

September 17, 2026

– Research & Development Strategy Briefing

Management of Technology to Establish an Unrivalled Position

Becoming an Essential Presence for Consumers and Society

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Research and Development, Global
Kao Corporation



These presentation materials are available on our website in PDF format:

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.

Agenda

- **Corporate Strategy and Research & Development (R&D) Strategy**
- Kao's Management of Technology / *Sharp Top* Strategy
- Evolution of the Value Creation Process
- Direction of Research & Development (R&D)
- Summary

Kao's Management Strategy

Kao Group Mid-term Plan 2027 "K27"

Vision

Saving future lives

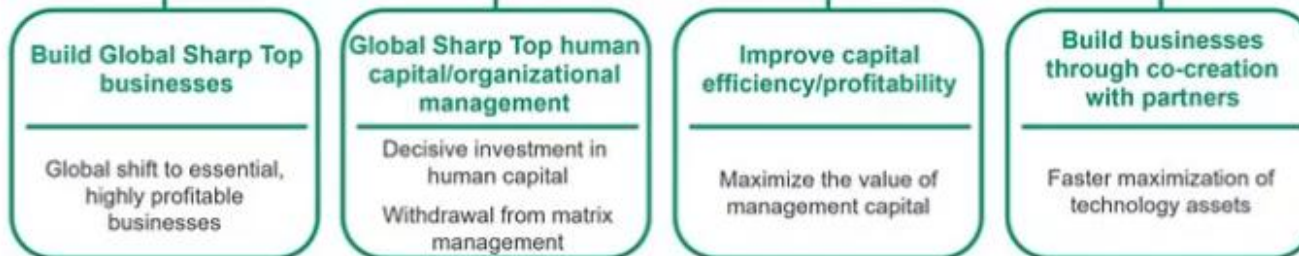
【K27 Basic Policy】

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

K27 Target	ROIC	11.0% or more
	EVA	70.0 billion yen or more
	Operating Income	Record-high operating income (FY2019 211.7 billion yen)
	Sales outside Japan*	800.0 billion yen or more (Sales CAGR +4.3%)

*Sales outside Japan are based on the location where the sales were recognized.

Strategies for achieving K27



Global Sharp Top Standard

Sales ratio outside Japan: 50% or more

Operating margin : 15% or more

Market share : Category-leading level



Corporate Strategy and Research & Development Strategy

Global	Sharp	Top
Operating in the global market	Utilizing exclusive unique technology	Implementing values with high social significance
Sales ratio outside Japan	Profit margin	Market leadership (Market shares)

Maximum

Economic value /
Social value

**High-Efficiency
Management**
(DX/ROIC Management)

**Environmentally
Conscious Design**
(ESG Management)

Minimum

Competitive costs /
Environmental impact

Exclusive Uniqueness x Social Significance

(Sharp Top Strategy - Management of Technology to Establish an Unrivalled Position)

Kao's Success
Model

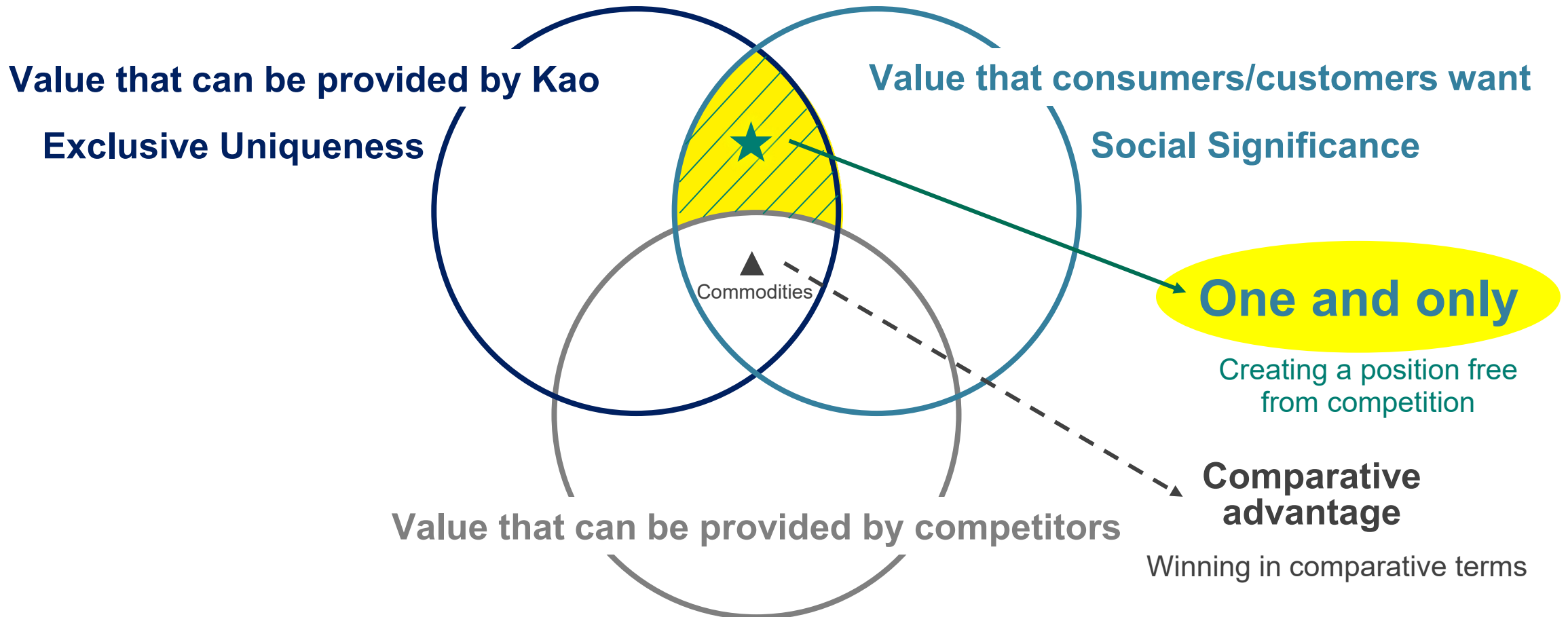
Technology Out

While deepening and evolving core technologies

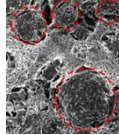
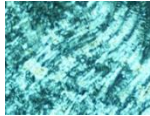
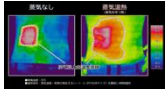
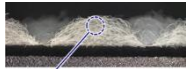
×

Precision Market In

Implementing precise identification
of potential needs and social issues



Exclusive Uniqueness x Social Significance (*Sharp Top Case Studies*)

Technology Out - Exclusive Uniqueness -			Precision Market In - Social Significance -
High water content lamellar: Stratum corneum intercellular lipid ceramides		×	High moisture and low irritancy for dry and sensitive skin
Agar hydrogel: Capsules providing protection from UV exposure		×	Thorough UV protection with comfortable application
Lamellar platform: Retention of lipid ingredients		×	High-concentration actives for remarkable hair care
Control of malodor-causing bacteria / Anti-bacterial detergent design		×	Exceptional cleaning and odor removal performance
Processing technologies for composite sheets (Fe ₂ O ₃ , superabsorbent polymer)		×	Soothing steam heat
Processed non-woven sheets / Coarse and dense structure		×	Reliable absorption that is gentle on the skin

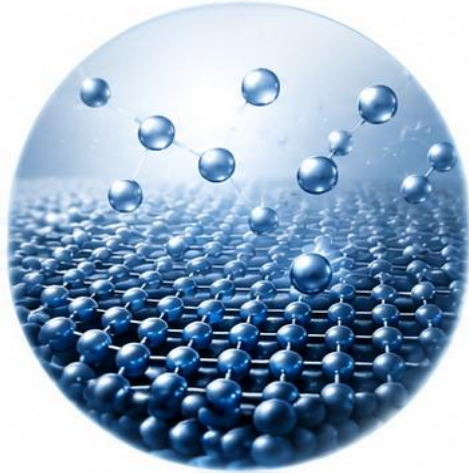
Management of technology that goes beyond accumulating proprietary technologies to identify changes in consumer needs and social issues and deliver value to growth markets

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Five Interfaces and Kao's Precision Interface Control Technology

