

YKK AP Integrated Report 2022





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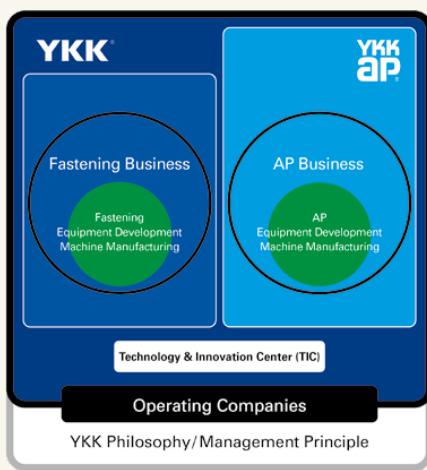
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The photo shows the YKK AP R&D Center (located in Kurobe, Toyama) where YKK AP's technologies are gathered.



YKK Group Management Structure



Since 1934, when YKK founder Tadao Yoshida began processing and selling fasteners, the YKK Group has developed its business by creating new value in fasteners through the establishment of an integrated production system and overseas expansion. Today, the YKK Group is a group of companies that share the YKK philosophy of “Cycle of Goodness” and the Management Principle, “YKK seeks corporate value of higher significance,” with YKK’s fastening business and YKK AP’s AP business at its core. While sharing common ideas and philosophies, we are enhancing our business competitiveness through management structures that are best suited to each of our businesses.

YKK Group and YKK AP Philosophy

YKK's founder, Tadao Yoshida made the "Cycle of Goodness" the central philosophy of all business activities. Based on this philosophy, and in keeping with the times, Tadahiro Yoshida, the second YKK president and YKK AP's Founder, established the Management Principle, "YKK seeks corporate value of higher significance."

Then, YKK AP defined its "Purpose," which was developed on the basis of these corporate philosophies, as the meaning of its existence. As we continue to focus on the "Architectural Products" of our company name, we are committing ourselves to being a company that builds a better society.

YKK Philosophy

The corporate philosophy of YKK's founder, Tadao Yoshida, expresses the fundamental position of the YKK Group.

CYCLE OF GOODNESS®

"No one prospers without rendering benefit to others."



Management Principle

Based on the "Cycle of Goodness" philosophy, our management principle highlights the importance of increasing corporate value in step with the times.

"YKK seeks corporate value of higher significance."



Seeking corporate value of higher significance, YKK will pursue innovative quality in the seven key areas shown above.

Purpose

At YKK AP, building a better society through our activities is the meaning and purpose of our business.

*We Build a Better Society
Through Architectural Products*

With a spirit of curiosity and exploration, we develop architectural products of true value that connect people, planet, and the future. We want to create a better society, while remaining committed to the art and technology that have always been fundamental to architectural culture.

The Philosophy of YKK's Founder, Tadao Yoshida

As an important member of society, a company survives through coexistence. When the benefits are shared, the value of the company's existence will be recognized by society. When pursuing his business, YKK's Founder, Tadao Yoshida was most concerned with that aspect, and would find a path leading to mutual prosperity. He believed that using ingenuity and inventiveness in business activities and constantly creating new value would lead to the prosperity of clients and business partners, making it possible to contribute to society. This way of thinking is referred to as the "Cycle of Goodness" and has always served as the foundation of our business activities. We have inherited this way of thinking and have established this as the YKK Philosophy.

Tadao Yoshida also described YKK Group as "an organization that is like a forest." Just as young trees and experienced trees, tall trees and short trees, all draw on their unique characteristics to grow independently to form a forest, so too do individual employees autonomously help each other in order to prosper together. At YKK AP, we look to embrace this "Forest Organization" idea so we can grow together with society while emphasizing employee diversity.



YKK's Founder **Tadao Yoshida** (1908-1993)

Born in Uozu, Toyama in 1908. Founded the precursor to YKK, San-S Shokai, in 1934, and began the production and sales of fasteners. He expanded the use of machinery in fastener manufacturing and established automated production. He created a company with a unique form, a fastener manufacturer engaged in integrated production from raw materials to finished product, and dedicated his life to the manufacture and sales of fasteners and building materials.

The Thought of "Architectural Products"

When YKK AP's founder Tadahiro Yoshida established YKK Architectural Products, the name of the company included a thought to "always continue pursuing the highest levels of art and technology, two elements that have formed the basis of architectural culture throughout history." The products we create are the components (structural elements) of houses and buildings. Rather than just basic construction materials and parts, we set out to provide "Architectural Products," complete industrial products for buildings. We continue to provide products that meet the desire of customers and business partners, and in doing so, we continue to be a company that contributes to customers, business partners, and society at large. Now, to carry this thinking forward and to establish ourselves as a necessary part of this changing society, in February 2021 we formulated our "Purpose." In addition to the spirit of curiosity and exploration toward art and technology that we have always fostered, we are aiming to create "Architectural Products" that have value in their time period, connect nature and people to the future, and thereby realize a better society. While embracing the ideas of our founder, we are placing "Purpose" at the center of our corporate philosophy and preparing to take on the challenges presented by this new era.



YKK AP's Founder
Currently Corporate Advisor **Tadahiro Yoshida**

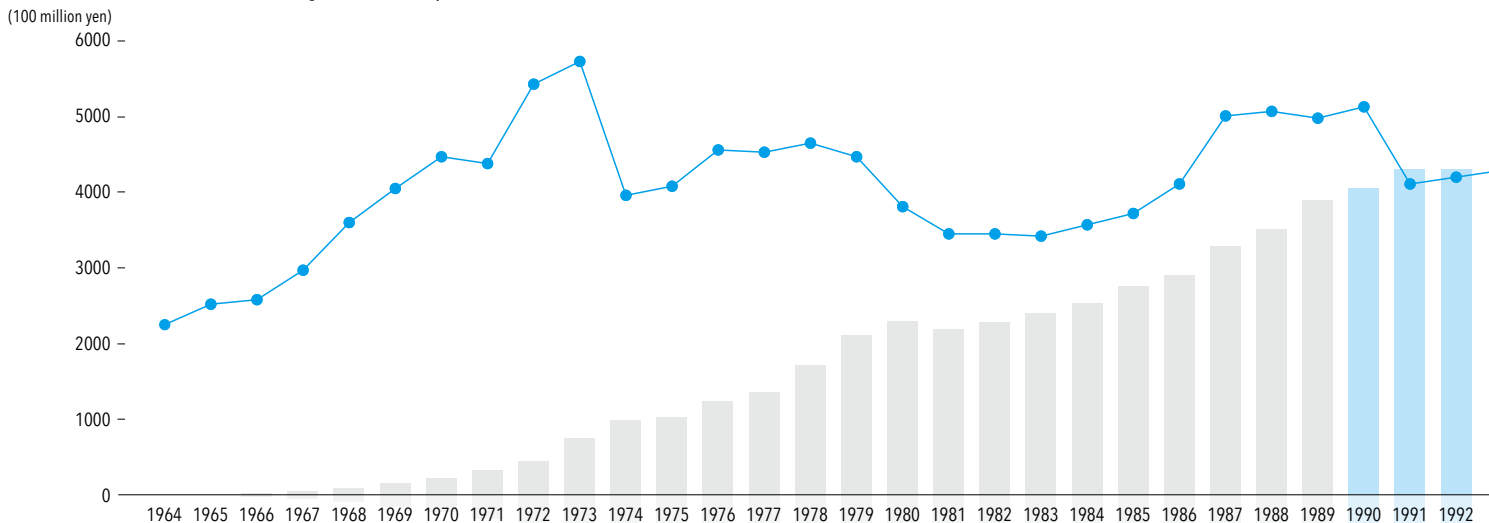
Joined Yoshida Kogyo K.K. (now YKK) in 1972. In 1990, established and became president of YKK Architectural Products (now YKK AP). After serving as president of YKK, and as representative director and chairman (CEO) of YKK and YKK AP, he gave up his status as representative and became a director for both companies in 2018. In June 2020, he retired from his director positions and became a corporate advisor for both companies. He has built the window business, facade business, and other businesses that became the foundations of today's YKK AP.

History of the YKK AP Business

1957-1989

Architectural products business begins

Yoshida Shoji Co., Ltd., the company that would eventually become YKK AP, was established in 1957 to undertake the sales and exports of fasteners manufactured by Yoshida Kogyo K.K. (now YKK). In 1959, the company began aluminum casting and extrusion operations, marking the beginning of YKK Group's involvement with architectural products. In 1966, the company launched sales of the residential aluminum product "High Sash." This helped to popularize aluminum sashes, which, thanks to the ease of processing and mass production, could meet the large-volume residential demand of the high economic growth period. The company continued to expand its range of products, from insulating glass to sashes and curtain walls for commercial buildings and exterior products.



1959 Aluminum casting and extrusion work begin



1961 Manufacture and sales of interior aluminum architectural products begin



1962 Manufacture and sales of aluminum window sashes begin

1976 Our first overseas affiliate, YKK Industries (Singapore) Pte. Ltd. (now YKK AP Singapore Pte Ltd), established

1983 Manufacture and sales of vinyl sashes begin



1986 YKK Alumico Indonesia (now PT. YKK AP Indonesia) is established as the first overseas plant with an integrated production system

1990-2004

The founding of YKK AP

In 1990, YKK Architectural Products (abbreviated to YKK AP) was founded out of its parent company, Yoshida Shoji Co., Ltd., as the core company of the YKK Group's architectural products business. Tadahiro Yoshida (currently a corporate advisor) was named its first president, and the company shifted from a mass-production/mass-market product-out approach to a market-in system, which sought to respond to diversifying customer needs. In 2003, YKK's architectural products manufacturing divisions were integrated in order to unite the architectural products business within the YKK Group into a single body. Business expansion continued overseas and the structure of the company called YKK AP was built.

1990 The company is renamed YKK Architectural Products Inc. (YKK AP)

1990 Sales of EXIMA system sashes for commercial buildings begin



2002 The company is renamed YKK AP Inc.

2003 YKK's Architectural Products Manufacturing Group is integrated into YKK AP Inc. and the architectural products business of the YKK Group becomes a fully integrated organization

2003 Sales of SYSTEMA series of system sashes for non-residential buildings begin



The AP business began in 1959, leveraging our knowledge of aluminum materials acquired through fastener manufacturing. Since then, we have continued to develop and supply products that meet the needs of our customers and propose new values for each era. Although the Japanese construction industry is said to be shrinking, as exemplified by the number of new housing starts, we have expanded our business with our founding aspirations in mind and are growing steadily.

2005-2010

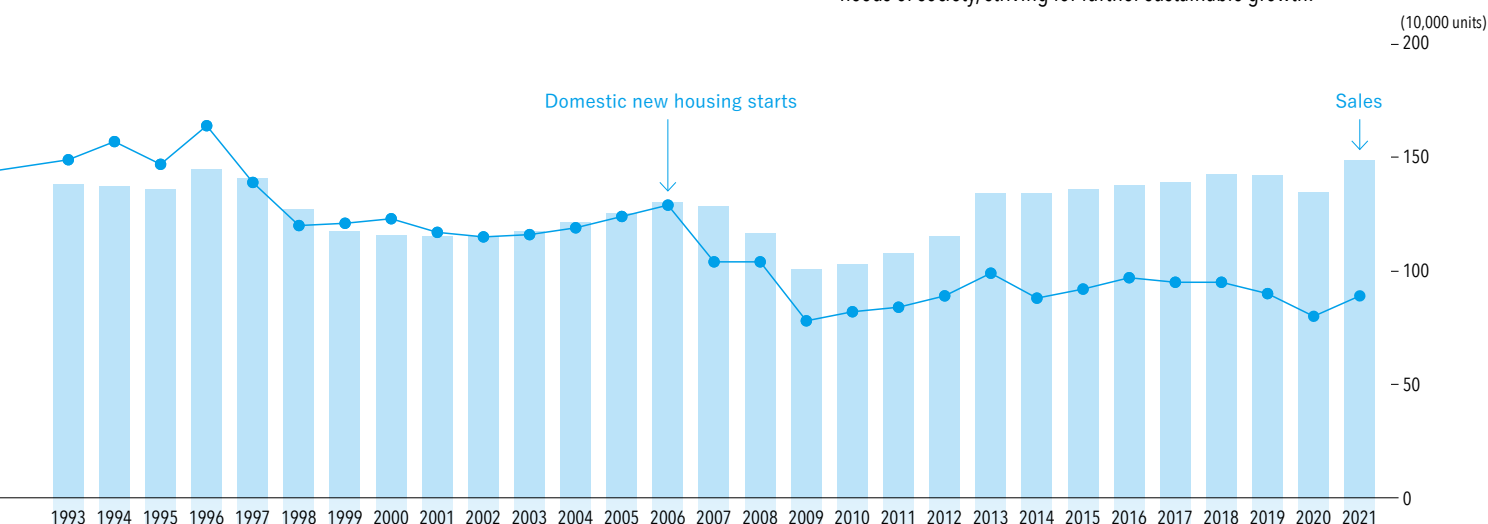
From sash manufacturer to window manufacturer

The company set out to transform itself from a sash manufacturer to a window manufacturer. It turned away from its business supplying knockdown style sashes and began to provide finished window products. The window business brand APW series was launched, driven by a desire to improve windows in Japan. In 2007, YKK AP America Inc. took the lead in sales of residential vinyl windows, and in 2009 the APW 330 residential vinyl window was launched. The company worked to popularize vinyl windows throughout Japan. In 2008, YKK AP FACADE Pte. Ltd. was established in Singapore, marking the group's definitive move into the facade business.

2011-

A company committed to products and manufacturing

In 2011, YKK AP's second president, Hidemitsu Hori, demonstrated our adherence to "monozukuri" under the policy of "a company committed to products and manufacturing." We further promoted the window business through our dedicated "MADO (window) Plant" and awareness-raising activities about vinyl windows, expanded our exterior and remodeling product lineup, and strengthened the engineering capabilities of the commercial products business to expand our market share. In FY 2020, we reorganized our overseas affiliated companies, and in FY 2021, we integrated the functions of the YKK Machinery and Engineering Department to build a system that can handle the rapidly changing needs of society, striving for further sustainable growth.



2005 Proclamation to promote insulating glass for residential windows

2006 The window business brand APW series is launched



2008 YKK AP FACADE Pte. Ltd. established

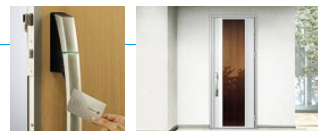


2009 Sales of APW 330 vinyl windows begin



2011 Operations begin at the Saitama MADO (window) Plant

2012 Sales of the Venato electronic smart door begin



2014 Sales of the LUCIAS series of exterior products begin



2016 YKK AP R&D Center is opened

2020 Reorganized overseas AP business and integrated capital relations and business operations of overseas affiliated companies into YKK AP

2021 Part of the YKK Machinery & Engineering Group is transferred and the "Machinery & Engineering Department" established

The Value Creation Process

Opportunities and Risks

- Health and Comfort / Safety and Security
- Climate Change and Disaster Countermeasures
- Demographics
- Ecosystem Conservation and Resource Recycling

Purpose:

“We Build a Better Society Through Architectural Products.”

YKK AP’s Capital

Financial Capital	Foundations Supporting our Business <ul style="list-style-type: none"> ■ Net assets: 241.8 billion yen ■ Total assets: 426.5 billion yen ■ Equity ratio: 56.2%
Human Capital	“Forest Organization” with a shared corporate philosophy <ul style="list-style-type: none"> ■ Number of employees — Japan: 12,630 Overseas: 4,158
Manufacturing Capital	Technology capabilities to support an integrated production system from raw material production to shipping and delivery <ul style="list-style-type: none"> ■ Manufacturing locations — Japan: 24 Overseas: 11 ■ Capital investments: 20.6 billion yen ■ Machinery and Engineering Group responsible for in-house development of production equipment ■ Manufacturing and supply systems rooted in each country/region
Social/Relational Capital	Co-creation relationships based on trust and reliance with stakeholders <ul style="list-style-type: none"> ■ Business locations — Japan: 201 Overseas: In 11 countries/regions ■ Affiliated companies — Japan: 6 Overseas: 17 (as of August 1, 2022)
Natural Capital	Creating environmental value at all stages of the life cycle <ul style="list-style-type: none"> ■ Energy consumption: 158,000 kl (crude oil equivalent) ■ Water consumption: 9.8 million m³ Figures in parentheses represent units of intensity (2,200 m³ / 100 million yen) ■ Raw materials — Aluminum: 130,184t Vinyl: 24,204t
Intellectual Capital	Creating technology through the challenge of solving social issues Kurobe, YKK AP’s technology headquarters <ul style="list-style-type: none"> ■ Global R&D organization ■ Research and development expenses: 9 billion yen

The YKK AP Value Chain

P36-47

Manufacturing and Logistics
In pursuit of manufacturing and delivery quality

Material Procurement
Responsible material procurement

High-quality products by an integrated production, manufacturing, and sales

Research, Development, and Verification
Creating technologies to support *monozukuri*

YKK AP’s Strategy

The 6th Mid-Term Management Plan Business Policy
Providing Social Value through

YKK AP’s Business Segments P22-29

Residential Business

Commercial Business

Exterior Business

High Rise Building Business

Foundations Supporting our Business

Corporate Governance Human Resource Development
P48-59

YKK Philosophy: “CYCLE OF GOODNESS”



“No one prospers without rendering benefit to others.”

*We Build a Better Society
Through Architectural Products*



Values brought about by YKK AP's business

Sales

Product appeal and proposal capability

and services provided
tion system that unites
es, and technology

Installation

In pursuit of greater
installation quality

Product use

User-friendly and social friendly products

[Customers]

Products that meet the demands of society regarding safety, security, energy conservation, health, easy installation, disaster prevention, ventilation, and more

[Society]

A mechanism for generating profits together with business partners and regions, as well as contributing to solving environmental issues throughout the value chain and reducing environmental impact

[Employees]

A work environment where each diversely skilled and experienced employee can grow, be motivated and work with peace of mind

Output

Net sales:	446.3 billion yen
Operating income:	17.3 billion yen
Rate of sustainable product sales:	38.4%
Sustainability investment:	2.2 billion yen
CO ₂ emissions in-house (Japan + overseas):	329kt
Waste emissions (Japan + overseas):	15.9 kt
<small>Figures in parentheses represent units of intensity (3.57t / 100 million yen)</small>	
Employee engagement (Japan):	51%

P14 - 19

Products and Realizing Manufacturing Reform

Special Accounts Business | Industrial Products Business | Research & Development | Manufacturing | Overseas AP Business

Health Management | Compliance | Risk Management | Environmental Management

YKK Management Principle: "YKK seeks corporate value of higher significance."

* YKK Philosophy / Management Principle / Purpose: P4 - 5



* Results as of March 31, 2022 or FY 2021 unless otherwise noted.

President's Message

To Be a Leading Architectural Products Company in Decarbonization

President Representative Director Hidemitsu Hori

Joined YKK in 1981. Served in U.S.A. from 1989 to 2006. After returning to Japan in 2006, served as YKK AP Vice President of Corporate Planning and Director and Senior Vice President of Business Groups, before reaching his current post in 2011.

FY 2021 Saw a Significant Impact of Social Changes on Earnings

Revenues up but profits down due to soaring material prices worldwide

In FY 2021, YKK AP's business was significantly affected by the following three social changes. First is the move toward decarbonization. Second is the setting in of "life with COVID-19." These two changes were positive for our company, thanks to our work on promoting windows with higher thermal insulation performance and higher added value, and led to an increase in orders and revenue. The third social change is the soaring prices of materials and logistics worldwide. We have made our own efforts to respond to these rising prices by reducing manufacturing costs and SG&A expenses, but the impact has been too great to be addressed by these efforts alone, and we have revised the prices of some of our products effective January 2022. However, since overall product prices will be revised from April 2022 onward, profits declined in FY 2021.

In FY 2021, we also faced the problem of delayed delivery of vinyl windows. The lumber shortage hit around summer, and our initial forecast was that housing starts would be delayed due to a lack of building lumber supplies, and that orders would also decrease. The actual impact, however, was not as severe, and in fact, orders for vinyl windows with high thermal insulation performance exceeded the forecast by more than 20% due to the increased popularity of energy-efficient housing aimed at decarbonization. As an emergency measure, our manufacturing sites implemented a 24-hour, seven-day-a-week production schedule, but this was not enough to cover all the orders received, resulting in delays in delivery. We were able to return to the standard delivery schedule in February 2022, and we are very grateful to our customers and business partners who said they would wait for YKK AP vinyl windows despite the delivery

delays.

With BCP risks having changed, stable procurement will also be pursued through product development

The global shortage of semiconductors also caused delays in the delivery of products such as electric shutters. Until now, it has been taken for granted that semiconductors and raw materials would be delivered on schedule as long as they were ordered, but from now on, we must develop our business with these kinds of risks in mind. Accordingly, we believe that the details of our business continuity plan (BCP) also need to be updated. Our previous BCP was mainly designed to respond to disasters, but going forward, we will also enhance the BCP in areas such as stable procurement. In addition, we believe that it is necessary to prepare for contingencies and develop products with second sources, such as alternative parts, in mind. Instructions have been given to our Research and Development Division to this effect.

Decarbonization and the COVID-19 pandemic Changing consumer needs provide opportunities

Except for the impact of material price hikes, business was very strong in all three areas: residential homes, exteriors, and commercial buildings. The first and foremost trend affecting manufacturers of architectural products is society's move toward decarbonization. Environmental awareness has increased following the Japanese government's "2050 Carbon Neutral Declaration," and sales of vinyl windows with high thermal insulation performance are growing. In addition to the growing interest in energy-efficient housing products from home owners and builders, the government is also promoting energy-efficient housing by including "energy efficiency standards-compliant housing" in the mortgage tax reduction program. We believe that these favorable conditions for vinyl windows will continue in the future.

With the drawn-out COVID-19 pandemic and the resulting increase in the amount of time people spend at home, the home has changed from “just a place to sleep and live” to somewhere to “live better.” This has laid bare people’s demands and frustrations with their current living spaces, such as needing a room for work, or finding them too hot, cold or noisy. As such, an increasing number of clients wish to use products that address these problems. In our case, products that offer not only thermal insulation performance, but also sound insulation performance and ventilation efficiency have met with high acclaim. In addition, sales of automatic doors have been strong due to the growing need for contactless use with respect to doorknobs, etc. in public facilities.

Constantly proposing new value

In the field of residential homes, October 2021 saw the industry-first launch of our face recognition key specification for the electronic “Smart Door” entrance door for single-family houses. User surveys have shown a high level of interest in biometric front door locks, and in fact, we have received more inquiries than we had expected. With the aim of achieving hands-free opening and closing in addition to contactless locking and unlocking, we will develop a product that combines a face recognition key with an automatic opening/closing mechanism on the entrance sliding door.

The “new normal” brought about by the COVID-19 pandemic has also been a major issue for the commercial building construction industry, and we are working to develop and promote products to accommodate this trend. PROPOSAL 8th, an exhibition of next-generation concept proposals for professional users that has been held since the summer of 2021, proposes facades and multifunctional windows that meet needs such as thermal barriers, thermal insulation, ventilation, sound insulation, and disaster prevention and security features.

Toward a new style of communication

The way we communicate with end users is also changing dramatically. The response to our online exhibition, which was launched in FY2020 to disseminate information amid the COVID-19 pandemic, was so strong that it was held again in FY 2021 as “PRODUCTS PARK 2021.” A cumulative total of 620,000 people have visited the site over the past two years, which provides a valuable opportunity to connect with end users with whom we have not had much direct contact in the past. Going forward, we hope to continue to add new avenues of communication, such as virtual exhibition halls. In addition, the qualities required for sales representatives are



changing, and since proposals will need to make use of virtual and online technologies, it is now easier than ever for young people and women to play an active role in the business.

Proactively expanding business by leveraging overseas capital restructuring

In FY2020, we reorganized our overseas affiliate companies into subsidiaries and integrated their operations and capital, allowing us to move funds more quickly and efficiently in accordance with the company's overall strategy. We believe this has laid the groundwork for further growth of our overseas business. This reorganization also strengthens a system in which overseas profits can be reinvested where they are generated, as per the philosophy of YKK's founder Tadao Yoshida.

In the U.S.A., where we are growing steadily, we plan to make major investments in the manufacturing division, and we have told our local employees that we want them to aim for the number one position in North America with confidence. In June 2022, YKK AP Technologies Lab (NA), Inc. was established in the U.S.A., a world leader in the digital field, to take on the challenge of digital innovation. We hope that our technicians will draw great inspiration from their contact with researchers on cutting-edge technologies in the U.S.A..

Renewing our commitment to China and Asia

In the Chinese market, the government's real estate regulatory policies have led to a significant shift in demand from the super-luxury market, which has been our main area of competition, to the mid-price range market. In addition, the clients are changing from private developers to state-owned developers, which has led to stronger cost pressures. In addition, local window and sash manufacturers are gaining strength, so we expect competition to intensify. Therefore, the biggest focus for our China business is cost reduction.

Other Asian regions are following the same trend as China, and in order to continue to grow our business, we need to develop products with an eye to high-volume market segments. We believe that our challenges will be to further reduce costs and develop products other than windows and sashes for condominiums.

The number of new housing starts in China is said to exceed 15 million units, about 20 times that of Japan, making it a big market, but competition is also that much fiercer. We hope to take advantage of the benefits of organizational restructuring to quickly reorganize our business in China and Asia, and to grow our overall overseas business sales to double what they are now, and later to the point where they will account for 40% of our total sales. This is an ambitious goal, but with our experience and capabilities to date, we believe it is fully achievable.

YKK AP's Mid- to Long-Term Business Focuses

Using our technology capabilities to take on the challenge of cutting greenhouse gas emissions

Our carbon neutrality initiatives are categorized into Scope 1 (YKK's direct emissions, such as from burning fuel), Scope 2 (indirect emissions, such as from electricity use), and Scope 3 (indirect emissions other than Scope 1 and 2, such as emissions in the supply chain). In terms of reducing our own CO₂ emissions, we will not only introduce solar power generation (Scope 2), but also focus on initiatives at our own plants and factories (Scope 1) as a company that markets itself on its technology capabilities. For example, we are considering ideas such as developing production lines that use as little electricity and energy as possible, and generating electricity from hydrogen and ammonia. In terms of the supply chain as a whole, we believe that the use of our energy-saving products makes a significant contribution to the reduction of CO₂ emissions.

In order to change employees' mindsets, we added carbon neutrality to the categories of our internal awards in FY 2021, and we are recognizing engineers who have made significant achievements in this area.

Thus, as a company certified by the Science Based Targets initiative (SBTi), we are not only promoting research and development to achieve a 50% reduction in our own greenhouse gas emissions by FY 2030 (relative to FY 2013), but also engaging in efforts for training of young engineers and more.

Initiatives for sustainable resources

Aluminum is one of the principal materials used in our products. In addition to increasing procurement of "green aluminum" made by using renewable energy, going forward we will increase the reuse rate of scrap metals by, for example, operating new recycling furnaces.

