ROICA™

ADVANCED FIT FOR LIVING

ROICA™ Sustainability Facts 2024

Life Innovation SBU ROICA Division

AsahiKASEI

Message from the Senior Executive Manager

Creating sustainable future with our customers

ROICA™ is excited to announce that we are embarking on a new chapter in ever-evolving world. We are incredibly thankful for the support of our stakeholders, who have enabled our business to grow to this point.

The fundamental philosophy of Asahi Kasei is to provide sustainable value while closely aligning with the needs of people and society. This ethos also drives ROICA™ business, as we actively engage in initiatives to collaborate with our customers around the world to contribute to society through innovating new stretch fiber.

The environment surrounding us is undergoing major changes on a global scale. Many factors such as global warming, population growth, poverty disparity, trade friction, digitalization, are impacting business at a rapid pace.Companies are expected to take proactive steps towards sustainability as a crucial responsibility.

We recognize that the road ahead may be more challenging than ever, but we remain committed to develop stretch fibers with less environmental impact and advance the innovative technology. Through our continuous efforts in creating new solutions, we aim to contribute to a sustainable future with a “smile” alongside our customers. We greatly appreciate your ongoing support and partnership.

Senior Executive Manager,
ROICA™ Division,
Life Innovation SBU

A brand with sincere regards for society

We aim to contribute to sustainability with dedication to “Life” and “Living” by promoting clean environment and energy as well as a healthy, comfortable, and secure longevity society.We are developing and promoting ROICA™ for various fields and applications by leveraging its unique stretch fiber characteristics. At the heart of our business principles are “Sustainability” and “Uniqueness.” It is very important to conduct our business in harmony with the environment and society. We are dedicated to build ROICA™ brand that is not only trusted and respected but also deeply loved by society.

Fostering innovation through co-creation

We recognize the importance of addressing and adapting the social needs in a long-term perspective to continue our brand to grow. Our commitment thus far has been to meet the needs of customers by leveraging our distinctive technological expertise in product development.In light of the rapid evolution of social issues and values, it is imperative that we develop products that align with the new standards of the market. We believe that by collaborating with our stakeholders to create products and values that meet the demands of the times, we can collectively drive growth and contribute to the advancement of the fiber & textile industry.

Importance of communication

At ROICA™, we understand the importance of engaging in active communication with our customers and stakeholders to ensure our continued evolution. By fostering open dialogue and listening to a diverse range of perspectives, we aim to identify and address issues, while delivering quality products that meet customer expectations. Proactive communication is the key to building trust with our customers and enhancing employee’s motivation. Through ongoing collaboration with our stakeholders, our goal is to earn the trust and respect of society.

Index

Report Scope | *This report is created based on FY2023 data and results(April 2023 to March 2024) .

The Asahi Kasei Group conducts corporate activities to provide new value to society by realizing its Group Vision of “living in health and comfort” and “harmony with the natural environment.” We aim to achieve two mutually reinforcing aspects of sustainability: contributing to sustainable society and sustainable growth of corporate value.

Asahi Kasei Group philosophy

Creating for Tomorrow
Group Slogan

Group Mission

We, the Asahi Kasei Group, contribute to life and living for people around the world.

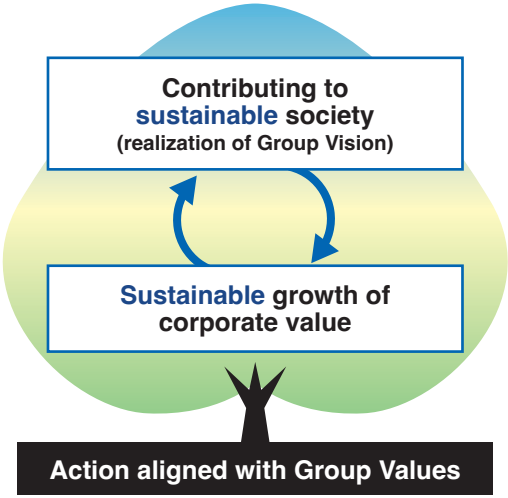
Group Vision

Living in health and comfort and harmony with the natural environment.

Group Values

Sincerity: Being sincere with everyone.
Challenge: Boldly taking challenges, continuously seeking change.
Creativity: Creating new value through unity and synergy.

Two aspects of sustainability for Asahi Kasei



In addition to aiming to provide value to society through our two challenges, we will enhance the fundamental activities that support our business activities, such as corporate governance, compliance, respect for human rights, and safety and quality. Our group will also pursue our two sustainability goals of contributing to a sustainable society and sustainable growth of corporate value. ROICA™ will continue to pursue its sustainability initiatives in alignment with the Asahi Kasei Group's goals.

ROICA™ will continue to collaborate with our customers to offer solutions that align with the market needs of the times and that can contribute to society with our pride.

Environment

GHG Emissions Reduction Target

ROICA™ has set mid to long-term numerical targets for greenhouse gas (GHG) emissions and is actively pursuing initiatives to achieve them.By 2030, our goal is to reduce GHG emissions from our business operations by more than 60% compared to fiscal year 2013. We will cooperate with our domestic and overseas factories to drive efforts towards GHG reduction.

