

Kao Group Mid-term Plan 2025 “K25”



Kirei—Making Life Beautiful

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<https://www.kao.com/global/en/investor-relations/library/business-strategy-presentations/>

Forward-looking statements such as earnings forecasts and other projections contained in this release are based on information available at this time and assumptions that management believes to be reasonable, and do not constitute guarantees of future performance. Actual results may differ materially from those expectations due to various factors.

Critical Background

1. Significant changes in society due to COVID-19
2. Global environmental issues deepening in the world and the rise in social interest
3. Increasing awareness of divided societies and self-interest principles

Situation of Kao Group

1. Maintained management policy of profitable growth and continued to increase dividends, despite slow growth in sales and profit
2. In times of drastic changes in the world today, it is difficult to set publicly announced financial forecast
3. Focusing mainly on existing business and lacking open innovation spirit, resulting in a lack of challenge to new businesses

Our Aspirations

1. Become a company that contributes to the creation of a sustainable society while achieving growth
2. Provide the most needed services to those in most need of them
3. Create a vibrant workplace driven by motivated employees

Enrichment of the lives of people

To strive for the wholehearted satisfaction and enrichment of the lives of people globally and to contribute to the sustainability of the world

Our new focus

Save lives, protect people



Concept

2021-

Kirei—Making Life Beautiful

October 2009 - 2020

Enriching lives, in harmony with nature

October 1985 - September 2009

For clean, beautiful and healthy lives

What we aspire to do as a company now

Become a company that saves future lives

Leverage technology to enter new fields

Start-up “Another Kao”

K25 basic principles toward 2030

Vision Sustainability as the only path

Concept Kirei—Making Life Beautiful

K25 Objectives

- 1) Become an essential company in a sustainable world
- 2) Transform to build robust business through investment
- 3) Maximize the power and potential of employees

Evolution of
corporate philosophy

ESG-driven Kao Way

As society changes, so does our corporate philosophy

Employee
empowerment

Implementation of OKR (Objectives and Key Results)

All members are connected, and challenges are key

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K25 Objectives

- 1) Become an essential company in a sustainable world
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Key Result 1

Take leadership in a self-propelling sustainable society

ESG Investment
= Reflection of future earnings

Key Result 2

Create another Kao and reinforce current Kao

Expand global business by focusing on saving lives

Key Result 3

Double the productivity of our business activities

Make challenges visible and pursue open innovation

K25 Financials (as a result)

Record-high sales and profit growth

Net sales : 1.8 trillion yen / Operating income : 250 billion yen

Dividend 36 Consecutive years

K25 basic principles toward 2030

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K25 Objectives

- 1) Become an essential company in a sustainable world
- 2) Transform to build robust business through investment
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Take leadership in a self-propelling sustainable society

ESG Investment = Reflection of future earnings

Key Results:

Carbon recycling

- Conversion of carbon dioxide into raw materials

Positive recycling

- Creation of new business through re-use

Stop pandemic

- Eradicate the source of infectious diseases

Keyword

Beyond Sustainable

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K25 Objectives

- 1) Become an essential company in a sustainable world
- 2) Transform to build robust business through investment
- 3) Maximize the power and potential of employees

Create another Kao and reinforce current Kao

Key Results:

New Business

- Launch digital and precision healthcare business (high-precision bioanalysis and homeostasis enhancement solution)

