Components Business

Ohmura Yasuhiro
Senior Vice President

(Reference) Differences between Financial Results and Medium-Term Management Plan Classifications

Segmentation for earnings reporting		Under the 2022-25 Medium-Term Management Plan
Reporting segment	Organization name &business	Business domain
Imaging Products	Imaging Products Business	Imaging
Healthcare	Healthcare Business	Healthcare
Precision Equipment	FPD Lithography Business	Precision Equipment
	Semiconductor Lithography Business	
Components	Customized Products Business	Components*
	Glass Business	
	Digital Solutions Business (Optical components, etc.)	
	Digital Solutions Business (Material Processing, Robot Vision)	Digital Manufacturing
Industrial Metrology and Others	Industrial Metrology Business	
	Other	management base
Corporate P/L non-attributable to any reportable segments	New business development costs (Next-generation Projects Division) G&A expenses, etc., for basic research and HQ functions	

Adjustment to Classifications under the Medium-Term Management Plan

- **Components***

  = Excludes "Material Processing, Robot Vision“ included in the Digital Solutions Business from the reporting segment of "Components"

- **Digital Manufacturing**

  = Adds above mentioned “Material Processing, Robot Vision" to Industrial Metrology Business included in the reporting segment of “Industrial Metrology and Others"

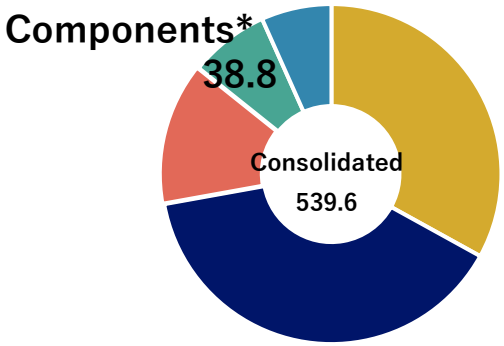
Adjusted amount “Material Processing, Robot Vision”

	FY2022/3	FY2023/3
Revenue	¥2.0B	¥4,0B
Operating profit	¥0.0B	¥0.0B

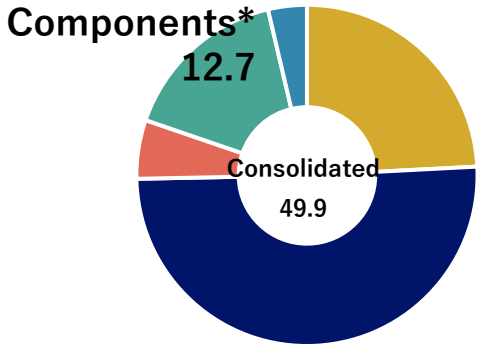
Components*: Business Outline

FY2022/3 Billions of yen

Revenue (※1)



Operating profit (※2)

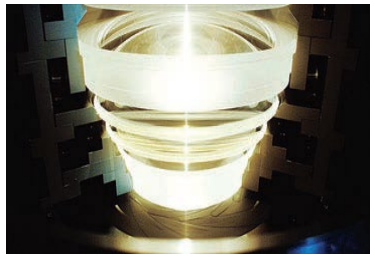


Vision

Grow together with customers as we support their innovation

Major products & Services

Optical & EUV related components, customized products, Space related products, Encoders for industrial robot, photomask substrates for FPD



Optical component

Intelligent actuator units
[C3　eMotion]

Photomask substrate for FPD

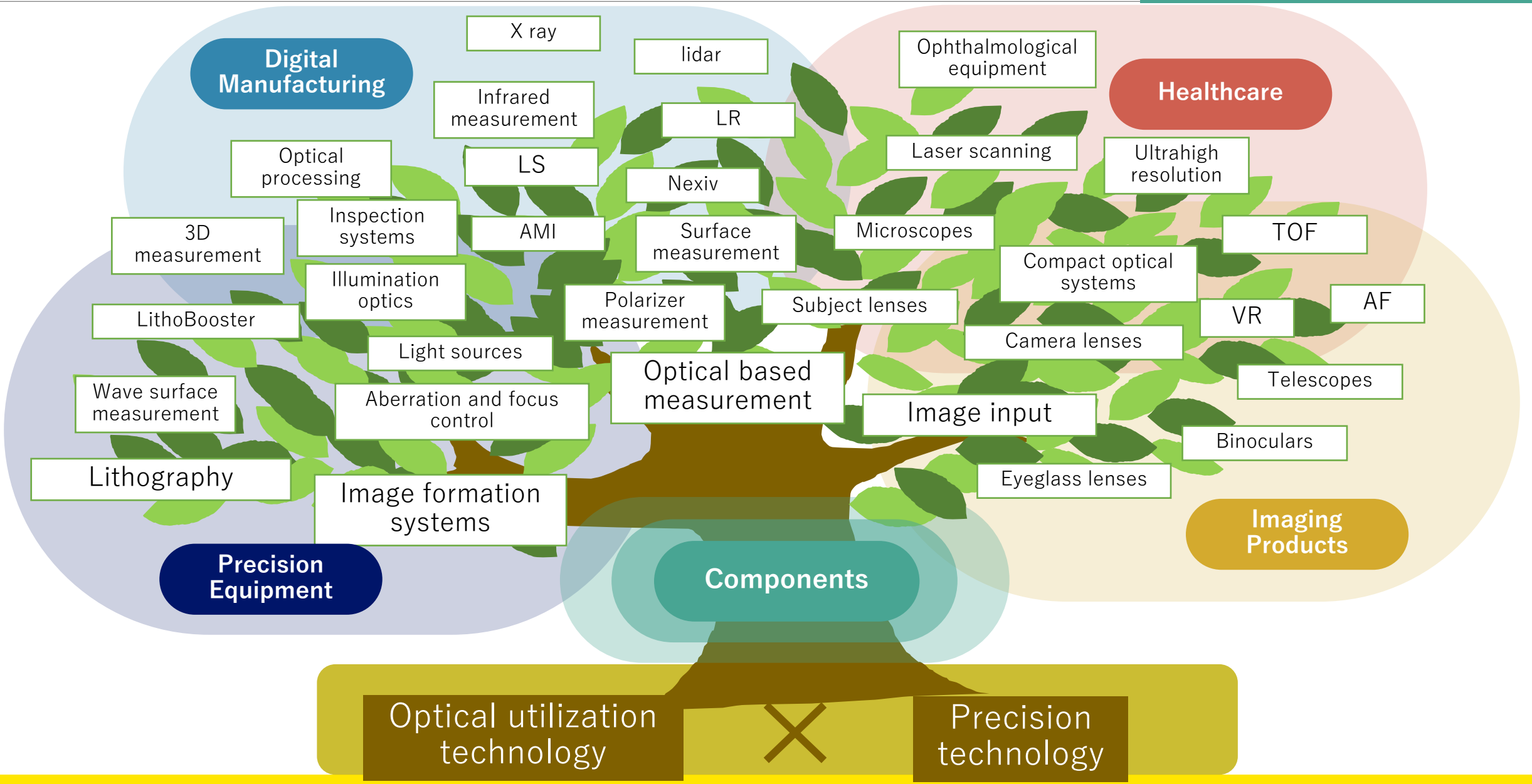
Financial target

	FY2023/3	FY2026/3
Revenue	¥49.0B(※1)	¥80.0B
Operating profit	¥17.0B(※1)	¥23.0B
OPM	34%	29%

(※1) Reflects the adjustment in the lower right corner of slide 41 from revenue and operating profit of the reporting segment of “Components business”
(※2) Operating profit ratio in FY2022/3 is shown before deduction of corporate P/L non-attributable to any reportable segments

Nikon's Optical Components

Components Business*



Components*: Business Strategy and Growth Drivers

Redisplaying of Medium-Term Management Plan (FY2022-FY2025) announced in April 2022

