI-based inspection equipment

No damage to the product inspected

It can inspect both the exterior and interior make-up

- Sales include only FA image processing equipment we have already created
- If development of new AI-based inspection equipment progresses well, we expect it to add sales upside



We will develop our FA image processing equipment and work with non-destructive testing systems to further grow company value

Purpose

Reveal the invisible
Make the impossible possible

Value

Widen possibilities for employees, customers, and society

We will develop FA image processing equipment beyond the gear industry, and succeed in **expanding our sales channels**



Sales channel expansion



Gear industry



Uncharted markets



By realizing non-destructive testing systems, we will make **internal and external inspections possible**

Non-destructive testing systems

Value



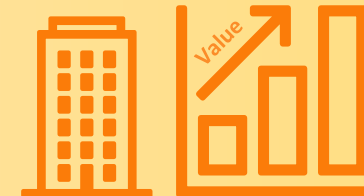
Surface inspection



Internal inspection



Labor-saving

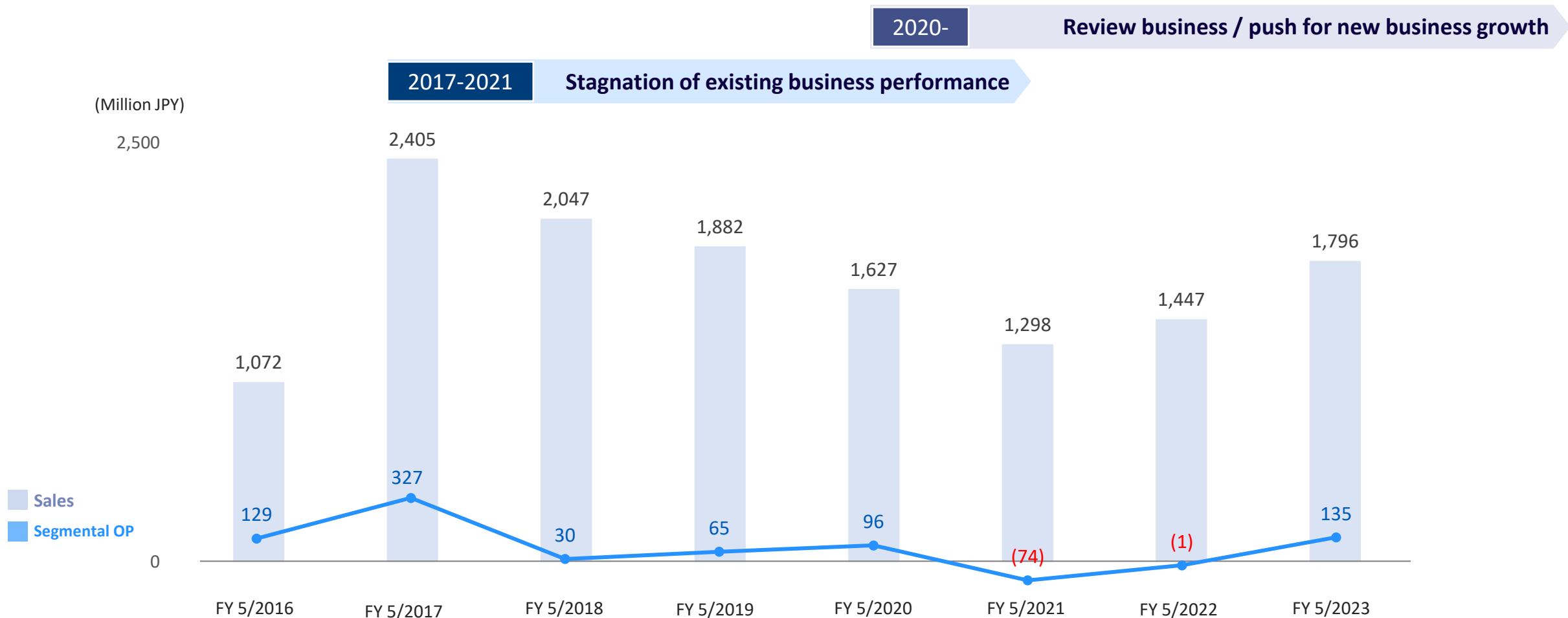


Grow company value

4 . Vibration Solutions Business

Promotion of Industry 4.0 Business Results (FY 5/2016 - FY 5/2023)

