

Innovation Management

Product Development

Our Basic Approach and Strategy

Unicharm's basic policy on product development declares that we will continuously create new value through technology innovation. Under this policy, Unicharm constantly conducts research on nonwoven fabric, super absorbent polymers, pulp and paper, pet food ingredients, and other raw materials while developing and upgrading processing technologies for these materials, always engaging in activities with innovation in mind. We are also strengthening our measures to shorten the lead time from the start of product development to product release.

Unicharm's product development consists mainly of the development of personal care products and pet care products. When developing personal care products, we uncover new product ideas by considering all stages of life and evolve them into actual products based on our mission of bringing ideas to life by turning unpleasant experiences into comfortable ones. In terms of pet care products, we strive to precisely cater our development to specific breeds and age groups with the goal of helping ensure the well-being of dogs and cats, enabling them to live in harmony with their family and society.

In both areas of product development, we value the importance of being closely connected to the living spaces of our customers and, therefore, Unicharm's team of product developers visit households to identify needs and turn ideas into products by repeatedly developing and verifying hypotheses. In addition to conventional on-site surveys by product developers, our internally developed Digital Scrum System has proven highly useful to this process. The system uses the latest technology to enable visual and audio data collection 24 hours a day from remote locations. All subjects are family members and are monitored unobtrusively, enabling them to live their lives as normal with peace of mind while allowing timely observation of lifestyles and usage patterns in their actual state.

We believe this system will allow us to gain insight into our customers more quickly, spurring new ideas for product development. It also allows us to offer guidance and instructions on appropriate product and facility improvements to countries and regions located remotely from our Technical Center in Shikoku, which functions as the core hub of our product development.

We will continue to thoroughly monitor our customers' lifestyles and usage patterns, discover the true needs behind them, and continue to take on new challenges in a confident and timely manner.



Management Structure

At Unicharm, we develop new products and rapidly revamp existing ones through an R&D&E (research, development, and engineering) system spanning four product categories (baby care, feminine care, wellness care, and pet care) which closely coordinates research into products that provide new value to customers, the development of materials and technology necessary for proposing new value, and the engineering of equipment for the stable mass production of these materials and technologies. Furthermore, as a company that continues to expand business globally, it is essential that we roll out products based on the characteristics of each country and region. Accordingly, we have established satellite offices of the R&D Division at major overseas subsidiaries and created a structure that facilitates the local development of products tailored to the needs of each country and region.

SDGs Theme Guideline: Internal Guideline for Contributing to Sustainability 302-5

The SDGs Theme Guideline was established and is operated to constantly improve the quality of our products and services. To further clarify this commitment, we formulated the following indicators: reducing input, increasing output, and contributing to the achievement of the SDGs through our products and services.

- (1) Reducing input
Contribute to reductions in environmental impact through less use of raw materials
- (2) Increasing output
Ensure greater customer satisfaction by providing even more value through our products and services than in the past
- (3) Contributing to the achievement of the SDGs
Play a key role in resolving environmental and social issues toward the achievement of the SDGs, while attaining indicators (1) and (2)
Specifically, we have adopted key themes for contributing to the achievement of the SDGs and aim to reduce input and increase output by 10%.

Examples of products conforming to the guideline in fiscal 2023 include *Silver Spoon Domestic Bonito in*, for which we reduced packaging weight and began using raw bonito from Japan for added value.



Indicators and Targets

► Kyo-sei Life Vision 2030: Safeguarding the Well-Being of Individuals

Indicators	Fiscal 2021 Results	Fiscal 2022 Results	Fiscal 2023 Results	2030 Targets
Percentage of products and services that contribute to the realization of a society where everyone can have a sense of individuality	100%	100%	100%	100%
Percentage of products and services that contribute to a society where people around the world are free from discrimination by gender or sexual orientation (including products and services that contribute to the elimination of sexual discrimination still present in certain countries and regions)	100%	100%	100%	100%
Percentage of products and services that contribute to the realization of a society where pets are welcomed by family members and community residents	100%	100%	100%	100%
Percentage of products and services that contribute to the realization of a society where infants and their families can live healthily and happily	100%	100%	100%	100%
Percentage of products and services that contribute to activities that can reduce the spread of preventable infectious diseases (contact transmission or droplet transmission)	100%	100%	100%	100%

► Kyo-sei Life Vision 2030: Safeguarding the Well-Being of Society

Indicators	Fiscal 2021 Results	Fiscal 2022 Results	Fiscal 2023 Results	2030 Targets
Percentage of products and services that contribute to freedom from various burdens and finding enjoyment in life	100%	100%	100%	100%
Percentage of products and services suitable for the SDGs Theme Guideline, an internal guideline for contributing to sustainability	100%*1	10.5%	5.9%	50%
Percentage of products and services that use raw materials procured from local production for local consumption, thereby contributing to local economies based on the perspectives of the environment, society, and human rights	Development ongoing	Development ongoing	Development ongoing	Double (compared with fiscal 2020)
Percentage of products and services supported by consumers (No. 1 market share)	23.5%	23.7%	23.2%	50%

*1 The 2021 result for "Practice of sustainable lifestyles" was changed from number of cases (products and services) to percentage of products and services in accordance with the SDGs Theme Guideline.

