

# III. Innovation

## Digital Transformation (DX)



**Tadayoshi Ito**  
 Managing Executive Officer  
 aG Digital Transformation Promotion

### Strengthening the business foundations and expanding the three growth fields by DX

In promoting DX, the azbil Group recognizes that changes in the natural environment, business environment, evolving technology, and new requirements of society are expanding the role and opportunities for automation, which is based on digitalization. The azbil Group aims to contribute to solving social issues in business activities and further enhance the value it provides by creating new business and new ways of working through digitalization.

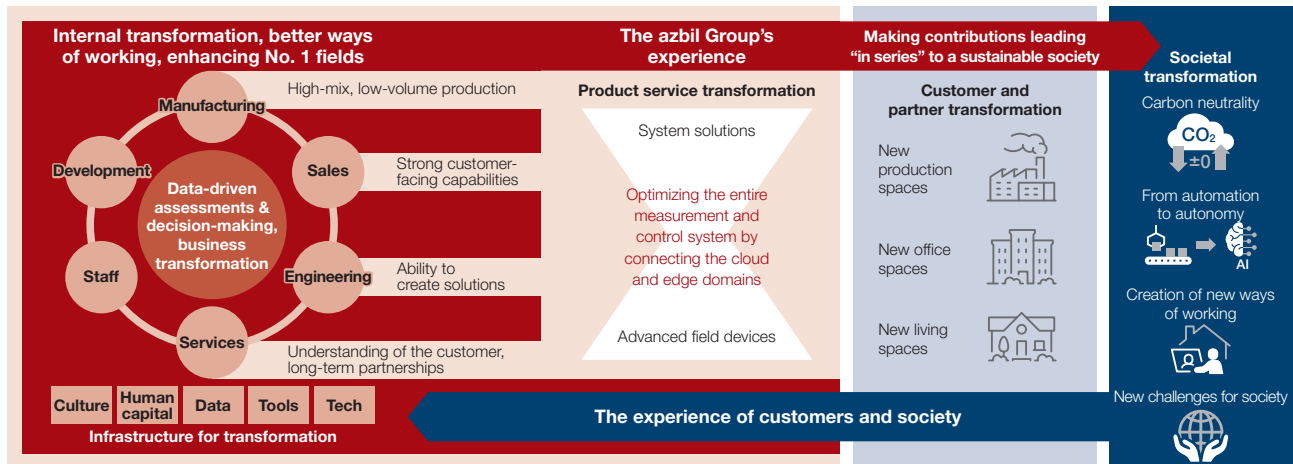
In our business activities, we have identified three growth fields: *new automation*, which enables us to further enhance the sustainability of production sites and building

operation sites; *environment and energy*, which promotes decarbonization by providing solutions to reduce environmental impact, curb energy demand, and integrate renewable energy; and *life-cycle solutions*, which supports a recycling-oriented society by providing value tailored to each stage of our customers' business development. We will accelerate the use of the latest digital technologies in these fields.

Also, as part of our efforts of creating new business and new ways of working, our sales and engineering divisions are responding to the different challenges faced by our customers in each region, such as maintenance using

#### Overview of the azbil Group's DX

Contributing "in series" to the transformation of customers, partners, and society through self-transformation, with feedback for our next transformation



cloud computing, while providing world-class solutions, collecting data remotely in service operations, analyzing events, and improving efficiency through digitization of control operation inspections by experts off-site, etc.

In our development departments we are putting the IoT, cloud computing, and AI to practical use and strengthening the network and system solutions we use between field devices and control and monitoring centers. Sensing information received from field devices is aggregated and processed by our systems, facilitating site control planning and monitoring, and allowing the entire measurement and control system to be optimized.

As part of our efforts to digitalize our production sites, we have introduced an advanced cloud-based manufacturing execution system (MES) to the core system at production sites of the azbil Group companies and have begun operating it. Using the benefits of cloud computing, we are expanding production DX efforts centered on onsite personnel. This includes introducing systems through remote work, improving the accuracy of inventory control, eliminating dependence on individual skills, reducing paperwork, and visualizing the progress of production in real time.

In addition, we are promoting the use of generative AI as an indispensable tool for future business development by issuing usage guidelines, launching tools for its safe use exclusively for the azbil Group, and applying it to business operations.

At the same time, along with these advances in DX, cyber security measures and management are important. The Cyber Security Office, a specialized organization, is promoting measures and management in an integrated way for everything from products and services to business systems.

By expanding partnerships with companies working in a variety of fields and with various research institutes (see p. 28), we are achieving business growth by implementing our technology and knowledge more widely in society and contributing to the achievement of the SDGs, along with promoting DX.

