Message from the CTO

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Progress in Fiscal Year 2021

- While striving to prevent the spread of COVID-19, maintained operations at manufacturing and repair bases
- Prioritizing patient safety, implemented several voluntary recalls of endoscopic and endotherapy products and upgraded the program following launch of EVIS X1
- Reviewed and reorganized development organization to conduct efficient product development

Future Priority Measures

- Promotion of product development and efficient R&D by the new development organization
- Implementation of initiatives to improve gross profit ratio
- Promotion of technological development toward introduction of single-use endoscopes

“We will continue to increase the value of endoscopes and make changes aimed at strengthening our organizational capabilities.”

In fiscal year 2021, the COVID-19 pandemic began and business was conducted amid an uncertain future. As CTO, what is your opinion on fiscal year 2021?

The COVID-19 pandemic has had a major impact on trends in technology, the most advanced being digitalization, called digital transformation (DX), which will accelerate in the years to come. This has had a great impact not only on product development, but also on supply chain management as a whole, such as in manufacturing and logistics, and I think DX and big data hold the key to the future of the medtech industry.

In fiscal year 2021, we launched the gastrointestinal (GI) endoscopy system, EVIS X1, in Europe, Japan, and some parts of Asia. The EVIS X1 marked the first model change in about eight years, and we had to overcome many technical hurdles, but I am pleased to have launched it successfully. We have also received a lot of positive feedback from the doctors. It is our pleasure to be able to support healthcare professionals and contribute to improving patients’ quality of life (QOL), and this is connected to improvements in employee motivation.

On the other hand, we conducted several voluntary recalls for endoscopic and endotherapy products, as well as upgraded the program following the launch of the EVIS X1 GI endoscopy system in fiscal year 2021, considering patient safety as a top priority. As CTO, I treat these events as important issues and we are proceeding with efforts to prevent them from recurring. As one of those initiatives, we started to reorganize the R&D organization. Through this reorganization, we aim to strengthen our organizational capabilities and ensure high product quality. In recent years, not only the demands from HCPs, but also the requirements brought about by tightened laws and regulations in the medical industry have been added to what we need to deal with and those matters have been becoming sophisticated and complex. Since the required technologies are wide-ranging, it is necessary to train specialized engineers in such areas as design, manufacturing, and procurement, and to respond systematically. Beginning April 2021, we shifted to a new organizational structure and in order to have concurrent engineering in the early stages of the product development, we divided the organization by technology and established a system to gather the necessary talents for product development project teams. Various engineers gather from the initial stage of development and then define the requirements of each field, conducting design validation to enable a range of requirements to be met. Since I regard the project leader of each project as bearing responsibility for product development, now, more than ever, I would also like to train the engineers and deepen their expertise by making the manager of each engineering function responsible for the skill development and training of each engineer who participates in a project.

In your capacity as CTO, how do you go about implementing your strategy?

Technology is an important element that supports corporate strategy, and my basic policy is to proceed with technological development in line with the strategy. I think it is important to invest properly, divided between the business development of products scheduled to be launched within a few years and the R&D of basic technologies for the future. Technologies that should be focused on in the future include not only AI and ICT, but also manufacturing technologies, including DX, and advanced technologies such as 6G and quantum computers. To maintain our competitive advantages and contribute to improving the QOL of patients, we will continuously invest in advanced technologies so that we can incorporate them into our product development in a timely and appropriate manner.

In terms of business, we launched the EVIS X1 GI endoscopy system in fiscal year 2021, but in the current fiscal year we are accelerating the development of new scopes for the EVIS X1 series. Also, as announced in the corporate strategy, we are currently working diligently toward the launch of our single-use endoscope developed in-house. As the market leader in endoscopes, Olympus is aiming to build a comprehensive portfolio, which adds single-use endoscopes to our mainstay reusable endoscopes, while providing the best solutions for all patients depending on their needs. Since the required functions and specifications vary by needs, we analyze the usage of each scope, identify the necessary technologies, and proceed with development. While reusable endoscopes possess the advantages for use in advanced endoscopic observation, diagnosis and treatments, we believe that single-use endoscopes can provide value in specific areas, such as infection control and durability. While assessing the strengths of each type of endoscope, we will be conducting technological development in the years to come.

From a manufacturing perspective, we are promoting digital manufacturing. Previously, a lot of our manufacturing relied on skill, but in the years to come, we will work to improve productivity by measuring the manufacturing process digitally. Recently, a technology called “digital twin,” which reproduces physical space information in digital space, has been drawing attention. We have hired new talent who will play a central role in this, are conducting trial operations toward the introduction of digital twin technology, and are beginning to see results. It is necessary to accumulate data, but because digitalization can predict processes and performance with a high degree of accuracy, we will be able to check finished products in virtual space before making them, enabling products to be developed more efficiently and effectively.

Please tell us about Olympus’ technical strengths and the future potential of endoscopes.

Olympus endoscopes began in 1950 with the birth of a practical gastroscope in collaboration with doctors. Olympus’ technological developments could not have been achieved without our involvement in the clinical procedure itself, and it is of the utmost importance that we work with healthcare professionals. In this way, our R&D has produced new technologies through our long-term efforts based on our relationships of trust with healthcare professionals that are centered on doctors. These relationships are one of Olympus’ strengths.

Looking back on the history of endoscope development, I think we have focused on improving both the value and quality of endoscopes. We have increased the value of endoscopes by supporting the doctors who have developed endoscopic procedures and expanding the range of procedures over a long period of time. We have also been working to improve the quality of a series of endoscopy workflows, aiming to improve the diagnostic performance of endoscopy and to evolve minimally invasive treatments with endoscopy.

I believe that the new EVIS X1 GI endoscopy system is equipped with unique functions that further enhance the value of early diagnosis and minimally invasive treatments provided by the endoscope. Extended depth of field (EDOF) technology has greatly improved the operability of high-magnifying endoscopes, which had been considered difficult in the past. In the years to come, I hope the standardization of diagnosis using high-magnifying endoscopes will be promoted all over the world. Red dichromatic imaging (RDI) is a technology that enhances the visibility of deep blood vessels and gastrointestinal bleeding points, and I believe this technology can contribute to safe and efficient endoscopic treatments. In this way, I believe that the various functions installed in the EVIS X1 will increase the value of the endoscope in lesion detection and diagnosis, and contribute to significant improvements in the quality of treatment.

From a medium- to long-term perspective, I think it will be necessary to add the efforts made so far and work on widening the range of the role of endoscopes. To significantly improve the position of endoscopes in healthcare, it will be important to expand what can be achieved with endoscopes and make healthcare professionals and patients gain a sense of that increase in value.

I believe in the potential of endoscopes and am confident that evolution will never end. As CTO, I would like to drive technological development at Olympus so that I can continue to contribute to the development of endoscopes.