

Special Feature:

Shifted to the overseas in the days of New Normal with COVID-19.

RIKEN KEIKI Co., Ltd. Development Center (left), Production Center (right) Kasukabe, Saitama Prefecture



■The global COVID-19 pandemic has transformed the way we live our lives. As the virus has spread rapidly to every corner of the world, today we are forced to live in a "new normal" in which we battle and learn to live with an invisible enemy even as fierce efforts to combat the pandemic continue globally. The business environment has also been transformed dramatically. Due to restrictions on physical movements, it has become common to engage in meetings and business discussions online. Businesses need to enhance their approaches to doing business while protecting employees from infection, through means such as staggered commuting times, teleworking, and social distancing. Today, society is truly faced with a difficult challenge.

However, even in the face of such circumstances our mission at RIKEN KEIKI remains unchanged. In fact, it is especially at a time like this that we should fulfill our mission of protecting society's industrial foundations and infrastructure.

This issue's special feature will report in detail on the Production Center in the city of Kasukabe, along with the Development Center in the same city, both of which work in close cooperation with the Production Center to enhance our international business development. In doing so, we will focus on RIKEN KEIKI's strategy for international markets in this new era.



The Front of the Production Center



Even as the COVID-19 pandemic raged worldwide in July of last year, construction was completed on the new RIKEN KEIKI Production Center on the site of the Development Center in the city of Kasukabe, Saitama Prefecture. The result was the long-awaited start of a structure under which efforts to enhance our international business development are powered by the double efforts of the Production Center and the Development Center working together. We interviewed Director and Executive Officer, Technical Collaboration Division Executive General Manager Shoii Kizaki, tasked with leading our technological development efforts as head of the Development Center, about RIKEN KEIKI's manufacturing and international business development in the future as it strives boldly to do business in this era of a "new normal" that has arrived so

Opening Feature: Special Interview

Manufacturing and International Business Development

Shoji Kizaki

Director and Executive Officer Executive General Manager, Technical Collaboration Division

Manufacturing through Seamless Cooperation between Development and Production

-Mr. Kizaki, you have worked in the field of technology since you first joined the company, and are the developer of RIKEN KEIKI's current waterfall development workflow. Throughout your career, you have devoted yourself to improving the quality of product development and the optimization of development processes, through efforts including the establishment of a software development structure suited to functional safety (safety integrity level, or SIL*1) and standard design based on ISO standards.*2 Would you tell us about RIKEN KEIKI's advantages in terms of its development capabilities, development quality and product quality, based on your own perspective?

I believe that RIKEN KEIKI's advantages in product quality are expressed in the integrated nature of our development. manufacturing, maintenance and service processes, as well as in the strictness of our quality control throughout these processes. As a company doing business on the theme of "Safely Seeing the Unseen Danger," we handle development and manufacturing in-house from the stage of sensors through to that of final products. At the same time, our structure includes an independent internal Quality Control Center that carries out extremely strict and thorough testing, and only products that pass this final inspection are shipped to market. Our approach to this process is an uncompromising one

It is also vital to ensure quality in the stages from maintenance through to the disposal of products after shipment. We have established a thorough maintenance structure not only in Japan, but also around the world as well, and through this structure we strive to maintain the quality that enables customers to use our products with peace of mind at all times.

-Construction was recently completed on the Production Center adjacent to the Development Center. On what particular points do you expect the strengths of cooperation between these two centers to be demonstrated in the future?

Our role as a manufacturer is to constantly increase customer satisfaction. We also need to continue to take on this challenge from the perspective of succeeding against the competition as well. I expect cooperation between the newly-completed Production Center and the Development Center to have a major impact in this

Over the five years since the Development Center began operation, pursuit of the quality, cost, and delivery (QCD)*3 performance expected when products are brought to market has accelerated. Once the Production Center has commenced full-fledged operation, we will be able to carry out even more seamless cooperation between the R&D sections to which development staff belong and the Production Division, which is in charge of manufacturing. We will also be able to realize collaboration between development and production in even more powerful ways for most sensors. Until now, this has been possible only for certain types of sensors. The result should be further improvements in our advantages in the quality of both development and our products. Furthermore, the adoption of automated production equipment will make it possible to plan production closely synchronized with customer needs. The Production Center also has a seismic damping structure and fully incorporates Business Continuity Planning (BCP)*4 considerations to be ready

