

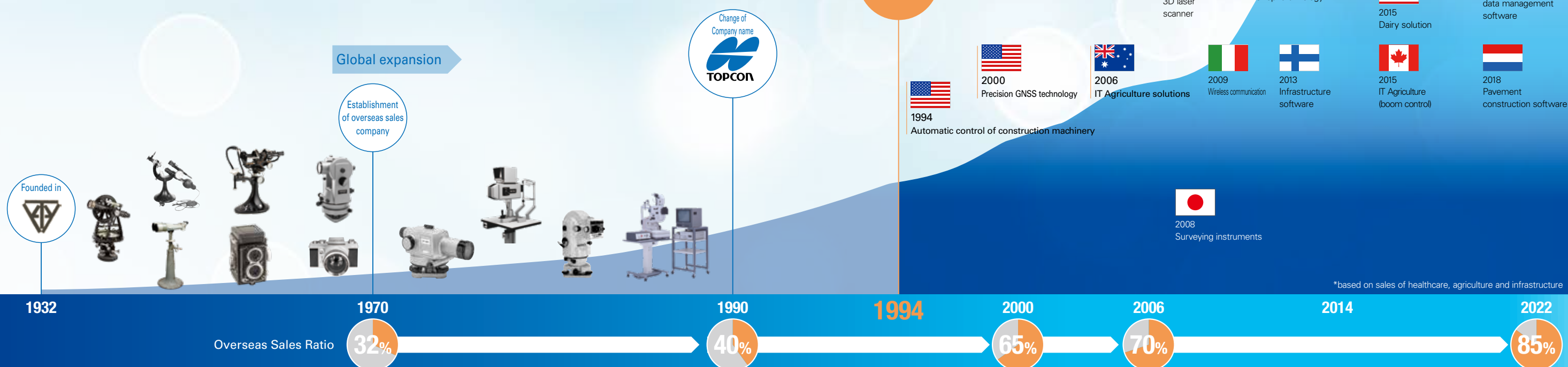
90 Years of History and Venture Spirit¹

An 90 years-old venture company with entrepreneurial spirit who used to be a pioneer of optical equipment in Japan becoming a solution provider in healthcare, agriculture and infrastructure in the world

In September 1932, Tokyo Kogaku Kikai Kabushikikaisha (Tokyo Optical Co., Ltd.) was established with the aim of domestically producing surveying instruments for the Army Ministry, based on the surveying instruments division of K. Hattori & Co., Ltd (currently SEIKO HOLDINGS CORPORATION).

In 1970, we established an overseas sales company in the United States and the Netherlands, which built a foundation for subsequent global expansion.

Since the 1990s, through overseas M&As and alliances, we have expanded our business into new fields such as automatic control technology for construction machinery, precision GNSS, and IT agriculture. We are working to solve the societal challenges in healthcare, agriculture and infrastructure through DX solutions, which make full use of IoT and network technology based on the proprietary technology cultivated since our establishment.



Founded in 1932



A pioneer in optical equipment made in Japan

In 1932, Tokyo Kogaku Kikai Kabushikikaisha (Tokyo Optical Co., Ltd.) was established with the aim of domestically producing surveying instruments for the Army Ministry. Initially, the company produced surveying instruments, binoculars and cameras, as well as sniper scopes used mainly by the Army.

After the war, the company focused on manufacturing binoculars and exported them primarily to the United States. In addition, the company produced surveying instruments and contributed to the nation's postwar reconstruction and development. In 1947, the company started medical device business.

Overseas expansion: 1970-



Numerous hit products using optomechanics technology

In 1970, we established two overseas sales companies in the United States and the Netherlands, followed by establishment of overseas manufacturing subsidiary in Hong Kong in 1986, which built a foundation for subsequent global expansion.

In the 1970s and 1980s, we evolved optomechanics technology by combining mechanical and electrical technologies with our proprietary optical technology. We have established a solid position as a comprehensive precision optical equipment manufacturer by producing industry leading surveying instruments and vision testers.

