# THE CANON STORY 2019/2020



prosperity and the well-being of mankind as we continue our efforts to bring the world closer to achieving kyosei.

#### **Canon's Corporate DNA**

Behind Canon's 80-year history and development as a business lies its corporate DNA: a respect for humanity, an emphasis on technology, and an enterprising spirit that the company has consistently passed on since its foundation. The enterprising spirit on which Canon was started as a venture company, and the relentless drive to distinguish itself through technology, permeate the company, and have continued to provide society with new advances. These motivating factors are in turn supported by a respect for humanity, which encompasses meritocracy and an emphasis on good health. Canon is committed to passing its corporate DNA on to future generations to ensure the company grows for another 100, or even 200, years.

#### The San-ji (Three Selfs) Spirit

The Three Selfs, the foundation of the company's guiding principles that have been passed down since Canon was founded, are self-motivation, self-management and self-awareness. For Canon, which strives to be a truly excellent global corporation while maintaining the legacy of its corporate DNA, the Three Selfs continue to serve as the company's most important guiding principles.

[Self-motivation] Take the initiative and be proactive in all things [Self-management] Conduct oneself with responsibility and accountability [Self-awareness] Understand one's situation and role in all situations

#### Contents

Kyosei: Canon's Corporate Philosophy	1
Message from Top Management	2
Excellent Global Corporation Plan Phase V	4
Vision toward Growth	6
Products and Services	18
Introduction to Canon Activities	26
Group Data	36

The QR codes in this booklet are links to websites of related topics. Scan any QR code to see related content.

# Kyosei

Canon's corporate philosophy is kyosei. It conveys our dedication to seeing all people, regardless of culture, customs, language or race, harmoniously living and working together in happiness into the future. Unfortunately, current factors related to economies,

resources and the environment make realizing kyosei difficult.

Canon strives to eliminate these factors

through corporate activities rooted in kyosei.

Truly global companies must foster good relations

with customers and communities, as well as with

governments, regions and the environment as part of

their fulfillment of social responsibilities.

For this reason, Canon's goal is to contribute to global





## "Change is progress. Transformation is advancement." Accelerating our grand strategic transformation for new growth.

and guickly respond to such changes.

business portfolio.

increase our market share.

Under our corporate philosophy of kyosei, Canon seeks to become a truly excellent global corporation that is admired and respected around the world. Toward this end, we will work together as a Group and continue to transform. We look forward to your continued support and cooperation.

The evolution of technology has given birth to innovations in every field, bringing significant changes to people's lives, business and the makeup and values of societies. As the pace of this evolution increases, we are transitioning into an age when corporations must constantly

Canon's history has been one of undertaking challenges. With our enterprising spirit and the San-ji (Three Selfs) Spirit by which we continually transform ourselves, we have cultivated businesses that can adapt to changing times and continue to grow.

In our five-year medium-to-long-term Excellent Global Corporation Plan Phase V, beginning in 2016 and designed to achieve new growth, we have undertaken a grand strategic transformation of shifting our core businesses from B2C to B2B. In 2018, employing such methods as M&A in our four new businesses-commercial printing, network cameras, medical and industrial equipment—we successfully completed this transformation of our

To drive future growth in our four new businesses, we will focus on expanding their scale and enhancing productivity. Meanwhile, we will strengthen our existing businesses by incorporating the latest technologies in such fields as the cloud, AI and the IoT to further

Hup Mitai

Fujio Mitarai Chairman & CEO Canon Inc.

### **Excellent Global Corporation Plan**

# Phase 2016 - 2020

Canon, seeking to become a truly excellent company that is admired and respected around the world, launched the medium-to-long-term Excellent Global Corporation Plan in 1996 and has successfully completed the first four phases of this plan. In Phase V, we are implementing seven key strategies as we embrace the challenge of new growth through a grand strategic transformation.



Canon Prachinburi (Thailand) staff receive training at the Toride Plant in Japan

### Phase 1996-2000

To strengthen its financial structure, Canon transformed its mindset to a focus on total optimization and profitability. The company introduced various business innovations, including the selection and consolidation of business areas, and reform activities in such areas as production and development

#### Establish a new production system to achieve a cost-of-sales ratio of 45%

Strengthen domestic mother factories by emphasizing production in Japan and integrating design, procurement, production-engineering and manufacturing-technology operations. Reduce costs through robotics, automation and other production-engineering technology.

### Reinforce and expand new businesses while creating future businesses

Create and expand new businesses by accelerating the horizontal expansion of existing businesses. At the same time, concentrate management resources, including the use of M&A, to accelerate the expansion of promising business areas.

#### 2001-2005 Phase

Aiming to become No. 1 in all major business areas, Canon focused on strengthening product competitiveness along with the changing times, stepping up efforts to digitize its products. The company also conducted structural reforms across all Canon Group companies around the world.



Restructure the global sales network in accordance with market changes

Review existing sales organizations and reinforce omni-channel marketing that integrates online and conventional sales routes. Strengthen and expand customer-driven solutions businesses and focus energies on cultivating markets in emerging countries.

### Enhance R&D capabilities through open innovation

Discard the strict notion of self-sufficiency and construct an R&D system that proactively leverages external technologies and knowledge, promoting joint and contract research with various partners such as domestic and foreign universities and research institutes.



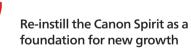
**Complete the Three Regional** Headquarters management system capturing world dynamism

Promote the acquisition of promising businesses through M&A and complete the Three Regional Headquarters management system, under which Japan, the U.S. and Europe utilize each region's strengths to establish comprehensive and efficient management.