Gas-Solid
Interface



Adsorption and desorption
of gaseous molecules



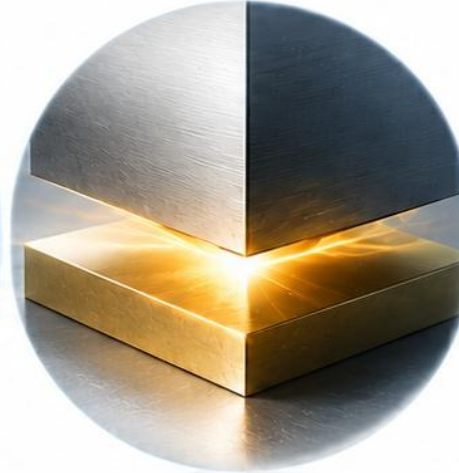
Liquid-Solid
Interface



Wettability, surface
modification, coating film



Solid-Solid
Interface



Fixation, adhesion,
friction control



Gas-Liquid
Interface



Interfacial activity,
volatilization, foam



Liquid-Liquid
Interface

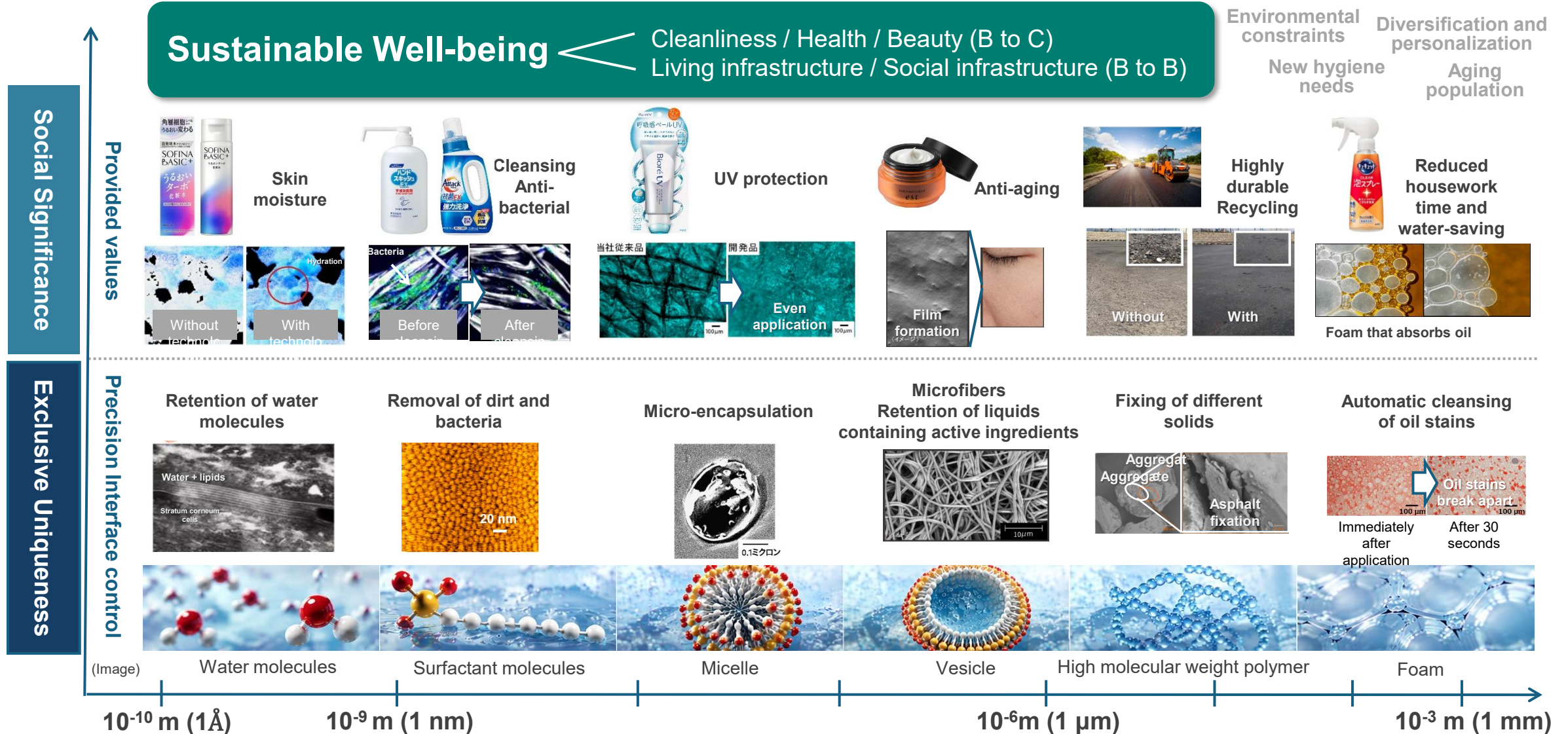


Emulsion, solubilization,
separation



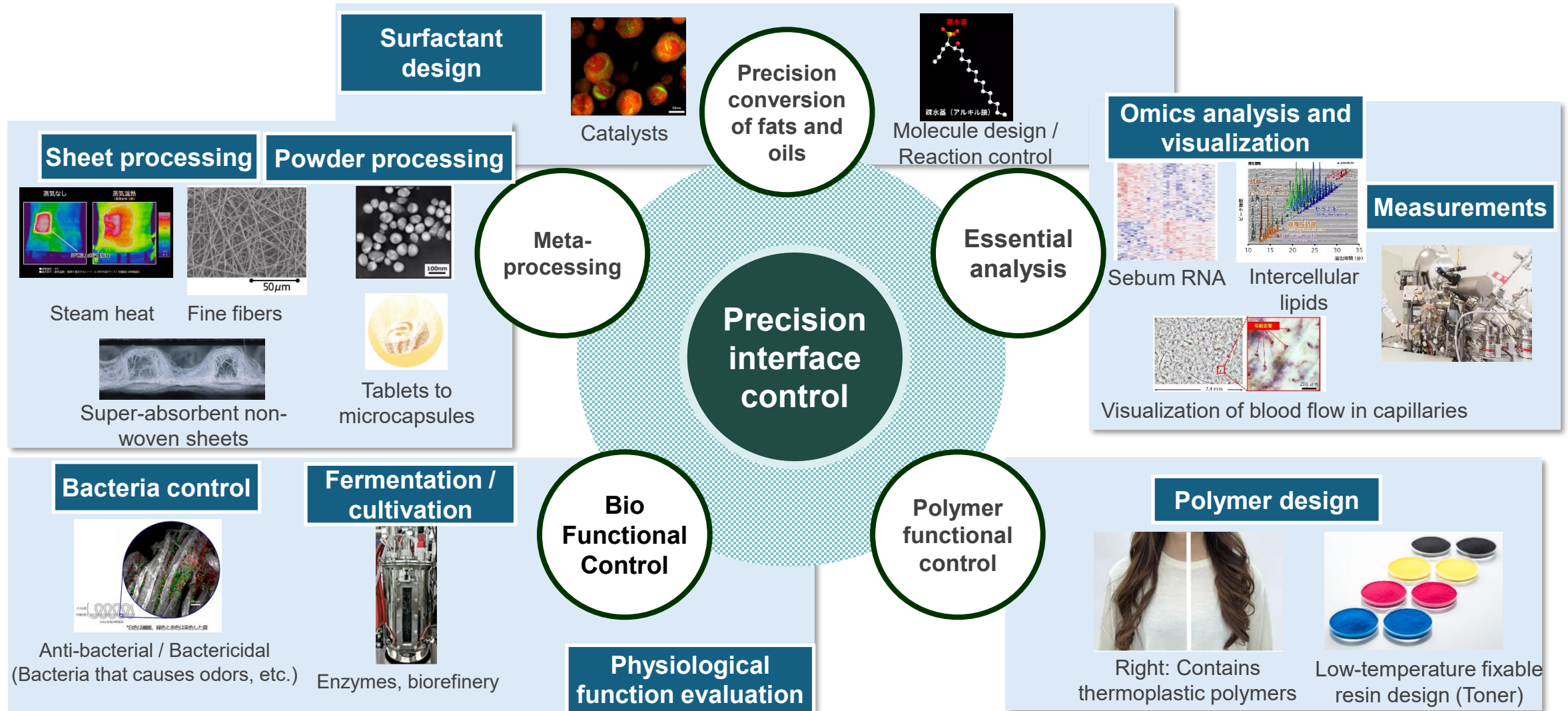
Solving macro social issues through micro interface control

Solving Macro Social Issues Through Micro Interface Control



Evolving and Deepening Core Technologies Through Fundamental Technology Research

Advancement and new integration of core technologies accumulated through product development

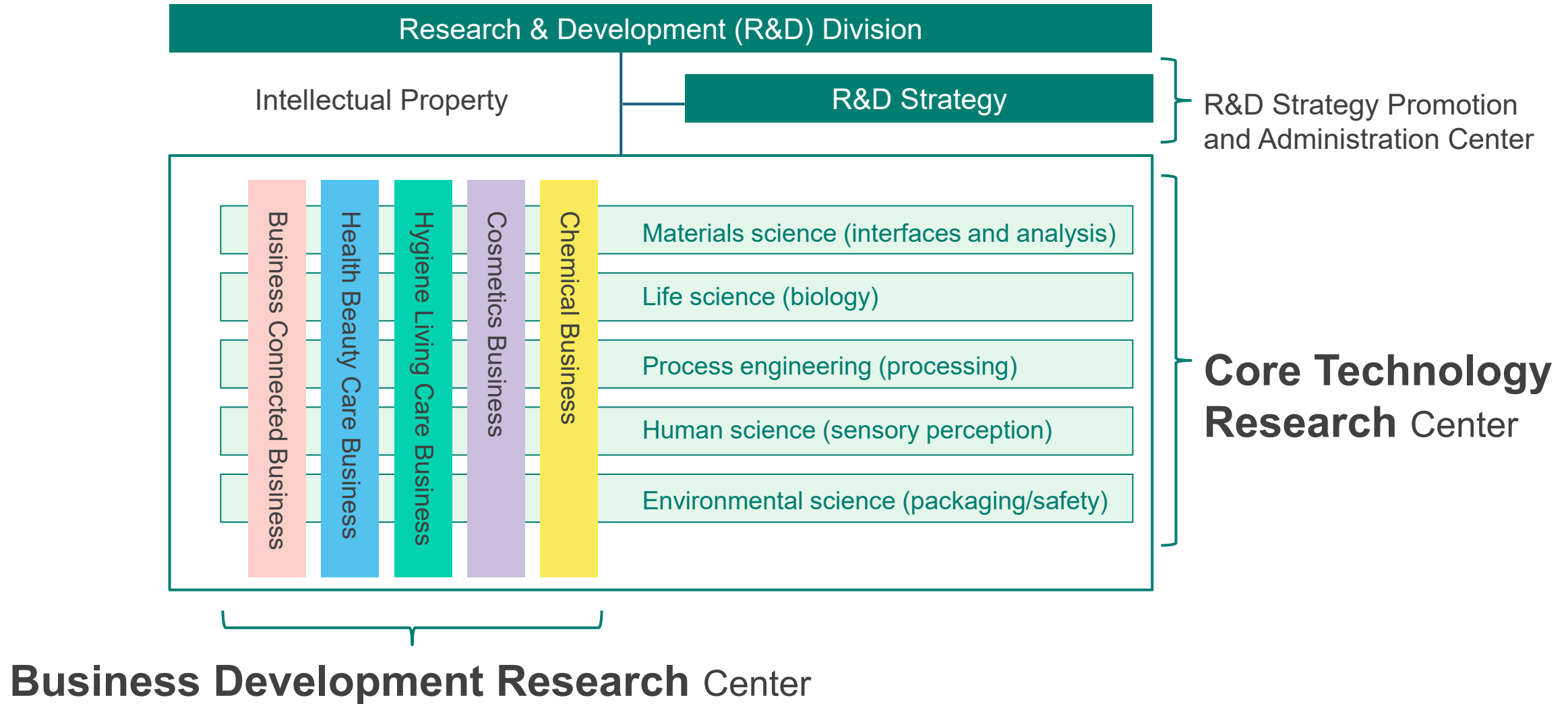


Transformation of Technology into Value Through Product Development Research

Advancement and new integration of core technologies accumulated through product development