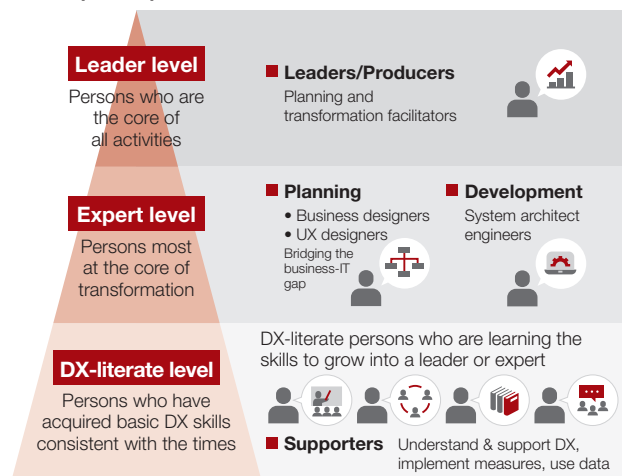
## Developing human resources for DX

DX provides support for the expansion and deepening of the azbil Group's three growth fields. For sustainable growth, it is essential to train personnel to have the necessary skills in business, data science, and data engineering. By gaining the needed knowledge and skills and applying them to produce DX, we will make them truly useful capabilities that expand and deepen the three growth fields.

The azbil Group classifies DX-capable personnel into three levels: DX-literate, expert, and leader. We are implementing a human resource development program with the aim of having 1,000 experts by 2030. We plan to demonstrate the DX skills acquired through education by implementing DX measures, and developing practical skills.

In FY2022, group training sessions were held to develop business skills. In addition to this, DX basic education incorporating case studies was held by various departments (staff and production, sales and engineering services, and development), with a total of 1,500 participants.

### DX-capable personnel and their roles



### Employee comment

#### Production DX efforts



**Yorihiisa Tamaoki**  
IT Development  
Headquarters  
IT Development Dept. 2,  
Group 1

In the area of production DX, we introduced an advanced cloud-based MES, which is an IT platform for the production floor, at the Group's production sites. Since it went online in May 2021, multiple production sites have been able to evaluate quality and production methods using the same production standards, evaluation criteria, and indexes, and the tacit knowledge of managers about plants and lines has become common knowledge. This has led to an increased awareness of improvement at these sites. Also, since the system operates completely in the cloud, we were able to confirm the effectiveness of the cloud system for purposes such as sharing accurate information with remote locations. Going forward, we aim for further DX by visualizing the accumulated manufacturing information using BI tools and the like and by transforming manufacturing sites so that they can be evaluated using data, with the MES serving as the hub for information at the sites.

## Research and Product Development



**Hideaki Ishii**

Managing Executive Officer  
aG Production, Purchasing, Research & Development, Product Safety, Quality, & Environment

The azbil Group focuses on strengthening its product competitiveness and R&D infrastructure to quickly identify changes in markets and in customers and to develop products based on automation technology.

### Strengthening product competitiveness

We are emphasizing research and development based on automation technology, which is the azbil Group's strong point, in order to expand our business in response to technological trends and changes in the market and in our customers.

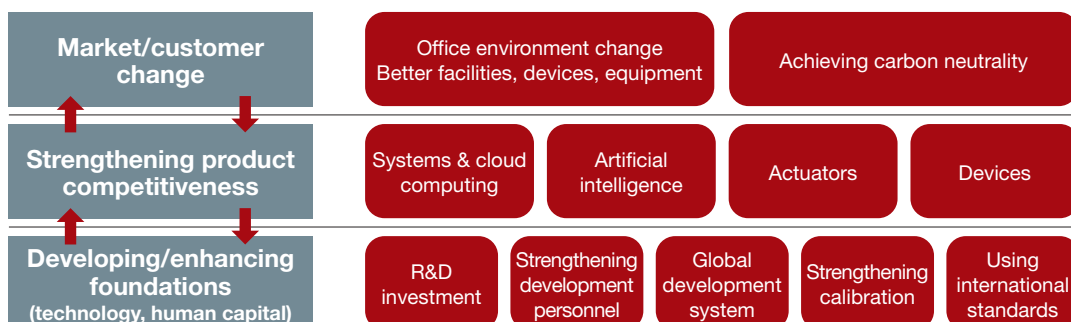
For example, we are accelerating research and development to meet the requirements for further energy conservation and energy conversion to achieve carbon neutrality, to respond to changes in offices, such as the pursuit of wellness and optimal working environments, and to make improvements in the performance of facilities, equipment, and devices.

Also, in order to strengthen the foundations for future business growth, we are making changes to establish

systems and mechanisms for the creation of competitive products, particularly at the Fujisawa Technology Center, our central R&D base.

Specifically, to further strengthen the area of measurement and control technology, we have established a new organization, Actuator Development Headquarters, to enhance our ability to create new value at customers' sites in the field of the actuator and its application. In addition, we are strengthening our application development system both in Japan and overseas using systems and cloud computing, artificial intelligence (including generative AI), etc. Also, in addition to last year's collaboration with external partners, in this fiscal year we will work to strengthen partnerships in the areas of renewable energy and new technology, both domestically and internationally.

### Strengthening product competitiveness and linking R&D infrastructure



## R&D investment

Technological trends, such as applying IoT and DX, are changing our environment dramatically in several fields, including measurement and control field we focus on. This change affects the expectation of society to contribute to environmental conservation, curb energy consumption, achieve people's wellness and so on.

