Printing Group

Competitive Advantages

- Ownership of electrophotography and inkjet technologies for digital printing
- Broad product range spanning consumer products, office equipment and commercial printing; global sales channels and customer support networks
- Mass production capabilities for high-performance printers containing many parts, supported by intra-Group collaboration and ability to make production machinery in-house

Basic Rationale on Value Creation

The history of humanity is told in the narratives printed on paper about how societies have created economies, taught culture to the next generation, and made scientific progress. Through printing products and services, the Printing Group helps people share what they are thinking and doing, and enjoy life. Canon printing products have assisted people in the creation, capture and communication of new value. Although recent societal changes have led to paper being used in fewer situations, the immediacy and convenience of printing continue to surpass digital data and displays functionally in many ways. Canon will continue to provide the printing products and services that cater to the evolving needs of society.

Canon's from-scratch development of such printing technologies as electrophotography and inkjet printing has contributed to the worldwide adoption of copying and printing. With the shift to digital over the past 20 years, we have created new value by utilizing digital technologies to facilitate rapid duplication and dissemination. With the society of the future expected to be based on cloud computing, we are focused on improving print security and content-on-demand technologies to enable the next generation of on-demand printing services, in which user-designated content can be printed the instant it is required. In this way, our policy is to continue to create new value by providing digital printing services based on cyber-physical systems featuring fully integrated hardware and software.

Supplying products that help to solve social issues also contributes to the achievement of SDGs.
For instance, the essence of the digital transformation (DX) can be seen in Canon's development of high-performance multifunction devices capable of quiet, high-speed scanning of auto-fed documents.
In addition, services that seamlessly integrate such devices with the cloud are helping customers make efficiency gains while also saving time and labor.
Through these initiatives, the Printing Group is contributing to the achievement of goals such as SDG 9 (Industry, Innovation and Infrastructure) and SDG 12 (Responsible Consumption and Production).

Related SDGs

9.1 By providing digital printing services based on cyber-physical systems and contributing to DX in office environments, Canon aims to help customers achieve more advanced, efficient operations while saving labor.

12.5 Canon has been undertaking the remanufacturing of used multifunction devices since 1992. The current range includes a special eco-conscious model, the imageRUNNER ADVANCE C3330F-RG, where an exceptionally high reused parts ratio of over 90% has been achieved.

13.2 Canon's multifunction office device imageRUNNER ADVANCE DX C5750F features energy-efficient design points such as on-demand fixing technology and a high-performance main controller. It achieves a reduction in CO_2 emissions compared with earlier models of around 47%.

Business Strategy in Phase VI

Business opportunities

- Demand for new printing/document solutions brought about by advances in IT
- Need for new printing services that cater to diverse work styles such as remote work
- Growth of digital printing markets in commercial and industrial printing sectors

Risks

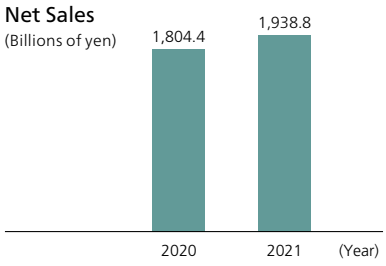
- Delay in development of digital services that meet the latest needs
- Acceleration of decline in office print volume due to impact of COVID-19 pandemic
- Impact on production and sales volumes due to semiconductor shortages

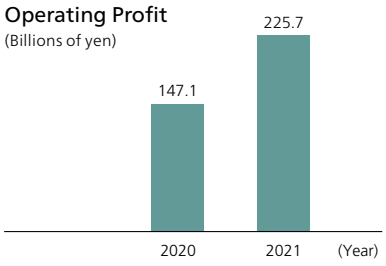
Issues

- Upgrading products and services to supply printing environments of uniform quality across home, office and other locations
- Improved efforts to mitigate production/procurement risks to minimize business impact of factors such as COVID-19 outbreaks and semiconductor shortages
- Improved remanufacturing and product capabilities to mitigate business risks while responding to the increased opportunities as society becomes more eco-friendly

Initiatives for Year I of Phase VI (2021)

- We derived gains in efficiency across development, production and sales through various collaborative efforts aimed at overcoming internal organizational barriers. Working on product development with Group companies helped to strengthen the competitive advantage of our products in commercial printing, a field considered to have new growth potential.
- We lost some sales opportunities due to emerging supply-side issues such as COVID-19 outbreaks and semiconductor shortages. We initiated efforts toward strengthening our development and production set-up to help mitigate future business continuity risks.
- As part of responding to evolving work styles, we upgraded our development capabilities for products that can deliver an office-level printing environment in the home or other locations, as well as for related operational support tools.