Current Business

- Invest in outstanding products and expand business

Cosmetics Business and sanitary business

- Pursue next innovation

Keyword

Another Kao and Reborn Kao

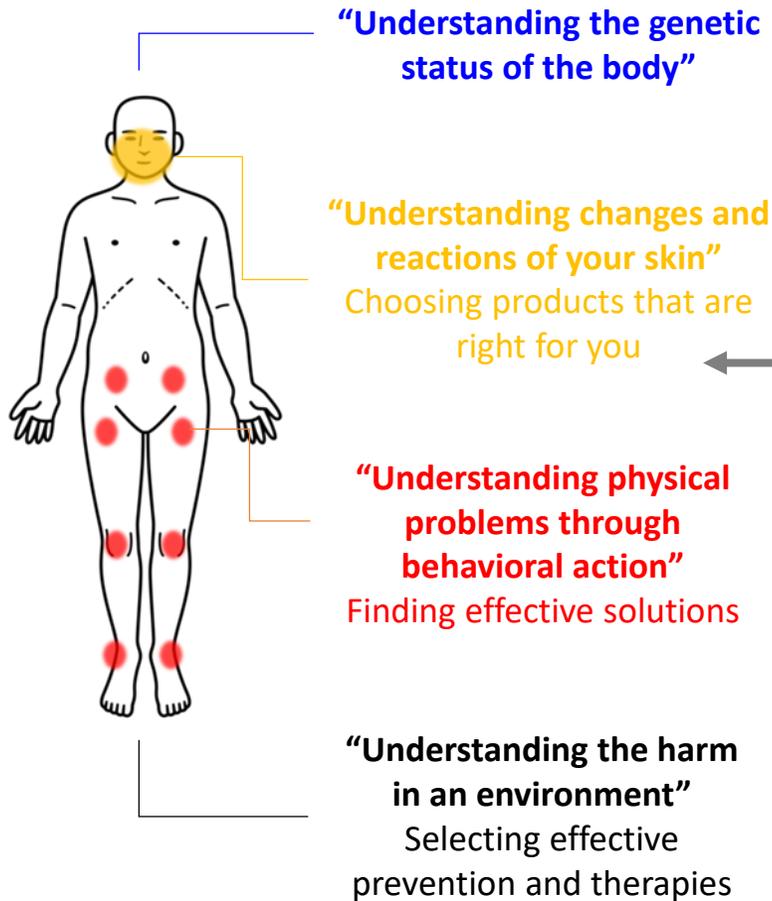
Obtain precise information about the body and take the best action to protect it



Precision health care

Understanding (Monitoring)

Protecting (Products)



The present and future: **genetic** monitoring

RNA monitoring

Customize

Symptoms and changes: **appearance** monitoring

Partial picture diagnosis

Customize

Health and protection: **mobility** monitoring

Walk monitoring

Customize

Infection and immunity: **homeostasis** monitoring

VHH Anti-body tests

Customize

Skin regeneration technology

Beauty Care

Ceramide technology, Fine Fiber technology, durable UV care technology, lamellar membrane technology, color and shape control technology



Homeostatic regeneration technology

Personal Healthcare

High penetration carbonation technology, steam heat technology, hand barrier technology, pharynx defense technology



Mobility recovery technology

Health & Wellness

Highly functional polyphenol technology, Technology for recovery of muscle control, metabolic function control technology



Immune enhancement and complete hygiene technology

Fabric and Home Care Beauty Care

Safe antiviral/antibacterial technology, suppression of vector infection, VHH antibody therapy technology



Launch of "Another Kao" and dynamic activation of "Reborn Kao"

Another Kao

Reborn Kao

Life

Everyday Lives

VHH Antibody
"Technology to protect people from viruses"
Mosquito Canceller
"Technology to save children from mosquitos"

Area: anti-virus
Anti-virus technology
"Technology to understand routes of infection and protect people from infection"

Virus, bacteria monitoring
Technology to understand harm in an environment"

Professional service
Barrier coating
(Safe, long-lasting, dirt-proofing, dustproofing)

Fabric and home care
Ecological, total cleaning
(Antimicrobial processing, sterilization, inactivation, regeneration)

Area: skin cure
Technology for beautiful skin treatment

RNA monitoring
Technology to understand genetic status of the body

Personal healthcare
Personal healthcare
(Blood flow, relieving fatigue, oral hygiene care)

Personal healthcare
Virus barrier
(Daily hygiene care)

Area: hair cure treatment
Technology that goes beyond human hair

Skin metabolism monitoring
Technology to understand change distribution of the skin

Beauty care
Protective skin care
(Friction proof, UV, artificial tanning)

Beauty care
Skin care cleansing
(Total sterilization, bubble care, can be used continuously)

Area: analgesic treatment
Technology for pain relief

Walk monitoring
Technology to understand physical problems by behavioral action

Cosmetics
Target-focused care
(Makeup care for wrinkles, blemishes and rough skin)

Cosmetics
Holistic skin care
(iP, Fine Fiber, ceramide, lamella)

Area: healthcare
Homeostasis recovery technology
(Highly functional polyphenols, metabolism activation, immunity strengthening, muscle recovery technology)

Sanitary
Baby healthcare
(Skin/growth stress care)

Sanitary
Hygiene care for elderly
(Walking assistance, simple to wear, fashionable)