- *1 Safety integrity level (SIL): a safety level defined based on the concept of functional
- *2 The International Organization for Standardization (ISO); a nongovernmental organization headquartered in Geneva, Switzerland, tasked with the formulation of international standards.
- *3 Quality, cost and delivery (QCD): These represent the three pillars of manufacturing, through which a manufacturer aims to realize high quality, low costs and short

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Opening Feature: Special Interview

The Outlooks of Development Center /

Center /
Production
Center

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Introduction of Development Center and Production Center



Engineering Department Floor

3D drawings displayed on large-size CAD displays (top). Over 70 engineers conduct design and development work diligently on a daily basis.

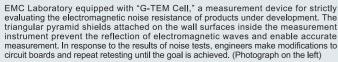






EMC Laboratory





"EMC" is the acronym of Electro Magnetic Compatibility and is defined as "electromagnetic compatibility" in JIS. Electromagnetic compatibility is a product manufacturing principle that a given machine must be designed and manufactured so that "it does not serve as an electromagnetic interference source, does not receive any electromagnetic interference and even if it receives interference operates permally."

Environment Laboratory

In order to develop products that can withstand any kind of environment, we make full use of various environmental test devices to evaluate the products' performance.





The RIKEN KEIKI Co., Ltd, Production

Analysis Laboratory for analysis of internal components of products and for structural analysis. The "JSM-IT500HR" earthquake-resistant analysis device, which conducts analysis by magnifying the electrode of a sensor by 10,000 to 20,000 times, is the second-generation analysis device introduced recently. It has a durable period of about 10 years. It can detect defects of sensor functions, allowing you to check whether a given product structure is configured as intended. The laboratory also has an analysis device that uses X-rays.

Exterior Appearance of Production Center



The Development Center (front) and the Production Center are directly connected with each other by a passage on the second floor.



The passage that connects the Development Center and the Production Center is color-coded: blue for the Development Center and orange for the Production Center.

for possible earthquakes.

At the same time, putting this collaboration to greater use will require human resources development. We are planning proactive human resources initiatives for the future in areas such as training human resources with skills in both areas of development and production, as well as hiring personnel from other industries.

The Key to International Strategy is the Collection of Information Concerning Standards

—Collaboration between the Development and Production centers will serve as a dual driver enhancing international business development. Are there any key points you would like to make concerning this subject?

Functional safety (SIL*1) is of particular necessity in global business development. This requires safety from the development process, including design. I believe that we will be able to generate even greater results on this point through the seamless collaboration between development and production we discussed earlier. As we were an early adopter of ISO*2 standards, we have been able to adapt to overseas standards without issue. However, in the area of SIL, the standards expected overseas differ from those in Japan.

Policies on the requirements of standards may vary by area, country and individual customer, and it is vital to accommodate each of these. For example, the requirements demanded differ completely between Europe and North America. Even though they are based on the same international standards, standards concerning functional requirements differ, and this requires customization to meet these needs. For this reason, in the future we will consider product development suited to customer needs from the development stage, through collaboration between the Development and Production centers.

The key to doing this is how quickly and precisely we can obtain information on standards and other customer needs. The international market is truly a battle of information, and in this area, we intend to enhance further cooperation with international sales and market strategy divisions.

Other essential concerns in international markets are price and speed.

As price is affected not only by product prices, but also maintenance costs, we need to strive to keep running costs down through progress on improving the durability and maintenance capabilities of sensors and other components.

On the subject of speed, we will work to accelerate the pace of development by incorporating, in some areas, more agile development methods involving repeated improvements at a faster pace through a more compact cycle, in addition to our existing "waterfall" method that delivers high levels of safety but does consume time in the development process.

Blazing a Trail Through Challenging Times with Quick Decision-Making

The COVID-19 pandemic has resulted in considerable changes to the business environment. Please tell us about your strategies and tactics for surviving in a difficult time in which we need to adapt to new standards and conditions.