GHG Emissions Reduction Target
- compared to FY2013 -

Asahi Kasei Group

Year 2030

More than
30% reduction

▼

Year 2050

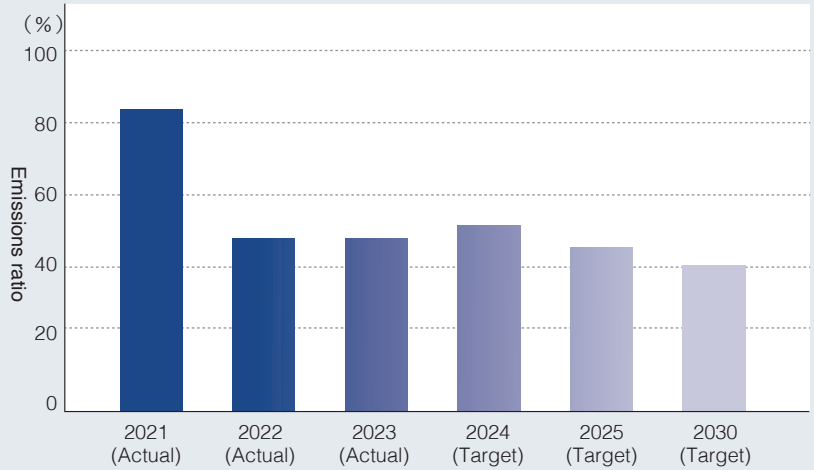
Carbon-neutral
(Aiming for zero emissions)

ROICA™ Business

Year 2030

60% reduction

GHG Emissions Ratio Trends and Targets
- compared to FY2013-



- Reduction Amount: Calculated from GHG emissions at domestic and overseas factories*1
- Figures for 2021 and 2022 (actual) are calculated in-house.
  * Excluding non-consolidated Formosa Asahi Spandex Co., Ltd.
- The figures may vary depending on the production volume of the fiscal year.

*1: Direct greenhouse gas emissions by businesses themselves (fuel combustion, industrial processes) and indirect emissions from the use of electricity, heat and steam supplied by other companies.

**ROICA™ is driving efforts to achieve our goals with transparency in three main areas:
introduction of LCA (Cradle-to-Gate calculation), conversion to low-impact energy, and capital investment for energy reduction.**

Responding to Climate Change

As part of its climate change initiatives, ROICA™ aims to reduce GHG emissions by more than 60% by 2030 (compared to FY2013). Furthermore, we are intensifying our initiatives to reduce emissions, including raw material procurement. We have also started to use biomass materials based on the mass balance method, and we will accelerate our efforts to achieve the target.

Reduction of GHG Emissions*1

Conversion of facilities for energy reduction

We are promoting to introduce technologies that emit less GHG by updating facilities and adopting energy-saving type equipment. ROICA™ is not only improving product quality, but also reducing environmental impact.

Conversion to low-impact energy

We have started utilizing renewable energy certificates with low environmental impact in some of our plants.

*1 : Direct greenhouse gas emissions by businesses themselves (fuel combustion, industrial processes) and indirect emissions from the use of electricity, heat and steam supplied by other companies.

Contribution to Society's GHG Emissions Reduction*2

Clarification of issues through LCA (Calculated by Cradle-to-Gate)

As ROICA™, we have initiated the calculation of CFP and water resources from the mining of raw materials at the manufacturing stage to the product shipment and are consistently striving to decrease environmental impacts. We started the calculation in Japan in FY2022 and at overseas plants in FY2023.

Building our own CFP automatic calculation system

We are building an automatic calculation system from factory data to speed up CFP calculation and to promote calculation by type of yarn.

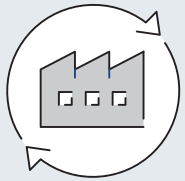
*2 : Indirect emissions from raw materials used, logistic of raw materials ,and waste disposal.

Environmental Management and Measures

ROICA™ prioritize our response to climate change and environmental issues, as well as its preservation activities, in accordance with the Asahi Kasei Group's policies. Our production sites in Japan and overseas obtained ISO 14001 certification for environmental management system. We have implemented a management system at each site, conducting internal audits and receiving audits by the certifying organizations to ensure its effectiveness. Especially in fiber & textile activities, managing waste, wastewater, exhaust emissions, and other pollutants is important. At ROICA™, we have established a comprehensive system to appropriately handle these emissions, promote recycling, and regulate the disposal of waste outside of our production sites.