In 1989, the company name was changed to Topcon Corporation.

Evolving to a solution provider: 1994-



Expanding through overseas M&A and new business development

In the 1990s, through aggressive overseas M&As and alliances, we obtained new technologies such as automatic machine control (the United States in 1994), precision GNSS (the United States in 2000), and IT agriculture solutions (Australia in 2006).

In 2006, we developed the world's first 3D OCT combining OCT and fundus camera. We launched fully automatic 3D OCT and non-mydratric fundus camera in 2013 and 2014, respectively.

We have transformed our business model to being solution-driven through M&As and alliances and new business development.

Acceleration of global investment

Since 2014, we have further accelerated our global investments, and have conducted M&As and alliances with more than 35 companies in Japan and overseas. From 2014 to 2015, we expanded our IT agriculture business through M&As and alliances. Furthermore, through our Eye care IoT business (the United States) and the acquisition of an IoT system development company (Finland), we have created an eye disease screening business.

We are addressing the societal challenges within healthcare, agriculture and infrastructure using DX solutions, by fusing leading-edge IoT and AI technologies.

90 Years of History and Venture Spirit 2

Chronicle of New Business Creation

食 Agriculture Entering the IT Agriculture Business

Topcon Acquires an Enterprise with IT Agriculture Technology

Topcon has acquired KEE Technologies Pty Ltd. (currently Topcon Precision Agriculture Pty Ltd.), an Australian company which has a wealth of applications and expertise in the IT Agriculture field. We have achieved full entry into the IT Agriculture business by integrating its technology with our precision GNSS technology.



2006

2000

住 Infrastructure Creation of the IT Construction Business

Topcon Acquires a Company with Cutting-edge Precision GNSS Technology

Topcon has acquired Javad Positioning Systems, Inc., an American company with a development center in Moscow, Russia, and possessing a cutting-edge technology for precision GNSS (Global Navigation Satellite System) which obtains highly precise positional information by combining data from multiple satellite positioning systems. By combining it with the surveying technologies based on optical technologies we own since our founding and the automated control technology for construction machinery we acquired in 1994, we have become possible to provide solutions to realize the automation of construction process.



Acquisition of a Venture Company with Automated Control Technology for Construction Machinery

Topcon has acquired Advanced Grade Technology, Inc., an American company which possesses the technology to automatically control the hydraulics of dozers, motor graders, and other construction machinery and perform construction and civil engineering work in accordance with data surveyed in advance. This has expanded our business field into construction in addition to surveying for construction sites.



Topcon Acquires Enterprises with Key Technologies for Expanding IT Agriculture Business



In 2014, Topcon acquired Wachendorff Elektronik GmbH (currently Topcon Electronics GmbH & Co. KG), a German company which develops and manufactures highly environment resistant displays demanded in agriculture. In 2015, we acquired Digi-Star Investments, Inc. (currently Topcon Positioning Systems, Inc.), an American company which manufactures, develops, and markets fertilization/feed volume analysis and management equipment systems for agriculture and dairy farming. Furthermore, NORAC Systems International Inc. (currently Topcon Agriculture Canada, Inc.), a Canadian company which is a pioneer in the development of ultrasound sensing and boom control technologies for IT Agriculture. Through these acquisitions, we have become able to offer solutions meeting a wide range of farming business needs.

2013

2014

2015

2017



Creation of the Screening Business

Established a Subsidiary in the U.S. to Enhance the Screening Business

With the aim of expanding the ophthalmic disease screening business, Topcon Healthcare Solutions, Inc. was established in the United States to develop and promote new business models (including billing), and specialized software and IoT platforms for efficient use of 3D OCT, fundus cameras, etc. in facilities other than ophthalmology.



Launch of the Fully Automatic OCT 3D OCT-1 Maestro / Fully Automatic Fundus Camera TRC-NW400



These products are fully automatic screening systems leveraging Topcon's proprietary technologies and are suited for use outside of ophthalmic hospitals. They enable the novel use of screenings outside of ophthalmic hospitals (excluding Japan) for early detection of eye diseases. Taking advantage of this feature, we have created a new business where screenings can be conducted for the early detection of eye diseases in places other than ophthalmic hospitals.

