

Kao's approach

At Kao, we are endeavoring to protect Research and Development (R&D) outcomes and effectively utilize the rights derived from these outcomes through cooperation between our Intellectual Property Division and research institutes to realize "Contributions to business and social through intellectual property (IP)."

Kao's creating value to address social issues

Social issues we are aware of

It is necessary to acquire IP and appropriately utilize one in order to use the technologies that we have created through *Yoki-Monozukuri* in ways that lead to the development of industry and contribute to society. There are social problems, for example, increasing counterfeit goods around Asia and existence of patent trolls who get expensive license fees with inappropriately utilizing IP.

Kao's creating value

Kao creates value that contributes to industry and society and transforms IP into assets by pursuing its true nature through particular attention to product development research and fundamental technology research. We also make global contributions through IP-related activities conducted by Kao Corporation and its Group companies both within and outside Japan working in tandem. In addition, we are ensuring acceleration in the pace of open innovation based on our IP strategy by entering into technical contracting.

Risks related to realization of our vision by 2030

In cases where it is not possible to acquire technology development linking industry and public benefit in the form of IP, difficulties arise in the ongoing development of products and pose risks to the realization of the company that we seek to be. Furthermore, the appearance of counterfeit goods with inferior quality gives rise to the risk of failing to meet the expectations of consumers regarding the value of our products, which makes it necessary to acquire IP and appropriately use one.

Opportunities related to realization of our vision by 2030

In addition to using the IP rights acquired through product development and fundamental technologies for our own products, we create opportunities to contribute to industry and society by making IP rights available through open innovation.

Contributions to the SDGs



Policies

Kao conducts its business activities by acquiring industrial property rights, such as patents, design rights and trademarks, and other IP rights as R&D results and names representing brand image, etc.

Kao also actively pursues the acquisition of rights in Asia, the Americas and Europe while vigorously protecting itself against any infringements of its legal rights, both within and outside Japan. Recently, Kao has been pursuing measures against counterfeit products in Asia and other regions.

At the same time, we are strengthening our global efforts to respect and avoid infringing on the rights of other companies, through undertaking R&D in such a way as to avoid infringing upon them from the initial stages and reconfirming existing patents before new product launches and taking action as necessary.

We also flexibly use IP by promoting open innovation.

Framework

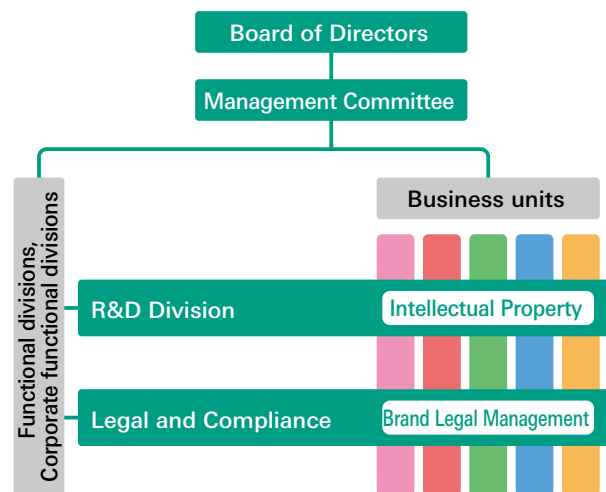
We implement Group-wide management of business-related intellectual property rights through the coordinated activities of our Intellectual Property Division (under R&D) and our Brand Legal Management Department (under Legal & Compliance).

The Intellectual Property Division plays a key role by promoting strategic applications for patents and technology-based design rights, which are indicators of key company values from the perspective of technology development capability, in a broad range of fields. The responsible of the party is the Senior Managing Director in charge of research.

Brand Legal Management collaborates closely with business divisions, considering cost effectiveness while submitting and managing applications for design-based design rights and trademark rights. The responsible of the party is the Executive Officer in charge of the Legal and Compliance Division.