Regarding vinyl, another key material in our products, some of the vinyl windows on the market contain lead, making recycling of discarded vinyl windows a difficult challenge. Therefore, we are currently conducting technical research on vinyl window recycling in collaboration with the Japan Sash Manufacturers Association and universities. We hope to increase the rate at which we recycle the vinyl scraps generated by our company to 70% in the future.

Wood has been a material difficult to commercialize due to procurement and maintenance issues. Currently, we are studying and researching the use of wood, and are accumulating knowledge by collaborating with lumber dealers and wooden architectural products companies throughout Japan on a project to promote and support the spread of wooden inner windows made from Japanese wood.



Making the company a good place for people to work and demonstrate their abilities by investing in robot technology and establishing a new CHRO position

Currently, we are stepping up the introduction of robot technology in our manufacturing divisions. One of the objectives is to improve productivity, but another major goal is to give employees more flexibility in the way they work.

Our past efforts to reform the way we work have led to an increase in acquisition rate of paid leaves, and with the style of working from home and satellite offices having become more widespread during the COVID-19 pandemic, administrative and sales employees now have more flexibility in the way they work. On the other hand, it is still difficult for employees working in plants and factories to take paid leave when they want it, partly because of their shifts. To address this, we will pursue digital transformation (DX) through the introduction of robot technology, thereby improving the efficiency of our manufacturing processes. We also aim at reducing costs by using robot technology to improve the overall process from production to transportation, helping to tackle the recent sharp increases in the price of materials. Since Machinery and Engineering, which makes manufacturing equipment, was joined in YKK AP in FY 2021 as part of a reorganization of the YKK Group, reform of the manufacturing division can now be undertaken even more quickly. We will also bring forward our investment in the manufacturing equipment themselves to be able to respond to the increase in orders.

In recent years, a shortage of human resources has emerged as a problem in many manufacturing industries, and we believe that this will become more serious in the future. In order to address this, it is of utmost importance to provide employees with a pleasant work environment and fulfilling jobs so that they can demonstrate their abilities. To this end, we are actively investing in improvements to the environment of our manufacturing sites.

We also believe that innovation is necessary for the sustainable growth of the company. The most important factor in achieving this is people, making the development of human resources imperative. Therefore, in order to strategically develop human resources, we established the post of “Chief Human Resources Officer (CHRO)” in October 2021. They are tasked with the duty of nurturing our personnel, and an Executive Vice President with experience in the manufacturing and sales divisions was appointed to the position. Although it will take some time for the new post to be fully functional, we hope that by first establishing this new CHRO position, we can foster an atmosphere within the company of conducting human resource development in earnest.

Drawing up our Purpose and Materiality Issues

We established our Purpose “We Build a Better Society Through Architectural Products” in FY 2020 and the Materiality in FY2021. As the Purpose is in line with our corporate philosophy of the “Cycle of Goodness,” it has been well received by employees. We believe that it is also invaluable in terms of creating a challenging and fulfilling environment for our employees to work in. Currently, we are in the process of working toward setting KPIs for Materiality and specific goals for employees.

Expanding our business domains and growing in quality and quantity

Sustainable growth of the company includes not only qualitative but also quantitative growth. Opportunities also remain in the domestic market. We will expand the scope of our business not only by expanding existing areas but also by venturing into new ones. Overseas, where there is significant room for growth, we will earn where we earn and invest in areas that need investment. As a provider of Architectural Products, we hope to keep on growing while contributing to society.

The 6th Mid-term Management Plan and Business Strategies

We formulate four-year Mid-term Management Plans, and in the 6th Mid-term Management Plan (FY 2021–FY 2024), we have established policies to conduct business development that responds to the demands of society in order to drive sustainable growth.

The 6th Mid-term Management Plan

YKK Group The 6th Mid-term Management Vision

Technology Oriented Value Creation

- **Creativity to Realize a Sustainable Society** Product appeal & proposal capability / Technology & manufacturing capability / Diverse human assets

The 6th Mid-term Management Plan Business Policy

Providing Social Value through Products and Realizing Manufacturing Reform

- **Providing Social Value through Products** Providing products that meet the demands of society, including safety, security, energy conservation, easy installation, health, disaster prevention, ventilation, and others
- **Realization of Manufacturing Reform** Manufacturing reform by enhancing technological capabilities (Machinery and Engineering (KOKI) integration), platforming & smart factorization, Developing technologies for achieving carbon neutrality

The 6th Mid-term Business Plan

Unit: 100 million yen

	FY 2021 (results)	FY 2022 (plan)	FY 2023 (plan)	FY 2024 (plan)
Net sales	4,463	4,914	5,171	5,440
Operating income	173	223	315	386
Operating income ratio	3.9%	4.6%	6.1%	7.1%

The 6th Mid-term Management Plan, which began in FY 2021, takes our Purpose “We Build a Better Society Through Architectural Products” as its core. The 6th Mid-term Management Plan business policy, “Providing Social Value through Products and Realizing Manufacturing Reform,” has been developed as a policy to fulfill this Purpose.

In response, in FY 2021, sales reached a record high as domestic

and overseas markets recovered from the impact of the COVID-19 pandemic, with the amount of new domestic housing starts exceeding that of the previous year. Conversely, operating income decreased due to the significant impact of the sharp rise in prices of raw materials.

In addition, in order to navigate through the highly uncertain business environment, including the impact of COVID-19 pandemic, the Mid-term Management Plan was formulated only for the first year, and a business plan for the remaining three years was drawn up in FY 2021. Following record-high sales in FY 2021, we aim to further increase sales and improve profitability through aggressive investments while further strengthening and expanding our existing businesses in Japan and overseas, thereby achieving sustainable growth.

The 6th Mid-term Investment Plan

Unit: 100 million yen

	FY 2021 (results)	FY 2022 (plan)	FY 2023 (plan)	FY 2024 (plan)
Japan	227	267	214	217
Overseas	36	130	51	36
Total	263	398	266	253

*Based on orders

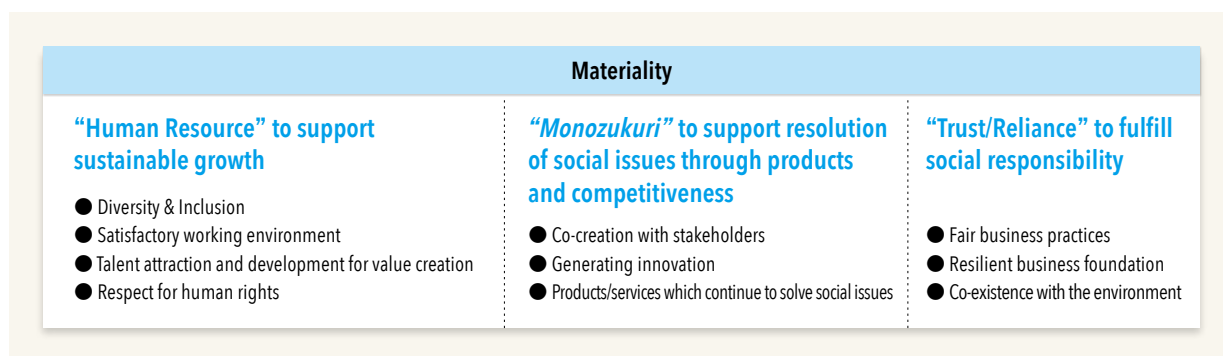
In order to further grow our business both domestically and internationally, we have drawn up a record-breaking investment plan for the 6th Mid-term Management Plan. With respect to capital investment plans, in addition to investments necessary for business continuity, such as for replacement of aging equipment and health and safety reasons, we intend to advance aggressive production expansion and rationalization investments where the expected returns ensure the investment’s rationality.

About 40% of the total domestic investment in the FY 2022 investment plan is for production expansion and rationalization investment. Overseas, we are planning larger amounts of investment than in other fiscal years, a result of production

expansion and rationalization investments in the U.S., India, and other countries. In FY2023 and FY2024, in addition to investments necessary for business continuity, we plan to be proactive in rational investing.

Materiality of YKK AP

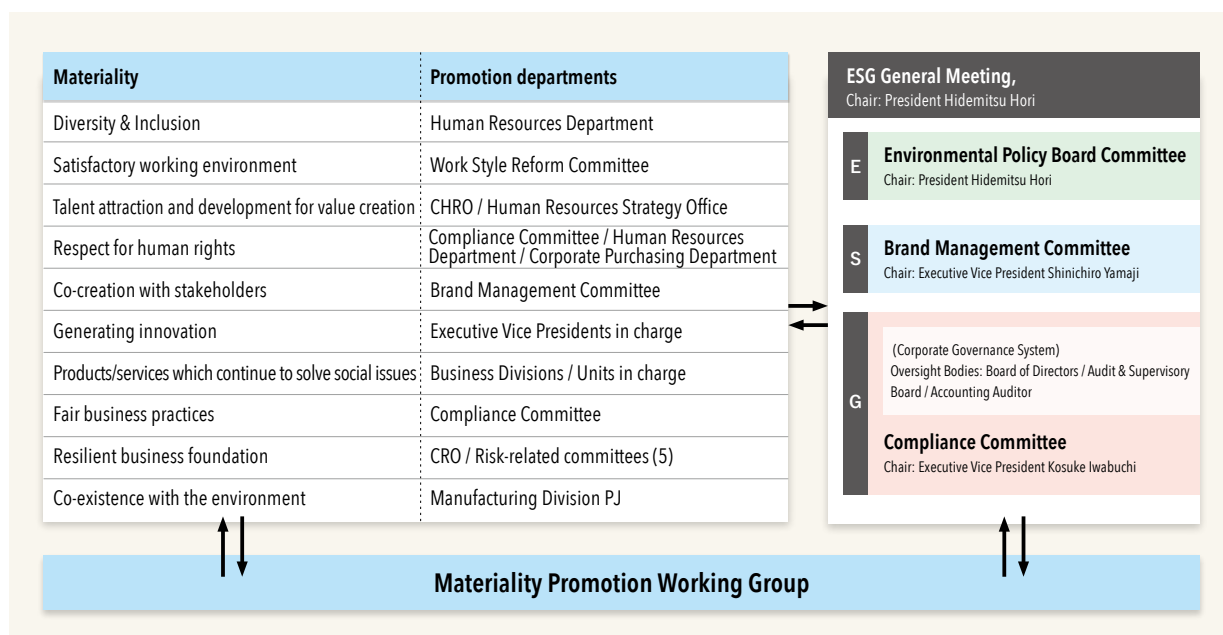
To drive YKK AP's sustained growth, we have identified Materiality (priority issues) for FY 2021 based on our Purpose. We have established systems to make progress on the materiality issues, and are further advancing individual initiatives by setting KPIs.



Materiality promotion system

We have established a promotion department for each materiality and are stepping up our initiatives accordingly. Furthermore, the “ESG General Meeting,” headed by the President, conducts materiality efforts from a company-wide perspective. The ESG General Meeting consists of the Environmental Policy Board Committee that takes the lead on environmental topics, the Brand Management Committee

that handles social topics, and the Compliance Committee, which handles governance. Each is chaired by the President or an Executive Vice President. The “Materiality Promotion Working Group,” which reports directly to the ESG General Meeting, conducts materiality efforts and manages KPIs in cooperation with the ESG General Meeting and the promotion department for each materiality.



6th Mid-term Management Plan and Business Strategies

Materiality and Targets in the 6th Mid-term Management Plan

In order to specifically promote efforts regarding materiality (priority issues), we have established initiatives and indicators for each materiality and set targets for them in the 6th Mid-term Management Plan.

Materiality		Initiatives
“Human Resource” to support sustainable growth	Diversity & Inclusion	Promote an inclusive corporate culture where employees with a diverse range of skills and experiences respect one another and work together
	Satisfactory working environment	Create a work environment in which each individual can grow, have a sense of fulfillment in their work, and demonstrate best performance
	Talent attraction and development for value creation	Attract, train, and promote next-generation leaders and invest in the necessary talent for sustainable growth
	Respect for human rights	Respect human rights not only in the company itself, but also in the supply chain and other areas associated with the company as part of corporate social responsibility
“Monozukuri” to support resolution of social issues through products and competitiveness	Co-creation with stakeholders	Continue to create values through active dialogue with our key stakeholders: customers, society, and employees
	Generating innovation	Promote innovation in business concepts and production/business processes from a medium- to long-term perspective in order to achieve sustainable growth
	Products/services which continue to solve social issues	Create new value and contribute to the sustainable development of society by taking on the challenge of solving social issues through our products and services
“Trust/Reliance” to fulfill social responsibilities	Fair business practices	Conduct business activities ethically and with integrity by ensuring compliance with laws, regulations, and social norms under a global governance system
	Resilient business foundation	Increase resilience through risk management that enables to respond to unforeseen events as well as enhances management transparency and honest and fair corporate governance
	Co-existence with the environment	Contribute to reducing environmental impact and mitigating and adapting to climate change through promoting a decarbonized, recycling-oriented society and expanding sales of environmentally-friendly products

Indicators	FY 2021 (Results)	FY 2022 (Targets)	FY 2023 (Targets)	FY 2024 (Targets)	Related SDGs
Women in management positions (Japan)	114	124	133	140	
Rate of persons with disabilities among employees (Japan)	2.29%	2.30%	2.35%	2.50%	
Ratio of men's to women's wages (Japan: average) *Parentheses indicate the ratio of men's to women's wages for section managers	75.9% (93.7%)	76.3%	76.8%	77.3%	
Rate of employees who take childcare leave (Japan: Men)	53%	Over 50%	Over 50%	Over 50%	
Employee engagement (Japan)	51%	60%	65%	70%	
Number of employees who obtained qualifications eligible for public qualification incentives (Japan: cumulative total of employees)	15,022	17,000	18,500	20,000	
“Value Creation Academy,” the next-generation leader development program ● Number of participants (Japan) *Figures in parentheses indicate cumulative number of participants ● Number of corporate officers appointed (Japan: cumulative total)	9(195) 31	9(204) —	9(213) —	9(222) —	
Number of employees dispatched by the company to obtain degrees (Japan: PhD, MBA, MOT)	13	20	24	27	
Enforcement of the YKK Group Human Rights Policy Statement in business activities in each country/region Expand and enhance content of training for human rights and harassment prevention					
Number of companies that we have concluded an agreement with regarding the basic transaction principles (Japan: cumulative total)	821	1,156	1,180	1,200	
Number of companies for which a CSR questionnaire for key suppliers has been conducted (Japan)	48	821	1,156	1,180	
Customers: Expansion of technical proposal and training options for domestic and overseas business partners Society: Promote activities that link customer feedback to the development and improvement of products and services and the provision of information Employees: Promote initiatives to gather a wide range of employee ideas and apply them to our business					
Establish programs to develop and create innovative human resources ● Establish AP innovation programs and systems to accelerate and promote creation of new business ● Develop a foundation for fostering an innovative organizational culture and developing innovative human resources					
Rate of high thermal insulation window use (Japan: for single-family houses)	70%	82%	87%	90%	
Rate of vinyl window use (Japan: for single-family houses)	31%	35%	38%	40%	
Rate of sustainable product sales (Japan + overseas)	38.4%	38.8%	38.8%	39.1%	
Number of sites implementing YKK Global Criteria of Compliance (YGCC) (Japan + overseas) *Number in parentheses indicates number of sites where internal audits have been conducted	55 (20)	56 (27)	56 (28)	56 (28)	
Expand and enhance content of compliance training ● Conduct compliance video training and e-learning for all employees					
Strengthen the CRO-led risk management system and speed up the response to emergencies Review BCP on an all-hazards basis ● Responses to infectious diseases, major natural disasters, supply chain interruptions, cyber incidents, etc. ● Recovery and operation through reliable management after the BCP is activated					
CO ₂ emissions in-house (Japan + overseas)	329kt CO ₂	304kt CO ₂	288kt CO ₂	275kt CO ₂	
Waste emissions (Japan + overseas) *Original units in parentheses	15.9kt (3.57 t/100 million yen)	15.5kt (3.16 t/100 million yen)	14.3kt (2.77 t/100 million yen)	13.9kt (2.56 t/100 million yen)	
Water use (Japan + overseas) *Original units in parentheses	9.8million m ³ (2,200 m ³ /100 million yen)	9.3million m ³ (1,890 m ³ /100 million yen)	9.6million m ³ (1,860 m ³ /100 million yen)	9.5million m ³ (1,750 m ³ /100 million yen)	

6th Mid-term Management Plan and Business Strategies

6th Mid-term Management Plan Priority Measures

Human resource strategies to create innovation

As the domestic construction market shrinks, our task is to expand our overseas business and bolster new business. In October 2021, we established the position of CHRO (Chief Human Resources Officer) for the purpose of developing and implementing a human resource strategy to realize our mid- to long-term management strategy, thereby ensuring sustainable growth even in this kind of business environment.

Under the basic policies of the 6th Mid-term Management Plan, “human resource strategies to stimulate innovation,” “flexible human resource strategies to implement management strategies,” and “human resource development and acquisition to drive management strategies and global growth,” we are working to develop human resource strategies and measures to enhance employee engagement, as well as building programs to develop and create innovative human resources.

Innovation is essential for the sustainable growth of YKK AP as a manufacturer. In addition, starting in FY 2021, the YKK Group abolished the mandatory retirement age system, making the effective allocation of human resources and career development even

more important. Led by the CHRO, we will pursue human resource strategies that are closely linked to our business and technologies.

Challenges and measures for generating innovation

Challenge	Measures
① Accelerate dynamic ideation of business themes [Raise themes]	Establish venues and environments for raising new themes <ul style="list-style-type: none"> ● Establish venues for contact with external parties ● Recruit and select new talents ● Share advanced technology themes within the company ● Organizational, human resource, and institutional development
② Speed up commercialization [Frameworks/systems]	Systems and human resource development to accelerate the process from theme selection to management resource allocation (clarification of implementation structure and processes) <ul style="list-style-type: none"> ● Systems to promote business ideation, value verification, and business assessment
③ Evaluation and motivation	<ul style="list-style-type: none"> ● Systems that also evaluate mid- to long-term results ● Emphasize evaluation within processes



Director, Executive Vice President, and CHRO (Chief Human Resources Officer)

Kazuo Matsutani

The CHRO, newly established in October 2021, will lead the development and implementation of human resource strategies for YKK AP’s sustainable growth, and will accelerate our efforts to address priority issues in the management strategy.

The key issues to realize this goal are human resource strategies that create innovation, improving employee engagement, and a flexible human resource system that can respond to changes in the business environment.

In terms of human resource strategy to create innovation in particular, we aim to be a game changer in various areas and take on the challenges of new fields of business, while linking these efforts to the deepening and expansion of our core

businesses. In FY 2022, we will work to build a foundation and foster an organizational culture that will transform us into an innovation-creating company, and to develop innovative human resources.

To improve engagement, in addition to the pleasant workplace that we have been working on so far, we will also pursue increased fulfilling workplace to drive growth of both employees and the company.

Although we expect to see various changes in the business environment going forward, we will continue pursuing human resource strategies that are consistent with our management strategies based on our ability to flexibly and quickly respond to changes.

Taking on new business fields and building the foundations

Taking on the challenge of new businesses and domains is essential for sustainable business growth.

In FY 2022, we established a new “Wooden Product Department” within the Residential Business Division, strengthen our interior architectural products business, an existing field, as well as taking on and building foundations in the new fields of building skins and wooden windows.

In the building skins business, we will develop products that can contribute to improving the energy-saving performance of residential homes and help address labor shortages by saving labor. First, we will develop wooden panels incorporating dedicated vinyl windows and expand the business domain with windows at the core.

In the wooden window business, we are taking on the challenge

of developing new window materials following aluminum and vinyl. Although wood offers excellent thermal insulation performance and design qualities, with wooden windows used in many residential homes in Europe and the U.S.A., in Japan, wood has not been widely used due to maintenance and price issues. YKK AP has been promoting and supporting the adoption of wooden inner windows throughout Japan since FY 2021 in collaboration with the timber and building materials businesses, and will consider creating a new wooden window (exterior window) market, advancing business models and product concepts, and commercializing these products.



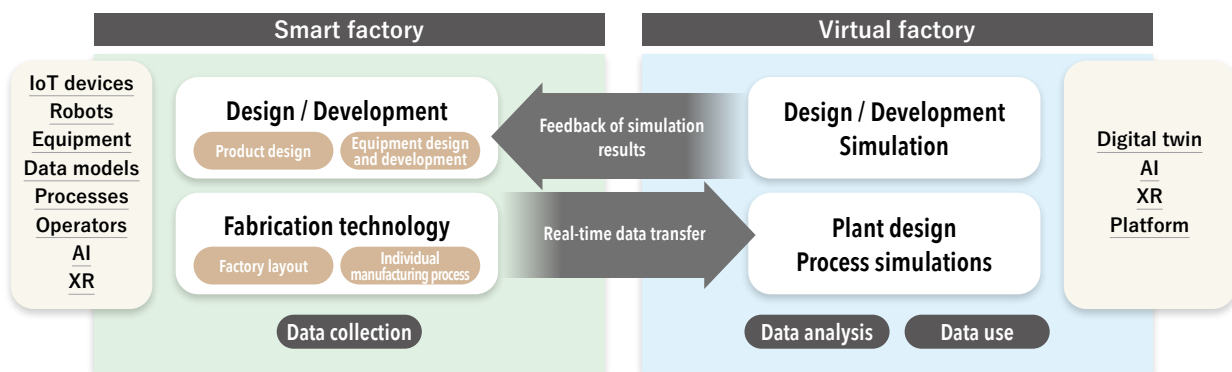
Wooden panels incorporating dedicated vinyl windows

Development of DX technology and establishment of YKK AP Technologies Lab (NA) Inc.

As the problems of a shortage of human resources and aging installation technicians grow more severe, digital transformation (DX) at installation sites is gathering pace in an effort to improve productivity. YKK AP has also designated “Smart factorization” as a priority measure in the 6th Mid-term Management Plan Business Policy, and alongside the digitalization of production, installation, and design/development sites, another urgent issue is posed by the development of digital and global leaders for the digitalization of products and services for customers.

Therefore, to strengthen research and development in the digital field, we established YKK AP Technologies Lab (NA) Inc. in Pittsburgh, Pennsylvania, U.S.A., in June 2022.

One of the main focuses for YKK AP Technologies Lab (NA) Inc. is the “virtual factory,” which creates an environment for production activities in a virtual space. By introducing IoT devices, etc. to actual manufacturing lines, implementing remote control and wireless in-factory networks using 5G, and researching and developing DX technologies such as the use of AI for information analysis, it will build engineering and supply chains in a virtual space, aiming to create a “digital twin.” Furthermore, from this base in North America, it will contribute to the business of YKK AP Group companies around the world by developing global talent capable of implementing the reforms associated with DX.



Senior Vice President, CIO & CDO
(Chief Information Officer & Chief Digital Officer)

Shiori Fukada

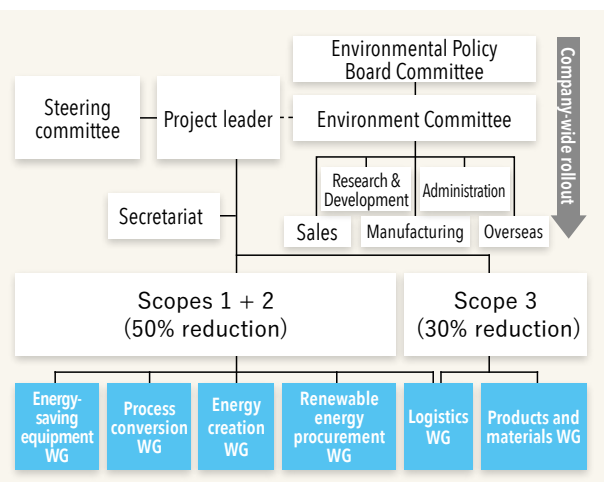
With the declining working-age population due to the low birthrate and aging population, and the rapidly increasing market competitiveness of emerging countries brought about by globalization, the environment surrounding Japanese companies is becoming more and more difficult each year. Furthermore, with such factors as the increasing pace of innovation in global society due to digital technology, there is an urgent need for Japanese companies to change, and it is clear that if they fail to do so, they will be left behind and face elimination from the market. In this sense, it is no exaggeration to say that IT and digital are now the keys to business success.

For several years, YKK AP has also been preparing for

change by standardizing operations, conducting business process re-engineering (BPR), reviewing existing systems and data to integrate or eliminate them, and conducting surveys and research aimed at digitizing business operations. In FY 2022, YKK AP Technologies Lab (NA) Inc. was established to advance research and development in the digital field from a global perspective, accelerating the further digitization of business operations and the fundamental transformation of the way business is conducted. YKK AP will pursue DX by researching, studying, and developing advanced technologies in the U.S.A., a digitally advanced country.

Initiatives to achieve carbon neutrality

In June 2021, we launched the “Carbon Neutral Project” to achieve carbon neutrality by 2050. With Executive Vice President Hiroshi Abe as the project leader, six working groups were established with the participation of young engineers. This has led to the development of a carbon neutral technology roadmap, and initiatives are underway in each working group. Aiming to achieve a 50% reduction in Scope 1 and 2 and a 30% reduction in Scope 3 relative to FY 2013 by FY 2030, we will enhance technological development aimed at carbon neutrality while reviewing each platform for products and *monozukuri*.



*See also “Special Feature: YKK AP’s Goal of Carbon Neutrality” on pages 30-33 for more details.

Corporate Officer Roundtable

YKK AP's Mid- to Long-term Strategy and Vision for Sustainable Growth

Under the Purpose, “We Build a Better Society Through Architectural Products,”

YKK AP is working to develop many products and services that contribute to solving social issues.

What vision and strategy do we have in place to continue to provide values in the future, what are the risks that may affect our business activities, and how will we overcome them? Three YKK AP corporate officers discussed the issues.

The facilitator is Chieko Kawai, Vice President of Corporate Communications.



Changes in social and economic conditions after 2020 reveal areas for improvement in business continuity

Kawai: A variety of risks are emerging, including climate change, aging populations, and material price hike. How do you view this situation?

Mizukami: First of all, with regard to materials, I feel that the recent political unrest has not only increased costs, but also threatened the supply of materials themselves. We need to convert to new materials,



Director and Executive Vice President,
R&D and Technology

Shuichi Mizukami

but this cannot be done overnight. We acknowledge that the divisions responsible for development and engineering will be required to start research and development as soon as possible. YKK AP has long been developing vinyl windows and promoting their use in order to decarbonize housing. While accelerating these efforts, we will also pursue improvements

in aluminum, such as making it lighter and stronger. I believe that these improvements in our technological capabilities will give us the strength to adapt to change.

