

# Research and Development

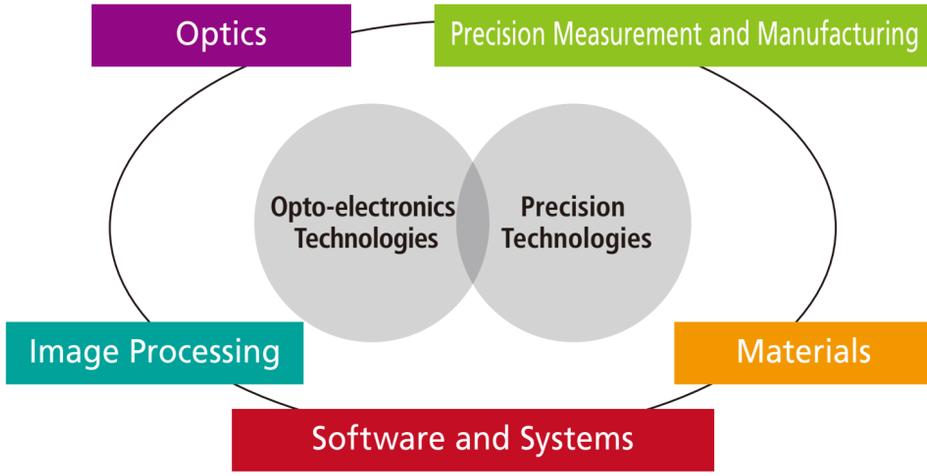
Nikon's proprietary perspective, as well as research and development, create a new future and value.

Nikon will continue to formulate and implement the necessary R&D plans to provide products and services optimized to meet their customer needs toward Vision 2030, as indicated in its Medium-Term Management Plan. Not only will Nikon work on optical technologies that support Nikon, as well as on elemental technologies such as product and production technologies of current businesses, but also on the R&D necessary to realize businesses that will serve as growth drivers through collaboration among the various organizations.



## Basic technologies that support Nikon

To strengthen Nikon's existing businesses and create new ones, it is vital to continue basic R&D activities based on a long-term perspective. With opto-electronics and precision technologies as the foundation, Nikon is conducting R&D in a wide range of technologies including optics, precision measurement and manufacturing, image processing, materials, and software and systems.



## Nikon Research Report: Introducing the results of Nikon's R&D activities

Nikon disseminates the results of its R&D activities based on its core opto-electronics technologies and precision technologies in the Nikon Research Report. This technical report focuses on technologies incorporated in new products and technologies highly evaluated by academic societies and other organizations, and highlights Nikon's unique, advanced technological capabilities and corporate value. For details, please refer to the website from the URL listed on the back cover.



## Technology Strategy Committee

In accordance with the company-wide medium/long-term plan, this committee works on establishing the direction of technological development and priority investment areas, while clarifying technology strategies that will aid in developing new areas of focus and enhance the competitiveness of our current businesses. Nikon will aggressively respond to the issues and needs in the two fields of value proposition of "Industry" and "Quality of Life," and aim for Nikon's long-term growth by promoting the technological development necessary for the Main and Strategic Businesses outlined in its FY2022-2025 Medium-Term Management Plan.

# Manufacturing

Consolidating technologies and increasing productivity.

**Synergy-driven Monodzukuri (manufacturing).**

Nikon aims to contribute to the prosperity and convenience of people's lives through Monodzukuri (manufacturing) based on "customer-focused" and "quality-first" fundamentals. While remaining constantly aware of these fundamentals, we will promote rebuilding of the production system of the entire Nikon Group and improvement of productivity. We have also established the Advanced Technology Research & Development Division, the Optical Engineering Division, the Next-generation Project Division, and the Production Technology Division as entities that provide cross-organizational support to each business unit, and we will create new added value through manufacturing from a Company-wide optimal perspective that transcends business units.



## Monodzukuri (manufacturing) structure

With the goal of increasing productivity throughout the entire Nikon Group, Nikon is implementing a variety of reforms. In 2017, production functions of the optical units were concentrated at Tochigi Nikon. In addition, in 2021, we transferred Sendai Nikon from the Imaging Business Unit and Tochigi Nikon Precision from the Semiconductor Lithography Business Unit to the Production Technology Division. Based on this new structure, in addition to creating new value by combining various technologies and know-how cultivated through the manufacturing of digital cameras and semiconductor lithography systems, we will promote the effective utilization of production-related resources, looking down all business units. Furthermore, we will promote productivity improvement throughout the entire Nikon Group by leveraging digital manufacturing.



## Monodzukuri (manufacturing) technology

Nikon is proceeding with the ongoing strengthening of the core technologies that support its manufacturing and the creation of differentiated technologies that will lead to future products and services. In addition to core technologies such as Materials and Precision Measurement and Manufacturing, we are working as one with our production locations on IE (industrial engineering\*) activities, which are the foundation of manufacturing. We are also focused on human resource development in order to consistently provide valuable products and services.

\* A method of optimizing production management by scientifically analyzing the content of processes and operations.



## Initiatives to improve QCD (Quality, Cost, Delivery)

Nikon has introduced and strengthened a common quality management system and production technology to ensure that all products manufactured at all of its production locations are of the same "Made by Nikon" quality worldwide. To accurately meet customer requirements not only for quality, but also regarding cost and delivery, Nikon is carrying out improvement activities from various perspectives such as development, design, procurement, manufacturing, and quality.