01

Waste Reduction



- Recycling Waste
- Reuse of raw materials

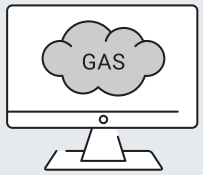
02

Water Resources Preservation and Management

- Reuse of cooling water
- Prevent of soil and groundwater contamination

03

Air Pollution Prevention



- Curbing VOC emissions
- Curbing fluorocarbons leakage

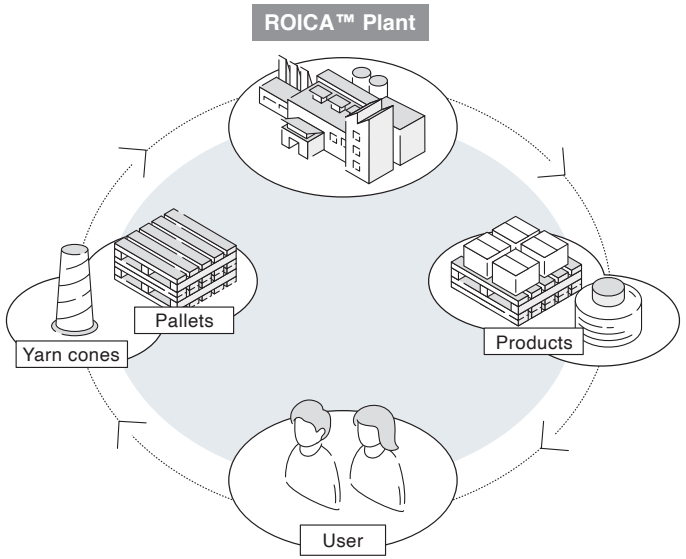
04

Chemical Substance Management

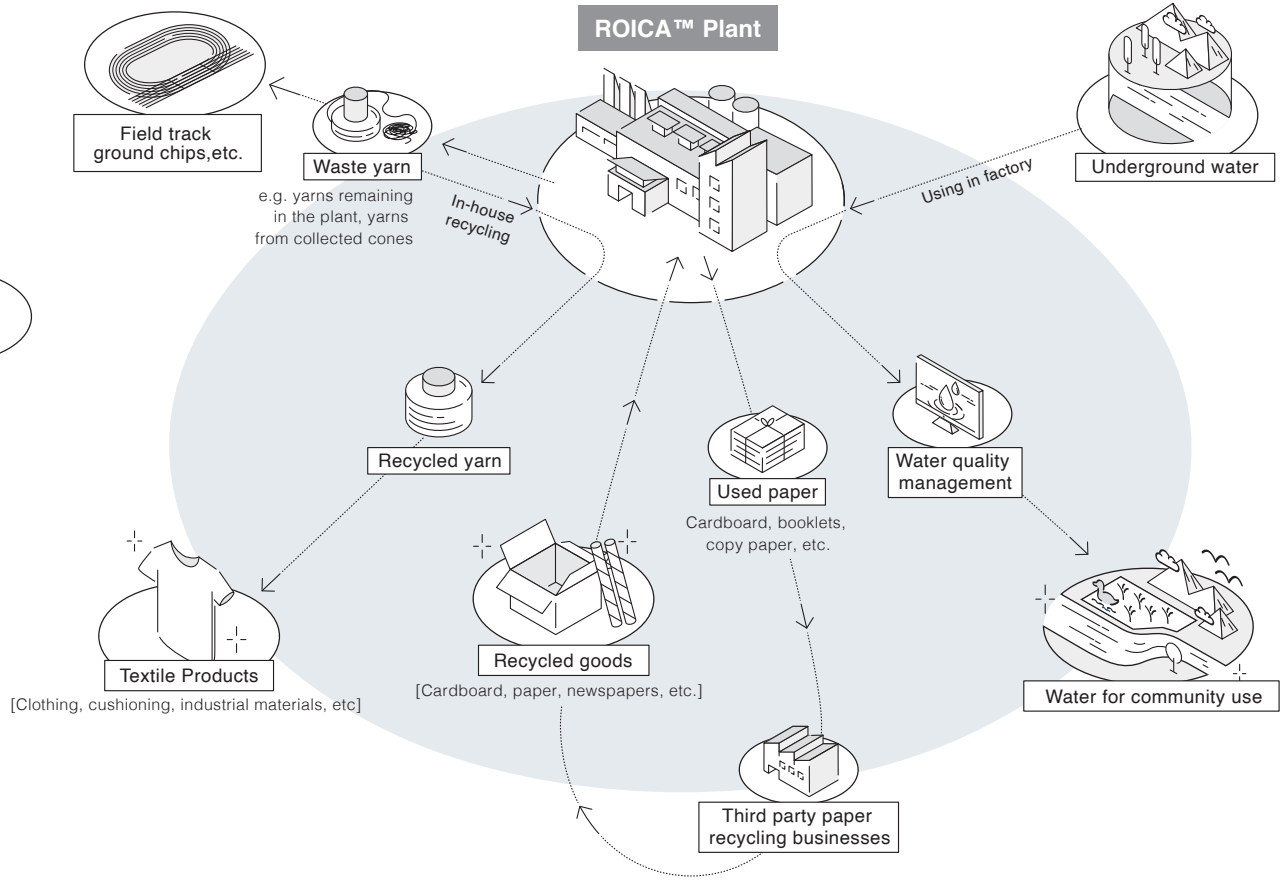
- Curbing chemical substance emissions

ROICA™ is committed to reduce waste generated by its business and industrial activities. ROICA™ is proud to announce that our proactive efforts in promoting the recycling and reutilization of resources, including waste yarn, waste oil, and packaging materials, have yielded remarkable results. The waste reduction rate for our entire business for domestic and overseas operations has reached an outstanding 99.6% in FY2023.

Reuse of Raw Materials



Recycling Wastes



〈 Waste reduction rate 〉

99.6%

ROICA™ is dedicated to water conservation at its domestic and overseas facilities in compliance with the effluent standards set forth in each country, including the recycling and reuse of cooling water. Our wastewater management operates round-the-clock to address any potential issues, with a focus on providing education and training to our employees to enable swift responses to any irregularities.

Fish inhabiting at irrigation canals (Japan Plant)

The Japan Plant monitors the quality and safety of cooling water used its operation before discharging into public water bodies. Additionally, the plant endeavors to recycle of water for reusage. Notably, we continue to uphold a record of zero issues with discharged water and sewage effluent.
In 2019, we are enhancing our online monitoring capabilities and installing additional emergency storage tanks, in addition to the existing wastewater storage facilities. In the event of wastewater issues, we can promptly identify irregularities and allow sufficient time to take corrective action.

Wastewater treatment facility (Thailand Plant)

The Thailand Plant has installed a sewage treatment facility to reduce the amount of wastewater classified as industrial waste. This facility utilizes microorganisms to break down sewage exceeding regulatory thresholds, ensuring compliance with standards before discharging it to the industrial park's sewage treatment plant. We place an online monitoring equipment at the discharge point to manage wastewater quality meticulously.
In China, where environmental regulations are strictly enforced, we are committed to reuse water and meet strict wastewater management standards. ROICA™ China/Warp Knitting and Dyeing Plant, where a significant volume of water is utilized in the dyeing process, enables to reuse approximately half of the wastewater within the plant by treating wastewater by additional filtration. In addition, the ROICA™ China Plant also has installed online monitoring equipment at the outlet of the treatment facility.

