

Healthcare Business

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Corporate Vice President

General Manager of Healthcare Business Unit

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- I'm Yamaguchi, Corporate Vice President and General Manager of Healthcare Business Unit.
- I am pleased to present to you about our Healthcare Business.

Healthcare | Business Strategy

Vision

Support improving quality of life for people through innovation

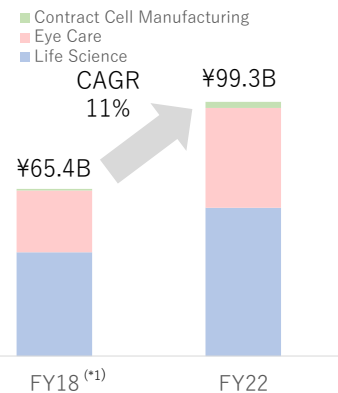
Achieved mid-term plan 3 years ahead of schedule

	FY 22	FY 23 Outlook	FY 25 Target	FY 25 New Target
Revenue	¥99.3B	¥95.0B	¥90.0B	Under review
Operating Profit	¥11.5B	¥11.0B	¥10.0B	Under review

Achievements and management policy

- Life Science Solutions** FY 22: Revenue up 30%+ YoY.
 - Continued to launch new products, including building out series of high-end systems, cloud and other products and services.
 - Aim for double-digit growth by strengthening application development and developing private sector markets with a focus on drug discovery.
- Eye Care Solutions** FY 22: Revenue up about 30% YoY.
 - Strengthening our sales force in each country to capture stable market growth.
 - Aim for sustained growth on new diagnostic functions and modality development.
- Contract Cell Manufacturing**
 - Nikon has achieved multiple accomplishments in contract manufacturing of regenerative medicine products approved in Japan. Solidifying our market reputation for quality technology.
 - Aim to scale up our business by adopting promising projects including expansion of regenerative medicine commercial products already approved overseas and products are likely to be approved in Japan.