To meet the requirements of society, respond to the needs of our customers, and expand our business through new products, we continue to focus on developing products and services that will become number one in areas like system and cloud computing, AI, devices, and actuators, as well as developing technology with a scope of the medium- to long-term growth. The new lab building (Building 103) and clean room and calibration office in Building 104 were completed at the Fujisawa Technology Center in September 2022. We will enhance our R&D for more sophisticated and advanced technology effectively with them.

In system and cloud computing, the control domain is expanding through the digitizing corresponding environmental changes in production facilities, office buildings, and living areas. Customer requirements are rapidly shifting from operation-oriented systems to management systems. It is therefore crucial to develop products and services that keep up with the latest technological trends, such as the use of generative AI. Viewing these trends as an opportunity to expand our business, we continue to develop system

foundations and applications across the entire company.

With regard to actuators, in light of the importance of strengthening the Group's product business, we are enhancing our actuator technology development capabilities with the help of the knowledge we have cultivated on valve and robotics technology. The further development of actuator-related technology, which is used in all of our businesses, will strengthen our product development and product expansion.

For these purposes also, the new building for conducting experiments will be used as a field testing environment to verify value in the field.

On the subject of devices, we will continue to strengthen our development capabilities in microelectromechanical systems (MEMS) with the help of a new clean room and other development and production environment enhancements. The range of applications for MEMS is expanding due to changes in the external environment, including a shift to more advanced kinds of measurement where quality rather than quantity is measured, the emergence of synergies with AI and DX, and a move toward autonomy in automation. In this environment MEMS is a core measurement and control technology for measurement instruments and field devices, so we will continue developing it and taking on new R&D challenges.

With the technology in these areas we are strengthening at our core, we aim to make contributions "in series" to the achievement of a sustainable society.

## New buildings at the Fujisawa Technology Center



**Building 103**

No. of floors	6
Building area:	2,320 m <sup>2</sup>
Floor space:	10,721 m <sup>2</sup>

- Better facilities for the development of central air conditioning technology that excels in comfort, energy efficiency, and harmony with the environment
- An innovative development environment that stimulates and activates creativity



**Building 104**

No. of floors	3
Building area:	1,336 m <sup>2</sup>
Floor space:	4,217 m <sup>2</sup>

- Expanded facilities for MEMS sensor development and production using world-class advanced MEMS technology as a base for developing measurement and control technology
- Enhanced facilities for developing measurement standardization technology, which is the basis for high-precision and high-reliability products

## Strengthening development personnel

We will focus further on training development-related personnel to increase product competitiveness. By fostering not only the diverse specialized skills of our developers, but also employees' ability to think, learn, collaborate, improve performance, and produce results independently, we aim to develop human resources who can create value in the field and take on the challenge of innovating. We are also working to train and acquire development-related personnel who are diverse, receptive to new ideas and technologies, and can collaborate with external partners in our global development system.

To achieve this, we have introduced and are now using a skills management system to visualize the technical and human skills of the approximately 1,000 engineers throughout the company, and to objectively and quantitatively identify and evaluate personnel who can accelerate development for growth. We also have in place an education system that uses diverse analytical methods based on individuals' skills to enhance career development and technical transfer capabilities. Furthermore, we have established an optimal development personnel structure by strengthening the hiring of individuals who share our Group philosophy and by mobilizing human resources in the development areas we are focusing on.

## Research and Product Development

### Global development system

With our research and development center in Silicon Valley in the U.S. and with our European group companies, our technology and product development has a global perspective.

Our U.S. R&D company works on the development of next-generation measurement technology, surveys the latest technological trends in areas like the IoT, engages in international standardization activity, and does collaborative research with local universities and start-up companies on subjects like AI-based technology development.

In Europe, through cooperation with companies such as Azbil Telstar, S.L.U., a Group company, we are strengthening our product line for pharmaceutical manufacturing and medical facilities.

In addition, as the next step in revising our global R&D collaboration structure, we are establishing a new research and development center in Singapore. Strengthening cooperation between R&D functions in Japan and abroad, we aim to achieve rapid application development and test marketing through collaboration with our business lines, taking advantage of our proximity to the market.

We will continue to take the initiative at our regional centers in Japan, the Americas, Asia, Europe, and other regions, while at the same time collaborating with interregional research and development centers to identify market changes in each region in a timely manner and to collaborate with business lines in a flexible manner. Also, to facilitate rapid product development, we will further strengthen co-creation by using each regional center as a base for collaboration with external partners.

### Global research and development bases



### Enhancing calibration capabilities to support measurement reliability

With “correct measurement” as the foundation for measurement and control, the azbil Group provides safety, comfort, and fulfillment for its customers. To determine whether the sensors and measuring instruments that are key to this end goal are measuring correctly, calibration is applied. The measuring instruments and generators that themselves serve as the physical measurement standards

are managed with high precision. The Measurement Standards Section at Azbil Corporation’s Fujisawa Technology Center is certified by the Japanese government as a JCSS Accredited Laboratory\*1 with excellent calibration capabilities for temperature, humidity, electricity, pressure, vacuum, liquid microflow, gas flow,\*2 and time (frequency). The Calibration Service Center at Azbil Kimmon and the Calibration Group at Azbil Kyoto are also certified as JCSS Accredited Laboratories, maintaining calibration capabilities that are top-class in Japan. These top-notch calibration capabilities and high-precision physical standards undergird the azbil Group’s correct measurements.

