Guidance for Disclosure and Engagement for Promoting Sustainable Finance toward a Circular Economy

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Abstract

There is a growing need to make a medium to long-term transition to a circular economy from a linear economy of mass production, mass consumption, and mass disposal, in response to the increasing demand for resources, energy, and food due to global population increase, a growing amount of waste, and a worsening of environmental problems such as climate change. In particular, the marine plastic litter issue has led to a growing interest in resource circulation for plastics, both in Japan and overseas.

A circular economy refers to economic activity that generates added value through servicization while reducing resource input and consumption, and making effective use of social stock, in addition to the conventional 3Rs (reduce, reuse, and recycle) initiatives. Among a wider range of stakeholders, the role of companies, who could lead innovation in business models and technology, and the role of investors and financial institutions (hereinafter, referred to as "investors"), who could supply and circulate funds as a driver of these businesses, are particularly important for achieving a transition to a circular economy.

Movement toward a circular economy transition by companies has not yet become mainstream, as initiatives related to a circular economy may not necessarily lead to corporate profits or consumer benefits over the short term. However, these initiatives can enhance the sustainability of business activities and serve as a source of competitiveness in the medium to long-term. In order to overcome time frame gap, and to realize high-quality dialogue for medium to long-term growth of corporate value, companies and investors need to consciously extending the timeframe of their focus and then conduct a dialogue and engagement that synchronizes corporate sustainability (the sustainability of a company's earning power) and social sustainability (the future shape and sustainability of society), by. In other words, awareness regarding a sustainability transformation (SX) is necessary.

In order to promote SX in circular economy, this Guidance for Disclosure and Engagement for Promoting Sustainable Finance toward a Circular Economy (hereinafter, referred to as the "Guidance") is expected to serve as a guide for companies to refer to when disclosing information, and for investors, who engage in dialogue and engagement (hereinafter, referred to as "dialogue") based on such information, and to present an outline of matters that both parties should focus on in disclosure and dialogue. The structure of the Guidance has been based on widely recognized and utilized frameworks such as the Recommendations of the TCFD, as common ESG disclosure frameworks are being developed internationally, as well as prior examples regarding the classification of initiatives contributing to a circular economy and related indicators. Moreover, the Guidance specifically focuses on the theme of a circular economy while following the stance of "Guidance for Collaborative Value Creation,"[1] and is consistent with the "Environmental Reporting Guidelines"[2].

[1] "The Guidance for Collaborative Value Creation" (formulated by the Ministry of Economy, Trade and Industry in 2017) is a guide for improving the quality of information disclosure and dialogue with investors, by systematically and integrally organizing information that companies should communicate to investors.
https://www.meti.go.jp/english/press/2017/pdf/0529_004b.pdf

[2] "The Environmental Reporting Guidelines" (formulated by the Ministry of the Environment) provide a method for companies to report on how they are addressing environmental issues in their business strategies, with the 2018 version being the latest.
http://www.env.go.jp/policy/j-hiroba/kigyo/2018Guidelines_E20190412.pdf

The Guidance consists of six items that should be focused on as key points for disclosure and dialogue when linking circular economy initiatives with the growth of corporate values. Specifically, these are “risks and opportunities”, “strategies”, “indicators and targets”, and “governance” that are common to general ESG disclosure frameworks, as well as “values” and “business models”, in light of the characteristics of a circular economy. In particular, values define whether a company’s various initiatives to transition to a circular economy are integrated into its high-level policy such as corporate philosophy and vision, which is an important element in judging the company’s viability and the feasibility of its business model. While 3R activities have often been viewed as a cost, as part of environmental conservation and legal compliance in fulfilling corporate social responsibility, companies could redefine the circular economy initiatives as sustainable economic activities that generate added value for them. Through such mindset changes, a business model is expected to demonstrate a story that can lead to the creation and acquisition of new markets over the medium to long-term, and serve as an important point for investors when they evaluate investments.

In addition, when a company develops a unique value creation story based on the framework of these six items, and seeks to engage in dialogue with investors, it is important to incorporate circular economy initiatives into its business model, and to explain and share what strategic investments are made to link these initiatives to the growth of corporate value. It is also important to explain what KPIs were achieved, and what results (outcomes) will lead to increased corporate value. When doing so, it is necessary to remain clearly aware of the interrelationships among the items, according to the following three levels, and to explain them as a consistent value creation story.

(1) The “high-level policy” level

Initiatives related to a circular economy can involve diverse approaches, and need to be implemented over a medium to long-term time frame. Accordingly, it is important that they are positioned as a high-level, company-wide policy that involves management. The consistent presentation of a company’s values and business model, as well as the involvement of management in governance, which is essential for the steady implementation of these values, will enable investors to understand the company’s ability to implement measures to increase corporate value.

(2) The “execution” level

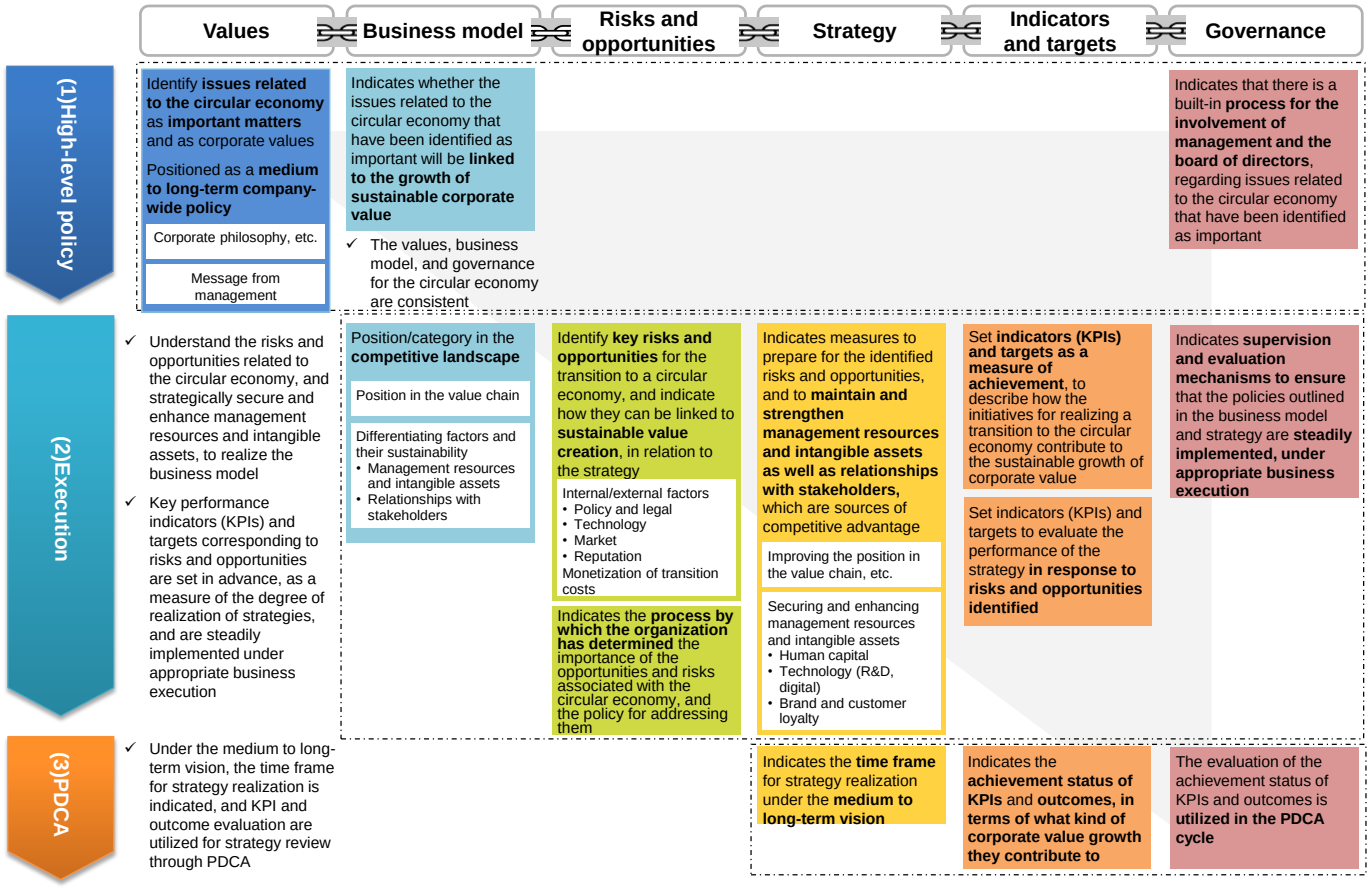
When implementing the company-wide policy on a circular economy indicated in the high-level policy, and explaining the business model to investors, it is important for a company to appropriately understand its ability and position in their market, identify key risks and opportunities, consistently present a strategy for securing a competitive advantage based on those risks and opportunities. It is also important to set corresponding key performance indicators (KPIs) and targets. In addition, presenting the supervisory mechanism as well as an evaluation method to ensure that the policies outlined in the business model and strategy are steadily implemented under appropriate business execution, will enable investors to evaluate its effectiveness.

(3) The “PDCA” level (plan-do-check-act)

Because initiatives related to a circular economy need to be understood on a medium to long-term time frame, it is important that the time frame for strategy realization is presented under the medium to long-term vision, and that the achievement status of KPIs and the results (outcomes) that will lead to a growth of corporate value is

presented in a logical manner. In addition, companies must not only measure KPIs over time, but also analyze the progress of their initiatives toward achieving their goals, and revise strategies as necessary. In order to review strategies based on the PDCA cycle, it is important to have a well-functioning, disciplined governance system within the company.

Interrelationship among the items to be aware of, upon disclosure and dialogue



A circular economy is not something that can be realized in a single step. Accordingly, it is important to think of it as a transition toward an ideal state. It is hoped that the Guidance will help to build collaborative relationships between companies and investors, and contribute to a steady transition to a circular economy.

The following are the key points of disclosure and dialogue summarized by this study group, as described in the following chapters.