03 Air Pollution Prevention

Environmental Management and Measures

Exhaust gas treatment system (China Plant)

At the ROICA™ Japan Plant, solvents used in production are collected through cooling and absorption into water to prevent air pollution. In addition, to address the issue of odors stemming from solvent decomposition products (amine compounds), exhaust gas absorption equipment has been implemented to significantly enhance odor control. This system was originally installed in 2013 and has since been further expanded in 2021. At the ROICA™ China Plant, we enhanced our efforts to control air pollution by installing three additional exhaust absorption facilities in 2019. Furthermore, we are implementing comprehensive management practices at all our plants in Japan and overseas, including regularly (hourly) scheduled automated monitoring of gas emission concentration to enhance the effectiveness of our exhaust management system.

04 Chemical Substance Management

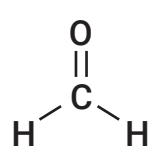
Environmental Management and Measures

For all chemicals used at ROICA™, we comply with the requirements of legal regulations, agreements, and voluntary standards in terms of product safety, occupational safety, security disaster prevention, and environmental impact.

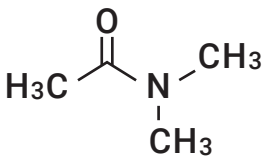
We consistently monitor the emissions amount of chemical substances subject to the PRTR system*1 and leakage of chlorofluorocarbons. We are dedicated to enhance facility management to reduce unforeseen emissions.

Substances subject to the PRTR system handled by ROICA™

Formaldehyde



N,N-dimethylacetamide



All chemical substances handled at our plants and development departments undergo a risk assessment*2 to ensure that on-site workers are informed of potential dangers associated with exposure to these substances. Furthermore, the assessments facilitate the management of chemical substances in a manner that does not affect the health of our employees.

*1：Chemical substances subject to the PRTR system: Substances subject to the “Pollutant Release and Transfer Register.” Under the PRTR system, plants and businesses that handle hazardous chemical substances are required to monitor and report (register) the amount of each scientific substance released into the environment and the amount transferred as waste, and the results are made public by the government.

*2：Risk assessment: A process to evaluate various risks in a particular situation or activities and to take appropriate countermeasures. Generally, procedure steps are in accordance of “identification,” “evaluation,” “control,” and “monitoring.” This is conducted in various areas of business and projects and is an important method to minimize risk.

Society

Social Management

The Asahi Kasei Group places a high priority on social initiatives among all its business activities. We are dedicated to uphold our corporate social responsibility through various initiatives, including advancing safety measures, fostering strong relationships with our supply chain and local communities, and promoting respect for human rights and diversity.ROICA™ aims to achieve continuous business growth by delivering products that align with societal needs and by actively engaging in community contributions. We are committed to collaborate with our customers to create harmony with society.

Corporate Social Responsibility | **ROICA™ conducts its business activities in accordance with the standards set forth by Asahi Kasei Group.**

Occupational Safety

Safety Convention at Japan Plant

For the health and safety of our employees, we implement various activities based on our occupational safety management system. In accordance with the safety standards and regulations set forth by the Asahi Kasei Group and the ROICA™ Plant, we are implementing taking risk reduction measures by closely managing operations, including equipment modifications.Moreover, we are focused on enhancing occupational safety by introducing a “Safety Day” and systematically conducting lectures, educational programs, training, sessions, and management practices. We also offer employee training programs on safety and regulations, including e-learning initiatives both at domestic and overseas sites.

Process Safety

First-aid training

We conduct annual fire and earthquake drills to enhance our response capabilities in the event of an emergency. In addition, with the cooperation of the Asahi Kasei Group, we have initiated measures to pass on our security and disaster prevention initiatives, aiming to mitigate risks by quantitative assessment. We share information on our activities with all sites including overseas.Furthermore, to mitigate risk, we are quantifying and documenting our security efforts through various simulations as part of our safety activities.

Quality Assurance

Physical Properties Measurement

Asahi Kasei Group is dedicated to anticipating the evolving needs of customers and society by providing high quality products and services that prioritize safety and security. To uphold high standards of quality, ROICA™ is committed to continuous quality improvement activities in line with ISO9001. Through quality risk education and quality assurance system to prevent fraud and tampering using technology such as digital transformation (DX), we strive to avoid quality issues.

Human Resource Development

The Asahi Kasei Group believes that every employee is a source in generating new value through their diverse perspectives and adaptability. We support our employees by enhancing their capabilities, honing their talents, and fostering a global mindset. Our commitment extends to providing educational initiatives that equip individuals with the skills, such as DX, digital business, marketing, and sustainability, which will become more desired in the future.

Human Rights and Diversity

At the Asahi Kasei Group, our objective is to cultivate a supportive work environment where individuals from diverse backgrounds can thrive, irrespective of gender, age, and any other attributes. We do not tolerate any form of inhumane discrimination and harassment basis on nationality, ancestry, ethnicity, birth, religion, gender, ideology, age, physical characteristics, sexual orientation, and gender identity.We are dedicated to preventing any violations by eradicating any actions or words that may cause harm, as well as eliminating forced labor and child labor. Our commitment to human rights extends to all our stakeholders, not only within our organization but also throughout our entire value chain.