Cultivate globally competent human resources capable of performing duties while maintaining an all-encompassing perspective of the world map

Optimize use of human resources in operations worldwide. Evaluate personnel around the globe to identify candidates for senior management positions and develop the skills of these future leaders by rotating them through key positions in Japan and overseas.



foundation for new growth

Revitalize the enterprising spirit in our corporate DNA and the San-ji (Three Selfs) Spirit, which have been the guiding principles of growth since our foundation, and complete a grand strategic transformation.

#### Phase 2006-2010



Canon moved ahead with such growth strategies as enhancing existing businesses and expanding into new areas while also thoroughly implementing supply chain management and IT reforms.

#### New training facility to foster the development of next-generation software engineers

Today, there is a growing need for AI- and IoT-related software to make products more competitive and support manufacturing sites. In 2018, the Canon Institute of Software Technology (CIST) was established to develop the next generation of software engineers. This facility offers an extensive curriculum, including courses for new employees and those transitioning to new fields, as well as training to enhance engineering skills and cultivate top engineers who can lead businesses. Aiming to elevate the expertise of our engineers and strengthen our product development capabilities, we plan to add new courses covering such diverse topics as data science, Al and information security.



Top: The CIST building at Canon's Shimomaruko Headquarters Bottom-left: Image processing workshop Bottom-right: Integrated training covering electricity, mechanics and software

# Phase

#### 2011-2015

Responding to weakness in the global economy, Canon revised its management policy from a strategy targeting expansion of scale to a strategy aimed at further strengthening its financial structure. While actively pursuing M&A activities, the company restructured its business at a foundational level to introduce new growth engines for future expansion.

A safer, more comfortable subway system for tourists and citizens alike





#### Network cameras are bringing greater safety and security to Fukuoka City Subway

Accommodating over 160 million passengers a year, including approximately 20 million tourists, Fukuoka City Subway is a major transportation hub. In advance of the subway's 40th anniversary in 2021, Fukuoka City Transportation Bureau embarked on a program to replace their analog surveillance cameras to provide an even safer and more comfortable transportation service.

On the Airport and Hakozaki lines, Canon's network camera system has been installed at the ticket gates, platforms, stairs, escalators, ticket vending machines and station entrances and exits.

The recorded images, which previously were handled at each station, are now centrally managed at a control room, allowing the video feeds from over 460 cameras to be reviewed any time. Furthermore, the new system yields a dramatic improvement in image quality, realizing Full HD images with resolution 24 times higher than the previous system and a 10-times-higher frame rate of 15 fps. The new video images are so sharp that it is possible to determine the type of bill used at a vending machine and so smooth that a person running will not disappear in the next frame. Previously, reviewing data required a visit to the station where it was recorded. Since this is no longer necessary, time and resources can be used more efficiently.

With Canon network cameras in action, each station can optimally allocate staff in response to the ever-changing congestion conditions on platforms and stairs. Thus, the cameras contribute not only to safety and security, but also to work efficiency.





# In the IoT era, network camera systems have evolved into video analytics solutions

## Advances are taking place in both hardware and software

Network cameras are an essential element of the modern infrastructure that ensures the safety and security of society. Network camera systems, which offer remote operation, video sharing, and smart software that can detect abnormalities, serve not only for surveillance and crime prevention, but also for marketing and enhancing productivity in manufacturing. Thus, the network camera market is undergoing rapid transformation and experiencing dramatic growth.

Utilizing Canon's proprietary optical technologies, we continue to advance our hardware and launch new systems, including cameras that can capture high-definition color video in the dark. At the same time, we are developing video analysis technology that incorporates AI, which will be instrumental to future growth. Canon has successively launched software with such smart functions as people counting, gender and age identification and the real-time silhouetting of moving objects to protect privacy.

Given our ability to advance both hardware and software, Canon can propose new services that anticipate market trends as we strive to expand our network visual solution businesses.



Milestone's XProtect software enables centralized video management

## Video Synopsis software dramatically increases the efficiency of video reviewing

BriefCam's signature video content analytics software features the company's unique Video Synopsis technology, which enables the review of hours of recorded video in minutes. Filters for identifying specific objects, such as red cars for example, boosts the efficiency of monitoring. This software is not only used for security, but also for crowd management and traffic flow optimization and its use is expanding to other fields.

## Consolidating the strengths of the Canon Group

Since welcoming Axis, a global leader in network camera systems that partners with over 90,000 companies around the world, and Milestone Systems, a leader in video management software, into the Canon Group, we have built a structure for providing comprehensive network video solutions.

In 2018, we welcomed Israel-based BriefCam, a leading video analytics solutions provider, into the Group. Today, the Canon Group possesses leading-edge technology in network camera hardware, as well as video management and video analysis software. Our ability to consolidate the strengths of innovative companies allows us to provide advanced solutions.



