Corporate governance   Risk and crisis management   Responsible care activities   Product quality management   Information security   Strategic digital transformation (DX)

Intellectual property   Tax strategies   Biodiversity   Communication with consumers   Process safety and disaster prevention   Corporate citizenship activities

Strategic digital transformation (DX) 102-12, 102-15

We are promoting a strategic digital transformation (DX). By using the power of digital, which enables communication regardless of location or time, we will deliver the value of *Yoki-Mono* (good products) to customers in more timely and customized formats and strive to provide solutions that increase creativity to employees.

Kao's creating value to address social issues

Social issues we are aware of
Among the environmental changes concerning global society and economy expected by 2030, we recognize the following in particular as related to DX.
- Intensification of global competition in conjunction with the Fourth Industrial Revolution
- Development of a sharing economy
- Global population shifts and competition to recruit human resources
- Changes in global movement of funds
- Substantial increases in demand for resources, energy, water and food
- Increased cybersecurity threats

With such significant changes in the environment expected, it is hoped that a society will emerge where everyone can play an active role, free from various restrictions such as region, location, age and disability. Also, since the global COVID-19 pandemic in 2020, many people have become aware of the new value of digital technology, and their daily lives have changed significantly as a result of the widespread adoption of non-contact and non-face-to-face digital technology in many social activities.

Until now, we have used various leading-edge technology in all stages of the supply chain and implemented DX with a focus on increasing operational efficiency.

Going forward, we hope to implement DX using the most recent leading-edge technology, pursue value that can be provided only by a company that is involved in the lives of people throughout their lifetimes, and create a new lifestyle culture in cooperation with various partners.

Risks related to realization of What Kao Aims to Be by 2030
In order to achieve the three policies established under the Mid-term Plan—become an essential company in a sustainable world, transform to build robust business through investment, and maximize the power and potential of employees—it is important that we support understanding of DX within the company and develop environments where we can collaborate with various external partners. When undertaking DX, legal compliance including protection of personal information and countermeasures against the risk of information leaks will be indispensable, and we are working in cooperation with our Legal and Compliance to ensure compliance with the laws of each country and across countries.

Opportunities related to realization of What Kao Aims to Be by 2030
To carry out the three policies of the Mid-term Plan, it will be necessary not only to select optimal digital technologies, but also to adopt two perspectives: value proposals that lead to solutions to social issues, and what methods should be used to make such value proposals. We will of course maintain our commitment to manufacturing as in the past, but we will place greater emphasis on providing value to each and every individual in an optimal form. Depending on the circumstances, we will not only focus on our own assets, but also actively collaborate with external partners to pursue optimal solutions for our customers and end users.

Kao's creating value
Until today, we have provided value to consumers through lifestyle-related products such as household products and cosmetics. In the process of product development, we accumulate research regarding various aspects of the human body, psychology and lifestyles of diverse people. We will provide combinations of products and services tailored to each individual's condition by using monitoring technologies created from the technologies and knowledge we have built up. We will accelerate efforts in collaboration with various companies, governmental institutions and other partners to make full use of our strengths in research assets and product development capabilities for solving social issues.

Contributions to the SDGs

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Strategic digital transformation (DX) 102-20, 102-43, 404-2

Policies

We seek to become a DX-ready company by transforming our business as well as organizations, processes, cost structures, and corporate culture.

Moreover, by multiplying the Kao core value of *Yoki-Monozukuri* with leading-edge technology including artificial intelligence (AI), we will enhance the level of value provision to all stakeholders (employees, customers, shareholders and society) and we will continue our efforts so that employees will be able to perform fulfilling work and to meet external expectations even in 2030.

Education and promotion

While introducing the best DX solutions at the best timing to bring maximum benefits to our employees, we will also encourage our employees to create their own DX solutions by making content widely available. Rather than conducting uniform education for all employees, we will carry out a policy of developing and implementing specific solutions with the departments that have actual problems and rolling them out company-wide as best practices.

Collaboration and engagement with stakeholders

We regard our suppliers as important stakeholders, not merely as customer-vendor relationships, and we aim to develop relationships that can transform companies and create social value together. We share a number of social issues in common with consumers, and we will maintain relationships that enable us to solve those problems together.

Framework

DX implementation is conducted and managed by the DX Promotion Committee, which is chaired by a managing executive officer (meetings are held 12 times annually).

Main fields
Reborn Kao
We will redefine our added value with digital technology enhancements by providing new experiences in both the real-world and the virtual-world as well as new product development and marketing through comprehensive strategies and tactics. We will also actively invest in structural reforms and DX to build a more robust business framework.

Another Kao
We are investigating several business domains that differ from the current B2C business model, in which we deliver value to our consumers through products such as household products and cosmetics. These new businesses will be launched with the aim of solving a number of social issues, but the method of providing value will be different from in the past. Some examples are B2C (to consumers) business that provides value for services rather than products, B2B (to businesses) or B2G (to governments and NPOs) business that combines goods and services, and B2B (to businesses) business that provides value by combining existing research knowledge with leading-edge digital technology. All new businesses will be developed on different ground from our existing business domains, and in the background is the utilization of many years of research assets. These include knowledge about the human body, psychology and lifestyles accumulated through Essential Research and our proprietary monitoring technology. By developing these business groups in addition to the existing B2C business model, we believe that we can take the first steps toward becoming a company that is indispensable for a sustainable society.

Raising efficiency (internal DX)
Leveraging digital technologies, we plan and implement strategy and tactics to fundamentally improve efficiency in work processes. Existing data is integrated after formatting to improve its usability, and is converted into high-value-added information using advanced technology.

