

GROWTH STRATEGY

As is set forth under our materiality details, OKI is using our strengths, namely, the “customer base,” “installed base,” and “technological capabilities” it has cultivated up until now to achieve tangible (“mono”) and intangible (“koto”) results that resolve the social issues set forth by the SDGs through the promotion of co-creation with many partners aimed at ultimately achieving social implementation.

OKI Group Initiatives in Response to Seven Social Issues Set Forth Under Materiality

Social Issues	Initiatives Up Through FY2022	SDGs
Aging Infrastructure	<ul style="list-style-type: none"> In response to social infrastructure for which there are safety concerns due to aging, we will provide new solutions that utilize sensor technologies and AI to contribute to the maintenance of infrastructure. 	
Natural Disasters <small>▶ For details, see the next page.</small>	<ul style="list-style-type: none"> By increasing the sophistication of disaster prevention and reduction, we will aim to achieve comprehensive disaster prevention solutions geared toward self-help, mutual assistance, and public assistance. By providing real-time information combining river-water-level and video monitoring, we will contribute to the achievement of “sustainable cities that are resilient to disasters.” 	
Transportation Issues	<ul style="list-style-type: none"> By achieving the evolution of ITS systems—for which we have a proven track record—and a V2X network, we will aim to reduce traffic accidents, mitigate traffic congestion, and achieve similar goals through infrastructure-cooperative ITS services. By using OKI’s transportation platform “LocoMobi®2.0” as a core, we will achieve new services utilizing ETC2.0. In fields combining 5G and automated driving, we will participate in experimental trials related to automated driving support from the infrastructure side. 	
Environmental Issues	<ul style="list-style-type: none"> To achieve decarbonization, we will promote labor saving via AI robots, increased business efficiency via telework utilizing area sound enhancement and similar technologies, and environmental-impact reduction via zero-energy gateways and the like. We will promote specific initiatives aimed at contributing to the achievement of a circular economy. 	
Labor Shortages <small>▶ For details, see the next page.</small>	<ul style="list-style-type: none"> In response to sites struggling with labor shortages including security/facility management, medical care, nursing, construction sites, and the distribution field, we will provide products and solutions that utilize our sensing technologies, AI, mechatronic technologies, and 24-hour online maintenance results to ensure the safety and security of work environments while improving work efficiency. 	
Labor Productivity	<ul style="list-style-type: none"> We will utilize know-how stemming from our own factories to support customers attempting to convert to Virtual One Factory or smart factories. Based on our smart-factory know-how, we will provide products and solutions that promote smart manufacturing in the agricultural, fishing, and other industries, thereby contributing to improved labor productivity. 	
Infectious Diseases <small>▶ For details, see the next page.</small>	<ul style="list-style-type: none"> We will achieve on-site non-contact/non-face-to-face solutions for financial institutions and the distribution field by utilizing non-contact terminals, automatic ETC (electronic toll collection) payment, and remotely operated robots. 	

Initiative Case Examples for Resolving Social Issues

The impact of changes in the social environment due to the spread of COVID-19 has been large enough to lead to changes not only in lifestyles but also in the form of business in many industries and necessitate business policy reviews. In Medium-Term Business Plan 2022, OKI has declared the intention to utilize the sensing and network technologies cultivated through its ICT (information and communication technology) business as well as the Mono-zukuri approach cultivated through its hardware business as a strength to resolve social issues—primarily via AI Edge solutions that promptly and suitably resolve on-site issues—and achieve its goal of “Delivering OK! to your life.” Below, of the seven social issues set forth in our materiality details, initiatives pertaining to three issues considered especially urgent in terms of responding to societal needs during and after the COVID-19 pandemic are introduced.

Handling Natural Disasters

Ever since fiscal year 2018—to respond to frequent typhoons considered as serious disasters and flood damage from torrential rain—municipalities throughout the country have been obtaining information from national and prefectural disaster-prevention-information systems to make decisions and provide instructions on how to respond. However, when it comes to providing evacuation instructions to local residents, the most important thing is for the instructions to be prompt and accurate. To achieve this, it is essential to provide real-time, accurate information from the site and promptly share it.

To respond to this issue, OKI is providing risk-management water-level gauges that do not contact the water surface and use acoustic-sensing technologies to local governments. In the future, we will provide systems that collect sensing information combining river-water-level and video monitoring and utilize AI Edge computers set up on-site to promptly notify sites and municipalities of the results of primary treatment/analysis. In addition, by linking this data with weather and other data, we will ensure the security and safety of local residents and visitors, thereby contributing to achieve disaster-resilient cities.