Uozu: The development of new materials is something we definitely want to pursue in order to expand our business overseas. This is because population growth overseas, particularly in Asia, is expected to increase the need for mid-price range housing rather than luxury residences that have been the growing market. The key to meeting these needs is knowing how many new products and new businesses we can generate behind the scenes. Returning to risk, the domestic



Director and Executive Vice President,
International Business

Akira Uozu

market is expected to cool down due to material price hike as well as an aging population and rising consumer costs. This means that we will not have enough customers to continue growing. To make up for this, we will have to change our target segments and incorporate new channels. I understand that this is an upcoming challenge for the Sales Division.



Director and Executive Vice President,
General & Administration

Kosuke Iwabuchi

Globalization and IT: keys to continued growth

Kawai: It will be important to take on the challenge of new materials, products, and segments, won't it?

Uozu: Regarding overseas markets, it is essential to expand our business areas in order to achieve sustainable growth.

Mizukami: With the Japanese housing market expected to

shrink, we believe it is necessary to develop products with an eye to both survival in Japan and overseas expansion.

Iwabuchi: In order to rapidly develop these kinds of new products and expand our business areas, it is essential to have a solid foundation of compliance and internal controls. The administrative divisions are proceeding with efforts to develop a business infrastructure by using IT to connect information from each business unit. In order to strengthen our new business overseas, we are also hurrying to take action aimed at risk management in preparation for a natural disaster.

Stepping-up reforms of work styles and diversification of human resources

Kawai: YKK AP succeeded in introducing work-from-home at an early stage of the COVID-19 pandemic. This was due to the fact that the head office functions were dispersed between Tokyo and Kurobe as part of the BCP, and preparations were underway to introduce work from home as part of work style reforms. What are your thoughts on the progress of work style reform from the perspective of the administrative divisions?

Iwabuchi: Actually, I believe that reform of work styles is just beginning. Particularly at manufacturing and installation sites, reforms have long way to go. As well as ongoing labor-saving efforts, we are also conducting research on smart factories, such as incorporating 5G technology to operate machines remotely.

Kawai: The YKK Group is not only reforming its HR system, exemplified by the abolition of the mandatory retirement age, but also promoting diversity. What is your take on this?

Mizukami: Many women are also playing an active role in the Research and Development Division. All of our employees are talented, but their sensibilities and ways of thinking of course vary depending on their gender, age and other factors. I believe that this diversity is important for bringing new perspectives to research and development. There are not only life events such as marriage, childbirth, and nursing care, which are often brought up, but also various views on life and ways of living. I also believe that we need to further examine how we can support employees' plans for their lives.

Uozu: Overseas, women are active as managers in engineering departments and plants/factories, so I would like to see more and



Vice President,
Corporate Communications

Chieko Kawai

more women from Japan go overseas and do the same.

Iwabuchi: The YKK Group hires regardless of age, nationality, or gender, so we do not give preference to women or foreign nationals. However, at this stage, the number of women needs to be increased if more of their opinions are to be reflected on site and in management. We will need to consider how to

respond to this issue, including in terms of recruitment.

Broadening each employee's horizons and becoming the most trusted company

Kawai: Could you tell us what kind of company you want YKK AP to be in 10 or 20 years?

Iwabuchi: I would like to see our company with a strong business foundation and a centralized data management system which would allow us to take actions with greater speed. For example, let's say we want to launch a new business overseas. Having easy access to information about restrictions and costs specific to a country or region will not only speed up the start-up process but will also greatly enhance our ability to expand our business.

Mizukami: In order to speed up overseas expansion going forward, we must have core technologies in Japan, identify the needs of each country and region, and develop products that meet those needs. Alongside digital technology, human resource development is also vital for achieving this.

Uozu: I agree. I personally believe that we also need to take advantage of our research and development and manufacturing capabilities to expand our sales channels and add other components of houses besides windows and doors to our business domain. To this end, we will actively invest human resources in our overseas business. We would also like to increase the proportion of our overall sales generated overseas.

Mizukami: I think it is also good to gain experience of other departments. For example, if you are in research and development, you could experience sales and manufacturing for the first year or two. This would help you see what the front line sales representatives are struggling with and what demands customers have.

Iwabuchi: It is important for each of us to be able to see the business as a whole.

Mizukami: I think it is important to be number one not only in sales, but also in trust. That is, to be the company that people think, "Go to YKK AP, they'll take care of it." To that end, all employees need to be able to answer "we can offer this as YKK AP." In that sense, I think we have set out a very good Purpose here. If each one of us thinks about how we can help make the society a better place, we can become a company that can be relied upon.

Business Segments

Domestic business segments

Following FY 2022's reorganization, the Renovation Business has been integrated into the Residential Business, and YKK AP's domestic business has been divided into six segments: the Residential Business, Commercial Business, Exterior Business, High Rise Building Business, Special Accounts, and the Industrial Products. As a manufacturer, we have also positioned the research and development and manufacturing of these products as one of our business segments, thereby strengthening cooperation with the other businesses.

Cooperation between overseas companies and domestic businesses

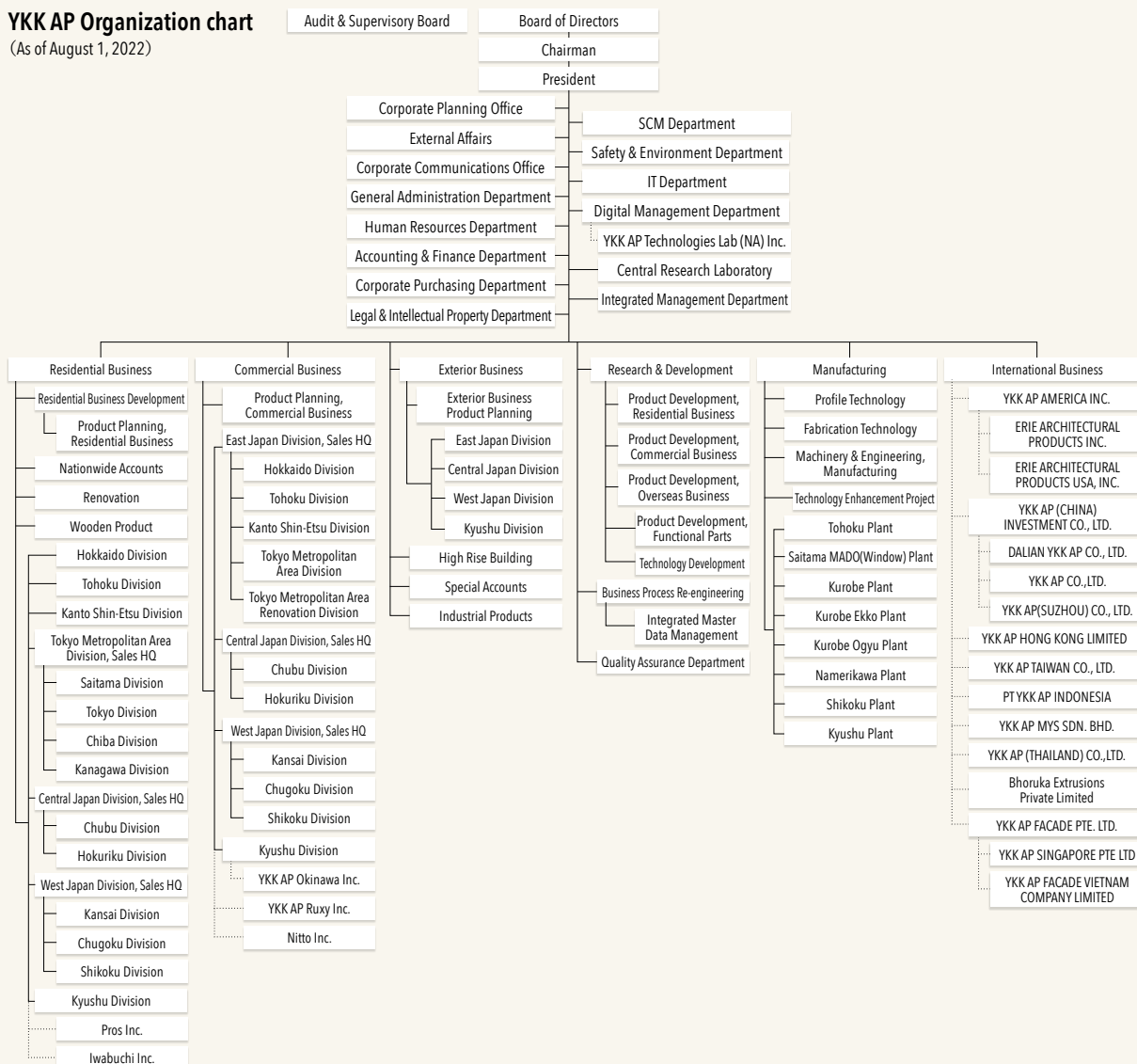
As part of our efforts to expand our overseas business, the International Business Division, which oversees our overseas companies, has been changed to the "International Division" through FY 2022's

reorganization and will work to undertake our business with greater speed than ever before.

Overseas companies are organically linked to their respective domestic business segments. The Manufacturing Division is working to utilize technical support from Japan to achieve quality assurance on a global level. In the Research and Development Division, the Product Development, Overseas Business provides development support and strengthens overseas product development in cooperation with local personnel. Similarly, collaboration efforts are carried out on a daily basis in the Installation and Engineering, including the provision of installation support and technical guidance to overseas fabricators by Japanese engineers.

In addition, the Legal and Intellectual Property Department, which combines the Legal Department and the Intellectual Property Department, has been established to strengthen our global governance by enhancing our legal and intellectual property activities overseas.

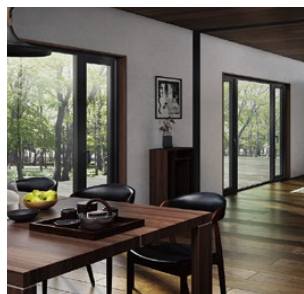
YKK AP Organization chart
(As of August 1, 2022)



Residential Business

Proposing comfortable lifestyles with windows and doors

We propose comfortable lifestyles through our entrance doors and window products, with a focus on the “APW” window brand. In both the new construction and remodeling markets, we improve windows and doors’ thermal insulation and safety performance.



Main products

- Windows
- Entrance doors/sliding doors
- Interior doors/partitions
- Window shutters
- Remodeling window/door
- Quake-resistance retrofitting

FY 2021 Business Overview and Future Strategies

In the Residential Business, we have concentrated on “high thermal insulation of windows and doors” as our policy, with a central focus on vinyl windows, and sales in FY 2021 were 109% year on year. Sales volume of the “APW” vinyl window series grew significantly, reaching 119% of the previous year’s level. In terms of sales volume of remodeling products, sales of “Mado Remo thermal insulation windows” and “Door Remo” were strong, at 141% and 122% respectively compared with the previous year. The rate of vinyl windows to the total number of windows sold for single family homes in Japan (the rate of vinyl window use) is 31%, and the combined high thermal insulation ratio of vinyl windows and aluminum-vinyl composite windows is 70%, indicating a shift toward higher thermal insulation. We believe that energy efficiency for residential homes will draw more attention as we move toward a decarbonized society, and that demand for such housing will increase even further. In FY 2022, we will increase the high-thermal insulation ratio to 82%. As for our products, we will focus on the themes of “safety and security” and “health and comfort,” enhance products that offer energy saving and disaster prevention/mitigation features, and bolster our lineup of products with outstanding functionality and refined designs.

Corporate officer’s commitment



Senior Vice President
Residential Business

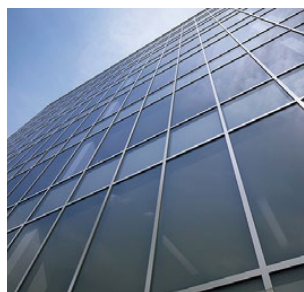
Koichi Ebihara

The global COVID-19 pandemic has brought substantial changes to the way we live and work. I feel that customers’ needs for housing have also been increasing to a higher level. In addition to a full lineup of high thermal insulation windows that allow people to live in comfortable room temperatures throughout the year, we will expand our added-value proposals to include products that help prevent and mitigate natural disasters such as typhoons and earthquakes, as well as “smart door” face recognition keys that focus on the themes of convenience and contactless use. At the same time, we will work to establish in place systems that will ensure a stable supply of these products.

Commercial Business

Creating beautiful and functional urban spaces

We provide value-added solutions such as facade designs and energy conservation features for office buildings, condominiums, medical facilities, and more to contribute to shaping the urban landscape and achieving a sustainable society.



Main products

- Commercial windows
- Curtain walls
- Commercial entrances
- Windows and doors for multi-family residences
- Remodeling products

FY 2021 Business Overview and Future Strategies

In the Commercial Business, as sales efforts during the COVID-19 pandemic, we enhanced opportunities for making product proposals remotely as well as face-to-face, and strengthened points of contact with customers. In terms of strengthening remodeling projects, we are stepping up our proposals to condominium management associations and management companies and offering related products for “thermal insulation, ventilation, and contactless use” to meet the needs arising from the pandemic. In terms of supply capabilities, we have begun to enhance our competitiveness by shortening lead times as well as expanding the number of products available for ordering online. These efforts resulted in strong orders, and sales were 110% of the previous year’s level. Going forward, we will focus on strengthening in the Tokyo metropolitan area and enhancing remodeling projects. To strengthen in the Tokyo metropolitan area, we will enhance our proposal capabilities, specifically by increasing flexibility in exterior design, and reorganize our manufacturing and supply system by constructing a new factory in Saitama. Also, to strengthen remodeling, we will work to create demand in response to the growing stock of multi-family residences, with “thermal insulation and ventilation” as keywords. In the non-residential sector, we will work on remodeling proposals aimed at longer life of buildings, particularly in educational facilities.

Corporate officer’s commitment



Senior Vice President
Commercial Business

Hiroyuki Seguchi

Our mission is to contribute to enhancing the value of commercial buildings with different uses, parts, and operating environments by providing products, technologies, and installation work that can be used “safely and securely” for a long time, with a commitment to quality. We will improve customer satisfaction by offering new products and services that meet customer needs, which change in response to population decline, the natural and social environment, and other factors. Furthermore, at construction sites where labor shortages are an issue, we will contribute to solving social issues in the industry as a whole by training young technicians and promoting the development of products and installation methods that require less labor.

Business Segments

Exterior Business

Proposing spaces that make living more comfortable

We will create new value by deploying products that unite “house” and “garden.” We are providing exterior products that make it easy to fully coordinate the residential property and each family’s lifestyle.



Main products

- Balconies
- Carports
- Gates & fences
- Terraces
- Exterior materials

FY 2021 Business Overview and Future Strategies

The exteriors market performed well, significantly outperforming the previous year. The reason behind this is a rebound in consumption that had stalled due to the COVID-19 pandemic, an increase in demand for garden-related products due to an increase in working from home, a substantial increase in demand for products to deal with the effects of snow damage at the beginning of the year, and a recovery in new housing starts. In the Exterior Business, sales were 109% of the previous year’s level, thanks to enhanced sales efforts and increased demand driven by product appeal and proposal capabilities. Going forward, our business strategy is to strengthen our organization and systems based on a policy of “boosting sales by providing fully coordinated proposals for buildings and exteriors.” In the new construction, exterior and remodeling markets, we will develop and strengthen existing sales channels in order to increase sales by proposing full coordination of buildings and exteriors. For custom-built homes, we will enhance value-added proposals for buildings and exteriors through “all-inclusive designs,” while we will offer stronger proposals that integrate buildings and exteriors into a unified cityscape for built-for-sale homes. In the field of garden exteriors for commercial buildings, we will work to expand our business by developing our lineup of exterior products.

Corporate officer’s commitment



Senior Vice President
Exterior Business

Masato Shinozuka

Through the exterior business, we provide health and comfort, energy conservation, energy creation, and safety and security to customers and society. We are also working to develop and penetrate environmentally friendly products such as exterior products that go well with plantings, non-formaldehyde products that use recyclable and environmentally friendly materials with consideration for residents’ health, and products that make indoor temperatures more comfortable and save electricity and energy. Through our business, we strive to build a better society, create value for our customers, and further enhance our brand and corporate value.

High Rise Building Business

Facades that increase a building’s value

We undertake the process from design to installation of facades for office buildings, condominiums, high-rise complexes, and more to provide the optimal facade system, fit for the purpose and needs.



Main products

- Curtain walls (made-to-order and standard)
- Commercial windows

FY 2021 Business Overview and Future Strategies

We have received orders generally as scheduled, for new office buildings including large-scale redevelopment projects. Ongoing projects were subject to the restrictions of the COVID-19 pandemic, but we responded by establishing an online inspection and management system. We will make further improvements to this initiative going forward. Sales were 101% of the previous year’s level due to COVID-19 positive cases found at some construction sites, which resulted in temporary site closure. In the 6th Mid-term Management Plan, we have set the goal of increasing sales and will work together with the Commercial Business not only to expand our areas of coverage, but also to strengthen our sales contacts through next-generation concept proposals and priority measures under the “PROPOSAL 8th.”

In the first half of the Mid-Term Plan, we will develop our systems and foundations to become a “partner” for each project rather than simply a “vendor.” On the technical side, we will contribute to adding value to construction by implementing effective proposals to meet market needs, such as diversified design, heat load reduction, improved thermal insulation, and ventilation.

Corporate officer’s commitment



Vice President
High Rise Building Division

Kazuhiro Kitano

The roles and functions required for office buildings are changing in response to rapidly changing work styles. Facades also require the advanced design and performance toward the future. We are also required to meet these needs with new ways of working. The facade systems we provide not only contribute to beautiful landscapes and comfortable indoor environments, but also to the reduction of environmental impact by paying attention to CO₂ emissions in the manufacturing and installation process.

Special Accounts Business

Providing products for a quick response to market needs

We provide high-performance window and door products to meet the needs of home builders and residential equipment companies based on universal design and consideration for the environment from our customers' point of view.



Main products

- Window and door products for home builders (prefabrication)
- Doorways and windows for modular bathrooms

FY 2021 Business Overview and Future Strategies

In the home builder (prefabrication) sector, sales were 104% of the previous year's level, supported by solid demand for new construction by the primary acquisition segment, although demand for rebuilding, our core area, was lackluster. In the modular bathroom sector, the remodeling market recovered significantly due to the impact of COVID-19. Sales were 116% of the previous year's level, partly due to an increase in market share resulting from the acquisition of new commercial rights.

Going forward, in the home builder (prefabrication) sector, we will work to improve partner and customer satisfaction by evolving our products through improvements such as the environmental performance and design of aluminum-vinyl composite windows and entrance doors with high thermal insulation. We will also look into the development of window and door products aimed at disaster prevention and mitigation. For the modular bathroom sector, we will focus on further evolution of existing bathroom doorway products. We will also consider product development for non-residential projects such as hospitals, care facilities, and hotels, as well as for further reduction of installation labor in condominium remodeling.

Corporate officer's commitment



Vice President
Special Accounts

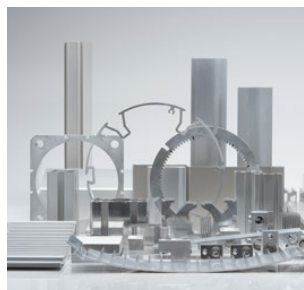
Makoto Takayasu

In the special accounts sector, we are developing products that meet changing market demands through business initiatives with each of our industry-leading business partners, such as home builders and residential equipment companies. As well as helping to realize safe, secure, healthy, and comfortable lifestyles, we will contribute to public well-being by fulfilling our role as a member of society. This will involve to the promotion of ZEHs through improved environmental performance and building a decarbonized society.

Industrial Products Business

Supporting the industrial sector with aluminum profiles

We provide high-quality extruded aluminum based on our knowledge of materials, profile designs, extrusion molding, surface treatment, processing, etc., and the advanced technology capabilities we have developed in the manufacturing of aluminum building materials.



Main products

- Components for machinery equipment
- Auto parts
- Architectural components
- Sustainable products

FY 2021 Business Overview and Future Strategies

The market for extruded aluminum was weak in the second half of the year, especially in the automotive sector, reflecting a shortage of semiconductors and the spread of COVID-19 in Southeast Asia. However, efforts to expand our sales share in a sluggish market environment and increase the number of business partners resulted in higher sales, especially in our core sector of construction. Sales were 130% of the previous year's level, due to soaring aluminum prices.

In terms of our business strategy going forward, by leveraging the technology and knowledge acquired from the process of manufacturing aluminum architectural products, we will make investments in accordance with market needs to build on the equipment and alloys we currently have, in order to respond to various needs and expand into new business areas. In the architectural products sector, we will expand sales of value-added products such as laminated profiles and processed products certified as noncombustible. In non-architectural sectors, we will work to expand sales in the automotive sector. As we work to continue satisfying our business partners with aluminum profiles, we will contribute to solving social issues through our business.

Corporate officer's commitment



Vice President
Industrial Products

Atsuhito Baba

We contribute to public well-being through business activities by understanding the needs of our business partners in various fields and providing optimal products. For example, proposals to reduce the weight of aluminum profiles can be contributed to improve work efficiency and reduce workload at construction sites, as well as lead to energy savings in transportation. Moreover, we are helping to improve the design quality of building materials by offering design proposals that take advantage of aluminum surface treatment. Through our efforts to hone our proposal capabilities by integrating manufacturing, sales, and technology, we will ensure that our business partners continue to choose us.

Business Segments

Research & Development

Creating new value through *monozukuri*

We have consolidated our research, development, and verification activities in Kurobe City, Toyama. By building rapid and timely product development systems, we are implementing *monozukuri* processes in the pursuit of high quality and advanced technology.



FY 2021 Business Overview and Future Strategies

In FY 2021, we worked on the full operation and establishment of a development process with front-loading development as the standard, as well as introducing PDM (Product Data Management) functions for some products to centralize design information. In residential products, we focused on further strengthening of product appeal by introducing the industry's first face recognition system for entrance doors. In exterior products we strengthened technological development to enhance proposals for the entire house, while for commercial products we sought to differentiate and improve competitiveness in fire-resistant products. We will continue to enhance and improve "product quality," "on-site quality," "usage quality," and "information quality" from the customer's perspective, as well as pursuing safe and secure products as our first priority. Also, we provide broad a range of values that meet society's needs, such as environmental consciousness and carbon-neutrality, and response to the increasing infectious diseases and natural disasters. In response to soaring material prices and supply concerns, we will work to reform our material and product structures while pursuing sustainability and implementing a circular economy in our business.

Corporate officer's commitment



Senior Vice President
Research & Development
Satoshi Himeno

YKK AP faces an extremely tough business environment, such as soaring material prices, the issue of carbon-neutrality, increasingly severe disasters, and a serious shortage of skilled workers. To overcome these challenges, we must further step up our evolution and develop products and technologies that build a better society.

We will focus on strengthening our product, technology, and proposal capabilities by promoting the platforming of existing products, improving *monozukuri* efficiency, allocating resources to new fields and technologies, and taking on the challenge of developing products that will help realize a more affluent and sustainable society.

Manufacturing

Enhancing technology capabilities and evolving *monozukuri*

Our *monozukuri* is put into practice through integrated production system that encompasses everything from the materials, components, and parts that make up our products to our manufacturing equipment. We will contribute to building a sustainable society through our technology and manufacturing capabilities.



FY 2021 Business Overview and Future Strategies

In FY 2021, the increase in demand for many products exceeded our supply capacity, however, we have established a sufficient production system through personnel policies and the launch of additional production lines. To cope with soaring material prices and tight procurement conditions, we are streamlining our personnel structure, improving productivity, and reducing costs. In addition, by taking thorough measures to prevent infection and prepare for natural disasters, we are developing our business with the safety and security of our employees as our top priority. Our business strategy going forward will be to enhance competitiveness in our businesses, products, and foundation. We will implement manufacturing reforms consisting of "platforms" to standardize products, equipment, and production lines, "smart factorization" to promote digital transformation, and "production base policies" to enhance competitiveness through optimized production and supply systems. In sustainable manufacturing, we will focus on environmental considerations by pursuing technological innovations in energy conservation, processes, recycling, etc., with the aim of achieving SBT targets.

Corporate officer's commitment



Executive Vice President
Manufacturing
Hiroshi Abe

Through *monozukuri*, we will provide better products to all customers by evolving and improving our technological capabilities based on the principles of "exceptional safety," "quality first," and "on-time delivery." Furthermore, in order to conserve limited resources in the manufacturing process, it is essential to take action with a view to the global environment of the future. In addition to technological innovations to achieve carbon neutrality, we will strive to make our products deliver happiness to customers and enrich their lives by creating a factory and workplace environment where employees can work with a sense of fulfillment.

Overseas AP Business

Operating businesses rooted in individual countries and regions

The requirements for architectural products vary depending on the climate and culture of each country and region. Since establishing our first overseas company in Singapore in 1976, we have conducted business operations by extending roots into the local communities to deliver products and services that meet their needs. In FY 2020, we restructured 16 overseas companies in 11 countries and regions. By integrating capital and business operations into YKK AP, we will further accelerate management.

FY 2021 Business Overview and Future Strategies

In North America, sales increased due to a recovery in the residential and commercial architectural products market. In China, domestic sales fell below the previous year's level due to a sluggish market caused by stricter and tighter real estate regulations. In Asia, some areas were affected by the COVID-19 pandemic, but the impact was minor and sales exceeded those of the previous year, resulting in overall overseas sales of 110% of the previous year's level.

Our business strategy going forward is to aim for stable growth by expanding sales channels/areas through the introduction of new products and strengthening cost competitiveness, and to proactively and flexibly develop new businesses and new markets. Also, as a whole overseas AP business, we will advance human resource development and strengthen our response to sustainability issues. The "International Business Division" has been renamed the "International Division" in order to strengthen cooperation with related divisions in Japan. We will reexamine our business model to be tailored to each country and region in terms of "sales," "products," "manufacturing/supply," and "administration," and grow our overseas AP business into YKK AP's core business.