Maestro is the product name for our 3D OCT (Optical Coherence Tomography) The Maestro can be operated easily with a single touch, and provides speedy automated image capture, freedom of measurement positioning and automatic measurement of each eye. This device can obtain detailed information of the body in the depth orientation by using optical interference for biomedical measurement. Similarly, the NW400 is a non-mydratic fundus camera that can also be operated easily with a single touch and provides speedy automated image capture, freedom of measurement positioning and automatic measurement of each eye.

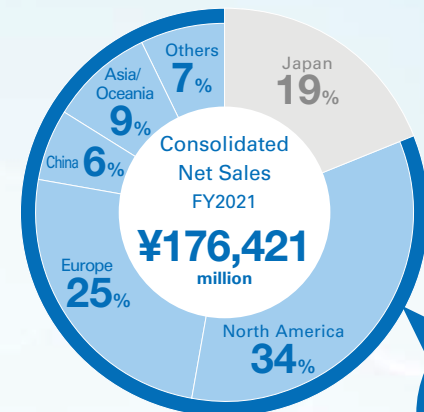
Highly Globalized

Topcon is active worldwide

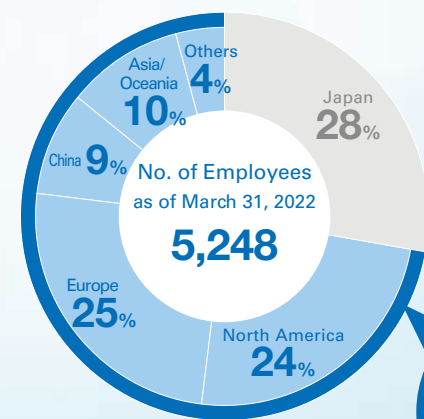
We were a forerunner of overseas expansion. Sales companies in the U.S. and Europe have more than a half century of history. Currently we have 63 sales bases in 29 countries around the world. Thanks to such global development, Topcon products are delivered to 198 countries and regions.

We have acquired various technologies through aggressive M&As and alliances to address societal challenges since the 1990s. Today, there are 27 development bases in 11 countries. In addition, we are operating 15 production bases in 8 countries. We are highly globalized with 81% of sales generated outside of Japan and 72% of employees are non-Japanese.

We will continue to take on the task of solving societal challenges within healthcare, agriculture and infrastructure through the unification of global development, production, and sales systems.



Sales outside of Japan account for approx. **81%** of the total sales



Non-Japanese employees account for approx. **72%** of the total employees

The U.S.



Development and manufacturing of GNSS and IT Construction-related products



The U.S.



Development of tele-optometry system and OCT-related hardware and software



Finland



Development of ophthalmic data management systems



Russia



Development of GNSS-related products



Japan



Comprehensive development and manufacturing in all business domains



Australia



Development of software for IT Construction



Australia



Development of software for IT Agriculture



The U.S.



Development of software for creating 3D models



The U.S.



Development and manufacturing of systems for IT Agriculture



Italy



Development and manufacturing of ophthalmic diagnostic device and software



Italy



Telematics-related development



Development
27 bases

Development framework to leverage our strengths

Sales
63 bases

Covering the entire world

Production
15 bases

Sharing the spirit of manufacturing (MONOZUKURI Spirit) with the world

as of July 2022

Advanced Technology

Providing new value based on optical technology

We have been introducing game-changing products in the field of surveying and ophthalmic instruments for 90 years since its foundation.

Since the mid-1990s, various M&As and alliances with overseas companies have taken place to acquire various technologies. We provide leading-edge and unique products and solutions such as automation of construction process, automation of farm operations, and eye disease screening in familiar places other than ophthalmology (offered in countries excluding Japan) through the integration of proprietary developed technologies and newly acquired ones. We are highly acclaimed with advanced technologies.