The new calibration office (in Building 104) in the Fujisawa Technology Center, which began operation in September 2022, has been visited by many customers and others, who have been able to witness the high quality of the azbil Group’s measurement abilities. We will continue to communicate the importance of correct measurement internally and externally through tours of the new calibration office.



New calibration office and (center) high-precision vacuum calibration system

\*1 Information on the categories registered and certified under JCSS is provided on the website of the National Institute of Technology and Evaluation (NITE).

\*2 Certification for gas flow rate is expected this year.

### azbil Group calibration locations



Company	Location	Calibration capabilities
Azbil Corporation	Fujisawa Technology Center Calibration Office	Temperature, humidity, electricity (current, voltage, resistance), fluid flow (gas, liquid), pressure, vacuum, time (frequency), length, weight, torque
	Kawara Technology Center Calibration Office	Temperature, humidity, electricity (current, voltage, resistance), pressure, time (frequency), length, weight, torque
Azbil Kimmon Co., Ltd.	Calibration Service Center	Flow rate (gas)
Azbil Kyoto Co., Ltd.	Calibration Group	Flow rate (liquid)
Azbil Kimmon Energy Products Co., Ltd.	Shirakawa Factory Calibration Department	Flow rate (gas)

## Utilization of international standards

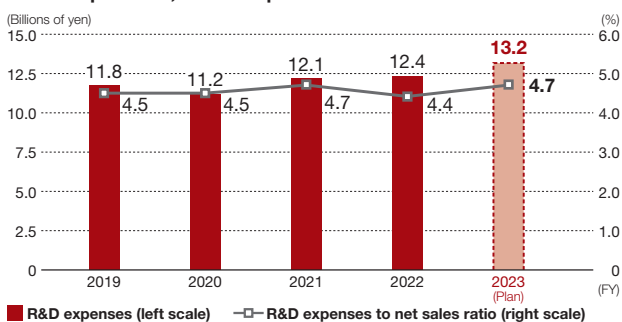
To promote global business, it is essential to utilize international standards as tools for market formation and certification of high quality. The azbil Group works on international standardization that is directly related to our business, and also has established a framework for discussing the use of international standards across the entire company in order to strengthen our global business. We continue to expand our utilization of international standards, viewing compliance with them not as a constraint but as a seed of innovation, and experimenting with initiatives to develop technology unconstrained by past limitations and free of preconceived ideas.

## KPIs for technology and product development

The azbil Group has set out quantitative performance indicators (KPIs) for the development of technology and products, such as the ratio of R&D expense to net sales or product sales, as well as the ratio of new products to product sales. We also appropriately revise our strategies for development of technology and products by monitoring the effects of our developed technology and products over time.

For research and development, we invested ¥12.1 billion in FY2021 and ¥12.4 billion in FY2022, and plan to invest ¥13.2 billion in FY2023. We are steadily investing in technology and product development in order to systematically promote product development for growth.

### R&D expenses, R&D expenses to net sales ratio



## Design management

To achieve “a world of automation created by human ingenuity and technology,” we advance design development based on human-centered design standards in the product development process. Since the azbil Group’s automation technology directly affects people’s health and well-being, the design of our products and services must also align with people’s ways of working and lifestyles, and be comfortable to use and attractive. The design of products that people directly see and interact with, such as interfaces or products placed in office spaces and production sites, should be not only safe and convenient, but also conscious of well-being. Thus, while ensuring the functions necessary for long lasting products, we are also transforming our designs to meet changes in ways of working and lifestyles.

One of our activities is to have employees from various departments and positions come together to formulate a vision for the future of our business. We also provide design education to instill creative thinking within the company. We believe that the strength of our design capabilities lies in the ability of our diverse human resources to direct their creativity toward a single theme. In order to continue providing new value to the world, we approach our design management with the goal of own growth.

The various products developed through our efforts over the past few years have been honored with prestigious design awards both in Japan and abroad.



The model F4Q digital mass flow controller, which won the 2021 Good Design Award and 2022 iF Design Award



The cell-type air conditioning system, which won the 2021 Good Design Award

### Hot topic

#### Using external collaboration in our global development system

At our research and development center in Silicon Valley, we collaborate with U.S. universities and startup companies to research the latest technology trends, develop new technology, and work on international standards in both the device/actuator area and the application area.

Furthermore, as part of our external collaboration in India, where future growth is expected, in May 2023 Azbil signed a memorandum of understanding with the Indian Institute of Technology Roorkee\* (IIT Roorkee) for joint research on innovative digital solutions. Azbil and IIT Roorkee will conduct joint research and internship programs in areas of mutual interest. Plans include joint academic activities, digitization acceleration projects, sharing of expertise and human resources, and workforce development in specific fields of science, technology, engineering, and mathematics (STEM).