Healthcare sales growth

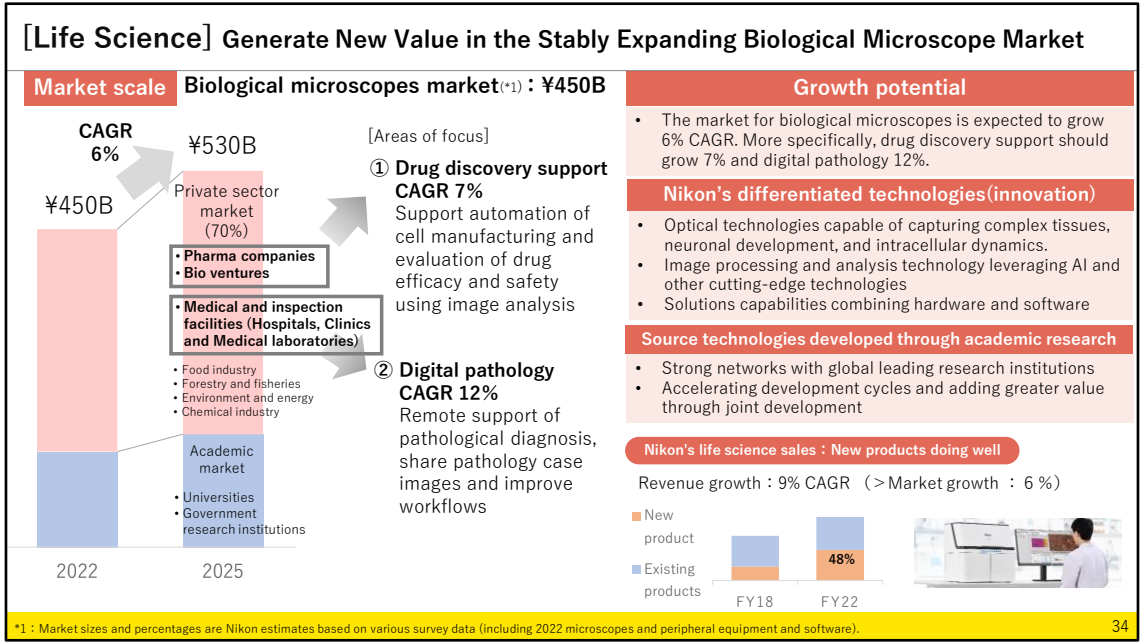


Business has steadily expanded by providing solutions that meet market needs

*1: Healthcare Business Unit launched in June 2017

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- We achieved our FY2025 earnings plan 3 years ahead of schedule.
- In Life Science Solutions, we achieved record-high revenue and operating profit last year by releasing a stream of new products and developing private sector market.
The growth driver is drug discovery support for pharma companies and bio ventures. Since FY2019, we have leveraged our optical and software technologies to make inroads into the private sector market.
- In Eye Care Solutions, the US market has been strong. We have also strengthened our sales force in Asia and Europe.
In 2015, we acquired the British company Optos. In addition to sales and marketing, we have been pursuing synergies with technology as well. We have continued to grow faster than the market average, thanks to the introduction of higher value products and functional enhancements.
- In Contract Cell Manufacturing, we launched the business in FY2015. Sales began to be recorded in FY2017, and we are moving into the profit contribution phase.
We are growing the number of projects contracted and scale of the business by expanding the contract manufacturing of regenerative medicine products etc.



- Next, I will speak about three segments, starting with Life Science Solutions.
- Biological microscopes are expected to grow 6% per year as biotechnology advances.
In particular, Nikon is focused on technological development targeting high-growth markets drug discovery and pathology with optical products, software and the cloud.
- In drug discovery support, we are proposing solutions leveraging cutting-edge technologies in image processing and analysis for pharma companies and bio ventures.
- In the clinical field, aging societies globally are leading to growth in the number of tests and diagnoses.
We are developing infrastructure and diagnostic support tools leveraging new diagnostic equipment and digital technologies to help improve workflows and drive efficiencies in work processes.
- We are speeding up development of new products and services based on the core technologies developed through our ties with universities and research institutions inside and outside Japan.
Since FY2019, we have been actively switching over to new products. As of last year, new products made up half of all revenue.
We aim to improve earnings by developing high value-added products and services.

[Life Science] ① Business Expansion in Drug Discovery Support (Drug Efficacy Evaluation and Cell Manufacturing)

Supporting diversifying drug development with image analysis and automation

● Drug discovery support market: CAGR 7%
[Drug efficacy evaluation support]
market size about ¥2 trillion (*1)

[Cell contract manufacturing support]
market size about ¥200 B (*2)

Assisting customers by expanding global drug discovery support facilities

- Opened drug discovery support sites in Japan, US and Europe and began contract business targeting private sector companies
- Deployed global standard service at each site and strengthened R&D functions

Accelerate business growth and aim for sales expansion that exceeds market growth

[Revenue]
 Revenue growth : CAGR 40%+ (> Market growth : 7%)

- Customers are mainly pharma companies and bio ventures
- Rapid ramp up in contract analysis requests since FY22

[Path forward]
 Expand our facilities and stand up development sites

*1 : MARKET SAND MARKETS CELL-BASED ASSAYS MARKET GLOBAL FORECAST to 2025
 *2 : MARKET SAND MARKETS CELL CULTURE MARKET GLOBAL FORECAST to 2024

- Next up are further details regarding our efforts in drug discovery support.
- The aging of societies globally has put pressure on public health insurance systems. In response, drug prices are reviewed more often, and the pharma industry needs to gain development efficiencies.
- Here we share some of the development support solutions we are working on with our customers to support development related to drug efficacy evaluation and cell contract manufacturing.
 Nikon is expanding the range of its solutions to include drug efficacy evaluation for different types of drugs, cell production process development needed to evaluate drugs, and development of mass production processes for regenerative medicine products.
 We are working on a variety of projects with major pharma companies and bio ventures inside and outside Japan as we aim to expand the business over the medium- to long-term.
- In FY2019, we began this drug discovery support business in three locations in Japan, the US and Europe. The range of our activities has expanded from image analysis of cells into drug efficacy evaluation and production process automation leveraging AI and other cutting-edge technologies.
 The business has grown, so we will expand facilities in Japan and the US to strengthen R&D.
- We aim to grow the business by 40% or more leveraging cutting-edge applications technologies developed in Japan, the US, and Europe.
- This 2 and a half minutes video shows a solution we are developing with a major pharma customer.