Our experience under these conditions has shown us that we can employ teleworking for development as well, and that design can be conducted remotely with further infrastructure enhancements.

One issue is the design review process. Correctly communicating information on the results of development is a vital factor. This involves how well we disassemble products to show so that the participants can understand them, and we are currently working to enable design review using 3D technology.

I think what COVID-19 has taught us is that even as the environment changes, we still need to do what needs to be done.

But it has also made it clear that even as we move forward with doing what we can, realistically there are going to be some things that we cannot do. This has shown the need to do develop now systems that can adapt to a crisis situation, so that when a crisis arises, we can respond swiftly. We need to make quick and safe judgments on whether it would be more effective to work together in one place or remotely depending on the circumstances, and take swift action accordingly. Doing so will enable us to continue to fulfill our mission in both domestic and overseas markets no matter what happens in the future.

(Date of interview: July 3, 2020)



*4 Business Continuity Planning (BCP): a plan for survival through preparing measures to enable the continuation of important business operations even in the event of a crisis such as a disaster, computer system failure, or terrorist incident.

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[Front-line interview]



In-Depth INTERVIEW

It has been more than 30 years since RIKEN KEIKI first advanced into overseas markets, and today our network covers five continents. While we boast overwhelming advantages in brand recognition and market share in Japan, in international markets the barrier posed by the three competitors of Honeywell, Draeger and MSA has proved a massive one. As a new effort to overcome the current impasse, this spring we launched cooperative initiatives between the Global Sales Department and the newly-established Market Strategy Department. We spoke with the leaders of these two divisions active on the front lines of the transformation to a bold, aggressive strategic approach in a new business environment, through effective collaboration despite the headwinds of COVID-19.

How to Overcome the Stronghold of the Big Three

Each of you was appointed to lead your Department—the Global Sales Department and the Market Strategy Department—this spring. Mr. Yamada, you joined the Market Strategy Department after a career in domestic sales, and then you served in the Global Market Strategy Office before being appointed head of Global Sales. Mr. Kojima, after joining the Company you had a long career in sales in West Japan, rising to the



head of individual groups in the West Japan Sales Department before taking leadership of the Market Strategy Department, which connects both domestic and global strategy. Each of you has had a career in which you have amassed a wide range of experience across multiple fields. Please tell us about your aspirations for your new posts, reflecting your experience until now.

Yamada: While I have only recently been appointed General Manager of Global Sales Department, this is my third year in global business when my previous position as Group General Manager is included. While I want to take on my new responsibilities based on thorough preparation, there is a great number of challenges involved. Even though we boast the top market share in Japan and have considerable advantages in domestic sales, we cannot be described as a major player overseas. While we do have a track record of more than 30 years doing business around the world and have established a global dealer network in addition to subsidiaries in the United States, Germany, Singapore and Malaysia, in terms of name recognition, brand power and sales share. the barriers presented by the Big Three of

Honeywell, Draeger and MSA are substantial, and our most pressing issue is how to overcome this stronghold.

Kojima: My career until now has been devoted entirely to sales in West Japan, where I have built up sales expertise and skills from the position closest to our customers. Sales includes activities conducted across the boundaries between market groups such as electronic devices and petrochemicals. With this launch of the Market Strategy Department as a cross-functional organization cutting across these vertical categories, I intend to put to use the sales experience and sensibilities I have built up until now to support sales activities focused on strategic development and tactical implementation, in both domestic and overseas markets.

Collaboration Grounded in Strategic Approaches for Individual Markets

How will you address the pressing needs to grow name recognition, branding and market share overseas through collaboration between Global Sales Department and the Market Strategy Department?

Yamada: The first thing we need to do is to break free from existing sales methods. As we noted earlier, we have the top share in the Japanese market, we have become accustomed to Japanese-style sales methods. As these methods cannot be expected to be effective unchanged in international markets, we have carried out sales especially focused on overseas markets through the collection of various data and the deployment of various types of advertising, but it cannot be denied that our approach has been an ad hoc one. We expect through cooperation with the Market Strategy Department to be able to review our existing tactics and provide information and topics through the development of strategies from an overall perspective based on data collection and marketing analysis for individual markets, such as semiconductors or petrochemicals, and to collaborate with sales personnel in the development of sales tactics based on these efforts.