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Strategic digital transformation (DX)

Mid- to long-term targets and performance

Mid- to long-term targets

In light of changes in the external environment including the expansion of ethical consumption, personalization of consumption, diversification of purchasing behavior and the rise of new distribution channels, we formulated the Kao Group Mid-term Plan 2025 (K25) with "Sustainability as the only path" as its vision. By maximizing utilization of accumulated technologies and knowledge as well as digital technologies, we will create new business for protecting lives in the future while reinvigorating existing business.

Anticipated benefits from achieving mid- to long-term targets

Utilization of leading-edge technology will enable new product development that transforms consumer experiences and inspires people. We believe that by building a digital platform based on the various data accumulated through Essential Research and dozens of proprietary monitoring technologies as a common foundation for both existing and new businesses and collaborating with multiple partners, we will establish new business models for Kao.

Performance in 2021

Performance

While promoting increases in operational efficiency by using advanced digital technology, we have evolved proposals by creating various unique user experience (UX) that use digital technologies, mainly in the Cosmetics. In addition, we have collaborated with numerous partners to develop an automated shelf allocation algorithm using AI, automate truck loading and unloading in logistics facilities to reduce waiting times, and use AI to examine costs.

Web Developed an automated shelf allocation algorithm using AI and started a field testing for raising efficiency in sales site development

www.kao.com/jp/corporate/news/business-finance/2021/20210708-001/ (Japanese)

Moving toward automated truck loading and unloading and reduced waiting times at logistics facilities
Started a joint demonstration trial to make automated forklifts equipped with AI linked to truck operation

www.kao.com/jp/corporate/news/business-finance/2021/20210917-001/ (Japanese)

Started using AI to examine costs with the aim of increasing the work efficiency of beauty advisors

www.kao.com/jp/corporate/news/business-finance/2021/20210706-001/ (Japanese)

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Strategic digital transformation (DX)

Our initiatives

Reborn Kao

By co-creating the user experience (UX) from the perspective of the Kirei Lifestyle Plan (KLP) with various partners, we have provided value that takes into consideration both a more personalized UX and the environment.

Hair color simulations using augmented reality (AR)

Since October 2021, we no longer offer color swatch samples for all our hair dye and hair manicure products in Japan as a promotional material to select a color at stores. In doing so, 56 tons maximum of plastic used yearly to produce these color swatch samples were reduced. Instead, we introduced a hair color simulation[1] as a support tool for customers selecting a hair color. The hair color simulation is easy and fun to use anywhere at any time by scanning a QR code[2] on an in-store display or the back of the product package, and customers can check their own hair color after dyeing.

[1] The tool uses the YouCam Makeup browser module, which is an AR makeup app provided in collaboration with Perfect Corp.
[2] QR code is a registered trademark of Denso Wave Incorporated.

Hair color simulation

Makeup diagnoses using AI technology

With regard to cosmetics, in many instances, testers for all items are placed in stores so customers can check the color and feel, but with today's heightened awareness regarding hygiene, more people are refraining from using testers.

We have introduced unique digital services and makeup simulators that recreate the makeup experience for each brand website and official LINE so that customers can experience cosmetics colors.

For *KATE*, we developed a makeup diagnostic tool that not only enables customers to find makeup styles that will look good on them, but also helps them to express themselves so that they can achieve the appearance they want to have. KATE Scan uses AI technology to measure the ratios of different parts of the face and uses the values with the unique *KATE* logic to perform an analysis. Based on facial impression analysis, the tool proposes makeup

methods that will create the look that the customer aspires to achieve. We have a lineup of tools available only from Kao including KATE Search, which suggests makeup products and colors suited to the individual customer for each product line.

KATE Makeup Lab
www.nomorerules.net/matome/ (Japanese)
Web

Lunasol D2C online sales reduce waste

We launched an initiative to predict sales based on advance online sales in order to reduce cosmetic product waste. Disposal of unsold products causes environmental impact including the release of CO_2 during processing, and it is possible to reduce the environmental impact from disposal by reflecting advance sales trends in production plans. (*Lunasol* product disposal volume: Approximately one-third the volume of the previous year)

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Strategic digital transformation (DX)

Leave no one behind
Company-wide web accessibility policy established with the aim of disseminating digital information that is easily accessed by all

Under the KLP, we are taking universal design measures to develop and provide products that are easy to use by all people to make consumers' everyday more beautiful. We will ensure improved web accessibility to provide information via our websites so that more people in various circumstances can easily find the information they need to choose and use our products.

Raising efficiency (internal DX)

Awareness-raising activities in each division and affiliated company

We have used COVID-19 countermeasures as an opportunity to accelerate work style reforms through the use of digital technologies. We have made major changes to work styles including extensive use of online conferencing tools by all employees including our president.

We have also created platforms to enable the integrated use of data stored in each field, enhance the accessibility of all information, and took measures to raise work efficiency.

The application of natural text searches* using AI, which started from a research integration search system, has expanded. Following application in the SCM field in 2020, we worked to apply and deploy natural text searching in practical operations such as in surveys on the scope of business impacts from chemicals of concern.

We also developed and deployed in-house creation of low-code in-house apps and robot process automation of repetitive tasks. Development by on-site employees who are highly familiar with the work not only raises work efficiency, it also facilitates grassroots digital human talent cultivation activities.

* Natural text search:
  A search performed using natural language (spoken language and sentences) rather than keywords

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