Supply Chain Management

Raw Material Procurement

Asahi Kasei Group is intensifying its efforts across the supply chain to build responsible supply chain management and advance sustainable procurement practices.To ensure that our raw material procurement aligns with global environmental and human rights considerations, we conduct a CSR survey of our material suppliers in Japan once every two years, achieving an impressive response rate of nearly 100%（FY2023 results). Based on the survey results, we categorize our material suppliers into four levels, ranging from A to D. We request companies ranked C and D to comply with our supplier guidelines and offer educational support as needed. In the future, we plan to extend this initiative to our overseas suppliers.Furthermore, to maintain peace and security in the international community, we conduct trade control in strict compliance with our export control regulations. Moreover, we are committed to upholding fair trade practices that align with the Subcontract Act and the Antimonopoly Act.

Technical Service

As part of our customer support, we visit yarn processing, knitting, dyeing, and sewing factories directly to provide concrete and detailed technical services to address customer issues, thereby deepening relationships of trust and mutual growth while aiming to produce high-quality products.

Center for Advanced Technology of Fibers and Textiles*1

As a fiber & textile research and development department, we have our own R&D Center with a large number of professionals in various specialized fields. We welcome global companies and brands to tour our advanced R&D facilities. Our capabilities include fabrics and processing technology development, collaborative fabric development with our customers, and assistance with product evaluation and other needs.

*1 : Now changed to Advanced Processing R&D Dept.

Technical Support

ROICA™ provides a wide range of technical support, including quality consultation, processing technology guidance and collaborative development initiatives globally.

Global Communication

At ROICA™, we actively share information and exchange technology among our oversea sites to improve the quality of our operations and services. We are also committed to create avenues for open communication with customers and stakeholders to foster deeper mutual understanding and cultivate trust-based relationships.

Participated in HKIAIA Gala Dinner

Asahi Kasei Fibers Hong Kong office (AFHK*1) participated in 21st anniversary Gala Dinner hosted by HKIAIA*2. As members of this association, we participate in this annual event to foster closer communication with industry professionals and government agencies within the intimate apparel sector.

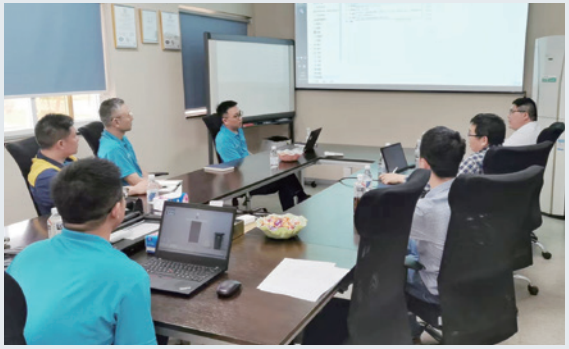
*1: AFHK:ASAHI KASEI FIBERS (H.K.) LTD.
*2: HKIAIA: Hong Kong Intimate Apparel Industries' Association

Ceremony to commemorate the 20th anniversary of the Thailand Plant

ROICA™ Thailand Plant (TAS*3) celebrated its 20th anniversary in February 2024. A grand ceremony was held to commemorate the anniversary and attended by individuals both within and outside the company who played the role in establishing TAS. At the party after the ceremony, the participants reminisced about the plant's 20-year journey and expressed their gratitude to local employees and related companies.

*3: TAS: THAI ASAHI KASEI SPANDEX. CO., LTD.

Technical exchange meeting



At the China Plant (HAS*4), engineers from various bases within Asahi Kasei Group actively engage in technical and information exchange. These meetings serve as a platform for sharing insights and perspectives across different business units, addressing challenges, and collaboratively creating new value. The plant plans to hold these sessions on an annual basis to foster ongoing learning and innovation.

*4: HAS: Hangzhou Asahikasei Spandex Co., LTD.

Community Support and Education

As a global brand, ROICA™ is dedicated to establishing strong connections with local communities. We not only aim to make a positive impact through our business operations, but also aim to be a brand that can earn trust from the society. We achieve this by upholding our commitment to “environment conservation,” providing “educational support,” and fostering “coexistence with local communities.”

Traffic Safety Workshop

The Thailand Plant (TAS*1) holds traffic safety seminars at neighboring elementary schools. The children learn how to put on a helmet and how to escape from a car in case they are caught in an accident. By providing children with correct knowledge about traffic safety and training opportunities, we are working to raise safety awareness in the local community.

*1: TAS: THAI ASAHI KASEI SPANDEX. CO., LTD.

Coastal Cleanup Activities

As part of environmental conservation activities, more than 200 individuals, primarily from the Taiwan Plant (FAS*2)-related companies, are actively engaging in coastal cleanup activities near FAS. This collaborative effort aims to not only enhance the cleanness of the coastline but also to protect marine life and insects, while simultaneously raising awareness among local residents on importance of environmental protection and beautification.

*2: FAS: Formosa Asahi Spandex Co., Ltd.

Rhine River Cleanup Activities

Asahi Kasei Europe (AKEU*3) conducts an annual river cleanup as a contribution to the local community, with more than 60 employees and their families volunteering to collect trash along the Rhine River. This commitment to cleaning up the Rhine River, a water body significantly impacted by plastic waste, holds exceptional importance to us as we strive to make a positive environmental impact in the region.

*3: AKEU: Asahi Kasei Europe GmbH

Biodiversity and Conservation

Aligned with Asahi Kasei Group's principles, ROICA™ is dedicated to reducing the impact of its operations on biodiversity and utilizing biological resources sustainably in harmony with nature. We actively promote biodiversity conservation efforts, fostering environmental awareness among employees through educational initiatives and various programs aimed at enhancing environmental and safety practices.

