

# Business Strategy

## Printing Group

By providing printing services based on a “cyber-physical” approach that integrates hardware and software components, Canon is helping customers to realize advanced, efficient operations and save labor in an age of digital transformation (DX).



### Competitive advantages of the Printing Group

- Ownership of electrophotography and inkjet technologies for digital printing
- Breadth of product range, from consumer products to equipment for office and commercial printing; globally developed sales and customer support networks
- Mass production capabilities for standard and high-performance printers that constitute many parts, based on organized intra-Group collaboration and ability to make production machinery in-house

## Basic Rationale on Value Creation

Printing has been an integral part of people’s lives and societal development. Printing is essential to cultured living beyond the basic needs such as clothing, food and shelter; today, it would be difficult to achieve economic development, cultural inheritance and scientific progress without print. Printers are necessities in use throughout the world.

Advances in IT are driving the shift to paperless offices, and the use of digital displays over printed paper is expected to continue going forward. Canon, however, sees social value in printing because it helps people collaborate more efficiently and be creative, supports deep thinking, and can simply be fun to have. We will continue to create products that deliver such value.

Canon’s history is closely tied to the evolution of copiers and printers. We developed electrophotography and inkjet printing technology from scratch, and have succeeded in helping to foster the global, widespread use of copying and printing. We have continued to create new value with the incorporation of new technologies to meet the changing needs of the time. For example, during the shift to digital over the past 20 years, we have brought new benefit by leveraging digital technology to enable instant reproduction and distribution of data.

The society of the future is likely to be based on cloud computing as ICT continues to evolve. Developing on-demand printing services that take advantage of such infrastructure, Canon’s aim is to provide on-demand printing of user-designated contents. The keys to realizing this will be print security and contents-on-demand technologies. Our products will become more “advanced and user-centric” and will have functional simplicity, stability and ease of use combined in one package, while also having the ability to access a range of services in a connected environment. Remote access to systems and software turns devices into cyber-physical systems in which the hardware and software are integrated. Canon hopes to serve our customers in the areas of efficiency and reduction of labor by providing digital printing services based on such systems.

Canon’s value creation and other activities in this field contribute mainly to the achievement of SDG 9 (Industry, Innovation and Infrastructure).

### Related SDGs



## Phase V Review

The three businesses targeting the consumer, office and commercial printing markets (which includes inkjet printers, multifunction printers and production printers) were integrated into a single digital printing business. This allowed us to rapidly assess any printing-related opportunities and risks based on centralized information, and to formulate a comprehensive strategy for the next-generation printing market. The revised set-up also supported new business development.

We expanded the product line-up with models for commercial printing, including continuous feed digital

presses for the graphic arts market. In terms of office equipment, we developed the imageRUNNER ADVANCE Gen3 series with color-shift and integrated cloud capabilities.

In 2020, lockdown in response to the pandemic forced many people to working from home, which significantly depressed the demand for office equipment. However, demand has since recovered as economies re-opened. Meanwhile the sales of home-office printers and consumables rose sharply. Integration of the three businesses enabled us to respond quickly to such developments.

## 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 declining office print volume trend due to impact of COVID-19 pandemic

In digital commercial printing, an area expected to grow, we will harness the collective resources of the Canon Group to create new products offering high image quality, productivity and reliability. We will also focus on accommodating an expanded range of print media, notably the printing of labels and packages.

Based on this approach, Canon aims to provide a range of hardware that can address all types of printing: those done at homes and offices, commercial and industrial printing and prints made in vertical markets. Canon will also offer print systems that can deliver cloud-based on-demand printing services to the home and office, commercial and industrial facilities, and commercial/industrial print providers.

The COVID-19 pandemic has clearly shown an impact on customer workflows; the capability to print was not necessarily available to all working in different environments prior to COVID. We are focused on providing new solutions for the Digital Transformation (DX) era based on the print management technology we have developed for office environments. We see this approach will lead to higher earnings as well.

In emerging markets, instead of going through a gradual development process, things can skip or jump to the next phase, bringing a whole new set of needs and demands. We aim to expand our business by first conducting detailed research on each national and regional market to determine the precise needs.

We are also looking for new business possibilities such as applying thermal inkjet technology to other industrial sectors. We are also committed to the environment, and based on various technological innovations related to sustainability we have developed to date, we intend to invest more for this cause.



