# Industrial Automation Business (IAB)

# Contribute to the Advancement of Manufacturing That Will Support a Sustainable Society by Strengthening Solutions

Managing Executive Officer Company President, Industrial Automation Business Company Motohiro Yamanishi



# — You were appointed the president of the Industrial Automation Business (IAB) this year. What is your vision?

IAB's vision under SF2030 is "Enriching the Future for People, Industries and the Globe by Innovative-Automation." I inherited the assets that support this vision from my predecessor. As the advancement of industries proceeds, it will be necessary to consider the global environment and ensure the satisfaction of people working at manufacturing sites. I believe this is a mission that IAB should fulfill. As companies are increasingly called upon to help realize a sustainable society, resolving our customers' issues requires that we go beyond improvements in production processes and extend the value proposition to our customers' supply chain and the entire engineering chain. Through the creation of new value by leveraging what we have accumulated to date, we will contribute to the resolution of social issues by making proposals more rapidly in response to customer needs. As Company President, I will seek to resolve issues together with our customers so as to maximize the value proposition, which in turn will lead to the realization of our vision.

# — Fiscal 2022 was the first year of the SF 1st Stage. What kind of year was fiscal 2022?

In fiscal 2022, demand for capital investment in the entire manufacturing industry showed an increasing risk of slowdown in the near term. On the other hand, demand remained steady for our focus market sectors including the semiconductor production equipment, electric vehicles (EVs), rechargeable batteries, etc. In these circumstances, our employees joined forces to overcome the Shanghai lockdowns imposed in the first guarter. From the second guarter onward, we promoted initiatives to strengthen supply capacity to alleviate the heavy order backlog. Despite a challenging year, we were able to shift IAB to a strong growth trajectory, with net sales of ¥485.7 billion and operating income of ¥85.8 billion, both well above the previous year's figures. The results for fiscal 2022 show that our strategy in SF 1st Stage has been effective.

Since 2016, IAB has been pursuing the "innovative-Automation" concept for innovation in manufacturing as a growth driver. For the various problems that are emerging at manufacturing sites, we contribute to resolving social issues with the OMRON's unique solutions that fuse the three approaches to innovation



#### Strategy & Business

in automation: "integrated (control evolution)," "intelligent (development of intelligence by ICT)," and

"interactive (new harmonization between people and machines)."

In SF 1st Stage, as a social value KPI designed to spread not only the economic value of advancement of manufacturing, but also the social value of job satisfaction and consideration for the global environment, we set the number of customers using innovative-Automation at 5,000. The number of customers using innovative-Automation has grown from 900 at the beginning of fiscal 2016 to 3,700 in fiscal 2022, far exceeding the interim target. As a result, the ratio of innovative-Automation solutions sales increased to 35% of sales (16% for fiscal 2016). We will continue to tackle increasingly complex customer issues and refine the value proposition so that more customers will adopt innovative-Automation.

## — In order to achieve the goals of SF 1st Stage and thus realize sustainable growth, what are IAB's strengths that you would like to develop, and what are the challenges for IAB?

IAB has three strengths. Firstly, the unique automation technology that combines cutting-edge technologies such as AI, IoT, and robotics with control technology for factory automation, based on the innovative-Automation concept. The number of innovative

# Number of customers using innovative-Automation

112% compared to FY2022 plan



applications we have developed using this automation technology has grown to over 290. They are being used to resolve issues and make improvements at many customer's sites. We have also recently incorporated advanced digitization technologies such as virtualization and 3D simulation to continuously accelerate the creation of innovative applications. Secondly, based on our own factory practices and customer feedback, the accumulated wealth of knowledge (expertise and know-how) that we utilize to maintain and improve our customers' manufacturing sites. This knowledge has been organized as explicit knowledge in the form of five different service programs, which are a focus of high expectations, in view of shortage of skilled workers at sites. Thirdly, a service network comprising more than 150 locations in some 40 countries and regions worldwide. Together with our production and logistics bases, we offer high QCDS (Quality, Cost, Delivery and Service) throughout the world as a basic requirement for industrial automation devices manufacturers. Meanwhile, the challenge is to enhance the speed of value transfer by channeling these strengths into solutions optimized for individual customer issues. We have already increased the number of field application engineers engaged in on-site implementation of innovative applications and provision of technical services to more than 1,700 worldwide. Moreover, we have established 36 Automation Centers (ATCs) where the suitability of our solutions for customer issues can be verified and demonstrated using actual equipment. Furthermore, in SF 1st Stage, we aim to significantly accelerate value transfer by expanding partnerships with system integrators that have unique strengths in each focus industry.

