

Before We Are No Longer Able to Live on the Earth



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Perspectives From Kaneka's Purpose Management

The caption at the beginning was borrowed from the book, *On The Future: Prospects for Humanity*, by astrophysicist Martin Rees.

This book is about the future.

This book begins here.

It offers some hopes, fears, and speculations about "what lies ahead."

It states that our ability to sustain a world that is more vulnerable than ever for much longer depends on our ability to accelerate one kind of technology while suppressing another.

There are now so many of us and our collective "footsteps" have not only transformed

but have also devastated the entire biosphere in some cases.

The natural environment is being increasingly stressed.

If a critical threshold is crossed,

our activities may cause dangerous climate change and mass extinction.

A dried-up, emaciated world will be passed on to future generations as a result.

Yet, there is no need to put the brakes on technology to reduce this risk.

On the contrary—we must deepen our understanding of nature and deploy the right technologies more quickly.

We have been entrusted as Earth's stewards in a particularly critical time.

That is the theme of this book.

So it concludes.



Yes.

Martin Rees' perspectives discussed here are exactly the Purpose Management aims at "KANEKA The Dreamology Company—Make your dreams come true."

I have decided on this caption to express my agreement.

Kaneka is refining its technology in three domains: the environmental and energy crisis; the food crisis, and the wellness (better living) crisis; and we aspire to provide optimal solutions through their social implementation.

We share Martin Rees' sense of urgency.

Life Is a Chemical Reaction.

For several years, I have cast animals, plants, and other life forms that spring forth vigorously in nature, the "joy of life," as the main characters on the front cover of our integrated reports.

Why?

The reason is clear.

At the cellular level, the life force of all life forms, including humans, plants, and animals, can mostly be explained by a common language called "chemical reactions."

This is where Kaneka comes in as a chemical company.

Let's open your elementary school science textbooks.

It explains that life consists of sustenance—through taking nutrients into the body by eating, as well as digestion, absorption, metabolism, assimilation, and catabolism through chemical reactions involving enzymes—and trying to reproduce.

Life, to live, is a chemical reaction.

To live is also to eat.



Kaneka's policy is to research the "mysteries of life" and to support a society that fosters life. This is because the universal understanding in chemistry, that "life is a chemical reaction," is the starting point for our activities (such as research).

The human genome was decoded in 2003.

What we have found is that, in terms of DNA, humans are hardly different from other organisms.

While we may look different, in terms of DNA, life is all the same.

The Miracle of the Earth and the Birth of Life

When it was created 4.6 billion years ago, the Earth was a ball of fire.

Over the next 500 million years or so, this fireball transformed into a planet covered by an ocean, and according to research, minerals dissolved into the ocean to give rise to a wide variety of organic matter. Life was born.

Ultimately, the Earth and all of its life forms, when the footsteps of their origins are tracked, lead to a single source.

By the way, humans are said to have undoubtedly sown the seeds of most of the problems currently facing the planet and its human inhabitants.

Therefore, I believe that for humans to survive as a species, we must change our thought patterns, zoom out, and reconsider problems from the perspective of "life on Earth," which includes the planet and all of its life forms.



The New Frontier of Biomanufacturing and Chemistry

I repeat.

Life and Earth are one, and chemical reactions are its common substance.

Each domain is a new frontier that Kaneka is striving in.

For example, the KANEKA Biodegradable Polymer Green Planet™, which will be discussed later in this report, as well as genome editing technologies, biopharmaceuticals, regenerative and cellular medicine, organic dairy businesses, supplements, biomanufacturing including fermentation and culture process technologies, PV Technology, E&I, and medical devices, among others.

Each research may appear different, but they are all connected to the big “life,” that is, life on Earth.

This is the new frontier created by chemistry.



Hybrid Management of the Toy Box

Innovation is a new combination that moves things differently.

To create new combinations between different things in different business fields.

This is what Kaneka calls “Hybrid Management.”

The stunning combination of technologies.

Our researchers are transcending fields and endeavoring to create new combinations never seen before.

This challenge may be a result of Kaneka being like a toy box.

A toy box filled with varied and different things.

We are enjoying the blessings of diversity.



Serendipity is being born inside the toy box.

I am proud of our dedicated researchers.

I hope you can see why the integrated reports featured plants and animals as the main characters.

The Post-Pandemic Future

It is said that the global population will reach 9.7 billion by 2050.

What can humanity do in the face of global crises such as the environment and energy, food, climate change, and world wars?