Vision

Grow together with customers as we support their innovation

Operational direction

Optical components (growth driver)
- Support demand for high durability, high performance and stable supply in a timely fashion

EUV related components (growth driver)
- Scale business by adding production capacity and supporting high NA (numerical aperture)

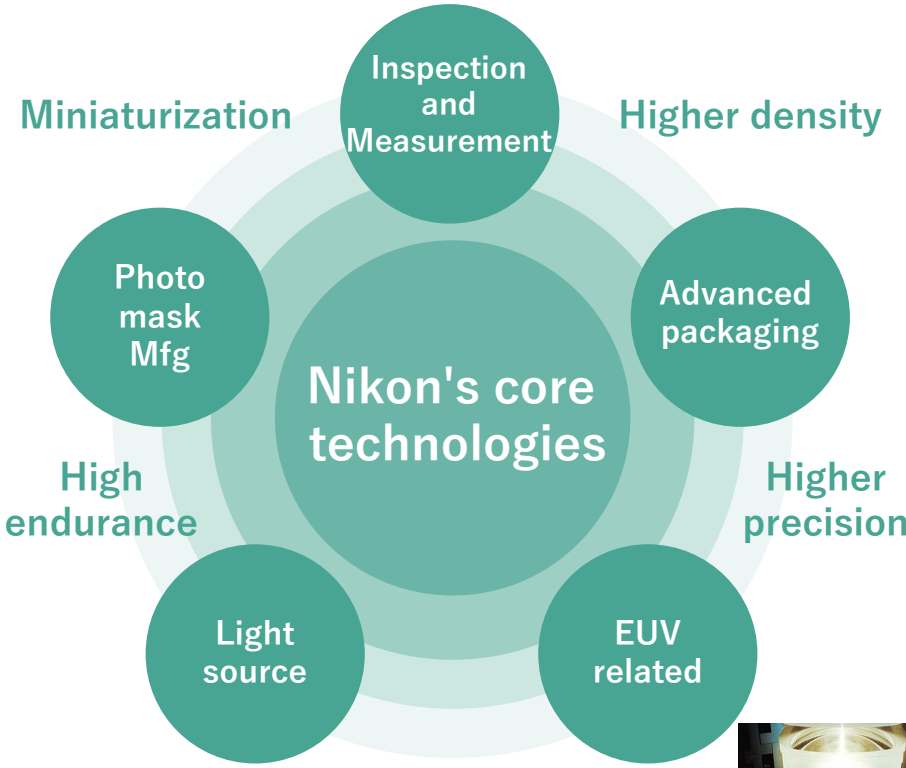
Encoders
- Focus on modules for human-robot collaboration

Glass
- Focus on high-precision polishing and high-quality film deposition for large Photomask substrates for FPD

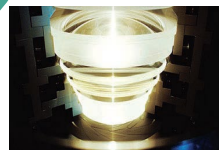
Earnings plan

Get to ¥20.0B+ in operating profit by doubling revenue

Contributions to the semiconductor industry



Cultivate businesses with new value-added products



Optical Components

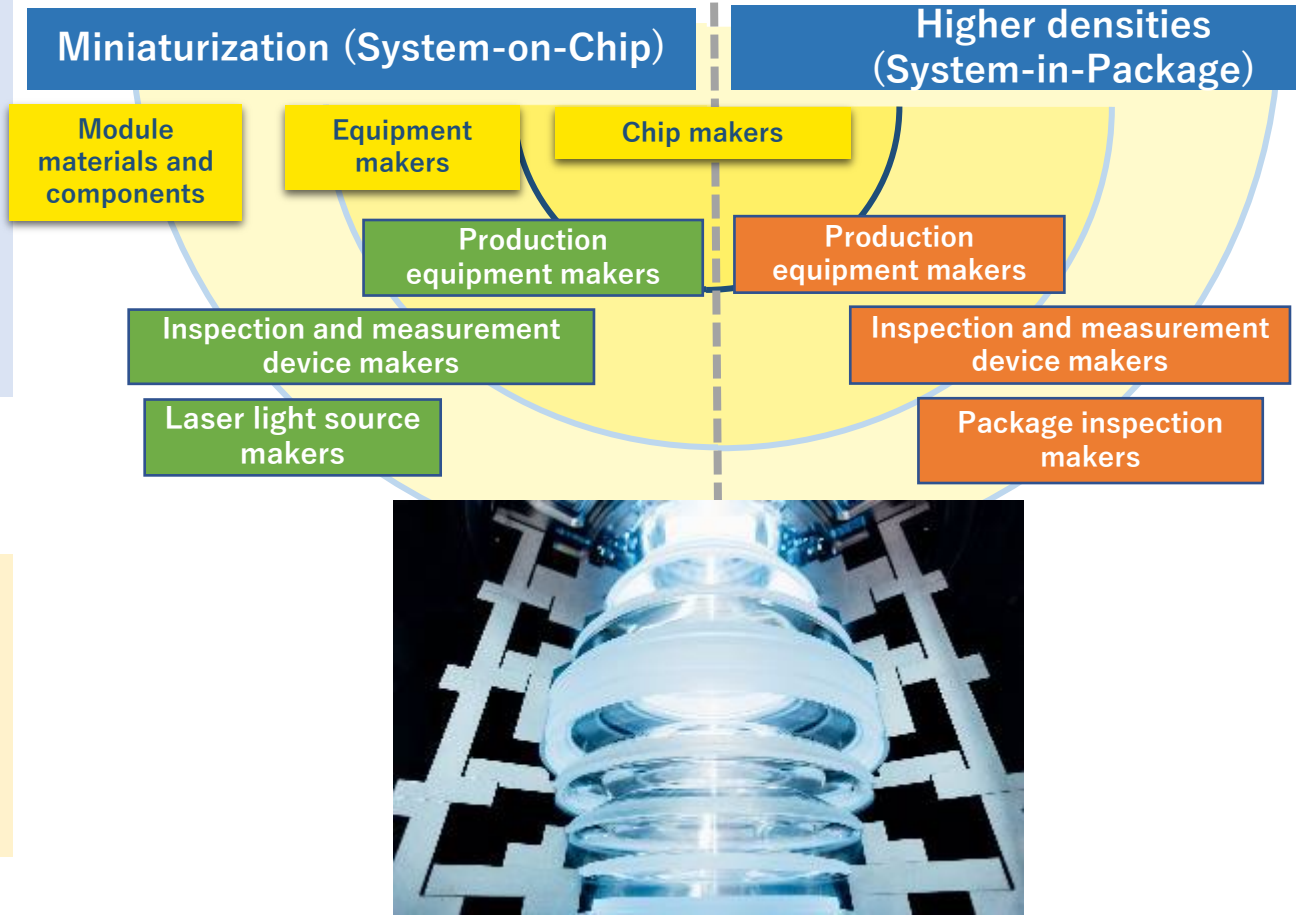
Market trends and business strategy

- Follow two trends--miniaturization and 3D--to engage with a semiconductor market invigorated by the emergence of a variety of new applications including 5G, IoT, AI, autonomous driving and neural networks.
- Propose a one-stop solution (from design and prototyping to mass production) for high-precision optical components.
- Deliver knowledge, experience and value by integrating optical components into customer systems, leveraging our knowledge as a semiconductor equipment maker.