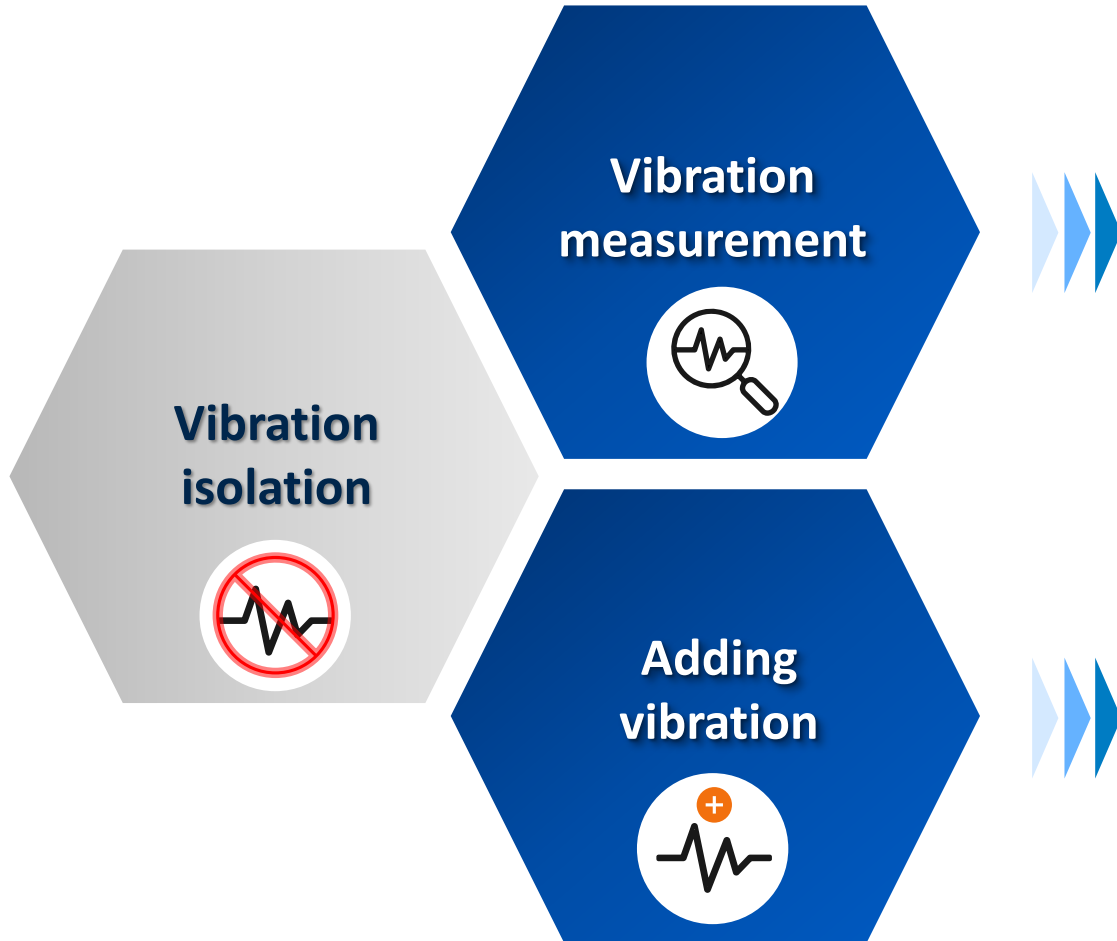
- Performance stagnated from FY 5/2017 to FY 5/2021.
- From FY 5/2020 we began to review the business and embarked on new business development. We aim to improve performance and create fields for medium- to long-term growth.