Values	✓ When companies position issues related to a circular economy as material issues for themselves, they should demonstrate that the following two points are positioned in an integrated manner, in their high-level company-wide policies, such as corporate philosophy and vision. (1) **Reasons for identifying issues related to a circular economy as material issues that the company should address through its business activities**, among the many social issues (2) **Basic direction for linking initiatives related to a circular economy to the growth of corporate value** ✓ If the above is also clearly mentioned in the management message, it will provide a basis for evaluating the company's viability. ✓ Investors should evaluate the rationale and reasonableness of the company's identification of issues related to a circular economy as material issues, and gain an understanding regarding whether the company's related initiatives constitute a coherent value creation story that is organically linked to its business model and strategy. They should do so while taking into account the fact that achieving a balance between economic value and social value contributes to a sustainable growth of corporate value.
Business model	✓ Companies should appropriately analyze **the market environment and its long-term trends (including the value chain and competitive environment, their market position, and the differentiating factors that give them a competitive advantage)** upon which their circular economy business model is based. They also need to consistently explain **how these factors lead to a sustainable growth of corporate value**, by linking them to the direct and indirect value delivered to customers. ✓ When doing so, companies should identify **the management resources and intangible assets that are essential to maintaining the competitive advantage of their business model** with regard to a circular economy, and present an integrated business model and strategy for the necessary **investments for developing and reinforcing those resources/assets.** ✓ Regarding the company's investments in their management resources and intangible assets, investors should appropriately recognize the impact of these investments on the company's competitive advantage and value creation, as well as measures to deal with potential risks to the security of such resources, and make medium to long-term investment decisions
Risks and opportunities	✓ Companies should summarize **the risks and opportunities for sustainable growth of their business models**, with reference to the inherent risks in relying on a linear economy and the opportunities created by transition toward a circular economy, that are likely to affect their business activities. ✓ At the same time, in order to create value by regarding the transition to a circular economy as an opportunity, companies should explain **how the initiatives will enable them to recover their investments over the medium to long-term, while maintaining the target profitability** in relation to their strategies, and **how such initiatives will contribute to sustainable corporate value**, along with evaluation indicators and methods. ✓ Investors should be able to evaluate how a company will respond to the risks identified from a medium to long-term perspective, or transform them into opportunities, based on the company's profitability and plan to recover the investment over the medium to long-term. They should no simply recognize the company's investment toward the current transition as an inefficient near-term cost, but should understand it organically, in conjunction with the corporate strategy.
Strategy	✓ Companies should summarize **how they will secure and strengthen the management resources and intangible assets** that support the competitive advantage of their business model. In addition, they should also describe what **measures they are taking to deal with the risk, etc. of losing these resources**, in the context of their **medium to long-term value creation story**, including a description of how they established the time frame. ✓ Investors should evaluate whether the strategies presented by the company are positioned within a consistent medium to long-term value creation story, in order to realize the goals presented in the business model, and to address the risks and opportunities identified by the company. When doing so, they should consider how the allocation of management resources and capital will contribute to a sustainable growth of corporate value, as well as the setting of the time frame, which is the premise for such allocation.
Indicators and targets	✓ Companies should set **targets as guideposts for executing strategies to grow corporate value, and key performance indicators (KPIs) to measure the degree of achievement** in advance,. They should present them to investors in a form that corresponds to the risks and opportunities identified in a circular economy, and explain **the self-evaluation which includes the results (outcomes)**. ✓ Investors should recognize that these indicators are not intended to be used to make simple comparisons between companies or industries, but rather to assist in understanding the degree of achievement of the strategies and value creation story of the company itself, through dialogue.
Governance	✓ In light of the fact that a medium to long-term perspective is indispensable for initiatives related to a circular economy, companies should indicate **whether a process in which the management and the board of directors is involved has been incorporated, with their active participation**, whether policies that are rooted in values are properly shared internally, and that a **PDCA cycle has been established to utilize the evaluation of the achievement status of strategies for strategy reviews**. ✓ In order to gain an assurance that a company will steadily execute the initiatives related to a circular economy that are positioned in its value creation story, and achieve a sustainable growth of corporate value, investors should understand whether the company has a disciplined governance system and whether the PDCA cycle is functioning properly.

Chapter 1. Introduction

1. Background - Necessity of transition to a circular economy and challenges for the transition

Necessity of transition to a circular economy

The global population is increasing at a remarkable pace, and it is projected to reach 9.7 billion in 2050. As a result, increasing demand for resources, energy, and food, a growing amount of waste, and worsening environmental problems such as climate change have become global issues. Economic activities that exceed the “planetary boundary”[3] may cause environmental destruction, interfere with the stable supply of resources, and undermine sustainable development. It is clear that the conventional linear economy[4] of mass production, mass consumption, and mass disposal will soon become unsustainable, not only in Japan but also worldwide. In addition to the conventional 3Rs (reduce, reuse, and recycle) initiatives, it is necessary to make a medium to long-term transition to a circular economy that creates added value through servicization while reducing resource input and consumption, and making effective use of social stock.

Domestic and international trends in the transition to a circular economy

In Japan, based on the Basic Act on Establishing a Sound Material-Cycle Society, the “Fourth Fundamental Plan for Establishing a Sound Material-Cycle Society”[5] was established in June 2018. The plan outlines the direction of seven initiatives, including “Integration of Efforts toward Creating a Sound Material-cycle Society into Those for a Sustainable Society” to improve environmental, economic, and social aspects in a coordinated manner, sets the “market size of business related to sound material-cycle society business” as an indicator for integrated initiatives addressing the environment and economy, and indicates numerical targets and specific initiatives taken by the related parties.

In addition, in May 2020, the Ministry of Economy, Trade and Industry formulated the “Circular Economy Vision 2020,”[6] encouraging the transition to a circular economy for society as a whole, and outlining specific initiatives that are expected of the related parties. The vision states that all industries are responsible for recognizing the importance of improving resource efficiency and aiming for a transition to more circular businesses, and also that when conducting business activities, companies are required to select a circular approach appropriate to their business type in every process of the supply chain, including design, production, use, and disposal, and to design total circularity with an eye on the life cycle.

The importance of a circular economy is also becoming widely recognized on a global level, and efforts to make a transition are accelerating. The transition to a circular economy is clearly stated in Goal 12: Responsible Production and Consumption (ensure sustainable consumption and production patterns) of the Sustainable Development Goals (SDGs), which was adopted by the United Nations in 2015, and will also contribute to the achievement of other goals, such as Goal 13: Climate Action (take urgent action to combat climate change and its impacts) and Goal 14: Life Below Water (conserve and sustainably use the oceans, seas, and marine resources

[3] Earth system limit value for the impact of human activities on the environment, released as a prerequisite for sustainable development

[4] The linear economy refers to an economic system in which the flow of procurement, production, consumption, and disposal is unidirectional (‘take-make-consume-throw away’ pattern), leading to an economic and social pattern of mass production, mass consumption, and mass disposal, based on disposability.

[5] https://www.env.go.jp/en/recycle/smcs/4th-f_Plan.pdf

[6] (in Japanese) https://www.meti.go.jp/shingikai/energy_environment/junkai_keizai/20200522_report.html

for sustainable development). An increasing number of countries have made the circular economy a major agenda item at international conferences such as the G20 and G7, along with the United Nations, and have launched policy initiatives toward a circular economy. For example, the European Commission has launched strategies and action plans for a circular economy, such as the "Circular Economy Package" released in December 2015 and the "Circular Economy Action Plan" released in March 2020, as well as concrete measures based on these strategies, and is strongly promoting a circular economy as one of the pillars of its growth strategy. In addition, countries have successively updated their regulations in the field of waste and resource recycling in recent years.

Domestic and international trends in resource circulation for plastics

In particular, the issue of marine plastic litter has led to a growing international interest in resource circulation for plastics. At the G20 meeting held in Japan in 2019, the "Osaka Blue Ocean Vision,"[7] which aims to reduce additional pollution caused by marine plastic litter to zero by 2050, was shared among the leaders of each country, and the number of countries and regions sharing this vision has expanded to more than 80. As many countries are proceeding with concrete formulation of their policies, in May 2019, the Japanese government formulated the "Resource Circulation Strategy for Plastics,"[8] with the basic principle of the "3Rs + Renewable" and the aim of improving resource circulation for plastics. The strategy is being embodied from the perspective of thorough reduction, effective, efficient, and sustainable recycling, and promotion of the use of alternative materials such as recycled materials and bioplastics. On a global level, the "Directive on the reduction of the impact of certain plastic products on the environment," released by the European Commission in 2019, calls for a further expansion of the use of recycled resins and alternative plastic materials, which is expected to open new markets. In addition, in China, "Opinions on further strengthening the control of plastic pollution" was released by the National Development and Reform Commission in January 2020, which states that the government will promote the spread of plastic alternatives and foster new business models.

Trends in sustainable finance

As the United Nation's SDGs become more prevalent in society, demand from society and markets for environmental action has rapidly increased in order to respond to global-scale environmental issues such as climate change. In this regard, there are signs that the market for environmentally friendly products and services is expanding accordingly. Business activities that do not account for environmental considerations run the risk of damaging corporate value, both at the individual company level and throughout the supply chain. There is growing concern that such companies will not be able to maintain social approval.

Investors and financial institutions that invest in and lend to companies play a major role in helping companies change their own behavior in response to these social trends. In the wake of the "Principles for Responsible Investment (PRI)"[9] proposed by the United Nations in 2006, investors are being called upon to promote changes in corporate behavior from a medium to long-term perspective in order to realize the ideal image of the economy and society, and to achieve a balance between economic value and social value (responsible investment), rather than merely focusing on short-term performance trends. In 2019, the "Principles for Responsible Banking (PRB)"[10] were developed by the United Nations, and the importance of financial institutions taking social goals into account,

[7] https://www.mofa.go.jp/ic/ge/page25e_000309.html
[8] (in Japanese) https://www.env.go.jp/press/files/jp/111747.pdf
[9] The number of PRI signatories has increased to 3,038 (as of March 31, 2020).
[10] The number of PRB signatories is 131 (as of September 22, 2019).

such as those outlined in the SDGs and the Paris Agreement, was shared internationally.

From this perspective, ESG investment, which accounts for factors related to environment, social and governance, which have not necessarily been included in conventional disclosure information, is expanding in Japan and overseas. On a global level, ESG investments grew to 30.7 trillion U.S. dollars in 2018, representing roughly one-third of the investment market. Although the scope of investments in the environmental field has primarily been limited to the area of climate change in the past, as the need to transition to a circular economy has been recognized internationally, index funds and thematic investment funds have begun to be established for this sector. In addition, the European Commission is currently working on a taxonomy to classify and define environmentally sustainable economic activities, and a circular economy is positioned as one of the six environmental objectives. In response, it is expected that financial market participants and large companies within the European market will be required to disclose an increasing amount of non-financial information on sustainability in the future. Based on these developments, it is clear that as the transition to a circular economy progresses, it will become even more important for investors, which supply and circulate the funds that drive businesses in financial markets, to evaluate companies from a medium to long-term perspective.