Business deployment

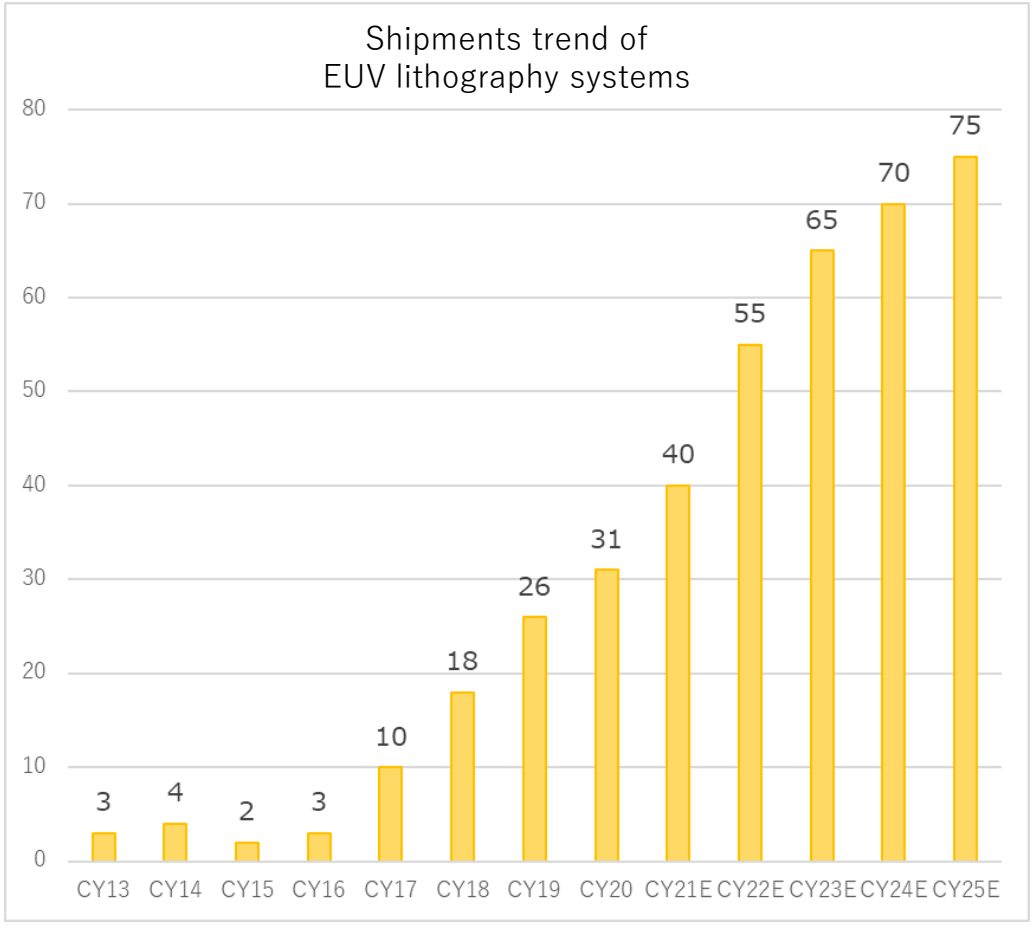
① Optical parts: Tie up with semiconductor laser makers
② Optical components: Tie up with production and measurement equipment makers in semiconductor, FPD
③ Others: Expand sales of optical components into laser processing equipment makers (outside of the semiconductor market)

Leverage optical components to contribute to miniaturization of semiconductors (EUV) and higher densities (cutting-edge IC chips)



EUV Related Components: Business Opportunities and Path to Commercialization

Components Business*



Source: September 08, 2021, Nomura Securities, Inc. Global Markets Research
EUVL Industry Close-Up Report

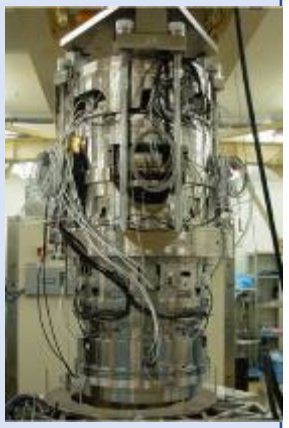
A history of the commercialization of EUV related fields

1986: NTT succeeded in EUV contraction projection aligner
From this time, Nikon has long been involved in the development technologies such as multilayer film, lithography optical system contamination control and mirror distortion aversion barrels for aspherical processing technology for lithography equipment optical systems, measurement technology and EUVL reflective mirrors for NEDO-contracted efforts including EUV lithography system base technology development.

2007: NA0.25 full field lithography system delivered to Selete
16nm L&S resolution with phase shift photomask

2008: Experimental success at EUVA with High NA0.3 of EUV optical system lithography

2011: Exited EUV lithography system development
Continued to work with EIDEC on future photomasks and small field high NA lithography systems for photoresist development and applied technology developed toward EUV related components and ArF optical systems.



Present: EUV related fields becoming a growth driver as we work together with customers in Customized Products Business in combination with our production technology base

EUV market expanding as, in addition to cutting-edge logic, DRAM makers also begin to use EUV lithography systems in mass production. Expect growth in demand for related products as EUV lithography systems gain adoption

Encoders

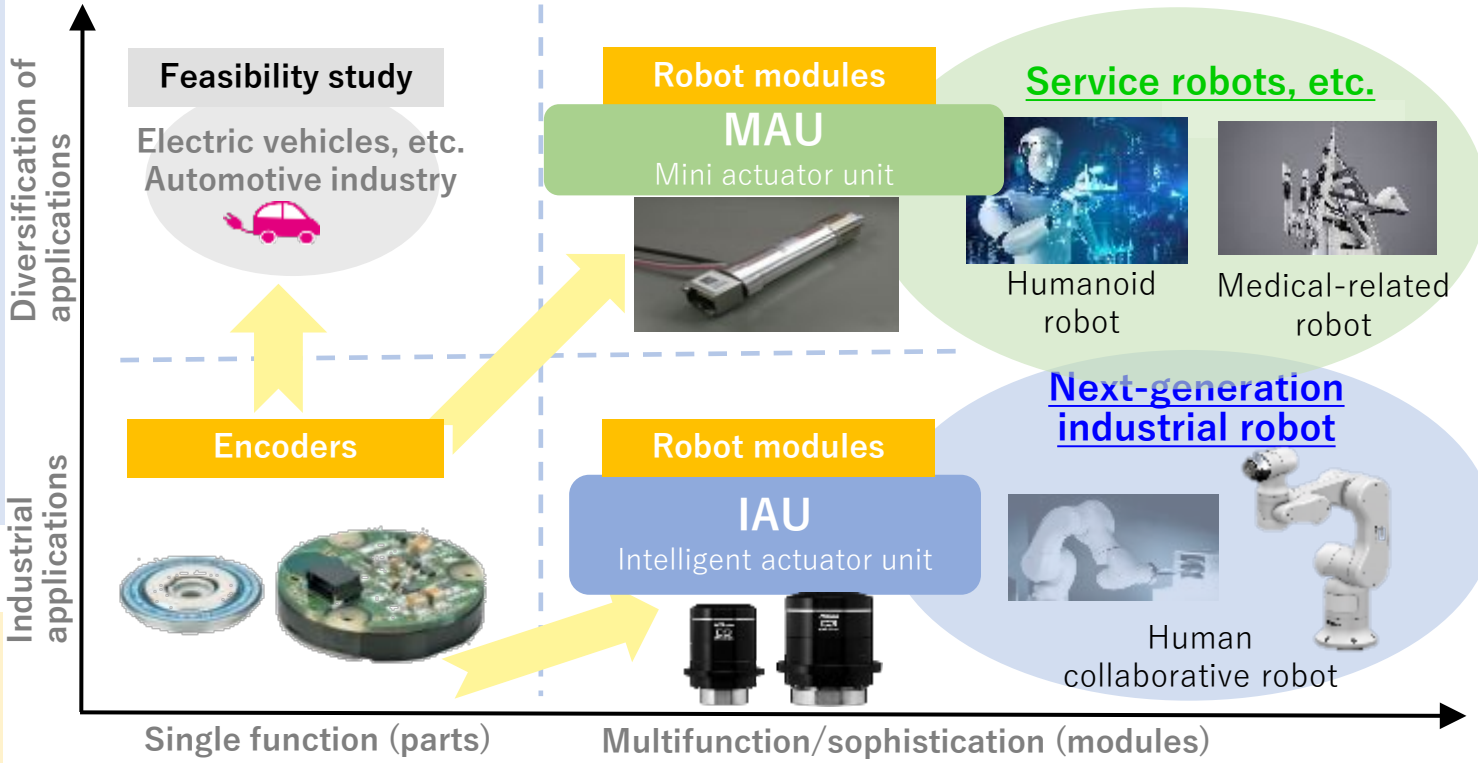
Market trends and business strategy

- Factory automation market growing 6-8% annualized. In particular, East Asia growth rate is 8% and expected to climb.
- Human collaborative robot market to grow 38% annualized (FY20-25) with manufacturing labor shortages and advances in application technologies.
- Launch next-generation absolute encoders to maintain product competitive edge and create new markets with safe and easy-to-use robot modules.