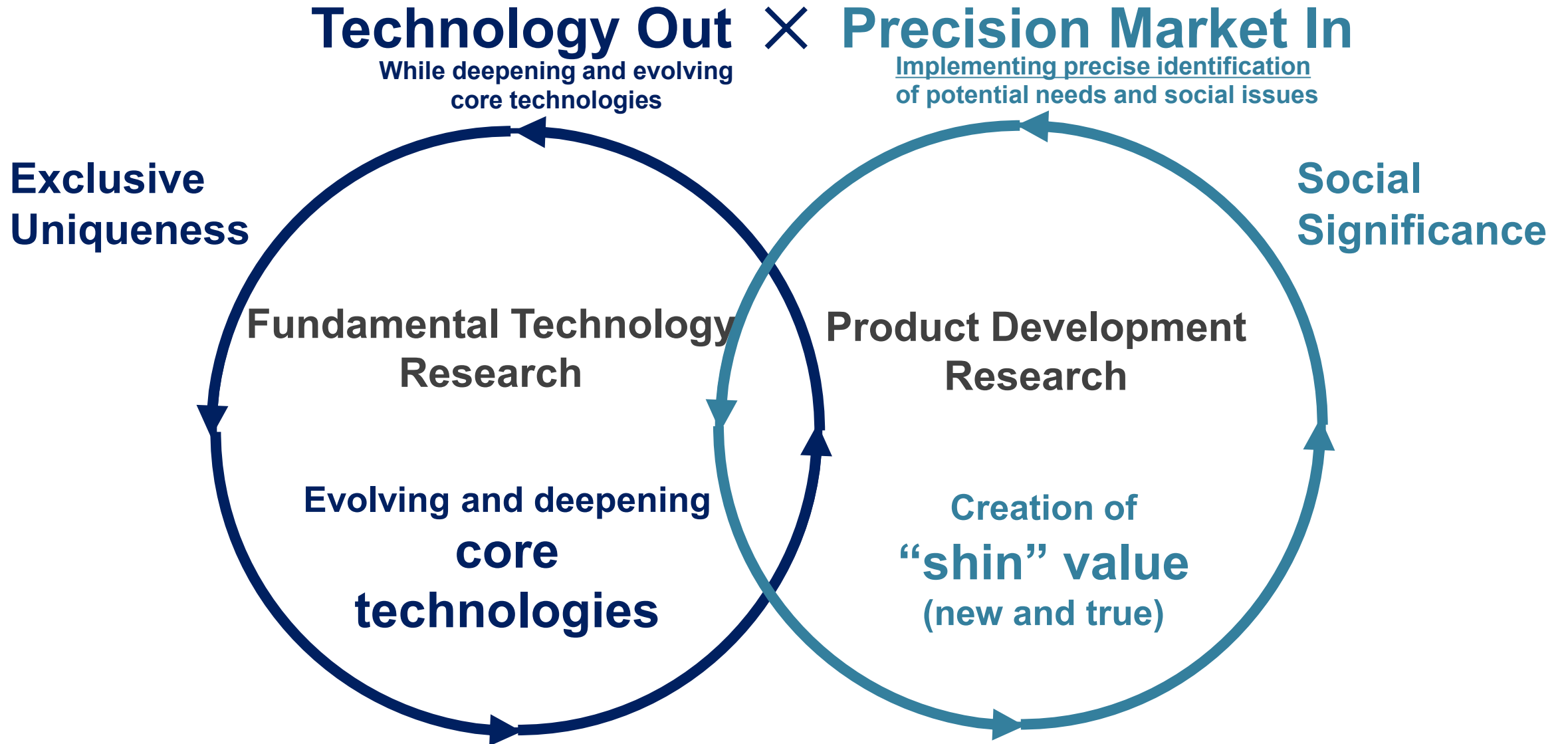


Kao's Research & Development Framework



Core Technology Management

Value Creation Through Fundamental Research and Product Development Research



Fundamental Technology Research x Product Development Research

Example of Carbonation

Evolution of formulation technologies

Exclusive Uniqueness

Integration with sheet technology

- Carbonated gel sheet



MegRhythm
Adhesive Carbonated Sheets
2025

- Expansion of carbonation application
 - Intensive circulation promotion / care for muscle fatigue
 - + Lasting sensation of refreshing menthol

Social Significance

Expansion of carbonation delivery technologies

- Aerosolization
- Gas foam stabilization
- Long-lasting carbonated foam due to powders, etc.



Success
Hair Tonic
1987



SOFINA IP
Beauty
Power Mousse
2015



Segreta
premium
SPA
FOAM
2020



melt
Sp/powder
2025

- Proposition of new value through essential research on carbonation
 - Hair tonic: Carbon dioxide gas + active ingredients
 - Skin: Works on the stratum corneum to provide moisture
 - Hair: Improves hair quality and cleans the scalp

Tablet-making / foaming technology

- Foaming carbon dioxide gas
- Increased concentration of carbonation



Bub
1983
* Long-time bestseller

- Promotion of blood circulation with carbonation
 - Inspired by carbonated hot springs: Enhances the warming effects of bathing to promote blood circulation and relieve fatigue, stiff shoulders, lower back pain, and cold sensitivity
 - Psychological and physiological effects of fragrances

Molding of bath additives

Technology Out

While deepening and evolving core technologies

Precision Market In

Implementing precise identification of potential needs and social issues

Fundamental Technology Research x Product Development Research

Example of Non-Woven Sheets

Integration with cleansing technologies

Retention of cleansing ingredients and functioning ingredients

- High water content / mild cleansing
- Silky smooth powder, cooling agent



- Cleansing wipes for effortless care
- Easy make-up remover
- Cleanliness and comfort, even when water is unavailable

Expansion and application of sheet processing technology

- Dust and hair capture performance
- Slim-type heat-generating sheets



- Proposal of new lifestyles through sheets
- Easy floor cleaning: Widespread hardwood flooring
- Steam heating: Comfortable eye area, improved blood circulation

Processing technology for non-woven sheets

Sheets created by intertwined fibers

- Softness and breathability
- Coarse and dense three-dimensional dome structure



- Providing reliable absorption + being “gentle on skin”
- Reduced rewet: Absorbent polymers + non-woven sheets
- Gentleness: Decreased dampness, stuffiness, and chafing by reducing surface contact with the skin

Fundamental Technology Research

Technology Out
While deepening and evolving core technologies

Precision Market In

Implementing precise identification of potential needs and social issues

Product Development Research

Fundamental Technology Research x Product Development Research

Example of Naturally Derived Hydro-Capsules

Technology to achieve the lowest possible cost

Particle size < 100 μm

- Even finer particles



Aqua Rich Essence
2019

Contains UV
protection agents



Airy Hold Cream
(UV protection with a breathable veil)
2025

- Improved UV protection
- + Technology for even and lasting coating film
An adhering oil gel with a new pack sensation
- + Skin humidity control
No stickiness or dryness in various environments

Technology for continuous production
Generation of fine droplets

Particle size < 300 μm

- Highly concentrated formulation of functioning ingredients with smaller particle sizes



Clear Clean Change
2009

With
catechin



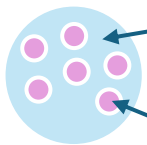
Deep Clean
2010

With aroma
ingredients

- Improved agent delivery
Reaches deep into periodontal pockets
- Expansion of functional materials application

Capsule technology

Particle size up to 2,000 μm



Agar hydrogel

Functioning ingredients

- Protection of functioning ingredients
- Functions activated by ingredient breakdown upon application



Bioré Mildly Acidic Water Cream in
2002

With ceramides



Sofina Night
Waterpack Gel
2002

With Vitamin E

- Watery sensation due to surface hydrophilicity
Addition of value through O/W formulation
- Improved skin penetration
- Creating a perception of efficacy through visual appeal

Fundamental
Technology
Research

Technology Out

While deepening and evolving core technologies

Precision Market In

Implementing precise identification of potential needs and social issues

Product
Development
Research

Kao's Management of Technology (MOT)

Business growth by
core technology
management

Biological control
Carbonation, polyphenol

Meta-processing
Non-woven sheets, polymer

Biological control, essential research
Ceramides

**Precision interface
control**

**Coating film /
film formation**

**Precision conversion
of fats and oils**

Polymer function control

Raw materials for various surfactants,
detergents, and cosmetics

Fatty acids, glycerin, edible fat and oils

"MIGHTY" superplasticizer for cement
Urethane



Bub



Success
Hair Growth



Econa



Healthya Green Tea



raku-raku
eco pack



Laurier



Merries



Quickle Wiper



Bioré Make-Up Remover



MegRhythm



Sofina



Curél



Lipstick, makeup
KATE Lip Monster



Bioré UV Aqua Rich



Kao Sekken
(Kao Soap)
1890



Kao Shampoo



Kao Kona Sentaku
Wonderful



Merit



Essential



Bioré Facial Cleanser



Bioré u



Attack



Asience



Bioré u
Self-Foaming
Hand Soap



CuCute



Attack Neo



Attack ZERO

Foam control

Bio

Enzymes

Plant cultivation

Saccharification enzymes

MAP

Emulsifiers for cosmetics, moisturizers

Synthetic aroma chemicals



Toners, toner binders

Floppy discs

Hard disk polishing agents

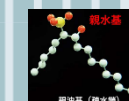


VISCO TOP
for concrete

**Harmony with
the environment**



Asphalt additives



Bio IOS

Water-based inkjet ink

Healthcare,
Sanitary

Beauty care,
Cosmetics

Fabric and
home care

Chemical

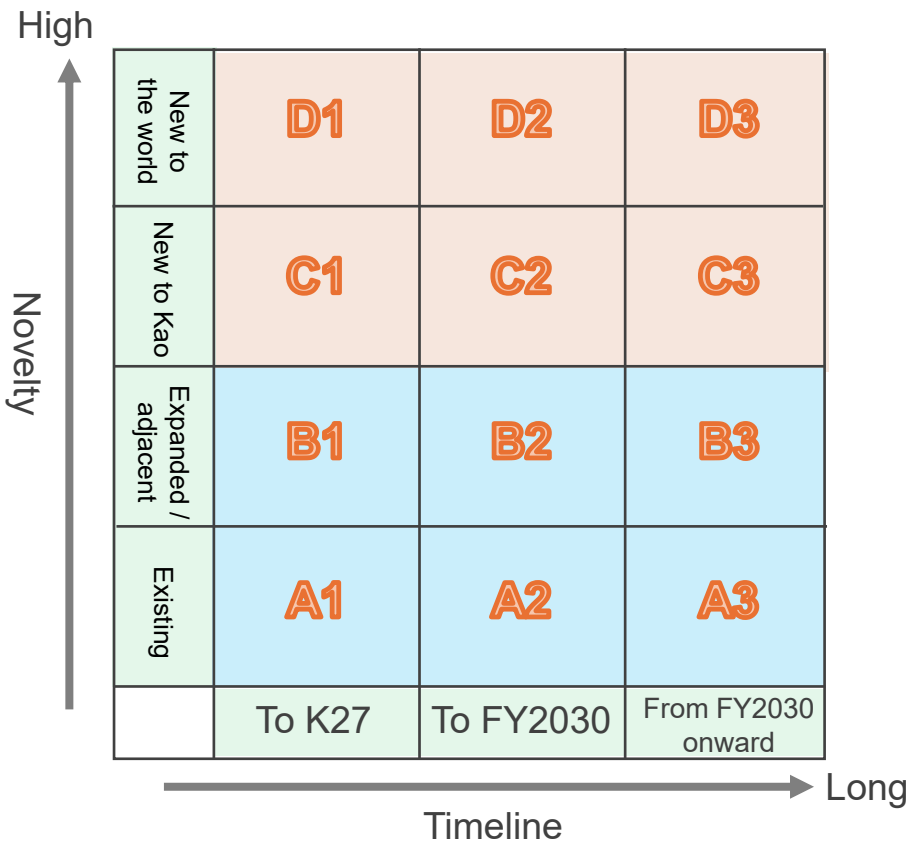
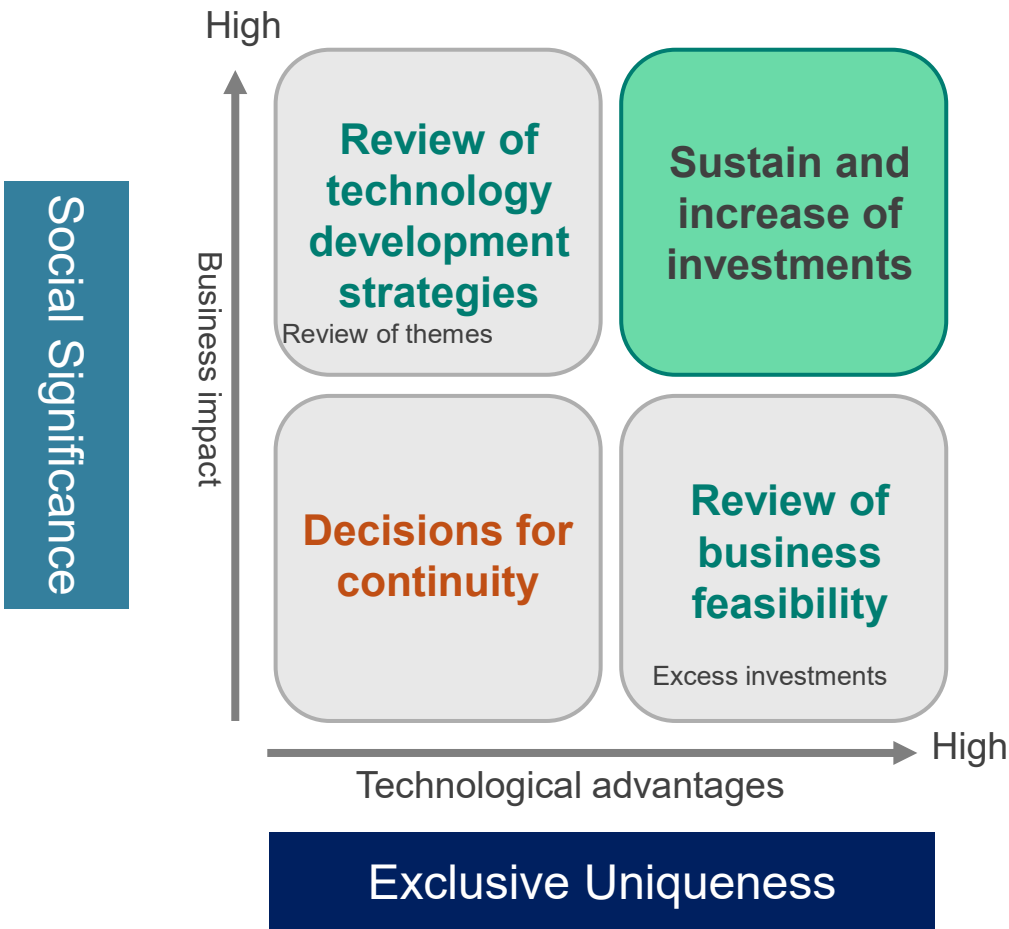
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R&D Management Improving the Value Creation Process