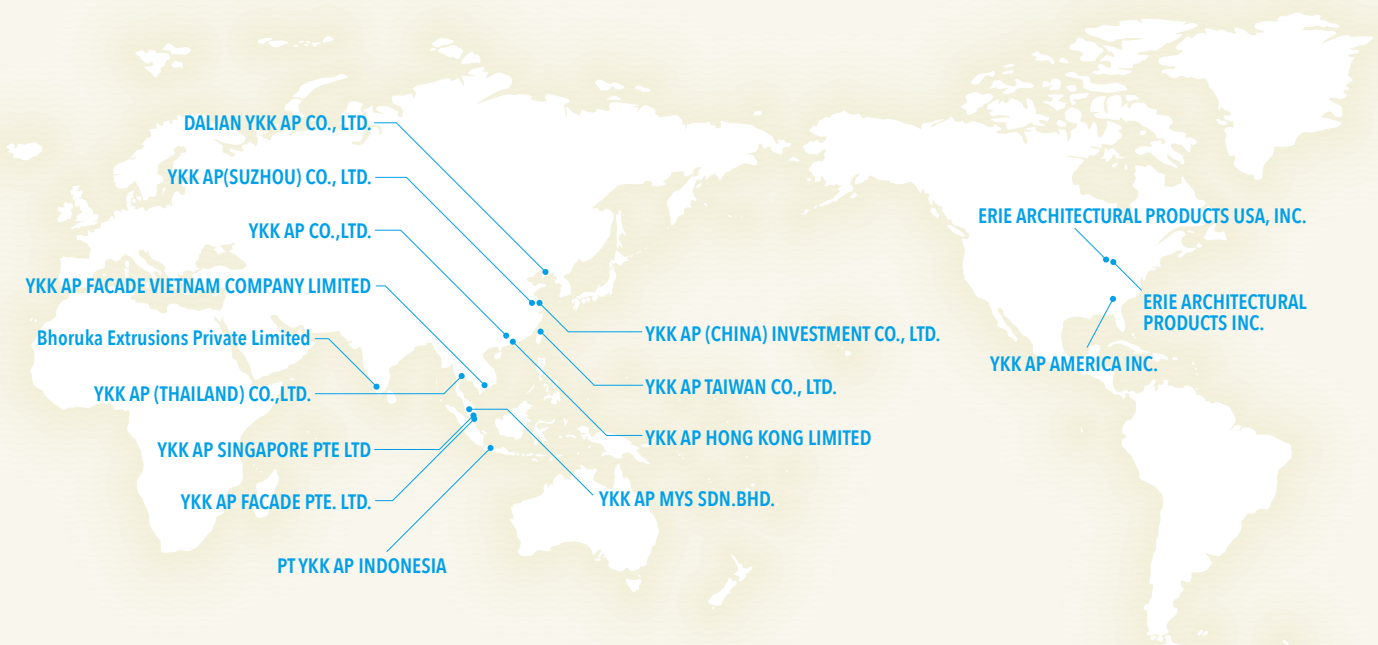
Corporate officer's commitment



**Vice President
International Business**
Tetsuya Onodera

The overseas AP business currently operates in 11 countries/regions and has more than 4,000 employees. In order to provide customers with products that fit the climate, culture, and needs of each country and region, we develop, manufacture, and sell our products by placing manufacturing bases and product development functions in each region. To expand our overseas AP business, we will contribute to our business partners with competitive products that also feature "easy-installation" elements. We will realize our Purpose by further enhancing our product lineup to fulfill our customers' needs for safety, security, energy saving, health, and more.

Overseas presence



Business Segments

Overseas AP Business

North America

We design, manufacture, and sell products centered on commercial aluminum architectural products for the commercial business and residential vinyl windows for the residential business. We offer products that meet regional needs such as thermal insulation products that lead environmental policy, safety products that address the increasing risk of hurricanes and more, and unitized curtain walls that address labor shortages.



FY 2021 Business Overview and Future Strategies

While the U.S.A. economy recovered rapidly from the impact of COVID-19, there are causes for concern including soaring material prices, supply chain disruptions, and upward pressure on interest rate. Despite these circumstances, the commercial business increased its revenues and profits from the previous year, reaching approximately \$200 million in sales for the first time since its establishment. In addition, ERIE ARCHITECTURAL PRODUCTS is gradually beginning to see synergies from its co-operative efforts with YKK AP AMERICA, with orders for five projects (valued at approximately \$7 million) to be awarded by February 2022. With housing starts increasing steadily in the U.S.A., the residential business achieved record sales and, like the commercial construction materials business, increased revenues and profits.

YKK AP AMERICA has set “Establish AP America Group as Dominant North American Architectural Products Company” as the business policy in the 6th Mid-term Management Plan. In the commercial business, we will strengthen the West Coast area and the Mid-South market by expanding our project center business, by taking advantage of our regional service model and design capabilities. ERIE ARCHITECTURAL PRODUCTS will work to expand its customer base through collaboration with YKK AP AMERICA. In the residential business, we will strengthen sales in untapped areas within the six states where we already operate, while at the same time making model changes and expanding the lineup of our core products.



President
YKK AP AMERICA INC.
Oliver Stepe

China

Our business in China is operated by YKK AP CO., LTD., which designs, manufactures, and sells aluminum and thermal insulated aluminum profile products for the Chinese domestic market, YKK AP(SUZHOU) CO., LTD., which manufactures parts, curtain walls, and window products as a global manufacturing and supply base, DALIAN YKK AP CO., LTD., a manufacturing base for vinyl profiles for the Japanese market, and YKK AP (CHINA) INVESTMENT CO., LTD., which oversees the aforementioned companies.



FY 2021 Business Overview and Future Strategies

As a result of the government’s real estate regulatory policies, the market environment deteriorated sharply in FY 2021. Despite entering the mid-range market, sales in the domestic business in China fell below the level of the previous year. Overall sales, including exports, increased due to increased orders for curtain walls from Japan and strong sales of “APW” vinyl windows, but profits decreased from the previous year due to the impact of sharply rising material prices. On the other hand, the YKK AP brand is also highly regarded in China, having been the first foreign company to win the “Architectural Windows and CW Industry Brand List, Top 10 Windows Brand List” for seven consecutive years.

The business policies of the 6th Mid-term Management Plan are to “expand business by accelerating growth of existing businesses and developing new businesses” and “rebuilding the manufacturing and supply system to support sustainable growth.” Our priority measures is to enter the mid-range market in the domestic demand business and to expand sales channels in the remodeling business, with the aim of increasing sales volume. To this end, we will expand our products for the mid-range market based on products for specific developers, and remodeling products, such as entrance doors and interior partitions/screen doors. To strengthen competitiveness in the luxury market, we will develop and launch value-added products such as wide-opening sliding doors with a concept of sophisticated design.



President
YKK AP (CHINA) INVESTMENT CO., LTD.
Akihiro Matsumoto

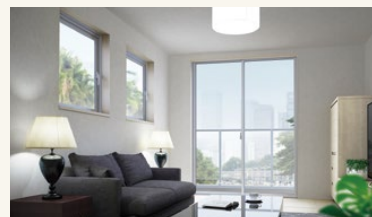
Asia

In fast-growing Asia, we have manufacturing bases in Taiwan, Indonesia, and India, and are developing products and business models tailored to each country/region.

In Taiwan, for example, we have earned a reputation as a top brand by designing, manufacturing, and selling products for new multi-family residences, single-family houses, and non-residential buildings, as well as remodeling projects, focusing especially on high watertight sashes suited to Taiwan's weather conditions with frequent large-scale typhoons. In Indonesia, which is home to the overseas AP business's first integrated production facility, as well as the R&D Center, serves as a base for research and manufacturing in Asia. We design, manufacture and sell aluminum profiles and aluminum sashes, mainly for Indonesia and the Asia region. And in India, where the future market growth is particularly promising among Asia, we are developing aluminum window products, focusing on luxury multi-family residences, in addition to our main domain business of the extrusion and sales of aluminum profiles.



Taiwan



Indonesia

Future Strategies

In Taiwan, we make efforts for FY 2022 to expand our share in the luxury market, enter the mid-luxury market, increase sales in the central and southern areas, strengthen orders in the non-residential sector, and expand our remodeling business. We will also further reduce costs for our main product series, strengthen sales development to non-residential projects, propose new remodeling methods, and develop remodeling distributors.

In Indonesia, in order to achieve the business policy of the 6th Mid-term Management Plan, "Increase sales & secure profit by sales channel expansion" we will work to expand bar profile sales channels for volume growth and to penetrate and expand a new business model with MADELA, a product for the mid-luxury market launched in October 2021. We will also begin to develop regional cities and island areas to achieve further penetration of the Indonesian market.

Bhoruka Extrusions in India has set a business policy of "Transform to architectural products company from extrusion company" in the 6th Mid-term Management Plan. Through focusing on and further cultivating the southern area of India and introducing value-proposition products, we will work to build a foundation for the AP business and contribute to the improvement of the living environment with our high-quality products.

Facade Business

YKK AP FACADE PTE. LTD., based in Singapore, provides total project management including design, engineering, procurement, and construction of facades for super high-rise and complex architecture. With the technology to handle a diverse designs and our engineering capabilities, we will take on renovations for building exteriors as well.

Future Strategies

In the 6th Mid-term Business Plan, we have set "stabilization of the Singapore business" and "policy formulation for the development of new location" as business policies. We will strengthen project management to meet construction deadlines and secure customers' trust in the midst of a challenging business environment of work schedule delays due to labor shortages and soaring material prices. In the high-rise building market, a growing number of constructions are aiming at "green buildings" that consume less energy and are more environmentally friendly. To meet this need, we will work to expand our technical proposals in both the new construction and renovation sectors, including solar radiation load simulation, solar radiation shielding devices, and building up expertise in high thermal insulation and thermal barriers. Furthermore, to develop new markets, we will study Europe to narrow down target areas and consider business models that can leverage our expertise, brand, and technology capabilities in the facade business.



Special Feature

YKK AP's Goal of Carbon Neutrality

The Japanese government's "2050 Carbon Neutrality Declaration" in 2020 has spurred on carbon neutrality efforts in Japan. This section will explain why we must tackle this issue and how YKK AP intends to contribute.



Promoting carbon neutrality to save the planet from the climate crisis

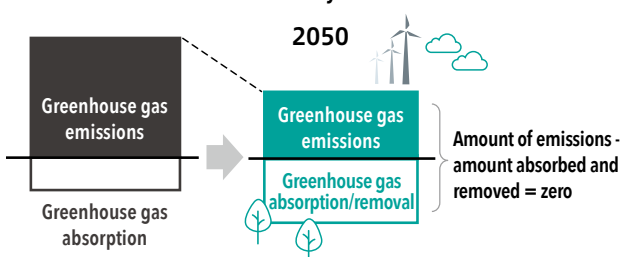
In October 2020, the Japanese government declared its goal of achieving carbon neutrality — the reduction of net greenhouse gas emissions to zero — by the year 2050. Reducing net emissions to zero means that the total amount of CO₂ and other greenhouse gases emitted after subtracting the amount absorbed through afforestation, forest management, etc. is effectively zero.

As of 2017, the global average temperature has already increased by about 1°C relative to pre-industrial (1850–1900) levels*. If this pace continues, temperatures are projected to rise even more each year.

The Paris Agreement, adopted in 2015 to resolve this global challenge of climate change, adopted the "2°C target," which calls for "keeping the global average temperature increase well below 2°C above pre-industrial levels and pursuing efforts to limit the increase to 1.5°C." To achieve this goal, more than 120 countries and regions are working toward the goal of carbon neutrality by 2050.

Furthermore, in recent years, a series of scientific studies have shown that a 1.5°C increase will have a significant impact on the global environment, and a more rigorous standard, the "1.5°C target," has been established to limit the average temperature increase to 1.5°C or less.

● Illustration of carbon neutrality



Prepared with reference to the Ministry of the Environment's "Decarbonization Portal" (Information in Japanese) https://ondankataisaku.env.go.jp/carbon_neutral/about/

Incorporating greenhouse gas emission reductions into YKK AP's business strategies

The Science Based Targets initiative (SBTi), established in 2014, is an international organization that promotes setting reduction targets aligned with scientific evidence for companies working to reduce greenhouse gas emissions. The "Science-based targets," are a set of global standards for companies to follow when setting greenhouse gas emission reduction targets consistent with the levels required by the Paris Agreement.

YKK AP has been a supporter of the SBTi since 2017, a relatively early stage among Japanese companies, and has committed to the goals it has set. The SBTi declaration standards were raised to a more stringent level after July 2022, but prior to that, we were certified in February 2021 as meeting the new standards as a "target well below 2°C."

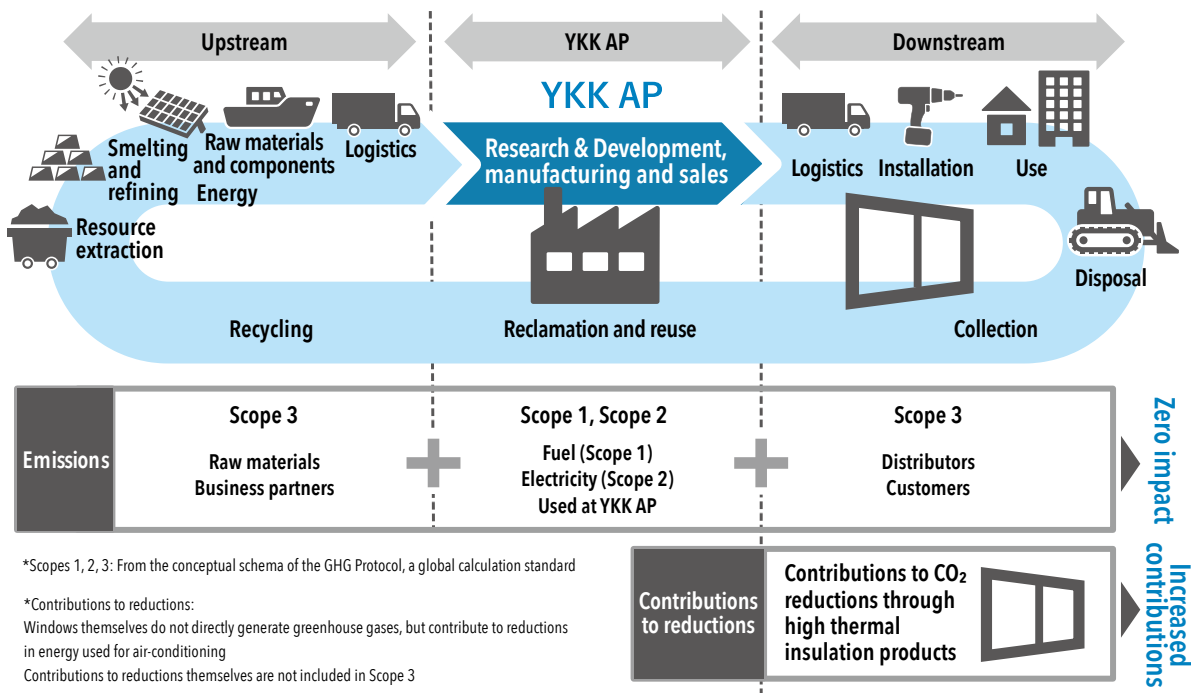
The Company also endorsed the Task Force on Climate-related Financial Disclosures (TCFD) launched by the Financial Stability Board in 2019. We understand the risks and opportunities posed by climate change and reflect them in our management strategies, including countermeasures. (See pages 48-50 of this report and the YKK AP Environmental Report (available in Japanese only) for more details.)

Target-setting and activities in Scopes 1, 2, and 3

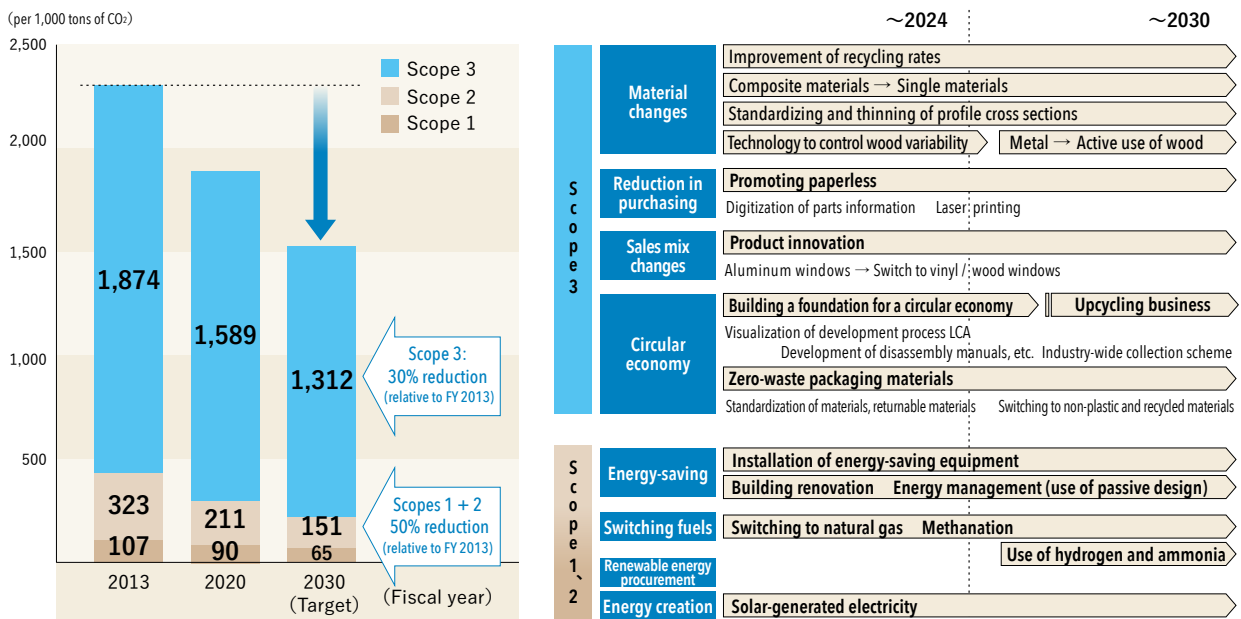
Reducing greenhouse gas emissions requires definitions (scopes) by which to measure emissions. These are Scopes 1, 2, and 3. Scope 1 covers greenhouse gases emitted directly through corporate activities, while Scope 2 covers greenhouse gases emitted indirectly through electricity consumption at manufacturing sites and offices. Scope 3 covers indirect greenhouse gas emissions other than Scopes 1 and 2, and relates to the supply chain as a whole.

YKK AP's CO₂ reduction targets are to achieve a 50% reduction in Scopes 1 and 2, and a 30% reduction in Scope 3 (relative to FY 2013) by FY 2030. Beyond that, we aim to achieve zero emissions by 2050.

● Lifecycle of YKK AP products and CO₂ emissions



● YKK AP's CO₂ emission reduction trends, targets, and initiatives



<Scope 3 initiatives> Improving material recycling rates and transportation efficiency

An analysis of the composition of CO₂ emissions associated with YKK AP's business activities across the entire supply chain shows that Scope 3 emissions account for the majority of the company's CO₂ emissions. Among them, emissions from purchased materials used in the manufacture of products account for 80% of the total (in

FY 2020). For us, therefore, efforts to reduce emissions pertaining to materials will have the greatest impact on our efforts to become carbon neutral.

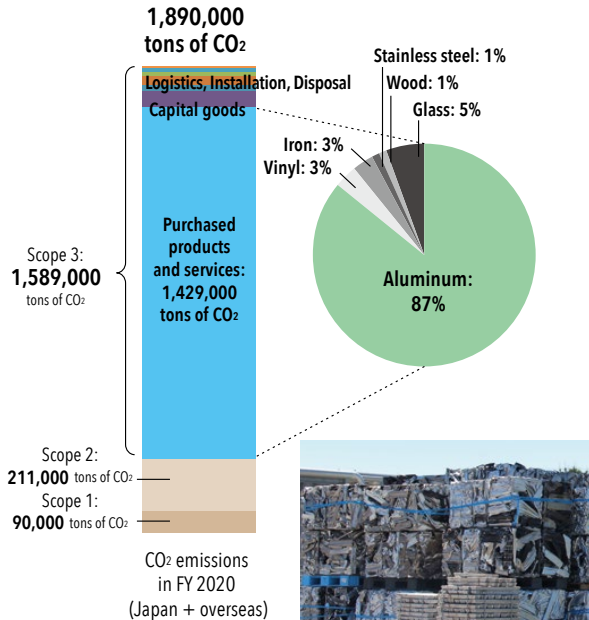
Aluminum materials account for 87% of CO₂ emissions from purchased materials. Aluminum is also known as "electricity in a can" because it requires large amounts of electricity to extract the metal from minerals such as bauxite.

However, aluminum also has many exceptional attributes in terms

Special Feature: YKK AP's Goal of Carbon Neutrality

● Breakdown of YKK AP's CO₂ emissions (FY 2020)

In the entire supply chain, a large share of emissions are from material procurement (refining, etc.), of which aluminum accounts for a significant portion.



Aluminum recycling has a significant effect in reducing CO₂ emissions.

of recycling the material already on the market, and it is often referred to as the “king” or “honors student” of recycling. This is because electrolysis, which is needed to extract aluminum from minerals, is no longer necessary, and its melting temperature of 660° C is low for a metal, so less energy is needed to recast it. It is said that generally, only 3% of the energy is needed when using recycled materials compared to when making new aluminum from minerals*.

Aluminum window frames, as well as automobile tire wheels, and many other products made from aluminum have been available in Japan since its era of rapid economic growth. We have introduced a dedicated recycling furnace and are working to increase the use of recycled scrap aluminum from the market. We also recycle all scrap materials and other materials generated in our in-house manufacturing processes, thereby contributing to a circular economy and the reduction of CO₂ emissions.

We also recycle the vinyl produced during the manufacturing process for vinyl windows and after use. The rate of internal recycling of scrap materials produced during manufacturing was 27% in FY 2021, and we are aiming to achieve 74% by 2024. We are also working with industry associations on a system to make use of discarded vinyl windows after they are used in residential homes and other buildings.

In addition, in Scope 3, we are working to improve the efficiency of transporting products and materials. We are working on “trunk line

relay transportation,” which includes consolidating transportation routes and improving loadability by combining partial loads, “secondary delivery,” which includes joint delivery and alternate-day delivery, and “modal shift,” which includes using railroad containers.

Scope 1 and 2 initiatives

Fuel reductions in manufacturing processes (Scope 1)

For Scope 1, which refers to CO₂ emitted directly through the company's own activities, we are working to reduce the amount of fuel used in our manufacturing processes.

In terms of what can be done with existing technology, we have already begun to electrify heat source equipment and switch to natural gas by using gas burners, in addition to conserving energy for production equipment and increasing its efficiency. We are also developing and verifying, based on existing technology, a switch to carbon-neutral methane, co-firing with hydrogen gas, and the use of hydrogen and ammonia in gas burners.

Electricity saving and energy creation (Scope 2)

Scope 2 refers to CO₂ emitted indirectly through the use of electricity in corporate activities. As such, we are working to reduce our electricity consumption through energy saving and energy creation.

In terms of our energy creation efforts, we are conducting trials to introduce solar power generation (installed on rooftops and in fields), hydroelectric power generation (using the power of water flowing through pipes), biomass power generation and boilers (using wood and RPF generated during manufacturing for in-house consumption), and wind power generation (using exhaust wind inside factories).

We plan to dramatically increase the deployment of these renewable energies from FY 2022 onwards, and in particular, solar power generation facilities are being installed one after another at our plants in Japan and overseas.

Achieving carbon-neutral facilities through visualization

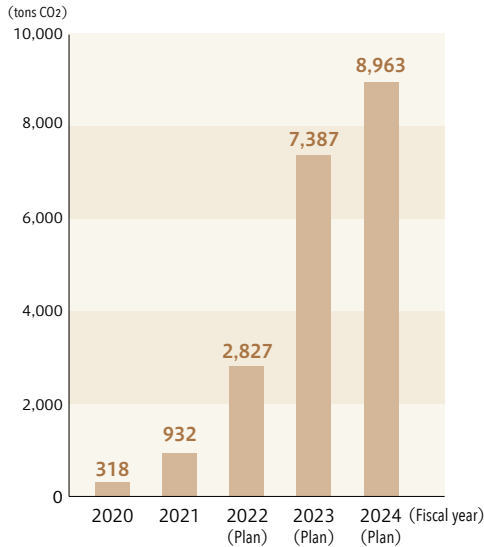
To measure progress in reducing CO₂ emissions in Scopes 1 and 2, it is essential to visualize emissions. In FY 2021, we established a database to identify energy consumption of each equipment and visualize CO₂ emissions from the manufacturing phase. By FY 2022, the database will enable automatic calculation and visualization of CO₂ emissions from the design and development phase of new equipment.

In terms of our products, meanwhile, we will revise the “Environmentally-Friendly Design Evaluation Sheet” and launch a system to have CO₂ emissions linked with evaluation criteria during design and development, as well as encouraging the development of environmentally friendly equipment with lower CO₂ emissions when manufacturing new products.

The new Saitama Factory, which will exemplify these efforts, is scheduled to start operation in September 2023. The new Saitama

● Reductions in CO₂ emissions through the introduction of renewable energy to YKK AP

- Installation on idle land and building roofs (new construction, no reinforcement)
- Installation on the basis of standby power



Factory will be carbon neutral as a result of improved thermal insulation of the building, windows that provide excellent thermal insulation and ventilation, dimmer lighting, and high-efficiency air conditioning, as well as the sourcing of solar-generated and other renewable electricity.

Helping reduce CO₂ emissions in society as a whole through use of our products

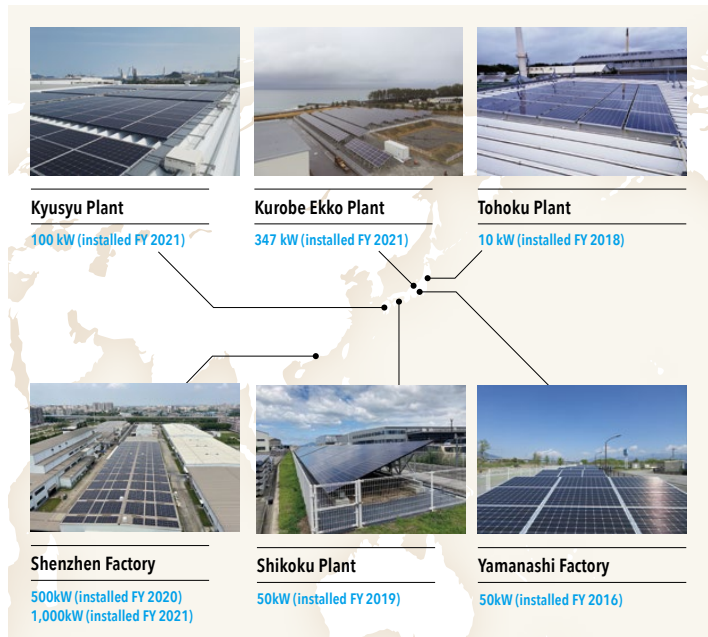
To achieve carbon neutrality throughout society, the housing and building construction industries are promoting the spread of net zero energy houses (ZEH) and net zero energy buildings (ZEB).

According to our calculations, the amount of heat that flows into a house from the outside through the windows accounts for more than half of the total. Our high thermal insulation products reduce the amount of energy used for heating and cooling, contributing significantly to the reduction of CO₂ emissions. We plan for these products to contribute to the reduction of CO₂ emissions across society by 696,000 tons of CO₂ in FY 2024. This amount is equivalent to the CO₂ emissions from 230,000 average households per year.