\* An institution of national importance providing higher education in engineering, sciences, management, architecture and planning, humanities, and social sciences. Since its establishment in 1847, it has played an important role in providing technical manpower and know-how to India.



MoU signing ceremony between Azbil and IIT Roorkee

## Research and Product Development

Special  
FeatureResearch and Development Base  
Fujisawa Technology Center

## New laboratory building now open!

In September 2022, a new laboratory building, Building 103, opened at Fujisawa Technology Center, the azbil Group's central R&D base.

With the widespread adoption of teleworking and the shift to an era in which people can choose where to work, the role of the office and the importance of the work environment are being reevaluated. Building 103 is an ingenious showroom where customers can see firsthand what the future of the office will look like with the azbil Group's new technology.

## Taking on the challenge of creating comfortable office spaces

By attuning Building 103 to the people who work there, we are pursuing the office space of the future, where all people can work comfortably and with peace of mind.

For example, in large office spaces, we introduced a system whereby air conditioning settings can be adjusted for each small area, so that people can work in an environment that suits them best. In offices where there are people with different sensitivity to temperatures, the indoor environment that feels comfortable varies from person to person. In the café-style workspace on the first floor of Building 103, the room temperature control system takes people's sensations of heat or cold into consideration by allowing occupants to report that they feel hot, cold, or comfortable using an electronic temperature report card provided in the workspace or using their own PCs or digital devices. This allows individuals to create a personalized and pleasant working environment tailored to their comfort preferences.

In addition, by using infrared array sensors to accurately detect the presence of people for control of airflow and automatic turn-off of lights, people can benefit from technology that combines comfort and energy savings.

Also, in the second-floor cafeteria, we are testing a unique new system that links the lighting and air conditioning systems. Cooler temperature areas are illuminated with cooler color and higher intensity lighting, while warmer temperature areas are illuminated with warmer colors and lower intensity lighting, thus enhancing comfort by visualizing temperatures so that users can choose the space they prefer.

In Building 103, we are also experimenting with new ways to showcase azbil Group products so that customers can encounter them firsthand. We are presenting the effects

of the products used in places that are usually hidden from the public eye by means such as having visible facilities without a ceiling and using augmented reality (AR).

A solar thermal energy system is installed on the rooftop that stores the heat generated by the sun in a vertical heat storage tank. Since water of a higher temperature tends to move upward, cold water and warm water do not mix in the vertical thermal storage tank. Compared to conventional shallow pool-type thermal storage tanks, the water in the tank can be used more efficiently.

## Improving the attractiveness of the Fujisawa Technology Center

In addition to its functions as a showroom, Building 103 serves as a workplace that promotes innovation in ways of working. The café-style workspace includes areas where several people can hold meetings and individual booths where people can focus on their work. It can also be used as a satellite office and is designed for activity-based working (ABW), in which workers can choose the most suitable location for their work.

Offices must also be able to function as forums where people can gather, co-create, and innovate. Next to the café-style workspace on the first floor is a glass-enclosed co-creation area. Seeing collaboration there among other employees and with customers can stimulate employee interest, giving rise to new activities. The co-creation area is expected to become a driving force for generating innovation.

To foster a virtuous cycle for innovation, we have begun subcommittee work to improve the attractiveness of the Fujisawa Technology Center. The Center's value-creation potential is being enhanced through themes like employee



• **1st floor café-style workspace of Building 103**  
A skeleton ceiling allows plumbing and equipment to be seen



• **2nd floor cafeteria of Building 103**  
Occupants can choose their preferred place, with cool lighting for cooler spaces, warm lighting for warmer and more relaxing spaces.



• **The solar thermal energy system on the roof of Building 103**



The temperature and amount of airflow from the air-conditioning vents can be seen with AR.

The AR shows the temperature distribution in the vertical thermal storage tanks in an easy-to-understand way.

activation and open innovation, contribution to society and invigoration of local communities, surveys and research related to productivity improvement, promotion of new ways of working in existing buildings, promotion of Building 103 facility utilization, and health and well-being management.

### Initiatives for employee activation

We are devising mechanisms to disseminate information on the subcommittees and the use of Building 103 so that people can gather together and share the joy of creating something new together. We will take steps toward implementation in 2023 and develop a concrete initiative.

### New ways of working in existing buildings

Based on data about employee ways of working collected during the construction phase of Building 103, we reviewed the layout on all floors of the existing buildings after considering what characteristics and ways of working were appropriate for each department. As a result, we have selected the necessary fixtures and fittings. Next, we will conduct a post-implementation evaluation and promote office renovations.

### Invigorating local communities

We have formulated a basic policy of “contributing to society through activities rooted in local communities at all our business sites, with active participation by every employee,” and are working on initiatives to that end. With the opening of Building 103, the Social Contribution Promotion Office and the subcommittee cooperated to develop new tour content based on the theme of energy conservation. With the cooperation of lecturers and support personnel from various departments of the Center, a tour was conducted for third graders from a nearby elementary school. The children and the teachers who led the outing expressed their appreciation, and participating employees had an opportunity to discover the significance of the company to society.