When an important issue arises, Intellectual Property Division and Brand Legal Management Division submit it to the Management Committee for deliberation, and the Board of Directors discusses proposals when necessary. The Management Committee reports and deliberates on useful patents that involve patent invention once each year.

Industrial property rights management framework



* As of December 2018.

Education and promotion

We have implemented a wide range of IP education and training programs for researchers, with continual fine-tuning, for researchers aligned with, for example, their years of experience and roles. In 2018, a total of around 750 researchers participated in IP education and training programs.

We also make effective use of e-learning program to enhance the effectiveness of our educational activities; online learning has already been adopted as a tool for IP education and training by our researchers in Asia, the Americas and Europe.

As a result, researchers have been taking more initiative in acquiring IP rights for technologies and in building IP portfolio.

Collaboration with stakeholders

We have created opportunities for direct dialogue with management levels in the Japan Patent Office and European Patent Office, as well as in patent offices in emerging economies, in order to allow us to maintain an accurate grasp of the latest trends in IP administration. In 2018, we engaged in an exchange of views with the Japan Patent Office.

We have also created opportunities for direct dialogue with patent attorneys in major countries and regions (including Europe, the Americas, China, South Korea and Taiwan) and multiple emerging nations to deepen our understanding of global IP practice.

Mid- to long-term targets and performance

Mid- to long-term targets

- Continue to build and strategically utilize our own patent portfolio, optimized for both volume and quality, and create cross-category, global structures that can strategically use essential research results that can generate diverse product value.
- Ensure effective and efficient prevention of third party IP-related incidents.

Anticipated benefits from achieving Mid- to long-term targets

Cost reductions or profit increase

Kao, which deploys numerous products, is able to apply essential research results to product development in multiple fields, and therefore, will be able to increase the efficiency of R&D through appropriate IP protection, which will lead to higher product revenues.

Impacts on society

Public release of inventions that we create will not just contribute to the advancement of technology, but also will contribute to the public good through the release of beneficial technologies (see below).



Performance in 2018

Performance

The number of new patent applications in 2018 remained at the previous year's high level thanks to active development of new inventions. Income from patent licenses also remained at a high level as a result of active utilization of patent rights.

Reviews of performance

IP acquired through assignment also contributed to the development of our portfolio, and we are promoting use of that IP globally.

Examples of technologies publicly released: Shampoo bottle notches

Kao has been placing a notch with a jagged shape on the sides of shampoo bottles since 1991. This enables persons with visual impairment as well as persons with normal vision who wash their hair with their eyes closed to identify the bottle by touch.

Believing that a lack of uniformity in the industry concerning the use of these notches would lead to consumer confusion, we withdrew our utility model application and worked through the Japan Cosmetic Industry Association to call on other companies to adopt an industry standard. As a result, the agreement of numerous companies in the industry was obtained. Now, most shampoo bottles have notches, and the use of notches has become an international standard due to Japan taking the initiative. (ISO 11156: 2011)



Notches first developed in 1991



Current notches

Our initiatives

Handling of Intellectual Property issues with other corporations

We regard intellectual property, including patents, as critical business assets, and are making efforts to effectively and strategically utilize such resources. In addition, in cases where IP issues with other corporations arise, we make efforts to resolve these issues through dialogue with those corporations when feasible, and through patent licensing where necessary.

Remuneration and incentives for employee inventions

The incentive system for employee inventions is intended to celebrate significant inventions by researchers from our company which contribute to our business operations. We give weight to the perspective that this will incentivize further inventions. Incentives include those awarded for patents utilized internally at Kao, which have led to excellent commercial outcomes, and license income incentives for patents which have produced significant income as a result of licensing to third parties.

We continued to implement incentive systems based on internal utilization of inventions and licensing income in 2018, marking 19 consecutive since the launching of this system at Kao Corporation. Every year the President offers words of appreciation

and encouragement at an awards ceremony for presentation of the incentives to the inventors.