Research Theme Portfolio Management

Visualization of all research themes (> 1,000) using Power BI*



* Power BI is a registered trademark of Microsoft Corporation.

Achieving both near-term social implementation and technology accumulation for the future

Kao's Intellectual Asset Portfolio Management

Box 1

Sustain

Protection of current competitive advantages

- Deepening and strengthening core technologies
- Managing the intellectual property portfolio
- Sustaining and fostering excellent human capital
- Enhancing brand value

Improvement of ROIC for existing businesses

Box 2

Redeploy

Transfer of intellectual assets to optimal locations

- Technology → Passing on to new themes
- Intellectual property → Licensing / JVs
- Human capital → Transferring to development *Genba**
- Data → Exploring external applications

Creation of new value

Box 3

Create

Creation of future competitive advantages

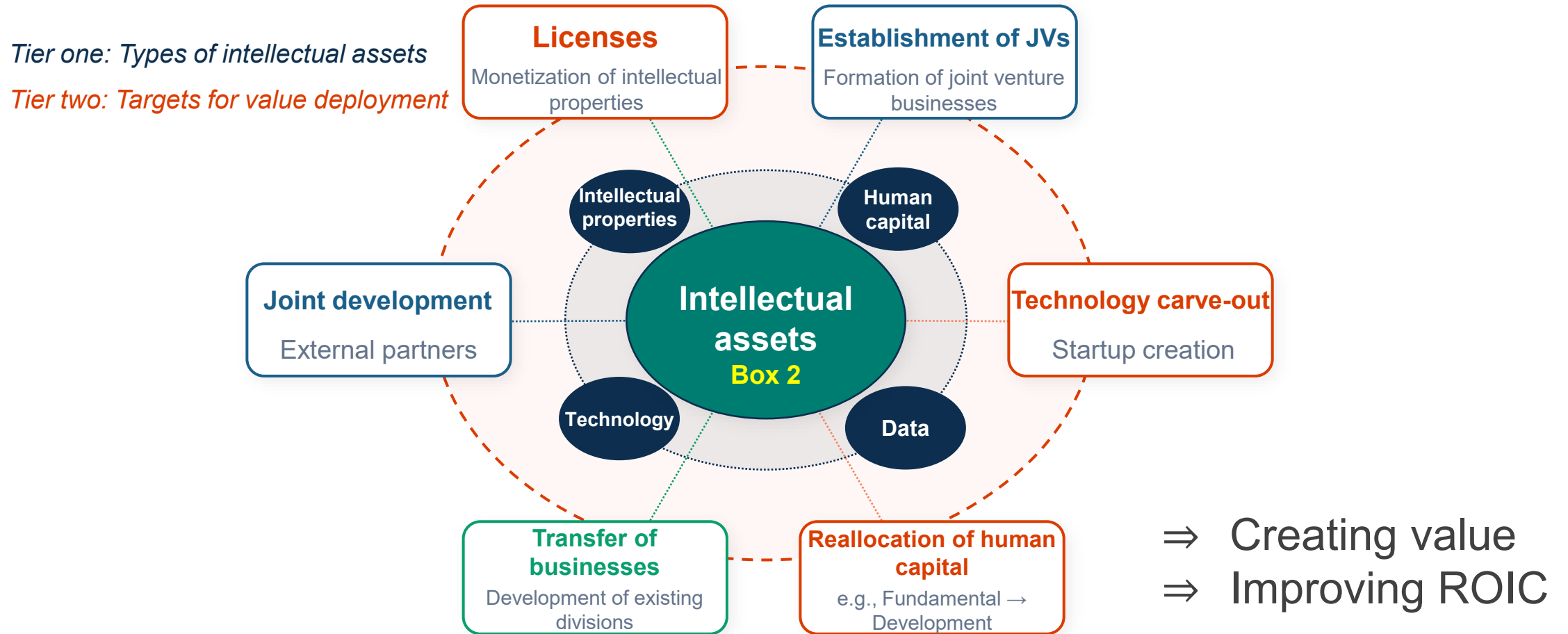
- Exploring new sectors of Well-being
- Longevity / Health Beauty
- Hygiene Wellness
- Nurturing disruptive technologies

Creation of new businesses and markets

* "Genba" literally means "actual spot".

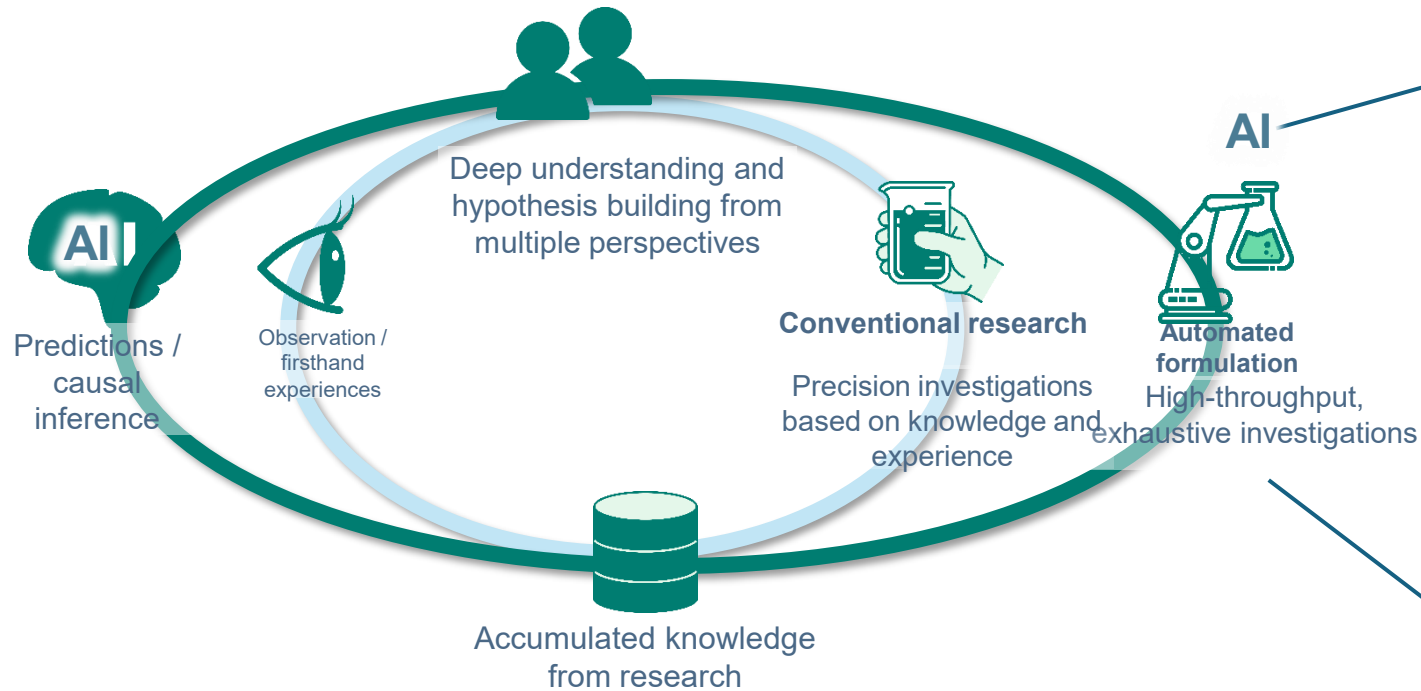
Shift from managing research themes to strategically redeploying intellectual assets

Approach to Intellectual Asset Redeployment



Preserve technology / Carry forward learning / Redeploy talent / **Transfer value**

Acceleration of R&D with AI and Laboratory Automation



* Automated experiments handle experiments that research staff—who conduct experiments by designating targets based on their expertise and experience—are too busy to conduct

The role of AI: Solve known issues at maximum speed

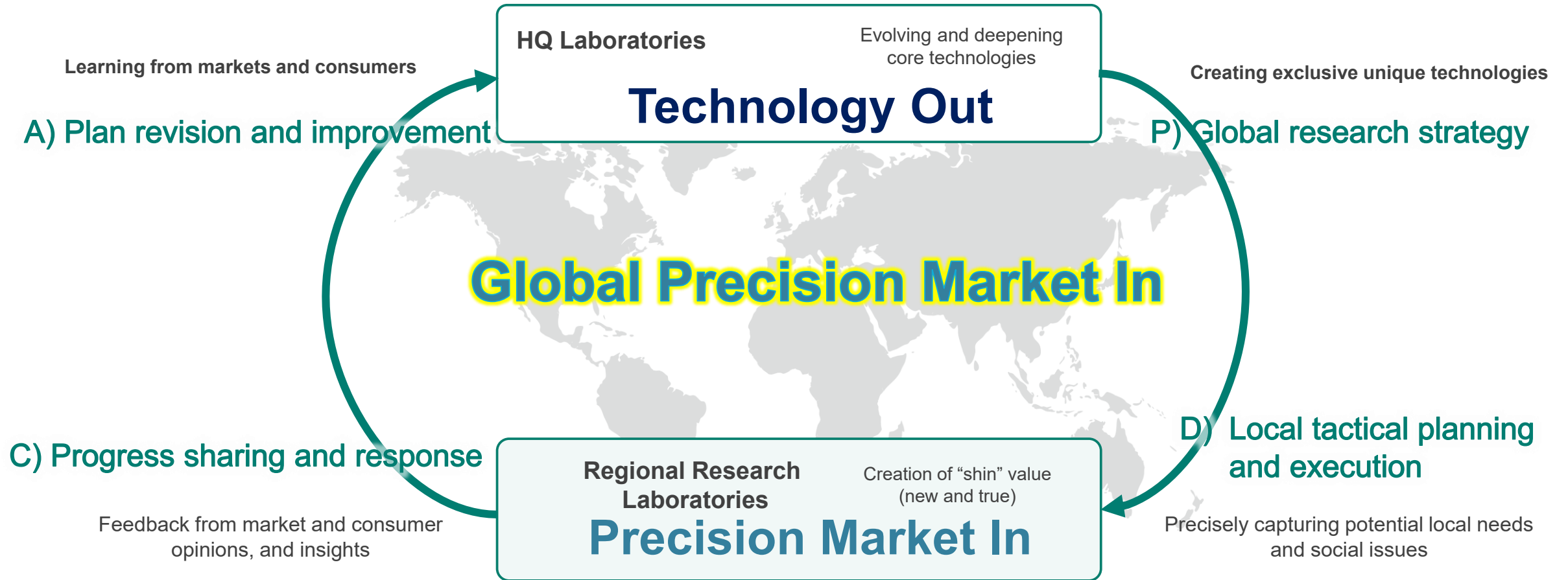
The role of researchers: Pioneer the unknown