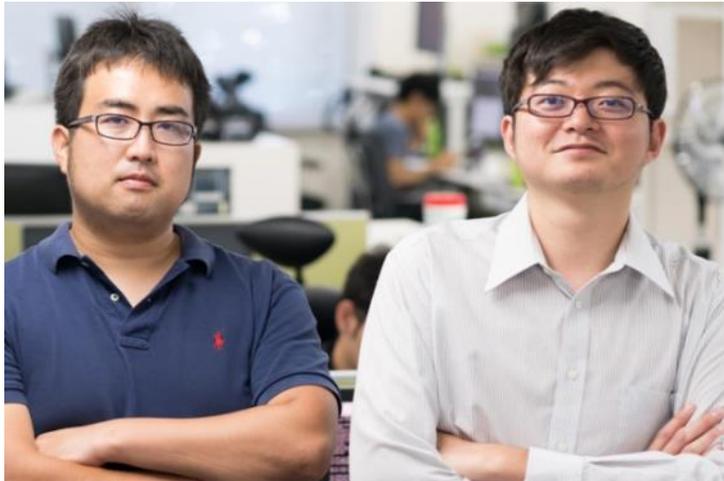
Ecology

Personal parameter mining
(maximizing utilization of digital)

Maximum with minimum



AI developer, one of the leading unicorn startups in Japan



D. Okanohara (COO)

T. Nishikawa (CEO)



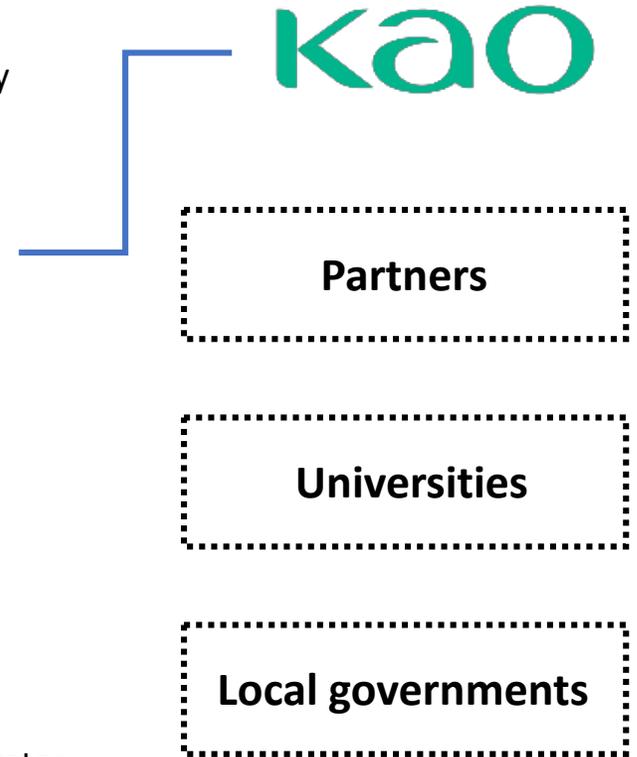
Awarded 2018 Best Paper on Human-Robot Interaction in May, 2018

Kao Corporation
Corporate Executive Fellow
Special Missions for Technology Strategy



Dr. Hiroshi Maruyama

- Former Director, IBM Tokyo Research Laboratory
- Former Professor, Institute of Statistical Mathematics
- Fellow, Preferred Networks
- Project Professor, Research into Artifacts, Center for Engineering, University of Tokyo



K25 Basic principles toward 2030

Vision Sustainability as the only path

Concept Kirei—Making Life Beautiful

K25 Objectives

- 1) Become an essential company in a sustainable world
- 2) Transform to build robust business through investment
- 3) Maximize the power and potential of employees

Double the productivity of our business activities

Key Results:

- Fair compensation according to challenge and contribution (implementation of OKR globally)
- Active promotion of talent from outside Kao and doubling the results of collaboration
- Reform to become “digital Kao” to be completed by 2023

Keyword

Open and Fair Innovation

Launch of Another Kao



From mass production, multiple categories to small, selected numbers of products



From growth and affluence, to great concerns



From refusal and reduction to reverse raw materialization



Issues related to everyday lives

Supply / Quality / High performance

Issues related to life

Disease / Disability / Aging

Issues related to ecology

Global warming / Pollution / Water / Food / Energy

Reinforcement of Reborn Kao



Cosmetics Business



Health & Beauty Care Business



Hygiene & Living Care Business



Chemical Business

Lifecare business

Save children from mosquitoes, one of the sources of infection



Number of people dying from mosquito-borne malaria (worldwide)