Employee invention systems are implemented on a country-by-country basis, and Group companies in Asia, the Americas, and Europe continued to establish their own incentive systems.

Promotion of industrial property rights management

We consider that the acquiring of the outcomes of R&D at Group companies as industrial property rights is an important step in realizing our *Yoki-Monozukuri* globally and in responding to local consumers and client needs. For this reason, we actively provide platforms for exchange and mutual inspiration among employees with responsibility for IP at Kao Corporation and Group companies both within and outside Japan, while taking measures to execute related work duties collaboratively. We also focus our capacities to support IP-related activities at different localities, with an emphasis on IP education for researchers.

With the increase in the number of Group companies and the lively state of invention activity around the world, we are striving to ensure closer coordination between countries with respect to IP activities. In 2018, there were a large number of new patent applications from Group companies in six countries outside Japan.

Response to the counterfeit goods problem in emerging nations

In regard to business expansion in emerging nations, the risk posed by the rapid diffusion of counterfeit goods increases for products which are well-received locally. It is thus very important to find appropriate countermeasures after having developed a clear picture of the current situation with regard to counterfeit goods. Some counterfeit goods are associated with safety concerns. In such cases it is not merely a question of protecting the brand value of the Kao product being counterfeited; it also becomes imperative that countermeasures to ensure the health and safety of local consumers are put in place.

China in particular could be described as a highly litigious society compared to Japan, as there are many more cases of IP-related litigation. There may thus be times when a resolute stance must be taken to address the issue of counterfeit goods in a lawsuit, depending on the particularities of the case.

In addition, to help prevent counterfeit goods from being imported, we have arranged for Kao personnel to act as instructors in Customs training sessions, teaching Customs personnel the key points to identify counterfeit items, and we have also been actively involved in seizure of imported counterfeit goods (border protection).

Management of trademarks and design rights

At Kao Corporation, the Brand Legal Management Department, which forms part of the Legal and Compliance Division, is in charge of trademark and design rights (some design rights are handled by the Intellectual Property Division under R&D). We conduct adequate availability searches for new names or designs in order not to infringe any rights of third parties. We also try to widen the scope of rights acquired to maintain Kao's brand value.

Close collaboration with marketing teams is very important for our trademark activities in particular. For this reason, in addition to the Kao Corporation Head Office, we also have three offices in Europe and the U.S. for smooth communication with marketing teams worldwide. Furthermore, we manage the entire schedule of naming processes, from the beginning of name creation through trademark filing and decision of names, in order to ensure timely naming synchronized with product development schedules.

We consolidate systems for the early elimination of counterfeit goods which have been on the rise in recent years. We cooperate with governmental authorities, e-commerce site managers, and peer companies in the industry, while we also reinforce our monitoring of markets including e-commerce sites.

Topic Rainbow Dyes innovation achieved through collaboration with other industries and fields

Kao and Fujifilm Corporation conducted joint research that resulted in the successful development of non-reactive hair dyes that penetrate into the interior of hair and are resistant to removal, enabling unique, high-resolution colors and personal hair color expression. The two companies named these hair dyes Rainbow Dye.

Rainbow Dye is the result of the fusion of the hair control technologies created from the knowledge accumulated through many years of hair research by Kao Group research teams in Japan and Germany and the dye molecular design and synthesis technologies that enable to creation of vivid colors acquired by Fujifilm from many years of research and development on photosensitive materials. We also received cooperation from Professor Horst Hartmann of the Dresden University of Technology in Germany, an authority on dye design.

Rainbow Dye is characterized by the creation of three-dimensional colors with a sense of depth and self-expression through hair color, expanding the scope of self-expression using hair coloring. The dye also has the property of easily dyeing hair but does not easily dyeing skin and is highly durable.

Going forward, the Kao Group plans to develop and release hair color products for salons using the Rainbow Dye technologies employed in these hair dyes.



Comparison of oxidation dye color (top) and Rainbow Dye color (bottom)