This worry is worsening.

Furthermore, dramatic advances have been made in fields such as biotechnology, cyber, and AI, and even the possibility of humanity’s exodus from the planet has been discussed.

As the pandemic comes to an end, the post-COVID world is at a historical crossroads. In other words, the period before and after the pandemic is set to decisively alter the course of history.

History never returns to where it was before.

The thriving and revival of humanity depend on how science and technology can help us resolve social problems.

Saving the planet with chemistry.

Kaneka, as a resident of Earth, will work swiftly to make science and technology dreams a reality and to apply them to solve social problems.

Kaneka is a Dreamology Company.

While we’re on the topic of integrated reports, I’d like to add a word on why animals breaking eggshells were included.

“You can’t make an omelette without breaking eggs”



That is, it takes a bit of courage to do something new.
If you're too scared to break an egg, you can't enjoy a delicious omelette.
The saying shows France's national character.
Additionally, "Kites rise highest against the wind, not with it."
(Winston Churchill)
We are betting on creative innovation with this feeling.



| Restoring Bonds —Trust & Respect—

Following the easing of COVID-19 border restrictions in many countries,
I immediately went to the U.S. and Europe (for the first time in three years).
I was making do with online meetings and messages until then,
but once I got in touch with the realities of our customers and colleagues on-site,
I discovered that my perceptions were vastly different.
Without realizing it,
our communication had become fragmented.

The end of the pandemic is the beginning of a
"new Trust & Respect."

Customers and colleagues restoring a true
"One Team" by bringing back trust and respect.
Mending the divisions.
My mind is set.

Trust People & Mutual Respect is a tradition that
has continued since Kaneka's founding over 70 years ago.
It is embedded within our company song,
"Eichi Aratani (Anew Wisdom)".

| Kaneka Is a Human Driven Company —The Evolution of "1-on-1"—

People are everything.
The pandemic reminded us how unnatural it is that people cannot talk face to face.
Our communication has become impaired
under the threat of something unidentifiable.
We have become unable to speak up.
We have been forced into silence.
While this is improving with the cure of time,
restoring considerate and humane communication
remains a large issue in management.

We have restarted activities to rebuild connections,
such as the first Run, Run, Run. Kaneka (group ekiden competition) in three years.

By the way, it has been five years since the "Kaneka 1-on-1" system began.
Kaneka was the pioneer of the "1-on-1" system in Japan.

The framework of this system consists of:

- Increasing corporate value and driving growth through the growth of our people.
- To accomplish this, supervisors and subordinates meet on a regular (at least biweekly) basis to review the progress of plans and the development of the subordinate's career and skills.

The system is evolving.
Leadership and followership.
We will strengthen the mechanism that allows the captain to unite
the crew's feelings to create winning momentum.
We will reset the soul of the system.



I Diversity: Creating New Value and Women's Participation

"Wow, I never thought of it that way!"

"Your perspectives are unique and always moving."

Diversity of ideas!

I want to fill Kaneka with such "idea craftsmen."

I want to amaze the world with their creativity and human magic.

I work with this in mind.

Unbound by gender, age, nationality, and other circumstances.

I want you to leap out of the box.

I want the hands of different and diverse employees to create new value.

This is what Kaneka considers diversity.

My job is to bring out their unhindered performance as a stage director.

"It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change." (Darwin)

I understood him as saying that only companies that can attract a diversity of DNA—a diversity of human resources that cause change—can survive.

"Be different!" is probably the keyword for diversity.

We are actively hiring and promoting women.

We are expanding women's opportunities because we want to amaze the world with a diversity of ideas.



I Positive Thinking: Let's Remove Limits!

The other day, I received a courtesy visit from the players of the Kashima Antlers (we are their official partner). The soccer club striving as one team to be the best in Japan and the world parallels the way we work as a passionate group to achieve a sustainable future.

Our new themes are deepening Trust & Respect between colleagues and pushing past limits (Limitless Adventure). Let's remove the limits.

"Innovation is the market introduction of a technical or organizational novelty, not just its invention." (Schumpeter)

"The human mind, if left alone, will lean 90% negative. So put it into words, be aware of it, and act with positive thinking." (Joseph Murphy)

"Based on my experiences, I can't do it, it's impossible." Wave goodbye to these negativity bugs. As our experiences have taught us our limits, we should also be able to learn to let them go.