"Innovative-Automation" is a concept indicating the direction in which the value OMRON provides is heading.

We are tackling manufacturing innovation based on three approaches: "automation beyond human abilities" to maximize on-site productivity from a new global perspective, "advanced collaboration between people and machines" where people and machines grow and evolve together, and "digital engineering transformation" to seamlessly connect manufacturing sites and facilities in digital space.

### — OMRON announced an investment in Kirin Techno-System Company, Limited (KTS) in fiscal 2022. What is your objective?

The objective is to accelerate innovative-Automation in the food and beverage industry, one of our focus sectors. By incorporating KTS' optical technology and high-speed transport technology, we will create new value, leading to business growth through the realization of safe, secure, and fulfilling food. Cocreation with external partners that possess technology is essential for enhancing execution and value-creation capabilities. We will continue to consider the acquisition of important technologies for enhancing the competitiveness of our business and resolving social issues, as necessary.



## — As manufacturing sites increasingly face social issues such as achieving carbon neutrality and human resource shortage, need for services to resolve these issues is increasing. How is IAB's service business progressing?

In recent years, the challenges faced by manufacturers have become increasingly complex as they have been compelled to respond to the growing labor shortage as well as the demand for environmentally friendly business operations, in parallel with conventional initiatives for productivity and quality improvement. To meet these challenges, we must anticipate changes in society and create and offer new services with added value. The "i-BELT" service that utilizes on-site data and the "Industrial Automation Academy (IA Academy)" human resources education service are highly acclaimed.

The former i-BELT is a service for collaborative creation with our customers to resolve their issues by combining customers' knowledge of manufacturing with our improvement know-how and the technologies that we have practiced in our factories. First, we conduct on-site diagnostics of the customer, and then evolve our initiatives together with the customer through repeated monitoring and improvement. Even if customers themselves recognize a problem, without the know-how to identify the cause, it is difficult to resolve essential issues and achieve specific targets for improving on-site issues, such as guality improvement. To provide concrete solutions, our service experts, who are well versed in production sites, work with customers to identify the causes and consider countermeasures using data analysis and Al. I-BELT is highly regarded and is continuing to grow as the core of our service business. Therefore, in order to respond to the many inquiries we receive, we are expediting fostering of field application engineers and service experts who work on the frontline. Furthermore, we aim to realize highly versatile data solutions through synergy with JMDC. We will also

accelerate our evolution as a solution provider capable of creating new added value. The latter IA Academy was launched in April 2023 to address the challenge posed by manufacturing sites lacking sufficient engineers and other human resources to ramp up production. We have systematized the implementation support curriculum, which was previously regionspecific, into an integrated educational program so that trainees can receive various levels of engineering education worldwide. Another advantage is that experienced instructors, including engineers in active service, are directly involved in provision of the education. Although this service has just been launched, it has been well received because the curriculum can be customized according to customer needs. We hope to grow it into a service that will drive business growth in the future.

## — Energy productivity solutions have proven to be an important concept for many manufacturing sites. Against this backdrop, in the last fiscal year, OMRON became the first Japanese manufacturer to join EP100, an international corporate initiative led by The Climate Group.

During our discussions on initiatives for the realization of sustainable manufacturing, we joined EP100, which aims to double energy productivity. This decision reflected the voices of employees working in the field. Employees at production sites that had been working for many years to improve energy productivity expressed their view that contributing to reduced energy consumption by improving productivity and guality, which are the "essence of production," would motivate them. Salespeople who interface with customers commented that they would be able to take ownership of customers' issues and address them in a more purposeful manner. I feel that, through EP100, management and frontline personnel are united in promoting environmental management and the resolution of social issues.

OMRON will promote carbon neutrality at its own sites to achieve EP100 and contribute to resolving the issues through the OMRON Group's products and services. Energy productivity at IAB's main sites in fiscal 2022 was 111% higher than in fiscal 2021 and 1.3 times higher compared to fiscal 2016, as a result of the progress of vigorous energy saving initiatives of the Ayabe Factory and other efforts. Solutions demonstrated at the OMRON Group's factories are offered as part of the i-BELT service to customers who promote environmentally conscious business operations. By combining IoT, AI analysis, and data utilization, we visualize our customers' factories and help them create sites where productivity and quality are both enhanced.

