

INNOVATION INITIATIVES

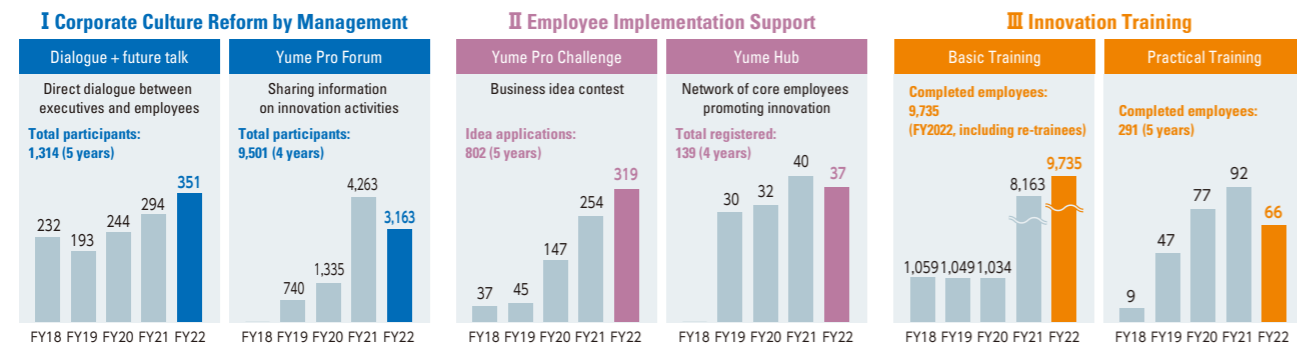
OKI developed the Innovation Management System (IMS) “Yume Pro” in anticipation of the international standard ISO 56002 and is implementing “full participation innovation” throughout the Company. In fiscal year 2023, OKI started conducting full-scale implementation-mode innovation activities, and we are accelerating our “shift to a corporate culture that continuously creates value,” which is one of our issues of materiality, as we take on the challenge of creating future business and expanding globally.

Accelerating Full Participation Innovation

OKI started developing “Yume Pro” in 2017, declared its intention to become an “IMS Ready” company in 2020, and is promoting the development of regulations aimed at creating value through full participation innovation as well as enhanced innovation education and other initiatives. In addition, in 2018, OKI started holding its annual “Yume Pro Challenge,” a business idea contest aimed at helping to sustainably create new business, and, in fiscal year 2022, 319 ideas were entered from throughout the Group. We are also starting to see examples of commercialization as a result of activities in line with our “Yume Pro” process based on proposal themes. In addition to our “Innovation Dialogue,” which offers the opportunity for direct dialogue between our management and employees, we added “Innovation Future Talk,” which gives small groups the opportunity to more deeply dive into

issues, in 2022, and a total of 1,314 people have participated. A total of 9,501 people have also attended the “Yume Pro Forum” for information sharing. We are also making steady progress on our corporate culture reforms aimed at achieving innovation, such as the number of people undergoing basic innovation training reaching 9,735 trainees in fiscal year 2022.

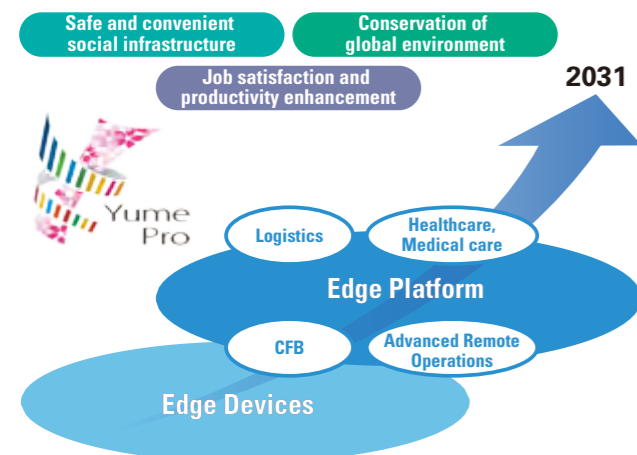
As a result of activities conducted in line with the above process, we set forth “new fields aimed at creating future business” in Medium-Term Business Plan 2025. (For details, see the next section.) As we strive to come up with specific ways to provide and further increase value in these fields, we will also conduct activities starting in 2023 that include promoting initiatives focused on work process reforms as well as accelerating implementation-mode innovation activities.



Promoting the Commercialization of Four New Fields

Our specific implementation-mode initiatives aimed at creating value in the four fields shown in the table are introduced below.