Challenges for a circular economy and initiatives to make a transition

While the transition to a circular economy is being promoted as a matter of domestic and international policy, initiatives related to a circular economy may not necessarily lead to corporate profits or consumer benefits over the short term, and movement toward the transition by companies has not yet become mainstream. However, it is a prerequisite for a company to fulfill its social responsibilities, including environmental considerations, as it carries out its business activities. In addition, at a time when the challenges of the traditional linear economy are becoming more apparent under the rapid growth of the global economy, it is necessary for all stakeholders, including not only businesses, but also governments, consumers, and the financial industry, to share an awareness of the need to transition to a circular economy. In this regard, they should play their respective roles in creating an environment that views environmental activities positively, as an actual source of value creation for the future, rather than viewing such activities as a cost.

Against a backdrop of the policy trends of national governments, based on the necessity of transitioning to a circular economy and the growing demands from markets and society for environmental action, it is inevitable that a transition to a circular economy and a market and society that value highly circular products and services will be realized, in the near future. Initiatives to reduce the amount of resource inputs and to use recycled resources will reduce the dependence on primary resources, and lead to the sustainability of corporate business activities, while also contributing to a reduction of greenhouse gas emissions and the resolution of a wide variety of environmental issues. In addition, Society 5.0, which makes maximum use of innovative digital technologies, is a concept that balances economic development with solutions to social issues such as environmental problems. As we move toward this new future society, a circular economy is a value axis that must be realized, from the perspective of maximizing the value of resources, and ensuring their effective use.

The transition to a circular economy will enhance the sustainability of business activities, and can also represent a source of competitiveness in the medium to long-term. In particular, as the environment surrounding corporate management has become more uncertain, and the demand from society for sustainability has increased in recent

years, it is important to synchronize corporate sustainability (the sustainability of a company's earning power) and social sustainability (the future shape and sustainability of society). In this regard, it is hoped that both companies and investors will extend the time axis assumed in their dialogue, remain aware of the importance of sustainability transformation (SX), and through appropriate communication and dialogue, link it to innovation in corporate technology and business models, while working collaboratively to create value.

2. Purpose of guidance creation

In order to transition to a circular economy, it is important to build collaborative relationships between companies that promote circular initiatives, and investors, who supply and circulate the funds that drive businesses in financial markets, and to also promote innovation. Companies need to assist investors by appropriately visualizing their initiatives in their integrated reports, annual reports, and other disclosures. At the same time, investors need to appropriately evaluate these initiatives through dialogue and engagement, so that funds can be supplied and circulated. In addition to the fact that implementation of a variety of initiatives involving a wide range of materials, products, and services can contribute to the transition to a circular economy, the purpose of implementing such initiatives and the manner in which they relate to the value creation story of the company will be multifaceted, as a matter of course. The purpose of the Guidance is to create an environment that facilitates smooth dialogue between companies and investors by providing an appropriate approach for communicating and evaluating how these various initiatives affect corporate value, and how the products and services provided by companies contribute to solving problems and lead to growth.

The Guidance has been based on widely recognized and utilized frameworks such as the Recommendations of the TCFD, as common ESG disclosure frameworks are being developed internationally, as well as prior examples[11] regarding the classification of initiatives contributing to a circular economy and related indicators. Moreover, the guidance also focuses on the theme of a circular economy while following the stance of the "Guidance for Collaborative Value Creation,"[12] and is consistent with the "Environmental Reporting Guidelines"[13]. In this regard, when companies identify the importance of a circular economy to themselves, and position their initiatives related to a circular economy as part of their integrated disclosures, we hope that the Guidance will help to facilitate dialogue with investors and financial institutions. From that viewpoint, the Guidance is expected to fulfill the following roles.

[As a guideline for companies]

The Guidance is intended to serve as a guide for companies to comprehensively communicate their values, business models, strategies, governance, etc. related to a circular economy to investors, and is expected to be referred to not only by investor relations team or ESG and CSR-related departments involved in the preparation of corporate integrated reports and annual reports, but also by corporate managers and directors.

As the transition to a circular economy is steadily being called for over the medium to long-term, and the social value created by companies is increasingly influencing investment and financing decisions, it will be useful for

[11] Circle Economy, PGGM, KPMG, EBRD, and WBCSD (2018) Linear Risks, European Investment Bank (2020) The EIB Circular Economy Guide Supporting the circular transition, Ellen MacArthur Foundation (2020) Circulytics, FinanCE Working Group (2016) Money makes the world go round, WBCSD (2020) Circular Transition Indicators v1.0, etc.

[12] https://www.meti.go.jp/english/press/2017/pdf/0529_004b.pdf

[13] http://www.env.go.jp/policy/j-hiroba/kigyo/2018Guidelines_E20190412.pdf

companies to deepen their dialogue with investors in order to acquire finance backed by appropriate evaluation by referring to the Guidance, and having corporate managers and directors act as leaders in terms of incorporating their initiatives related to a circular economy into their value creation stories, and disclosing them proactively.

Because the value creation process of each company is unique, companies are expected to use the framework of the Guidance as a basis for communication. Rather than viewing each item as formal or fixed, companies should select the items that are important to their business models and strategies, and use those items by positioning them in their own value creation stories.

[As a guideline for investors]

The Guidance is intended to help investors evaluate the initiatives related to a circular economy of companies from a medium to long-term perspective, and make appropriate investment and financing decisions, as well as to promote the growth of corporate value and the sustainable growth of investee companies, and to assist in stewardship activities aimed at increasing medium to long-term investment returns for clients and beneficiaries. It is also hoped that it will be used for dialogue between asset owners and asset management organizations.

When evaluating corporate initiatives, it is important for investors to understand the position of the circular economy and related initiatives in the value creation story of a company, from a medium to long-term perspective through dialogue, rather than pursuing comparisons among companies regarding various circular economy initiatives.

Based on corporate disclosures, investors place importance on quantitative information to make a determination of feasibility upon incorporating them as specific corporate values. In particular, they expect data on the growth and generation of free cash flow that leads to a growth of corporate value, as well as regarding the effectiveness of governance related to risk management in this area, to be presented together, as much as possible.

Meanwhile, the fact that the quantitativeness of the information is not fully satisfied does not mean that the contribution to social value through business is generally regarded as unworthy of evaluation. Even if information such as environmental indicators does not necessarily lead to an immediate increase in or generation of free cash flow, if it can be explained as leading to future corporate value indirectly or potentially, together with information that presents the process leading to such outcomes, it may attract the attention of investors and provide an opportunity to initiate dialogue.

While referring to the importance of a circular economy to their business activities, companies might transition to a circular economy, or accelerate their efforts and attempt to disclose information from a new perspective. Although they may wish to prepare carefully in order to fulfill their accountability, by starting with the disclosure of relevant information as a first step, the company can stand at the entrance of collaborative value creation through dialogue with investors.

Rather than waiting for companies to unilaterally disclose and explain the items in the Guidance, it is hoped that investors refer to the Guidance and engage in dialogue with companies in order to fill gaps in information and awareness, and obtain the information necessary to make their own investment decisions, etc.

The Guidance is a first step toward creating an environment for the transition to a circular economy through smooth dialogue between companies and investors, and it is envisioned that the Guidance will be revised and expanded as appropriate, in order to foster a common understanding on both sides, and to reflect future developments in corporate information disclosure.

Chapter 2. Key points of disclosure and dialogue

1. Structure of the Guidance

The Guidance consists of six items that should be focused on as key points for disclosure and dialogue when linking circular economy initiatives with the growth of corporate values. Specifically, these are “risks and opportunities”, “strategies”, “indicators and targets”, and “governance” that are common to general ESG disclosure frameworks, as well as “values” and “business models”, in light of the characteristics of a circular economy. In particular, values define whether a company’s various initiatives to transition to a circular economy are integrated into its high-level policy such as corporate philosophy and vision, which is an important element in judging the company’s viability and the feasibility of its business model. While 3R activities have often been viewed as a cost, as part of environmental conservation and legal compliance in fulfilling corporate social responsibility, companies could redefine the circular economy initiatives as sustainable economic activities that generate added value for a them. Through such mindset changes, a business model is expected to demonstrate a story that can lead to the creation and acquisition of new markets over the medium to long-term, and serve as an important point for investors when they evaluate investments.

In addition, when a company develops a unique value creation story based on the framework of these six items, and seeks to engage in dialogue with investors, it is important to incorporate circular economy initiatives into its business model, and to explain and share what strategic investments are made to link these initiatives to the growth of corporate value. It is also important to explain what KPIs were achieved, and what results (outcomes) will lead to increased corporate value. When doing so, it is necessary to remain clearly aware of the interrelationships among the items, according to the following three levels, and to explain them as a consistent value creation story.

(1) The “high-level policy” level

In addition to a diversity of approaches, initiatives related to a circular economy are characterized by the need to assume a medium to long-term perspective. For this reason, by positioning the approach to such initiatives in an integrated manner, as a high-level, company-wide policy rooted in values such as corporate philosophy and vision, it is possible to achieve a balance between economic value and social value, as a source of essential value creation.

A business model is a framework through which a company, based on such values, provides value to its customers and society, and links this value to a sustainable growth of corporate value. The existence and proper functioning of a disciplined governance system is necessary for a company to steadily implement its business model and achieve a sustained growth of its corporate value. From this perspective, when a company identifies a circular economy as a material issue, it is important that it be positioned within its values, and that these values form an organically consistent story, together with its business model and governance.

(2) The “execution” level

In order to implement the company-wide policy on a circular economy indicated in the high-level policy, when explaining the business model to investors it is important for a company to appropriately understand its ability and position in their market (position in the value chain, differentiators, and sustainability). At the same time, it is also necessary to identify risks and opportunities that have a significant impact on the company’s business

model, and to indicate how they can be linked to sustainable value creation, by relating them to strategy. It is also preferable to indicate the process by which the organization has determined the importance of the identified risks and opportunities, as well as the policies for addressing them.