For example, in a case of co-creation with Okayama Murata Manufacturing Co., Ltd., OMRON analyzed data on particles in the clean room as well as temperature, humidity, and other environmental data. The results of the analysis showed that energy efficiency could be improved by controlling the operation of the air conditioning system in the clean room. With an eye to continuously improving the quality of energy management, Okayama Murata Manufacturing has set a goal of reducing electricity costs by an amount equivalent to 200 tons of CO<sub>2</sub> emissions per year as a first step.

# — What are the main features of IAB's business plan and what is the outlook for fiscal 2023?

Demand for capital investment in manufacturing industry as a whole in fiscal 2023 remains uncertain due to inflation and other factors. Nevertheless, customers related to megatrends, including semiconductor production equipment, that is, those whose business concerns electric vehicles (EVs), rechargeable batteries, and solar cells, continue to make capital investments. Furthermore, in view of geopolitical risks and automation spurred by labor shortage, we see potential demand for investment in

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diversification of production sites. To seize these business opportunities and expand sales, we are focusing on three initiatives.

Firstly, we are further concentrating our resources on focus industries. Having carefully identified the markets, areas, and customers on which our expectations of strong demand are centered, we have increased our sales resources to a level that is 1.4 times higher than in the previous fiscal year. We have a structure in place that enables us to quickly grasp changes in our customers' needs and propose solutions.

Secondly, we are strengthening strategic investment in value creation through innovative-Automation. To accelerate the creation of highly competitive innovative applications that address our customers' essential issues, regardless of changes in the market environment, we are developing new products by refining our Al/IoT and robotics technologies and enhancing value co-creation activities with our leading global customers.

Thirdly, we are further strengthening the service business. As mentioned earlier, even amid uncertain market conditions, there are evident needs in the service space, such as for energy productivity, quality improvement using on-site data, and human resources training to overcome the serious shortage

# Sales of solutions by innovative-Automation

Sales composition ratio in 2022

Average annual growth rate since 2016

+22%

# 35%

of advanced production skills. We will continue to evolve our services and promote solutions for all on-site issues.

# — What measures will IAB implement to further increase profitability?

The key to achieving a further increase in profitability is for IAB to accelerate the shift to a solutions. business based on innovative-Automation and to unleash the creativity of its workforce. Customers using solutions embodying innovative-Automation have recognized the higher added value inherent in our proposals for increasingly complex issues, which go way beyond the conventional provision of components. In other words, a further increase in the number of customers using innovative-Automation will lead to higher profitability. To accomplish this, it is important to enhance proposal capabilities of individual employees, such as employees engaged in global sales and field application engineers, who provide value to customers. Moreover, we are stepping up investments in IT systems and other environmental improvements and capacity development in order to provide customers with applications and services embodying innovative-Automation. As the progress of inflationary economy increases the value of each individual, we are addressing enhancement of individuals' capabilities as the top priority so that a higher level of human creativity can be demonstrated.

# — OMRON is committed to high-cycle management. What results have you achieve so far at IAB?

In a rapidly changing business environment, it is necessary to respond swiftly to solve the various problems that arise at customers' sites. In this regard, I feel that the speed with which value proposition is created and delivered to the site is still insufficient. It is important to implement high cycle management to meet customer expectations and realize our vision. IAB promotes high cycle management in three major layers. Firstly, initiatives are pursued by executives who exercise leadership as the flag bearers of high cycle management. We are vigorously investing in AI and IT systems to transform our approach to value creation and improve the working environment for employees. In particular, in pursuit of value creation, we accord the highest priority to cultivation of an environment conducive to co-creation. Using software, functions can be added during prototyping in order to quickly respond to customer requests. Whereas in the past we proceeded with development by envisioning every aspect of usage after receiving a request, optimization can now be performed more quickly.

Secondly, high cycle management is promoted by some 1000 managers who exercise leadership at the frontline worldwide. They decide their own themes and promote activities at a higher cycle. Unique initiatives pursued through collaboration between these managers and employees at the frontline are already advancing in several countries. In South Korea, initiatives are underway to revitalize the organization. For example, thanks to the cultivation of a supportive ambience in the workplace, people who take on challenges will receive positive recognition even if the results fall short of the goal and measures have been introduced that encourage employees to collaborate and take decisive action.