### Initiatives for health and well-being management

In promoting work-style reforms, the azbil Group has advocated health and well-being management since July 2019 as a comprehensive approach to encouraging employee good health and liveliness. To foster safety, peace of mind, and wellness, six buildings at the Center, new and old, including Building 103, are enrolled in the WELL Health-Safety Rating® under the WELL Building Standard® (WELL Certification®), which evaluates buildings with a focus on human health and comfort.

\* WELL Building Standard and WELL Health-Safety Rating are registered trademark of International WELL Building Institute (IWBI).



# Manufacturing and Procurement

## Improving the global production system

As the azbil Group expanded globally, a three-pronged production system with bases in Japan, China, and Thailand was established. At each location we are strengthening our production and procurement network, improving our sales and distribution channels for direct sales and shipment to various markets, and working to enhance productivity and expand production volume while lowering costs.

At our production center in Dalian, China, a new factory building was completed in April 2022, and we are working to automate various processes, including large body processing, painting, and inspection, in order to accommodate the expansion of production, especially for industrial valve production. We are also expanding the number of parts procured locally, and are working to reduce costs while expanding our procurement network.

At our Thailand production center, we have been expanding production models, focusing on component products, and improving the infrastructure of our production system. We are currently constructing a new factory to expand production models for products that require advanced production engineering, such as electromagnetic flowmeters and differential pressure transmitters for the industrial market.



The new factory building in Dalian, China, which has begun operation. An advanced control valve production system is under construction.



Artist's rendering of the factory building in Thailand now under construction. It will produce products for the industrial market.

## Production upgrade initiatives

As part of the global production system development, we are strengthening the collaboration between the Shonan Factory, which is our core production facility, and the Fujisawa Technology Center's technology R&D functions. We continue to improve their function as the "mother factory" of the Group.

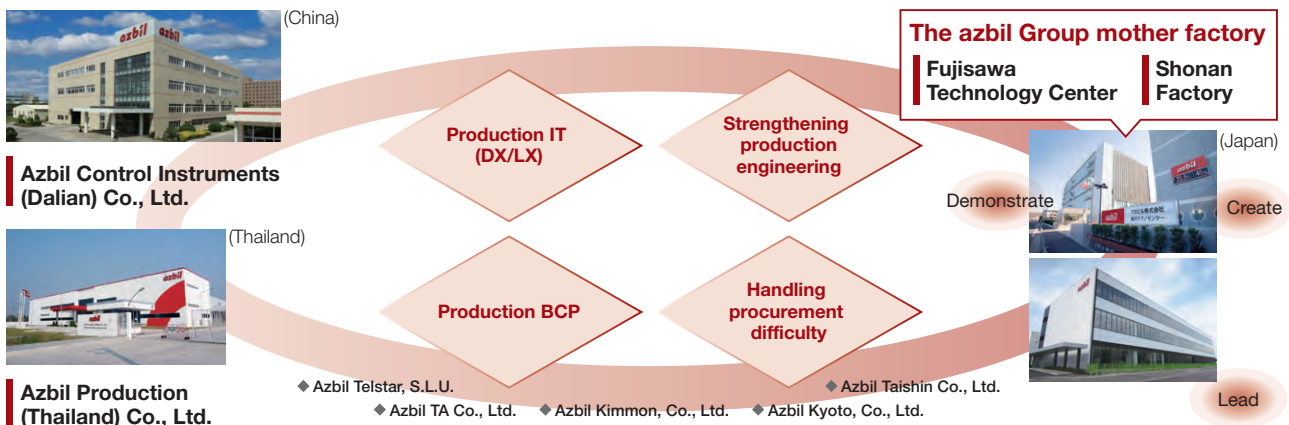
## Production IT (DX/LX)

Year after year, the use of IT in production has been increasing due to the need to improve production process productivity and quality control and to address the shortage of human resources. The azbil Group is planning and implementing various IT initiatives at its Fujisawa Technology Center and Shonan Factory to improve their function as a mother factory. For example, to support Azbil's distinctive high-mix, low-volume production, IT is used to transmit the needed information to production equipment in a timely manner, to link PCs and projection mapping used in production, and to provide instructions on assembly locations and parts picking, which enhances the assembly process to prevent human error. We are also expanding IT-based quality control methods such as the collection and visual management of vast amounts of quality information which can then be used by people to devise and implement quality improvement strategies.

As part of our "production DX activity," relevant departments discuss approaches to these issues in the workplace and make improvements. At the same time, since the individual production management systems used by each product line are gradually aging, we are also implementing "production LX" (legacy transformation) to build entirely optimized systems that are linked to the core system while taking into consideration the characteristics of individual products.

## The azbil Group's production system

### The azbil Group's mother factory leads a strong global production system



## Strengthening production engineering

The azbil Group is innovating its production processes through the advancement of production engineering with the aim of building competitive production lines. Specifically, we are developing more advanced micro component bonding, adhesion, assembly, and precision machining technology, with a focus on MEMS sensor packaging. At the same time, we are promoting the development and application to production lines of construction methods that facilitate unique and advanced manufacturing, such as the utilization of new materials and innovative material processing.