Strategic Focus for Phase VI Going Forward (through 2025)

- Expand commercial printing business; establish industrial printing business; gain leadership of the digital printing market
- Reinforce Canon's product lineup by leveraging our strengths in electrophotography and inkjet technologies, along with DX-related capabilities

To achieve these goals, in 2022, we are focusing on upgrading the product lineup and our workflow solutions, and on providing printing environments that function independent of location.

Our medium-to-long-term strategy in digital commercial printing is to focus on accommodating an expanded range of print media, notably printing of labels and packages. In hardware, our aim is to supply product ranges to cover all types of usage from the home or office environment to professional print service providers, as well as commercial and industrial print settings. In addition, Canon will offer print systems to deliver cloud-based on-demand printing services.

We are focused on providing new solutions for the DX era based on Canon's print management technology originally developed for office environments. We are also striving to create new business possibilities by applying inkjet technology to other industrial sectors. In addition, we remain committed to ensuring all our business activities are environmentally conscious.

Imaging Group

Competitive Advantages

- Unique brand power inherited as longstanding industry pioneer and supplier of cameras used by professionals
- Ability to create value as leading company in the field of imaging, based on established superiority in optical and camera technologies
- Ability to supply products and services on a global scale due to ownership of technologies relating to network cameras, image-processing software, and video analytics

Basic Rationale on Value Creation

Visual information is essential in people's daily lives. The Imaging Group supplies a diverse range of products and services that enhance the value of the visual image and enable customers to convert embedded information as required.

In the camera business, Canon contributes to the cultural development of photography and video by supplying high-performance products that use the optical technologies we have cultivated over many years to create high-quality images. These visual images not only preserve memories and emotions in vivid color, but also create value by sharing the joy of visual experiences. We are also developing new concept products to enable novel approaches to image creation, and building tools to support production of highly creative content utilizing technologies such as virtual reality (VR) and volumetric video. Our web cameras are also used in offices, schools and other settings to help overcome limitations of time and location.

In the network camera business, Canon's aim is to help address social issues by converting video-feed data into information. To help realize a more safe and secure society, in addition to supplying network cameras, video management software, and video analytics technology for security applications, we are integrating technologies to develop video solutions for use in recording and monitoring, as well as assessing and responding to emergency situations.

Canon products also have uses in manufacturing or retail settings. Improvements in productivity, quality and customer satisfaction can be achieved by linking video solutions to operating systems. For example, video analytics technology can be employed in factories to help identify defective items or even automate such tasks, thus saving labor. In shops or distribution centers, this technology can also be used to reduce losses and increase profits by tracking movements or product inventories.

By supplying systems that help translate visual experiences into human happiness and providing video solutions to help address social issues, the Imaging Group aspires to support comfortable lifestyles, culture and education. These efforts contribute to the achievement of goals such as SDG 4 (Quality Education) and SDG 11 (Sustainable Cities and Communities).

Related SDGs

4.7 Canon is helping to realize broader educational opportunities through streaming video systems that enable expressively rich communications.

11.2 Canon supplies various video solutions that are contributing to the realization of smart cities and the development of smart mobility solutions.

12.3, 13.2 Understanding our responsibilities as a corporate citizen, we are targeting steady reductions in the use of energy and resources through development and design advances; we also supply solutions to contribute to productivity improvements.

Business Strategy in Phase VI

Business opportunities

- Growing demand for network video solutions due to digitalization of society
- COVID-19-induced growth in market for online video-based communications
- Growing demand for advanced video imaging such as XR, volumetric video and VFX

Risks

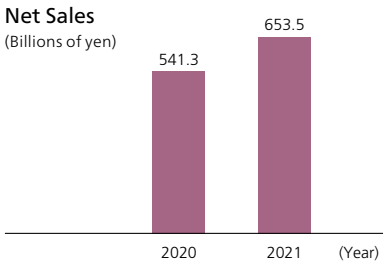
- Contraction of camera market due to advances in smartphone functionality
- COVID-19-related impacts such as reductions in face-to-face sales opportunities and difficulties with logistics and parts procurement
- Brand recognition among younger demographics