Thirdly, we are pursuing transformation of the entire culture of IAB by accelerating the "biological clock" of IAB employees. Whereas there is a tendency to spend too much time on preparation, I encourage our people to get everyone on board and advance boldly without undue hesitation. We cannot achieve stellar results overnight, but I want to seize the initiative and proceed with tenacity while relishing the changing atmosphere of IAB.

#### Case 1 Contributing to Resolving Human Resource Issues in Manufacturing Industry through the IA Academy Education Service

In manufacturing industry, human capital is becoming increasingly important as ESG management attracts growing interest. At manufacturing sites, the evolution of manufacturing has become a pressing issue. For example, it is imperative to keep pace with technological progress and to make each production site self-reliant through greater local production for local consumption. Therefore, shortage of human resources at manufacturing sites, especially technical personnel essential for maintaining and updating production facilities, is an urgent management issue. OMRON has long contributed to resolving human resources issues through the provision of educational services. Combining the experience and know-how of our field application engineers worldwide with the knowledge of the OMRON Group's factories, we provide educational services for approximately 210,000 people annually. In April 2023, we systematized our previous regional curriculum and opened the Industrial Automation Academy (IA Academy), which provides uniform educational services at all our sites throughout the world. Since conventional educational services in the factory automation industry focus on seminars and equipment training for customers who have purchased the company's products, there have been few educational services supporting the development of skilled engineers. IA Academy offers not only conventional training on how to use OMRON products but also engineer education services that are optimized for each company based on a curriculum tailored to the human resources development issues and needs of manufacturing companies. We have established 10 different engineering courses corresponding to the skills required at manufacturing sites. Courses can be selected flexibly from a curriculum systematized to match the level of proficiency and career development

of trainees. Customers use OMRON's IA Academy for basic training of new employees so that they will quickly become able to work effectively and for reskilling operators on the production floor as well as other staff. For companies operating globally, the need to establish a sustainable supply chain geared to local production for local consumption is an important management issue, in view of rising geopolitical risks. Addressing this issue necessarily involves the recruitment and training of excellent engineers at sites around the world. Taking advantage of OMRON's global network, IA Academy offers educational programs in 13 languages at more than 150 sites in 40 countries and regions worldwide. At IA Academy, more than 1700 field application engineers, all of whom are experienced in optimizing solutions and supporting the start-up of equipment at customer sites, serve as instructors for engineer education. Adopting the customer's perspective, they share the know-how for improvement and innovation that they themselves have cultivated in the field. We provide a hands-on, practical learning environment using actual equipment, capitalizing on our Training Centers and 36 Automation Centers around the world. Through IA Academy's provision of educational services, OMRON is tackling the shortage of human resources, one of the most important management issues in manufacturing industry.

One of the world's leading e-commerce and logistics companies has selected OMRON IA Academy to provide part of the curriculum for the Apprenticeship Program, its training program for new employees. Through a 24-month training program, this company fosters engineers in-house. The engineers gain advanced expertise in automation, robotics, IT, and other cuttingedge technology fields. As the customer's partner in establishing a long-term advanced engineer training process and for the provision of learning experiences directly linked to on-site operations, OMRON is helping enhance its employees' on-site practical skills.

#### **Employee Comments**

Through IA Academy, we respond to various needs, ranging from basic education for engineers to the training of specialist engineers. Training is tailored to the needs of each customer's sites. IA Academy offers a curriculum that is always abreast of technological advances concerning such themes as human-machine coordination, analysis and utilization of on-site data, and cyber security for control systems. We are delighted to see the trainees develop the skills they need to make a difference in customers' businesses and advance their own careers. Going forward, we will continue to provide systematic educational services that address customers' issues while supporting the career development of trainees.