Raising employee awareness

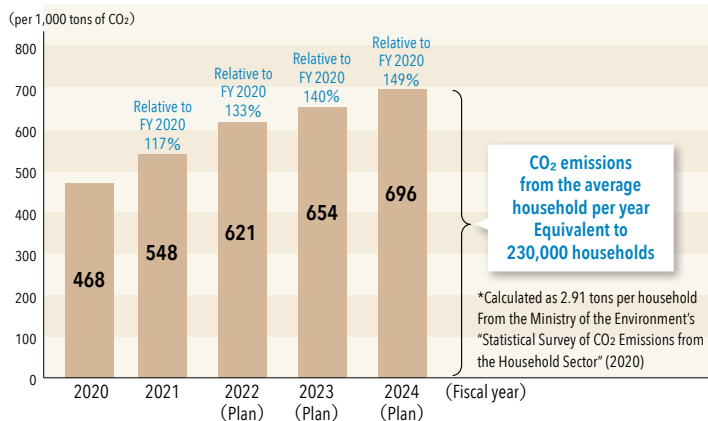
We hold “Environmental Action” events twice a year to help employees recognize and put into practice behaviors that will lead

● Bases where solar power generation equipment is installed



● Contributions to CO₂ reductions through high thermal insulation products sold in Japan

Sales of high thermal insulation products can be said to contribute to the reduction of greenhouse gases in society as a whole



*Applicable products (equivalent to sustainable products)

Vinyl windows: APW 430, APW 330, Plamado H
 Composite windows: APSWORD, APW 410
 Vinyl inner windows: Mado Remo - PLAMADO U Inner Window
 Thermal insulation doors: InnoBest, Venato D30, Kantan Door Remo, Concord S30
 Commercial thermal insulation windows: EXIMA 37, EXIMA 77, APSWORD NEO-LB

*Conventional products

[New construction] Windows: Aluminum windows with double glass
 Doors: Aluminum doors
 [Remodeling] Windows: Aluminum windows with single glass

to a sustainable society. The number of participants has increased each year, with participation exceeding 97% for the summer and winter events in FY 2021. For example, from January to February 2022, under the theme of carbon neutrality, employees took on the challenge of the “Zero Carbon Action” recommended by the Ministry of the Environment in their daily lives.

By changing the mindset of each and every one of our employees, we will contribute to achieving carbon neutrality in society as a whole.

Stakeholder Dialog

Technology development to contribute to society and YKK AP's employees ability to make it happen

YKK AP, with “We Build a Better Society Through Architectural Products” as its Purpose, is disseminating technologies that can help solve social issues from its technology headquarters located in Kurobe City, Toyama Prefecture. Satoko Ito, who as a freelance newscaster continues to report and communicate information on social issues such as regional economic revitalization and energy problems, discussed the significance of YKK AP's business with President Hidemitsu Hori at the YKK AP R&D Center in Kurobe.

Satoko Ito Freelance Newscaster and Visiting Professor at the Graduate Institute for Entrepreneurial Studies / **Hidemitsu Hori** President Representative Director of YKK AP



Satoko Ito

Born in Itoigawa City, Niigata Prefecture. After working as an anchor for a news program, she studied at Fordham University in New York. After returning to Japan, she continued to work as a TV and radio broadcaster, while also pursuing her interest in international contributions, energy issues, and other activities. She is also a graduate of the Graduate Institute for Entrepreneurial Studies, where she obtained an MBA. Her current activities include working as a commentator for television programs. She maintains that re-energizing local economies is the key to restoring Japan's vitality.

We create products that benefit society and use the profits to develop even better products — this is the company's DNA.

Ito: Today, I visited YKK AP's manufacturing and development facilities in Kurobe. The rich natural setting, with a view of the Tateyama Mountain Range, and the factory, with its state-of-the-art technology, created a sense of unity. Kurobe is known as the company's technology headquarters, isn't it? I was explained that this site is the company's principal manufacturing base, featuring in close proximity the Value Verification Center, which conducts evaluation and verification of products, the Partners Support Studio, which makes technical proposals to professional users, and the YKK AP R&D Center, which YKK AP's technologies are gathered. As such, it is able to conduct research and development that incorporates the perspectives of users and professionals, and

reflect them in *monozukuri* with a sense of urgency.

Hori: “A company committed to products and manufacturing.” Since my appointment as President, I have made this my policy. As a manufacturer, I attach a great deal of importance to *monozukuri* that takes into account consumers' perspectives. Kurobe is an essential hub for this policy. It is our headquarters for manufacturing and development, and also our front-line worksite.

Ito: I understand that you are conducting “user verification” by having customers who use your products participate in the development process.

Hori: That's right. We ask monitors of various demographics, including children, the elderly, and people with disabilities, to use our prototypes and to say as much as they can about what they notice, like ease of handling and design. We sometimes get some pretty ruthless opinions, but it's very helpful.

The Value Verification Center also conducts experiments on vibration

during transportation. In addition to the quality of our products, we strive to improve the quality of every step of the process: delivery, installation, and after being installed in homes.

Ito: At the Value Verification Center, I also saw an experiment in which the windows were subjected to rain, wind, and flying debris. I was amazed at what harsh conditions were being envisioned in the pursuit of safety. Does the Partners Support Studio explain that to professional users?

Hori: At the Partners Support Studio, we not only provide explanations, but also have engineers from our Research and Development Division listen to requests and issues from home builders, manufactures, and other professional users, and make proposals based on our technology and quality. Unfortunately, the COVID-19 pandemic has made it difficult for them to come and visit us, so we deal with them online.

Ito: You are also expanding your business overseas. I know that each location has different weather conditions and different needs. How do you address that?

Hori: We work to understand the weather, climate, and culture of each country and region, and develop businesses that are rooted in each local community. For example, in the U.S., we develop and manufacture special windows that will not break even if a hurricane hits, and in Taiwan, which is frequently hit by typhoons, we develop and manufacture windows with high watertight performance. Although there are now more overseas companies that have the capability to complete their work locally, the engineers assembled here at the YKK AP R&D Center in Kurobe support research and development in various locations.

Ito: I hear you are engaged in many initiatives that address social issues. What is there in terms of contributing to carbon neutrality, for example?

Hori: Since the performance of windows, which account for the largest proportion of heat flow in and out, determines the thermal insulation performance of a house, we are proud to say that windows are a product that can play a leading role in reducing CO₂ emissions in the house. Of course, we are also actively working to reduce CO₂ emissions in our business activities.

As a manufacturer, we want to approach carbon neutrality with our technological capabilities. We have been urging on our engineers, and the younger ones in particular seem to be enthusiastic and motivated by this.

Ito: In talking with the employees who showed me around the facility today, I felt that everyone was very passionate. How do you cultivate this enthusiasm in your employees?

Hori: Actually, I don't really feel that we are cultivating it. YKK AP has always embraced the idea of "three-party sharing," which was advocated by YKK's founder, Tadao Yoshida, and this is a management approach that represents the YKK philosophy of the "Cycle of Goodness." What other companies make for 100 yen, we make for 50 yen through ingenuity and creativity, and the profits generated are split into thirds between our customers, affiliated companies, and ourselves. Our philosophy is to use our share for development and investment, and to create products that are more useful to society. This is a bit off topic, but I am sure you saw many

robots in operation on the production line at the manufacturing plant. That was a production line designed and installed by our Machinery and Engineering Department. The robots themselves are purchased, but we are responsible for designing how they operate. We have the soil for our employees to create new things with their own hands and to be helpful for society.

Upholding YKK's founding spirit and creating an environment in which employees can realize their full potential

Ito: Are you saying that the corporate culture fosters each individual's mindset?

Hori: Yes. Our founder also said that "the YKK Group is like a forest." The idea is that each employee, with their various attributes and personalities, is independent but comes together to form a company, just as tall trees, small trees, and various other trees are independent but come together to form a forest.

Ito: These are words that go hand in hand with diversity. One of the "Social" themes of ESG, valuing people, is also part of that soil, isn't it?

Hori: That's right. The most important thing is our employee ability. To this end, we have established a new position of CHRO (Chief Human Resources Officer) and are working to create a system that allows employees to further develop their abilities and an environment that helps them to showcase them. Through training support and awards, we are developing not only human resources who can grow existing businesses, but also those who can take on the challenge of innovation. We also hold "round-table meetings," in which myself and the directors visit sales and manufacturing locations across the country to talk with employees in an informal setting. All kinds of issues become apparent in the course of these candid conversations. We hear frank comments from female employees, like "I don't know how to build a career here" and "I don't have anyone to serve as a role model."

Ito: My research focuses on revitalizing local economies. Having a state-of-the-art research and development, and manufacturing center in a regional city like Kurobe City is ideal for the local economy and provides a sense of hope for the local people. Not only that, but in the time of "living with COVID-19," more and more people prefer to work remotely in rural areas. I think this is an unparalleled environment for these people as well.

Hori: We are also proud of the fact that in Kurobe City, we are developing technologies that will be communicated not only to the rest of Japan, but also the rest of the world. The spread of remote work has loosened the restrictions on where people can do their jobs, so you can be in a regional city and immediately connect and work together with people in urban areas and around the world. We intend to capitalize on this advantage while offering a variety of ways to work.

Ito: I was really struck by YKK AP's ambition today. I am very much looking forward to seeing the kind of comfortable lifestyles that Kurobe will bring us going forward.

Research, Development and Verification

The perspectives of consumers, professional users, and the needs of society are essential elements of *monozukuri*. The three technical facilities in Kurobe City, the technology headquarters of YKK AP in Toyama Prefecture, identify, share, and consolidate multiple perspectives and needs. These facilities share information with our overseas bases and work in unison with them to achieve *monozukuri* that provides solution. The knowledge and data that we acquire from this are major strengths of YKK AP's *monozukuri*. This is where the spirit of “co-creation” resides.

Research, development, and verification systems

Pursuing high quality and advanced technology through co-creation with stakeholders

The cycle of development, evaluation/verification, technology proposals, and information sharing serves as the foundation of the *monozukuri* process at YKK AP. This is carried out by YKK AP R&D Center, the Value Verification Center, and the Partners Support Studio.

The YKK AP R&D Center is where YKK AP's technologies and knowledge are concentrated. Here, teams delve into research and deepen their knowledge in their specialized fields to deliver high-quality product development and propose advanced technologies.

The Value Verification Center conducts the evaluation and verification that is indispensable for product development and providing new product value. To collect a broad range of findings and data, verification is conducted from three perspectives — “user verification” by consumers, “field verification” in which various usage environments are recreated, and “analysis and simulation” using numerical simulations. User verification involves the verification of product value from the viewpoint of consumers, whereby consumer monitors of different ages and physical attributes actually operate the product to confirm safety and usability. In response to the “new lifestyle,” we are also making

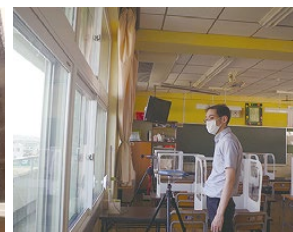
efforts to conduct online verification of architectural products, etc. in the monitors' homes. In field verification, we conduct verification under actual conditions or in recreations of actual conditions. These include testing windows and shutters against typhoons and strong winds, and testing energy conservation and sound insulation for inner windows and insulating glass in schools.

The Partners Support Studio presents proposals based on our technology and quality in response to issues and requests from professional users. We share issues via joint installation verification and more as well as exchanging opinions and information to work toward solutions.

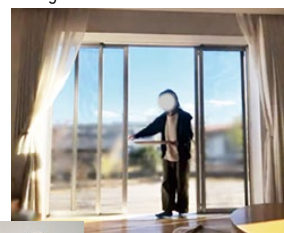
The Central Testing Center Laboratory works to ensure the quality of our products. The Center is registered as a JNLA testing laboratory that conforms to the standards established by the International Organization for Standardization and the International Electrotechnical Commission, and we are strengthening our product quality assurance system through rigorous testing from a third-party perspective. In addition, the Central Research Laboratory also works with external research institutes to research window engineering and architectural physics.



Field verification for typhoon and strong wind conditions



Field verification in a school



Online user verification



Joint installation verification in the Partners Support Studio

Overseas research and development

Sharing information on warm, cold, and hot-humid regions to develop optimal products

YKK AP has also strengthened its global research and development system. YKK AP R&D centers have been established in Germany and Indonesia to conduct research and studies in different regions: Japan for warmer regions, Germany for colder regions, and Indonesia for hot and humid regions. This information is compiled and shared to develop products optimally suited to each region.

At the YKK AP R&D Center (Germany), we investigate and research innovative European technology in the fields of energy conservation architecture and building materials, and promote high added-value in windows and doors through functional parts, thermal insulation of windows and doors, and frames and glass, etc.

At the YKK AP R&D Center (Indonesia), we study, research and develop energy-conserving installation methods, windows and doors suited to hot and humid areas. We also engage in research on passive designs (the designs of comfortable living environments that utilize natural energy). In addition, as part of a joint industry-government-academia research project on “energy-conserving multi-family residences for middle-income residents,” we are measuring the effectiveness of using windows and entrance doors that provide effective ventilation. The insights gained from these activities are also being applied to proposals for improved ventilation through the NEXSTA series of ventilation windows for elevated locations, which were launched in May 2021.

● Global R&D organization



Germany (Wuppertal)

Surveys and research on advanced European window technology

- Investigation/research on innovative European technology
- Research on advanced technology aimed at high added value

Indonesia (Tangerang)

Research and development of windows for hot and humid areas

- Research and facilities related to climate and culture, construction circumstances, and standards
- Passive design research for hot and humid areas, research on windows and doors

Japan (Kurobe)

In-depth technology capabilities at the Technology Headquarters

- Co-creation of advanced themes
- Research and development of core technologies, materials, manufacturing, products, and installation methods
- Collaboration with the Value Verification Center and the Partners Support Studio
- Integration and sharing of the results of each Center



Collaborative research project on energy-conserving multi-family residences



“NEXSTA” series ventilation windows for elevated locations

Product safety and quality assurance

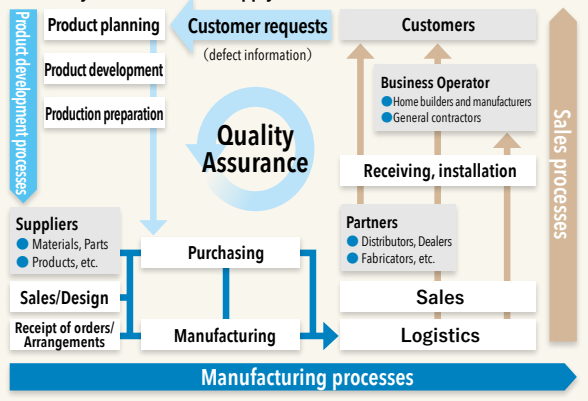
Higher levels of customer satisfaction by thoroughly ensuring product safety and quality

Ensuring the safety and quality of products is an absolutely critical part of *monozukuri*. Aiming to contribute to the establishment of the “product safety culture” promoted by the Ministry of Economy, Trade and Industry, and to deliver safety and security to customers, YKK AP has been working to ensure product safety under the “YKK AP Product Safety Basic Policy.” YKK AP was selected as the recipient of the “METI Minister’s Award” at the “Best Contributor to Product Safety Awards (sponsored by METI)” in 2017. This was our third time winning the METI Minister’s Award, and we were certified as a “Gold Contributor to Product Safety” as a result.

In 2019, we established the “Quality Assurance Department,” and have encouraged operation of processes to ensure quality throughout the entire supply chain, from product development to production and sales, thereby ensuring quality. Further, we are working to integrate requests from customers and business partners, reports of faults, and opinions regarding inspections and repairs as quality information. This has led to elimination of faults

at an early stage as well as prevention of faults, contributing to providing social value through products that create a high level of customer satisfaction.

● Quality assurance in the supply chain



Material procurement

YKK AP aims to fulfill its social responsibilities throughout the supply chain. In procuring materials, we pursue CSR procurement that takes into consideration human rights, the environment, and fair business practices. We are also working to enhance our partnerships with suppliers in order to reinforce the cooperative relationships that are indispensable for CSR procurement. Furthermore, aiming to build a stable supply system, we are strengthening our understanding of risks in procurement and measures to counter them.

Procurement Policy and CSR Procurement

Honest and fair procurement based on the YKK Group Procurement Policy

YKK Group enforces a procurement policy consisting of organizational governance, human rights, labor practices, the environment, fair business practices, and consumer issues. This policy is used as a basis for conducting CSR procurement aimed at fulfilling our social responsibilities throughout the supply chain. As part of these efforts, and in order to develop a deeper mutual understanding with our business partners, we have established our “Basic Principles of Procurement” that stipulate the following five principles: compliance with laws, regulations, and social norms along with fair and ethical transactions; consideration of human rights and the labor environment; consideration of health, safety, and the environment; quality and product safety assurance; and information security assurance. As of FY 2021, we have concluded agreements with 821 major business partners, and we are aiming for 1,200 companies by FY 2024. In addition, in FY 2021 we conducted CSR questionnaires to check the status of initiatives at 48 companies, and will continue to do so for all business partners with whom we have concluded agreements on the Basic Principles of Procurement.

YKK AP also conducts “green procurement” initiatives, which involve prioritizing the purchase of environmentally friendly materials from environmentally conscious companies, in accordance with the “YKK AP Basic Policy on Green Procurement” stipulated in the “Green Procurement Guidelines” which are designed to promote products and *monozukuri* that contribute to a sustainable society.

● YKK Group Procurement Policy

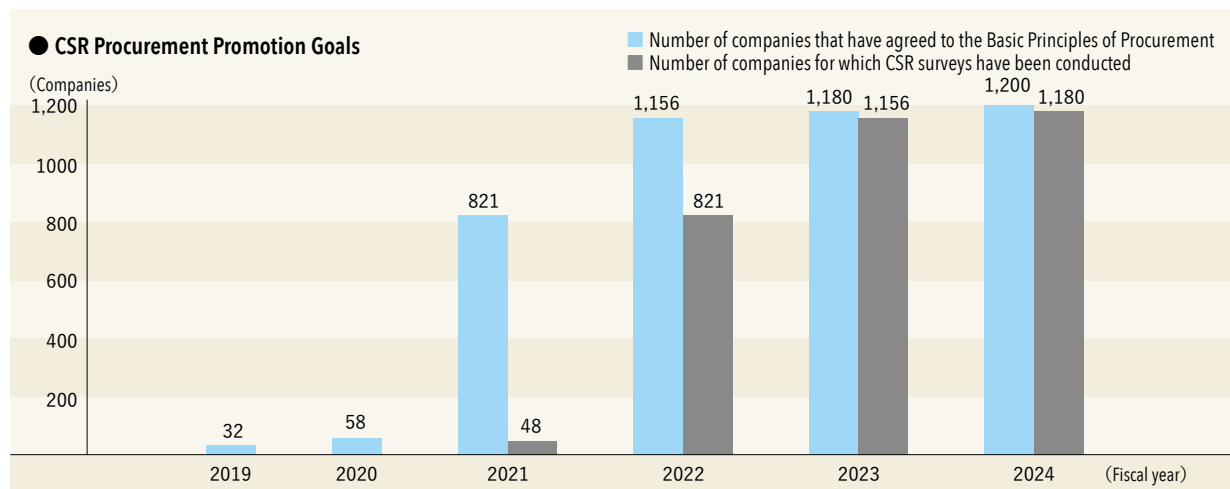
Ever since YKK's founding, we have based our business activities on the conviction, under the YKK Philosophy, “Cycle of Goodness” that an enterprise is an important member of society, that it must thereby co-exist with other elements of society, and the value of its existence will be recognized by the benefits it shares with society. The belief behind this is that no one prospers without rendering benefit to others. We carry out business activities with the aim of bringing mutual prosperity, and our intent is that innovative ideas and inventions will result in business expansion for the YKK Group, which in turn would bring prosperity to customers and trading partners, and thus benefit all society. This is none other than our execution of sustainability.

● YKK AP Basic Policy on Green Procurement

In accordance with YKK AP's Environmental Management Policy, we will purchase environmentally-friendly materials and parts from environmentally-friendly companies (companies that are proactive about the environment) to reduce the environmental impact of our business activities as a whole and promote the development and provision of environmentally friendly products, thereby contributing to the realization of a low-carbon, recycling-oriented society.

*For details, visit our website:

<https://www.ykkap.co.jp/company/en/sustainability/procurement/>



Partnership Building Declaration

Fulfilling our social responsibilities and strengthening our partnerships

In keeping with the YKK Philosophy, Management Principle, and Purpose, we are strengthening our partnerships with suppliers and business operators in the supply chain with the aim of fulfilling our social responsibilities. In June 2022, we drew up and announced the “Partnership Building Declaration” with the aim of building a relationship of co-existence and mutual prosperity. Accordingly, we have declared that we will make concerted efforts to address the items listed on the right.



● Partnership Building Declaration

We declare that in order to build new partnerships through cooperation, co-existence and mutual prosperity with our supply chain business partners and other value-creating business operators, we will make concerted efforts to address the following items.

1. Coexistence and mutual prosperity throughout the supply chain and new cooperation that transcends factors such as scale and group affiliations.
2. Compliance with the “Promotion Standards”
 - (1) Pricing methods
 - (2) Cost burdens for die management, etc.
 - (3) Terms of payment for notes, etc.
 - (4) Intellectual property and expertise
 - (5) Knock-on effects of work style reforms, etc.
3. Others
 - We have published our “Basic Transaction Principles” and strive to conduct fair transactions with our business partners.
 - We will continuously provide in-house training to ensure that the contents and purpose of the Act against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors and the “Promotion Standards” are thoroughly understood.

*For details, visit our website : <https://www.ykkap.co.jp/company/en/sustainability/procurement/pdf/partnership.pdf>

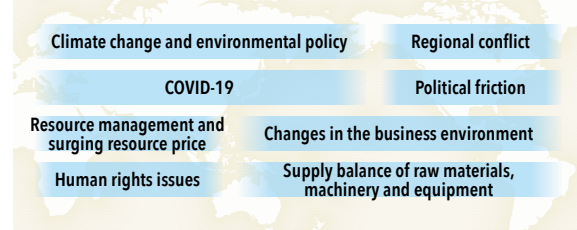
Risks in Procurement and Countermeasures

Quickly identify risks from a BCP perspective and strengthen countermeasures

In recent years, factors such as the COVID-19 pandemic, climate change and disasters, as well as heightened geopolitical risks, have brought about drastic changes in the environment for corporate activities, and the future remains uncertain. In FY 2021, YKK AP also suffered a significant impact from the global supply shortage of electronic components, which led to problems including delays in the delivery of our electric shutters. In light of this situation, we are further strengthening measures to promptly identify and improve risks in our supply chain from the perspective of our Business Continuity Plan (BCP). In addition to securing inventories of critical management items in case of emergencies, the research and development, manufacturing, and purchasing divisions work

together to set up alternative sources of supply, and other efforts taking the BCP into account are conducted from the product development phase.

● Major factors in the external environment affecting procurement



● Measures and initiatives to address risks in procurement

Risks	Countermeasures	Initiatives
Weather and disasters (earthquakes, typhoons, cold spells, etc.)	Alternative materials, multi-company purchasing, inventory	① Selection of alternative materials
Politics (wars, conflicts, economic sanctions)	Exclusion from purchasing	② Multi-company purchasing system
Economy (supply-demand balance, exchange rates)	Alternative materials, multi-company purchasing, inventory	③ Inventory measures
Ethical and legal issues (human rights, labor environment, information security, subcontractor support)	Compliance, exclusion from purchasing	④ Cost reductions, sale prices, and other business strategies
Supply chain (legal compliance, competitiveness, stable supply)	Inspection, evaluation and restructuring	⑤ Conclusion of agreements on the Basic Principles of Procurement
		⑥ Change of internal systems (rules and regulations, appraisals)
		⑦ Integrated and focused management of manufacturing and sales operations
		⑧ Changes in the management system for contracted and temporary employees
		⑨ Supply chain restructuring
		⑩ Compilation of BCP data

Manufacturing and Logistics

Our “integrated production system” is considered to be the greatest strength of YKK AP’s *monozukuri*. YKK AP focuses on in-house development, manufacturing, processing and assembly of aluminum, vinyl, and other materials, components, and manufacturing equipment. We have also established processes for high quality and stable supply, including elemental technology used in the development of materials and the creation of manufacturing and logistics systems. We aim to further improve efficiency through a seamless integrated production system, thereby achieving a high level of quality and stable supply.

Integrated production system

We even develop and manufacture manufacturing equipment, delivering a high level of quality through a seamless integrated production system

YKK AP has integrated all *monozukuri* processes at its own manufacturing sites in Japan and overseas. The glass used for our vinyl windows and other core products is procured as raw sheets and processed in-house into Low-E glass and triple-glazed glass. In addition, we handle every process from the beginning, such as smelting the raw metal for aluminum, and blending the base materials for vinyl.

Even the development and manufacture of parts, which constitute the backbone of our products, are carried out in-house. We build on our technological development capabilities, including elemental technologies, to produce metal and plastic functional parts such as door rollers, screws, and netting for screens. The plant also has various types of test and evaluation functions, and ensures the quality of the parts.

In addition, an in-house division called Machinery and Engineering is responsible for the development and manufacture of specialized equipment for making our products. We are working to further enhance our technical competitiveness through seamless and rapid collaboration between the Machinery and Engineering, the Research and Development, and the Manufacturing.

From FY 2021, as part of the “Realization of Manufacturing Reform,” business policy of the 6th Mid-Term Management Plan, we will also pursue a shift to smart factories. We are restructuring our manufacturing and supply systems through business collaboration, and building efficient new production lines by harnessing data on equipment, people, and production management.

We believe that our insistence on integrated in-house production enables us to develop technology quickly, control costs throughout the supply chain, and guarantee reliable quality. It is because of this integrated production that the philosophy of “starting at the source,” under which we pursue materials and equipment in order to solve problems, has taken root. This basis was built by Tadao Yoshida, YKK’s founder. In the 1940s, the U.S.A. was a far more industrially advanced nation. Seeking to compete with their fastening products, Yoshida spent 2.5 times the company’s capital at the time to import and study U.S.A.-made machinery. He developed his own improved equipment and implemented a business model of integrated production, from raw materials to commercialization. By upholding and maintaining that spirit, we will continue on our high-quality *monozukuri*.

● The cornerstone of YKK AP’s *monozukuri*: the Integrated Production System



Materials

We produce materials in-house for aluminum, this involves everything from melting to extrusion and surface treatment, and for plastic, from raw material blending to extrusion.



High-performance glass

We process our own high-performance and high-functioning double and triple insulating glass.



Components

YKK AP produces everything in-house, from operating and functional components to screws and screen netting.

Manufacturing equipment

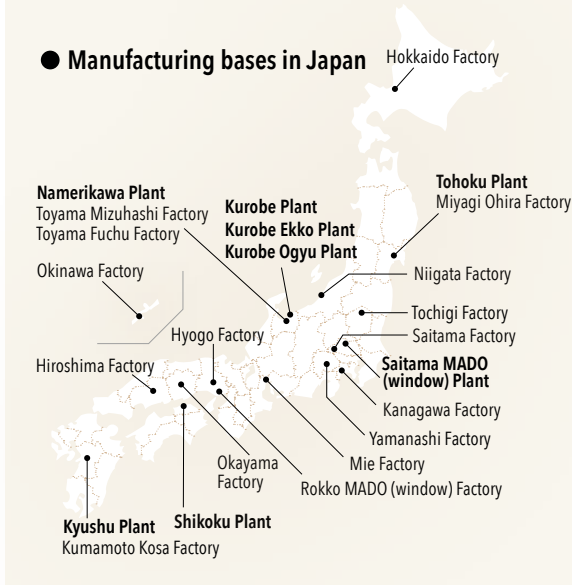
YKK AP has developed its own manufacturing equipment, production lines, and process control systems, etc., and has deployed them in the company’s plants in Japan and overseas.