■ Serendipity: The Ability to Connect the Dots

While trying many things out of curiosity, something unexpected happens through chance encounters and seemingly unrelated events.

Discovering new wonders and seizing lucky combinations.

This must be the best part about research.

The goddess of serendipity arrives in an everyday, ordinary appearance.

This is how I feel after having spent many years on research sites.

The trigger that gives birth to serendipity is the everyday research that connects the dots.

Like deer running through the woods, research sites are thriving with serendipity.

When Edison said, "I have not failed.

I have successfully found 10,000 ways that will not work," he gave us the trick to encountering serendipity.

The age of discontinuity.

Without an antenna for things other than what is of immediate interest, the way we view things becomes extremely narrow.

If you come across something out of the ordinary, don't miss that opportunity; take a detour.

According to research, around 30 to 50% of important scientific discoveries are said to be a result of unintentional coincidences.

Like this, the value realized by chance wasn't something that was initially expected or sought after.

They were completely unexpected.

Let's keep in mind that research is planning for coincidences.



■ Don't Forecast the Future, Plan It

It's not about "how the future will be," but "what to do with the future."

The unknown arouses anxiety and makes you want to know what lies just ahead.

It's tempting to try and forecast the future.

But what is more important than forecasting the future, is to plan the future.

That is, to demonstrate adaptability.

Responding quickly and appropriately to change

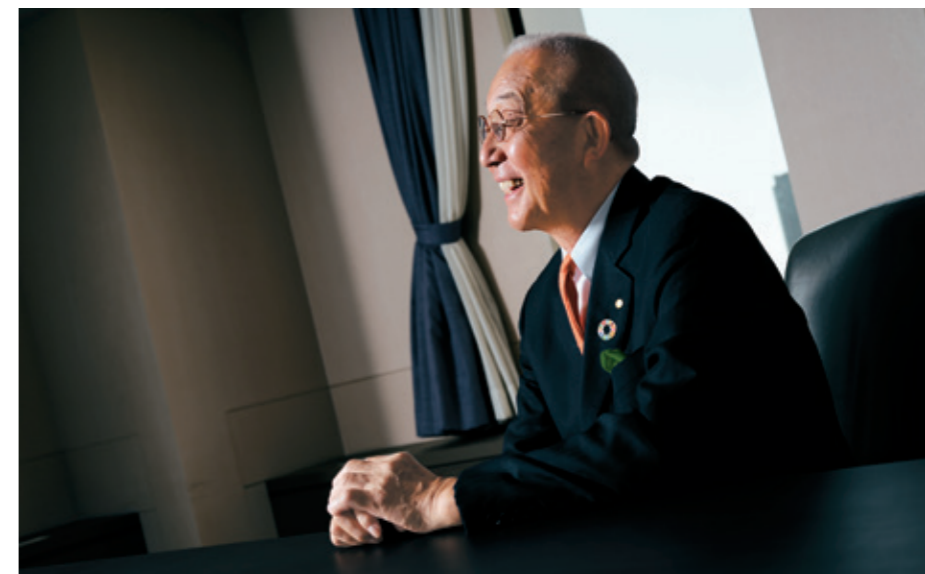
—being reactive; staying ahead of change

—being proactive; and the best is

creating the future with your own hands

—being creative.

Kaneka will act with a clear purpose and principles to plan a future and then realize that future.



Gratitude and Prayers

I believe management is about responding to change while moving back and forth between the whole and its parts.
The whole is a part, and a part is the whole.

Although the brain has long been thought to be the only command center for organisms, recent research has led us to believe, for example, that the brain and gut operate independently, led by gut bacteria.

The same is true with management.
God is in the details.

Each and everything that happens on-site, and change in each and every employee, are the factors that harmonize the whole operation.

Management is truly about the whole picture —shine a light on the details.

There would be a no greater joy for me than if, while reading this report, you could understand the relationship between the whole and its parts in management.
Each and every narrative I present here are Kaneka’s most important principles and major policies themselves.

We have continued to focus on human-driven management this past year. I report this with gratitude and prayers for all of you.