> Business Development Manager OMRON Europe Gaetano Fusillo



Industrial Automation Academy



## Case 2

### Automation by Introducing Collaborative Robots Contributes to the Creation of Safe and Attractive Workplaces

For Japan's broadly based manufacturing industry, shortage of engineers and production workers are becoming increasingly severe as the country's workforce continues to age and shrink, reflecting a declining birthrate and population aging. In order to resolve various on-site issues caused by labor shortage, there is a growing interest in automation employing collaborative robots that can safely work with humans even in limited spaces. To help realize sustainable manufacturing sites, through a partnership with Techman Robot, Inc. (Taiwan) since 2018, OMRON has been offering the TM series of collaborative robots, which can work in the same space as humans without safety barriers. A camera is mounted as standard equipment at the end of the robot arm, and by utilizing landmarks, quick calibration can be performed by accurately determining the position of the arm in relation to the workbench. An intuitive motion program generation function is also available. Presented below is a case study of an automated production line optimized for high-mix/lowvolume production by utilizing these collaborative robots. ARIKAWA WORKS .Co., Ltd. designs and manufactures metal molds for weaving machines, machine tools, and semiconductor production equipment, carries out metal press work, and fabricates metal items indispensable for each of these types of equipment. In recent years, labor shortage has made it difficult for the company to hire enough people. The company introduced collaborative robots not only to increase productivity but also to create a more comfortable working environment. OMRON, in cooperation with its local distributor Yamazaki Electric Corp., conducted preliminary verification of press operation automation and quality inspection, and established an optimal support system for introduction of the robots to meet the needs of ARIKAWA WORKS. Expert engineers supported the sophisticated coordination of robots by using safety sensors that detect people and the intrusion of objects, and supported the start-up of

quality inspection by deploying image sensors. The press operation was automated by controlling two collaborative robots. The task of insertion into the die was divided into a series of steps, making it possible for robots to perform the task in a manner similar to that of a human. For quality inspection, a single collaborative robot works in combination with image sensors to capture images of each machined surface, and advanced image processing technology is used to detect defects and sort defective products according to the quality of their surface, thereby contributing to a significant reduction in the workload. We also support process improvement to ensure flexibility for accommodating changes in products and in-house fostering of system integrators for expanded utilization of collaborative robots. Since the introduction of collaborative robots, ARIKAWA WORKS has been able to reduce the time required for simple tasks while increasing the number of personnel engaged in high-value-added tasks. Implementation of innovative-Automation is spreading across the production operations of various companies. We will package our initiatives for supporting introduction of collaborative robots at ARIKAWA WORKS as a solution that our seven branches in Japan will propose to their customers as a way of resolving social issues. Utilizing our extensive knowledge of automation, based on a customer-oriented approach, we will continue to contribute to the creation of comfortable workplaces where people and machines collaborate with one another.



Press working process automated by two collaborative robots

#### **Comments from Our Partner**

"I see you are still making things by hand." That is what a student who was interested in joining our company said to me during a visit to our factory, a comment that prompted me to endeavor to create a more attractive workplace. This was accomplished through automation using collaborative robots, which we started introducing in fiscal 2020. These robots are valuable assets of our factory where high-mix/low-volume production is performed in a limited space. Since there is no need to place a fence around these robots, their introduction still leaves sufficient space for people to move around, and the layout can be flexibly changed according to the nature of the work. When we expanded the scope of automation from press work to quality inspection, OMRON supported us with its superior image processing technological capabilities, and we were able to further improve operational efficiency. Going forward, we will consider further automation by increasing the number of collaborative robots and connecting processes. I am pleased that we introduced the system. Besides achieving higher equipment utilization rates and improved guality, we received very positive feedback on the initiative from our employees and outside parties. Some business partners indicated their willingness to support us because they were inspired by our new initiatives. In fact, automation has enabled us to win new business and has also had a positive impact on recruitment, helping us hire several new employees since the introduction of the system. I recognize various benefits of the investment that go beyond automation. Through the exhibition space that we opened to the public in 2023, I hope to connect with many companies and share our experiences to further expand the circle of automation.

Representative Director ARIKAWA WORKS .Co., Ltd. Fuki Arikawa



#### Case 3 Establishment of OMRON KIRIN TECHNO-SYSTEM CO., LTD. to Realize Safe, Secure and Fulfilling "Food"

Labor shortage in manufacturing industry is becoming more acute with every passing year. In the food and beverage industry, there is a growing need for automation that achieves sophisticated quality control and inspection without excessive reliance on manual labor, thereby ensuring the safety and security of products. In addition, in view of the need to reduce energy consumption and plastic usage so as to protect the global environment, the challenges facing manufacturing industry have become more complex in recent years. OMRON established OMRON KIRIN TECHNO-SYSTEM CO., LTD. (OKTS) on April 3, 2023, to create optimal beverage inspection solutions by leveraging its knowledge of manufacturing industry. As a leading Japanese manufacturer of inspection machines for the beverage industry, OKTS possesses advanced optical, transportation, and image processing technologies that support industry-leading high-speed inspection, as well as the ability to propose solutions corresponding to the know-how of diverse manufacturing sites. Kirin Techno-System Company, Limited, the predecessor of OKTS, has contributed to stable supply of products to the beverage industry through appearance inspection of PET bottle caps, labels, etc., inspection of the content of beverages and detection of foreign matter, and so on. The combination of OMRON's advanced control technology cultivated by innovative-Automation with OKTS's inspection machine technology will create synergy.