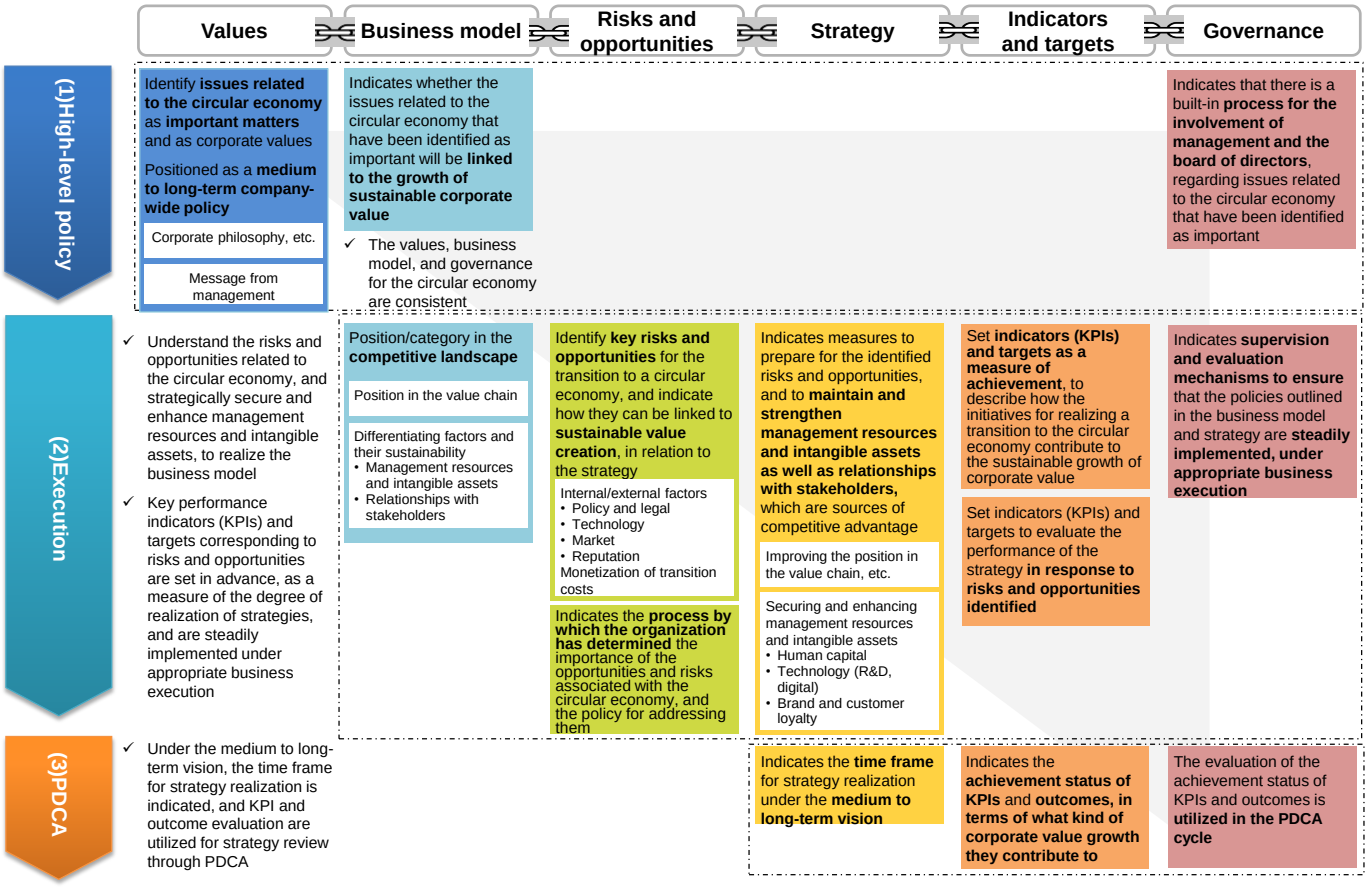
Strategy is a measure to prepare for the identified risks and opportunities, and to maintain and strengthen management resources and intangible assets as well as relationships with stakeholders, which represent sources of competitive advantage, and to realize a sustainable business model. It is important for a company to present concrete initiatives for investment to improve its position in the value chain, and to secure and enhance management resources and intangible assets, including human capital, technological capital (R&D, digital, etc.), brand, and customer loyalty from a medium to long-term perspective, in line with its value creation story.

When evaluating the degree of achievement of a strategy, it is important to set key performance indicators (KPIs) and targets that correspond with the risks and opportunities, and to indicate what kind of supervisory and evaluation mechanisms have been established as governance, in order to ensure that the policies outlined in the business model and strategy are steadily implemented, under appropriate business execution.

(3) The “PDCA” level

Because initiatives related to a circular economy need to be understood on a medium to long-term time frame, it is important that the time frame for strategy realization is presented under the medium to long-term vision, and that a logical explanation is provided not only by evaluating the achievement status of KPIs, but also based on the results (outcomes) that will lead to a growth of corporate value. In addition, companies must not only measure KPIs over time, but also analyze the progress of their initiatives toward achieving their goals, and revise strategies as necessary. In order to review strategies based on the PDCA cycle, it is essential to have a well-functioning, disciplined governance system within the company.

Interrelationship among the items to be aware of, upon disclosure and dialogue



2. Values

Values refer to a company's corporate philosophy, vision, etc. As such, values serve as the core principles for making decisions on future corporate directions and strategies, as well as when considering specific social issues as management challenges and business opportunities in the context of social issues which change with the times, and incorporating them into business models and strategies.

As the global environment surrounding business activities becomes increasingly complex and uncertain, companies can provide value to society while adapting to the times with a medium to long-term perspective and future orientation, by returning to their corporate philosophies, visions, etc. How a company perceives a particular social issue as a management challenge or business opportunity, and incorporates it into its business model and strategy is a crucial management decision that also relates to the significance of the company's existence.

If a company does not position its initiatives related to a circular economy as an integrated policy rooted in its values, it may easily suspend such activities when forced to make business decisions involving a short-term trade-off between profit and resource efficiency, and a balance between economic value and social value as a source of essential value creation cannot be achieved for such initiatives.

For investors with medium to long-term perspectives, becoming familiar with a company's values means understanding the company's core principles for decision-making, which is an important element in judging the company's viability and the feasibility of its business model. Currently, as symbolized by the SDGs, there have been calls to improve sustainability on a global level, and it is becoming more important for investors to consider not only the economic value of a company, but also the medium to long-term social value that a company brings to society, when determining whether its business activities are sustainable.

Therefore, it is important for companies to (1) present the reasons for identifying issues related to a circular economy as material issues that the company should address through its business activities, among the many social issues, and (2) demonstrate that they have integrated the basic direction for linking initiatives related to a circular economy to the growth of corporate value into their high-level company-wide policies, such as corporate philosophy and vision. Furthermore, if it is clearly mentioned in the management message, it will provide a useful basis for evaluating the company's viability and the feasibility of its business model.

It is important for investors to evaluate the rationale and reasonableness of a company's identification of issues related to a circular economy as material issues, and to understand whether the company's related initiatives constitute a coherent value creation story that is organically linked to its business model and strategy. They should do so while taking into account the fact that achieving a balance between economic value and social value contributes to a sustainable growth of corporate value.

Key points of disclosure and dialogue

- ✓ When companies position issues related to a circular economy as material issues for themselves, they should demonstrate that the following two points are positioned in an integrated manner, in their high-level company-wide policies, such as corporate philosophy and vision.
  - (1) **Reasons for identifying issues related to a circular economy as material issues that the company should address through its business activities**, among the many social issues
  - (2) **Basic direction for linking initiatives related to a circular economy to the growth of corporate value**

- ✓ If the above is also clearly mentioned in the management message, it will provide a basis for evaluating the company's viability.
- ✓ Investors should evaluate the rationale and reasonableness of the company's identification of issues related to a circular economy as material issues, and gain an understanding regarding whether the company's related initiatives constitute a coherent value creation story that is organically linked to its business model and strategy. They should do so while taking into account the fact that achieving a balance between economic value and social value contributes to a sustainable growth of corporate value.

Case Study 1: Positioning a circular economy in the medium to long-term management vision, and promoting it on a company-wide basis

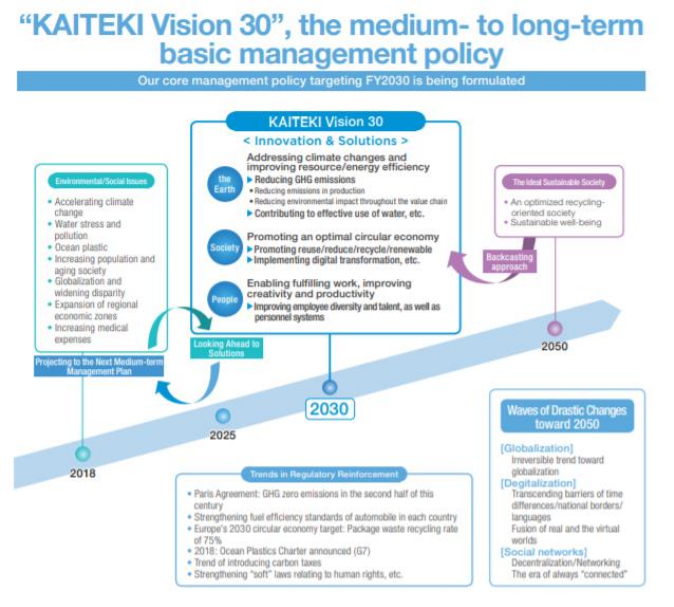
In its medium to long-term basic management policy, "KAITEKI Vision 30," Mitsubishi Chemical Holdings aims to "promote an advanced circular economy," and implement it across the entire Group.

<KAITEKI>

KAITEKI means "the sustainable well-being of people, society, and our planet Earth." It is a concept that proposes a way forward for the sustainable development of society and the planet, in addition to serving as a guide for solving environmental and social issues.

<KAITEKI Management>

The Management of Economics emphasizes capital efficiency, the Management of Technology pursues creation of innovation, and the Management of Sustainability aims to improve sustainability. KAITEKI Management is an unique management approach that enhances corporate value by implementing these three management practices in an integrated manner, while remaining conscious of time and timing.



Source: Mitsubishi Chemical Holdings Group's "KAITEKI REPORT 2019" and corporate website

Column: How Mitsubishi Chemical Holdings formulated its medium to long-term basic management policy and initiatives aimed at internal dissemination

The “KAITEKI Vision 30” was formulated by backcasting from a vision of the ideal sustainable society in 2050. This is not the first time that Mitsubishi Chemical Holdings has set its management policy through backcasting. “Project 10/20,” which was launched in 2006 under the leadership of former President Kobayashi, simulated the society in 2025, and examined the role that science should play in that society. In May 2007, decision criteria for corporate activities were established based on the results of these studies, leading to KAITEKI Management, which was launched in April 2011. In formulating the medium to long-term basic management policy, “KAITEKI Vision 30,” the company drew on these past experiences to envision the society it aims to achieve in 2050, and established targets for 2030 as a part of that process.