Joint development of products by Canon and Axis

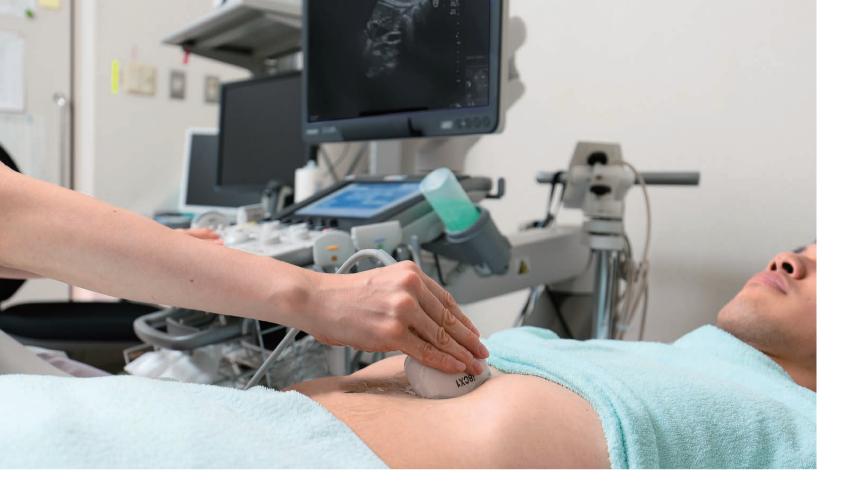




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Canon

# Diagnostic ultrasound systems allow healthcare professionals to detect even subtle abnormalities



#### Sharper ultrasound images for even earlier detection of minute changes

Japan's National Cancer Center Hospital, the country's preeminent hospital for cancer treatment, is active in the advancement of leading-edge cancer treatments, trains healthcare workers and, in conjunction with corporations and universities, conducts clinical research and trials for the development of next-generation treatment.

Patients from all across Japan with difficult-to-diagnose illnesses visit the National Cancer Center Hospital. Emphasizing patient welfare, the hospital chooses a diagnostic method suited to each person to attain the best possible test results in the shortest time. As diagnostic ultrasound systems are non-invasive and don't expose patients to radiation, there is no need for concern over side effects. These indispensable devices are used at every stage from diagnosis to post-treatment convalescence.

Canon Medical Systems' Aplio i-series is the main diagnostic ultrasound system used for examinations at the hospital. Doctors and technicians can select the ideal transducers and parameters for the body part or organ under examination in pursuit of impressive images that lead to more accurate diagnoses.

When developing diagnostic systems, Canon Medical undertakes joint research with various medical institutions, heeding their evaluations and advice in order to improve image quality. Today, the evolution of ultrasound image quality has even made possible the early detection of such diseases as pancreatic cancer, which is difficult to detect with CT and MRI. Canon Medical's diagnostic systems are driving the early detection and accurate treatment of cancer to higher levels of precision.





## Expanding and improving our medical business to support a healthy 100-year lifespan

#### Moving forward together with **Canon Medical**

Canon Medical, which joined the Group in 2016, has become the heart of Canon's medical business. A pioneer of diagnostic imaging systems, the company has achieved numerous world's-first and first-in-Japan solutions in such areas as CT scanners, MRI systems, ultrasound systems and X-ray angiography systems.

Under its Made for Life management philosophy, Canon Medical is accelerating the development of technology and the commercialization of products that contribute to human health and protect precious lives. The integration of Canon Medical's technologies with Canon's expertise in imaging and manufacturing has given rise to never-beforeseen innovations.

Even before welcoming Canon Medical to the Group, Canon had made important contributions to healthcare with advances in digital radiography and ophthalmic equipment. Moving forward together, Canon and Canon Medical will continue to collaborate with medical institutions, corporations and universities worldwide and undertake the challenge of developing advanced technologies in new fields.



Canon Medical Systems headquarters

#### Image reconstruction technology developed with deep learning

Canon Medical's Advanced intelligent Clear-IQ Engine (AiCE) uses deep learning to reduce image noise. It is employed by the Aquilion Precision, the world's first highresolution CT, and the Aquilion ONE/GENESIS Edition area detector CT.

The commercialization of AiCE has enabled doctors to conduct more precise examinations with the same level of radiation dose as a typical chest X-ray. We are planning to implement AiCE on other medical devices in the near future.

#### Focusing on medical IT and in-vitro diagnostics

Canon Medical Systems aims to provide efficient patientcentric solutions in the three fields of diagnostic imaging, medical IT and in-vitro diagnostics.

In the field of diagnostic imaging, we are undertaking open innovation with leading medical institutes and universities worldwide to produce higher-resolution images that will contribute to greater diagnostic precision. At the same time, we are developing technologies that will reduce the burden on patients through lower radiation doses and shorter exam times.

With an eye toward optimizing healthcare, we are implementing such leading-edge technologies as AI in the field of medical IT for the collection, consolidation, analysis and processing of medical information to provide medical professionals with more cogent data.

Lastly, in the field of in-vitro diagnostics, we are working to develop such solutions as blood and gene testing, DNA chips and rapid gene testing towards earlier disease detection and preventing the spread of infections.



Diagnostic imaging R&D through an open innovation approach The medical images in the above photo are from the LIDC/IDRI database, which has been made public by the NCI and the Foundation for the NIH (United States)





# Digitalization of commercial printing is creating a new era and new value

## The transition from analog to digital printing

Commercial printing covers a wide range of materials including product manuals, books, catalogs, direct mail and transactional applications. For large print-runs, offset printing—which involves the creation of print plates—remains the dominant method. Yet, there is a growing demand for digital printing, which does not require plates and is nimble enough for short-run production in a broad range of applications and quick turnaround.

Digital printing not only enables output on an as-needed basis, but also variable-data printing, in which the content of individual pages can be customized. As a result, it can flexibly meet such new customer needs as one-to-one marketing.



With digital printing, materials can be produced and delivered on an as needed basis

## UV printers output colorful bus wrap advertising

Our large-format printers with UV curable inks can produce durable and vivid wrapping used for advertising on buses and other vehicles.