OMRON and OKTS are currently working on the development of a "zero-defect" solution as the first step in creating synergy between the two companies. Conventionally, beverage production lines have inspection machines installed between each process to establish a high-quality production system that prevents defective products from progressing to the next

process. This results in items to be discarded at each process, which not only reduces productivity but also causes extra energy consumption and increased plastics waste. Through linkage of the information processing network with each inspection machine by means of automation controllers and Al, the new solution under development will enable rapid analysis and identification of the causes of defects. For example, in the case of a PET bottle blow molding machine\*, the judgment as to the parameters that are problematic and causing defects, which used to depend on the skills, tricks, and experience of skilled workers, will be automated. By applying similar control to the entire beverage line, a zero-defect line can be achieved. New co-creation solutions will help maintain production quality, increase energy productivity, and reduce plastics consumption.

OKTS will continue to create innovative solutions and contribute to production innovations that improve safety and quality in the food and beverage industry worldwide. By increasing productivity, OKTS will lead the way in realizing sustainable manufacturing sites that help protect the global environment.

\* Equipment that blows air into molten resin (PET bottles, etc.) to inflate and mold it.



#### **Employee Comments**

Since the establishment of Kirin Techno-System in 1990, the company has provided inspection solutions to many beverage manufacturers. We realize that customers' needs for automated inspection are further increasing as the labor shortage worsens. In joining the OMRON Group, we will take on the challenge of creating new solutions that combine our technologies with innovative-Automation and maximize the value proposition to our customers.

OKTS currently has a large share of the Japanese market for inspection machines for the beverage industry. We intend to increase our presence in the rapidly growing global beverage market, especially in Asia. In South Korea and Thailand, we have already started to propose inspection solutions to local beverage producers in cooperation with OMRON sales departments in each country. While there is robust demand for high-quality inspection in Japan, demand for machines that offer ease of use and are backed by meticulous local services is high elsewhere in Asia. Business development should be in tune with the needs of each market. While leveraging our strengths in technology, we will develop new inspection machines equipped with OMRON's image processing technology that will enable sales departments in each country to provide services. By combining our products with OMRON's applications and solutions and by leveraging its sales channels, we will strive to offer value that meets the expectations of our customers worldwide so as to contribute to the safety and security of "food" for people around the world.

President OMRON KIRIN TECHNO-SYSTEM CO., LTD.

Hironobu Hosokawa



## **Sales Composition by Business Domains**



## Net Sales / Operating Income / Operating Income Margin



# INPUT

- R&D cost: ¥27.0 billion (results for FY2022)
- Capital expenditures: ¥9.3 billion (results for FY2022)
- Started joint development with NTT Communications Corporation of DX solutions in the IT/OT (factory automation) domain to realize decarbonization in manufacturing (September 2022)
- Committed to doubling "energy productivity" with the Healthcare Business upon joining the EP100 international initiative (November 2022)
- Invested in Kirin Techno-System Company, Limited, a manufacturer of comprehensive inspection machines for the beverage industry. Became a subsidiary as OMRON KIRIN TECHNO-SYSTEM CO., LTD. (April 2023)
- Launched i-BELT service using the i-BELT Data Management Platform (August 2022)
- Launched the K7DD-PQ series of motor condition monitoring devices that automate the monitoring of abnormalities at manufacturing sites, replacing human workers (February 2023)
- Launched the NX502 controller with advanced control of information and safety (April 2023)
- Launched the Green Concept aimed at reducing environmental impact by reducing the carbon footprint of control panel manufacturing (June 2023)
- Launched the MD-650 mobile robot, which contributes to optimizing transportation efficiency at production sites (July 2023)

# **OUTPUT**

- Net sales: ¥485.7 billion (+16.2% YoY)
- Operating income: ¥85.8 billion (+12.6% YoY)
- Number of customers using innovative-Automation: 3717 companies (112% vs. plan)
- Sales of the solutions business as a proportion of total sales of IAB: 35% (+2% percentage points YoY)
- Created innovative applications: 290 (+40 from the previous year)
- Obtained certification for the IEC 62443-4-1 international standard for industrial control system security (May 2023)

- OUTCOME
- Established manufacturing sites that support a sustainable future in which symbiosis with the global environment is achieved and workers experience job satisfaction