We are also promoting the creation of more advanced processes and production lines by incorporating production IT engineering into our production. For example, we have switched from visual inspection to automatic inspection performed by high-resolution cameras and AI, and we are building a system that integrates information and materials by utilizing an IoT environment to link QR codes of products with production information.

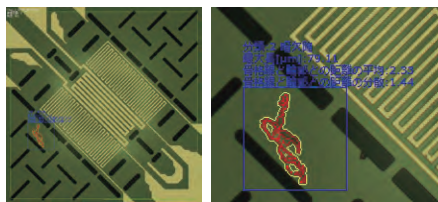
We are expanding the scope of application of these initiatives from our mother factory to production centers in Japan and overseas. We are striving to increase business competitiveness by maintaining and improving quality on a global basis.

### MEMS sensor chip image inspection



By introducing an imaging device for inspection, accuracy has been improved and work time has been significantly reduced.

Many decisions can now be made automatically by AI-based image processing.



## BCP for manufacturing and procurement

The azbil Group's business continuity planning (BCP) limits the impact on our customers of risks that threaten production or distribution in Japan and overseas, including natural disasters and other unexpected situations such as the COVID-19 pandemic or emergencies. To improve production robustness, we are implementing the following BCP initiatives with the aim of restoring production within an acceptable time period.

- Production line BCP: plans for restarting production lines
- Component BCP: plans for alternative acquisition of parts and for maintaining inventory

- Countermeasures for restrictions on work in the capital city area: securing alternative factory production and logistical capacity
- Disaster preparedness: strengthening the capacity of production sites to cope with natural disasters

Moreover, in response to the recent global shortage of semiconductors and the difficulty in procuring parts due to *force majeure* declarations by companies providing basic materials, we are implementing measures to minimize production stoppages through flexible responses involving the development of commercial distribution channels and design changes.

## Response to parts procurement difficulties

In response to the prolonged global procurement difficulties for semiconductors and other parts, we are boosting our production BCP by focusing on the following three areas, in addition to coordinating with our suppliers.

### (1) Cooperation among azbil Group companies

Leveraging its global production system with three main production bases Japan, China, and Thailand, Azbil is working to ensure parts availability by improving communication with its manufacturing subsidiaries in Dalian and Thailand to confirm market inventory in each country, especially in Asia.

### (2) Obtaining and guaranteeing the quality of goods on the open market

We conduct searches for goods that are normally difficult to obtain. We have launched a search support system to greatly expand the scope of market inventory searches and enable appropriate acquisition, while at the same time ensuring the quality of parts by thorough quality-first authenticity checks, especially for semiconductors and other electrical and electronic components.

### (3) Design changes due to selection of alternative parts

By adopting more readily available parts, our development department continues to rapidly identify and evaluate alternatives to ensure that products are delivered to our customers.

## Enhancing governance for the global production system

We have been working on the development of production centers in Japan, the expansion of overseas production centers, and the development of a global production system in conjunction with the expansion of domestic production centers, and have secured a certain level of governance through various standardization measures at our mother factory. Going forward, we will further strengthen governance in order to continue providing products that customers recognize as having azbil quality.

# Intellectual Property

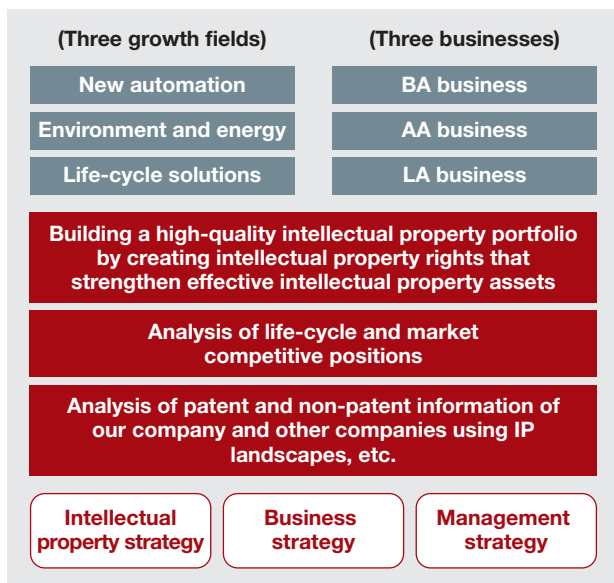
To ensure that Intellectual property is linked “in series” to the execution of the azbil Group’s management and business strategies, Azbil established its Intellectual Property Strategy Department in 2023.

This department, together with our business units and R&D departments, is strengthening and reforming the process of intellectual property creation so that intellectual property contributes to the azbil Group’s value creation. Specifically, in order to build a high-quality intellectual property portfolio, we analyze our own and other companies’ patent and non-patent information in each business and technology area utilizing IP landscapes, analyze life cycles and market competitiveness, and proactively acquire intellectual property assets that are judged to be effective.

Also, as part of our proactive intellectual property strategy, we verify business hypotheses by utilizing intellectual property information for technological and product development in the three growth fields defined in our medium-term plan, and as a defensive intellectual property strategy, we protect (deter and defend) existing intellectual property in business continuity/peripheral development in existing business areas, and maintain intellectual property of high importance that contributes to business strategies.