► Kyo-sei Life Vision 2030: Safeguarding the Well-Being of Our Planet

Indicators	Fiscal 2021 Result	Fiscal 2022 Result	Fiscal 2023 Result	2030 Target
No. of products and services that implement the "3Rs + 2Rs" based on Unicharm's unique approach	Development ongoing	2	2	10 or more

Initiatives and Results

Lifree Overnight Relief Absorption Pads for Sensitive Skin (Japan)

In April 2023, Unicharm released *Lifree Overnight Relief Absorption Pads for Sensitive Skin*, the strongest deodorizing absorption pads ever for the *Lifree* brand. Designed for use at hospitals and care facilities, they offer enhanced odor-eliminating and absorption capabilities through the use of activated carbon sheets, reducing stool odor components found in the urine of the elderly by around 50%.^{*2} They also come with a rapid absorption polymer that increases the absorption speed by 20%^{*3} to better prevent leakage.



*2 Unicharm product comparison

*3 Unicharm product comparison

Lifree Stretchable Tape-Type Perfect Fit Diapers (Japan)

In May 2023, Unicharm introduced *Lifree Stretchable Tape-Type Perfect Fit Diapers*, offering greater comfort for diaper use at hospitals and care facilities. These disposable diapers come with two separate stretchable tapes that can be attached together to hold the diaper firmly in place, fitting perfectly to any body shape. We have also increased the elasticity of these tapes by around 30%,^{*4} reducing the feeling of tightness.



*4 Unicharm product comparison

Sofy Active Pregnancy Monitorable Pantyliners (Japan)

In November 2023, we introduced *Sofy Active Pregnancy Monitorable Pantyliners* in our line of *Sofy* brand menstrual care products. To support women who are trying to conceive,*¹ Unicharm has long conducted research on possible methods for easily predicting when conception is most likely*² while leading an everyday life. As a result, we discovered that discharges contain certain substances which are key indicators of such timing. When these pantyliners detect moisture and said substances through *Sofy's* specially designed technology, two lines appear to indicate the optimum time for conceiving.

In conjunction with this product release, we launched a "Pregnancy Planning Mode" function for the *Sofy* menstruation management app that offers a product-linked function to monitor one's physical condition and notify them on when to begin using *Sofy Active Pregnancy Monitorable Pantyliners*.



*1 Refers to acquiring knowledge, discussing with family members, monitoring one's physical condition, and receiving fertility treatment, among other activities people often engage in when trying to conceive a child

*2 A time span of six days, which is the optimum time for conceiving

P.073 Providing Apps and Information That Help Women Address Concerns and Changes in Physical Condition and Menstruation

Sofy Lab Sanid Talord Khuen (Thailand)

Unicharm released *Sofy Lab Sanid Talord Khuen*, a sanitary pad for nighttime use that features a "3D lock pad," to provide reassurance of a good night's rest even during menstruation. The pad fits perfectly in all areas, preventing leakage from gaps. In addition, the packaging is designed in soothing black and purple with hand-drawn star and moon imagery, appealing to the tastes of our younger audience in particular.



Silcot Facial Towel Suhada Omoi (Japan)

In April 2023, Unicharm released *Silcot Facial Towel Suhada Omoi* silk-touch sheets, which reduce friction and irritation on the face after washing.*³

The sheets realize a gentle a silk-like texture through the use of 100% natural fiber, which is about 20 times thinner than pile yarn used in ordinary cloth towels. They have also been approved for safety by OEKO-TEX® STANDARD 100, an international safety certification for textile products, having cleared its most stringent standard, class I.



*3 Compared to ordinary towels

Unicharm Silcot Firming & Repairing Face Masks and Unicharm Silcot Firming & Brightening Face Masks (China)

In November 2023, Unicharm's first *Silcot* brand face masks were released in China. These products use hydrophilic nonwoven fabric, which stretches easily, and are uniquely designed to allow the mask to be hung over the ears and prevent shifting in motion. Also, pulling and fitting the mask allows beauty serum to easily penetrate the skin. They contain beauty ingredients such as hyaluronic acid for moisturizing, CICA (centella) for skin repair, rosa roxburghii fruit extract extract for lightening, and caffeine extract for skin tightening.



