Advanced digital technology strategy 102-12, 102-15, 102-43, 103-1, 103-2, 404-2

Kao Sustainability Data Book 2021

2020 Our initiatives

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.

ESG Keyword

DX target fields Use of AI

Higher work efficiency

Sebum RNA monitoring technology

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

We believe that through DX, *Yoki-Monozukuri*, a value creation activity undertaken since Kao's foundation, will become a customer experience that is close to each consumer and customer in line with our Kirei Lifestyle Plan (KLP). We will monitor environmental changes related to DX and provide value to all stakeholders including consumers and customers.

Kao's creating value

Furthering DX not only enhances productivity and operational efficiency, but is something we believe leads to higher satisfaction among current customers as well as the opportunity to gain new ones. We hope to pursue value that can be provided only by a company that is involved in the lives of people throughout their lifetimes and to create a new lifestyle culture.

Contributions to the SDGs



Policies

We are promoting strategic DX to realize business transformation and enhanced operational efficiency through effective use of cutting-edge technology, and by utilizing IT tools and big data learning from Kao's artificial intelligence (AI), we can discontinuously improve company productivity (= added value / cost). In the period leading up to 2030, we will implement DX in order to focus on business models and business processes that integrate goods and information even more.

Education and promotion

While quickly introducing solutions that allow employees to realize the benefits of DX, we encourage all of our employees to make their own DX by making content widely available to them. 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 and not merely as customer-vendor relationships, and aim to create social value together through DX. We promote open innovation with business partners, research institutions and other organizations.

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Framework

Until now, the Strategic Innovative Technology Team (SIT), supervised by the Senior Managing Executive Officer, has performed advanced digital technology strategy planning and execution, but DX is spreading to each division and starting in 2021, it will be transferred to the following divisions. By operating the matrix of (3), which supports information technology, and (1) and (2), which are business departments, we will continue to develop solutions in the following four fields with an eye toward exits.

- Strategic Innovative Transformation and Digital Business Creation under the Corporate Strategy (supervised by the Managing Executive Officer)
- (2) DX Co-Creation (the Managing Executive Officer is head of the center) under the Consumer Products Business (supervised by the Representative Director and Managing Executive Officer)
- (3) Enterprise Information Solutions (supervised by an executive officer)

Efficiency utilization field

Leveraging digital technologies, this field plans and implements 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.

Information strategy field

This field proposes strategy and tactics from a comprehensive approach including real-world experiences in addition to using digital technologies to innovate communications with stakeholders (employees, customers, shareholders, society) inside and outside the field. It is forging relationships with and creating a network of outside content partners to develop information content aligned with the strategy and tactics.

Business and sales field

This field uses digital technologies to propose new businesses and new business models, and establishes faster product development processes suited to the

DX target fields

business model.

IT design management field

This field is rebuilding our information system platform and introducing and implementing advanced information technology for DX. This will support activities in the three fields.



Mid- to long-term targets and performance

Targets for 2021

Advanced digital technology is an indispensable weapon for increasing corporate value, and by making use of it, Kao will become an Al-ready company.

By multiplying Kao the core value of *Yoki-Monozukuri* with cutting-edge technology, 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.

Anticipated benefits from achieving mid- to long-term targets

Business impacts

Time creation and money effectiveness, combined with fixed cost control effectiveness to produce a result of over 2.5 billion yen

Social impacts

We will raise the levels of the provision of value created in accordance with the KLP to stakeholders including customers, shareholders and employees or the process of co-creating value (such as higher speed, greater capacity, longer distances and one-to-one).

Performance in 2020

Performance

By utilizing advanced digital technology to streamline various different operations, during 2020 we achieved an approximate 1.4 billion yen cost reduction, surpassing 1.0 billion yen in work efficiency effects for two consecutive years. Although most of this result cannot be expressed as a direct impact on profit and loss because it is an inhibitory effect, the time creation effect was equivalent to more than 200,000 hours, making it possible to devote more time to creative endeavors.

At the same time, we have used COVID-19 countermeasures as an opportunity to accelerate work style reforms through the use of digital technologies. Approximately 15,000 employees working at sites in Japan excluding production workers and in-store workers have in principle been working from home since February 28. We have increased VPN lines to support this, and all employees including the president are using online conferencing tools. As a result, major changes have occurred in work styles. We are currently transitioning to a flexible work style that distinguishes between work from home and work in the office according to need to, but we are making full use of digital technologies to thoroughly prevent the spread of infections and maximize work efficiency.

