

Q&A of Nikon IR Day 2023

Disclaimer

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Rather, the Company has exercised its discretion in providing a summary for those who did not participate.

Also, forward-looking statements, such as performance forecasts and the like, provided in these materials are based on certain assumptions and may differ significantly from actual business results as a result of a variety of factors.

Advanced Manufacturing Business

Q: Please tell us about the competitive environment surrounding SLM and its competitive edge.

A: In the Additive Manufacturing (AM) industry, the number-one player by sales is EOS, which does metal and resin 3D printers, giving it a broader product portfolio than SLM. Number two is GE Additive, a subsidiary of General Electric. SLM is the number-three player.

SLM's strength is that it makes metal 3D printers for large-format platforms for large parts. Aerospace and defense applications in particular handle large parts that take a long time to mold. SLM speeds up molding by deploying a multi-laser system that houses multiple lasers in one device, much like a twin stage increases throughput in a semiconductor lithography system. SLM is the first to deploy multi-lasers in metal 3D printing machines. Competitor devices typically use 4 or 6 lasers, but SLM's newest large-format system (NXG XII 600) is equipped with 12 lasers, delivering overwhelmingly high productivity and differentiation.

Q: How does Nikon leverage its technologies from semiconductor lithography systems to support SLM?

A: We supply core modules as hardware and support software development, as well. To enhance yield and quality, we have begun collaboration on the development of powder bed surface measurement and algorithms to calibrate the many lasers. Furthermore, as SLM adds to its product lineup it is studying the adoption of Nikon's modular design used in semiconductor lithography systems to enhance product competitiveness and production efficiency.

Q: Besides the number of lasers, what other structural strengths does the SLM metal 3D printing machine possess to support large molding sizes?

A: Large-format molding requires a large bed size. Also, when the lasers melt the metal, smoke discharges, blocking the laser beam and reducing the real power of the laser. Furthermore, small metal debris known as spatter negatively impact quality. The hydrodynamics of these factors need to be calculated and removed. Larger spatter cannot be removed by wind alone. The product design needs to incorporate simulations, and systems to control wind flow are needed. Moving forward, to go even larger, it will be important to have process controls that, among other things, provide real-time feedback to the laser output based on measurements of the melting condition when laser beams hit the metal.

Q: What proportion of sales today is consumables such as metal powder? What are your plans for the consumables business moving forward?

A: Service revenues including metal powder sales account for approximately 20% of sales. Large volumes of specialized metal powder cannot easily be purchased and used by customers. As a hardware maker, it will be important to strategically work with powder makers to handle high-quality specialized powders and increase future profits.

Q: In the metal AM market, I expect metal 3D printing machines will be introduced to prototyping applications moving forward. Over the mid- to long-term (out to 2027) do you project capturing demand for metal 3D printing machines for mass production items?

A: In Japan, the mainstream belief is that metal 3D printing machines are used only for prototyping. But overseas, they are already being used in mass production in the medical and defense industries. They are also used for integrated molding and lighter parts in multimillion-dollar automobiles known as Hyper Cars. In Japan, metal 3D printers are starting to be used in the mass production of some parts such as gas turbine engines. Moving forward, we expect use cases to grow at a certain rate for mass production, in addition to prototyping.

Q: What are the growth drivers of sales going forward?

A: The greatest driver of growth will be increased sales volumes of the high-priced large-format NXG XII 600. Each machine is priced at several hundred million yen, making a large contribution toward sales.

Healthcare Business

Q: As I understand it, the revenue driver in Life Science Solutions is not sales of the

biological microscopes themselves. Rather, it is image processing and analysis and cell production automation support. Are these technologies and solutions differentiated from the competition?

A: We believe we are the only company with a drug discovery support base in Japan, US and Europe approaching pharmaceutical companies and bio ventures. We support drug development at pharmaceutical companies and bio ventures based on the long track record we have developed over many years in academia leveraging imaging technology using microscopes. As drug prices are cut every year inside and outside Japan, pharmaceutical companies increasingly need to manufacture competitive drugs quickly and efficiently. Given these trends, our strength is our ability to provide an integrated service related to drug efficacy and safety evaluation leveraging image analysis.

Q: What is the market share of Optos' fundus camera?

A: Optos has 1/3 share of the market for fundus cameras. In the field of OCT (Optical Coherence Tomography), Optos also sells a fundus camera with integrated OCT, but does not yet enjoy a large market presence. Leveraging Nikon's optical technology and Optos' laser technology, we will advance the development of new diagnostic equipment and functionality enhancements.

Q: Compared to the competition, Optos' fundus camera can capture wider view angles but is also higher priced. What kind of demand is there in the screening market for early discovery of ailments?

A: In its main market, the US, you have Ophthalmologists as well as Optometrists. It is common for eyeglass stores to be conjoined with optometrists who conduct eye exams and prescribe eyeglasses or contact lenses. In the US, Optos enjoys strength among optometrists, in particular major high-end eyeglass chains.

Q: Your presentation states sales grew at a CAGR of 11% between FY2018 and FY2022. During the same period, the business turned profitable. Can you share the level of operating profit for each business area?

A: We do not disclose a breakout of operating profit, but Eye Care Solutions generates profitability on par with standard medical device makers. In Life Science Solutions, which has its roots in our founding business of microscopes, we have made a variety of investments in R&D as well as a global footprint. Therefore, profit margins are not as high as Eye Care Solutions, but in the near future we aim to bring operating margin to 15% or more.

Q: Which business area contributed to achieving the Medium-Term Management Plan targets 3 years ahead of schedule? And which business area do you expect to

contribute to profit growth as you revisit your Medium-Term Management Plan?

A: Eye Care Solutions has been in line with plan. Life Science Solutions contributed to operating profit growth. In Life Science Solutions, since 2018, one year after the business unit was established, we launched new products at a rate 2 to 3 times faster than in the past. After getting past the coronavirus pandemic, new products have been highly regarded by customers for their functionality and contributed to business performance. Now we are shifting investment from analog to digital devices. Following the launch of ECLIPSE Ui, a digital microscope for clinical applications, in September we also launched the ECLIPSE Ji for R&D. We aim to continue to grow by launching high value-added products like these.

Sustainability Strategy

Q: What is Nikon doing about the massive amounts of electricity consumption and CO2 emissions attributable to cutting-edge lithography systems?

A: As a semiconductor production equipment maker, we contribute to advances in semiconductor chips. One macro way of looking at it is that we contribute to the reduction of power consumed across the globe by products that use many semiconductors. Moreover, we have been working to reduce electricity consumption rates in semiconductor lithography systems, which consume great amounts of energy. For example, we are working at the components level to improve temperature control efficiency around temperature controllers. Also, weight reduction is key. To date, we have promoted ceramics and lightweight metals. But we need to do more to make things more lightweight. Moreover, we are now studying measures that would avoid using to the extent possible materials that emit CO2 or consume energy during the production process. It is not easy to balance performance enhancements with reductions in CO2 emissions and energy consumption, but we are aware it is a challenge that needs to be addressed.