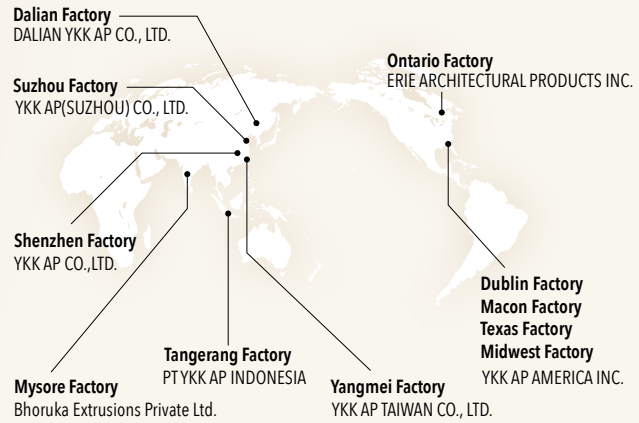
Processing, assembling, packaging

Our APW vinyl window series products are produced in our carefully controlled plants, from preparing the glass to manufacturing the components and assembling the windows, thereby ensuring high performance.

● Manufacturing bases in Japan



● Overseas manufacturing bases



Logistics

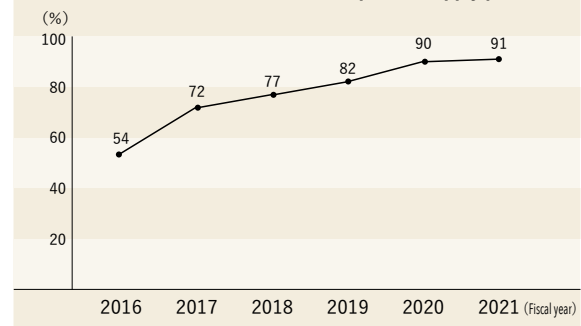
Expanding and enhancing unit load to achieve sustainable logistics

A shortage of drivers has led to the distribution industry facing rising delivery costs and other issues. To ensure efficient and stable logistics, we are expanding and enhancing our “unit load” system, in which goods are stacked on pallets and consolidated into units. Goods are loaded onto pallets for transportation, allowing for easy loading and unloading at transit points. This has enabled us to establish an efficient system of intermediary transportation to all regions of Japan.

We have implemented palletization on a regional basis and achieved a palletization rate of 91% for residential component supply products as of March 2022, resulting in an annual reduction of 110 million yen per year in trunk line transportation costs. For commercial products, we have developed attachments and pallets specifically designed for such products to achieve an efficient transportation system.

We will continue to pursue unit-loading to achieve greater logistics efficiency and a more stable supply system.

● Palletization rate for residential component supply products



Health and Safety

A fulfilling and pleasant working environment for the health and peace of mind of our employees.

Another important issue is to create a safe and healthy workplace for employees involved in *monozukuri*. YKK AP establishes a stress-free, pleasant working environment by introducing air-conditioning equipment and clothing as measures against the heat. We have improved cafeterias, restrooms, and other aspects of the environment to create a fulfilling workplace where employees can work with vitality.

To enhance safety, we also continue to conduct “periodic machinery and equipment safety inspections” every three years to ensure the intrinsic safety of our equipment. In addition, since FY2021, we

have been identifying and improving “shortcut behaviors” and “troublesome tasks” in the workplace in order to eliminate all unsafe practices. We will continue to engage in safety and health activities to create a safe environment where employees can enjoy peace of mind.



Sales

The first step for having YKK AP products help meet various social needs, such as energy conservation, comfort, and safety, is to make end users and professional users aware of our products. In addition to realistic product presentations at showrooms and exhibition facilities, YKK AP communicates information through web content and other channels. Building on our architectural expertise, we are also refining our sales and proposal skills to be able to talk about buildings as a whole.

BtoC activities

Proposing healthy and comfortable living, by using both real and online showrooms

YKK AP has established showrooms throughout Japan to enable customers —the end users— to actually “see, touch, and experience” YKK AP products. The showrooms are more than just product displays. Rather, customers can feel for themselves the differences in thermal insulation and soundproofing and learn how to maintain the products, thereby communicating the performance required of windows and the importance of choosing the right ones. Further, our professional advisors then suggest the best products to meet the needs of our customers and support them in creating better homes.

In November 2020, we also released the Window and Entrance Door sections of our “O-uchi de Showroom” web content, which allows visitors to find hints for selecting products from the comfort of their own home, just as they would when visiting a showroom. In March 2022, the Exterior section was added, and the total number of site visitors surpassed 60,000. The exterior section introduces exterior products such as gates, fences, and carports that can be added to a residential home to improve ease of living and the overall impression the house gives. The key points of product selection are explained in a video, and proposals are made for total coordination of buildings and exteriors to suit customers’ homes



“O-uchi de Showroom” exterior section



“HEALTHCARE MADO” promotion

and lifestyles.

In October 2021, we launched the “HEALTHCARE MADO” promotion to introduce the health care benefits of vinyl windows. Remodeling with high thermal insulation vinyl windows allows room temperature to be maintained at a comfortable level and makes condensation less likely to occur. This can be expected to reduce the occurrence of mold and mites, some of the possible causes of allergies. A special website is now available to provide information on the health care benefits of these vinyl windows and information on using them for remodeling. The official YKK AP YouTube channel also features first-hand accounts from families who have adopted vinyl windows.

Through our showrooms and web content, we will continue to provide information on our products and propose ideas for safe, secure, healthy, and comfortable homebuilding to our customers.

● TDY Alliance, a business alliance in the remodeling field celebrating its 20th anniversary

Since February 2002, YKK AP has been part of a business alliance in the remodeling field with TOTO LTD. and DAIKEN CORPORATION. With a message of “bringing smiles into people’s lives,” the TDY Alliance, which celebrates 20th anniversary in 2022, collaborates in areas including the planning and development of products, sales support systems, and more. Proposals for remodeled spaces are made possible by combining products from the three companies, such as the “Ten People, Ten Houses” lifestyle proposal using TDY products. Information is communicated through 13 collaborative showrooms nationwide, large-scale fairs, and the “TDY Remodeling Information Website.”



Example of a “Ten People, Ten Houses” plan



BtoB activities

Sharing of information through facilities and forums for professional users

Having professional users gain a deeper understanding of YKK AP products that contribute to solving social issues and enabling healthy, comfortable living is crucial in making customers familiar with those products. The “YKK AP Experience Showroom” in Shinagawa, Tokyo is a facility established to help professional users in the construction industry learn about our products. The showroom includes a section for experiencing thermal insulation effects, which consists of five rooms with different window and wall insulation specifications, each with three exterior walls cooled with outside air at 0 to 5°C. Rooms with high thermal insulation properties are tailored to specifications that can achieve the upper energy-saving grades (grades 5-7) of the Housing Performance Indicator System, which was newly established in FY 2022. Visitors can experience the performance of the windows through differences in temperature and condensation in each of the rooms.

In addition, starting in 2021, we are holding “PROPOSAL 8th” to propose next-generation concepts for commercial products. “PROPOSAL,” first held in 2000 and now in its 8th year, presents to professional users the elemental technologies for building exteriors that YKK AP has developed and accumulated, such as architects and construction companies involved in building construction, as prototypes using full-scale exhibits.

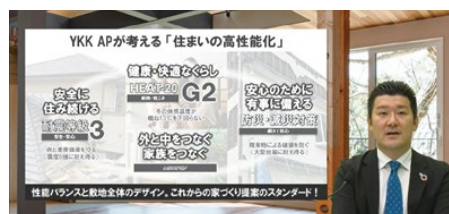
In addition, starting in FY 2020, we are also operating the “Live

Stream Forum,” an online forum for professional users involved in the home building process. We provide live lectures by experts on topics such as high-performance residential homes, renovation, and exteriors, and in FY 2021, a cumulative total of about 3,500 people viewed six sessions.

We will continue to share information with professional users by drawing on the advantages of both virtual and face-to-face communication.



Panoramic view of the “PROPOSAL 8th” venue



A scene from “Live Stream Forum 2021”

SE (Sales Engineers)

Creating homes that solve problems based on extensive knowledge of residential housing

One of our greatest strengths in proposing solutions is our sales engineers (SE), who make technical proposals together with sales representatives. Our 50 sales engineers belong to the Product Development, Residential Business, Research and Development Division and are located at 10 sites in Japan. Based on our knowledge of not only windows but also residential homes as a whole, we propose the most effective window types and optimal product layouts based on simulations of thermal insulation, ventilation, and sunlight.

Currently, 16 of our SEs have acquired the “Wood Structure Meister Level 2” certification on wooden house structure and seismic performance. We propose “earthquake-proofing + heat insulation” performance improvements and provide design support for renovations, taking advantage of products such as “Frame II,” which enables seismic retrofitting without reducing the number of windows. With these proposals based on our knowledge of residential homes as a whole, we are addressing social issues such as the revitalization of the stock housing market.

We also provide information to address the requests and problems of professional users, tailored to the characteristics of each region of Japan. As an example, we conduct verification of the value of shutters in areas where snow tends to build up. At our Value Verification Center, we have conducted lateral pressure verification on shutters by reproducing falling snow and using virtual materials that simulate snow buildup, thereby demonstrating the utility of shutters as a snow damage countermeasure that prevents breakage of windows and glass to make proposals for installation.



Shutter - lateral pressure verification using dummy materials simulating snow accumulation



Shutter - lateral pressure verification using reproduced snowfall

Installation

YKK AP products are not completed just by being manufactured. They are completed only when they are installed in residential and commercial buildings and they begin to function for customers to use. In other words, just like the product itself, installation is tied closely to quality.

Meanwhile, labor shortages are a major challenge facing the construction industry. YKK AP is striving to develop human resources and labor-saving efforts, etc., to solve such social issues and further improve the quality of installation.

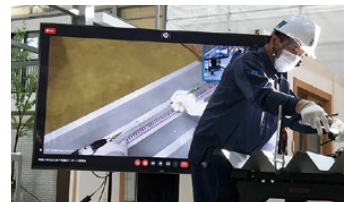
FE (Field Engineers)

Using an in-house qualification system to hone technical skills and improve installation quality

Field engineers (FE) are engineers who contribute to our business by working on the front lines of installation sites. Field engineers belong to the Field Technical Center (FTC) of the Fabrication Technology Department in the Manufacturing Division. There are currently 39 working at 10 regional offices and 14 sites in Japan. They provide technical guidance to professional users in each area through training and educate them on how to ensure final quality and prevent faults. Further, in addition to visiting the site and investigating the causes when a fault has occurred, they provide feedback to the FTC and Product Development, leading to improved products.

As engineers, they need established targets to refine their technical capabilities, but there are no national, public, or private certifications directly related to the field engineer role. Accordingly,

the education working group of the FE Operations Improvement Review Committee, which was launched in FY 2016, proposed an internal certification system. The secretariat for the certification system was launched in FY 2017, and the basic concept and details of the system were examined. The system began operation in FY 2018. As of FY 2021, ten engineers had been certified for Level 1 and six for Level 3. FEs that have honed their technical skills provide stable quality and service in installation work.



Online installation training for professional users

Co-creation to improve installation quality

Sharing issues and technical information and leveraging them to improve installation quality

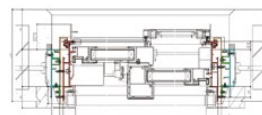
Co-creation and collaboration with professional users involved in construction is indispensable to solving issues and improving installation quality. "DO SPACE Ageo," located in Saitama Prefecture, is a facility established to train and raise the level of exterior construction technicians and pass on installation skills. It develops and implements training curricula to ensure a high standard of quality for an increasingly diverse range of products and technologies. The "Installation Techniques Study Group," which launched in May 2021, will conduct research on topics such as the establishment of a standard construction model suited to actual construction sites, training of installation technicians, and the development of training methods. In collaboration with the Tokyo Metropolitan Area Construction Cooperative Association and experienced installation technicians, a total of eight meetings were held in FY 2021. Through these efforts, we aim to share the skills of experienced installation technicians and further improve installation techniques throughout the industry.

In addition, professional users' expertise in window remodeling is shared at "MADO (Window) Shop BS Meetings." Conceptual design

plans were examined and construction verification conducted using expertise from the field, leading to the joint development of "Mado Remo Thermal Insulation Windows for Condominiums." Together with professional users who are familiar with construction sites, we are working to further improve installation techniques and develop products that draw on our knowledge and expertise.



Exchange of opinions on research topics at the Installation Techniques Study Group



Consulting with professional users based on conceptual design plans



Installation Skills Training Academy

Aiming to develop human resources and transfer skills, two issues facing the construction industry

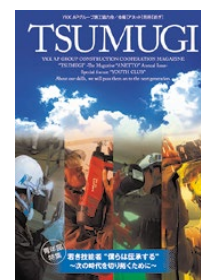
In FY 2013, we established the “Installation Skills Training Academy” jointly with the “YKKAP Group Installation Cooperative,” which is composed of sash and curtain wall installation specialists. Every two years, trainees participate in a training program divided into three levels: Standard Course, Standard Course 2, and Specialist Course. It is said that it normally takes ten years of actual work experience to acquire the skills for sash and curtain wall installation, but our Training Academy trains technicians in as little as six years, with three courses based on skill level. As of FY 2021, a cumulative total of 311 young technicians have participated in the program.

In FY2021, we also worked to support the recruitment of installation specialists through the creation of educational videos for installation workers and the publication of a newsletter. Going

forward, we will work with the Installation Cooperative to address human resource development and skills transfer, which are issues facing the construction industry.



Left: Educational video for installers



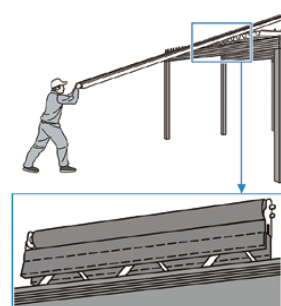
Right: Newsletter highlighting the activities of young technicians

Labor-saving in installation work

Supporting jigs contribute to labor-saving, safe, and efficient operation

As products become more sophisticated with higher thermal insulation and fireproofing specifications, their weight is increasing accordingly. This, coupled with the aging of the installer workforce, has led to increased workloads on sites. In response to this situation, YKKAP has developed support jigs that save labor during transportation and installation. The “Folded Plate Lifting Roller” provides support for lifting folded plates, the material used for roofing carports. In addition to reducing the burden on installers, the reverse rotation prevention mechanism enhances safety. Other new developments include a “concrete cutter” that improves safety for

installers and the environment with its superior dust collection performance, and a “simple hand crane” that assists in the loading and unloading of trucks. The use of such devices can reduce efforts, contribute to ensuring safety during installation and transportation, and help increase efficiency.



Folded Plate Lifting Roller

Installation guidance to overseas installation technicians

Achieving a high level of installation quality by conducting training around the world

As we expand our businesses around the world, it is important to maintain installation quality in order to ensure product quality. In Taiwan, where YKKAP has developed a construction contracting business model similar to that in Japan and enjoys a large share of the luxury condominium market, the “Installation Skills Academy” was held for members of the Installation Cooperative Association, which consists of local installation contractors and others. Even though it is not possible to dispatch employees or instructors from Japan due to the COVID-19 pandemic, local employees who understand Japanese installation techniques and quality provide installation guidance and training to ensure high standards. In

China, where our focus is on system sales, we have established installation training centers in Shenzhen and Suzhou to provide training to installation specialists retained by customers. Similarly,



On-site installation training in Taiwan

in Indonesia, we conduct installation training in order to improve the technical skills of local installation technicians.

Product use

YKK AP products are deeply connected to our customers' lives. For this reason, we are focusing our efforts on enhancing delivery of information and maintenance support to ensure that our products can be used safely and reliably for a long period of time. We communicate know-hows for healthy and comfortable living, as well as safe usage and care methods, through a variety of media. We aim to improve the quality of our response when a fault or malfunction occurs, and further increase our customers' satisfaction.

Providing information to customers

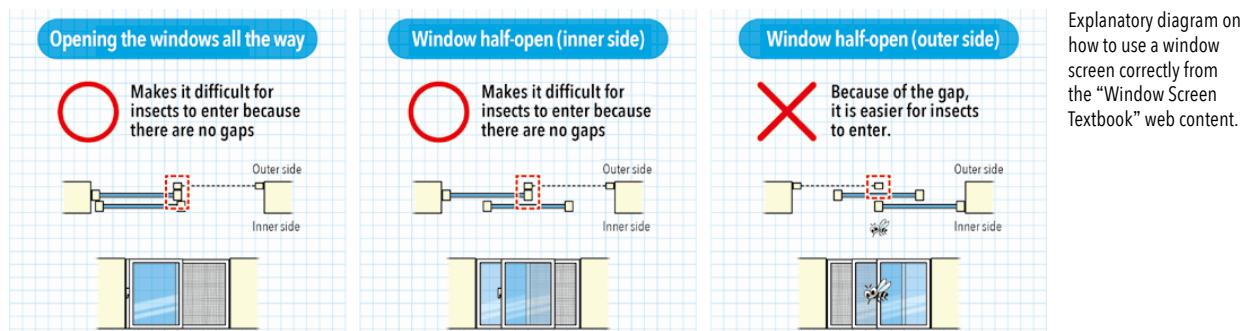
Promptly communicating accurate information and supporting healthy and comfortable living

Windows and doors — YKK AP's core products — have a significant impact on the indoor environment. In order to make our customers' living spaces even healthier and more comfortable, we proactively communicate information on how to effectively use our products. In FY 2021, we released the "Window Screen Textbook" as online content. While ventilation has been a focus of attention during the COVID-19 pandemic, we have also heard from customers about their concerns about insects entering through screens. In addition to the correct way to use screens to reduce insect entry, this web content provides easy-to-understand illustrations and videos that explain how to keep insects away and tidbits of information on cleaning. We also opened the first store in the window field on "Gokko Land," a popular social experience application for children, and released a game for children titled "YKK AP's Home Comfort Challenge!". We hope that by coming into contact with windows through the game, children will think

about windows in real life, actually open windows and interior doors to ventilate their rooms, and have conversations with their families about comfortable living spaces.

Further, as a Gold Contributor to Product Safety, we also invest effort in disseminating information aimed at achieving an even higher level of safety and peace of mind. In particular, when children, who have small hands and bodies, use windows or doors, or similar equipment, there is a possibility of accidents that would not occur with adults. To prevent these kinds of accidents, we have collaborated with the popular "Poop Workbook" series to publish and utilize a booklet and online game, aimed mainly at elementary school students, to have fun learning about how to use windows and doors safely.

We will continue to provide information through a variety of media in order to ensure healthy, comfortable, safe and secure living for our customers.



Top screen of "YKK AP's Home Comfort Challenge!" game for children



"The Poop Home Safety Workbook: Windows and Doors Version" booklet

Customer support

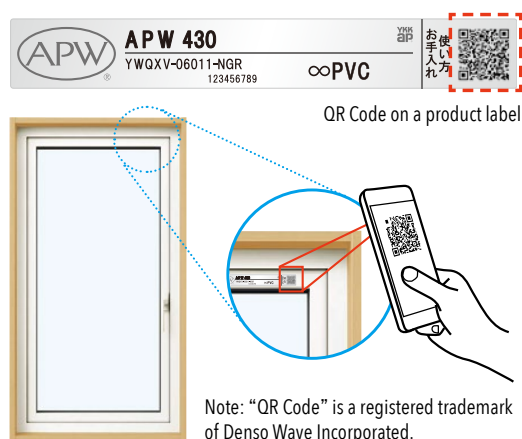
Quickly providing easy-to-understand user instructions

YKK AP products age along with the buildings in which they are installed. In order to ensure that our products can be used safely and reliably for a long time, we also strive to provide information on how to use and care for them on a daily basis. For example, we print QR Codes* on product labels to give customers quick access to usage and care instructions. When the QR Code is read with a smartphone or similar device, customers can easily check how to use and care for the product in question. The QR code can also be used to make inquiries smoothly and directly without filling in product information.

Booklets such as the Owner's Manual, which is given to customers at the time of handover through the installation company, are produced by conducting user verification, including on product safety and usability, at the Value Verification Center,

while confirming that the necessary information has been provided and that the explanations are easy to understand. They also confirm that the information is organized so that it can be intuitively grasped, and the product can be used easily, correctly, and safely.

Customer feedback is indispensable for disseminating handling user instructions in an easy-to-understand way. Customer feedback received at the customer service center and in showrooms is shared within the company. We are reflecting customer feedback by, for example, releasing a video on the official YKK AP website that explains in an easy-to-understand way how to operate the electronic Smart Control Key for entrance doors and register the key. Through these efforts, we aim to ensure that all customers can use our products safely for a long time.



Explanatory video on how to operate the electronic Smart Control Key

Owner's Manual

Maintenance support

Higher customer satisfaction through improved and standardized quality of response

Prompt response in the event of a malfunction or other fault is crucial to having customers use our products safely for a long time. YKK AP strives to improve and standardize the level of response quality by having Maintenance Business Development Department take the lead in sharing information with the Maintenance Centers in each region.

We are also working to improve response quality and call reception environment in the Call Centers that play an important role as consultation desks for customers. Further, we launched the YKK AP Certified Maintenance Technician Association to share information by certifying installation technicians who have superior skills as YKK AP Certified Maintenance Technicians* and having them join the Association. Technical training and other programs

will be implemented to improve and standardize the quality of response. * No. of Certified Technicians: 561 (as of June 1, 2022)



YKK AP Certified Maintenance Technician conducting maintenance on a shutter

Co-existence with the Environment

Aiming to leave a better society/environment for the next generation,

YKK AP is taking on the challenge of creating new value and achieving zero environmental burden, through technical innovation.

We strive not only to create environmental value in “research/development/verification,” “materials procurement,”

and “manufacturing/logistics,” but also to solve environmental issues at the “sales,” “installation,” and “product use” stages.

In addition, we are strengthening efforts in each area with the aim of achieving carbon neutrality in 2050.

YKK AP Environmental Action Plan aimed toward 2050

Aiming to resolve environmental issues throughout the value chain

YKK Group has established the “YKK Group Environmental Vision 2050,” which maps out the long-term orientation of our environmental initiatives. Under this policy, YKK AP has established its vision for 2050 to “achieve zero environmental burdens throughout the entire lifecycles within our business activities.” In the Mid-term Environmental Policy for FY 2021 to FY 2024, we have set environmental targets for the entire value chain with the aim of resolving and contributing to the resolution of the environmental issues of “climate change,” “resource recycling,” “water,” and “biodiversity,” and are working to achieve them.

As the structure for promoting these activities, the “YKK AP Environmental Policy Board Committee,” chaired by the president, formulates and approves environmental policy and strategy

from a management perspective. Under that policy, the “YKK AP Environmental Committee” incorporates the environmental policy into sales, research & development, manufacturing, management, and overseas divisions. Further, in FY 2019, we agreed to the Task Force on Climate-related Financial Disclosures (TCFD). Based on it, we analyze scenarios of climate-related risks and opportunities to determine the impact on our business and finances and incorporate the findings into our management strategies.

To confirm the progress of these environmental policies and environmental compliance, we conduct annual internal environment audits. We have also acquired ISO 14001 certification at all locations in Japan and at ten locations overseas and are continually working to increase the level of environmental management.



Taking on the challenge of carbon neutrality

Horizontal deployment of energy conservation and expansion of renewable energy

YKK AP has set its target of reducing greenhouse gas emissions to 50% (compared to FY 2013) by FY 2030. In February 2021, this target was certified by the international organization Science Based Targets initiative (SBTi) as being “well below 2°C” based on scientific evidence. Toward realizing this goal, we will triple our investment in renewable energy compared to FY 2020, and further strengthen our commitment to achieve carbon-neutrality in 2050.

Also, raw material procurement accounts for nearly 90% of our Scope 3 CO₂ emissions. In particular, the procurement of aluminum (mining, refining, and overseas transportation), which we use to produce aluminum window frames, etc., has a significant impact. In addition to increasing the ratio of recycled aluminum use, we are promoting the market penetration of vinyl windows that use PVC, which CO₂ emissions is less than 20% of aluminum.

At the product-usage stage, we are helping to reduce CO₂ emissions in offices and houses by boosting the market penetration of vinyl windows, which have high thermal insulation performance. In FY 2021, our contribution to reduction of CO₂ through high thermal insulation products was 117% of the FY 2020 level, and we will contribute to further reductions by increasing the high thermal insulation products.

In regard to logistics, we have introduced double-trailer trucks for transportation over land, which enhances loading efficiency by increasing the amount of cargo to 1.8 times the original load. We will continue to reduce CO₂ emissions through the introduction of modal shifts and large-capacity trailers, etc.



The history of YKK AP's environmental activities and future vision for 2050

1990 / 1995 / 2000 / 2005 / 2010 / 2015 / 2020 / 2030 ... 2050

The 5th Mid-term Environmental Management Policy → The 6th Mid-term Environmental Management Policy → Long-term vision

Observance of compliance

[YKK Group Environmental Pledge (1994)]

- Response to/compliance with environmental laws and regulations
- Establishment of the environmental management structure
- ISO 14001 certification (The first certified in YKK AP: M&E Center (1998))

Response to recycling-oriented society

- Establishment of the YKK AP Environmental Committee
- Development/promotion of eco-products
- Continued reduction of the environmental burden (energy conservation, 3R, chemical agents)
- Environmental communication and education
- Creation of an environmental management system
- Social Environment Report (since 2005)

Response to sustainable society

Low-carbon, resource recycling, coexistence with nature

- Creation of a sustainable society through products and *monozukuri*
- Increasing the level of eco-products; improving societal recognition (outside awards)
- Enhancement/visualization of energy policy; utilization of natural energy
- Strengthening of communication inside and outside the company

Response to sustainable society

Simultaneous pursuit of business growth and the environment

Creation of environmental value at all stages of the lifecycle

- Increased contribution to the reduction of CO₂
- Global activities to reduce the environmental burden
- Environmental activities with everyone participating

Achievement of a sustainable society

Decarbonization, circulation, coexistence

Achievement of "zero environmental burden" throughout the entire lifecycle in business activities

- Achievement of zero CO₂ throughout the lifecycle in products and *monozukuri*
- Use of renewable/recyclable materials
- Expansion of coexistence with nature and the community

YKK AP Environmental Management Policy (FY 2021 to FY 2024)

Creating environmental value at every stage of the lifecycle: Toward a brighter future for nature and humanity

With the intention to make a better society and environment for the next generation, YKK AP will take on the challenge of creating new value and achieving zero environmental burden, through technical innovation.