Gran-Deli MARIE Biscuits for Dogs (Japan)

The dog treat market continues to expand while more and more people are keen to enjoy meals and snacks with the beloved canine members of their family. Millennial customers, in particular, have expressed that they would be delighted if their favorite snacks were also available for their dogs. Taking this into account, in September 2023 Unicharm released *Gran-Deli MARIE Biscuits for Dogs*, a product jointly developed with Morinaga & Co., Ltd. As they are only 3 cm in diameter, these mini biscuits are designed to be fed easily, and the recipe was adjusted specifically for dogs to realize a gentle milky taste.



Gaines Golden Spoon Canned Wet Cat Food (China)

In October 2023, Unicharm launched *Gaines Golden Spoon*, a new line of canned wet food for adult cats, in China. It has a meat content of roughly 90%*⁴ and the chicken is cut into 1x1 cm pieces to allow the texture and taste of the ingredients to be savored. This product comes in three flavors (chicken, chicken & salmon, and chicken & beef) and can be fed to cats with peace of mind as it is free of starch, coloring agents, and seasonings.



*4 Excluding water

World's First One-Sided Opening*¹ Disposable Baby Diaper (Vietnam)

In October 2023, Unicharm's local subsidiary in Vietnam released *Bobby One Side Open Pants* for its *Bobby* brand of pants-type disposable baby diapers.

In Vietnam, people are highly cautious when it comes to choosing disposable diapers for newborns, based on widespread belief that lifting a baby's legs to change diapers would cause hip dislocation and that the diaper should be secured as tightly as possible around the waist. In response, we developed *Bobby One Side Open Pants*, a disposable baby diaper that comes with retractable tape on one side of the waist so that newborns can lie on their back for diaper changes without lifting their legs. When closed, the side tape covers the baby's stomach firmly and gently for a perfect fit.



*1 Diapers featuring a wing on one side of the waist that can be opened and closed and is longer than the other side, which are the first of their kind among the world's leading disposable baby diaper brands (based on Unicharm research, October 2022)

Unicharm Pet Deo-Clean (Thailand)

Unicharm's local subsidiary in Thailand released *Unicharm Pet Deo-Clean*, wet wipes for pets available in unscented, powder-scented, and floral-scented types. They are designed to be safe even when licked by pets, as they contain 99% pure water.

These large 20x20 cm sheets are soft, thick, and durable, allowing pets to be wiped comfortably, contributing to their hygiene and well-being.



MamyPoko Pants Extra Absorb (India)

In October 2023, Unicharm's local subsidiary in India introduced *MamyPoko Pants Extra Absorb*, the most highly absorbent disposable diapers ever for the *MamyPoko* brand*² that allow babies to sleep soundly through the night.*³

In India, people are increasingly underscoring the importance of good sleep on their infant's development. These diapers feature an additional inner layer that is highly absorbent, abundantly absorbing urine and keeping the inner surface dry. In addition, the surface of the top sheet is enriched with coconut extract, ensuring that it is safe for babies' delicate skin. Its innovative Flexi Fit waistband gently wraps around the baby's belly, holding the diaper firmly in place and preventing leakage.



*2 Compared with other *MamyPoko* brand products sold to date in India (based on Unicharm research, May 2023)

*3 Results of a diaper wearing experiment using a body movement sensor showed less body movements during sleep compared with existing products on the market (based on Unicharm research, December 2021)

Kirey Care Alcohol-Free Disinfectant Wet Wipes for Outdoor Use (Indonesia)

In Indonesia, it has become commonplace for people to wear face masks and use disinfectants due to growing awareness of health and hygiene since the COVID-19 pandemic. In view of this, Unicharm's local subsidiary PT. UNI-CHARM INDONESIA Tbk (UCI) introduced *Kirey Care*, alcohol-free disinfectant wet wipes that can be conveniently used on the go and cater to the growing health and hygiene awareness of customers in the country. They have met the sterilization test requirements of Indonesia and can be used without the concerns of skin irritation or odor that come with alcohol disinfectant wet wipes. Having received MUI*⁴ halal certification, this product is also approved for use by people of Islamic faith. Moreover, this product marks UCI's debut in the personal care field and wet wipes market.



*4 Indonesian Ulema Council

Recipient of Porter Prize 2023

The Porter Prize (administered by the Hitotsubashi University Business School Department of International Corporate Strategy (ICS)) was established in July 2001 to recognize companies that achieve and maintain high profitability in their respective industries through innovation in products, processes, and management skills, and the execution of unique strategies based on this innovation. The award is named after Professor Michael E. Porter of Harvard University.

Unicharm received the award in recognition of its dedication to the personal care field using technology cultivated in the area of nonwoven fabric and absorbent material processing and molding, and the synergies it is expected to generate in the pet care field, a relatively new line of business.