In addition to the management’s leadership, time and effort are required to spread these basic policies throughout the company. Since 2018, Mitsubishi Chemical Holdings has been holding workshops on a regular basis, in order to enhance the implementation of KAITEKI and the “KAITEKI Vision 30,” and to disseminate them within the company. In FY2020, the target was expanded from senior managers to the younger generation, who will be the core of the company in 2030, and approximately 600 people have participated in the program as of December 2020. In these workshops, the management and business strategists share information with the participants regarding the business areas in which they are attempting to create economic value and social impact through a circular economy, based on their company’s material issues. Through the resulting discussions, the participants are able to identify the actions that are required in the near term.

From the initiatives of Mitsubishi Chemical Holdings, it can be understood that the involvement of management is important in the formulation of values, and that the key to the dissemination of values is the continuous involvement of top management and other management levels, under strict governance.

Source: Prepared based on the Mitsubishi Chemical Holdings Group’s “KAITEKI REPORT 2019,” the corporate website, and interviews with the company

3. Business model

A business model describes how companies generate value for customers and society and grow corporate value in a sustainable manner. Specifically, it indicates what the company does as a business, in which market or field it maintains a competitive advantage and holds an important position in the value chain, the value it provides through its business, and how it creates a sustainable growth of corporate value as a result.

Until now, companies have been engaged in 3R activities for the effective use of resources. However, there is a strong tendency for these activities to be regarded as a cost for environmental conservation, in terms of fulfilling social responsibilities. In some respects, 3R activities have been implemented by companies as part of their compliance with laws and regulations, and it cannot actually be said that 3R activities have been evaluated as a source of value creation by management and investor relations professionals. However, if a circular economy can be redefined as a sustainable economic activity that generates added value through servicization while reducing resource input and consumption, and making effective use of social stock, a circular approach can be viewed as an investment that contributes to the growth of corporate value by improving the non-financial value of the company.

In particular, unlike climate change, no international targets or regulations have been established for a circular economy, and there is a limit to how much the market will be able to determine whether or not such initiatives will represent a source of added value. However, if we look at it another way, because future policy trends are still in flux, there is a high likelihood that management decisions will have an impact on the success or failure of a company's business, depending on whether the company decides to invest in advance, to anticipate the direction of the market and incorporate the potential value it can provide to customers into its business model, or decides to become a follower, and act only after policy and market trends have been determined.

In light of the above, when explaining circular initiatives as an investment to investors, it is important for the company to identify the value chain and competitive environment of the main market on which the business model is based, the company's position in the value chain, and the differentiating factors that provide a competitive advantage. The company should then explain how these factors lead to a sustainable growth of corporate value in a consistent manner, by linking them to the direct and indirect value delivered to customers. At the same time, for companies, an identification of the management resources and intangible assets (human capital, technology (including R&D investment and digital investment), brand, and customer loyalty) and relationships with stakeholders that are key to securing a competitive advantage, along with investment to maintain and strengthen these resources and relationships to increase efficiency, will contribute to support the sustainability of their business models.

For this reason, companies need to appropriately analyze their position in the market environment, along with long-term trends based on the outlook regarding policy trends and changes in consumer preferences in each country and region that may directly or indirectly affect the markets in which they operate. They also need to show investors how they will be able to secure a competitive advantage for their company in these markets. When doing so, it is important for companies to link important elements of their business model, including the items described below, in the most straightforward manner, and communicate them as a value creation story.

✓ **Position in the value chain**

What kind of added value a company provides in the various processes ranging from upstream to

downstream in the value chain constitutes the core of its business model. Accordingly, when companies provide an explanation to investors regarding the added value they provide, it is important to explain the sources of its products and services success in the market and with customers, rather than describing the detailed specifications of the products and services, while indicating influencing factors such as consumer preferences as objectively as possible.

In addition, in recent years, with the growing demands from markets and society for environmental action, companies have been accelerating their environmentally friendly initiatives, especially global companies that provide products and services to end customers in the value chain. Against this backdrop, initiatives related to a circular economy, in particular, aim to improve the resource efficiency of the entire supply chain through collaboration with a wide range of stakeholders, beyond suppliers of materials and intermediate goods, with a view toward the life cycle of products from design to disposal.

For this reason, companies that provide products and services for business users can also deepen the understanding of investors regarding their circular economy business models, by identifying both direct and end customers as well as their needs in the value chain, and showing investors what specific added value they can provide to these consumers, either on their own, or through collaboration with their stakeholders.

✓ **Differentiating factors and their sustainability**

In order for companies to create and maintain competitive advantages in the face of changes in the market and competition, it is important that their business models include factors that differentiate them from competitors. Although the transition to a circular economy is inevitable for the world as a whole, a wide range of initiatives involving a large variety of materials, products, and services will contribute to this transition, and the changes in the markets in which companies operate and the threats posed by competitors will differ from company to company, including the timing of their manifestation.

When companies explain the differentiating factors of their business models to investors, they are required to show how their characteristics and strengths lead to these differentiating factors, based on information such as the existence of competition and their competitive positions in the market, as well as future prospects with respect to that situation.

It is important for companies to identify the management resources and intangible assets that are essential to maintaining the competitive advantage of their business model, and to present an integrated business model and strategy for the necessary investments for developing and reinforcing those resources/assets[14]. Companies should also comprehensively explain, together with their related indicators and targets, how the investments in such initiatives related to a circular economy contribute to value creation and sustainable profitability and within what timeframes and methods they evaluate the effect and efficiency of the investments, based on objective facts. These efforts will be useful for promoting the appropriate evaluation of companies by investors.

Investors need to understand that investments in these management resources and intangible assets should be

[14] For example, if a company that manufactures and sells products wants to grow its corporate value by switching to a business model that allows it to accept more repairs from customers as part of its initiatives related to a circular economy, it will need to establish efficient collection routes from repair facilities and stores. In addition to these investments in tangible management resources, companies should also invest in human capital and digital resources to develop customer relationship management (CRM) capabilities, in order to effectively and efficiently strengthen customer loyalty to their sustainability-oriented brand stance. By doing so, the company may be able to tell a more compelling value creation story that contributes to sustainable profitability, while achieving a balance between economic value and social value.

regarded as facets of value creation stories that are unique to individual companies, and should not be evaluated by a uniform standard. In this regard, it is important for investors to appropriately recognize the impact of these investments on a company's competitive advantage and value creation, as well as measures to deal with potential risks, in order to make medium to long-term investment decisions.

Classification of circular initiatives

Because circular initiatives encompass a wide variety of approaches, when companies explain how these initiatives are linked to the growth of corporate value, and when investors evaluate these explanations, it is useful for smooth dialogue to organize what position a company's initiatives occupy in the value chain, what value they provide through its business (namely, the attributes of the entity), and how they result in a sustainable growth of corporate value (namely, the attributes of the initiatives). The Guidance aims to support the understanding of both companies and investors by providing an example of such a framework.

Specifically, the value creation story of a company's circular initiatives will differ, as a matter of course between (1) the case in which a company adopts circular initiatives in its own business activities, and (2) the case in which a company contributes to an improvement of circularity in society, by providing technologies and solutions that contribute to the circular initiatives of its customers. For example, design for reduce of products by manufacturers, which is a typical initiative in conventional 3R activities, is an example of a company adopting circular initiatives in its own business activities, and increasing free cash flow through cost reductions. On the other hand, the supply of alternative plastic materials, for which demand is increasing both in Japan and overseas from the perspective of promoting improved resource circulation for plastics, is a good example of how a company can achieve a balance between its own sales and an improvement of circularity in society, by providing technologies and solutions that contribute to its customers' circular use initiatives.

Circular business activities can be broadly divided into the following categories: (1) initiatives that contribute to resource savings and waste reduction; (2) initiatives that contribute to the reuse, long-term use, and effective utilization of products, etc.; (3) initiatives that contribute to the circular use and recycling of resources; and, (4) initiatives that contribute to the use of renewable resources. In this manner, we can clarify not only the standpoint from which companies are contributing to an improvement of circularity, but also what they are aiming for through their initiatives. This should be helpful for understanding the position in the value chains of other industries and companies in the same classification, as well as the differentiating factors and their sustainability.

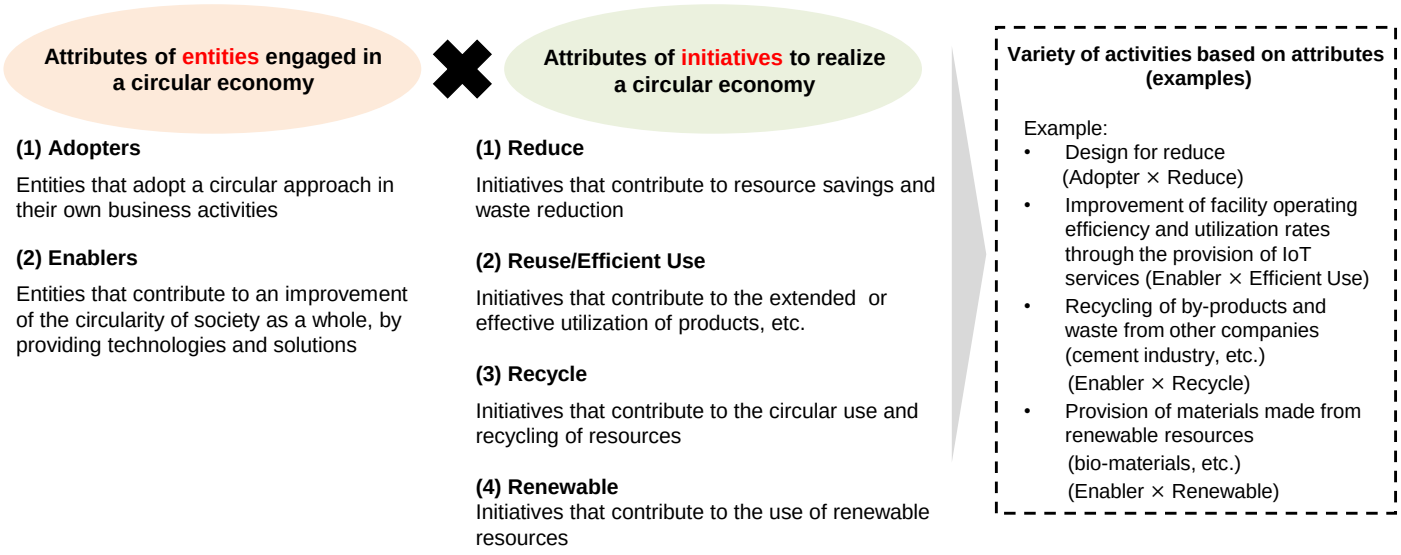


Figure 1: Classification of circular initiatives and examples of various activities, according to attributes

Key points of disclosure and dialogue

- ✓ Companies should appropriately analyze **the market environment and its long-term trends (including the value chain and competitive environment, their market position, and the differentiating factors that give them a competitive advantage)** upon which their circular economy business model is based. They also need to consistently explain **how these factors lead to a sustainable growth of corporate value**, by linking them to the direct and indirect value delivered to customers.
- ✓ When doing so, companies should identify **the management resources and intangible assets that are essential to maintaining the competitive advantage of their business model** with regard to a circular economy, and present an integrated business model and strategy for the necessary **investments for developing and reinforcing those resources/assets**.
- ✓ Regarding the company's investments in their management resources and intangible assets, investors should appropriately recognize the impact of these investments on the company's competitive advantage and value creation, as well as measures to deal with potential risks to the security of such resources, and make medium to long-term investment decisions.