The application of natural text searches* using AI, which started from a research integration search system, has expanded. In 2020, we created a system that allows plant operators to perform natural text searches of operation logs using machine-reading AI to find the appropriate information in the shortest possible time.

* Natural text search

A search performed using natural language (spoken language and sentences) rather than keywords

A search tool screen image



Reviews of performance

Three years have passed since the launch of our SIT. DX has spread to each division and we have had a number of successes. In 2021, as more employees will be able to use digital technology themselves, it is necessary to strengthen the link between fostering corporate culture and enhancing corporate value.

Our initiatives

Efficiency utilization field

We have used COVID-19 countermeasures as an opportunity to accelerate work style reforms through the use of digital technologies. Approximately 15,000 employees working at sites in Japan excluding production workers and in-store workers have in principle been working from home since February 28. We have greatly increased VPN facilities to support this, and all employees including the president are using online conferencing tools. As a result, major changes have occurred in work styles. We are currently transitioning to a flexible work style that distinguishes between work from home and work in the office according to need to, but we are making full use of digital technologies to thoroughly prevent the spread of infections and maximize work efficiency.

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Information utilization field

We are promoting a strategic DX to realize business transformation and enhanced operational efficiency through effective use of cutting-edge digital technology and implementing measures that contribute to enhanced corporate value (business performance, ESG, etc.). We proposed and implemented digital communication strategies for BtoC (consumers), BtoE (employees) and BtoS (society). For BtoC, we used cutting-edge technology for value transmission and D2C business model support. For BtoE, we undertook internal branding of our main products. For BtoS, we promoted the creation of issue-based communities.

Business and sales field

We accelerate and advance *Yoki-Monozukuri* through digital technology. Using AI, we will redesign how we conduct market research, product development and sales leveraging online sales and social networks. We are active in four areas: knowing (evaluating and introducing digital research tools), creating (building systems for strong niche product development), delivering (trials of e-commerce test marketing using crowdfunding), and conveying (developing value transmission methods using Al image analysis).

Use of AI for practical application of sebum RNA monitoring technology

We launched a collaborative project with Preferred Networks, Inc. (PFN) with the aim of achieving practical application of the sebum RNA monitoring technology that we developed. By applying PFN's predictive model using Al technology to Kao's data obtained from sebum RNA, we seek to evaluate the risk of future skin damage and create a beauty counseling service that commits to the condition of the skin and provides individualized beauty advice and a skin care by based on genetic information.

* Sebum RNA (ribonucleic acid) monitoring technology The technology to analyze RNA isolated from sebum, reflecting fluctuating daily body conditions. By collecting sebum with oil blotting film through a non-invasive (lower physical burden on the body) trial, we were able to obtain 13,000 RNA expression levels.

Flow of RNA monitoring: Sebum collection to RNA extraction, purification and analysis

1. Sebum sample

2. RNA collection and purification



RNA solution

3. Comprehensive analysis of RNA in sebum Comprehensive analysis using

Comprehensive analysis using a next-generation sequencer



pecific detection of humai RNA only

Data analysis

Heat map of RNA expression information*



Use of colors for visualization of the level of sebum RNA expression information for 15 people

For DX promotion

Until now, SIT Communication has been posted on our intranet on a regular basis (generally every other month) and the Senior Vice President of the SIT has called for cooperation in the spread of DX, resulting in accelerated development of solutions that are more in line with on-site issues.

Starting in 2021, each function (efficiency, information utilization, business and sales) previously carried out by the SIT was transferred to new organizations established in business departments (Business divisions and Corporate Strategy), and it is expected that user-oriented DX will be promoted further.

IT vendor cooperation

Concerning planning and implementing DX solutions, we work with external IT vendors from the initial planning stage. In particular, employees of comprehensive IT vendors abundant in IT technology skills are placed into our Strategic Innovative Transformation, where we take on professional advice.

In addition, we are undertaking initiatives for collaborative relationships that go beyond the relationship between customer and vendor so that we can solve social issues together.