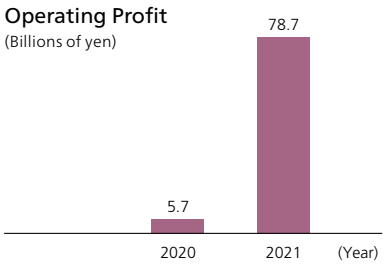
Issues

- Establishing strong position in the mirrorless camera market
- Creating new businesses in the fields of visual experience and visual data utilization
- Collaborating with partners possessing different strengths
- Upgrading software technology

Initiatives for Year I of Phase VI (2021)

- We further enhanced our EOS R system cameras and RF-series interchangeable lenses, and launched a new virtual reality ("VR") imaging production system (EOS VR SYSTEM). We also proposed new ways to enjoy images, including the launch of a new camera that captures images automatically and remote web-cameras.
- We strengthened our technological cooperation with Group companies: with Axis in development and marketing, with Milestone in video management software, with Arcules in cloud-based services, and with BriefCam in video analytics software.
- We developed video analytics solutions based on combining image processing and AI technologies such as a solution to alert office users to possible congestion and a solution called "Inspection Eye for Infrastructure" to detect cracks in buildings.





Strategic Focus for Phase VI Going Forward (through 2025)

- Maintain the top position in the digital camera market and expand business scope of network cameras to encompass the social infrastructure market
- Establish Smart Mobility business by leveraging our optical and network technologies

In the camera business, our aim is to generate sustained profits by retaining our leading brand position based on market share. We will also focus on leveraging our technical expertise to develop solutions that explore new possibilities in visual expression, such as XR systems (combining VR, MR and AR) and volumetric video.

We are also striving to utilize imaging technology to expand into business domains that help solve social issues. This includes the development of video analytics solutions for collaborative robots and automated guided vehicles, and efforts to upgrade our lineup of cameras fitted with advanced sensors for capturing images even in the dark. We are also pursuing efforts to grow the business through an open innovation approach by leveraging the strengths of Canon's imaging technology. In the promising area of autonomous driving, in addition to optical technologies we are developing distance measuring and other perception technologies, working to build a smart mobility business.

Medical Group

Competitive Advantages

- Over a century of knowledge in the medical field and partnerships with healthcare professionals
- Canon's diverse range of proprietary imaging and manufacturing technologies
- Global sales/service network over 150 countries/regions

Basic Rationale on Value Creation

Amid global trends of rapidly aging populations, rising healthcare costs and the ongoing infectious threat posed by COVID-19, demand for healthcare has risen to unprecedented levels, and promoting better health while preventing disease is now a common challenge across countries and regions worldwide. Under such conditions, Canon's Medical Group is engaged in business that respects a shared set of values with patients and healthcare professionals. In terms of value creation, the foremost priority for Canon is to work out what kinds of technology are required to fulfill the needs of those providing healthcare; to supply the technology for realizing this practically; and to find ways of ensuring ease-of-use and maximizing economic value. These ideas are summarized in the Canon Medical management slogan *Made for Life*, which plays a guiding role in the Medical Group.

The Medical Group is mainly focused on the three fields of diagnostic imaging, healthcare IT and in vitro diagnostics. Our products and services help to prevent disease, maintain people's health, and contribute to recovery from illness in varied ways. In the field of diagnostic imaging, we are utilizing AI technology to develop CT, MRI, and PET-CT image reconstruction technology that offers higher image quality while reducing radiation dose and noise, and to realize easy-to-operate diagnostic ultrasound systems that allow more efficient testing. In healthcare IT, we are developing IT solutions to collect, integrate, analyze and process different types of diagnostic images and data. In the field of in vitro diagnostics (IVD), we are supplying rapid genetic testing systems, antigen test kits and IVD reagents for COVID-19 testing.

These business activities are directly involved with solving social issues related to human health and welfare, thus contributing to achieving the SDGs, most notably SDG 3 (Good Health and Wellbeing), SDG 9 (Industry, Innovation and Infrastructure), and SDG 17 (Partnerships for the Goals).

Related SDGs

3.d By incorporating image reconstruction technology developed using AI, we have brought to market diagnostic imaging equipment that achieves high image quality while reducing radiation dose compared to conventional CT scanners.