Handling Labor Shortages

Due to Japan’s declining birthrate as well as the aging and decreasing population at the same time, serious labor shortages became chronic in multiple industrial fields starting around 2014. As a result of both this situation and requirements related to societal needs during and after the COVID-19 pandemic, there is an increasing need for “unmanned operation/non-contact/non-face-to-face” solutions, and expectations regarding service robots that can take over on-site work are running high. However, when the cooperative robots currently used at various sites detect people or changes in the surrounding situation, they stop moving to ensure safety, which is an issue hampering the expansion of such usage. OKI is utilizing the

video processing, AI Edge network technologies, and robotics technologies the Company has cultivated until now as well as results in the field of 24-hour online/remote maintenance to promote the development of advanced remotely operated robot solutions that operate 24 hours a day. One major feature of OKI’s robots is that they can be controlled from remote operation centers, so—when the robots are about to encounter difficulties—people can control them remotely to promptly overcome such challenges. In addition, because we have achieved 1:N handling enabling one person to monitor multiple robots, we are simultaneously resolving labor shortages and achieving unmanned/non-contact/non-face-to-face on-site operations.

Escalation AI/Autonomous cooperation

- Real-time site limit estimation by AI
- Autonomous, remote cooperative operations via ultra-visual-field expansion and robust, flexible robot PF



XR utilization
Patrols & inspections
Patrols

Transportation support
Guidance and reception

Digital twin consoles

- Advanced future service robot consoles
- Robot interfaces that maximize the user experience
- Expanding console functions via XR utilization

Edge sensor network/5G networks

- Operation linkage between robots and embedded sensors
- Robust, flexible communications functions provided by remotely operated modules

Equipment/Warehouse management

Office buildings

Advanced remote operations
Robot solutions enabling cooperation with people and the execution of diverse types of operations

Advanced remote operation center

Suspicious object detection
Patrols & inspections

Building management

Shopping centers

Public facilities

Inter-AI cooperation/Compact AI

- Automatic inter-AI arbitration by robots/expanded annealer utilization
- Installing compressed advanced AI model in robot edge
- Generating high-speed, lightweight, high-precision AI models

High-reliability sensing via fusion

- Miniaturization and power-saving that can be installed in robots
- Detecting abnormalities in buildings and people's behavior
- Area sound enhancement that supports dialogue between people and machines

Calling out to and conversing with people
Guidance, customer service, and transportation

XR utilization
Calling out to people
Security support

Handling the Spread of Infectious Diseases

Due to the spread of COVID-19, it is assumed that urban functions will shift from being heavily concentrated at specific locations to being decentralized, and the work styles and lifestyles of people are changing. Both countries and private companies have a new, important role: they are expected to speedily prepare measures and solutions in response to the new normal. OKI will take advantage of its Mono-zukuri strengths—which are based on hardware and robotics technologies cultivated through ATMs and printers—to set up multifunctional self-service terminals equipped with non-contact “Hygienic Touch Panels” wherever people go in their daily life. In addition, the Company is working on expanding

its automatic ETC payment services—for which it has a long track record for expressways—to include general roads, and the Company is also conducting experimental trials aimed at achieving non-contact/non-face-to-face automatic payment for drive-throughs. Furthermore, through “Smart Recommend,” which utilizes AI-based gaze and emotion recognition technologies, we will contribute to the achievement of non-contact/non-face-to-face over-the-counter sales as well as increased store-operation efficiency. Solutions like these are helping to minimize the risk of infection at various finance- and distribution-related stores, medical institutions, etc., thereby contributing to the achievement of safe, convenient cities.

Increased sophistication of real-time AI vision

- High-precision marketing based on “individual” behavior
- Increased sophistication of payment systems



Trying on clothes without contact via XR

Mid-air panels
Unmanned transportation
Non-contact operation
Three-Cs countermeasures/Crowding visualization

5G networks

- Optimal remote consultation system utilizing broadband/low latency/multi-connection

Remote operation centers

Non-contact

Terminal maintenance

Network security

- Digital health and connected environment expansion
- Safety and energy efficiency of increasing IoT devices

Safe, convenient payment/services

Shifting to self/non-face-to-face handling

Escalation AI

- Efficient handling through cooperation between people and AI
- Seamlessly shifting difficult tasks from AI to people

Automation

Labor-saving/Non-face-to-face solutions

Inter-AI cooperation/Social optimization

- Last mile logistics optimized and convenient for “individuals”
- Reducing the environmental impact via sharing/on-demand
- Non-face-to-face/Unmanned operation by AI operators
- Avatar/chat/translation etc. multi-contact

Next-generation contact centers
AI operators

ETC CARD
Payment
Multipurpose ETC utilization services

Appointments at medical institutions
Ticket reservation/Self cash point
Smart recommend

“Individual”-specific interaction

- Service access channels optimized for “individuals” and timing
- Micropayment/dynamic pricing linkage
- Self/non-face-to-face handling and outsourcing of cash processing