- (1) Construction of models and execution of predictions with machine learning
- (2) Creation of data-driven experimental design
- (3) Automated formulation

Efficiently achieves optimal compositions through high-throughput and exhaustive investigations (**three times higher productivity**)

Accelerating Research on Globalization



Global ≠ Geographic expansion

Global = Delivering locally tailored value to address shared global challenges

Implementation of Regionally Optimized Value for Shared Global Issues: Case Studies

Precision Market In

Creating and commercializing new value for local consumers

<U.S.>

Jergens Lotion Bursts



A solid lotion that is enjoyable and fun to use, delivering fragrance and moisture when rubbed on the skin

Launched in FY2025



Application of agar hydrogel technology

Application

- New lifestyle proposals for Gen Z: Users can carry them and share with friends
- A moisturizing design optimal for the local environment

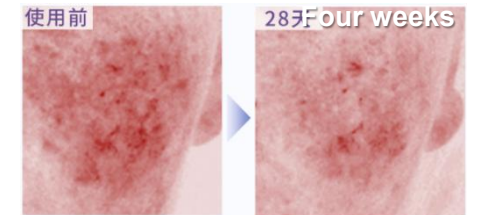


<China>

Curél Firming Smoothing Cream



Improves skin elasticity, moisture and redness



Launched in FY2026

The power of ceramide care

+

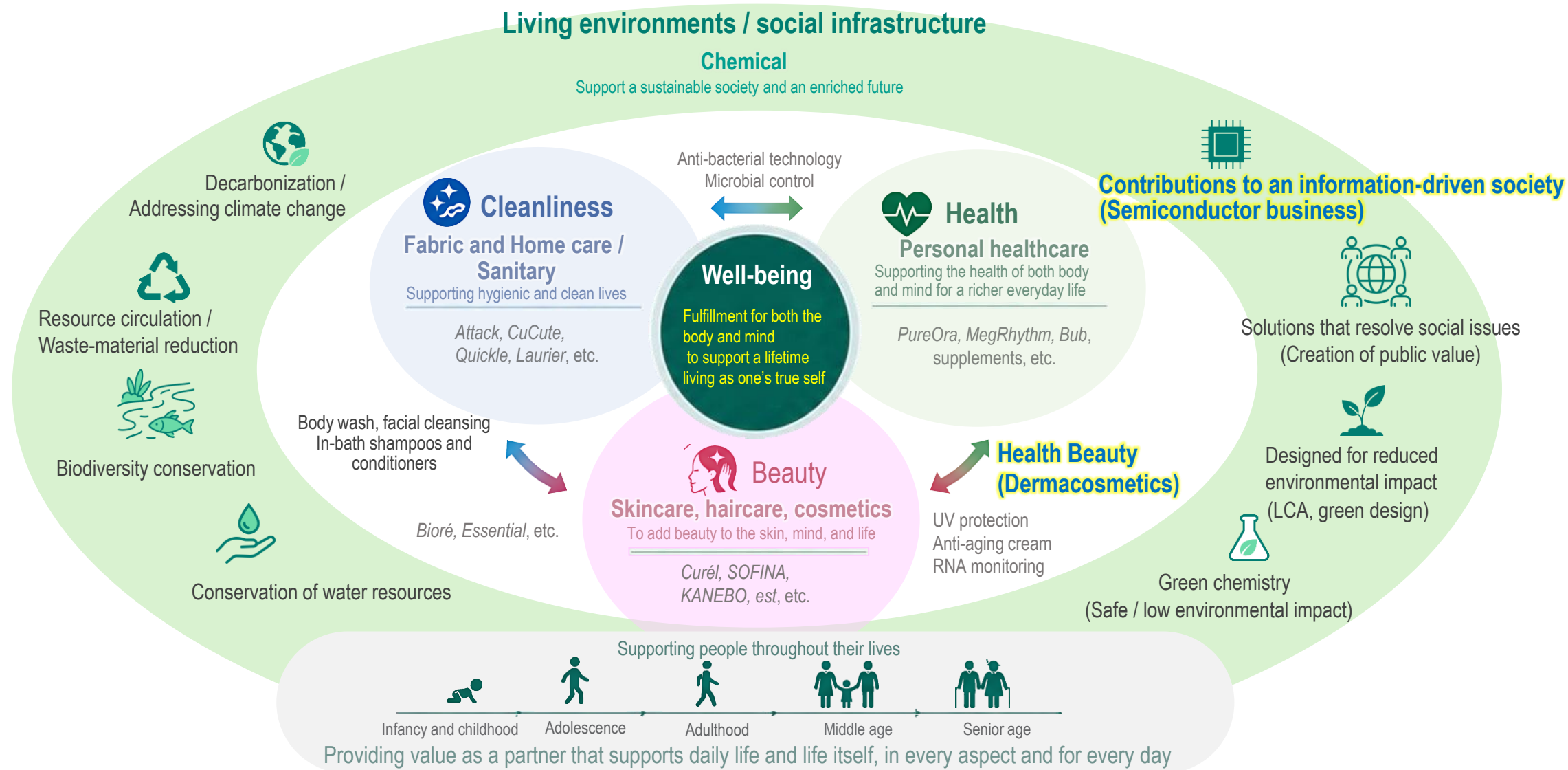
Formulation technologies that address specific skin types

- Red, rough skin: Uncovering sensitive skin with a weakened barrier and redness, specific to China
- Acquisition of local evidence based on dermatology
- Cultivation of credibility through collaboration with local dermatology experts

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Our Aim to Contribute to Global Well-being



Target Areas: Social Significance x Exclusive Uniqueness (Kao's unique winning formula)

- (1) Social significance: Addresses social issues (contributes to Well-being)
- (2) Kao's exclusive uniqueness: Is it a technology not found at other companies? Is it a sector where our accumulated technologies can be leveraged? (The pinnacle of molecular-level interface control technology)
- (3) Opportunities for market growth: Is it a high-growth market with a CAGR of > 5%?
- (4) Feasibility: Is value implementation possible in the short term? (Adjacent sectors of existing businesses)

Dermacosmetics

Global dermacosmetics market (related markets)

3.9 trillion yen → **5.7 trillion yen***
FY2025 FY2030
Approx. 1.46 times

8.0%
CAGR (2023-2025)



Kao's unique winning formula

**Precision interface control x Sebum RNA
Perceived quality x Skin homeostasis**

Applying fundamental research into the skin's innate functions to skincare that delivers tangible results

Source: Euromonitor, Derma Skincare. * Extrapolated using the CAGR through 2025.

Semiconductor chemicals

Semiconductor chemicals market

7.7 trillion yen → **10.6 trillion yen**
FY2025 FY2030
Approx. 1.38 times

6.5%
CAGR (2025-2030)



Kao's unique winning formula

**Precision cleaning x Selectivity
Interface control at the nano- to molecular level**

Addresses semiconductor miniaturization and high functionality supported by AI and data centers

Source: Fuji Keizai, Current Status and Future Outlook of the Semiconductor Materials Market, 2025.

Large market x High growth x Kao's precision interface control → Two sectors to focus research investments

Kao's Skincare Approach That Maximizes the Skin's Biological Origin Functions

A conventional dermatologic approach

Originating from **ingredients**

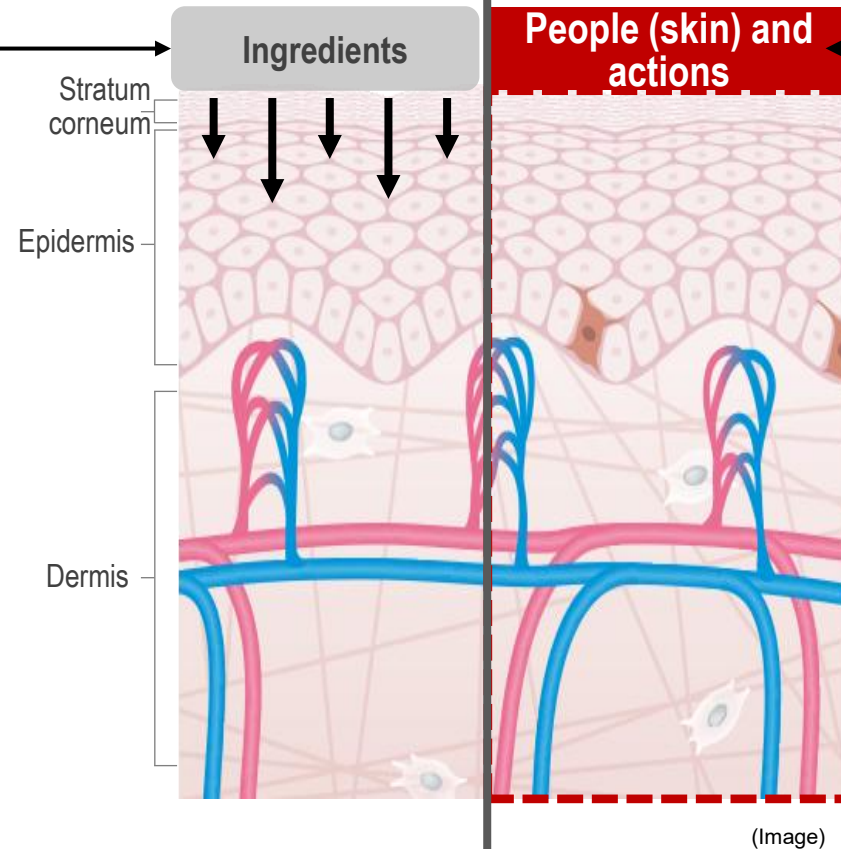
This approach applies high-performance ingredients to the skin, aiming to promote healthy skin with one-to-one method

- Anti-wrinkle ingredients
- Anti-age spot ingredients
- Anti-inflammatory ingredients, etc.

Approaches using ingredients are...