## Imaging Group

Combining optical technologies developed over many years with image processing, video analytics and network technologies, we aim to further reinforce the competitiveness of our existing operations while also establishing new businesses in areas such as smart cities and smart mobility and helping to build social infrastructure.



### Competitive Advantages of the Imaging Group

- Unique brand power inherited as longstanding industry pioneer and supplier of cameras used by professionals
- Technical expertise borne of decades as a leading optical equipment manufacturer
- Ability to supply integrated products due to ownership of technologies relating to cameras, image-processing software and video analytics

## Basic Rationale on Value Creation

Camera market contraction has continued due to rising smartphone penetration and the impact of the COVID-19 pandemic. However, there is sustained demand for high-performance models delivering professional-level richness of image and for mirrorless cameras. At Canon, we seek to capture this demand by leveraging technical expertise cultivated over many years to create products offering high performance and image quality. As part of contributing to the continued development of photographic and imaging culture, we also emphasize the social value inherent in the joy that Canon products give to people. Besides the development of new concept products to widen the appeal of photography, we are also focused on ways of fully capturing and recreating 3D spaces based on innovative technologies such as free-viewpoint video.

In contrast, the market for network cameras is growing with widespread increases in security-consciousness and the evolution of the “smart city” concept globally. Against this backdrop, our network cameras are contributing in areas such as crime prevention, traffic safety and urban infrastructure planning. Network cameras are also adding value in novel settings through its video analysis technology,

such as enabling defective parts recognition or enhancing process automation in factories and production facilities, or helping to increase sales in retail outlets based on detecting flows of people and merchandise. We are also developing software to anonymize people within video data feeds for privacy-protected monitoring applications. Our activities in the field of network cameras are based on the open strategy adopted by the Canon Group companies Axis Communications (“Axis”) and Milestone Systems (“Milestone”), which grants business partners flexibility in systems construction. Along with better security and safety, this approach translates to improvements in productivity, customer satisfaction and product quality.

The Canon Group’s provision of high-quality cameras, network cameras and related products contributes to the achievement of several SDGs, notably SDG 9 (Industry, Innovation and Infrastructure) and SDG 11 (Sustainable Cities and Communities).

### Related SDGs



## Phase V Review

In a significant achievement, we maintained our No. 1 share of the shrinking digital camera market. Amid a shift to mirrorless cameras, we reallocated resources to boost the development of new businesses and products, including new concept cameras. While the COVID-19 outbreak temporarily depressed demand in 2020, the market has since begun to recover. Moreover, the surge in online communications due to the pandemic is expected to stimulate demand for better and more precise imaging, an area of strength for Canon.

In the network camera business, following the addition of Axis and Milestone to the Group in Phase IV, we strengthened our position further through the acquisition of BriefCam in 2018. In 2017, the cloud business planning and development operations of Milestone were also spun off into the new Arcules venture as part of establishing an integrated value chain for our network visual solutions technology. This was one of the major achievements in Phase V.

## Business Strategy in Phase VI

### Business opportunities

- Adoption of network cameras in varied settings such as factories, shops, healthcare and schools
- Growth in demand with progressive adoption of smart cities, IoT and AI
- Emergence of new imaging technologies such as virtual reality (VR), augmented reality (AR), mixed reality (MR) and free-viewpoint video
- Growth of markets for network camera systems and video analytics software

### Risks

- Contraction of camera market due to higher smartphone penetration rates
- Loss of sales opportunities and supply chain disruption caused by COVID-19 pandemic
- Brand recognition among younger demographics

Our policy goal is to enter the vehicle-mounted camera market by leveraging Canon's optical, image processing, video analytics and network technologies to establish the Smart Mobility business. We have started working with partner companies to develop and commercialize products in areas such as automotive LiDAR (light detection and ranging) sensors and next-generation AGVs (automated guided vehicles) or AMRs (autonomous mobile robots).

In network cameras, in collaboration with Axis, Milestone, BriefCam and Arcules, we are working with Canon Group sales companies to build a platform for incorporating advances in IoT, AI and other technologies to create novel solutions that address diverse customer needs. Elsewhere, we are responding to the demand created by new situations such as the increase in remote work amid the COVID-19 pandemic that demands higher-quality video links; more automation in factories; and new demand in a range of healthcare settings. In addition, we are developing solutions using AI-based video analytics technology for real-time people counting and facial recognition within crowds and related applications.