Business deployment

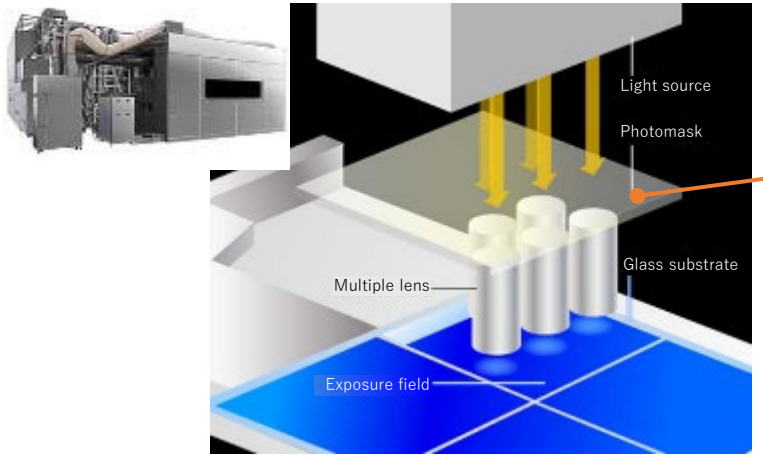
① Expand sales of encoders to Japanese makers and target overseas makers
② Expand from encoders into robot modules
Tie up with industrial robot makers
③ Plan to enter the next-generation industrial robot and service robot markets

Leverage encoders (parts) to enter robot modules

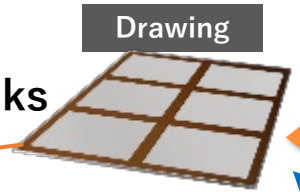


Source: Fuji Keizai. Analysis by Digital Solutions BU.

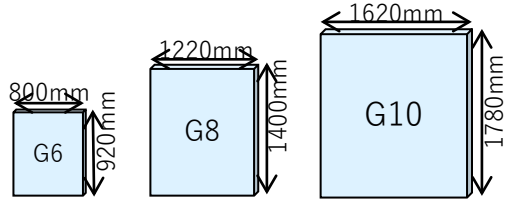
FPD Photomask Substrates



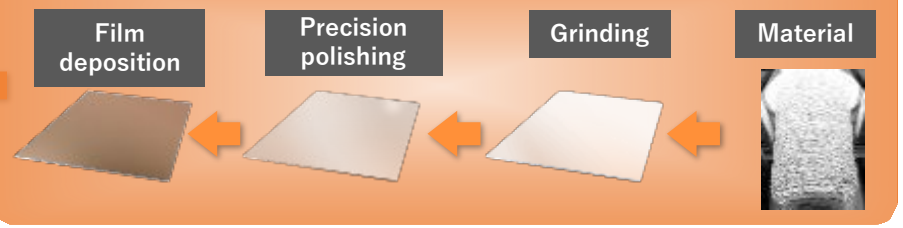
Photomasks



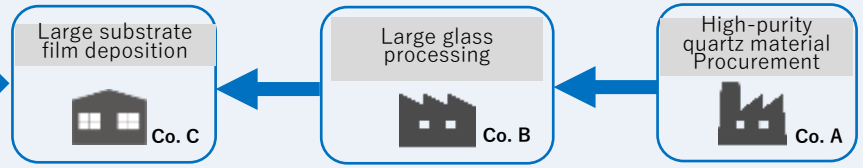
● FPD photomask major sizes



● Nikon's production process (integrated production)



● Rivals

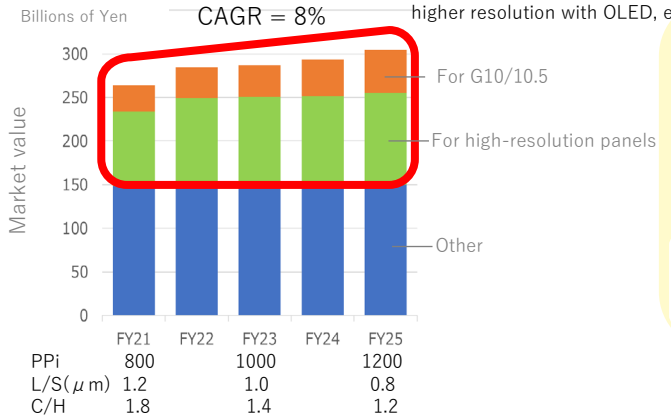


Advantages

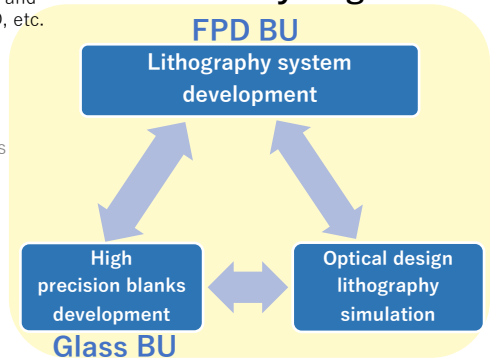
- Supports next-generation higher resolution panels
  - High-precision polishing technology for highly flat surfaces
  - High-performance film deposition technology
  - High-precision measurement technology
  - Ability to support sophisticated requests thanks to integrated process from material to film deposition
- Development capabilities working with internal lithography systems development and optical engineering division
- Ultra large-scale production equipment up to G10.5. No. 1 share (70%+)

● Market scale: ¥30.0B

Growth driven by larger TVs and higher resolution with OLED, etc.