Biodiversity Conservation Initiatives in Asahi Kasei Group

The water discharged from the Japan Plant serves as a crucial resource for local agriculture and waterside organisms. We started biodiversity conservation activities in FY2010 with the theme of “water,” which is closely related to biodiversity and our business activities.Starting in FY2015, we embarked on activities to protect the endangered freshwater fish species, “Hariyo*1” beyond its natural habitat. Furthermore, from FY2016 onwards, we have actively engaged in the biodiversity conservation project titled “Operation Dragonfly 100 - Save Shiga's Dragonflies! (Biodiversity Lake Biwa Network).”

*1: Hariyo: A freshwater fish found only in Shiga and Gifu prefectures. It has become an endangered species due to loss of habitat caused by the decrease of spring water, river maintenance, and development.

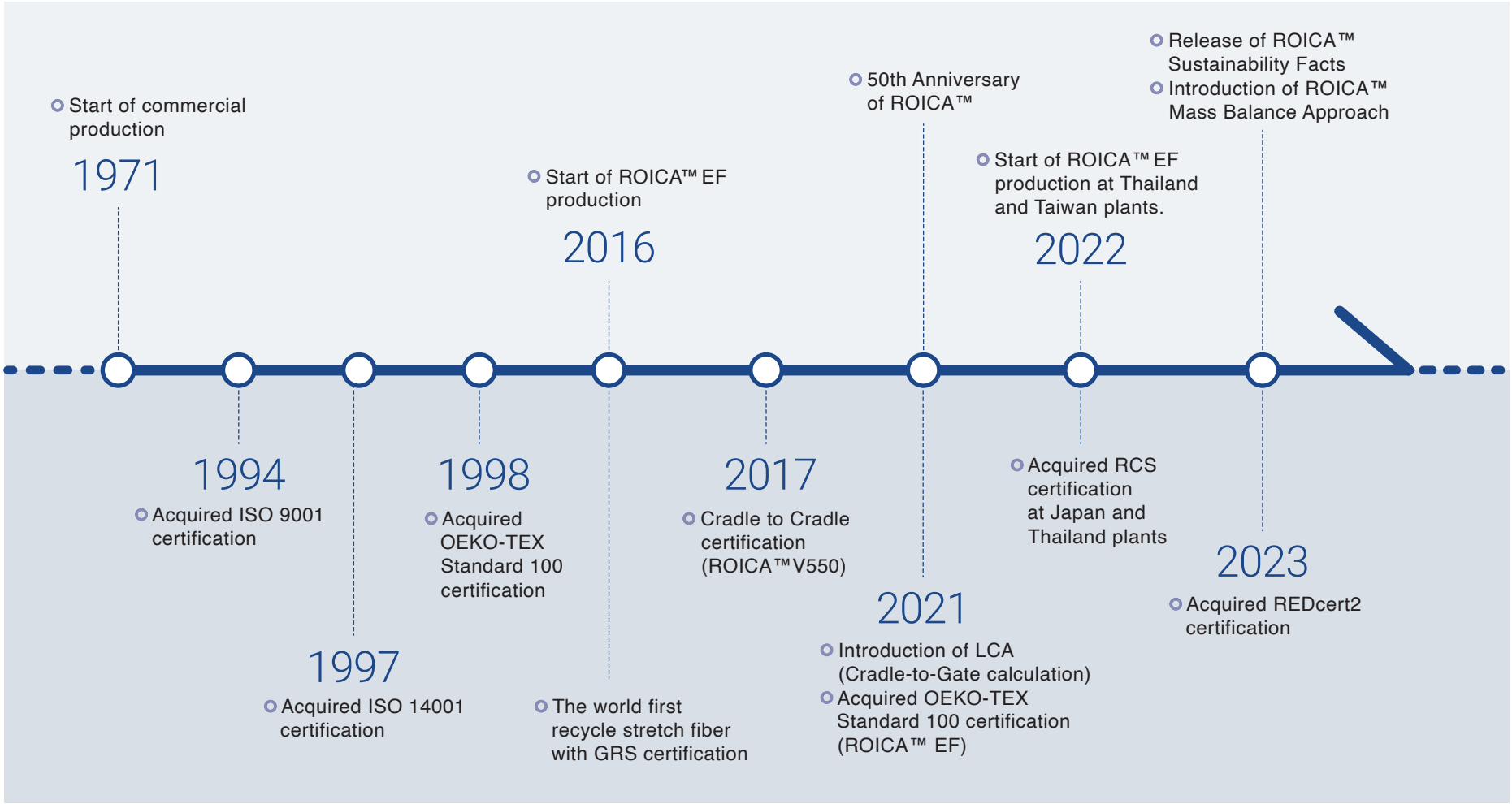
Biotope “Moribio” installed at Japan Plant

“Moribio” was established with the objective of fostering a harmonious coexistence between living creatures and people, working towards a future where this balance thrives. Our initiative contributes to the preservation of local biodiversity by creating diverse environments such as a Hariyo pond, Dragonfly marsh, waterways, and Machimori pots. We also actively engage in environmental education through communication initiatives and observation events. During a recent construction project at the out of operation period that disrupted the groundwater supply, we took proactive measures to safeguard the Hariyo. We relocated the Hariyo back to their original pond, dried it out, and reintroduced 60 Hariyo back into the Moribio to ensure the continued protection and propagation of this unique species.

Brand Information

History of ROICA™ Sustainability

ROICA™ has accumulated a history over half a century since it started production in 1971. It represents a legacy of collaborative efforts with our stakeholders to innovate valuable products and to contribute to social and environmental challenges. We will continue our commitment to coexist with society and environment by offering advanced technology and maintaining high quality standards.