In order to achieve our mission to solve societal challenges in healthcare, agriculture and infrastructure, we will continue to push the envelope and develop disruptive technology.

GNSS (Global Navigation Satellite System) technology

Our proprietary Vanguard Technology™ reliably captures signals from all positioning satellites. This includes not only GPS and GLONASS, but also QZSS and Galileo and others. In order to realize high-speed and high-precision positioning, it is equipped with a 452 channel reception capability, enabling highly sensitive and stable reception. With positioning accuracy of several millimeters, it is widely used not only for surveying but also for civil engineering and IT agriculture.



Optical sensing/ Applied optics

The distance measurement technology used in surveying instruments realizes accurate measurement to the millimeter, by precisely measuring the time of the laser beam transmitted back and forth to an object. This technology provides highly accurate 3D position measurement. In addition, the noncontact measurement of crop growth using spectroscopic technology controls the amount of fertilizer applied in real time. This technology is a driving force of IT Agriculture which optimizes crop growth and quality.

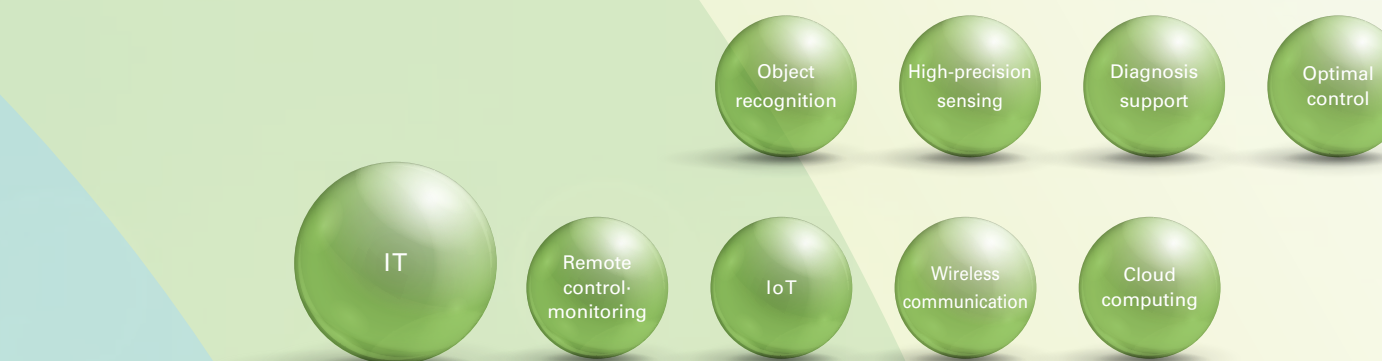


New value creation "Sensor to AI"

While AI, or artificial intelligence, is attracting worldwide attention, we are developing technology based on integrating high-performance sensors with AI. Using our core optical technology, the high-performance sensor suppresses noise and fluctuations in real world data, enabling stable and highly accurate information collection. The ability to develop "Sensors and AI" as a single unit is unique to Topcon.



learn more



Optical design

We possess lens design and thin-film technology, which are the backbone of sensing technology for "Sensor to AI". Our optical design optimizes the entire optical measurement system. We leverage special thin film coating technology, mass production technology, and special processing technology to create highly advanced optical sensors.



Control technology

Combining high-precision 3D position measurement technology and precision hydraulic control technology enables automatic control of construction machine blades and buckets to match 3D design data. In the field of IT agriculture, the combination of location information and electric steering makes it possible for farming machinery to run automatically, and greatly increases the efficiency of farm operations.

Thorough examination of 3D fundus

3D OCT (Optical Coherence Tomography) is the culmination of optical sensing, optometry, and image processing technologies, and we were the first in the world to bring this to market. In addition to conventional fundus camera functions, we have developed a new technology that instantly reflects the microscopic 3D structure of the fundus, opening a new era in ophthalmic examination and diagnosis. Some of the models can capture high-resolution images of not only the retina but also the vitreous body and choroid, and is widely used for research on the degree of disease progression and disease mechanism.