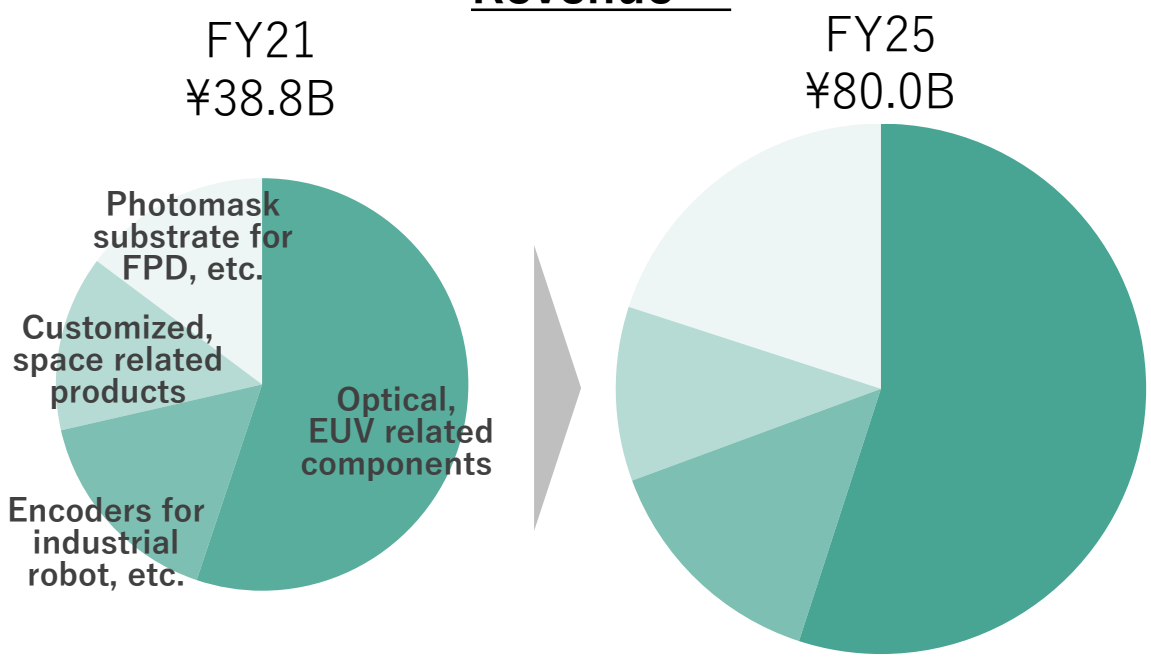
● Internal synergies



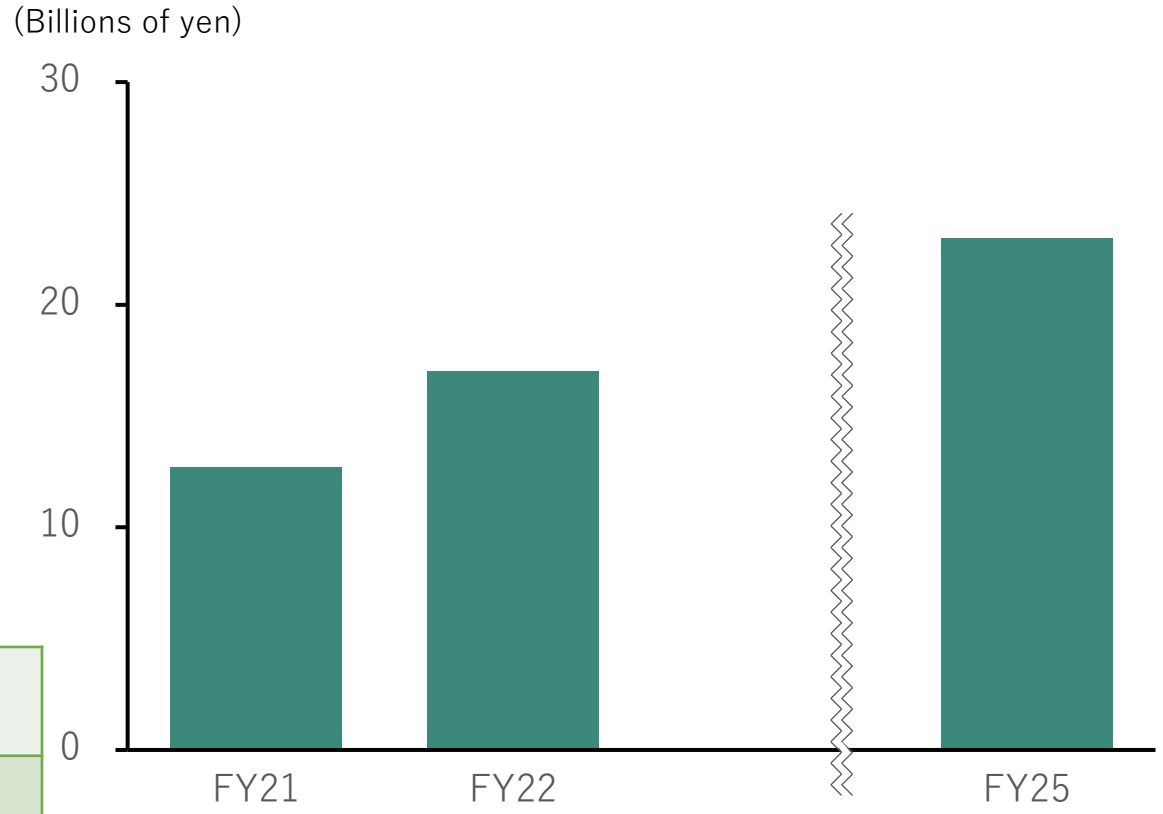
Focus management resources on high-precision polishing and high-quality film deposition for large types

Components*: Earnings Plan

Revenue(※)



Operating profit



(Major products in sub-segments)

Digital Solutions	Optical component, Optical parts, Encoders for industrial robot, etc.
Customized Products	EUV related components, Customized, space related products
Glass	Photomask substrate for FPD

Get to ¥20.0B+ in operating profit by doubling revenue

(※) Reflects the adjustment in the lower right corner of slide 41 from revenue and operating profit of the reporting segment of “Components business”

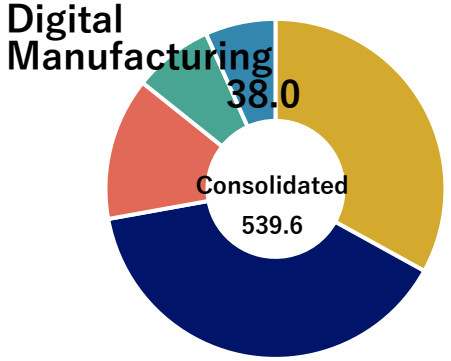
Digital Manufacturing Business

Ohmura Yasuhiro
Senior Vice President

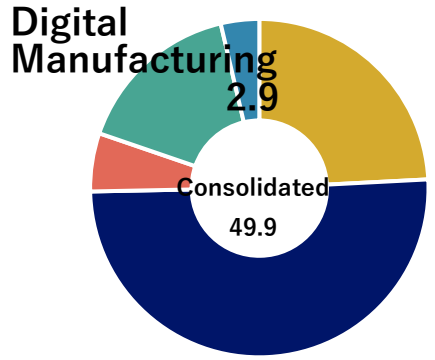
Digital Manufacturing: Business Outline

FY2022/3 Billions of yen

Revenue (※1)



Operating profit (※2)



Vision

Enable innovations in manufacturing with applied optics application technologies

Major products & Services

Industrial Metrology Business(Laser Radar, X-ray and CT inspection system, in-line measurement, CNC Video Measuring Systems, Industrial microscope)
Optical processing（Machine & Contract processing）, Robot Vision

Non-Contact Large-Volume Inspection System
[APDIS]

X-ray and CT Inspection
[XT H 225 ST 2x]

CNC Video Measuring System
[NEXIV VMZ-S Series]

Optical Processing Machine
[Lasermeister102A]

Financial target

	FY2023/3	FY2026/3
Revenue	¥41.0B (※1)	¥70.0B
Operating profit	¥4.0B (※1)	¥11.0B
OPM	10%	16%