Video : Nikon Well-Being Transformation toward Automation of Cell Manufacturing for Treatment of Ophthalmic Diseases
<https://www.healthcare.nikon.com/en/well-being/detail17.html>



<Movie>

[Life Science] ② Growth in Digital Pathology

Drive workflow efficiencies through digital transformation of pathological diagnosis

Step 1 (Device): Launched Japan's first digital microscope for medical use

- New medical device that is easy to operate and promotes the digitalization of pathological diagnosis



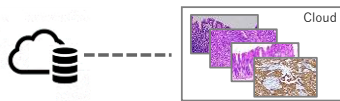
Step 2 (ICT^{*1}): Support remote pathology diagnosis accuracy and in-operation diagnosis

- Remote diagnosis functions that will change conventional workflows of pathological diagnosis

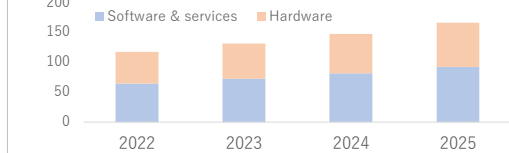


Step 3 (Cloud): Share pathology images and support conferences

- Cloud-based efficiencies in pathologist workflows
- Relieve time and physical limitations on conference with shared data viewing



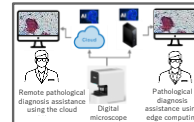
(Billions of yen) **Digital pathology market CAGR : 12% (*2)**



Initiatives aimed at individualized treatment leveraging composite data

● Software & services: Pathological diagnosis support leveraging AI technology

- Support pathologists with pathological diagnosis assistance leveraging AI (Dr. with AI)



● Software & services: Composite pathological diagnosis geared toward personalized treatment

- Promote individualized treatment with move toward multiple layers of pathological diagnosis modalities