Such technology was used for buses running between Canon offices in Japan. These buses were adorned with a wrap advertisement to generate excitement for the Rugby World Cup 2019<sup>®</sup> which will be held in Japan for the first time.

## Unlocking new possibilities together with Océ

Océ, which has achieved great success mainly in Europe and North America with its product lineup for commercial printing including continuous feed presses and largeformat printers, joined the Canon Group in 2010. Together, we are able to produce both hardware and software for high image quality, high productivity and high reliability as we strive to expand our commercial printing business.

Océ's PRISMA series software centrally manages the workflow of the printing process from the receipt of orders to post-press processes, contributing to greater efficiency and higher productivity at printing companies.

In 2017, we launched a continuous feed press for the graphic arts market that delivers high-resolution printing on offset coated paper. It meets the strict market's requirements by not only achieving high image quality for premium catalogs and direct mail, but also providing the capability to print on a wide range of media.

As we face the future together, Canon and Océ are undertaking research and development with an eye on the field of industrial printing, which is growing rapidly worldwide.



Océ ProStream1000, a continuous feed press for the graphic arts market



## From the evolution of manufacturing comes the evolution of IT society

REER 120kg

# Canon industrial equipment drives manufacturing in the IoT age

## OLED manufacturing, supported by Canon

OLED panels, used for smartphones and televisions, offer such advantages as high image quality, outstanding black levels and low power consumption. With technological advancements enabling thinner and even bendable OLED panels, the growing demand is expected to continue.

Delivering high productivity and high quality, Canon Tokki's OLED panel manufacturing equipment has established a dominant market position as an industry leader. In collaboration with Group companies Canon ANELVA and Canon Machinery, Canon Tokki conducts manufacturing, installation and maintenance services while undertaking the development of new equipment that will make possible higher definition and raise productivity.



Transport unit of OLED panel manufacturing equipment

## Nanoimprint lithography, the ultimate microfabrication technology

In the drive toward greater miniaturization of circuit patterns, the semiconductor lithography equipment that uses light to etch patterns onto the silicon wafers has become ever larger and more expensive.

In pursuit of an alternative, Canon developed nanoimprint lithography technology, which entails the simple principle of a mold, or mask, being pressed like a stamp onto a resist on the wafer surface. Today, nanoimprint lithography is gaining recognition as a more compact system that can reduce the cost of semiconductor manufacturing.

## Three Canon Group companies achieving high synergy

Canon Machinery holds a large share of the market for die bonders, which are used for bonding semiconductor die to a substrate. The company is also a leader in factory automation, manufacturing such custom equipment as automated assembly lines for lithium-ion batteries.

Canon ANELVA specializes in vacuum thin-film deposition technology, used in the fabrication of semiconductor and communication devices, and in sputtering equipment, which is essential to the production of hard disk drives (HDD) and LEDs.

Together with Canon Tokki, Canon Machinery and Canon ANELVA are pioneering the development of industrial equipment for manufacturing next-generation semiconductor and electronic devices. The three Group companies closely collaborate on manufacturing technology, procurement and logistics while expanding business through development of new products and services.



Canon ANELVA's sputtering equipment plays a major role in the manufacturing of semiconductor devices



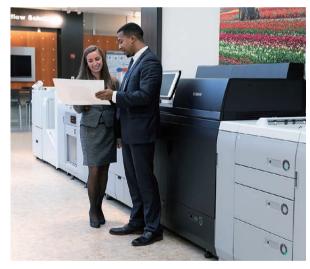


# **INDUSTRY**



**Network Cameras** 

Network cameras play an increasingly important role in monitoring systems that contribute to safety, security and crime prevention. Canon is expanding our visual solutions business with video analysis technologies that utilize AI.



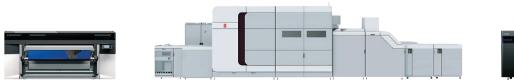
**Commercial-Use Printers** 

In collaboration with Océ, we offer reliable hardware that produces high-quality images and smart workflow software. As demand for digital continues to grow in commercial printing, our technologies meet the challenging requirements of customers.

Pooling the strengths of the entire Canon Group, we are expanding the scope of our business and breaking new ground with industrial equipment that supports society.



Semiconductor Lithography Equipment With the arrival of the IoT age, the semiconductor chip market has diversified even further. Our high-productivity equipment helps meet the growing demand for chips in the automotive and communication devices that are driving market expansion.



Large-Format Printers for the Graphic Arts Market

High-Speed Color Sheet-Fed Presses



**Commercial Photo Printers** 





FPD (Flat Panel Display) Lithography Equipment

**Industrial Cameras** 



#### **OLED Panel Manufacturing Equipment**

Vacuum evaporation technology makes Canon Tokki the world leader in manufacturing equipment for OLED panel production. By refining technology and production capabilities, the company is accelerating manufacturing equipment development.

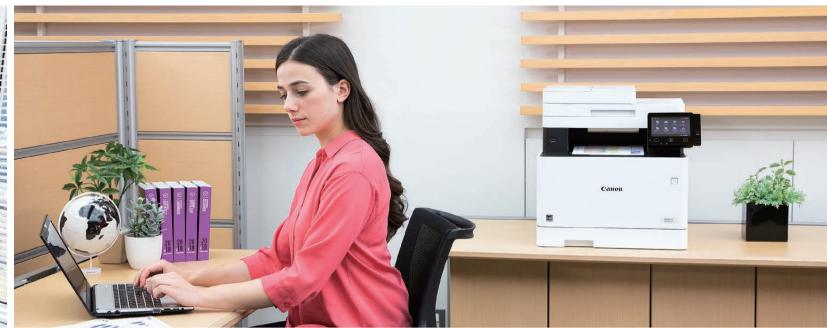


**CMOS Sensors** 



**Components/Measuring Devices** 









#### **Office Multifunction Devices**

Featuring advanced security functions, Canon Office Multifunction Devices enhance productivity and flexible work styles through network and cloud connectivity, supporting the realization of optimal document management environments.