- ✓ Are insufficient for restoring the complex homeostasis of the skin
- ✓ Make it difficult for the formula to work effectively, as the skin may not receive the full effects of active ingredients, depending on the original condition of the skin

Topical and symptom-oriented



Kao's approach

Originating from **people (skin) and actions**

This approach implements precision control of the skin interface to condition fine structures inside the skin and bring out its biological origin functions

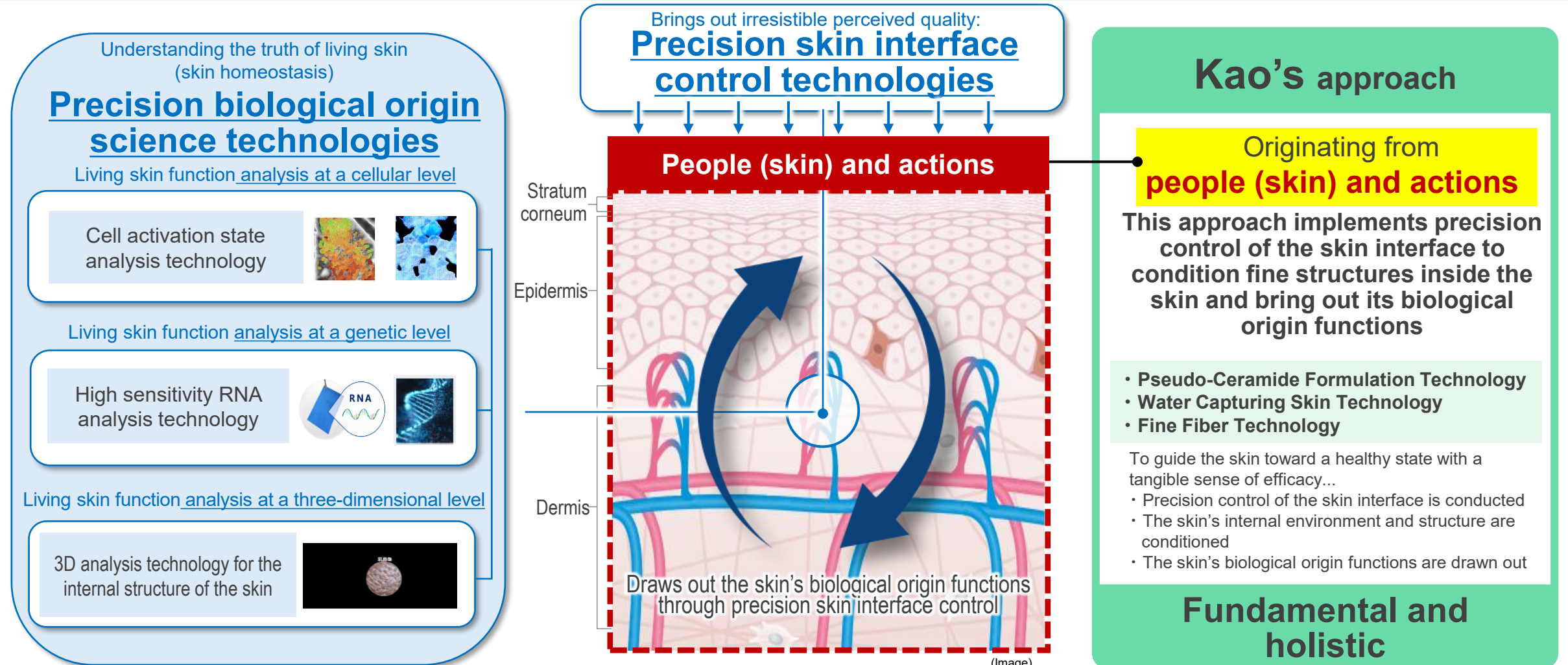
- Pseudo-Ceramide Formulation Technology
- Water Capturing Skin Technology
- Fine Fiber Technology

To guide the skin toward a healthy state with a tangible sense of efficacy...

- Precision control of the skin interface is conducted
- The skin's internal environment and structure are conditioned
- The skin's biological origin functions are drawn out

Fundamental and holistic

Kao's Skincare Approach That Maximizes the Skin's Biological Origin Functions



Exclusive unique solutions with “precision skin interface control” x “precision biological origin science”
⇒ **“shin” skin homeostasis care**

Dermacosmetics: New Technology Showcase



est
True to you.

GENOLUXE CREAM
est

未来まで、塗り替える。
est GENOLUXE CREAM、誕生。

きっかけは花王最先端の皮脂RNA研究。

「解砕型FFジェノリクス技術」採用。
「解砕型マイクロファイバー^{*1}」を含む皮膜形成アプローチ。
さらに美容成分「ジェノリクス^{*2}」を配合した、こだわりの設計。

塗るだけでまるで皮膚のような膜^{*3}を形成しながら、美容成分^{*2}をたっぷりと肌へ補給。
肌(角層)の深層までアプローチして、“美しい肌(角層)”特有の状態^{*4}へ整えます。

ひと晩で感じる潤い。ふっくらと潤いに満ちた、ハリとなめらかさ。

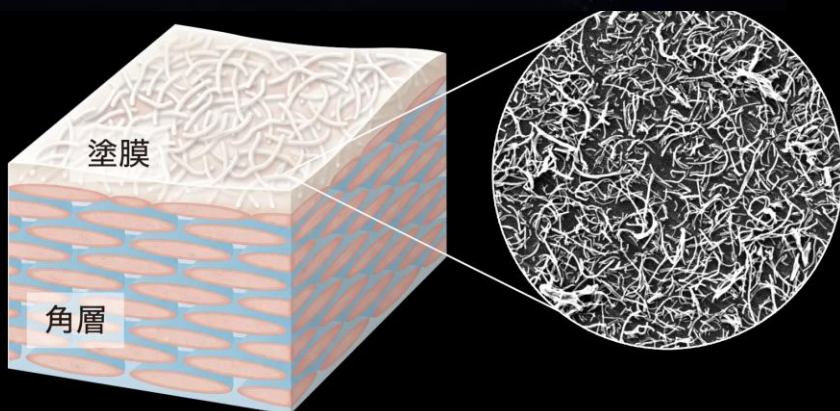
美しさはどこから生まれるのか。
今、美が一斉に動き出す。運命を追い越す美しさを、あなたに。

est GENOLUXE CREAM — Key Visual



分子レベルで
スキンケアを根本から変える

The key to fundamentally changing skincare
at the molecular level



Kao has developed a unique coating film technology:
Fine Fiber.



This brings about homeostasis,
activating high-quality RNA.



This process unlocks the skin's innate power,
allowing you to feel changes from within sooner.

Kao's "shin" Skin Homeostasis Care

Conventional approach (originating from ingredients)

Addresses symptoms through ingredients



Moisturizing
ingredients
for dryness

Brightening
ingredients for
age spots

Firming
ingredients
for wrinkles

Topical, ingredient-specific approach
to visible symptoms

Kao's new approach ("shin" skin homeostasis care)

Science of the skin's biological origin functions and homeostasis itself



Understanding the skin's
biological original functions



Identifying the mechanisms
that disrupt these functions



Delivering comfort through
exceptional perceived quality

Exclusive uniqueness serves as a barrier for market entry

(The formation of competitive advantages by combining three technologies instead of just one)

Precision biological origin science (Sebum RNA, etc.)

Reads skin conditions and
even detects early signs of
future changes



Our proprietary yardstick (analysis)

Precision interface control

Technology that selectively
works on the fine structures
and interface of the skin



Our proprietary technology foundation

Perceived quality

A design backed by science
for pleasant sensations and
perceived effects



Technology that delivers
perceptible effects

This combination establishes Kao's competitive advantage

Detects early signs,
addressing imbalances,
offering pleasant, easy-to-
continue care to change the
skin's future



Not ingredients, but mechanisms: Next-generation dermocosmetics solutions from Kao

Cosmetics Business: Dermacosmetics Growth Plan

Accelerating growth in dermacosmetics, targeting Cosmetics Business sales of 400 billion yen and an operating margin of 15%



*1 Core operating income: Income excluding the impact of structural reforms executed in FY2023

Make dermacosmetics a growth engine

Outpace market growth to raise its share of our overall sales

Market size: FY2025

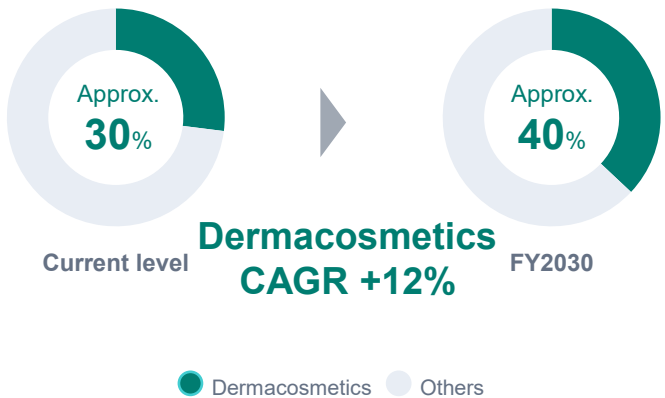
3.9 trillion yen

Market size: FY2030^{*3}

5.7 trillion yen

CAGR +8%^{*2}

Cosmetics Business: Dermacosmetics sales



*2 2023–2025 (Euromonitor Derma Skin Care) *3 Extrapolated using the CAGR through 2025

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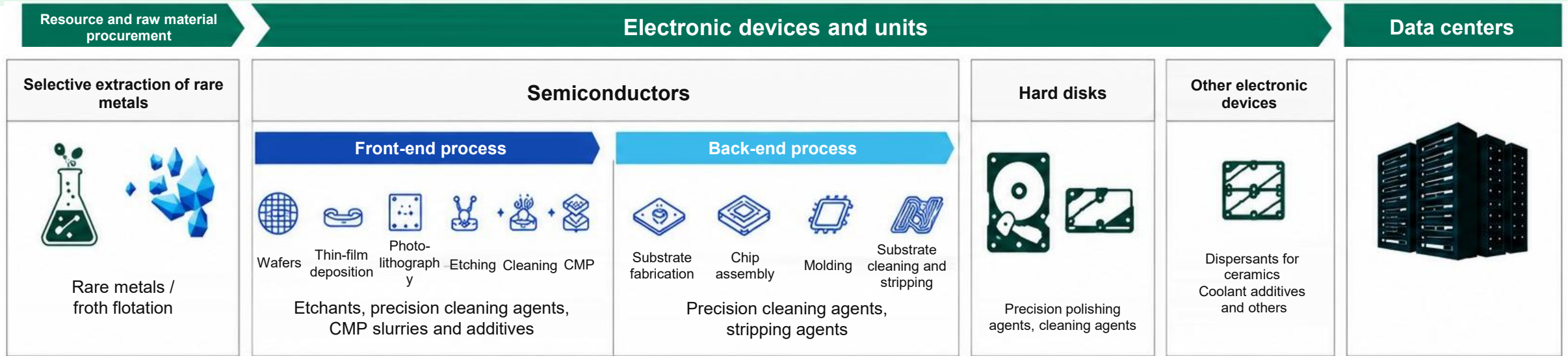
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Addresses semiconductor miniaturization and high functionality supported by AI and data centers

Source: Fuji Keizai, Current Status and Future Outlook of the Semiconductor Materials Market, 2025.