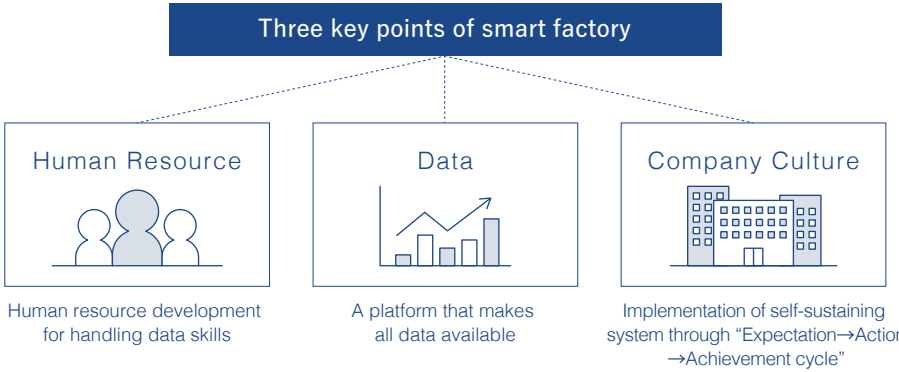


Digital Transformation Initiatives

Digital transformation (DX) initiatives will be essential to realize sustainability strategies in the future. DX involves leveraging digital technology to revamp operations, organizations, processes, and corporate culture in response to environmental changes, social needs, and customer demands. This transformation is crucial for enhancing company's value and adapting to the demands of the new era. As we look towards the future, we recognize the significance of reviewing our business portfolio.

Promotion of Digital Transformation (DX) to Accelerate Sustainability Strategies

In 2017, ROICA™ embarked on the journey to transform into a smart factory for digital transformation started in Japan. The collaborative project officially commenced in 2022, with the factory, sales, and development teams synergistically working together. Furthermore, in 2023, we extended our DX initiatives to our overseas pant in Thailand as a part of our commitment to embracing innovation for the future.



ROICA™ is actively utilizing POWER BI data visualization platform in Asahi Kasei Group.

Rewarded with the Good Factory Award 2024 (12th)

GOOD FACTORY AWARD™

The Japan Plant was honored with the “Factory Management Award” by Japan Management Association in 2024 for exemplary factory management practices. The award recognizes a factory that is excellent in overall management and exhibit a well-balanced approach to manufacturing operations.Japan Plant was highly evaluated for the following three points: (1) smart factory management based on people, data, and company culture; (2) improvement of decision-making speed and quality through a data-driven approach; and (3) organizational revitalization through the development, analysis, and use of visualization led by members of manufacturing team.

Research and Development for Sustainability

ROICA™ positions the development of environmental conscious products as an investment in a sustainable future. We are dedicated to generating various innovative ideas, research, and development to achieve this goal. Our commitment extends beyond product manufacturing to include responsible sourcing procurement practices.

Initiatives in Raw Materials Procurement
Mass Balance Approach

ROICA™

As part of our efforts to reduce CFP, we have implemented the mass balance method. By combining bio-derived raw materials with renewable energy such as electricity, we have successfully lowered our carbon footprint without compromising the performance of our ROICA™ products.

Waste Reduction Initiatives
Recycling

ROICA™ EF

Conventionally discarded, pre-consumer yarns are recycled for use as raw materials. In comparison with regular yarns, the material has achieved a 30%* reduction in CO2 emissions in the manufacturing process. Not only are our products recyclable, but they also maintain the same fundamental properties and quality as regular ROICA ™, demonstrating an excellent balance of environmental consciousness and product quality.

*FY 2019 / Caluculation for products with 58% recycle rate

Commitment to Circularity
Degradable

ROICA™ V550

As part of our innovative approach to create a synthetic stretch fiber that degrades in nature, we produce ROICA™ V550, which is degradable.
While regular spandex shows no degradation in general, ROICA™ V550 degrades slowly into CO2 and water (100% degradation has not been confirmed).

Certification

As the importance of sustainability grows, the question of how to respond to environmental and social issues and how to operate business correctly as a brand has become crucial. We understand the importance of objectively assessing and demonstrating our sustainability efforts and practices to enhance our global brand identity and earn the trust of our stakeholders. ROICA™ has acquired certification at both domestic and overseas plants and for various yarns with different characteristics.

*The certification differs depending on each factory and yarn. *Usage of certification logo on fabrics/garments must be followed by each certification body guideline.

Certification for Each Production Site

Japan

ISO 9001

JQA-QMA16697

ISO 14001

JQA-E-90093

Thailand

ISO 9001

TH 018928

ISO 45001

TH 017417

ISO 14001

TH 020198

China

ISO 9001

0350216Q30451R1M

ISO 14001

0350216E20242R1M

Taiwan

ISO 9001

TW07/03556

ISO 14001

TW13/10313

ISO 45001

TW17/00487

ISO 9001: Quality Management System ISO 14001: Environmental Management System ISO 45001: Occupational Health and Safety Management System

Certification

Certification for ROICA™ yarn

ROICA™ BRAND

OEKO-TEX Standard 100, Class1
Class1 certification is the product for babies and children up to the age of 36 months

OEKO-TEX STANDARD 100 13.HJP.27480 Hohenstein HTTI www.oeko-tex.com
〈 Japan, China 〉

OEKO-TEX STANDARD 100 16.HTH.88174 Hohenstein HTTI www.oeko-tex.com
〈 Thailand 〉

OEKO-TEX STANDARD 100 24.HTW.55643 Hohenstein www.oeko-tex.com
〈 Taiwan 〉

ROICA™ EF

OEKO-TEX Standard 100, Class1
Class1 certification is the product for babies and children up to the age of 36 months