Large-Format Inkjet Printers

Canon large-format inkjet printers take both high productivity and high print quality to the next level. Featuring LUCIA TD pigment inks, the printers meet a wide range of large-format printing needs, from CAD drawings to poster printing.



Laser Printers/Laser Multifunction Printers Widely used in offices, schools, shops and businesses, Canon printers are at the forefront of image quality and ease of use, while also receiving top marks for environmental performance and recycling programs.



**Business Inkjet Printers/Business Inkjet MFPs** Canon inkjet printers deliver excellent cost performance through such features as refillable ink tanks. In 2018, Canon launched a high-speed A3 multifunction printer with a spacesaving, low-maintenance design ideal for offices.



#### Software

Canon provides software for large-format inkjet printers that enables businesses to easily create high-quality posters and software for multifunction printers that achieves centralized document management and streamlined workflow.



**Scanners** 

By converting documents, business forms, photos and film into data form, Canon scanners improve file organization and sharing. Our diverse lineup meets a wide range of individual and business needs.

Canon proposes office network solutions for the cloud era that meet



#### Card Printers

Canon card printers print not only on such paper media as business cards, postcards and envelopes, but also on plastic and IC cards. With these devices, card printing can be done in-house to support cost reduction and improved work efficiency.



#### Calculators

In 1964, Canon introduced the first 10-key electronic calculator. Today, we offer models with such unique features as printing capabilities and one-touch cost-sell margin calculation functions to meet all kinds of needs.



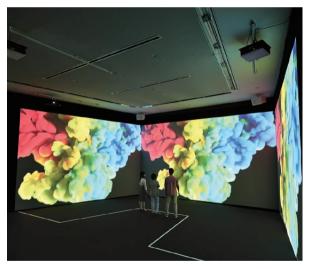
# PROFESSIONAL

Interchangeable-Lens Digital Cameras Professional photographers trust EOS to capture the perfect moment. More than 30 years since its creation, EOS continues to expand the possibilities of visual expression, raising the bar in speed, ease of use and image quality.



Broadcast Equipment

Canon broadcast lenses boast a dominant position at television stations and in video production. Pioneering support for the UHD 4K and 8K broadcasting already underway, Canon is providing more realistic and immersive imaging. Canon has earned the trust of demanding professionals in such fields as medical and imaging by maintaining the highest standards of quality and continuously pursuing technological innovation.



**Multimedia Projectors** 

Canon offers a wide range of multimedia projectors, from models for projection mapping and use in large venues to portable models. Our proprietary optical system realizes clear, high-quality image projection and compact body designs.















Digital Cinema Cameras

Interchangeable Lenses

Professional Digital Video Camcorders

Professional Displays

Professional Photo Inkjet Printers

**Digital Radiography** 



#### CT Diagnostic Systems

Canon Medical's CT diagnostic systems have continually introduced numerous world-first functions. Incorporating feedback from healthcare professionals, we are advancing our systems to improve patient comfort and achieve higher image quality.



**MRI Systems** 



Diagnostic Ultrasound Systems



HOME



#### **Digital SLR Cameras**

Honed by professionals that never miss a precious moment. Canon DSLR cameras and our wide range of interchangeable lenses ignite the passion of photo lovers. The captured images can be sent to smartphones right away.



#### **Digital Compact Cameras**

Lenses, image sensors and image processors that combine to achieve high image quality and superlative functionality are loaded into the compact, lightweight bodies of Canon digital compact cameras, allowing users to enjoy simple image capture.



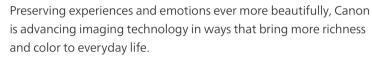
#### **Mirrorless Cameras**

Canon's wide range of mirrorless cameras enables everyone from entry-level users to advanced amateurs to shoot beautiful photos with ease. With our new EOS R System we are pursuing even greater image quality and ease of use.



Binoculars

Canon binoculars achieve remarkably sharp visibility even at high magnification. Our proprietary optical Image Stabilizer (IS) provides a stable view that enhances the users' enjoyment of nature, live performances and sports.





#### **Inkjet Printers**

Canon inkjet printers make printing directly from smartphones and tablets easy. Our lineup includes models for printing cards, nail stickers and A3-size paper as well as models with refillable ink tank systems that contribute to low running costs.



#### Photo Book Services

Canon's various photo book services allow people to create precious, long-lasting records of their fondest memories. Letting dedicated apps do much of the work, anyone can make a photo book with ease.