Kojima: As Yamada noted, today we have amassed expertise based on a long-established market-specific strategic approach in Japan. The mission of the Market Strategy Department is to support efforts to employ this expertise in the field of international sales. This will include identifying issues by analyzing sales trends in each market and developing strategic themes as solutions for these issues. For example, the OHC-800 is one of our unique products that can enable differentiation from the competition. It is a calorimeter equipped with two sensors to



improve its resistance to the effects of other miscellaneous gases. It sells very well in the Japanese market in fields such as electric power, gas and steel, and we are carrying out strategic analysis and development to deploy this product in similar markets overseas. In addition, the FI-900 interferometer-method gas monitor introduced this spring is an explosion-proof gas monitor equipped with advanced functions such as

those for telecommunications and self-diagnosis, and particularly as a product that has passed explosion-proof testing overseas it should be able to demonstrate its strengths in international markets. In addition, these are products that not only play roles in safety and maintenance, but also contribute to productivity. Centered on these strategic products, we will collect market data and carry out marketing analysis to propose sales strategies.

Strategies for the "New Normal": Webinars and Remote Co-Visits

The COVID-19 pandemic struck right on the eve of the launch of collaboration between your department. How are you developing tactics based on international strategies in these times that require new initiatives?

Kojima: While it seemed to dampen enthusiasm at the start of our collaboration, in fact since the previous year we had been working on the development of a special English-language website for the strategic OHC-800 product mentioned earlier and developing web promotional strategies to draw prospective customers to the site. As COVID-19 meant that we could not carry out sales activities on customer sites, we moved quickly to set up an application form on the site's landing page for webinars using a web-conferencing system to describe the product. While in Japan we can use web conferencing for one-on-one customer sales. activities, in overseas markets it is effective to hold seminars with guest speakers, online exhibitions and webinars to promote new products in order to reach large numbers of prospective new customers. In this new business environment in which we are unable to meet with customers directly, the Market Strategy Department has developed plans to play a powerful support role in international sales by growing brand recognition through promotional activities and securing prospective customers by drawing visitors to the special site and holding webinars, as we as inside sales activities including nurturing prospective customers through follow-up email and other means to hand prospects over to field sales staff.

Yamada: As Kojima noted, while normally we would visit overseas customers in person, of course we are unable to do so at present, and as a result even Global Sales Department staff remain in Japan. But online sales activities are free from these physical restrictions. This has led us to develop the concept of remote co-visits with dealer staff. We thought that perhaps we could use tablets to engage in virtual co-visits to customer facilities. This is a tactic that involves loading tablets with the explanatory materials that salespeople normally would use when accompanying overseas dealer staff on



visits to customers and providing the tablets to staff overseas to deliver the information to clients. Although we were a little bit worried about the tablets possibly not coming back to us (laughs), this approach has made it possible to provide full explanations and nurture prospective customers. We also can expect that if the situation improves and we are to be able to make actual visits in the future, then the preparations made until now could lead to further customer development and the receipt of orders. We live in a new era that requires quick thinking and ideas, and we intend to make steady, diligent progress to ensure the benefits of collaboration between the Global Sales Department and the Market Strategy Department, through effective strategic development combined with tactical trial and error. (Date of interview: July 7, 2020)



TIIS explosion-proof certified ATEX explosion-proof certified **IECEx** certified CE Marking compliant 0 **Quick Response! High Precision! Long-Term Stability!**

Interferometer Method Explosion-Proof Gas Detector





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The "FI-800" Interferometer Method **Explosion-Proof Gas Detector with High Reliability** and a Good Track Record has been Renewed.

We have developed the "FI-900" explosion-proof gas monitor, in which an interferometer method sensor that uses a detection method with a good track record of more than 80 years is incorporated. The product was released this February.