Over **400,000** every year

Most of them are children under 5 years old

Number of people dying from infectious diseases transmitted by living organisms (worldwide)

Over **700,000** every year

Note : Based on WHO Fact Sheets (<https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases>)

SCIENTIFIC REPORTS
nature research

Check for updates

OPEN Mosquito repellence induced by tarsal contact with hydrophobic liquids

Hiroaki Iikura^{1,2,3,4}, Hiroyuki Takizawa¹, Satoshi Ozawa², Takao Nakagawa¹, Yoshiaki Matsui^{1,2} & Hiromi Nambu^{1,2}

Mosquito legs have a unique highly water-repellent surface structure. While being beneficial to mosquitoes, the water-repellence of the tarsi enhances the wettability of hydrophobic substances such as oils. This high wettability induces strong attraction forces on a mosquito's legs (up to 87% of the mosquito's weight) towards the oil. We studied the landing behaviour of mosquitoes on oil-coated surfaces and observed that the mosquito contact time was reduced compared to that on hydrophilic-liquid-coated surfaces, suggesting that the oil coating induces an escape response. The observed escape behaviour occurred consistently with several hydrophobic liquids, including silicone oil, which is used globally in personal care products. As the repellent effect is similar to multiple hydrophobic substances, it is likely to be mechanically stimulated owing to the physical properties of the hydrophobic liquids and not due to chemical interactions. On human skin, the contact time was sufficiently short to prevent mosquitoes from starting to blood-feed. The secretion of *Hippopotamus amphibius*, which has physical properties similar to those of low-viscosity silicone oil, also triggered an escape response, suggesting that it acts as a natural mosquito repellent. Our results are beneficial to develop new, safe, and effective mosquito-repellent technologies.

Female mosquitoes transmit numerous infectious diseases. The global incidence of Dengue fever alone, borne by *Aedes* mosquitoes, has drastically increased owing to the expansion of the vector's habitats, and the number of cases is estimated at 390 million per year^{1,2}. The spread of these diseases can be triggered by multiple bites of a single mosquito. When a mosquito blood-feeds on an infected human, the infectious pathogen is ingested into her abdomen, and her next bite places an uninfected human at risk. Therefore, preventing mosquitoes from biting humans is an effective strategy against disease transmission.

The application of insect repellents plays an important role in protecting humans from insect bites^{3,4}. Common strategies for repelling insects act on their olfactory senses mediated by volatile active agents and on their taste perception, exemplified as bitter tastants⁵⁻⁷. These dual mechanisms induce avoidance behaviour in mosquitoes. In addition to affecting the insect's sense of smell and taste, DEET (*N,N*-diethyl-3-methylbenzamide) exhibits contact-based chemorepellence mediated by tarsal segments of the *Aedes* mosquito legs⁸. This multiple-mechanism action makes DEET particularly effective; it is the most widely used repellent, with its effects lasting for approximately six hours. However, to provide perfect protection from mosquito bites, a high-concentration DEET formulation must be applied carefully over the exposed skin. Moreover, several countries have imposed age-based restrictions on DEET, such as limiting the number of daily uses for children and infants^{9,10}. Therefore, discovering additional mechanisms for repelling mosquitoes is important for the design of effective protection methods that could be safely used for all age groups. In this study, we explored a repellence mode that focuses on the unique physical properties of the surface of mosquito legs rather than their chemosensory neurons and receptors, because we expected that the wettability of liquids on the tarsi could be an important determinant factor for the motion of mosquitoes.

Mosquito legs are highly hydrophobic due to the fine geometrical structure of their surface (Supplementary Figs. S1a, b)^{11,12}. This water-repellent nature generates a weight-supporting force on water surfaces; the maximum repulsive force of a single mosquito leg is 23 times the mosquito's body weight. This allows female mosquitoes to use the surface as a foothold to lay their eggs and also permits the adult mosquitoes that emerge from the

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SCIENTIFIC REPORTS | (2020) 10:14448 | <https://doi.org/10.1038/s41598-020-71406-y>

Note : Scientific Reports (https://www.researchgate.net/publication/344059505_Mosquito_repellence_induced_by_tarsal_contact_with_hydrophobic_liquids)

Targets for 2030 (K30)