Column: Examples of initiatives related to a circular economy

There are various kinds of initiatives related to a circular economy, beyond the traditional 3Rs. Companies are required to select an appropriate approach for their business type, for every process in design, production, use, and disposal, and to design total circularity with an eye on the life cycle.

This section presents examples of initiatives at each stage of the product life cycle.

＜Design>

- Design for reduce (weight saving)
- Design appropriate for reuse and recycling（design for disassembling or mono-materialization）
- Long lasting product/Service design（durability, upgradability, reparability）
- Reduced unnecessary functions of tailor-made products
- Environmentally friendly materials use such as recycled materials

＜Manufacturing＞

- Reduced production loss with optimization of production process and reuse of mills ends and by-products
- Reduced sales loss by meeting demand exactly with IoT

＜Use＞

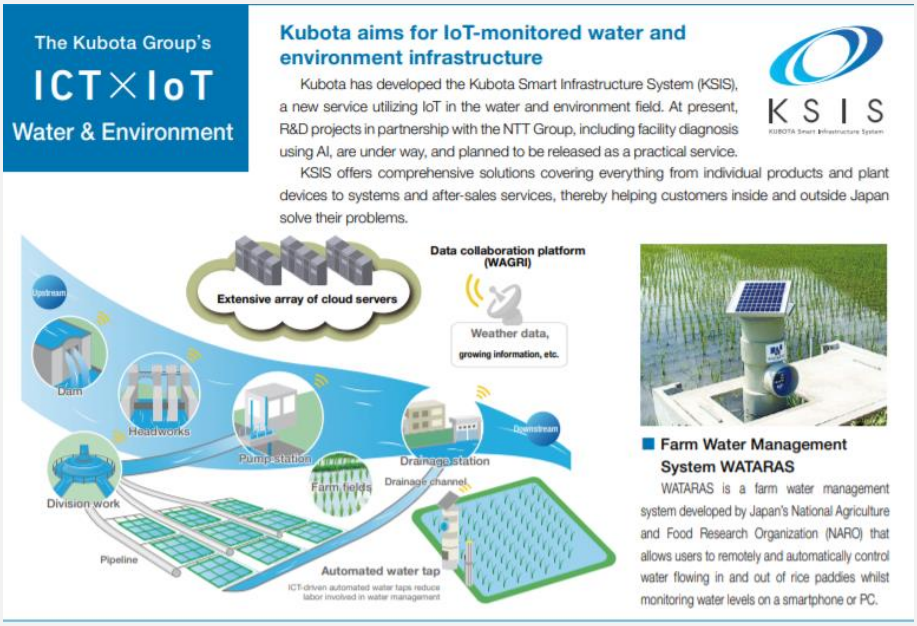
- Efficient use of products through leasing and maintenance
- Improved operating efficiency through servicization with IoT and extended product life（PaaS/ MaaS）
- Efficient use of idle assets through sharing
- Reuse and cascading of used products

＜Disposal＞

- Manufacture-and service provider-led collection and recycling
- Reduced industrial waste/ Through recycling
- The most appropriate recycling measures based on waste features
- Optimized waste collection with IoT

Case Study 2: Demonstrating social issues, provided values, and business models (Enabler x Recycle/ Renewable)

Kubota Corporation clearly identifies four issues, together with its own solutions to each of these, as “Kubota’s Unique Sustainability”: (1) harmony with nature, (2) efficient food production, (3) maintenance of social infrastructure, and (4) working toward a recycling-based society. While showing its strengths along with data, Kubota has also introduced the new service, “Kubota Smart Infrastructure System (KSIS)” which utilizes IoT, and explained how the company is developing its business in line with technological developments and changing customer needs.



Source: KUBOTA REPORT 2020

Case Study 3: Consistently explaining values, business models, and strategies – RE.UNIQLO Initiative which Gives New Life to Used Clothing (Adopter × Recycle)

UNIQLO, the core business of Fast Retailing, strives to create clothes that can be used by customers for a long time, in terms of design and durability, etc. In addition to continuous product improvements based on customer feedback, UNIQLO works to deliver products that customers want at the optimal time, and to eliminate waste in production and sales, through improvements in production volume forecast accuracy and logistics reform. UNIQLO has also adopted a sales strategy that they sell out products that remain unsold even after the optimization of production and sales, by lowering prices, or by carrying these products over to the following fiscal year or later, in order to avoid discarding them. These initiatives contribute to improvements in customer satisfaction, as well as to realizing a sustainable society in terms of efficient use of limited resources.

In addition, in order to fulfill its responsibility for products after they are sold, UNIQLO collects and recycles clothes that are no longer worn by customers. The clothes collected at UNIQLO stores are delivered to and reused by people in need, at refugee camps and disaster areas, as emergency disaster relief, etc., in cooperation with the United Nations Refugees Agency (UNHCR), and NGOs and NPOs around the world. Clothes that cannot be reused are processed and recycled as fuel or soundproofing materials. In September 2020, UNIQLO expanded these activities, and launched “RE. UNIQLO” as an initiative to collect UNIQLO clothes that are no longer needed from customers and give them new value, in order to make effective use of resources. In November 2020, UNIQLO began selling a recycled down jacket as the first product of RE.UNIQLO. All of the down and feather used in the new products comes from down jackets collected from customers, to realize a new item of product-to-product recycling.

Source: UNIQLO’s “RE.UNIQLO” website

Column: Fast Retailing’s initiatives to create value and differentiate its products through the communication on sustainability

Fast Retailing considers sustainability as a core element of its business strategy, under its sustainability statement, “Unlocking the Power of Clothing.” The company strives to solve issues in three areas which underpin its business: People, Planet, and Community. It creates new value in response to the opportunity presented by changes in consumer awareness, and the growing demand for companies be environmentally conscious. For example, the company considers its “RE. UNIQLO” initiative as an opportunity for environmentally conscious customers to increase their attachment to its brand. Fast Retailing has made efforts to communicate its sustainability activities in an easy-to-understand manner to all stakeholders, including customers and investors.

Fast Retailing’s communication and disclosure is characterized by a multifaceted approach for both customers and the ESG community. For example, UNIQLO was previously carrying out separate recycling initiatives: one on clothing donations and another on clothing recycling, but it reconsidered this strategy, and now communicates about these initiatives as part of its comprehensive reuse and recycle initiative, “RE. UNIQLO.” Moreover, the company uses its easy-to-read Sustainability Report as a communication tool for a variety of stakeholders, and discloses more detailed and technical information on its website and in the Sustainability Data Book.

Sources: Fast Retailing website, “Sustainability Communications”, UNIQLO website, “UNIQLO Sustainability”

4. Risks and opportunities

Risks and opportunities are factors that may threaten the sustainability and growth of a company's business model, in the face of changes in the business environment. They can be summarized as risk factors that should be addressed in light of their importance to the company, or business opportunities that can provide the company with sustainable competitive advantages, such as the creation of new markets, by addressing them.

Making the transition to a circular economy is becoming a common understanding as a global issue, second only to combating climate change. As countries develop policies to transition to a circular economy, companies can stay ahead of these policies and market trends by appropriately identifying risks and opportunities, and making strategic investments to incorporate circular initiatives before external factors force them to modify their business models. In addition, this can lead to opportunities due to differentiation from competitors and creation of new markets, as well as the avoidance of threats or mitigation of their impacts.

For this reason, companies need to identify the risks and opportunities that are material for the sustainable growth of their business models, with respect to the inherent risks in relying on a linear economy, and the opportunities created by transition toward a circular economy, that are likely to affect their business activities. It is also preferable to include an explanation regarding how the organization has determined the relative importance of the risks and opportunities associated with a circular economy, compared to other risks and opportunities, the process by which decisions are made to control risks and transform them into opportunities, and how these issues are integrated into overall risk management.

In addition, when companies seize business opportunities and revise their management strategies, which are not limited to a circular economy, it is necessary to consider the investment that will be required for new initiatives, as well as the impact of such initiatives on existing businesses. Accordingly, we have provided a summary of points to note while making such a transition in Table 2. It is important for companies to explain how the initiatives will enable them to recover their investments over the medium to long-term, while maintaining the target profitability in relation to their strategies, and how the initiatives will contribute to sustainable corporate value, along with evaluation indicators and methods.

Medium to long-term investors, especially institutional investors, need to understand the risks and opportunities that affect a company's stakeholders, from the perspective of fulfilling their stewardship responsibilities to their clients and beneficiaries. It is important for investors to evaluate how a company will respond to the risks that have been identified from a medium to long-term perspective, or transform them into opportunities, based on the company's plan for recovering the investment over the medium to long-term while maintaining the target profitability. They should not simply recognize the company's investment toward the current transition as an inefficient near-term cost, but should understand it organically, in conjunction with the corporate strategy.

As a reference, Table 1 summarizes the typical risks of relying on a linear economy and the opportunities created by transition toward a circular economy, in line with the classification of the risks associated with the transition to a low-carbon society in the Recommendations of the TCFD.

- ✓ **Policy and legal**

  As countries develop policies to transition to a circular economy, it is necessary to understand how these policies will affect a company's initiatives, and ultimately its corporate value. For example, the European Commission has decided to add circularity to the requirements of the Ecodesign Directive, and the implementation rules for covered products are gradually being amended. Accordingly, companies launching products into the European market will need to make new confirmations to ensure that their products comply with these standards. While there are concerns that responding to these policy changes will require companies to perform reviews of their designs and supply chains, which represent the foundation of their business models, along with associated increases in costs, in cases where companies respond appropriately, they will have the opportunity to maintain and expand their market presence, as a differentiator from their competitors.