What We Considered in Our Mid-Term Plan

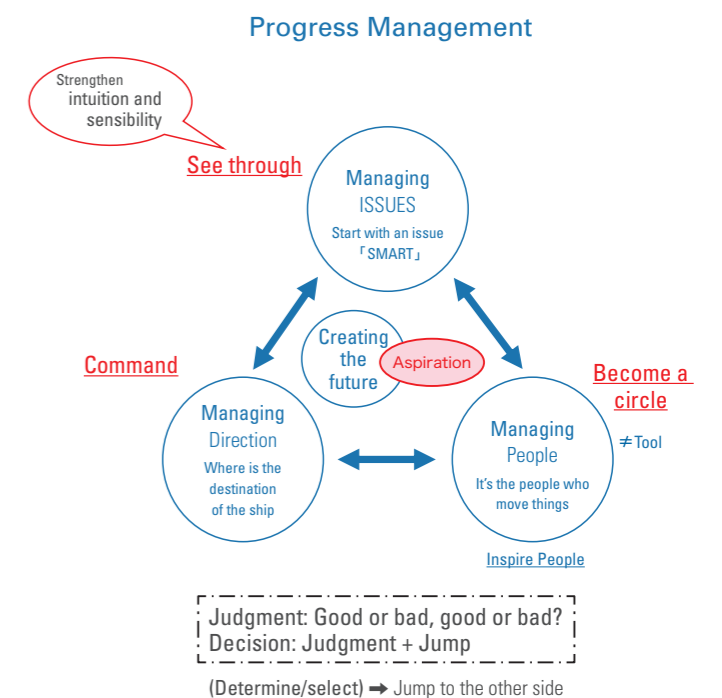
I am sometimes moved by nursery rhymes and fairy tales.
The Mother Goose Nursery Rhymes are full of lessons that touch me deeply to this day.

*For want of a nail, the shoe was lost.
For want of a shoe, the horse was lost.
For want of a horse, the rider was lost.
For want of a rider, the battle was lost.
For want of a battle, the kingdom was lost.
And all for the want of a horseshoe nail.*

A small gap in the mind can lead to a big failure.
I think it’s a great lesson.
It also expresses very well, “The whole is a part, and a part is the whole.”
Those who have played with jigsaw puzzles may already know this, but I believe using the parts to paint the whole picture is essential.

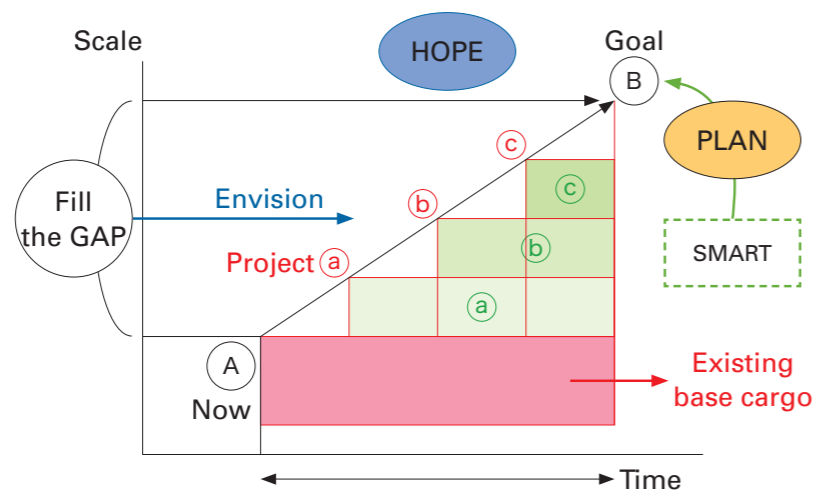
(1) Progress Management

The mid-term plan is an inspection (monitoring) of the runway leading towards a tremendous leap.
Reconfirm the future (aspiration = romance) that each business aims for, structure it as a vision, and specify the dates and scale.
I propose a vision to achieve speed and dynamism by structuring critical issues, which are choke points (Issue Management), and by assigning priorities to issues (Direction Management). The mid-term plan will meticulously visualize progress management, which is comprised of these three managements.



(2) From Hope to Plan with SMART

Identify what should be done now by backcasting from how the future should look. Visualize from the SMART (Specific, Measurable, Actionable, Realistic, Time-Limited) perspective and bring the whole picture to the forefront. Through this, hope becomes plan.