We will further develop vibration isolation technology and enable vibration visualization



Our vibration solutions will contribute even more to our clients' productivity



Vibration Monitoring App

- We will expand sales of the monitoring app that enables vibration monitoring and visualization

Monitoring app

Vibration Equipment

- We will expand sales of our equipment that can produce precise vibrations
- By recreating vibration environments, we make it possible to distinguish between environments before installation

Before installation

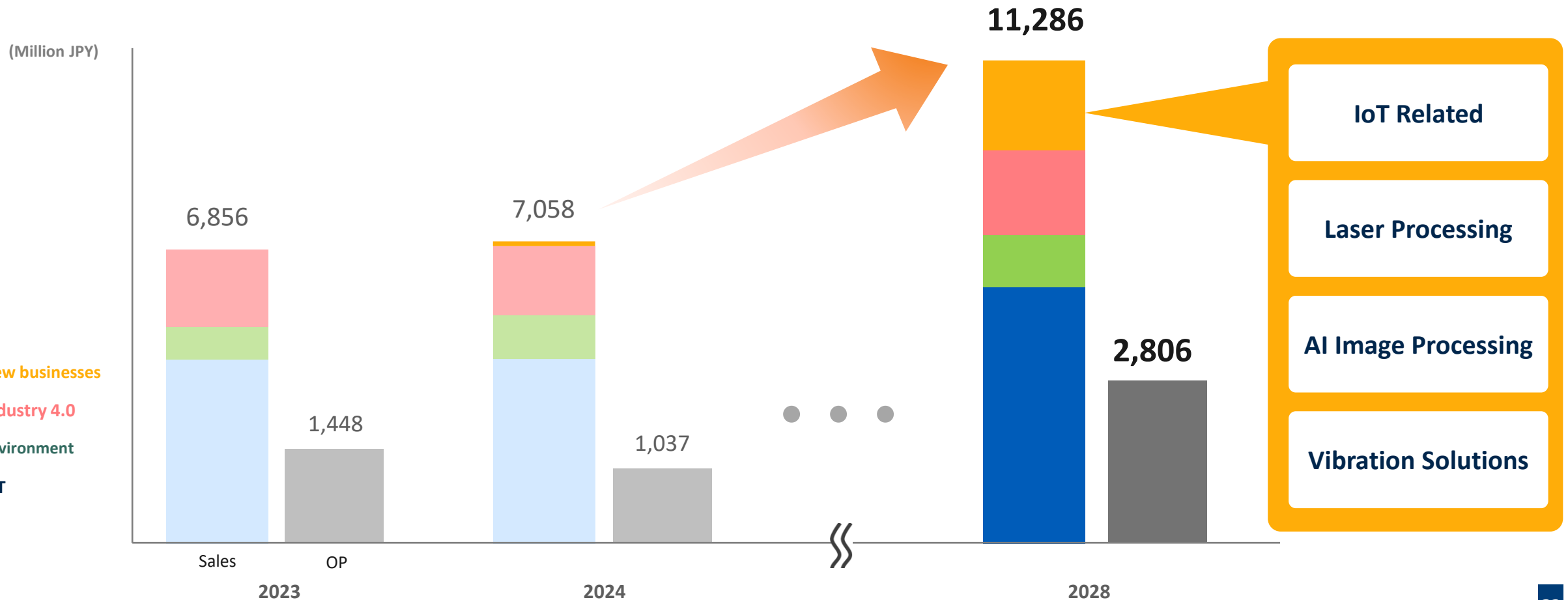
Unclear how much impact vibrations at installation will have, or how much vibration isolation is necessary

Equipment reproduces vibrations

5-Year Financial Targets

Consolidated Financial Targets

- FY 5/2028 targets ➡ Sales: Y11.3bn; OP: Y2.8bn
- We expect new businesses to contribute approximately Y1bn-Y2bn
- The principal new businesses are the IoT related, laser processing, AI image processing, and vibration solutions businesses







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