Innovation Business Development Center: Practice and Globalization of Innovation Activities



New Areas	Issues	OKI's strengths x Entry strategy
Advanced Remote Operations	<ul style="list-style-type: none"> Labor shortages Productivity enhancement 	Efficiency of security, facility management, manufacturing, and construction site operations through the use of remotely operated platforms and multi-vendor edge modules
Logistics	<ul style="list-style-type: none"> Labor shortages CO₂ reduction 	Optimize transport routes from feeder lines to trunk lines with real-time AI sensing Link this with warehouse integrated platforms to optimize the entire supply chain
Healthcare, Medical care	<ul style="list-style-type: none"> Labor shortages Health Management 	Support health promotion and testing with behavioral change, wireless vital/biosensing, and medical device manufacturing
CFB*	<ul style="list-style-type: none"> Labor shortages Power saving 	Apply CFB technology developed in LED printer heads High-brightness displays, various semiconductor wafers/functional films

*CFB: Crystal Film Bonding : Semiconductor bonding technology cultivated in the LED printer business

Advanced Remote Operations

As labor shortages become increasingly severe and various kinds of work undergo a digital transformation, individual edge devices are being substituted for on-site work, which is causing problems related to cooperation between people and devices as well as the inability to create value through multiple kinds of work. In line with the actual characteristics of on-site work, OKI has developed “REMOWAY™,” an advanced remote operation platform that combines edge modules (ROMBOX®) with reliable wireless communications to flexibly handle cooperative work between people and edge devices in real time. Our aim is to achieve the integrated management of multi-vendor robots and devices as well as autonomous cooperation between people and robots in various fields (security/facility management, offices, shopping centers, plants (manufacturing), and construction sites), thereby realizing both the increased efficiency of various types of on-site work and business expansion.



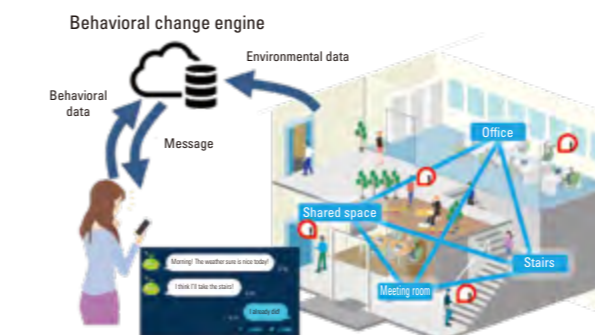
Advanced remote operation platform: “REMOWAY”

Healthcare, Medical Care

As the birthrate declines and the population ages—leading to issues that include a shrinking workforce and increasing medical insurance premiums—there is an increasing need to increase the health awareness of individuals and improve the healthy life expectancy while also increasing the efficiency of medical settings.

OKI is repeatedly conducting experimental trials and promoting the commercialization of the following services: a “behavioral change service” that encourages health promoting behavior by sending users real-time messages at suitable times according to their behavioral characteristics; a “physical education ICT solution” that is intended to raise the awareness of young people of health management through physical education classes that utilize vital information measured by using wearable devices.

In addition, by developing medical equipment that takes advantage of our optical sensing technology and other strengths, we aim to increase the efficiency of medical settings.



Behavioral change service (Wellness Office) overview

Logistics

In the logistics field, there are issues related to labor shortages and CO₂ reduction, but many sites are still limited to analog approaches that are dependent on individual skills and sheer numbers, which is a major barrier in terms of resolving such issues. OKI aims to resolve site-level issues while promoting digital transformation efforts and utilizing real-time AI processing to optimize the overall supply chain.

In March of 2023, as a result of the Yume Pro process, we commercialized the delivery plan optimization service “LocoMoses®,” which uses AI to achieve more efficient deliveries in response to “2024 logistics problems.” In addition, in terms of warehouse work, we are focusing on the problem of shipping work grinding to a halt as a result of freight temporarily getting lost, and we are aiming to achieve simple location management by utilizing sensing technology to automatically track the position of freight.



Delivery plan optimization service: “LocoMoses”

CFB

By applying “CFB (Crystal Film Bonding)” —our dissimilar semiconductor material bonding technology, which we cultivated in the LED printer business—we create unique micro-LED displays, we support semiconductor-device-industry combination (More than Moore) with bonding technology, and we thereby contribute to increasing the sophistication of semiconductor devices.

OKI does not take on challenges such as the above alone. Instead—by pursuing co-creation with our customers and partners—we use CFB as a catalyst to make new combinations of different materials, industries, and ideas, thereby contributing to the open innovative development of micro-LED displays as well as increased added value for semiconductor devices.



In September of 2023, we collaborated with Shin-Etsu Chemical Co., Ltd. to use CFB technology to lift off only the gallium nitride (GaN) functional layer from their QST substrates, thereby successfully developing technology for bonding to a dissimilar-material substrate.