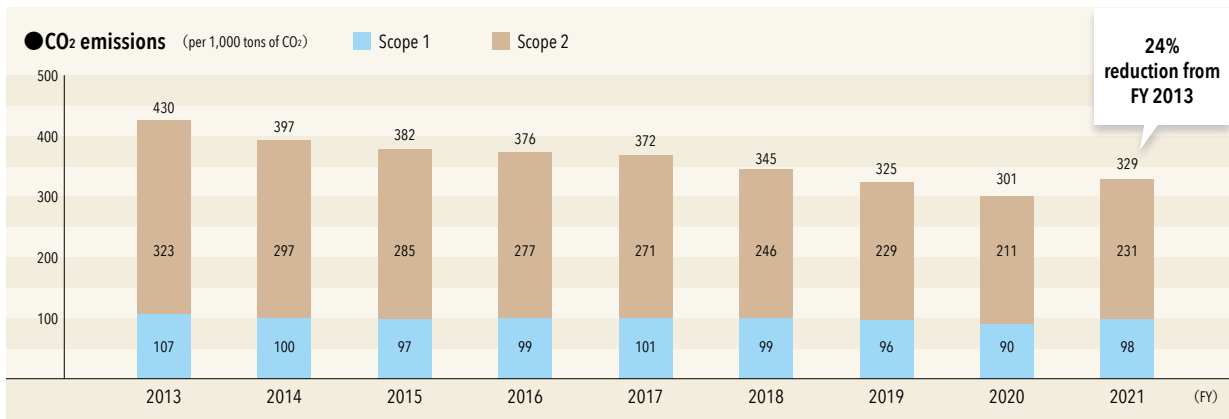
- We will strive to contribute to resolving environmental issues throughout the value chain and reducing the environmental burden.
- We will address climate change, resource recycling, water, and biodiversity as environmental issues.
- We will create new environmental value with an eye toward the future, on a foundation of diverse human resources.

FY2024 environmental targets (Compared to FY2013)

Research, development, and verification ▶ Material procurement ▶ Manufacturing and Logistics ▶ Sales ▶ Installation ▶ Product use

<h3>Climate change</h3>	<ul style="list-style-type: none"> ● Development of products as measures against climate change <ul style="list-style-type: none"> ● Scope 3: Reduction of CO₂ emissions by 20% ● Scopes 1 + 2: Reduction of CO₂ emissions by 36% ● Achievement of zero-CO₂ model factories ● Contribution of a 149% reduction of CO₂ through high thermal insulation products (compared to FY 2020) 	<ul style="list-style-type: none"> Customers <ul style="list-style-type: none"> ● Showrooms linked to the community Society <ul style="list-style-type: none"> ● Education of the next generation ● Contribution to the local community Employees <ul style="list-style-type: none"> ● Environmental activities with everyone participating
<h3>Resource recycling</h3>	<ul style="list-style-type: none"> ● Improvement of the internal recycling rate of vinyl windows <ul style="list-style-type: none"> ● Reduction of waste emissions by 32% ● Reduction of packaging materials by 20% (FY2022) ● Utilization of outside company scrap from vinyl windows 	
<h3>Water</h3>	<ul style="list-style-type: none"> ● Development of products as measures against damage from windstorm and flooding ● Reduction of total water usage by 24% 	
<h3>Biodiversity</h3>	<ul style="list-style-type: none"> ● Achievement of hexavalent chromium-free products ● Achievement of factories that are in harmony with local nature 	

Systems/efforts toward achievement of environmental targets → **Review/revision of eco-product evaluation items/criteria** + **Implementation of an eco-factory evaluation/certification system** + **Circular economy/bio-economy/sustainable energy**



About the Scopes

- **Scope 1**...Direct greenhouse gases emissions from fuel burned by own company
- **Scope 2**...Indirect greenhouse gases emissions from electricity used by own company
- **Scope 3**...Indirect greenhouse gases emissions from across own company's supply chain (excluding Scopes 1 and 2)

Taking on the challenge of a circular economy

Efforts to “reduce/reuse” waste from the company

Our company is promoting 3R activities* (reduce, reuse, recycle waste, etc.) in order to achieve a circular economy. In terms of waste produced in our business activities, we aim to “improve our recycling rate (zero landfill)” and “reduce the production of waste by 40%,” and are working to turn waste into valuable resources, recycle waste, and improve yield rates.

In regard to “improvement of our recycling rate,” we have achieved zero emissions since FY 2017, as defined by our company (a recycling rate of at least 97% of waste generated in conjunction with our business activities). As for industrial waste from domestic manufacturing sites, we achieved a recycling rate of 100% in FY 2019, while 99% for Japan and overseas in total in FY 2021. Overseas manufacturing sites have also improved to 91%, and initiatives to reach 100% are ongoing.

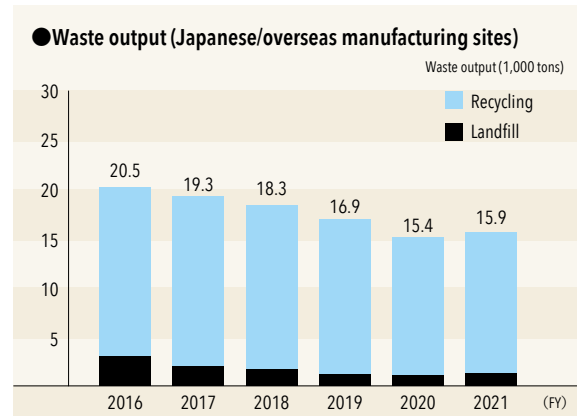
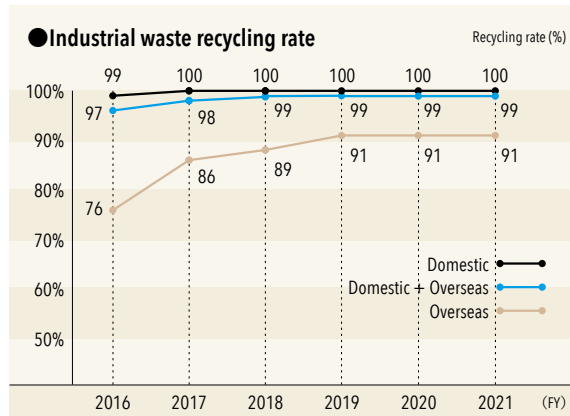
In regard to “reduction of industrial waste,” we began focusing on reduction of plastic packaging materials from FY 2020 and are promoting simple packaging, returnable packaging, and standardization of packaging materials. Further, we are promoting the conversion of waste to valuable materials by manufacturing RPF (refuse-derived paper and plastic-densified fuel), which uses film, laminate, and other waste plastic and old paper as raw

materials. We reduced the total amount of waste product in Japan and overseas in FY 2021 by 22% compared to FY 2016.

Initiatives after product use Development of the infrastructure for recycling aluminum/plastic

The company is taking on the challenge of creating a circular economy for aluminum and plastic, which are the main materials of products. In regard to aluminum, recycling inside the company has already reached 100%. As for recycling outside the company, we improved the recycling rate to 25% in FY 2021 in an effort to expand the use of scrap materials and the proactive utilization of recycled metal. We will accelerate the transition to of aluminum in the future by operating recycling furnaces for recycled materials, etc.

In regard to plastic, due to aging, vinyl window waste in the market is expected to increase in the future, and the recycling of plastic used in the discarded window frames is an issue. We participate in the Reviewing Committee for Recycling of Used Vinyl Window, an industry-academia partnership launched in 2019, and the entire industry is working to establish a system to collect and recycle vinyl windows in the market.



Vice President
Safety & Environment
Department

Shunichi Matsuda

“Aim for a balance between business growth and the environment.”

The number of companies that view the environment as a management issue is now increasing. YKK AP is no exception, of course, and we have established as its vision for 2050 to become a company that produces zero environmental burdens across all product lifecycles, and are striving to achieve a balance between business growth and the environment. To do this, it is important that all employees share the goal and have an awareness of their role in contributing to the environment through the business, rather than having just a part of the company working on

energy conservation and recycling. With the Environment Committee serving as a bridge with management, we will overview the value chain and incorporate these concepts into the orientation of efforts and concrete goals at each stage, including development, manufacturing, and sales, etc., in order to raise each employee’s awareness for “contributing to the environment.”

We are planning to carry out a variety of projects in FY 2022, including carbon neutrality, recycling of plastic, and having zero packaging materials waste. In addition to efforts inside the company, we will consider cooperation with business partners and the overall industry, as we contribute to a sustainable society through a multifaceted approach.

* 3Rs: Reduce, Reuse, Recycle

* For details, see our “YKK AP Environmental Report 2022” (Information in Japanese): <https://www.ykkap.co.jp/company/jp/sustainability/environment/report2022/>

Respect for Human Rights and the Active Participation of Diverse Human Resources

YKK AP respects the human rights of all stakeholders involved in our business. In addition, our employees are diverse in age, gender, nationality, and a variety of other attributes. We aim to be a company in which each employee can fully demonstrate his or her individual strengths. We engage in establishing a fulfilling and pleasant working environment that generates “challenges,” “foresight,” and “innovativeness.”

We have further accelerated the promotion of diversity in an effort to create new value.

Approach to and engagement with human rights

Compliance with the “YKK Group Human Rights Policy Statement.”

Respecting the human rights of all people involved in our business

As a company that does business all around the world, we respect the human rights of every individual stakeholder in every country and region in accordance with the “YKK Group Human Rights Policy Statement.” We ask not only our employees but also our business partners who are involved in our products and services to comply with the Statement. We have also strengthened further our efforts by revising the “YKK Group Code of Conduct” in FY 2021 in accordance with the international guidelines regarding social responsibility (ISO 26000) and by including “respect for human rights” in the Materiality of YKK AP that was formulated in FY 2021.

Establishing a Human Rights Working Group to promote internal understanding

From FY2022, the company established a Human Rights Working Group (WG) as part of the Compliance Committee, and strengthen our efforts by integrating the human rights initiatives from our business activities in the past into the entire company. In addition to understanding current circumstances through assessment of new human rights risks and evaluating the importance/severity of those risks, in FY 2022, we promote to raise awareness of human rights through education and training for all employees and understanding of the initiatives inside the company.

●YKK Group Human Rights Policy Statement

[1] Equal Opportunity and the Prohibition of Discrimination

Based on the concept of “fairness,” the YKK Group respects the human rights, individuality and personal character of its stakeholders in all countries and regions of operation. YKK does not condone discrimination, harassment or other acts that disregard human rights. YKK promotes fair business activities by prohibiting the violation of human rights and by taking appropriate action should an infringement occur.

[2] Respect for Basic Labor Rights

The YKK Group respects basic labor rights in all countries and regions of operation, including freedom of association and the right to collective bargaining.

[3] Respect for Employment Practices in Countries and Regions of Operation

The YKK Group respects the laws, regulations and employment practices of all countries and regions of operation. It also prohibits the use of child labor and forced labor.

Operation of a whistleblowing system and continued activities to increase employees’ awareness

With the demand for a “grievance (complaint processing) mechanism” to save workers from human rights violations that occur in corporate activities, etc., the YKK Group implemented the “YKK Group Whistleblowing System” in 2006, and established a system that enables individuals to consult with/report to consultation desks inside and outside the company anonymously regarding behavior that violates laws, work regulations, or internal rules. We are working to make all users aware of it. In addition, from the perspective of protecting whistleblowers, we have prohibited treating individuals disadvantageously due to their consultation.

By aiming to prevent the occurrence of illegal actions and to address them quickly if they do occur in the process of conducting business activities, the whistleblowing system is intended to serve as a structure for firm compliance. We have established a consultation desk for consultation/notification related to human rights violations and compliance, as well as issues related to the workplace environment, mental concerns, and health, and are otherwise giving attention to the mental and physical health of our employees.

We have also implemented whistleblowing systems at overseas companies and have established a system for consultation/notification.

●Initiatives and targets for “respecting human rights” in Materiality

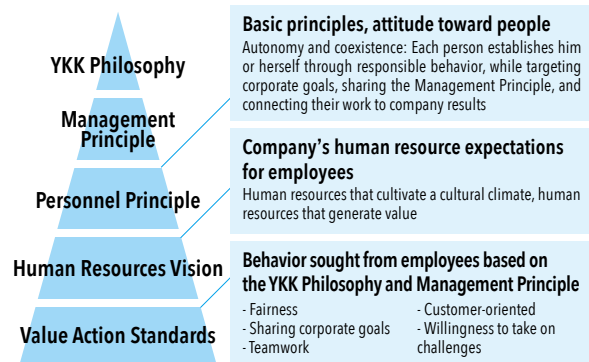
Initiatives	Indicators (quantitative/qualitative)	Future vision (FY 2024)
As corporate social responsibility, we give consideration to human rights issues not only in our company, but also in the supply chain, etc.	Expansion/enhancement of human rights training contents - Implementation of human rights training for corporate officers (in Japan) - Implementation of harassment training for all employees in Japan	A workplace environment where employees can engage in their work actively and comfortably with mutual respect
	Basic transaction principles Number of companies in agreement (Cumulative total)	Fulfilling our social responsibility throughout the entire supply chain
	Number of important suppliers where we have conducted a CSR questionnaire	

Approach and system related to human resources

A further commitment to a “performance based meritocracy,” based on “fairness,” “job (role),” and “autonomy”

Based on the idea of “autonomy and coexistence,” YKK Group creates systems and environments in which each and every employee can demonstrate their full potential, regardless of age, gender, educational background, and so on. The goal is to create a “Forest Organization,” a company in which every employee has a consciousness of being a manager, and grows strongly together as a group, like a forest that is made up of individual trees. To create value as such an organization, we work to develop human resources and achieve truly fair personnel systems.

In the reforming of our personnel systems, we are further focusing on “performance-based meritocracy” in terms of roles, under the philosophy of “fairness,” “job (role),” and “autonomy,” while aiming for equality of roles, results, and treatment regardless of age, gender, educational background, or nationality. In the past, we operated a system for the rehiring of retired employees up to age 65, but we abolished the mandatory retirement age system in



FY 2021. This makes it possible for individuals to work regardless of their age as long as they are able to fulfill the role required by the company. The company supports independent working styles by clarifying the expected working methods and the abilities and experience needed to perform roles, and provides opportunities for employees to forge their own careers and put forth their own intentions.

Promoting diversity

Improving of corporate value through inclusion of diverse human resources

YKK AP has issued the “Diversity & Inclusion Declaration” with the aim of utilizing the diversity of human resources to create new value and increase our future competitiveness in the international community. In particular, as priority issues, we are striving to strengthen the hiring of female employees and support their career development, as well as to expand and entrench the employment of persons with disabilities.

The “AP Woman Career Development Program” which is a career development supporting program for female employees in the 6th Mid-term Management Plan, provides support for the long-term career formation of participants, through various career trainings,

networking inside the company, and operation of a mentor system, etc. In FY 2021, 249 people, who were recommended from each workplace as candidates to be leaders in the future, participated. From the perspective of balancing work and childcare, we have conducted “Survey Related to Diversity & Inclusion” starting from FY 2021. In this survey, we examine the ease of taking childcare leave and the working environment, and analyze the results to reflect them in future measures.

Further, in conjunction with abolition of the mandatory retirement age system, we are working to establish an environment in which people can work regardless of their age, and to expand the hiring of human resources who have foreign citizenship.

● Diversity & Inclusion Declaration

Based on the concept of “fairness,” we will create new value through mutual recognition and acceptance of differences in age, gender, educational background, nationality, and disability, etc.

- 1 We aim to create a workplace where anyone can engage in their work actively and comfortably with motivation, regardless of generation.
- 2 We aim to cultivate female leaders who can make proposals and improvements utilizing diverse perspectives in the fields of sales, manufacturing, technology, and management.
- 3 We aim for a company that can respond to the demands of society through each employee’s diverse values.

● Diversity initiatives

	Step 1 (Past)	Step 2 (Present)	Step 3 (Future Vision)
	Compliance with laws/rules	Accept diversity	Create value
	Focus on superficial characteristics	Management from diversity to value creation	
Educational background	Labor Standards Act	Hiring of human resources with a variety of career backgrounds; fair evaluation	Equal role, Equal results, Equal treatment
Age	Act on Stabilization of Employment of Elderly Persons	● Abolition of mandatory retirement age system: Hiring regardless of age, gender, or nationality	
Gender	Act on Securing, etc., of Equal Opportunity and Treatment between Men and Women in Employment; Act on Promotion of Women's Participation and Advancement in the Workplace (2016)	Promotion of the active participation of women; promotion of women for management positions/section manager-level positions ● Management positions: FY2021: 114 → FY2024 target: 140 ● Section manager-level positions: FY2021: 412 → FY2024 target: 500	
Nationality	Immigration Control and Refugee Recognition Act (Illegal employment)	● Proactive hiring of foreigners	Utilize the characteristics of individuals, create new value, and contribute to business.
Disabilities	Act on Employment Promotion etc., of Persons with Disabilities	● Utilization of disabled individuals according to their nature: FY2021: 2.29% → FY2024 target: 2.50%	
Working style	Labor Standards Act	Achievement of work-life balance ● Encouragement of male employees to take childcare leave: FY2021: 53.0% ● Promotion of taking paid vacation: FY2021: 67.1% → FY2024 target: 80.0% ● Total actual working hours: FY2021: 1,984 hours	Enhancement of work and life

Business leaders' development

Graduate school dispatching and MOT/MBA overseas studies

Aiming to develop the human resources of next generation that will lead business, we dispatch employees to graduate schools (doctorate/master's programs) in Japan and overseas and provide support for MOT/MBA study abroad. Research themes are not limited to current business, and we also proactively recommend the themes that will be even more critical in the future, such as robotics, AI/machine learning, DX, next-generation environmental response, etc. We aim for diversified ideas as an organization by helping employees to gain specialized knowledge and a multifaceted perspective that expand beyond the framework of the company. We dispatched 15 employees in FY 2021, for a

cumulative total of 25 employees.

Further, in addition to recommending the acquisition of doctorates, etc., we aim for collaboration between recipients, with organizations within the company, and with universities and research institutes. We operate the "AP PhD Holder Association" with the aim of further revitalization. By sharing each individual's technological assets and utilizing personal networks, we promote the establishment of an environment and human resources development to enhance business strength. In FY 2021, we conducted seminars with experts, etc.



Seminar hosted by the AP PhD Holder Association



Vice President
Human Resources Department

Yuka Murakami

"Strive to create an environment where employees can engage in their work actively and comfortably."

The company abolished the mandatory retirement system in FY 2021, making it possible for employees to continue working regardless of their age. In the future, we will further pursue "motivation to work" while aiming for true diversity and inclusion in which each employee can fully demonstrate his or her individual strengths regardless of their attributes. In FY 2021, we issued the "Harassment Eradication Declaration," and are implementing realistic training for all employees using the company's original harassment video. In addition, we operate the cross-business

Work Style Reform Committee and Workplace Environment Improvement Committee to review "ease of working" in each office and manufacturing site. We also advance initiatives that are suited to the characteristics of the region and workplace.

I was appointed head of the Human Resources Department in FY 2022. I will further incorporate diverse perspectives and implement initiatives from the standpoints of employees with a variety of attributes. As a company, we will work to establish a corporate culture and environment where each employee in the "Forest Organization" can engage in their work actively and comfortably, and support the company's sustained growth.

Work style reform

Promoting the creation of a healthy and flexible working environment

In FY 2018, YKK AP established the “Work Style Reform Committee,” chaired by Executive Vice President Kosuke Iwabuchi, and has engaged in efforts to achieve diverse working styles, with the aim of revitalizing human resources and improving productivity through work style reform. Four working groups (Engagement Improvement WG, New Work Style Retention WG, Workplace Improvement WG, Company-wide Business Improvement WG) have been established in the Work Style Reform Committee, and measures for improvement based on identification of each issue are promptly implemented.

Up to this point, we have promoted improvement of productivity

through expansion of the system that allows flexible work styles and new work styles such as working from home, shared desk, satellite offices, and revamping communication tools. On the other hand, management of working hours, communication between employees, and efforts to reform work styles at manufacturing/installation sites where telework is difficult, have become issues due to the sudden switch to telework.

Further, as an effort to create “a fulfilling workplace environment,” in FY 2021, we conducted a survey aimed at improving employee engagement and worked to increase the workplace satisfaction level through Workplace Improvement Committees in each department. In order to develop a comfortable environment, we proactively invested in air conditioning, cafeterias, restrooms, and break rooms, etc., at manufacturing sites.



Significant increase of air conditioning equipment at the Tohoku Plant as part of establishing the workplace environment (left). Opening of two satellite cafeterias at the Shikoku Plant (right).

Health Management

Considering employee and family health as a management issue, and promoting prevention measures.

Our company considers employee and family health to be a management issue.

In order to implement and also clarify our health management initiatives inside and outside the company, we issued a “Health Declaration” in 2018. Further, we have promoted the establishment of a healthy environment, etc., to reduce lifestyle-related diseases and control psychological disorders, and were recognized as a “2022 Certified Health & Productivity Management Outstanding Organization (Large Corporation Division).”

In addition, we will prohibit smoking inside the company during working hours, beginning in April 2025. Along with sequential closure of smoking areas in business locations that have had separated smoking areas, we will strive to make all employees aware of support programs and encourage them to quit smoking.

We run employee health maintenance programs in collaboration with external organizations

We have established a health consultation service both inside and outside the company to promote the maintenance of employee

physical and mental health. Inside the company, employees can consult with industrial physicians at business locations and nurses at health management centers, at any time. We also work with external organizations to provide appropriate mental healthcare for employees through counseling by e-mail, by phone, and via remote interviews. This program makes it possible for employees to consult with counselors about a wide variety of concerns regarding their future and their career, etc., and also promotes mental health and increases motivation for work. We help employees to engage in their work actively and comfortably through these efforts.

● Health Declaration

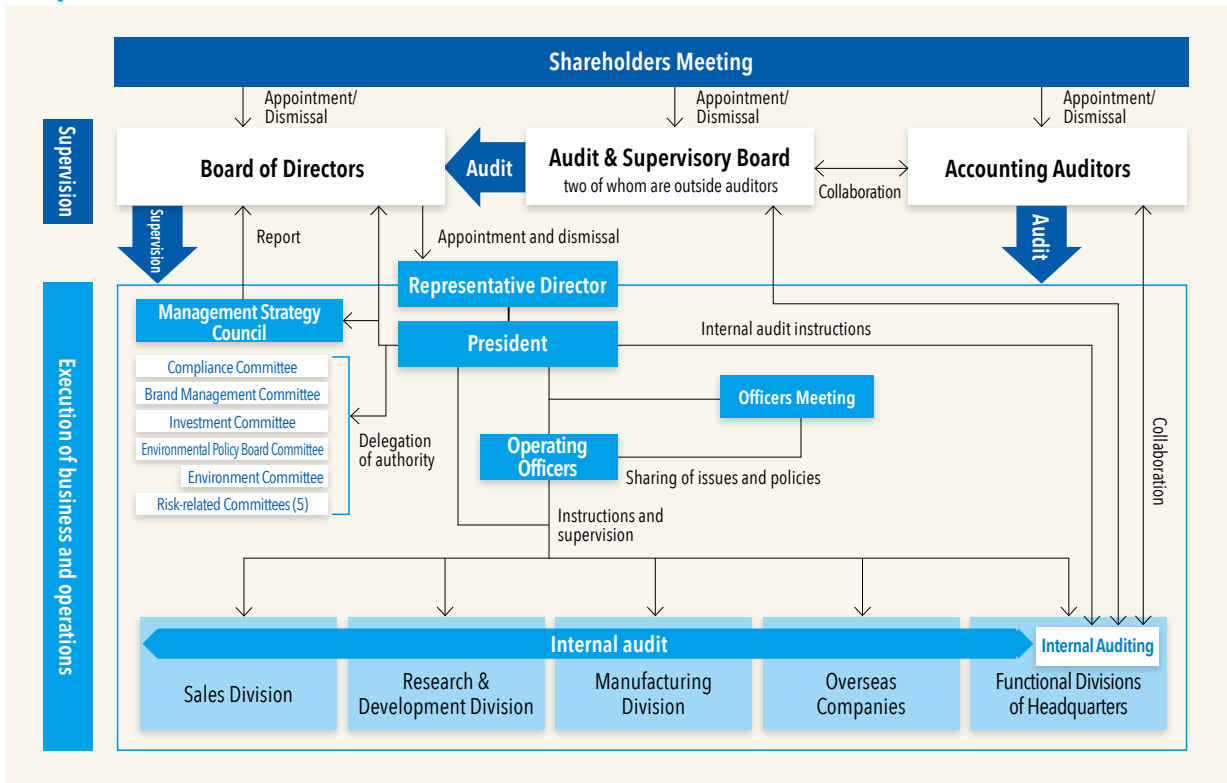
YKK AP aspires to become a company where all employees are able to work with pride and pleasure. We believe that a prerequisite for achieving this goal is for all our employees and their family members to maintain and improve their mental and physical health, which will enable every employee to demonstrate their unique qualities and capabilities to the maximum and to propel our company’s growth and contribute to society. Based on this concept, our company, Health Insurance Society, employees and their families are united in their endeavors for health promotion.

For details, visit our website: <https://www.ykkap.co.jp/company/en/sustainability/health/>

Corporate Governance

Under the philosophy of the “Cycle of Goodness,” we strive to enhance our corporate governance system in an effort to further enrich our corporate value. Our company’s basic approach to corporate governance involves several organizations and systems. The Board of Directors serves to make decisions on important matters, such as the company’s management policy, and serves as an oversight function. The Audit & Supervisory Board, meanwhile, is the company’s auditing organization. The final component of the company’s basic approach is the Operating Officer System, a framework that helps the company promote the execution of business and operations.

Corporate Governance Structure



Separation of management and execution (Execution of duties by directors, Operating Officer System)

Directors comply with the regulations of the Board of Directors and follow the rules regarding director duties, and appropriately carry out business based on the division of duties. They regularly attend compliance training offered by lawyers, etc., and submit to the company written oaths pledging to comply with laws and regulations in performing their duties as directors. In addition, we have introduced the Operating Officer System to ensure the faster execution of business and operations via the separation of management and execution. While directors dedicate themselves to realize total optimization, operating officers execute individual businesses and operations with responsibility and authority, in accordance with the policies resolved in the Board of Directors meeting.

Main Committees for Executing Business/Duties

Compliance Committee

We work to improve the compliance system of our company and subsidiaries. A compliance director is appointed, and he reports to the directors and audit & supervisory board members regarding the development of the compliance system and compliance status.

Brand Management Committee

This committee considers and formulates important policies for our company from a technical standpoint.

Investment Committee

We established the Investment Committee to discuss particularly important investment cases. By going through the review in the committee, they can be evaluated more efficiently by the Board of Directors meeting.