The "FI-900" is the renewed successor of the conventional device with a flameproof enclosure, the "FI-800." The "FI-900" employs the "interferometer method," by which as the movement amount of interference fringes formed on the sensor by light are read, the refractive index of the gas is identified and the concentration and heat quantity of the gas are detected. The device not only exhibits long-term stability and a long service life, it also handles corrosive gas through the introduction of the SUS specification that was difficult to detect with the conventional model. Thus, the new model has balanced the improvement of durability with the expansion of measurable gas types.

Certified with Domestic Explosion-Proof TIIS Testing, as well as Overseas Explosion-Proof ATEX/IECEx Tests

The conventional model "FI-800" has been used in worksites that handle substances such as combustible gases, hydrogen, and organic solvents for the purpose of explosion prevention and gas concentration control. On the other hand, the "FI-900" has become capable of measuring corrosive gases including ammonia and vinyl chloride monomer (VCM) and has been certified with domestic explosion-proof TIIS testing (Explosion-proof structure Electrical machinery / equipment type test), as well as overseas explosion-proof ATEX (European Union directive for protection against explosive atmospheres) and IECEx (International Electrotechnical Commission System for Certification to Standards Relating to Equipment for Use in Explosive Atmospheres). The device is also compliant with the safety performance standard CE Marking, which makes it possible to promote its introduction in

Capable of Self-Diagnosis and Identification of **Various Statuses by Means of Modbus** Communication.

By enhancing its durability and newly incorporating a self-diagnosis function and Modbus communication function, the "FI-900" features further improved reliability as a gas detector to be used for safety management. By means of 27 self-diagnosis parameters ranging from sensor output, sensor temperature and gas flowrate to power voltage, the device status is constantly

monitored. The diagnosis results are classified into four categories of "abnormal," "normal," "out of specification" and "maintenance required," and are output to the high-order system. These advanced self-diagnosis and identification functions allow abnormalities to be detected and the operation load for use in worksites to be reduced.

Also Capable of Hydrogen Purity Measurement and Process Gas Concentration Control, the Device is also Expected to be Introduced in the Hydrogen **Energy Field.**

Furthermore, due to its quick response (90% response made within 15 seconds) and high indication accuracy (indication accuracy: within ±3% F.S.), as well as hydrogen purity measurement capability, the "FI-900" can be used for various applications including process gas concentration control, explosion prevention of combustible gas and VOC concentration management. As the device has an explosion-proof structure that can be applied to a hydrogen environment, it is also expected to be introduced in the hydrogen energy field. Currently, "Power to Gas (P2G)," a demonstration project of producing and storing hydrogen by using excess electric power generated by renewable energy, is progressing mainly in Europe, and the hydrogen produced there is transported by means of pipeline and lorries and then used in fuel cells, FCV, etc. The "FI-900," equipped with hydrogen purity management capabilities, is expected to be introduced in various worksites in overseas markets.

SUSTAINABLE GOVERNMENT

Sustainable Development Goals (SDGs) refer to the global goals aiming to achieve a better and more sustainable world by 2030, consisting of 17 goals and 169 targets, as stated in the "The 2030 Agenda for Sustainable Development, adopted at the United Nations Summit in September 2015.



Just as the FI-900, our products envision possible international cooperation aimed at the improvement of energy efficiency and the development and upgrading of less environmentally impacting clean energy sources, thereby contributing to Goal 7, "Make energy clean and for all energy for all," under the SDGs.



Our company endeavors to create safe working environments for workers, by developing and manufacturing state-of-the-art gas detector and alarm systems. In this way, our businesses contribute to Goal 9. "Let's build a foundation for industry and technological innovation," under the SDGs



To Protect Human Lives and Health from Disasters. we Support the Domestic Disaster Relief Project of

the Japanese Red Cross Society

The Japanese Red Cross Society operates the disaster relief project to protect the lives and health of people afflicted in disasters that occur in all parts of Japan, by dispatching medical teams and relief teams, distributing relief goods, etc., at the time of a disaster. Because our company pursues safe working environments for workers as our management philosophy, we sponsor the activities of the Japanese Red Cross Society to jointly protect the lives and minds of people.





