

Medium- to long-term growth drivers

Sensing business growth strategies



Sensing business strengths and market forecast

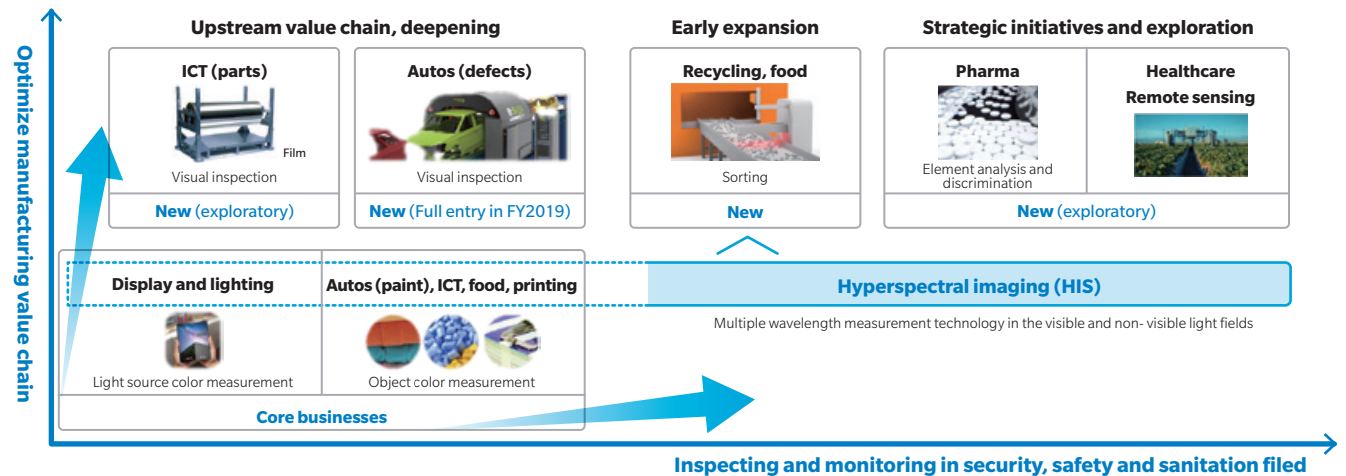
Based on the optical technologies we have developed over many years, Konica Minolta provides the world with competitive measuring instruments in three domains. One is light source color measurement, which includes light source color measuring instruments for displays, an area where Konica Minolta holds more than 50% of the global market share. Another is object color measurement, which meets color quality management needs in a broad range of industries. The last is visual surface inspection, where we provide products for the ICT and automotive industries. As one strength of our sensing business, since our customers are companies with global supply chains, we have a business model that allows for expanding the sales of measuring instrument models specified by these companies across the entire supply chain. Through a worldwide service support network, we can keep in continuous contact with our customers and stay abreast of the

latest trends in the industry.

Measuring instrument demand is being aided by an increasing demand for IT devices due to the proliferation and expansion of teleworking and more people staying at home by COVID-19, as well as a trend toward automation and laborsaving on production floors. This demand is projected to grow even further, from ¥38 billion to ¥50 billion for light source color measurement, from ¥44 billion to ¥50 billion for object color measurement, and from ¥600 billion to ¥870 billion for the entire light and image measurement market.

Going forward, our strategy will focus on expanding business into the upstream region of the value chain and into security, safety, and sanitation field, further expanding growth with the "visual inspection for automobiles" and "hyperspectral imaging (HSI)" businesses, in particular, which we position as strategic investment.

Growth strategies for the sensing business



Medium- to long-term growth drivers

Growth strategy 1: Expanding visual inspection

Speeding up the business expansion in the automobile market

Facing a shortage of workers, automakers are increasingly looking to automate production processes. One process in particular is the visual inspection of vehicle bodies. Because the human eye is often relied upon for these inspections, it is a major challenge to improve quality, achieve consistency, and save labor.

Seeing the chance to solve a problem for the automobile industry as a growth opportunity, we are actively investing in the business of visual inspection for automobiles, which includes looking for scratches, gaps, or unevenness on vehicle exteriors. In 2015, we acquired Radiant Vision, a major U.S.-based manufacturer of display inspection systems and took ownership of their visual inspection technologies. Then in 2019, we acquired Spain-based Eines Systems, a leading company in the automobile visual inspection market. Eines is a technology company whose primary business is providing automated systems and solutions for quality inspections in automotive production processes. It has a global customer base and excels in customer-centric development.



Eines' automated quality inspection system for automobile production

Konica Minolta will continue making strategic investments in the visual surface inspection business for automobiles and accelerate growth in this field.

Growth strategy 2: Entry into the HSI market

Expanding business into the security, safety and sanitation field

Previously, Konica Minolta's sensing technologies have consisted mainly of technologies for measuring visual light. Going forward, however, we will expand the range of "visualization" by broadening our scope to include the invisible light region. As part of this effort, in December 2020 we acquired Finland-based Specim, Spectral Imaging, a leading company in hyperspectral imaging, a multi-wavelength measurement technology for the visible light and invisible light regions. Having this company's technologies allows us to not only inspect the color and appearance of object surfaces but also internal components.

For example, the sorting of plastics is gathering attention in the field of recycling, which is an area set to see greater demand amid efforts to build a circular economy. HSI is now being used to

sort black plastic material, which had previously been difficult to automatically identify.

The HSI market is predicted to see an average annual growth rate of 15% between 2020 and 2025. Positioning HSI technology as a linchpin of our growth strategy for the sensing business, we will expand our business in security, safety and sanitation field through areas such as foreign material inspections for foods and pharmaceuticals and material sorting for recycling.

Comment from Specim

Specim is a global leader in hyperspectral imaging and our international team is equipped with expertise in optics, electronics, software, and sensor technologies. We serve the market with the broadest range of hyperspectral cameras, imaging spectrographs, systems, software, and accessories.

Our products are globally used in machine vision systems, inspecting food or pharmaceuticals production quality, sorting waste, or measuring printed color accuracy. Our products are chosen by numerous research labs, including world recognized centers and installed and operated in drones and large-scale remote sensing airplanes.

Konica Minolta shares our vision and values and will greatly support our business through improved sell-through and reach to global customers. We see many potential synergy benefits in new product development and global sales network expansion.

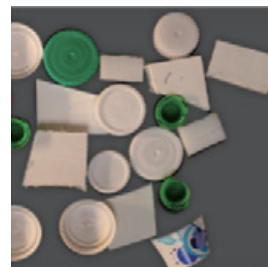
We are excited and motivated to work as a part of Konica Minolta Group to grow our common business and add value to our customers globally.



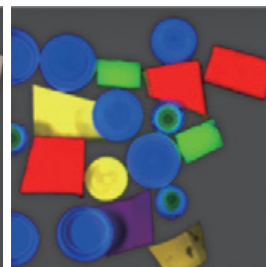
Tapio Kallonen,
CEO of Specim

HSI enabling sorting based on material type

Color image



HSI processing image



- PET
- PP
- PVC
- HDPE
- PS