9.5 Canon's efforts to promote innovation include joint research projects with the National Cancer Center of Japan in the field of photon-counting CT systems, and with Kyoto University's Center for iPS Cell Research and Application to develop high-quality iPS cell lines for autograft use.

17.6 Through partnerships with universities and medical institutions in Japan and overseas, we are carrying out leading-edge research on AI-based precision care approaches, including the latest clinical research on CT, MRI, and diagnostic ultrasound systems.

Business Strategy in Phase VI

Business opportunities

- Harnessing new materials to create additional value in diagnostic imaging equipment
- Advances in genetic and other biotech fields and regenerative medicine
- Adoption of ways to promote and demonstrate systems remotely using DX tools

Risks

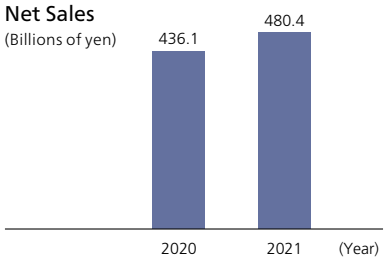
- Reduced opportunities for sales and supply chain disruption caused by the COVID-19 pandemic
- Preferential policies for locally manufactured products for medical devices
- Underdeveloped presence in the U.S., the market with the greatest global influence

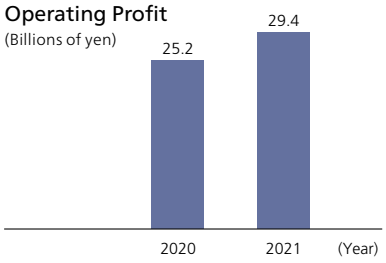
Issues

- Expansion of business portfolio beyond diagnostic imaging systems
- Gaining market share in the U.S. and elsewhere for diagnostic imaging equipment and upgrading global presence
- Improving the supply chain by switching to readily accessible materials and alternatives in response to changes in the environment

Initiatives for Year I of Phase VI (2021)

- Our efforts to commercialize photon-counting CT systems, which are expected to achieve high image resolution while reducing radiation dose compared with conventional CT scanners, included the acquisition of Redlen Technologies and the start of a related joint research project with the National Cancer Center of Japan.
- Product launches included a digital X-ray system for multipurpose scans; a digital PET-CT system using AI-based image reconstruction technology; a 320-row area detector CT scanner; a high-power 1.5-tesla MRI scanner; and new premium-class diagnostic ultrasound systems that support highly efficient testing.
- We established a global organizational structure to strengthen the healthcare IT business and sought to speed up joint research with medical institutions.





Strategic Focus for Phase VI Going Forward (through 2025)

- Further expansion of diagnostic imaging business through external partnerships or M&A
- Expand portfolio into fields beyond diagnostic imaging, such as IVD reagents and healthcare IT

In diagnostic imaging, we will develop technology to facilitate commercialization of photon-counting CT systems that have the potential to deliver ultra-high image quality while significantly reducing radiation dose required in scanning. In addition, we are developing next-generation high-performance MRI scanning systems by combining technologies from Group companies, notably the RF coil technology of QED, with image-processing technology based on AI. In ultrasound equipment, we are working on cutting the cost of sales via in-house production of a common platform using proprietary technology.

To develop businesses beyond diagnostic imaging, we are working to develop healthcare IT systems that gather, integrate, and analyze image and non-image data collected in clinical settings. In the IVD field, we are working to expand Canon's business portfolio by broadening our presence into areas such as peripheral devices used in testing.

Industrial Group

Competitive Advantages

- Product development based on incorporating specific customer requirements from design stage, with manufacturing sites and facilities capable of development, design and production
- Nanoimprint lithography technology that lowers costs and achieves miniaturization
- Products that raise customer productivity and that enable lower cost of ownership; professional workforce with high levels of technical expertise and experience

Basic Rationale on Value Creation

In 1970, Canon became the first Japanese firm to launch semiconductor lithography equipment. In 1986, we began applying the technology to the development of lithography equipment for manufacturing flat-panel displays (FPD). These areas still form the core of the Group's business today. In the past, to address the miniaturization of semiconductors, we pursued a business strategy of expanding our lineup of products to offer to the market. Although the need for miniaturization continues to exist, from the 2010s, we shifted our strategy toward product development that incorporates specific customer requirements from the design stage, in line with diversifying customer needs, leading to increased earnings and the flexible provision of value to customers.