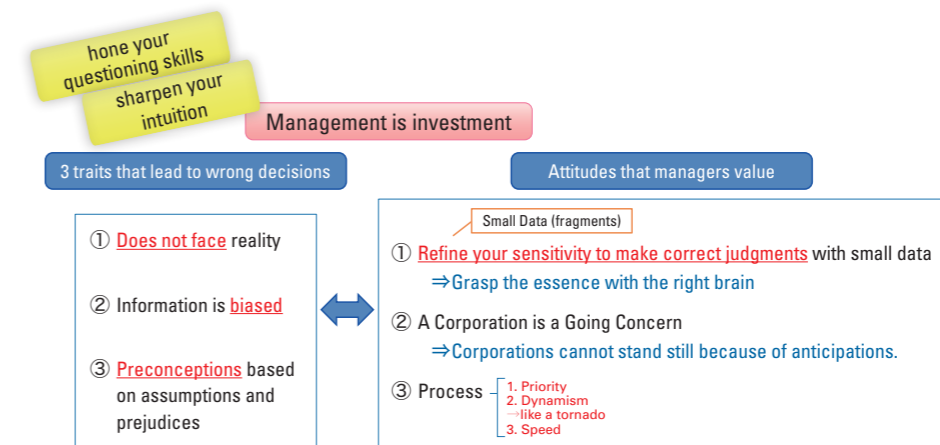
(3) 3R+S

Every leader in an organization has the power to decide, together with the responsibility that goes with it. Every leader must exercise leadership with determination, using their power correctly to lead the organization toward its goals. Become aware of this mission, think for yourselves, and ignite people's hearts with positive action. Passion is born from action, and it spreads.

- ① Right Practice
State what you want to do specifically
- ② Right Posture, Standing tall
Straighten your back, correct your posture
- ③ Right Effort
Give it your all
- ④ Single Minded Way
Work earnestly

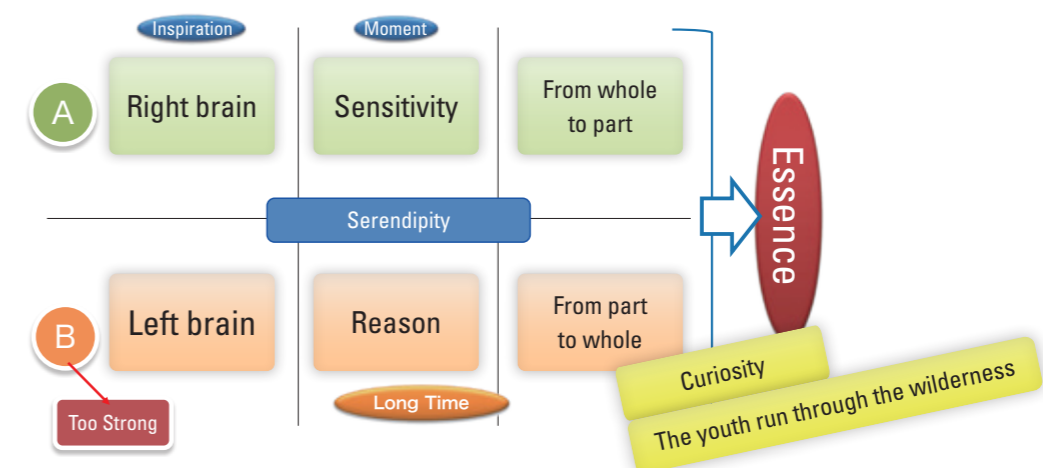
(4) Management Is Investment

Beginnings are a revival of mindfulness. Review past efforts without preconceptions and deep-clean the mental litter. Become humbly aware of yourself on the edge of a cliff, and don't repeat the laziness of not having started. Don't fall into the pattern of making the wrong decisions. Focus on the future that has already begun in front of you and see into its essence with discernment.



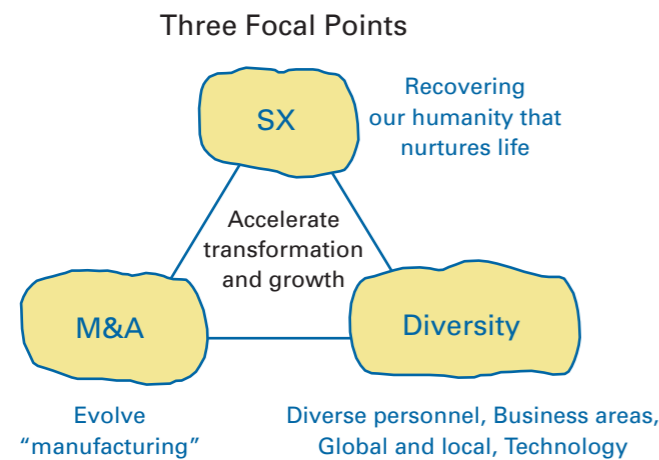
(5) Serendipity Is Intuition

Luck comes to those who are ready. Cherish your burning curiosity and inspired heart. Have the mindset of stepping out of existing boxes and observing from above; and hone your ability to notice the sprouts of growth, discover, and imagine.