Large market x High growth x Kao's precision interface control → Two sectors to focus research investments

Kao Chemicals Enabling AI and Data Center Infrastructure



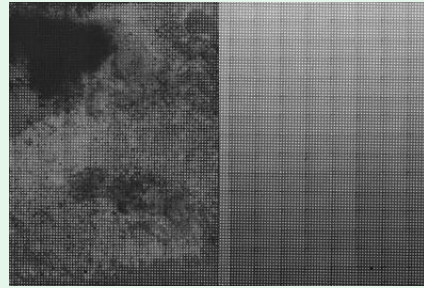
	Selective Extraction of Rare Metals	Semiconductor Front-End Process Materials (26 items surveyed)	Semiconductor Back-End Process Materials (8 items surveyed)	Hard Disk-related Process Chemicals
Market size (FY2025 forecast)	0.5 – 1.5 trillion yen	6.1 trillion yen	1.6 trillion yen	0.08 – 0.1 trillion yen
CAGR (FY2025–FY2030)	5 – 8%	6 – 7%	6 – 7%	3 – 4%
Kao's business areas	Selective extraction of rare metals; chemicals for separation and purification	Etching agents, precision cleaning agents, CMP slurries, additives and others	Precision cleaning agents, stripping agents, and others	Precision polishing agents, cleaning agents
Kao's market position	Not disclosed	Top share Chemicals for specific NAND manufacturing processes	60% share Package substrate cleaning agents	50% share Polishing agents for specific processes

Reference material: Fuji Keizai, Current Status and Future Outlook of the Semiconductor Materials Market, 2025.

Kao's Precision Interface Control Technology That Supports Semiconductor Manufacturing Processes

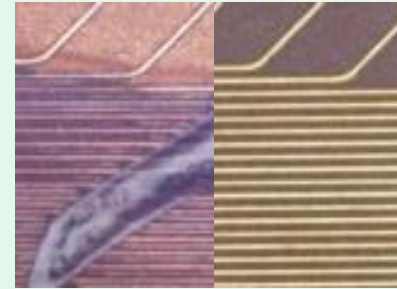
Dissolution

Improvement of device
performance and yield

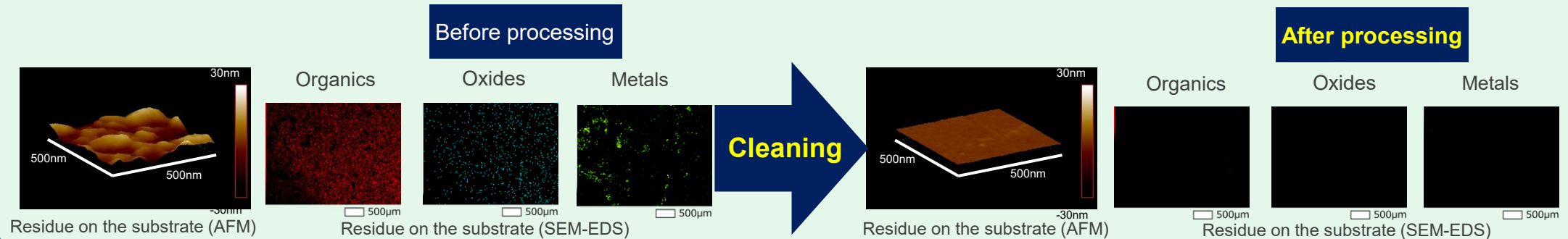


Detachment

High processing precision
and process stability

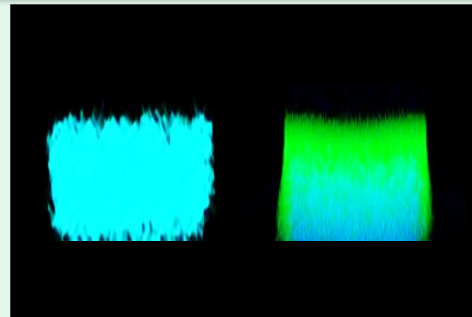


“For micro interfaces, **protect** what is needed and **remove** what is not”



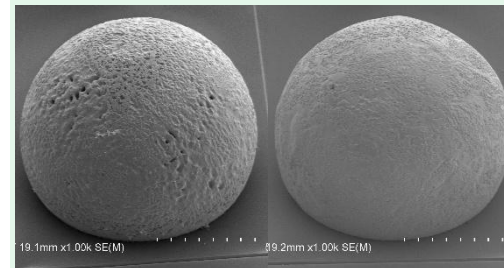
Uniform effects, even for
detailed, ultra-fine and
complex structures

Penetration



Material properties that do
not cause damage to
structures or substrates

Protection



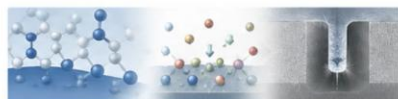


The key to radically improving the quality of semiconductor manufacturing at the molecular level

Kao's Key Technologies and Products

Front-End Stage

Precision Interface Control Technology
at the Molecular Level



Supporting Nanoscale Structure Formation

Back-End Stage

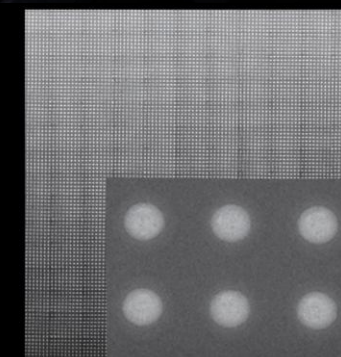
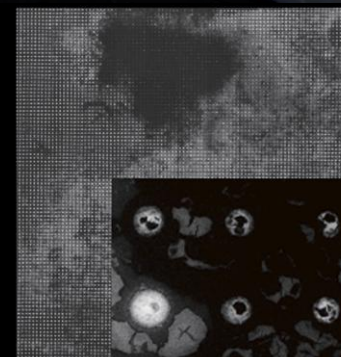
Precision Selective Cleaning Technology



Selective Cleaning for Finer Packaging Structures

With over 500 manufacturing steps,

Semiconductors are evolving into finer
and more complex structures.

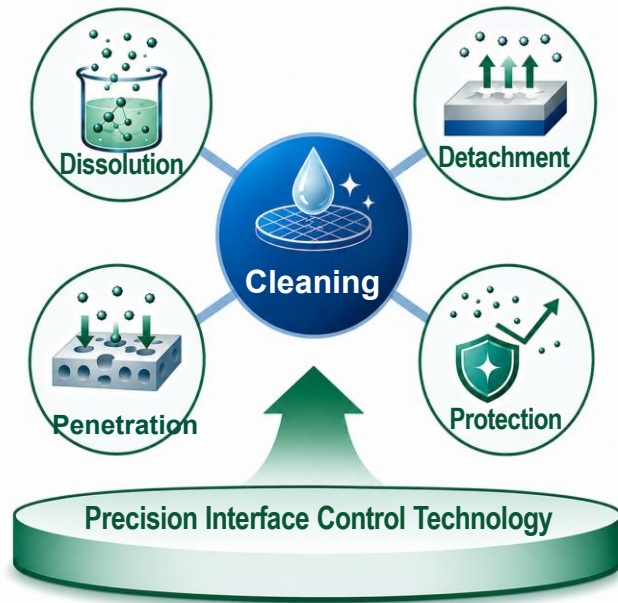
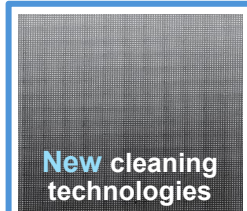


removing only contaminants with exceptional precision
while protecting essential materials.

Kao's Business Opportunities for the Semiconductor Market

Semiconductor market: Increasingly fine and complex structures
⇒⇒ The difficulty level of cleaning is also increasing

Precision Interface Control Technology that enables intricate “fine-tuning”



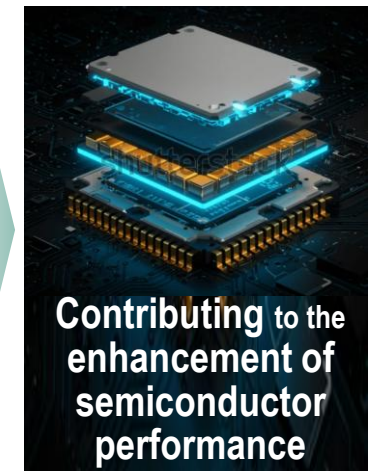
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The ability to “fine-tune”

(1) Use of cleaning centers:
Replicates customer processes for swift verification of optimal conditions



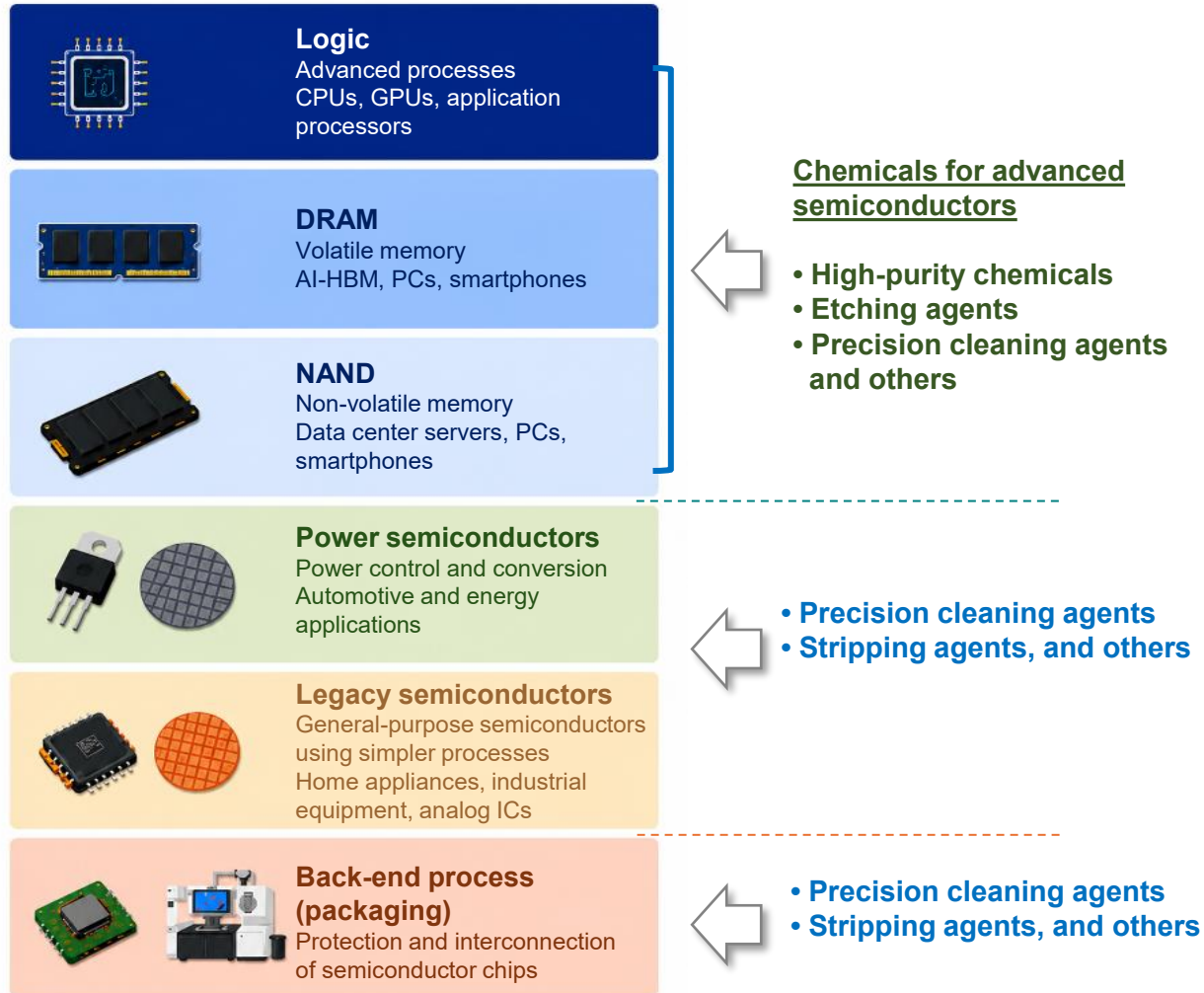
(2) Participation in JOINT 3:
Co-creation of technology with equipment and material manufacturers