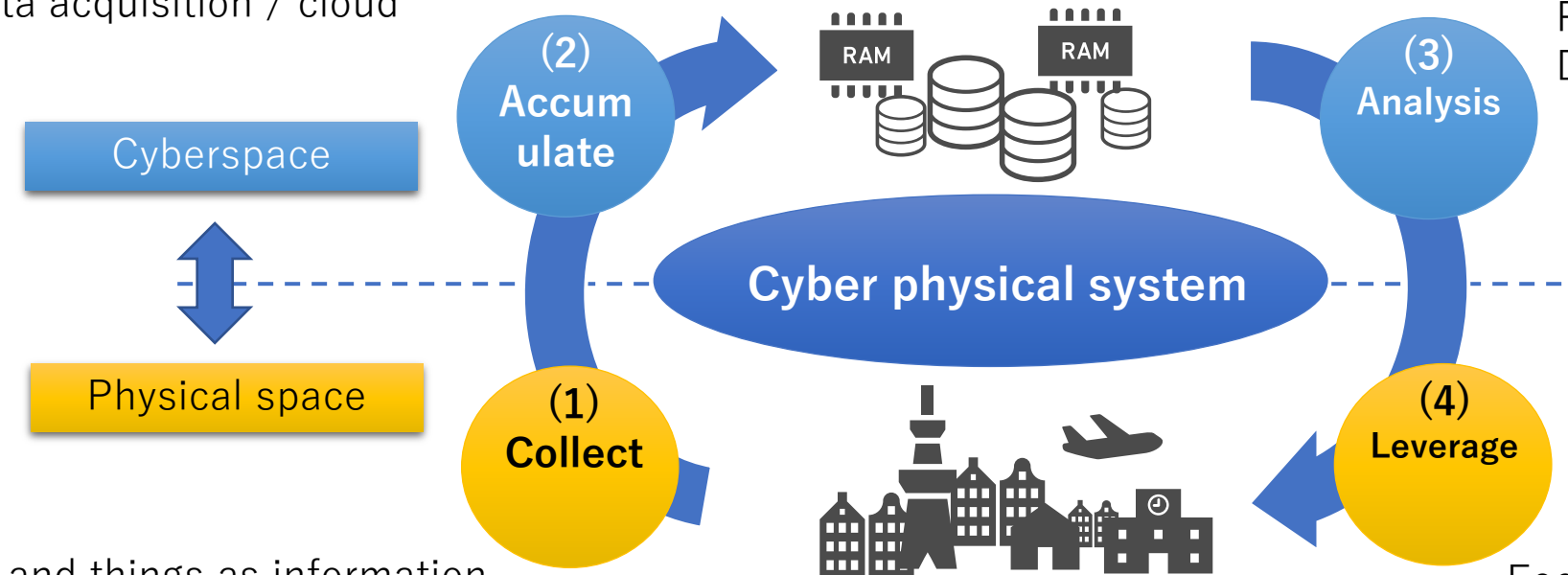
(※1) Reflects the adjustment in the lower right corner of slide 41 from revenue and operating profit of the reporting segment of “Industrial Metrology and Others”
(※2) Operating profit ratio in FY2022/3 is shown before deduction of corporate P/L non-attributable to any reportable segments

A Society Where Humans and Machines Co-create

Digital Manufacturing Business

Data acquisition / cloud

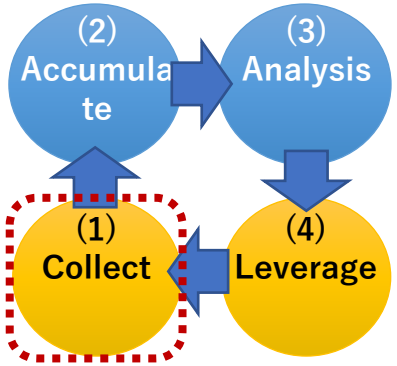
Predicting the future.
Discovering knowledge.



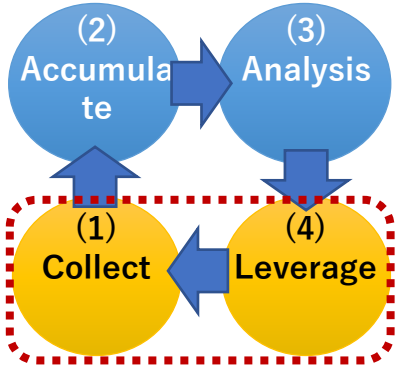
People and things as information

Feedback of value into the physical

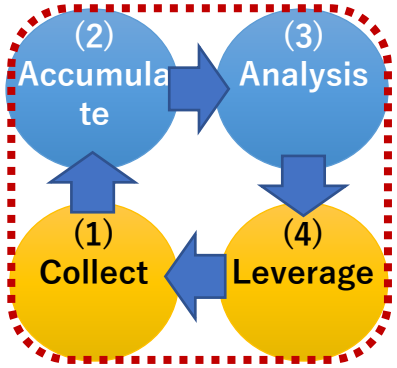
Provide components



Alliances and collaboration



System sales



Areas where Nikon works

Nikon expanding its role mainly from (1) Collect to (2) Accumulate

Digital Manufacturing: Business Strategy

Operational direction

Laser Radar
- Joint development with customers in automotive, aviation spaces

X-ray and CT
- Focus on EV battery inspection

In-line measurement
- Promote digitalization of manufacturing processes

Material Processing
- Deliver three processing technologies (additive, removal and riblet) as end products, components or as contract processing services.

Robot Vision
- Begin in automotive and electronics fields

Trends related to the business

Society in 2030

Environmental changes
- Outer space business
- Flexible manufacturing systems
- Digitalization in manufacturing industry
- Carbon Neutral
- Security

Technological advances
- High output lasers
- 6G high-speed communication standard
- Fuel cells
- AI
- Compact, multifunction sensors

Growth drivers

“Material Processing” and “Robot Vision”

※ Material Processing and Robot Vision are included in the reporting segment of “Components”.

Industrial Metrology Business: Business Opportunities

Game changer	EV / 5G						
Target industries	Automotive				Electronic components (automotive)		Semiconductor
Target applications (examples)	Automotive bodies		LIB*		Connectors	PCB*	WLP*
Growth scenarios	Automation of manufacturing processes	Lighter weight (aluminum)	Fire prevention	Re-use	100% inspection of important parts		Automation of manufacturing processes
Delivery of solutions	Combine **Laser Radar** and robots	Combine **X-ray and CT** and autoloaders			Combine **CNC Video Measuring Systems** and autoloaders		
Competitiveness	Nikon's proprietary large-scale space precision measurement	Advantages of high-output x-ray source (High-speed, high-resolution x-ray CT using RT*)			Top market share in Japan and Asia in high-end and mid-range CNC Video Measuring System		

LIB (Lithium-ion battery), PCB (printed circuit board), WLP (wafer level packaging),
RT (rotating target) is a a technology that achieve high output while avoiding high heat by rotating the x-ray light-emitting base.

Laser Radar and In-line Measurement

Bring an innovative measurement solution to the production floor

Nikon's market-leading measurement and inspection technology supports the next step

Solutions Overview			Related video APDIS automotive inline: https://youtu.be/riGBpSc43s4
Strengths	・High-precision: 28um@2m ・High-speed: Throughput 8 times conventional ・Environment: IP54 compliant	Focus points	・Targeting production floors, smaller, lighter, faster
Used by:	1) BMW 2) Stellantis (Chrysler JEEP) 3) US and Japanese automobile OEMs		
Market share (Reference)	2021: 10% Share by install base (business unit research)	Market scale (Reference)	2021: 2,692 units LR TAM for the automotive industry (business unit research)

X-ray & CT and In-line Measurement

Bring an innovative measurement solution to the production floor

Nikon's market-leading measurement and inspection technology supports the next step

Solutions Overview			Related video LIB inline: https://www.youtube.com/watch?v=yhHsZG7aEj0
Strengths	・High output, high analytical capabilities -225kV Rotating Target ・High-speed CT processing -Helical / Half turn	Focus points	・Automation on production floors, high operating rates, enhanced usability
Used by:	1) Connector and sensor makers 2) EV battery makers 3) Diversified electronics manufacturers		
Market share (Reference)	2021: 20% No. 3 globally (business unit research)	Market scale (Reference)	2021: Approx. ¥30.0B Industrial x-ray system market (business unit research)

CNC Video Measuring Systems and In-line Measurement

Bring an innovative measurement solution to the production floor

Nikon's market-leading measurement and inspection technology supports the next step

Solutions Overview			
Strengths	・High-precision: Stage repeat accuracy 0.5um ・High-speed: Throughput 1.5 times conventional ・Simple: Optimized for automatic illumination	Focus points	Higher-speed measurement for production floors
Used by:	1) Semiconductor backend contract manufacturers 2) Electrical and electronic components makers 3) Automotive parts manufacturers		
Market share (Reference)	2021: Top share Share in Japan and Asia markets for mid/high-end equipment (business unit research)	Market scale (Reference)	2021: Approx.¥50.0B Imaging metrology equipment market (business unit research)

Related video

NEXIV inline
https://youtu.be/P_Y-scMtXzs

Wafer loader:
https://www.youtube.com/watch?v=EyoupLfKp2Y

Growth Drivers: Material Processing and Robot Vision

Digital Manufacturing Business

Redisplaying of Medium-Term Management Plan (FY2022-FY2025) announced in April 2022