The Japanese Red Cross Society undertakes a variety of activities including disaster relief and locally based volunteering, under the mission "We combine the hopes to relieve suffering people, and we protect human lives, health and dignity under all circumstances." One of its nine projects is the domestic disaster relief project.

Typhoons and torrential rains have caused disasters in many parts of Japan over the past several years, including the torrential rain in the Kyushu region in July 2020. It is considered that a mega-scale disaster, such

as a Nankai Trough earthquake and an earthquake with an epicenter directly beneath the capital, will occur within the next 30 years at the probability of more than 70%, afflicting 5 to 7.2 million people.

In the event of a disaster, it is the most important to protect the lives and health of afflicted people. In preparation for a large-scale disaster, the Japanese Red Cross Society has established a structure to rapidly provide necessary aid at the time of a disaster, including the dispatch of medical teams, deployment of provisional clinics, distribution of relief aid, provision of blood products and mental care.

As of April 1, 2019, 489 medical teams consisting of 3,437 healthcare professionals are allocated across Japan. For example, immediately following Typhoon No. 19 last year, a number of medical teams started to visit shelters and take care of afflicted people in turns. The JRCS Disaster Healthcare Coordinate Team undertook liaison with related organizations that acted in the afflicted area.

Because our company considers that it is our mission to "protect the lives and minds" of working people, under the slogan of "Safely Seeing the Unseen Danger," we found great significance in supporting this JRCS project, and decided to contribute to it through sponsorship.

Disaster risks continue to increase. We would like to support this project in order to protect human lives and health from those risks.

Our support for the JRCS project above contributes to the four goals under the SDGs specified on the right.

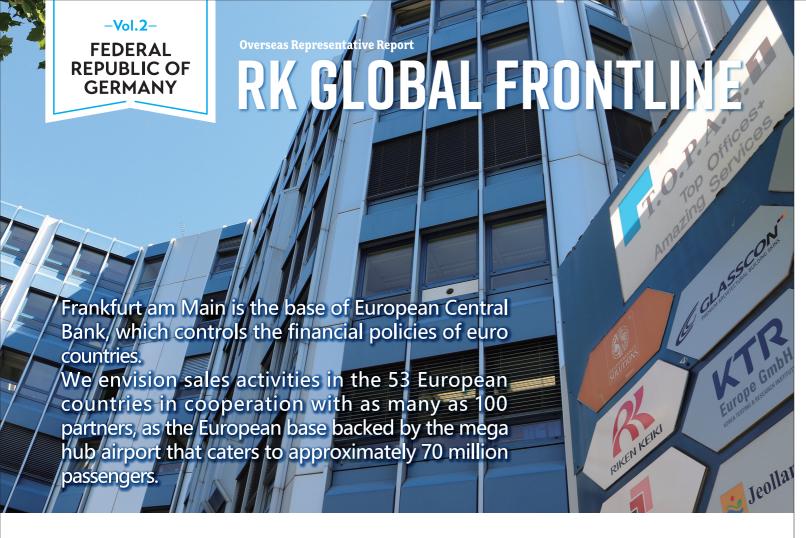












RIKEN KEIKI GmbH

RIKEN KEIKI GmbH was established in May 2017. "Although it has only seven employees, it successfully penetrated into the new market as early as in the second year of establishment, by making proposals featuring our key products in cooperation with powerful partners. Our sales also rapidly increased by approximately four times. Frankfurt is the center of the European securities market, along with London. The city is located in the southwestern part of Germany, a free country where we can exchange with others freely, and it has comfortable climate to live in throughout the year," says Yusuke Ikenaga, who was expatriated last year and serves as the local representative starting this year.

The second article of the "RK GLOBAL FRONTLINE" series is a report from Frankfurt, the European base of RIKEN KEIKI, which handles the entirety of Europe from central Germany.