In the camera business, we are continuing to focus on development of new high-value-added products targeting segments with higher growth potential such as mirrorless cameras. Moving with the times to create new value, we are also putting more resources into the development of new concept cameras that emphasize the fun of capturing still images and video as a way of appealing to younger demographics. In addition, we are maintaining our global service and support network to give Canon customers greater peace of mind when using one of our products.



## Medical Group

We are reinforcing Canon’s medical diagnostic imaging equipment/systems businesses by incorporating IoT, AI and other digital technologies and advances in biotechnology. We are also making comprehensive Group’s resources to enter the field of in vitro diagnostics, including testing equipment such as test reagents.



### Competitive Advantages of the Medical Group

- 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 rapid aging of populations globally, rising healthcare costs and the growing threat posed by infections such as COVID-19, the demand for healthcare continues to increase rapidly and there is greater interest in promoting better health and in disease prevention. Canon supplies healthcare professionals with a diverse range of products and services of high utility value across the fields of diagnostic imaging, healthcare IT and in vitro diagnostics. Leveraging the distinguished history and related expertise of Canon Medical Systems, which joined the Canon Group in 2016, this business also draws on various collaborative partnerships with universities and medical institutions across each phase from R&D and manufacturing to sales and customer service. Research collaboration with such as Japan’s National Cancer Center aimed at creating innovative next-generation systems and a joint research program to apply deep learning technology to MRI imaging with Kumamoto University and the University of Bordeaux is ongoing.

The business activities are rooted in Canon’s corporate philosophy of *kyosei* and the Canon

Medical Systems management slogan *Made for Life* and this creates new value. In addition, we are looking to maximize synergy by creating original high-value-added products based on utilizing Canon’s imaging technology to enhance CT and MRI diagnostic imaging systems.

Canon’s efforts in this field contribute to the achievement of SDG 3 (Good Health and Well-being), SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action), as well as to SDG 9 (Industry, Innovation and Infrastructure) through new advances in medical technology. Canon’s active promotion of joint development and open innovation programs with partners in the public and private sectors – including universities, medical institutions and business partners – also contributes to the achievement of SDG 17 (Partnerships for the Goals).

### Related SDGs



## Phase V Review

The most significant development in Phase V was when Canon Medical Systems joined the Canon Group in 2016. This move transformed the Group's business portfolio by expanding the medical business, which at the time was one of Canon's leading new businesses. Since the acquisition, a platform for creating synergies has been completed and efforts are focused on expanding the business through the integration of sales networks.

In 2020, the final year of Phase V, equipment sales and installation activities were restricted by the

COVID-19 pandemic. In collaboration with Nagasaki University, we developed a commercial rapid genetic testing kit employing the fluorescent LAMP method for use in testing for COVID-19. We also expanded our range of products to prevent the spread of infectious disease with the launch of a qualitative antigen test kit developed jointly with Yokohama City University. Demands for imaging and diagnostic equipment increased despite the interruptions to sales activities and disruption of supply chains, resulting in only a slight decline in sales from 2019 levels.

## Business Strategy in Phase VI

### Business opportunities

- Digital transformation as IoT, AI and other technologies applied to healthcare
- Advances in genetic and other biotech fields and regenerative medicine
- Development of products and services to help prevent the spread of COVID-19 and other infections

### Risks

- Loss of sales opportunities and supply chain disruption caused by the COVID-19 pandemic
- Preferential policies for locally manufactured products for medical devices
- Delayed development of global market presence

Over the medium to long term, we expect to grow profits based on the sustained demand for medical equipment and diagnostic imaging support services.

Specific initiatives for mainstay products (CT/MRI/ultrasound diagnostic equipment) include efforts to lower costs further through production reforms, such as the development of platforms fully utilizing Canon's superior production technology, greater use of modular components and a shift toward more automation of assembly and in-house manufacturing of components.

We will focus on applying the performance of Canon products by applying photographic technologies to CT and MRI scanning. With IoT, AI and other aspects of the DX revolution starting to appear on the frontline of healthcare, our aim is to grow sales not only in Japan, but also in Europe, the US and emerging markets by making Canon products more competitive using diagnostic solutions and image analysis application. We are also looking to grow our healthcare IT systems business based on existing products to integrate medical information in ways specific to individual physicians or the diagnostic setting, and a solution to assist in the interpretation of radiographic images to support prompt and appropriate treatment of emergency patients.

In addition, we are focused on biotechnology, which is a field driving medical progress. We are harnessing Group resources to make a full-scale entry into in vitro diagnostics, including peripheral areas such as diagnostic reagents. In regenerative medicine, we are also pursuing a joint research with Kyoto University's Center for iPS Cell Research and Application, with the aim of developing high-quality iPS cell lines for autograft use by the year 2025.