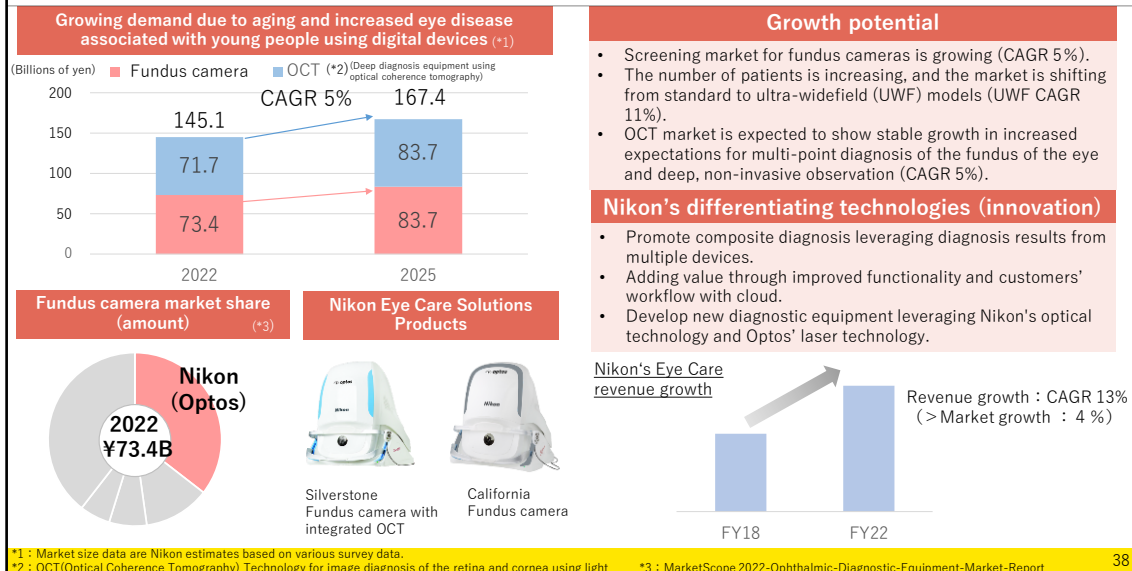


*1: Information and Communication Technology; A general term for technologies that utilize IT to support communication between doctors and patients.

*2: MARKETSDMARKETS. DIGITAL PATHOLOGY MARKET FORECAST TO 2028.

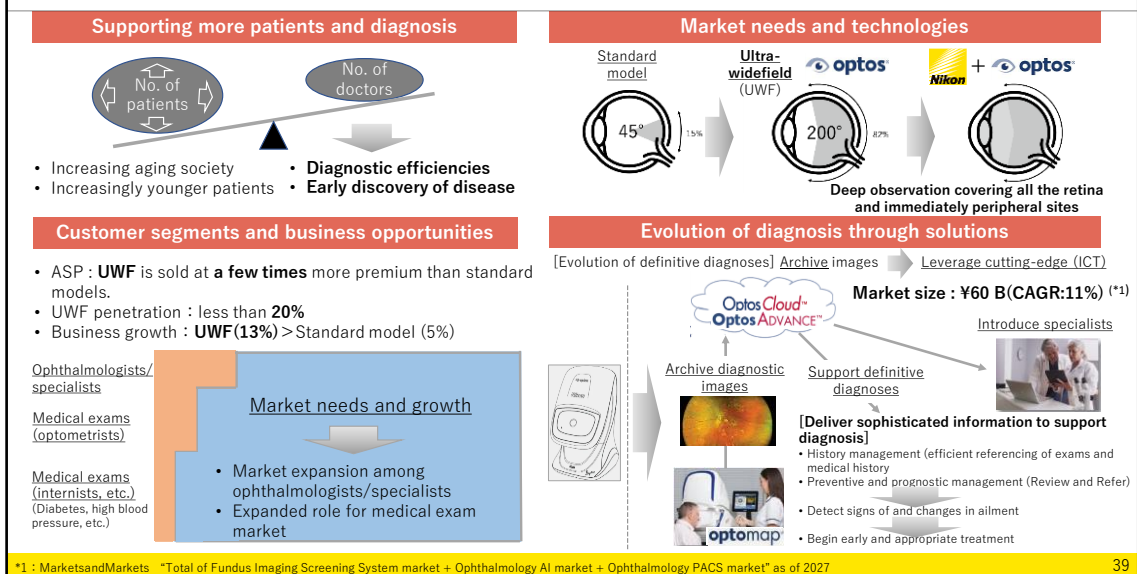
- Here we share our efforts in digital pathology.
- As aging progresses globally and advances in medicine, pathology diagnoses are on the rise. Leveraging digital technologies to enhance diagnostics accuracy and efficiency is increasingly more important.
- This spring, Nikon launched Japan's first medical digital microscope "Ui". We have also built a platform for remote diagnosis and we will begin initiatives aimed at greater diagnostics workflow efficiencies leveraging the cloud in the fall.
- The digital pathology market promises growth over the medium to long term. We are actively engaged in the development of diagnostic support tools leveraging AI and software.
- In the field of pathological diagnosis, composite diagnosis based on image diagnosis and genetic characteristics should contribute to progress in personalized treatment. We aim to capture new market opportunities here.