Accelerate the “3+5” Strategic Platform

I would like to reiterate the “3 Focal Points and 5 Initiatives” that form the foundation of our strategy. First, the three focal points (focuses) are ① Restoring life-nurturing humanity “SX” (sustainability + DX); ② Promoting structural reform through M&A; and ③ Promoting diversity through diverse people, business areas, regions, and technologies. We will accelerate transformation and growth by prioritizing these three points.



Five Initiatives

- 1) Strengthening the Asian Strategy
- 2) Advancing Digital Transformation (DX)
- 3) Advancing Carbon Neutrality
- 4) Alliances and M&As
- 5) Diversity Committee

1. Strengthening the Asian Strategy

We will accelerate the development of the Chinese market in particular, through local business planning and dispatch capabilities, making full use of the Asian regional headquarters structure. We will incorporate Asian dynamism.

2. Advancing Digital Transformation (DX)

Under the DX & Carbon Neutral Committee, we will accelerate efforts that integrate DX and CN (carbon neutrality) in the manufacturing sector.

We will concretize production technology strategies and production innovation concepts to realize CN by upgrading our digital platform, which includes manufacturing innovations that apply digital technologies as well as R&B.

3. Advancing Carbon Neutrality

The DX & Carbon Neutral Committee will lead our efforts to accelerate the realization of CN throughout the company with the integration of DX. To achieve a 30% GHG reduction in FY2030 compared to FY2013, we will strive to both reduce our environmental impact and increase business efficiency. We will accomplish this through energy conservation, manufacturing innovations, alternative fuels, and the introduction of low-CO₂ electricity, as well as through the introduction of our own Internal Carbon Pricing (ICP) system and LCA evaluation mechanism.

4. Alliances and M&As

We will strengthen our open innovation and alliance activities that link our external and internal resources, based on the high level of expertise of the Investment Planning Committee and the Global Open Innovation Planning Department.

5. Diversity Committee

We have created opportunities to raise the stage for women’s advancement, such as through roundtable discussions with female executives.

We will promote human resource-oriented policies by enhancing the activities of specialized teams that promote the further advancement of women.

We will also facilitate human capital diversification through initiatives such as career recruitment and expanding the appointment of female executives.

Purpose of the Management Policies

“Wellness First” Health Management to Achieve Sustainability (ESG Management)

1. KANEKA The Dreamology Company – Make your dreams come true –

We will be a company that serves people’s lives through our adventures in the “sea of wonders” that is chemistry.

2. Solution Provider

We will contribute to building a sustainable society based on the Triple Package of Management System Transformation.

3. Hybrid Management

We will accelerate transformation and growth by combining diverse technologies and promoting hybrid management, which creates valuable solutions.

4. Trial & Error Experiment Driven Company

We will strive to be a Value Creating Company, transforming into a new portfolio, by operating under the guideline of being a passionate experiment company (keeping only what is worth testing extensively), and through repeated renewals.

Selection and Concentration

1. Domain

We will accelerate portfolio transformation with the three crises (Environment and Energy, Food, and Wellness) as our business domains.

2. R&B (Research & Business)

We will push ahead with the development of innovative materials (breakthrough technology) and proactively invest management resources in research and development activities, which is an investment in the future.

3. The Strategic Investment of Resources

We will make timely investments that contribute to the growth strategy with speed and scale. We will also make proactive investments that will lead to business expansion, such as in strengthening our capabilities and in facilities to manufacture new products. Furthermore, we will reinforce our core business groups while accelerating portfolio transformation through the rapid growth of leading + large new businesses.

I Strengthening the Management Platform

1. Speed Up the Implementation of New Businesses Into Society

We will apply a “selection and concentration” approach to themes with scale and improve the productivity of R&B.

2. Innovate and Upgrade Operations Through Digital Transformation

We will implement business transformation by introducing a new personnel system that will increase the motivation and productivity of employees, as well as become an organization and people that continue to create high value.

3. Evolve “Kaneka 1-on-1”

We will enhance our ability to solve problems on-site by creating a physically strong “One Team” with a strategy (game plan) to win.

4. Open Innovation

We will proactively carry out alliances and M&As, thereby accelerating the transformation of our business portfolio and accelerating discontinuous growth.