- ✓ **Technology**

  Technological and other innovations can have a significant impact on a company's initiatives to transition to a circular economy. For example, if the development of technologies for separating mineral resources from the materials contained in end-of- life products, and recycling them economically and efficiently enables the circular use of the those resources, there is a risk that facilities for mining primary resources with a large environmental burden will become stranded assets. Conversely, the development of IoT technologies may lead to the creation of opportunities, by enhancing competitiveness through a reduction in manufacturing costs, if these technologies result in an improvement in the utilization rate of equipment.

- ✓ **Market**

  The market is the premise of the value chain that forms a business model, and a company's initiatives are greatly affected by changes in the supply and demand of the involved resources, products, and services. For example, if a company is engaged in business activities that depend on non-renewable resources, while there is a risk of price hikes and supply chain fragmentation as the world's demand for resources and energy grows, there is also an opportunity to expand the market for environmentally friendly products, against the backdrop of growing demand for environmental action from consumers.

- ✓ **Reputation**

  Reputation relates to the perceptions of potential customers, employees, and the community regarding a company's business activities. If a company can effectively communicate on its proactive stance and achievements in transitioning to a circular economy, and succeed in gaining an appropriate reputation, it will be able to effectively promote the accumulation of human capital by building its brand and customer loyalty, and attracting human resources who understand the corporate culture. On the other hand, if an undesirable reputation becomes firmly established, it may be regarded as a disreputable sector, leading to concerns from stakeholders, which may directly or indirectly hinder the company's business activities.

Although the Guidance presents a summary of typical risks and opportunities, many others are naturally possible, as well. It is important for companies to understand the risks and opportunities that may represent material issues, in light of their business activities.

When seeking to transform risks into opportunities, it is important that companies consider whether their initiatives will have unintended effects on the realization of a sustainable society. For example, while increasing the use of recycled materials is desirable from the perspective of reducing resource inputs, there are cases where such

efforts result in a trade-off with increased greenhouse gas emissions, and care must be taken to ensure that the company's initiatives do not damage the social value in the entire life cycle.

Key points of disclosure and dialogue

- ✓ Companies should **summarize the risks and opportunities for sustainable growth of their business models**, with reference to the inherent risks in relying on a linear economy and the opportunities created by transition toward a circular economy, that are likely to affect their business activities.
- ✓ At the same time, in order to create value by regarding the transition to a circular economy as an opportunity, companies should explain **how the initiatives will enable them to recover their investments over the medium to long-term, while maintaining the target profitability** in relation to their strategies, and **how such initiatives will contribute to sustainable corporate value,** along with evaluation indicators and methods.
- ✓ Investors should be able to evaluate how a company will respond to the risks identified from a medium to long-term perspective, or transform them into opportunities, based on the company's profitability and plan to recover the investment over the medium to long-term. They should not simply recognize the company's investment toward the current transition as an inefficient near-term cost, but should understand it organically, in conjunction with the corporate strategy.

Table 1: Risks and their potential financial impacts and opportunities, in line with the Recommendations of the TCFD's classification of transition risks

	Risks of relying on a linear economy	Potential financial impacts	Opportunities created by transition toward a circular economy
Policy and legal	● **Regulatory and tax changes** to promote the circular economy ● **Lawsuits and recall requests** due to products or business models that use materials with a high environmental impact ● **Increases in waste management costs** ● **GHG emission regulations** for product manufacturing and incineration	● Increased operating costs ● Depreciation and impairment of assets due to policy changes, and early asset retirement for existing assets ● Increased costs or decreased demand for products and services due to fines and judgments	● **Effective use of regulatory and tax changes** to promote the circular economy **in one's own business** ● **Reduction of waste management costs** by reusing products or providing by-products and waste to other companies for recycling ● **Reduction in energy consumption**
Technology	● **The production facilities, etc.** of linear business models **become stranded assets**	● Amortization and early retirement of existing assets	● **Reduction in manufacturing costs** by reusing products and recycling by-products and waste ● **Reduction in manufacturing costs** by improving resource efficiency through IoT
Market	● **Higher resource prices and greater volatility** due to resource depletion ● **Supply chain fragmentation** due to difficulties in obtaining non-renewable resources and primary resources important to the company ● **Loss of customers** due to increased demand for environmentally-friendly materials and products ● **Loss of customers** due to insufficient supply capacity, etc. to meet demand for recycled materials ● **Obsolescence of existing products and weakening customer relationships** following the development of environmentally-friendly materials, products, and innovative designs	● Decreased demand for goods and services due to changes in consumer preferences ● Resulting in changes in the revenue mix and revenue sources, or a decline in revenue	● **Stabilization of raw material prices** by reducing dependence on non-renewable resources and primary resources important to the company ● **Improvement in supply chain resilience** by reducing dependence on non-renewable resources and primary resources important to the company ● **Capturing new markets and customers** for environmentally-friendly products and services ● **Market expansion and customer acquisition** through business strategies that meet demand for recycled materials ● **Transitioning to a new service-based business model and strengthening customer relationships** through a circular business model that aims to extend the life of assets through means such as repair and refurbishment
Reputation	● **Damage to the brand image** due to products and business models that use materials with high environmental impact ● Employee dissatisfaction with the company's response to environmental demands from the market and society (≒**difficulties in attracting human resources**) ● **Decline in interest among ESG investors**	● Decline in revenue due to lower demand for goods and services ● Decline in revenue due to lower production capacity ● Decline in revenue due to a negative impact on workforce management and planning ● Reduction in capital availability	● **Improvement in reputation** by responding to the environmental demands of international markets and society ● Acquisition of employees who support environmentally friendly initiatives (≒ **acquisition of human resources**) ● **Improvement in reputation among ESG investors**

Table 2: Points to note in transition to a circular economy

- Volatility in raw material prices and fragmentation of the supply chain, both due to an unstable supply of recycled resources that is dependent on the amount of waste
- Fragmentation of recycling systems due to contamination of recyclable resource supply systems by hazardous substances
- Increase in energy consumption, when recycling is prioritized without regard to energy efficiency
- Following up on differences and revisions in regulations and taxation systems surrounding manufacturing, sales, use, consumption, and disposal in different countries from the perspective of a circular economy, and the costs involved in responding to these changes
- Securing the initial investment resources for transitioning to a circular business model
- Withdrawal from investment and loans by investors who are seeking only short-term profits
- Loss of existing customers who prioritize price over environmental considerations
- Securing financial resources and human resources for the initial investment in establishing a waste management system to provide to other companies, for the purpose of reusing products, and recycling by-products and waste
- Conflicts of interest between an existing sell-out business model and a circular business model that aims to prolong the life of assets through means such as repair and refurbishing, and uncertainties regarding responsibilities for safety and other issues
- Establishment of an internal review and information dissemination system, to support dialogue and engagement with ESG investors
- Increased costs for gaining a reputation by responding to demands from markets and society for environmental action
- Addressing social responsibilities regarding employment adjustments and other issues arising from changes in the existing supply chain, as part of the transition to a circular business model

Case Study 4: Clearly stating the risks and opportunities associated with a circular economy, in the integrated report

Canon has set four material areas in its “Action for Green” environmental vision: contributing to a low-carbon society, contributing to a circular economy, eliminating hazardous substances and preventing pollution, and contributing to a society in harmony with nature, and also discloses risks and opportunities in each area, in its integrated report.

	Risks	Opportunities
Climate change	**Transition risks:** • Stricter energy-efficiency regulation and associated compliance costs (products/sites) • Increase in business costs from economic measures to reduce emissions (e.g., carbon tax) **Physical risks:** • Negative impacts on operations caused by increasingly severe extreme weather events such as typhoons and floods **Reputational risks:** • Worsening external evaluation due to insufficient information disclosure	• Expanded opportunities for sale of energy-efficient products (low lifecycle emissions) • Contribution to society-wide CO_2 emissions reductions through IT solutions and sales of energy-efficient industrial products • Reduced energy costs through increased efficiency in production and transportation • Expanded opportunities for use of renewable energy through lower associated costs • Enhanced corporate image through proactive disclosure of activity results
Circular economy	**Transition risks:** • Increased procurement costs of raw material due to resource constraints • Stricter resource-efficiency regulation and associated compliance costs (products/services) • Increased costs for collection and recycling of used products in various regions **Physical risks:** • Impairment of stable water supply and negative impacts of operation due to extreme weather events **Reputational risks:** • Damage to corporate image from slow transition to circular economy	• Business cost reduction through improved resource efficiency • Enhanced competitiveness through 3R design and development of advanced recycling technology • Increased demand for remanufacturing products • Enhanced corporate image through showcasing of our advanced approach to resource recycling
Hazardous substances	• Increased chemical substance management costs due to strengthened and expanded regulations • Suspension of production or disruption to parts supply chain due to serious noncompliance by suppliers • Damage to corporate image due to poor regulatory compliance	• Supplying safe products and maintaining competitiveness through more advanced chemical substance management • Cost reduction by introducing more efficient management process across the supply chain • Enhanced corporate image through contribution to international standardization, etc.
Biodiversity	• Decreasing supply and price increase of printing paper due to dwindling forestry resources • Restraints on business activities due to disturbed balance of local ecosystems	• Applicable usage of our products and technologies to conservation of ecosystem • Enhanced corporate image through contribution to local communities

Source: CANON Sustainability Report 2020

5. Strategy

Strategy is a medium to long-term measure for realizing a sustainable business model by creating opportunities, and preparing for possible risks, and maintaining and strengthening management resources and intangible assets as well as relationships with stakeholders, which represent sources of competitive advantage.

When companies formulate strategies, they aim to expand and maximize existing opportunities by maintaining and strengthening management resources and intangible assets as well as relationships with stakeholders, which represent sources of competitive advantage, or to transform the risks they have identified as material issues into opportunities, whenever possible. On the other hand, it is necessary to manage risks and mitigate their impact with an awareness of the time frame, for those risks that are difficult to transform into opportunities. Companies need to provide information to investors regarding how they will strategically allocate management resources and capital, including investments in management resources and intangible assets, in order to expand and maximize these opportunities and transform risks into opportunities, and manage risks and mitigate their impact.

As for the risks and opportunities associated with a circular economy, many affect not only individual companies but also the entire value chain, such as the depletion of certain raw material resources that are essential for manufacturing products, and the expansion of the market for environmentally friendly end products and services. In this regard, when a company presents its strategy for initiatives related to a circular economy, it would be useful to explain these initiatives in an integrated manner to investors, in order to obtain appropriate evaluations. In cases where a strengthening of its influence, or improvement of its the business position in the value chain[15] are material to a company, they should also be presented in an integrated manner.