We are also notifying new IP creation processes and enhancing the content of intellectual property education for our business departments and R&D departments. In these efforts, we are promoting the training of professionals such as certified intellectual property analysts.

## Initiatives for strengthening intellectual property capabilities



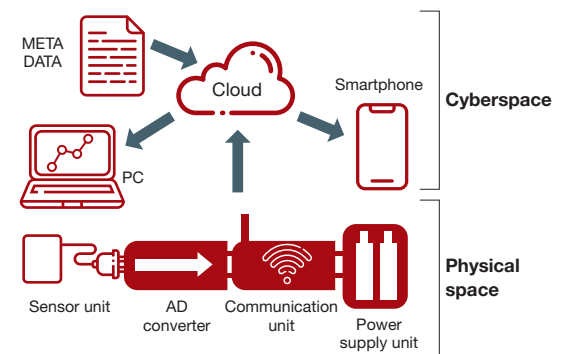
## Proactive use of patents to achieve the DX of society through SUCS™\*

Azbil Corporation holds a basic patent that allows for the easy construction of an IoT sensing system by connecting four units (sensor, AD converter, communication, and power supply) with a connector. The Japan Society of Next Generation Sensor Technology (Chairman: Akira Kobayashi, Professor Emeritus, Tokyo Institute of Technology) advocates the philosophy that sensing technology can solve technological problems in various fields and accelerate innovation in society. The company participates in the creation of the SUCS Consortium, which was established based on these patents in support of this philosophy, and provides these basic patents, which are indispensable to its activities, free of charge to member organizations.

By using SUCS to freely combine various units, even those without specialized knowledge can easily build and use a wide range of IoT sensing systems. By being able to use this technology, it is expected to contribute to the discovery of potential sensing-related requirements that cannot be solved by the company alone, DX in various fields, and ultimately the resolution of social issues that Society 5.0 aims to address. As a measurement and control enterprise, the azbil Group will continue to contribute to the DX of society.

\* SUCS (SENSPIRE™ Universal Connecting System) is a registered trademark of the Japan Society of Next Generation Sensor Technology. SENSPIRE is a term coined from the words *sensor* and *inspire*, indicating the progressive advancement of sensors, and is a registered trademark of the Japan Society of Next Generation Sensor Technology.

### SUCS Framework



# Quality Assurance, Product Safety, and Product Reliability

We aim to ensure quality assurance, product safety and product reliability to satisfy customers and users throughout the product life cycle, from the planning of products that meet needs to final disposal.

For this reason, the azbil Group has established and implements the following basic policies.

## The azbil Group Basic Policy on Quality

The azbil Group provides safety, comfort, and fulfillment in people's lives and helps to preserve the environment through "human-centered automation." Based on the azbil Group Philosophy, the Guiding Principles for azbil Group Business, and the azbil Group Code of Conduct, we work to satisfy our customers' expectations by supplying them with products and services of assured quality in the following three ways.

1. Using a quality management system  
We use a quality management system to maintain and improve the quality of the products and services we provide.
2. Ensuring the anticipated level of quality  
We always ensure the level of quality anticipated by our customers, and implement continuous quality improvement, striving to prevent the occurrence of any nonconformity in quality, reliability, or safety.
3. Aiming to offer appealing quality  
We seek to provide attractive products and services that exceed customers' expectations.

## The azbil Group Basic Policy on the Safety and Dependability of Products and Services

The azbil Group provides safety, comfort, and fulfillment in people's lives and helps to preserve the environment through "human-centered automation." Based on the azbil Group Philosophy, the Guiding Principles for azbil Group Business, and the azbil Group Code of Conduct, we work proactively to ensure the safety and dependability of our products and services for the safety and peace of mind of our customers.

1. Legal compliance  
We comply with laws and regulations related to product safety and dependability, and strive to bring about the sort of society that the laws and regulations aim for.

2. Safe and dependable products and service  
We ensure the safety and dependability of our products and services with advanced technology and proper management.
3. Customer safety and peace of mind  
We strive to ensure customers' safe and confident use of our products and services by providing cautions, warnings, and other useful information.
4. Prompt response to problems  
If there is an issue with a product or service, we respond promptly and appropriately.

## Initiatives for quality assurance, safety, and reliability

To ensure that our customers can use our products and services safely and with peace of mind, two corporate departments, the aG Quality Assurance Department and the Department of Safety Assessment, provide guidance and supervision of quality throughout the azbil Group and ensure product safety and reliability through safety audits.

Through the work of the azbil Group Quality Assurance Committee, we strive to prevent the occurrence or recurrence of quality problems, and we address major risks through mitigation strategies and the establishment of a crisis management system. We also endeavor to guarantee the safety of our products and services by promoting safe designs based on our Safe Design Standards document and by applying the mechanisms of our safety risk assessment system.

## Quality assurance and safety of Group companies and business lines

By establishing a quality assurance system that is directly linked to our business requirements, we guarantee the quality and safety of the products we provide.

### azbil Group quality assurance and safety