#### **Compact Photo Printers**

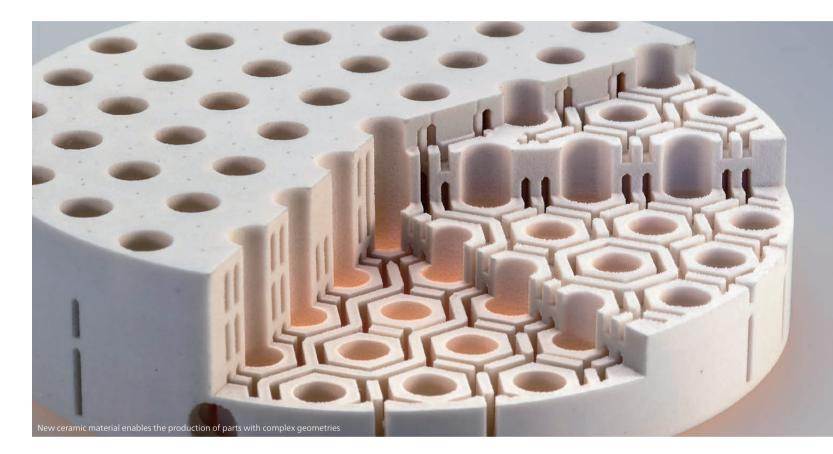
Canon compact photo printers allow users to easily output highquality prints of photos captured with a camera or smartphone, even when out and about. Photos can be printed on various paper types, or as stickers to decorate notebooks and diaries.



#### Mini Photo Printer

Designed for use with mobile devices, users can carry around this palm-size mini photo printer with ease to print whenever and wherever. Users can also add messages, emoji and stamps to their photos via a dedicated smartphone app.

# **Research & Development**



With an emphasis on technology at the core of our corporate DNA, Canon has remained a leader in the fields of photography and printing while developing numerous core competency technologies. Today, we are expanding research and development in the medical and industrial fields.

#### Emphasis on technology in our corporate DNA

Canon's history of research and development began with the pioneering dream of "building the best camera in the world." Ever since, we have passed down our approach of emphasizing technology and commitment to pursuing originality.

#### Open innovation

To accelerate the pace of progress, Canon promotes open innovation. We work together with universities and research institutes worldwide to develop leading-edge technologies.

#### Core competency technologies in the field of imaging

Optical, sensor and image processing technologies are the primary sources of Canon's competitive strength. By integrating these with AI, the IoT and other emerging technologies we will continue to create new value.











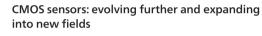


## Video content analysis software creates new value from network cameras

Canon is pursuing further advancements in network cameras by accelerating the development of video content analysis software and such features as real-time counting of people in crowds. With potential use cases for transportation or service at commercial facilities including the ability to estimate wait times, we are providing new solutions that go beyond security and surveillance.

#### New sports viewing solution simulates the experience of seeing the winning moment up close

Canon is creating thrilling new viewing experiences using such technologies as the Free Viewpoint Video System, which allows video to be viewed freely from various angles and positions. In addition, we have conducted successful trials for our Spatial Imaging Solution, which transmits and adjusts 8K video in real time for immersive viewing on a large curved display.



CMOS sensors dominate the modern image sensor market and their use is spreading to such new fields as manufacturing. Canon has the advantage of developing and manufacturing our CMOS sensors in-house enabling us to stand at the forefront of technological advances, delivering increased pixel count, high sensitivity and global-shutter functionality to accurately capture fast-moving subjects.



## New ceramic material enables accurate 3D printing of parts with complex geometries

Until recently, it was difficult to accurately produce ceramic parts using 3D printers due to shrinkage during the post-annealing process—an effect of the resin in the ceramic. We therefore developed a new ceramic material without resin. This material enables the precise production of parts with complex geometries, helping to meet a wide range of high-variety, short-run production needs.



## Pursuing R&D in advanced diagnostics and treatment technologies through open innovation

Canon U.S.A.'s Healthcare Optics Research Laboratory conducts joint research with Harvard Medical School teaching affiliates at the leading edge of healthcare. Leveraging our optical imaging and robotics technologies, we are undertaking the development of such technologies as an ultra-miniature endoscope and needleguiding system.

# Manufacturing & Quality





Canon remains dedicated to manufacturing our own products and technologies. We not only pursue automated assembly, but also strive to cultivate technicians with outstanding skills. By establishing high standards of safety and quality assurance, we strengthen our efforts to ensure trust in the Canon brand.

#### Establishing mother factories

Canon's production system designates a mother factory for each of our businesses. Integrating design, procurement, production engineering and manufacturing technology, the mother factories lead our efforts in automation and in-house production.

#### Chie-Tech

The production equipment we create ourselves is symbolic of Canon's capacity for self-improvement. We produce our own tools and devices as well as entire systems, which eliminates waste and is more cost efficient than purchasing equipment from vendors.

#### No claims, no trouble

This is our mission to guarantee the high quality of Canon products. In addition to meeting ISO9001 standards, we have devised our own quality management system, which is applied throughout the entire product lifecycle.









## Pursuing full automation from the product design stage

Canon pursues the implementation of automated assembly lines and robotics to ensure reliable production of high-quality products at low cost. Our development department and Meister technicians collaborate on all processes from product development to automated assembly. We aim to achieve fully automated production that requires zero human intervention.

## Expanding in-house production to further enhance productivity

Canon has continued to advance our in-house production of key devices, components, molding dies and assembly systems as well as carrying out in-house equipment maintenance. In response to the increased demand for software for products and services, we are undertaking new initiatives in embedded software for our products and in software verification processes.



## Globally optimized production utilizing the strengths of each country and region

Canon has established a globally optimized production system, taking a broad view of the ever-changing social and economic conditions around the world. We select the ideal production locations based on such factors as taxes, logistics, parts procurement and labor. We manufacture our products employing an agile and flexible system that spans the globe.