Today, Canon develops, manufactures and sells lithography equipment based on i-line (mercury lamp) or KrF (krypton fluoride) technology to help lower production costs and increase productivity for customers. Due to high power consumption of lithography equipment, we are working to develop more energy-efficient models and otherwise add value to our existing range by proposing solutions tailored to specific customer usage conditions.

Canon's products in this field are one of the forces driving global establishment of social infrastructure, industrial innovation, and energy-saving initiatives. Hence, our related business activities directly create value for society. Moreover, by stamping the circuits directly onto the wafer, our nanoimprint lithography equipment revolutionizes the semiconductor production process, enabling the creation of highly detailed nano-level circuitry at reduced cost and energy consumption. This will create added value for the entire semiconductor industry.

By helping to build the base for new industries and provide flexible value in line with customer needs, Canon's efforts in the field of industrial equipment contribute to the achievement of SDGs such as SDG 9 (Industry, Innovation and Infrastructure) and SDG 11 (Sustainable Cities and Communities).

Related SDGs

9.4 Nanoimprint lithography technology simplifies the production process for semiconductors without any loss of high-performance functionality, leading to energy savings, higher productivity and reduction in environmental impact.

11.6 We are working to lower environmental impact by using fewer packaging materials.

Business Strategy in Phase VI

Business opportunities

- Growth in global semiconductor market due to rising demand for 5G/IoT-related products
- Increase in WFH and use of web conferencing due to COVID-19 pandemic
- Growth in OLED display market due to rising demand for high-resolution images/streaming video (4K/8K, etc.)

Risks

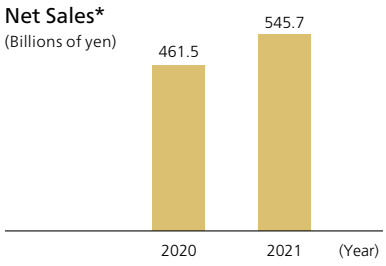
- COVID-related impacts: travel restrictions, extended delivery times and procurement delays for parts and materials
- Foreign government policy-related strategic changes in location of semiconductor production

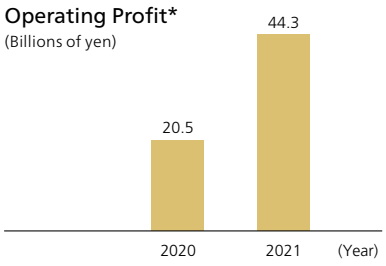
Issues

- Upgrading production capacity to respond to rapid growth in semiconductor demand
- Further work towards establishing nanoimprint lithography technology, which can realize miniaturization at lower cost, including moving to mass production
- New business creation, including expansion into peripheral equipment, based on technical cooperation with other parts of the Canon Group

Initiatives for Year I of Phase VI (2021)

- We responded quickly to the growth in demand for semiconductor lithography equipment caused by rapidly expanding global semiconductor demand.
- In view of COVID-related concerns, we launched an IT support system to allow maintenance and support services without onsite visits. By collecting and analyzing operational data, engineers are able to detect and predict issues, contributing to process efficiency gains and higher added value.
- We made further progress with the development, manufacture and sale of nanoimprint lithography equipment and other products designed to reduce environmental impact.





* Figures are for the Industry and Others Business Unit

Strategic Focus for Phase VI Going Forward (through 2025)

- Focus on growing and strengthening business to meet strong demand for semiconductor lithography equipment, notably by further expanding in European and US markets
- Focus on enhancing product competitiveness in FPD manufacturing equipment and accelerating the development of new processes and materials for OLED applications

In semiconductor lithography equipment, our aim is to maintain our overwhelming market share in i-line lithography equipment while working to increase our share of the KrF lithography equipment market. In addition, we will work on establishing nanoimprint lithography technology, including stepping up technological development to enable mass production while also developing new applications through our participation in R&D into upgrading the basic telecommunications infrastructure for a post-5G world.

Responding to rising demand for high-resolution images and streaming video (including 4K and 8K), we are also focusing on the OLED display manufacturing equipment sector by developing new manufacturing processes and materials. In the FPD lithography sector, we are developing more competitive products based on advances in our proprietary optical technologies. Canon Anelva is also focused on developing film deposition equipment for next-generation non-volatile memory applications that realize energy savings.