Alongside these initiatives, we continue to conduct joint research with leading global universities to help develop Canon's global presence in the medical field.



## Industrial Group

Amid further projected growth in semiconductor production, we are responding to the increasing demand for industrial equipment using a product development approach that customizes designs to customer needs, while also contributing to the construction of social infrastructure and technological innovation.



### Competitive advantages of the Industrial Group

- Nanoimprint lithography technology that lowers costs and realizes miniaturization
- Products that raise customer productivity and lower cost of ownership
- Product development based on incorporating specific customer requirements from design stage
- Manufacturing sites/facilities capable of fully integrated R&D, design and production
- 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, in order to respond to the miniaturization of semiconductors, we expanded our product lineup with a product-out business strategy. Although this need for miniaturization continues to exist today, from the 2010s, we will shift our strategy from the design stage to product development that incorporates customer specific requirements, in line with the diversification of customer needs, leading to increased earnings and flexible provision of value to customers. We are working to boost the competitiveness of our i-line and KrF lithography equipment by improving wafer throughput and overlay accuracy.

Canon's products in this field can contribute to building a sustainable society, and are set to be one of the forces driving construction of social infrastructure, industrial innovation and energy-saving initiatives. We believe that providing customers with high-value-added products will

contribute to the achievement of SDGs. We continue to add original value with our latest models, including the introduction of new heat-exchange technology to mitigate the high power consumption of lithography equipment, or using temperature regulation to increase efficiency by adapting the equipment to ambient usage settings at customer sites. Using chips with lower power consumption in smartphones will promote the development of social infrastructure while helping to preserve the global environment. Our thinking during Phase VI of the Excellent Global Corporation Plan remains to focus on promoting "value creation through business."

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



## Phase V Review

One of the major outcomes from Phase V was our capture of a dominant share of the i-line lithography equipment market. This reflected our customized design concept of creating uniquely diverse sets of applications to meet specific customer needs. In addition, we expanded our product lineup beyond front-end processes to target rising demand for back-end processes such as high-value-added packaging. Canon's market share of KrF lithography has grown from a few percent in 2009 to around 30% in 2020. We have created a stable earnings base for the business as display technologies have evolved,

establishing a strong presence in FPD lithography and OLED manufacturing equipment for the Canon Group.

The COVID-19 pandemic in 2020 resulted in significant delays in equipment installation. However, amid firm demand for datacenters and PCs, investment is recovering in semiconductor devices. Growth has also remained healthy in the OLED manufacturing sector amid strong capital spending budgets. Amid major societal changes, we successfully increased sales volumes while securing higher market shares across all product lines.

## Business Strategy in Phase VI

### Business opportunities

- Growth in semiconductor market due to rising demand for 5G/IoT-related products
- Growth in OLED display market due to rising demand for high-resolution images/streaming video (4K/8K, etc.)

### Risks

- Growth in machinery demand exceeds production capacity
- Improved performance of rival products and erosion of profitability due to price-based competition

We are upgrading the Group's OLED display manufacturing equipment in response to the growth in demand for high-resolution images and streaming video (including 4K and 8K). We are also seeking to expand within the area by applying new manufacturing methods and materials development.

In semiconductor lithography equipment, we expect business opportunities to expand going forward due to growth in demand for 5G-related products, network servers and other IT infrastructure. Our aim is to maintain our dominant market share in i-line lithography while working to secure a greater share of the KrF lithography market. In addition, aiming to enter the market for state-of-the-art lithography equipment, we will continue efforts to establish nanoimprint lithography. We see this technology, which can produce microchips with extremely precise circuitry patterns at relatively low cost, contributing to the future manufacture of new generations of advanced semiconductor chips.

In FPD lithography equipment, we expect demand for high-definition panels to continue. Our aim is to expand Canon's global market share by developing new and highly competitive products based on the continued development of our

proprietary optical technologies.

Moreover, we will focus on creating continuous post-sale streams of income by providing our customers with post-installation support and new proposals, expanding into after-market areas in ways that advantage our customers.

Separately, we will seek to establish the base for new businesses by taking a fresh look at our existing core technologies alongside nanoimprint and other technologies.

In addition, we will strive to reduce costs using various methods, including using standard parts to replace custom-ordered parts from the design stage and producing more parts in-house.