## Our Meister and Master Craftsmen system is the foundation of Canon's manufacturing excellence

Canon honors our most skilled technicians by awarding them the title of Master Craftsman, while those who have contributed to enhancing Canon production through their skills and knowledge of assembly and component processing earn the title of Meister. All of our skilled workers play the important role of passing down their expertise to the next generation.



## Canon Quality is proven through uncompromising quality tests

We are dedicated to producing "Canon Quality" products, each of which promises customer satisfaction, safety and peace of mind. Our certified testing facilities enable us to conduct in-house tests to ensure compliance with public standards and regulations. We conduct stringent quality tests to ensure Canon Quality.

# **Environment & CSR**



Under our corporate philosophy of *kyosei*, Canon undertakes efforts to realize a sustainable society. We promote various CSR activities, such as achieving a low-carbon society committed to resource recycling, eliminating hazardous substances, conserving biodiversity and providing support for social welfare, education and culture.

#### Canon Group Environmental Charter

The Canon Group Environmental Charter, which we instituted in 1993, serves as the basis for all of our environmental assurance activities. The charter emphasizes maximizing resource efficiency by promoting environmental assurance activities, taking the entire product lifecycle into consideration.

#### **CSR Activity Policy**

Canon conducts CSR activities internationally and within local communities by effectively leveraging the company's advanced technological strengths, global business deployment and diverse, specialized human resources.











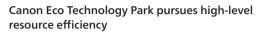






## $\ensuremath{\text{CO}_2}\xspace$ emission reduction throughout the entire product lifecycle

Canon strives to reduce CO<sub>2</sub> emissions throughout the entire product lifecycle, from design, manufacturing and logistics to customer use and recycling. In addition to developing energy-saving products, we undertake various activities targeting energy conservation, including the optimization of logistics and improvement of energy efficiency at operational sites.



At Canon Eco Technology Park, we employ our leading-edge automated recycling system to recycle toner and ink cartridges. We also collect and remanufacture used office multifunction devices, producing products that are as good as new. The facility's showroom serves as a hub for the Canon Group's environmental activities.



## High-resolution facsimiles to pass down Japanese cultural assets for future generations

Canon conducts the Tsuzuri Project in cooperation with NPO the Kyoto Culture Association. Combining leading-edge digital technologies and the traditional craftsmanship of Kyoto artisans, we produce high-resolution facsimiles of precious cultural assets. These facsimiles are used for public display in place of the originals, which are preserved in environments that prevent deterioration.

## Educational activities that nurture youth creativity and opportunities for growth

As a leader in imaging, Canon strives to nurture rich sensibility and create new ways for people to communicate emotion. We conduct photography and video shooting workshops around the world, mainly for young people. In Africa, our support extends to programs that train young people in the field of printing.



## Friendship School Chain Project improves children's educational environments

To provide better educational environments for children in economically disadvantaged areas of Vietnam, Canon participates in such activities as school construction and the donation of desks, chairs and other supplies. Many Canon employees in the Vietnam region volunteer for these activities, strengthening their relationship with the local community.

# Marketing



PhotoPlus 2018, one of North America's largest photography and imaging events

## **AMERICAS**

Canon U.S.A. oversees operations in North, Central and South America. In recent years, the company has strengthened its customer-oriented marketing and reinforced its digital marketing, including the design of user-friendly e-commerce sites and enhancing the efficiency of aftermarketing activities.

In the office equipment business, Canon U.S.A. is promoting a regional management system in which operations in the Americas are divided into four regions. The company also holds national dealer summits to reinforce relationships with top dealers.

In addition, an organizational structure is being implemented with the aim of creating new innovations. New businesses can be developed while strengthening research and development.



The launch event for a strategic production printer in Mexico



Working to strengthen relationships with top dealers at a national dealer summit

Canon supply chain management closely coordinates development, production, sales and after-sales service, ensuring that products, services and solutions are delivered to customers around the world in a timely manner.



## **EMEA**

Canon Europe oversees business in the EMEA region-Europe, the Middle East and Africa. Operating in approximately 120 countries and regions, Canon Europe is proposing new products and solutions tailored to customer needs while strengthening its sales network.

In 2018, the Group opened two Customer Experience Centres, one each in Switzerland and France, giving customers an opportunity to experience firsthand Canon's products and solutions. At Photokina, one of the world's leading photo and imaging expositions, a wide range of Canon products were on display, including the newly launched EOS R System.

Canon Europe is also expanding business activities in the Middle East and Africa, including the recent establishment of a local sales company in Saudi Arabia, where much economic growth is expected.

The Canon booth at Photokina 2018



B2B and B2C products can be tested at the Customer Experience Centre in Paris



B2B products including commercial printers are displayed at the Customer Experience Centre near Zurich



## **ASIA & OCEANIA**

The Canon Asia Marketing Group oversees operations in China, South Korea, South Asia and Southeast Asia. The Group's B2B activities have focused on the sales of office multifunction devices (OMDs) and commercial printing presses, and the strengthening of the brand. Strategic, region-specific OMDs have been launched to expand business throughout the whole of Asia, particularly in the rapidly growing Indian market. At the China International Import Expo, held for the first time in 2018, products and solutions from such industries as business and healthcare were exhibited, reflecting the diverse strengths of the Canon Group.

In the B2C sphere, the Group built its own e-commerce website, which has led to an increase in market share.

In the Oceania region, Canon is strengthening its B2B offerings through proactive M&A.



A newly opened Canon Business Imaging Solutions Lounge in India lets customers directly experience B2B products



The Canon PhotoMarathon photography event is held throughout Asia



**JAPAN** 

The Canon Marketing Japan (Canon MJ) Group oversees marketing activities in Japan. Leveraging the strengths of the entire Canon Group, Canon MJ develops new businesses that integrate such core Canon technologies as imaging with IT solutions.