Make Kao a company with a global presence, valuable to society

K30 Objectives

- 1) Become an essential company in a sustainable world
- 2) A high-profit global company that also significantly contributes to society
- 3) Returns to stakeholders according to levels of growth

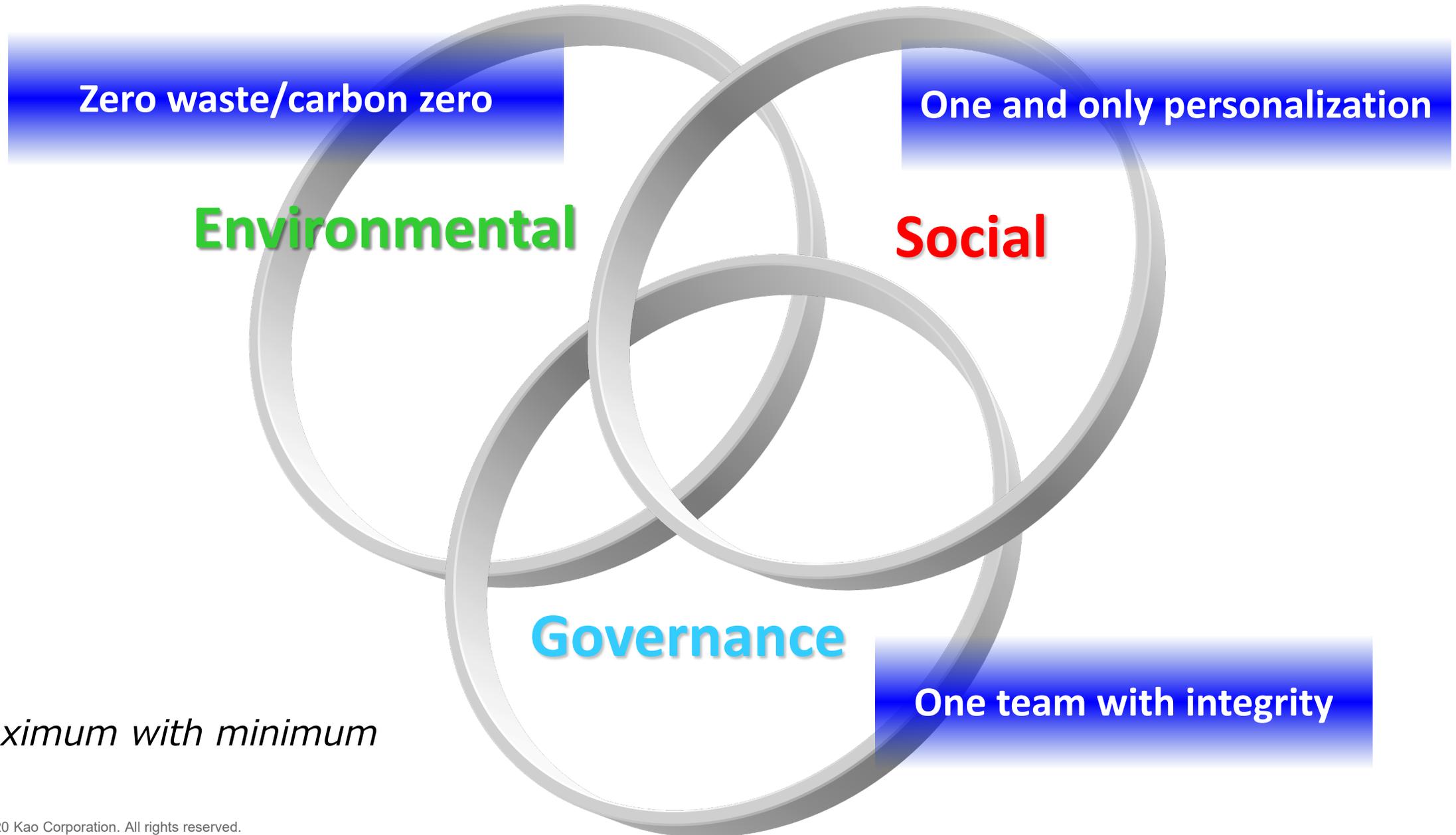
K30 Financials (as a result)

Record-high sales and profit growth

Net sales 2.5 trillion yen / Operating income 400 billion yen

Dividend 41 Consecutive years

ESG-driven management of the Kao Group



Maximum with minimum

Kirei—Making Life Beautiful