[Eye Care] Differentiation with Ultra-widefield in the Expanding Eye Screening Market



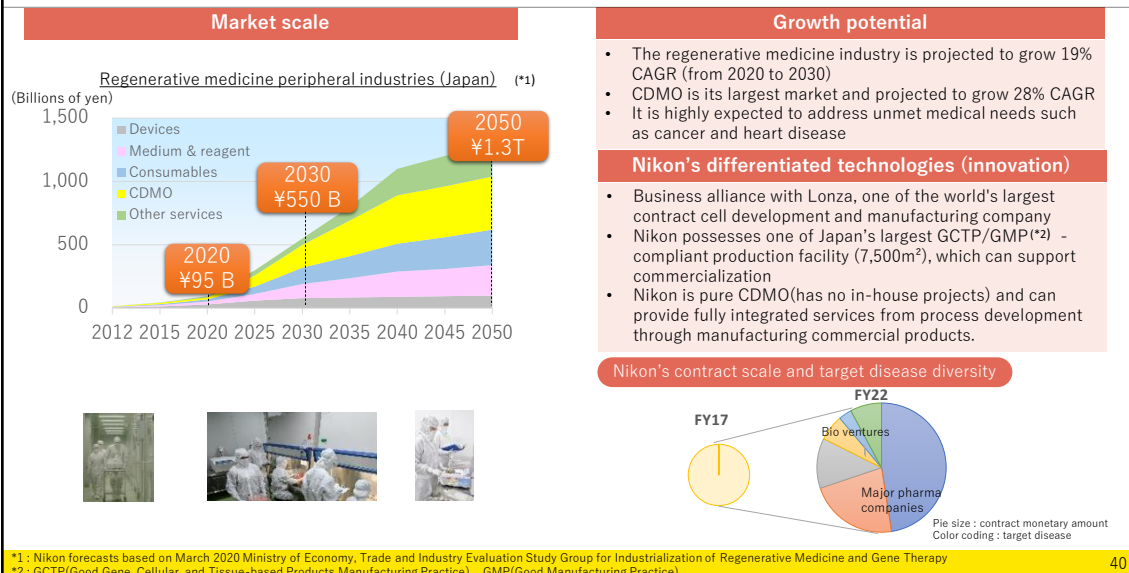
- Here, I will talk about Eye Care Solutions.
- The market for image diagnosis equipment is expected to show stable growth of 5% per year, given the aging population and increased eye disease associated with young people.
- Our fundus cameras have approximately one-third of the global market share thanks to differentiated technology. The market for more technologically advanced ultra-widefield models is expected to show double-digit growth.
- OCT models, which are used to diagnose deep into the eye, are delivering more added value with optical technology and diagnostic support tools. Nikon is working with Optos to develop new equipment and enhance functionality leveraging technological strengths on both sides.
- On the sales and marketing front, we are efficiently leveraging the global sales networks of Nikon and Optos to continue to grow revenues solidly in all markets.