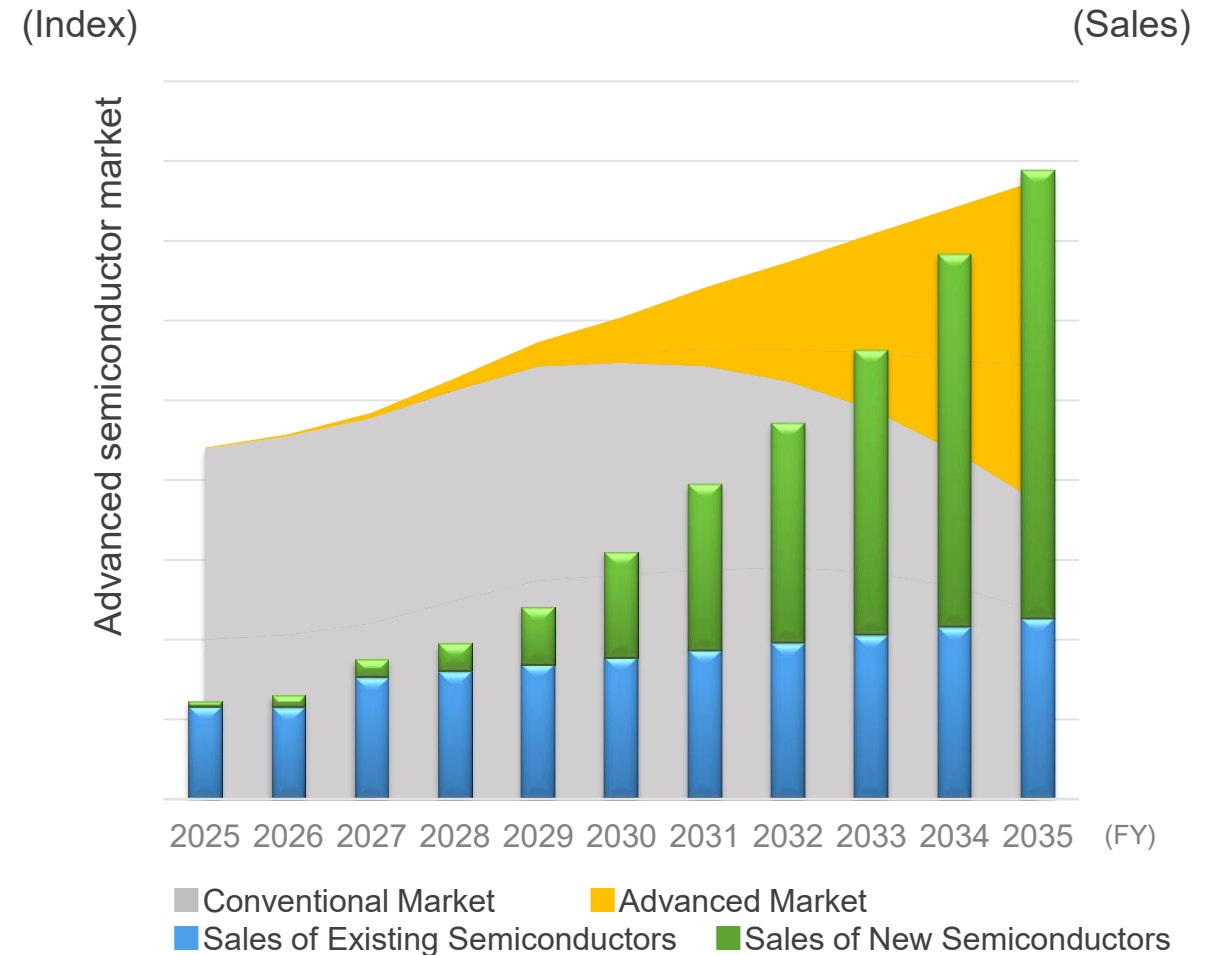
The value of Kao's precision interface control will increase with semiconductor miniaturization and growing complexity

Kao: Business Plan for Semiconductor-Related Markets

Focus areas and process chemicals



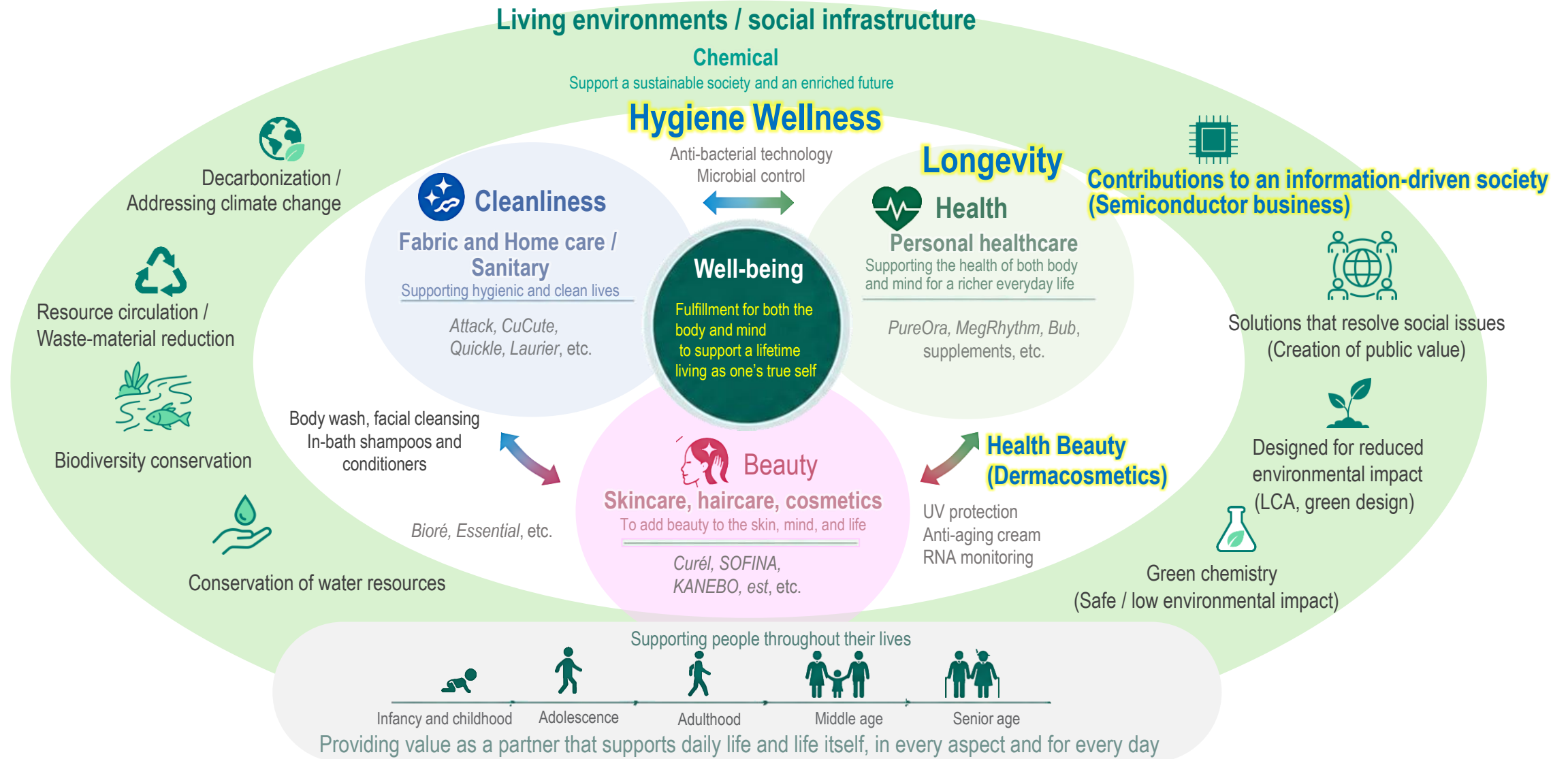
Business targets: CAGR > 30%, Operating margin > 40%



Agenda

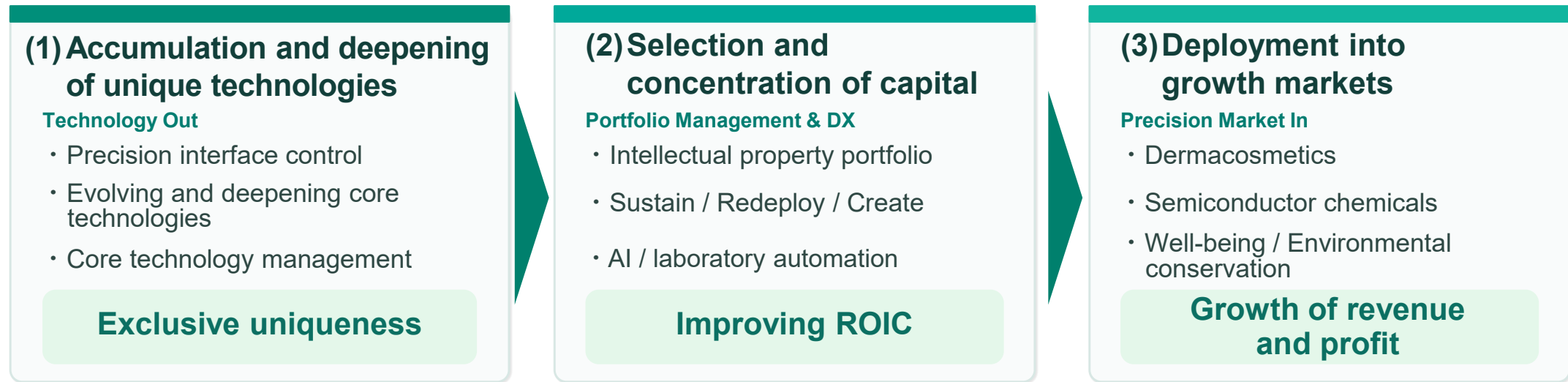
- Corporate Strategy and Research & Development (R&D) Strategy
- Kao's Management of Technology / *Sharp Top* Strategy
- Evolution of the Value Creation Process
- Direction of Research & Development (R&D)
- **Summary**

Our Aim to Contribute to Global Well-being



Converting R&D Investments Into Corporate Value

With our exclusive unique technology, we will precisely select the market that will generate the most value and concentrate intellectual assets in this market
- Management of Technology to Establish an Unrivalled Position -



“Leverage our technological capabilities to become even more essential for consumers and society”