Having a Bird's Eye View of all of Europe from the Center of Germany, the Most Powerful **Country in Europe**

Frankfurt is a center of commerce, economy and finance, located mostly at the center of the Federal Republic of Germany, the largest country in Europe and the fourth largest country in the world in terms of GDP (approximately 3,950 billion dollars*) after the United States, China and Japan. It is also a transportation hub that offers easy

access not only to France, Italy, Spain and other main European countries, but also to all of Europe including Northern Europe, Eastern Europe and Southern Europe. Frankfurt am Main Airport boasts one of the largest passenger numbers in the world, and Frankfurt Main Station is one of the largest terminal stations in Europe. Such transport facilities are the main reasons why RKG is based in this city. At present, RKG sells the products of RIKEN KEIKI from here to 29 countries including main European countries. We at RKG aim to sell in all 53



[Local reporter]

Yusuke Ikenaga

Managing Director, RIKEN KEIKI GmbH

European countries. Toward this goal, the seven employees work very hard every day, approaching various markets in close cooperation with nearly 100 sales partners.

Catching Up with European Competitors by Guiding Skill **Upgrading at Dealers and Enhancing our Brand Power**

After I was expatriated to RKG in January 2019, the first thing that I did was acquire









inquiries and orders is returning to the pre-COVID-19 level. Although we are not able to let our quard down vet, we cannot afford to ruin this upward trend. While staying alert, we would like to continuously strengthen branding, increase shipment destinations and expand our market share. We will especially gear up sales activities in the semiconductor-related market, which is linked to the automobile industry, chemical industry, etc., that drives technological innovation in Germany with high technology, in order to establish a structure that enables solution proposals specializing in the semiconductor market in the near future, just as in Japan. We will accelerate our efforts to strengthen sales power from this European base, eventually aiming to penetrate into the **RIKEN KEIKI GmbH**

Three Challenges

Strengthen brand power and expand market share

Strengthen partner sales force

Expand sales in 53 European countries

"Germans Disposition"

Just like Japanese, Germans are known for their earnest characteristics. However, the careerism to "live to work," which is frequently observed in Japanese corporate culture, is absent in Germany. In contrast, it is common to "work to live" in Germany, which is an extremely natural way of thinking and living. This significant difference is considered to result from the difference between individualism and groupism. and between rationality and "tatemae

For example, the culture of "omotenashi" has been emphasized in Japan. This habit of "omotenashi" is not common in Germany. This suggests that "tatemae (public position)" is still required in Japan, while, in Germany, people can exchange with others freely, without such pressure from their surroundings

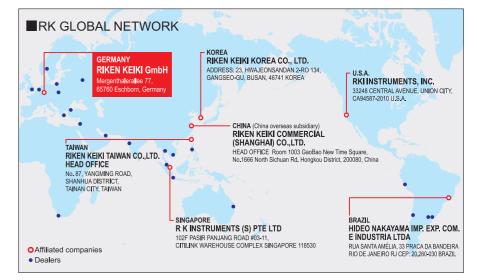
Germany has a rich culture of music. literature, play, philosophy, history, etc. They also have a food culture that makes life wonderful, such as beer, wine, ham, bread and coffee. Germans may appear silent and shy, but they are actually kind, warm-hearted and pleasant when frankly approached. The earnestness, rationality and individualism of Germans clearly represent their national characteristics to maintain a good balance among life, culture and the lifestyle of enjoying life.

which RKG participated. Leveraging my experience in marketing research and analysis in the Overseas Market Strategy Unit at the Head Office, I identified dealers that could be potentially powerful partners at the exhibition, and successfully concluded many partner contracts. This contributed to our rapid sales increase by 3.7 times over the two years from 2018. Messe Frankfurt, the largest trade fair site in the world, is located here in Frankfurt, where exhibitions are frequently held. We will continue to proactively acquire new partners toward penetration and sales increase in all European countries. At the same time, we are also focusing on sales and maintenance training aimed at strengthening the sales power of new and existing partners. We carefully select partners that have particularly strong sales power in each country, and strengthen our familiarity and brand power by improving their skills to the same level as the sales reps of RIKEN KEIKI, thereby expanding our market share and aiming to compete with the key European competitors at the same level.

new partners at the global exhibition in

Strengthening Solution Proposals to the Semiconductor **Market Toward the** Post-COVID-19 Era