Environmental Policy Board Committee and Environment Committee

The Environmental Policy Board Committee was established to determine our environmental policies and measures, and to supervise the progress of our environmental policy. Also, the Environment Committee promotes the policies of business execution divisions and supervises their progress.

Risk-related Committees (5)

We have appointed a Chief Risk Management Officer (CRO) to promote YKK AP’s risk management. We established a Quality Committee, Trade Management Committee, Crisis Management Committee, Information Security Committee, and Technical Asset Management Committee in order to maintain and enforce regulations.

Directors and Board of Directors (As of June 2022)

Chairman of the Board, Chairman Representative Director



Akira Yoshida

March 1977: Joined Yoshida Kogyo K.K. (now YKK)
1988 to 1995: Served in the U.S.A.
April 2004: YKK Vice President
April 2009: YKK Senior Vice President
June 2011: Director, YKK Director, CFO, Senior Vice President
April 2012: YKK Director, CFO, Executive Vice President
April 2019: YKK Director, Vice Chairman, CFO
June 2020: Chairman Representative Director (Current)
YKK Director (Current)

President Representative Director



Hidemitsu Hori

March 1981: Joined Yoshida Kogyo K.K. (now YKK)
1989 to 2006: Served in the U.S.A.
April 2007: Vice President
April 2009: Senior Vice President
June 2009: Director, Senior Vice President
June 2011: President Representative Director (Current)

Director



Executive Vice President,
General & Administration

Kosuke Iwabuchi

March 1986: Joined company
1996 to 2009: Served in the U.S.A. and China
April 2009: Vice President
April 2016: Executive Vice President
June 2016: Director, Executive Vice President (Current)

Director



Executive Vice President,
CHRO (Chief Human Resources Officer)

Kazuo Matsutani

March 1981: Joined Yoshida Kogyo K.K. (now YKK)
April 2009: Vice President
June 2016: Director, Vice President
April 2018: Director, Executive Vice President (Current)

Director



Executive Vice President,
Business Process Re-engineering

Wataru Otani

March 1981: Joined Yoshida Kogyo K.K. (now YKK)
April 2001: YKK Vice President
April 2004: YKK Senior Vice President
June 2004: YKK Director, Senior Vice President
April 2009: YKK Director, Executive Vice President (until June 2018)
June 2018: Director, Executive Vice President (Current)

Director



Executive Vice President, Sales & Marketing

Shinichiro Yamaji

March 1981: Joined company
April 2009: Vice President
April 2013: Vice President
April 2017: Executive Vice President
June 2020: Director, Executive Vice President (Current)

Director



Executive Vice President,
R&D and Technology

Shuichi Mizukami

July 1985: Joined Yoshida Kogyo K.K. (now YKK)
April 2009: Executive Chief Engineer
April 2010: Vice President
June 2020: Director, Vice President
April 2021: Director, Senior Vice President
April 2022: Director, Executive Vice President (Current)

Director



Executive Vice President,
International Business

Akira Uozu

March 1985: Joined company
April 2013: Vice President
April 2021: Senior Vice President
June 2021: Director, Senior Vice President
April 2022: Director, Executive Vice President (Current)

Director



Fumio Niizeki

March 1977: Joined Yoshida Kogyo K.K. (now YKK)
April 2012: Vice President
June 2014: Director, Vice President
April 2016: Director, Executive Vice President
April 2022: Director (Current)

Director



Chairman, YKK Corporation

Masayuki Sarumaru

March 1975: Joined Yoshida Kogyo K.K. (now YKK)
1977 to 1994: Served in the U.S.A.
June 1999: YKK Vice President
June 2008: YKK Director, Executive Vice President
June 2011: YKK President Representative Director
June 2018: YKK Chairman Representative Director (Current)
June 2020: Director (Current)

Audit & Supervisory Board Members (As of June 2022)

Chair of the Audit & Supervisory Board Audit & Supervisory Board Member (outside)



Susumu Miyoshi

April 1970: Joined Japan Airlines Co., Ltd.
April 2001: Executive Officer of same
April 2004: President of the Americas branch of same
April 2009: Senior Managing Executive Officer of same
February 2010: Retired from same
June 2011: YKK AP Outside Audit & Supervisory Board Member (Current)

Audit & Supervisory Board Member (full-time)



Hisao Miyamura

March 1978: Joined Yoshida Kogyo K.K. (now YKK)
2002 to 2008: Served in China
April 2008: YKK Vice President (until March 2018)
June 2018: Full-time Audit & Supervisory Board Member (Current)

Audit & Supervisory Board Member



Kiyotaka Nagata

YKK Corporation Audit & Supervisory Board Member (full-time)
March 1979: Joined Yoshida Kogyo K.K. (now YKK)
April 2008: YKK Vice President
April 2009: YKK Executive Chief Specialist
June 2013: Outside Audit & Supervisory Board Member
YKK Full-time Audit & Supervisory Board Member (Current)
June 2016: Audit & Supervisory Board Member (Current)

Audit & Supervisory Board Member (outside)



Takashi Miyatani

Mori Hamada & Matsumoto Partner Lawyer
April 1991: Registered as a lawyer (Daini Tokyo Bar Association)
April 1998: Mori Sogo Law Office (now Mori Hamada & Matsumoto) Partner Lawyer (Current)
June 2007: YKK AP Outside Audit & Supervisory Board Member (Current)

Audit & Supervisory Board

In general, the Audit & Supervisory Board, which consists of four Audit & Supervisory Board members, holds meetings 12 times a year to audit the execution of duties by directors from a legal and valid standpoint. They also attend major meetings such as the Board of Directors Meeting, express opinions as necessary, and visit each location to conduct audits in accordance with the audit policy.

Two of the Audit & Supervisory Board members are invited from outside the company. With expertise in corporate legal affairs along with advanced knowledge and experience in corporate management, they conduct audits from an objective and fair-minded stance.

Compliance

Revision of the “YKK Group Code of Conduct”

The YKK Group Code of Conduct was formulated in 2008 as the code of conduct to be implemented by YKK Group employees around the world. Its foundation is the YKK Philosophy and Management Principle. The Code was revised in FY 2021 in light of recent changes in the demands of society and increased importance of sustainability.

The YKK Group Code of Conduct consists of seven principles and 29 bylaws. These principles and bylaws take into consideration and are compliant with the ten principles of the United Nations Global Compact and the eight fundamental Conventions of the International Labour Organization (ILO), and contribute to achievement of the SDGs as well. The revisions also include new

stipulations regarding respect for diversity and other elements that will be the foundation for promotion of diversity management. We will translate them into multiple languages including English and work to ensure that every one of our employees around the world implements the YKK Group Code of Conduct and to gain the trust of all of our stakeholders.

●YKK Group Code of Conduct: 7 Principles

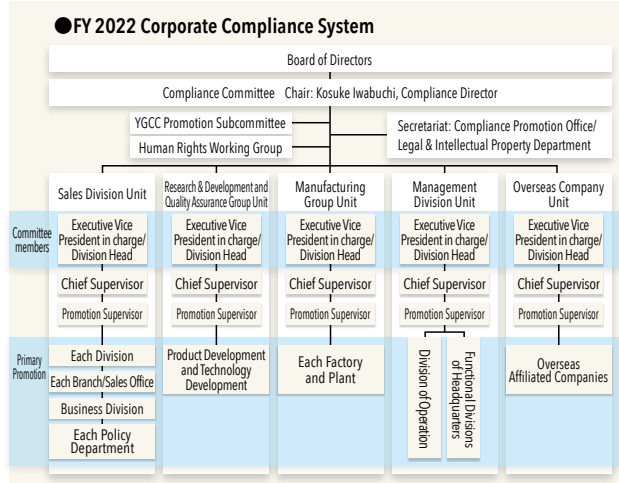
- Compliance
- Fair Operating Practices
- Respect for Human Rights
- Harmony with the Environment
- Health and Safety
- Product Quality and Safety
- Contributing to Communities

* For details, visit our website:
<https://www.ykkap.co.jp/company/en/sustainability/corporate-governance/pdf/code-of-conduct.pdf>

Corporate Compliance System and Education

We have established a Compliance Committee to promote the YKK AP Group corporate compliance system. Divided into five units, this system promotes the compliance activities of YKK AP and affiliated companies. We established a Human Rights Working Group as part of the Compliance Committee in FY 2022, and are strengthening our approach to human rights as well.

In addition to regularly holding compliance training for corporate officers, at least two hours of compliance training is provided to all employees each year. We also provide education led by each specialized department and committee to persons involved in specialized fields (personnel labor, purchasing, environmental safety, trade, information security, technical asset management, etc.).



Standards for Compliance Activities: “YKK Global Criteria of Compliance”

Since FY 2019, YKK AP has been implementing the “YKK Global Criteria of Compliance (YGCC),” which are the YKK Group’s compliance standards based on the YKK Philosophy and ISO 26000. We completed implementation at major sites in Japan and overseas in FY 2021, and we plan to entrench operation of the

YGCC while implementing it at new sites in FY 2022.

We regularly carry out YGCC audits such as self-inspection and internal audits. Standardized monitoring contributes to reduction of on-site workloads by eliminating duplicate monitoring items.

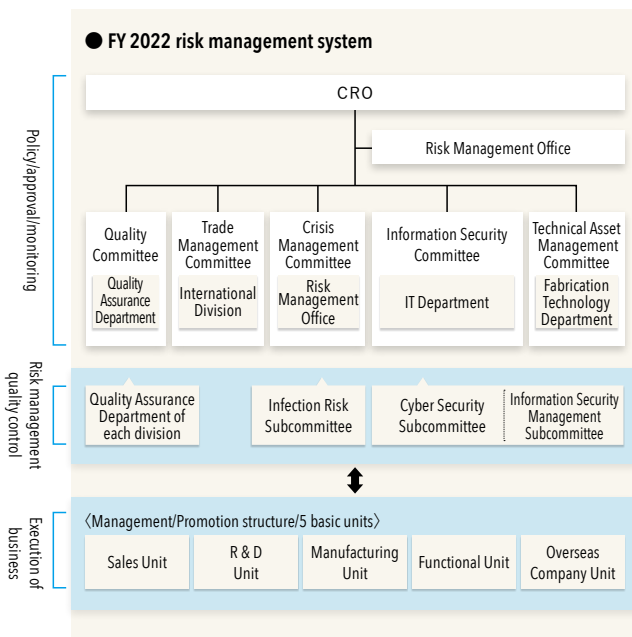


Risk Management

Strengthening of the risk management system

YKK AP has formed five risk committees (Quality Committee, Trade Management Committee, Crisis Management Committee, Information Security Committee, and Technical Asset Management Committee) to enhance the risk management structure and establish a governance structure for emergencies. We have also created rules for each committee and are operating them accordingly.

In FY 2021, in conjunction with changes to the management structure of overseas companies due to reorganization of overseas AP business, we worked to create a risk management structure for overseas companies, focusing on identifying key risks at each company and sharing response policies. In addition, with the demand for a stronger approach to cyber security, in FY 2022, we have established a Cyber Security Subcommittee as part of the Information Security Committee, and are strengthening IT security, and the security structure for information and assets related to IoT and digital products.



Risk map development and selection of key risks

We assess the risks surrounding the business and create a risk map according to changes in the environment, the urgency of response to the risks, and the expected scale of damage. Of these, we have designated 36 key risks that have a significant impact on management, including outbreaks of disease/infection, earthquakes/tsunamis, technology leaks, failure of systems/software. We have clarified the divisions in charge of these key risks and prioritize measures to prevent the risks in ordinary operations.

BCP initiatives

In preparation for disaster and risk occurring, we have formulated business continuity plans (BCPs) at all locations in Japan and overseas. In addition, we carry out regular disaster drills every year to increase the effectiveness of the BCPs.

In FY 2021, we formulated BCPs in preparation for the spread of COVID-19 in order to continue or restart products supply and services as soon as possible, and keep the impact inside and outside the company to a minimum. The plans also stipulate shift to a work/production structure determined in advance in the event of an increase in infected individuals in the workplace, or individuals who have had close contact with infected individuals, and the possibility of impact on supply of products and services, as well as the handling of transfers/business trips to overseas companies. We are implementing the plans in order to prevent the spread of infection and to continue business operations. As part of the supply chain BCP, we also purchase our materials from multiple suppliers, strive to grasp and improve the supply chain (through supplier reassessment and reorganization), arrange emergency substitutions, and secure inventory, etc.

The company holds “a resilient business foundation” as part of its materiality, and, going forward, will rework plans toward an “all-hazards-type BCP” in preparation for a variety of risks, and enhance its risk management.



Vice President, CRO
(Chief Risk Management Officer)

Osamu Anda

“Strengthen risk management in Japan and overseas.”

With the aim of achieving financial soundness and the sustained growth of the company, YKK AP has identified key risks, including the impact of the spread of disease, geopolitical risks, natural disasters, quality risks, and IT risks, and is promoting risk management to ensure the safety of employees in our business activities, reduce or avoid the loss of management resources, and minimize loss and damage in the event of an emergency, and to restore business operations as soon as possible. Further, with the changes to the structure of overseas AP business in FY

2021, we will continue in FY 2022 to work toward achieving “a resilient business foundation,” which is one aspect of materiality, through advance measures during normal times, education and training, monitoring, and other business continuity management (BCM) aimed at strengthening our risk management globally.

As the CRO, I will strive to establish a structure in which we can execute initial measures and the BCP promptly on an all-hazards basis, including in the event of major natural disasters, severing of the supply chain, and cyber accidents, etc., aimed at gaining the ability to continue business appropriately in the event of a serious emergency.

Stakeholder Communication

We work with all stakeholders, including employees, customers, business partners, and local communities, to continue being a company that is trusted by the community and loved by society. We strive to improve our corporate value by providing a place for dialog as necessary to be of use in business innovation and product quality improvement.

Dialog with customers and society

Stakeholders	Relationship with stakeholders	
Customers	<p>Provide better products and services</p> <ul style="list-style-type: none"> - Verify product value from a consumer perspective - Communicate by phone or email to address inquiries and requests - Presentations and proposals on products and services at exhibition facilities - Provide timely information through social media and websites, etc. 	<p>[An Example of Dialog]</p> <p>If we anticipate a typhoon, a blizzard, or other natural disaster, YKK AP transmits information on preparing for disasters via its official social media accounts and website, etc. Timely transmission of information enables us to contribute to safe and worry-free daily living.</p>
Supplier Subcontractors	<p>Promotion of social responsibility in our supply chain</p> <ul style="list-style-type: none"> - Provide activity summaries, explain YKK AP's performance and policies - Explain YKK AP's research and development, manufacturing, supply and purchasing policies 	<p>[An Example of Dialog]</p> <p>Each year, YKK AP hosts a "Procurement Policy Explanation Meeting" and explains the company's performance and policies to suppliers. Since FY 2020, we have created opportunities to provide even more suppliers with explanations through online meetings.</p>
Business partners	<p>Sustainable business initiatives through partnerships</p> <ul style="list-style-type: none"> - Explain YKK AP's performance and policies - Exchange opinions for product planning and improvement of existing products 	<p>[An Example of Dialog]</p> <p>In the MADO (window) Shop BS meeting, we exchange opinions and considered issues related to products and installation methods, and related improvement measures, methods of attracting customers, and improvement of work efficiency, etc. We use the opinions expressed there to improve and enhance products and mechanisms.</p>
Local communities	<p>Promote social responsibility as a corporate citizen</p> <ul style="list-style-type: none"> - Explain YKK AP's performance and policies - Participate/co-sponsor cleanup activities and events in the community - Provide next-generation educational support 	<p>[An Example of Dialog]</p> <p>At YKK AP, we participated in the environmental learning pavilion "Ecostudy Room Online*" to provide support for the education of the next generation, and introduced our efforts related to the environment in the value chain and the connection to the SDGs, as environmental learning content for schools, educational institutions, and families.</p>



Facebook post "Preparing for a Typhoon"



Procurement policy explanation meeting



Ecostudy Room Online

Dialog with employees

The YKK Group has established opportunities for dialog between management and employees with the aim of providing a "satisfactory" and "pleasant" working environment and strengthening the foundations to enable all employees to head in the same direction. The roundtable meetings between the president and employees that were started in FY 2021 have become places for the enhancement of mutual communication. With directors participating and the meetings being held at overseas companies beginning in FY 2022, we will increase the opportunities for dialog even more. In addition, under the management philosophy of YKK's Founder, Tadao Yoshida, that "stocks are certificates for participating in business," we have established the Employee Stockholding Association, in which about 80% of all qualified individuals participate. Reports on management performance and Q&A sessions, etc., are conducted in meetings held twice each year.



Roundtable meeting at YKK AP America Inc.



Meeting of the YKK Employee Stockholding Association

* Sponsored by Nikkei Inc. and the Sustainable Management Promotion Organization

YKK AP in Numbers

Key Consolidated Financial Data

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022 (Plan)	FY 2023 (Plan)	FY 2024 (Plan)
Net sales (consolidated)	417.5 billion yen	428.0 billion yen	425.8 billion yen	402.8 billion yen	446.3 billion yen	491.4 billion yen	517.1 billion yen	544.0 billion yen
Japan	365.6 billion yen	376.4 billion yen	374.5 billion yen	353.2 billion yen	388.6 billion yen	424.2 billion yen	443.8 billion yen	459.9 billion yen
Overseas	71.3 billion yen	73.0 billion yen	71.3 billion yen	66.2 billion yen	79.7 billion yen	90.2 billion yen	98.4 billion yen	107.9 billion yen
Overseas ratio	13%	13%	12%	13%	14%	14%	15%	16%
Operating income	22.1 billion yen	23.5 billion yen	22.8 billion yen	20.9 billion yen	17.3 billion yen	22.3 billion yen	31.5 billion yen	38.6 billion yen
Operating income margin	5.3%	5.5%	5.4%	5.2%	3.9%	4.6%	6.1%	7.1%

		FY 2020	FY 2021
Profit and loss	Ordinary income	23.0 billion yen	18.6 billion yen
	Net income attributable to owners of parent company	21.3 billion yen	11.1 billion yen
	Comprehensive income	48.3 billion yen	19.7 billion yen
Financial status	Net assets	225.1 billion yen	241.8 billion yen
	Total assets	389.7 billion yen	426.5 billion yen
Financial indicators	Equity ratio	56.9%	56.2%
	Return on equity	9.6%	4.8%
Cash flow	Cash flow from operating activities	29.6 billion yen	26.9 billion yen
	Cash flow from investing activities	-3.8 billion yen	-19.8 billion yen
	Cash flow from financing activities	-9.6 billion yen	-5.4 billion yen
	Ending balance of cash and cash equivalents	27.2 billion yen	31.7 billion yen
Capital investments / R&D expenses	Capital investments	14.8 billion yen	20.6 billion yen
	R&D expenses	8.0 billion yen	9.0 billion yen

* Transactions with parties inside the Group have been offset in net sales (consolidated).

* The overseas ratio is the ratio of net sales to external customers.

* Return on equity for FY 2020 is calculated based on ending equity capital, as it was the first year of consolidation.

* Figures have not been audited by a certified accountant or audit firm.

* The consolidated financial data for profit and loss, financial status, financial indicators, and cash flow were reviewed by an audit firm for FY 2021.

Main Non-Financial Data

		FY 2019	FY 2020	FY 2021
Number of employees	Japan	12,325	12,389	12,630
	Japan	Men75 % Women25 %	Men74 % Women26 %	Men74 % Women26 %
	Overseas	4,284	4,328	4,158
Average age ^{*1}	Men	42.8 years old	42.8 years old	42.9 years old
	Women	40.1 years old	40.0 years old	40.3 years old
Women in management positions ^{*2}	Number of employees	99	111	114
	Ratio	5.2 %	5.7 %	5.7 %
Rate of employees who take childcare leave ^{*3}	Men	49.2 %	63.9 %	53.0 %
	Women	99.0 %	94.8 %	97.6 %
Employment rate of persons with disabilities (average for each fiscal year) ^{*4}		2.26 %	2.35 %	2.29 %
Rate of mid-career hires ^{*5}		63.7 %	62.5 %	69.0 %
Rate of employees who take paid leave ^{*6}		78.4 %	60.9 %	67.1 %
Contribution to reduction of CO ₂ through high thermal insulation products ^{*7}	vs FY 2020	—	100 %	117 %
	Quantity	—	468,000 tons of CO ₂	548,000 tons of CO ₂
Ratio of new constructions to remodeling projects ^{*8}	Residential	New 76 %	New 75 %	New 77 %
		Remodeling 24 %	Remodeling 25 %	Remodeling 23 %
	Commercial	New 73 %	New 76 %	New 70 %
		Remodeling 27 %	Remodeling 24 %	Remodeling 30 %
Rate of vinyl window use ^{*9}		26.2 %	28.9 %	31.4 %
Occurrence rates of accidents that required time off from work (4 days or more) ^{*10}		0.22	0.24	0.29
Locations	Japan	199 sites	200 sites	201 sites
	Overseas	10 countries/ regions	11 countries/ regions	11 countries/ regions
Manufacturing locations	Japan	24 sites	24 sites	24 sites
	Overseas	11 sites	11 sites	11 sites

*1 Data from YKK AP Group (Japan). Includes Japanese employees working abroad

*2 Data from YKK AP alone (Japan). Includes Japanese employees working abroad

*3 Data from YKK AP alone (Japan)

*4 Data from YKK AP alone (Japan). Includes Japanese employees working abroad

*5 Data from YKK AP alone (Japan)

*6 Data from YKK AP Group (Japan)

*7 Data from YKK AP Group (Japan)

*8 Data from YKK AP Group (Japan). Based on net sales

*9 Data from YKK AP alone (Japan). Ratio of vinyl window use in sales for single family homes

*10 Data from YKK AP alone (Japan). Figures represent the frequency of workplace injuries that occurred over a sum total of one million working hours and those that resulted in death or injury.

Major Awards

Awards in Japan

2021 Ranking of the Most Desirable Architectural Products and Equipment Manufacturers

(Nikkei Architecture)



Residential Window Sash: 1st Place for the 11th consecutive year

Residential Entrance Door: 1st Place for the 6th consecutive year

Commercial Building Aluminum Sash and Curtain Wall:

1st Place for the 17th consecutive year

Reader Survey of Trends in the Use of Products, etc., of Architectural Products and Equipment Manufacturers, November 25, 2021 Edition

Kids Design Award 2021

(NPO Kids Design Association)



KIDS DESIGN
AWARD 2021

Design that contributes to the safety and security of children category

High window/storage screen door pull chord "Loopless"

Designs that contribute to comfortably raising children category

Remodeled entrance sliding door "Door Remo Entrance Sliding Door"/

2-leaf interlocking sliding door with sleeves

Electronic Smart Control Key: Face recognition key function added

The "Uchi-soto Space" package that enhances time at home

August 2021



Good Design Award 2021

(Japan Institute of Design Promotion)



"Plude Frame Unit"

October 2021



FY 2020 Workplace Occupational Safety Awards

(Japan Aluminum Association)

Special Award of Excellence

YKK AP Kurobe Ogyu Plant, Kurobe Ekko Plant, Miyagi Ohira Factory, Kumamoto Kosa Factory, YKK AP Okinawa Okinawa Factory

Award of Excellence

YKK AP Saitama Factory, Okayama Factory

May 2021

22nd Logistics Environment Award Special Award

(Japan Association for Logistics and Transport)



YKK AP/Nippon Konpo Unyu Soko Co., Ltd.

June 2021

Local Commendation for Invention 2021 (Chubu) Invention Incentive Award

(Japan Institute of Invention and Innovation)

Renovated window structure and installation method for refurbished windows (Patent No. 6588670)

November 2021

Overseas Awards

Best of Practice Award

(The Architect's Newspaper)

ERIE ARCHITECTURAL PRODUCTS INC. June 2021

2021 Built Design Awards

(3c AWARDS)

YKK AP AMERICA INC. "YWW 50 TU" November 2021

Manufacturer of the most desirable architectural products and facilities for use in an ideal home

(Taiwan Architectural Aesthetics Culture and Economy Association; an incorporated association/National Chengchi University College of Commerce Public Opinion and Market Research Center)



Window Sash Category: 1st Place for the 10th consecutive year YKK AP TAIWAN CO., LTD. November 2021

Golden Merchant Award/Outstanding Foreign Business Award

(General Chamber of Commerce of the Republic of China)

YKK AP TAIWAN CO., LTD. November 2021



FY 2021 - 2022 17th AL-Survey Architectural Windows and CW Industry Brand List Top 10 Window Brand

(China Construction Metal Structure Association)

Award for the 7th consecutive year

YKK AP CO., LTD. March 2022



Desirable Architectural Products Brand Award

(China Real Estate Association)

Selected for the 12th consecutive year YKK AP CO., LTD.

March 2022



Company Outline

Corporate Name	YKK AP Inc.
Headquarters Address	1, Kanda Izumi-cho, Chiyoda-ku, Tokyo, 101-0024, Japan
Capital	14.0 billion yen
Foundation	July 22, 1957
Accounting Period	March 31 of every year

	● Domestic Affiliated Companies	● Overseas Affiliated Companies
Affiliated Companies	YKK AP Okinawa Inc. Pros Inc. Iwabuchi Inc. YKK AP Ruxy Inc. Nitto Inc.	YKK AP AMERICA INC. ERIE ARCHITECTURAL PRODUCTS INC. ERIE ARCHITECTURAL PRODUCTS USA, INC. YKK AP (CHINA) INVESTMENT CO., LTD. DALIAN YKK AP CO., LTD. YKK AP CO.,LTD. YKK AP(SUZHOU) CO., LTD. YKK AP HONG KONG LIMITED YKK AP TAIWAN CO., LTD. PT YKK AP INDONESIA YKK AP MYS SDN. BHD. YKK AP (THAILAND) CO.,LTD. Bhoruka Extrusions Private Limited YKK AP FACADE PTE. LTD. YKK AP SINGAPORE PTE LTD YKK AP FACADE VIETNAM COMPANY LIMITED YKK AP Technologies Lab (NA) Inc.

Memberships	Japan Sash Manufacturers Association Japan Building Openings Association Japan Construction Material & Housing Equipment Industries Federation Association of Living Amenity	Japan Federation of Housing Organizations Wooden Home Builders Association of Japan Japan International Association for the Industry of Building and Housing Japan - China Association for Building and Housing Industry Japan Aluminium Association etc.
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Editorial Note

Thank you for reading the “YKK AP Integrated Report 2022.” We created this integrated report to introduce our stakeholders to our initiative to be a company that makes society a better place through business activities, with the YKK AP Purpose “We Build a Better Society Through Architectural Products” at its core. We hope this “YKK AP Integrated Report 2022” will help readers gain a better understanding of our company. Going forward, we will work to keep improving the report by reflecting your opinions and suggestions.

YKK AP Integrated Report 2022

Extent of Coverage	YKK AP Inc./YKK AP Affiliated Companies
Period Covered	FY 2021 (April 1, 2021 to March 31, 2022) Note: This report partially includes information outside the coverage period
Date of Publication	November 2022
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 YKK AP Inc.