OEKO-TEX STANDARD 100 21.HJP.70983 Hohenstein HTTI www.oeko-tex.com
〈 Japan 〉

OEKO-TEX STANDARD 100 22.HTH.33855 Hohenstein HTTI www.oeko-tex.com
〈 Thailand 〉

OEKO-TEX STANDARD 100 24.HTW.92524 Hohenstein www.oeko-tex.com
〈 Taiwan 〉

Recycled Claim Standard（RCS）
Verifies the presence and amount of recycled material in a product

RECYCLED BLENDED claim standard ©TextileExchange
TE-00055526
〈 Japan 〉
RCS Certified by IDFL

RECYCLED BLENDED claim standard ©TextileExchange
TE-00030663
〈 Thailand 〉
RCS Certified by Crean Globe

ROICA™ V550

OEKO-TEX Standard 100, Class1
Class1 certification is the product for babies and children up to the age of 36 months

OEKO-TEX STANDARD 100 22.HJP.76725 Hohenstein HTTI www.oeko-tex.com
〈 Japan 〉

C2C Certified
Material Health Certificate™
Gold v4.0

Circular economy oriented
material standards (Biological cycle)
〈 Japan 〉

Appendix

Glossary of Terms

*Terms are listed on the page where they are mainly explained.

Publication	Terminology	Explanation
4	Sustainability vision	A statement, guiding business decisions and actions toward a more sustainable future.
6	GHG	Atmospheric gases that trap heat and contribute to global warming. Examples include carbon dioxide, methane, nitrous oxide, and fluorinated gases, emitted from human activities like burning fossil fuels and agriculture.
7	LCA	Abbreviation for Life Cycle Assessment. A method for quantitatively assessing the environmental impact of a product or service throughout its life cycle (raw material procurement→production→distribution→use→disposal→recycling) or at a specific stage.
	Cradle-to-Gate	An assessment of a partial product life cycle from resource extraction (cradle) to the factory gate (i.e., before it is transported to the consumer).
	CFP	Abbreviation for Carbon Footprint of Products. It is a calculated value or index that makes it possible to compare the total amount of greenhouse gases that an activity, product, company, or country adds to the atmosphere.
	Renewable energy	Renewable energy is energy derived from sources that naturally replenish themselves, such as sunlight, wind, water, and geothermal heat. It is sustainable, environmentally friendly, and does not deplete over time. Examples include solar power, wind power, hydroelectricity, and geothermal energy.
8	ISO14001	Environmental Management System (Certification)
	VOC	Abbreviation for volatile organic compounds. A generic term for organic compounds (chemical substances) that are highly volatile and become gas in the atmosphere.
11	Chemical substances subject to the PRTR system	Substances subject to the "Pollutant Release and Transfer Register." Under the PRTR system, plants and businesses that handle hazardous chemical substances are required to monitor and report (register) the amount of each scientific substance released into the environment and the amount transferred as waste, and the results are made public by the government.
	Formaldehyde	Formaldehyde is a colorless, strong-smelling gas used in manufacturing and household products. Formaldehyde maybe released into the environment from furniture, construction materials, and adhesive, and other materials.
	N,N-Dimethylacetamide	An organic compound abbreviated as DMAc. A colorless, high boiling solvent commonly used in the chemical industry for various applications such as pharmaceutical production.
	risk assessment	A process of identifying hazards that could negatively affect an organization's ability to conduct business.

Publication	Terminology	Explanation
13	ISO9001	Quality Management System (Certification)
	e-learning	A type of online education, training, and knowledge sharing that is conducted over the Internet.
15	CSR	Abbreviation for Corporate Social Responsibility. It is the idea that businesses should operate according to principles and policies that make a positive impact on society and the environment.
18	biotope	Distinct habitat within an ecosystem where specific plants and animals thrive, characterized by unique environmental conditions that support diverse life forms.
20	REDcert²	A certification for chemical recycling. REDcert² offers certification schemes for sustainable biomass, biofuels and bioliquids as well as sustainable agricultural raw materials for use in the food and feed industry as well as biomass for material purposes respectively material purposes for the chemical industry.
21	digital transformation	A process of using digital technology to change how a business operates, delivers value, and interacts with customers. It involves adopting new tools and systems to improve efficiency, customer experience, and innovation.
	smart factory	A digitized and automated manufacturing facility that uses technologies like IoT, AI, robotics, and big data to enhance efficiency and productivity.
	data-driven	It means using data and analysis to make decisions and drive business outcomes.
22	mass balance approach	A mass balance approach tracks and quantifies the flow of materials through a system by ensuring mass is conserved, used in various fields like chemistry, engineering, and environmental science for analysis and optimization.
	pre-consumer	Materials or products that have not yet reached the consumer market, such as manufacturing waste or excess inventory.
23	ISO45001	Occupational Health and Safety Management System (Certification)
25	OEKO-TEX Standard 100	The world's high standard for safe textile products, awarded only to products that have passed rigorous analytical testing for more than 350 hazardous chemical substances. An international safety standard that complies with regulations in all countries.
	RCS	Abbreviation for Recycle Claim Standard. It is an international, voluntary standard that sets requirements for third-party. It is a chain of custody standard to track recycled raw materials through the supply chain.
	C2C Certified	A rigorous, third-party program that evaluates and recognizes products for their environmental and social impacts. A product is designed so that its materials and components can be repurposed or recycled indefinitely.

ROICA™

ADVANCED FIT FOR LIVING

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