The novel coronavirus (COVID-19) infection started to spread in this spring, mainly in Italy and Spain at first. It later expanded to Germany, and our normal working schedule needed substantial review. As the situation gradually improved, we undertake daily operations by combining working from home and working at the office, without delaying sales response and product shipment to customers and partners. The markets have been gradually reopened since July, and the receipt of





RIKE	N KEI	KI's	hist	ory	#2
as told by its products					

1946

After World War II, RIKEN KEIKI also Entered the Education Industry. In Response to a Request from GHQ, RIKEN KEIKI

Produced "Slide Projectors (Magic Lanterns)."

fter World War II, RIKEN KEIKI entered an era where the company was greatly affected by the trends of the coal industry. The first impact was the designation of coal as the most important material for postwar rebuilding by GHQ (General Headquarters of the Allied Forces). Based on this designation, the national government adopted an outline of coal production emergency measures at a cabinet meeting. RIKEN KEIKI made a good restart by receiving special supplies of materials including steel stock as an important plant manufacturing the gas detectors that supported the coal production increase measures. Even after that, amid the strengthening and increasing of coal production, RIKEN KEIKI exerted its power on the improvement of products, and in 1949, it newly released the "Type 12" direct-reading gas detector. This method made a contribution to the simplification of the optical structure and paved the way to the today's small-size portable gas detectors.

Almost in the same period, in response to a request from GHQ to promote education on democracy through visual education, RIKEN KEIKI also entered the education industry in 1946. The key factor for this entry was the manufacturing of the slide projector we are going to introduce this time.

Expanded Business from Projector Manufacturing to Slide Production

The request to manufacture slide projectors is considered to have been made because Jiro Tsuji, the second president, was both the director of the Japan Movie Education Association and the president of RIKEN KEIKI at that time. The completed prototype slide projector exhibited high quality and high accuracy for social education material.

Although the projector was completed, the slides to be projected by the projectors were in extremely short supply. To address this situation, RIKEN KEIKI decided to expand its business to the production of slides. It built a slide production factory, where a series of tasks including scenario writing, original artwork, shooting, development and printing were conducted. RIKEN KEIKI sold produced slides to the education industry with the product name of "RIKEN Slides," and produced many science education slides including "Living Things in Tidal Flats" and "Hydroponics of Paddy-Field Rice," as well as animation slides including "Brahma." The produced slides for projection use were delivered to customers with their scripts as sets. One of the employees in charge of scenario writing at that time is said to have been Tsutomu Mizukami, a representative novelist of the Showa era.

Forming a Partnership with the Mainichi Newspapers, RIKEN KEIKI Expanded its Business to News Slides

After the entry to the education industry, RIKEN KEIKI also expanded its business to the production of news slides. At this point, TV broadcasting by national and public stations had yet to start (NHK general channel was launched in 1953), and moving picture news could only be seen in movie theaters. In those days, it was difficult to run news movies because movie films were in short supply. The paper materials for newspapers were also in short supply, and newspapers had to be issued in the tabloid format size, which is half the size of an ordinary daily newspaper. Under these circumstances, the provision of information to the citizens was insufficient. In an attempt to correct this situation, our company formed a partnership with the Mainichi Newspapers and launched a news slide business. News slides that were periodically produced were shown in various places and contributed to information provision to Japanese citizens and helped to put the country on the path to economic recovery from the chaotic postwar period.

Business Grew but Finally Withdrew Due to Increased Competition

Both the manufacturing of slide projectors and the production of slides received accolades, and the business grew for around the next 10 years.

However, around 1955, many competitors emerged. Around the same time, a number of public TV stations were launched and the movie industry also greatly flourished. The slide business of RIKEN KEIKI, which contributed to the education industry and news industry in the era from the postwar period to the rebuilding period—along with the main business of gas detector manufacturing, which substantially grew thanks to a series of coal production increases—completed its mission and withdrew from the industry. (Continued in article #3)



We are a pioneer in creating safe working environments for workers.

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Prototype of slide projector manufactured at the request of GHQ

1949
"Type 12"
direct-reading gas detector



"Type 12" portable slide projector "Clarté" t



Slide film and scripts





Color animation slide and monochrome slide film