Capitalize on new markets by combining unique value propositions

Needs in society and industry

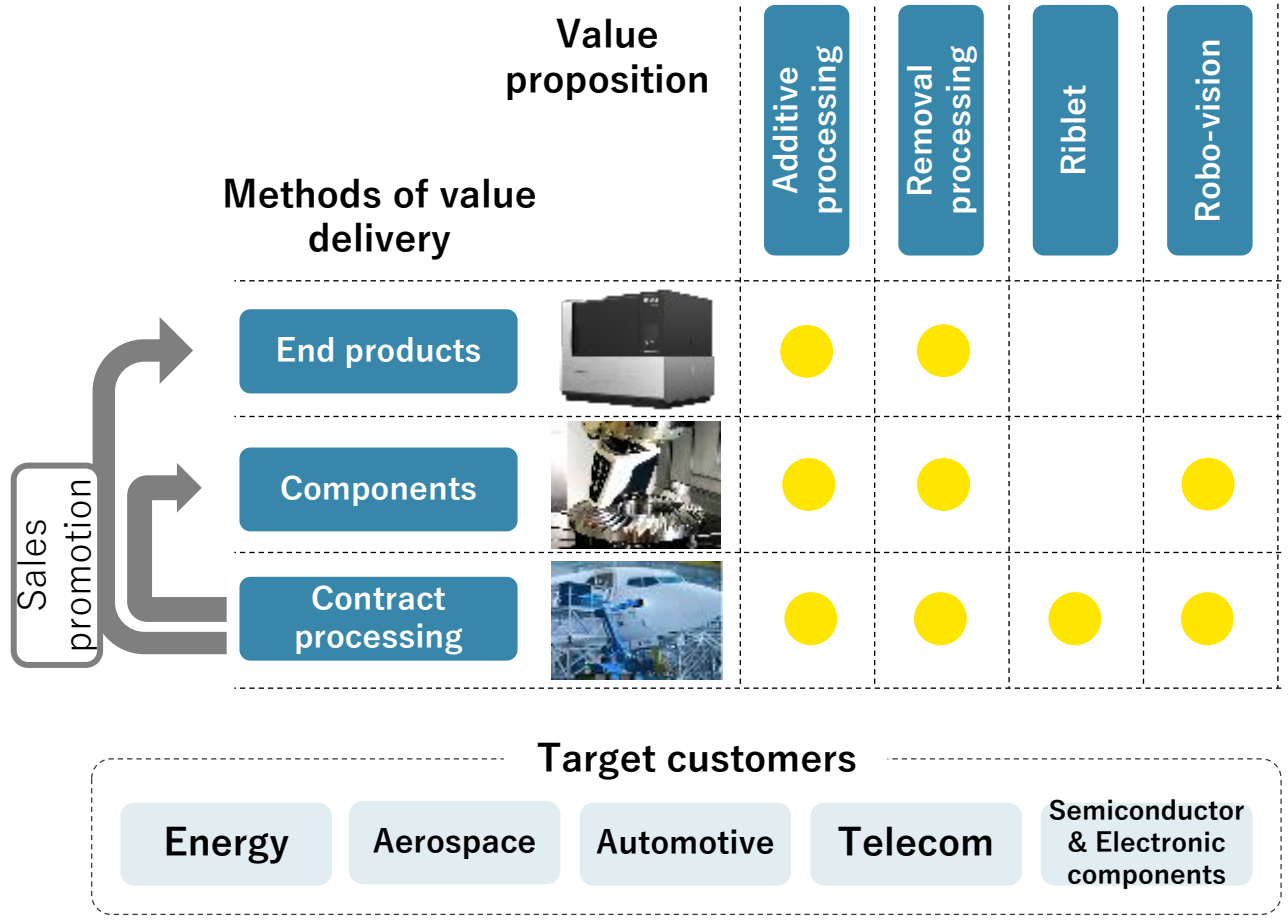
- High-precision processing for difficult-to-cut and complex shapes
- Fuel efficiency improvement and power generation gains
- High-speed detection of objects, more sophisticated and efficient pick & place operations

Nikon's strengths

- Elemental technologies such as high-precision measurement, feedback processing, 3D alignment and high-speed sensing
- Capabilities in precision systems integration

Business development

- Develop promising applications jointly with customers
- Deliver solutions encompassing additive, removal and riblet processing and robot vision



Material Processing and Robot Vision

Digital Manufacturing Business

Initiatives aimed at challenges to scaling up the business

■ **Strategic diversification in the overall business**

- Focus on four, closely related technological areas and grow earnings. Combine together at the same time diversify risk

■ **Down-select customers and applications in each business**

- Start from a business plan based on a broad range of possibilities and acquire core applications and evangelist users

■ **Strengthen business base with well-planned and continued alliances**

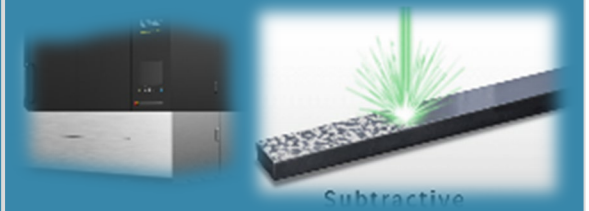
- Accelerate scaling up by promoting collaboration and alliances in order to make the best use of internal assets

Additive

High value-added processing for aerospace applications

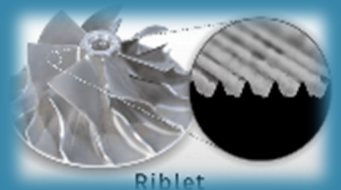
Subtractive

Automated precision processing of dies, tools and difficult-to-machine materials



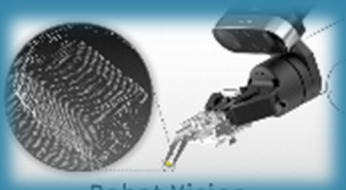
Riblet

Enhances flight efficiency of airplanes and UAV



Robot Vision

Greater sophistication and efficiency in pick & place of automotive parts



Deliver solutions that change the future of manufacturing while we strengthen our customer and business base