[Eye Care] Technology Synergies between Nikon and Optos and Business Growth

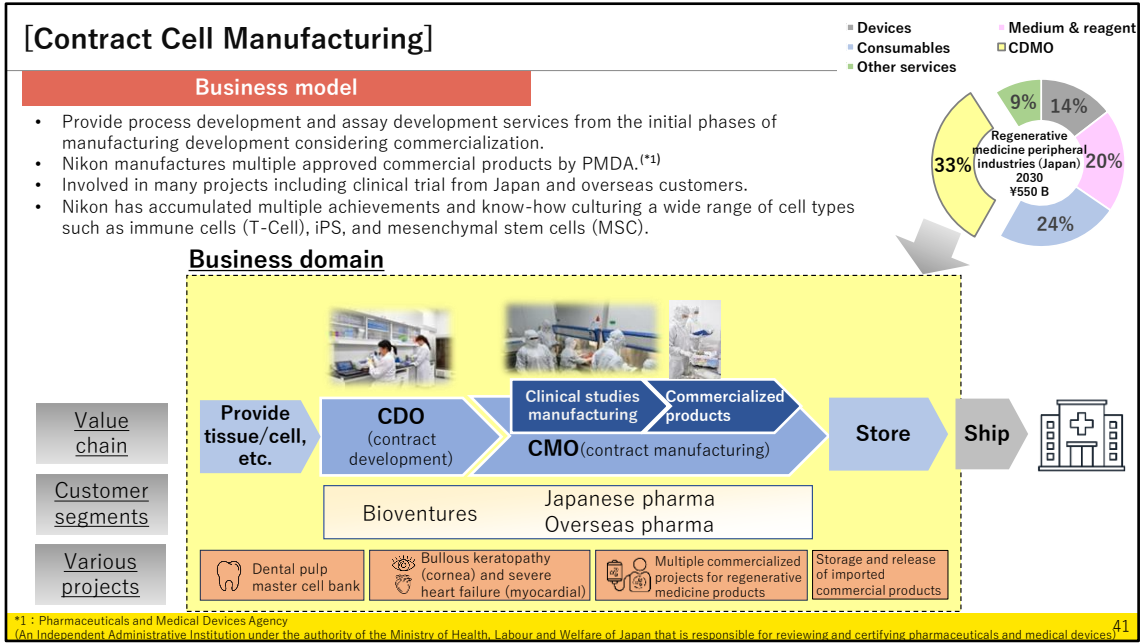


- Ophthalmological ailments are increasing across a broad range of age groups, making early discovery and treatment of ailments a pressing challenge. Striking a difficult balance between reducing doctor burden and enhancing diagnostics accuracy is key to continued growth in the diagnostic equipment market.
- Our ultra-widefield fundus camera is a ground-breaking diagnostic tool that captures about 80% of the fundus in one capture. In particular, the ultra-widefield function contributes greatly to efficient diagnosis of areas immediately peripheral to the fundus of the eye, leading to early discovery of signs of ailment.
- The ultra-widefield fundus camera models are priced at a few times that of standard models and are expected to grow in the double digits. So far, the ultra-widefield models have penetrated less than 20% of the market. Ophthalmological ailments developed from diabetes, high blood pressure and the like are increasing, leading to a larger market for screening, including medical exams.
- We have begun a cloud service in the US for images captured by our fundus cameras and OCT. We will strengthen management systems to manage signs and changes in ailments and pathological histories leveraging image archives. We hope our diagnostic support tools will speed up doctors' definitive diagnoses and reduce patient burdens.

[Contract Cell Manufacturing] From Break-even to Profit Contribution Phase



- Finally, I will discuss Contract Cell Manufacturing.
- Cell-derived regenerative medicine harnesses healing abilities and immunity that are inherent to the human body. The industry including peripheral industries, in Japan is expected to grow to ¥550 billion by 2030.
- In 2015, we entered into a business alliance with Lonza in Switzerland, one of the world's biggest players, and we launched Nikon CeLL innovation. We support pharma companies and bio venture customers with contract manufacturing and process development of high-quality regenerative medicine products.
- We have won contracts from customers inside and outside Japan. The drugs administered to patients have achieved ground-breaking therapeutic results. At the same time, more and more promising bio ventures from universities are progressing into clinical studies and trials, expanding the market for regenerative medicine.
- We are growing the number of projects contracted and scale of the business by responding to various diseases, and we are accumulating more technology.



- Here, we describe the business model of Nikon CeLL innovation.
- As you can see from the value chain, the business domain covers everything from providing tissue and cells leveraging a cell bank to contract development and manufacturing, and storage and transport procedures for clinical studies and commercialization. We have a track record across all parts of the value chain and strive to establish a stable management base.
- In providing tissue and cells, we finished building Japan's first master cell bank using dental pulp cells. Moving forward, we expect to expand application to a variety of ailments. These applications include the development of drugs for rare ailments.
- In clinical studies and commercialization, we are working with a university venture to develop a production method and contract manufacturing of iPS cells, for use in corneal transplants. In the major markets of heart and hematological diseases, we have won contracts from pharma companies and bio ventures from inside and outside Japan who give us high marks for our technology and quality management capabilities.
- The number and size of contracts are growing as we add to the customer base, making this a promising growth business.
- This concludes my presentation of progress in the Healthcare Business. Thank you for your attention.