In 2018—the 50th anniversary of the Canon MJ Group—the Group's corporate structure was reorganized into a customer-based framework that is more responsive to specific customer needs. In 2019, the year which Canon MJ has dubbed its "second founding," the Group will turn its attention to such growing industries as IT solutions, BPO services and industrial equipment while continuing to emphasize existing Canon brand businesses including cameras and office equipment. Going forward, the Canon MJ Group will strive to provide solutions to customer needs.

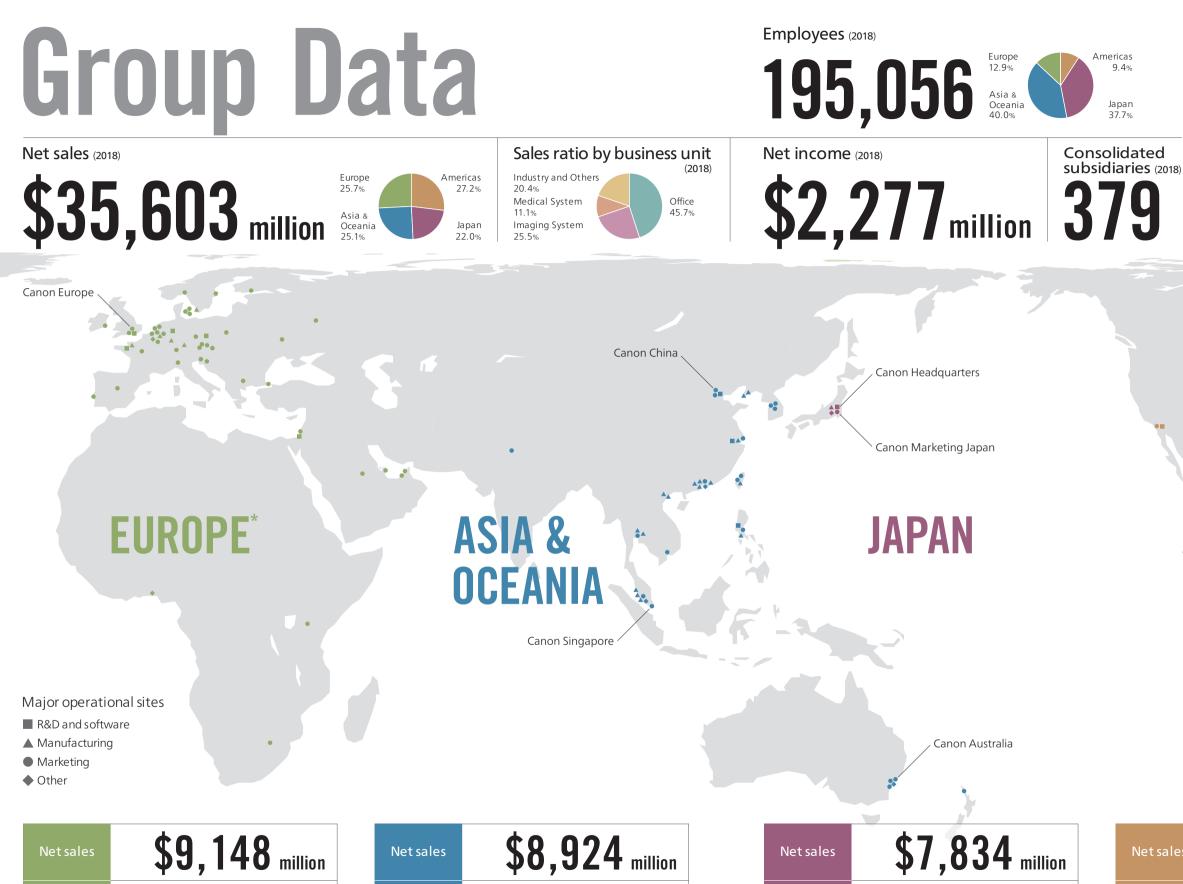
Canon provides a full range of print solutions, from print process coordination to support



The Canon booth at the Security Show 2019



Canon proposes ways to enjoy photography through such activities as shooting sessions



**Employees** 

25,281

77,954 Employees

Here, and in other published data, "Europe" refers to EMEA Number of employees and consolidated subsidiaries as of December 31, 2018.
U.S. dollars of December 28, 2018, solely for the convenience of the reader.
Figures based on preliver the convenience of the reader. amounts are translated from yen at the rate of JPY 111 = U.S.\$1, the ap nary data released by IFI CLAIMS Patent Services, a U.S. research comp per 31, 2018. • U.S. dollar amounts are tran for Taiwan Semiconductor Manufacturing Company Limited. • Sales ratios do not total 100% due to sales bety ween seaments of 2.7%

73,460

**Employees** 

9.4%

Japan 37.7%

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Rank	Organization	Number of patents
1	IBM	9,100
2	SAMSUNG ELECTRONICS	5,850
3	CANON	3,056
4	INTEL	2,735
5	LG ELECTRONICS	2,474
6	TSMC	2,465
7	MICROSOFT TECHNOLOGY LICENSING	2,353
8	QUALCOMM	2,300
9	APPLE	2,160
10	FORD GLOBAL TECHNOLOGIES	2,123

Top ten U.S. patent holders

by company (2018)

Canon U.S.A.

## \$9,697 million 18,361 **Employees**