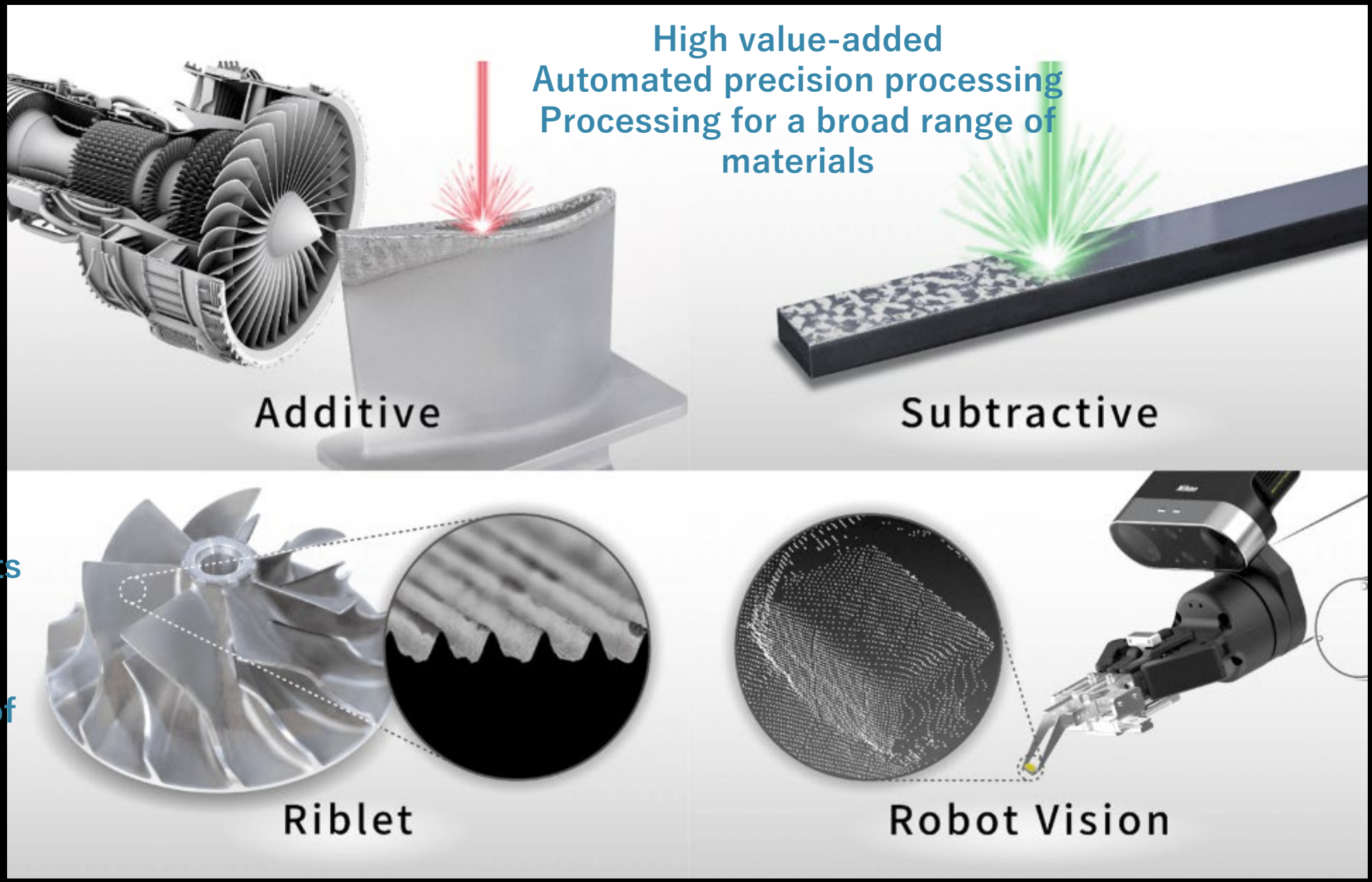
Material Processing and Robot Vision

Japanese https://ngpd.nikon.com/

English https://ngpd.nikon.com/en/

Digital Manufacturing Business

High value-added
Automated precision processing
Processing for a broad range of materials



Efficiency improvements

CO_2 reductions

Processing of free forms

Ultra high-speed

High recognition capabilities

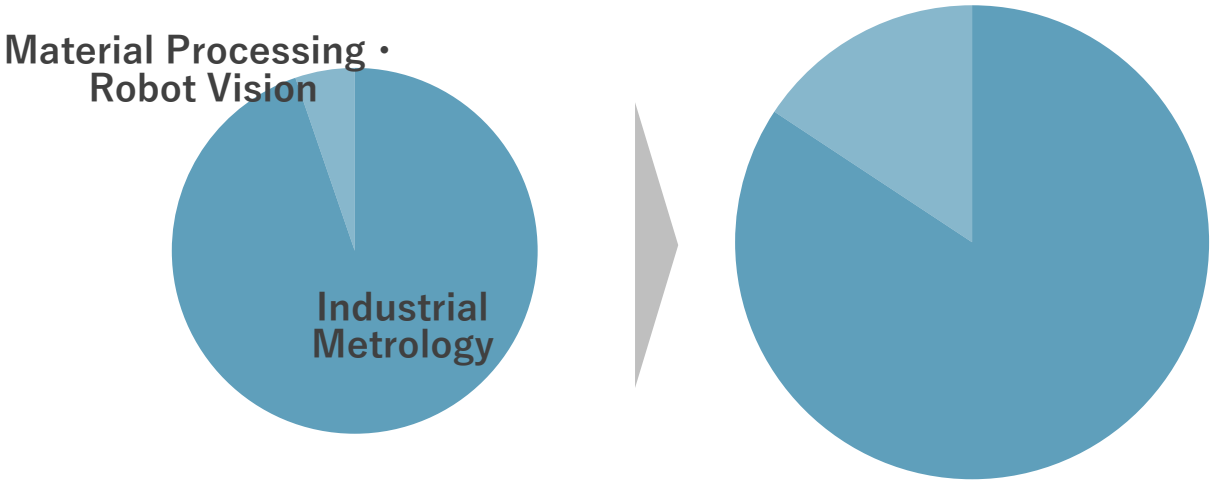
Great deal of flexibility

Digital Manufacturing: Earnings Plan

Revenue(※)

FY21
¥38.0B

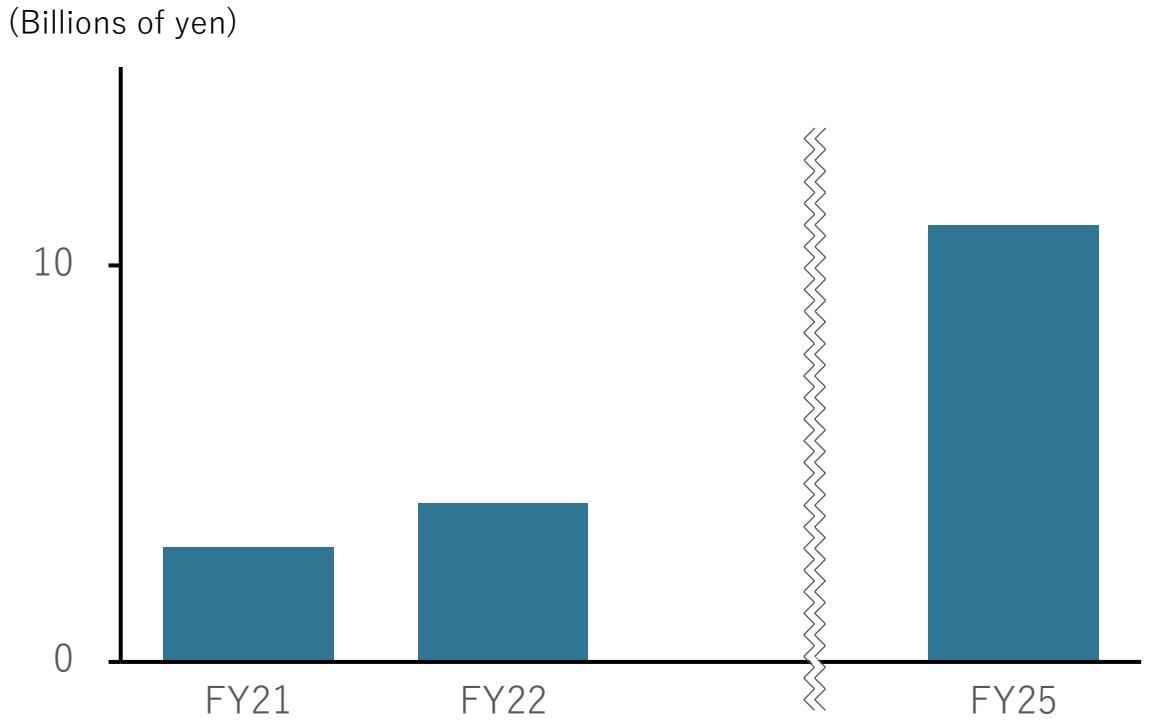
FY25
¥70.0B



(Major products in sub-segment)

Industrial Metrology	Laser Radar, X-ray/CT inspection system, In-line measurement, CNC Video Measuring Systems, Industrial microscope
Digital Solutions	Material Processing（additive, subtractive & riblet processing), Robot Vision

Operating profit(※)



Leverage alliances to get to 10%+ annual revenue growth

(※) Reflects the adjustment in the lower right corner of slide 41 from revenue and operating profit of the reporting segment of “Industrial Metrology and others”