There are a wide range of approaches to increase resource efficiency in initiatives related to a circular economy, ranging from improving the efficiency of conventional 3R efforts or providing technologies and solutions in order to do so, to new business models such as provision of services, which has spread with the development of digital technologies. It is important for companies to indicate how they will secure and strengthen their management resources and intangible assets, such as investments in necessary human capital, R&D and digital technologies, brands, and customer loyalty, in order to maintain and strengthen differentiating factors from competitors, according to their business models related to a circular economy.

It is important for investors to evaluate whether the strategies presented by the company are positioned within a consistent medium to long-term value creation story, in order to realize the goals presented in the business model, and to address the risks and opportunities identified by the company. In addition, with regard to measures to strengthen the company's influence and improve its business position in the value chain, and to secure and strengthen management resources and intangible assets, it is necessary to determine whether the investment (cost) represents an asset, based not only on the specific scale and nature of the investment, but also on how it will contribute to sustainable corporate value.

Moreover, because a medium to long-term perspective is essential for a circular economy, it is important to define a specific range of short, medium, and long-term time frames for the realization of strategy. In addition, the timing of the manifestation of the effects of a company's dependence on a linear economy, or the transition to a circular economy will vary from company to company. In a dialogue with a company, discussing the time frame set by the

[15] One example is securing business partners who are capable of meeting the company's own responsible procurement standards, in order to meet society's demand for responsible procurement.

company in its strategy will enable investors to gain a deeper understanding of how the company views a circular economy, as well as the associated risks and opportunities associated, and how it plans to realize its competitive advantage.

Key points of disclosure and dialogue

- ✓ Companies should summarize **how they will secure and strengthen the management resources and intangible assets** that support the competitive advantage of their business model. In addition, **they should also describe what measures they are taking to deal with the risk, etc. of losing these resources**, in the context of their **medium to long-term value creation story**, including a description of how they established the time frame.
- ✓ Investors should evaluate whether the strategies presented by the company are positioned within a consistent medium to long-term value creation story, in order to realize the goals presented in the business model, and to address the risks and opportunities identified by the company. When doing so, they should consider how the allocation of management resources and capital will contribute to a sustainable growth of corporate value, as well as the setting of the time frame, which is the premise for such allocation.

6. Indicators and targets

Indicators and targets are metrics and levels aimed at assessing the degree of achievement regarding whether the strategies developed by a company are being steadily implemented, and whether the implemented strategies are appropriately linked to the creation of corporate value, based on an identification of risks and opportunities in order to grow corporate value, while responding to such risks and opportunities.

After identifying the risks of relying on a linear economy and the opportunities created by transition toward a circular economy, companies should set targets as guideposts for executing strategies to grow corporate value, along with key performance indicators (KPIs) to measure the degree of achievement in advance, when responding to such risks and transforming them into opportunities. It is also important for companies to incorporate these KPIs into their value creation stories in a form that corresponds to risks and opportunities and present them to investors, and to explain the self-evaluation which includes the results (outcomes).

When doing so, companies are encouraged to clarify the interrelationships among KPIs that are related to value creation and KPIs that measure the degree of achievement of circular initiatives, such as the ratio of circular initiatives to total sales, and how circular initiatives contribute to the growth of their corporate value. In addition, companies should also quantitatively analyze and present these measures by incorporating them into their value creation stories, while understanding that the financial impacts of the achievement of strategies are important for investors.

In addition, because strategies are developed based on the identified risks and opportunities, many of the indicators for evaluating the results of these strategies will naturally be related to the risks and opportunities associated with a circular economy. Meanwhile, indicators for measuring the state of response to the risks and opportunities associated with a circular economy can be defined and evaluated differently, depending on the industry, scale of the business, and region of operation.

Accordingly, investors need to recognize that these indicators are not intended to be used to make simple comparisons between companies or industries, but rather to assist in understanding the degree of achievement of the strategies and value creation story of the company itself, through dialogue.

Key points of disclosure and dialogue

- ✓ Companies should set **targets as guideposts for executing strategies to grow corporate value**, and **key performance indicators (KPIs) to measure the degree of achievement** in advance. They should present them to investors in a form that corresponds to the risks and opportunities identified in a circular economy, and explain **the self-evaluation which includes the results (outcomes)**.
- ✓ Investors should recognize that these indicators are not intended to be used to make simple comparisons between companies or industries, but rather to assist in understanding the degree of achievement of the strategies and value creation story of the company itself, through dialogue.

Table 3: Risks, opportunities, and indicators presented by "policy and legal," "technology," "market," and "reputation"[16]

	Risks of relying on a linear economy	Opportunities created by transition toward a circular economy	Example of indicators	Example of indicators (Examples from companies)
Policy and legal	• **Regulatory and tax changes** to promote the circular economy • **Lawsuits and recall requests** due to products or business models that use materials with a high environmental impact	• **Effective use of regulatory and tax changes** to promote the circular economy **in one's own business**	• Percentage of raw materials used in more durable products or/with extended use, per total raw material consumption by mass • Status of introduction of product design (e.g. design to prolong the lifespan of products) and/or business model (e.g. take back/refurbishing scheme)	• Ricoh: Resource conservation rate (Ratio of reduction of new resource input to total resource input)
	• **Increases in waste management costs**	• **Reduction of waste management costs** by reusing products or providing by-products and waste to other companies for recycling	• Percentage of by-products and waste to be landfilled or incinerated • Collection of recyclable or reusable resources • Percentage by recovery type per recovered outflow (e.g., recycled, remanufactured, repaired or reused)	• Renault: Resource savings from sorting and reselling metal scrap • Veolia) Waste recovery rate with breakdown of material and energy recovery
	• **GHG emission regulations** for product manufacturing and incineration	• **Reduction in energy consumption**	• Percentage of renewable energy to the whole energy used in business activities • Percentage of renewable energy to produced energy	• Orange: GHG emissions prevented via recycling • Bridgestone: CO_2 emissions per unit of production
Technology	• **The production facilities, etc.** of linear business models **become stranded assets**	• **Reduction in manufacturing costs** by reusing products and recycling by-products and waste • **Reduction in manufacturing costs** by improving resource efficiency through IoT	• Percentage of by-products and materials recycled from waste materials to raw material input • Existence of plans for end-of-life PPE assets (property, plant, and equipment: physical assets with a use period of one year or more) that adheres to circular economy principles • Development status of suitable IT and digital systems, processes or infrastructure supporting a circular business model	• Google: Servers Build program where parts dismantled from used servers are refurbished to build remanufactured servers and are then deployed back into data centers • Taiheiyo Cement: Use of waste and by-products per unit production(kg/t-cement)
Market	• **Higher resource prices and greater volatility** due to resource depletion • **Supply chain fragmentation** due to difficulties in obtaining non-renewable resources and primary resources important to the company	• **Stabilization of raw material prices** by reducing dependence on non-renewable resources and primary resources important to the company • **Improvement in supply chain resilience** by reducing dependence on non-renewable resources and primary resources important to the company	• Percentage of input of non-renewable materials (including reused or recycled products and materials) to the total input of raw material • Share of critical materials (in terms of supply risks and importance for the business continuity) per primary resource input • Total raw material input by mass per revenue	• BASF: Percentage of raw materials from renewable sources in the composition of products sold • Michelin: Material efficiency index (comparison of product performance in relation to the material used) • Bridgestone: Resource productivity (sales per the amount of raw material use), Ratio of materials from recycled and renewable sources
	• **Loss of customers** due to increased demand for environmentally-friendly materials and products	• **Capturing new markets and customers** for environmentally-friendly products and services	• Percentage of products (by mass) and services (by revenue) designed in accordance with the circular economy principles	• Schneider Electric: Number of "ecoDesign Way" products • Toshiba: Number of products and services certified as Excellent ECPs (products and services with the highest level of environmental performance in the industry upon release) • Philips: Circular Revenue • Kubota: Number of certified Environment-friendly Products (Eco-Products) and the sales ratio of them

[16] Prepared based on materials such as: Ellen MacArthur Foundation (2020) Circulytics; WBCSD (2020) Circular Transition Indicators v1.0; Entreprises pour l'Environnement (2019); and other materials from each company

	Risks of relying on a linear economy	Opportunities created by transition toward a circular economy	Example of indicators	Example of indicators (Examples from companies)
Market (cont.)	● **Loss of customers** due to insufficient supply capacity, etc. to meet demand for recycled materials	● **Market expansion and customer acquisition** through business strategies that meet demand for recycled materials	● Percentage of raw materials contained in circulated (reused/ refurbished/ remanufactured/ recycled) products , per total raw material consumption by mass	● Renault: Percentage of recycled materials from end-of-life vehicles and other industries in new vehicles manufactured ● Nike: Percentage of footwear and apparel styles including some recycled materials
	● **Obsolescence of existing products and weakening customer relationships** following the development of environmentally-friendly materials, products, and innovative designs	● **Transitioning to a new service-based business model and strengthening customer relationships** through a circular business model that aims to extend the life of assets through means such as repair and refurbishment	● Number of average uses of reuse products before reaching end of life	● Michelin: Ratio of tires retreaded vs new tires in sale
Reputation	● **Damage to the brand image** due to products and business models that use materials with high environmental impact	● **Improvement in reputation** by responding to the environmental demands of international markets and society	● Extent of engagement with customers on advancing circular economy topics ● Percentage of raw materials sourced from sustainable supply chains ● Availability of suppliers code of conduct or responsible procurement policies to ensure sustainable procurement	● Kao: Percentage of consumer product brands for which people can easily access complete ingredients information ● Nisshin OilliO Group: Proportion of certified palm oil, traceability of mills and list of mills ● Sumitomo Forestry: Sales volume ratio of imported certified timber ● Sony: Sony Supply Chain Code of Conduct and Sony Group Policy for Responsible Supply Chain of Minerals
	● Employee dissatisfaction with the company's response to environmental demands from the market and society (≒**difficulties in attracting human resources for the company**)	● Acquisition of employees who support environmentally friendly initiatives (≒ **acquisition of human resources**)	● Extent of internal communication on the circular economy strategy and implementation plans, if trainings related to circular economy are offered	● Fujitsu: Release of multilingual video aiming to raise awareness of the marine plastic waste pollution, and Tsushima eco tour for employees ● Nissui: Number of participants in "Cleanup Campaign" activities to clean up the areas around their domestic offices
	● **Decline in interest among ESG investors**	● **Improvement in reputation among ESG investors**	● Extent of engagement with external investors/ financiers on circular economy topics	● Mercari: Presented the medium to long-term vision to establish a sound material-cycle society in the financial reports

7. Governance

Governance is the system and function that exert discipline on a company, to grow corporate value in a sustainable manner and steadily execute the strategies that underpin its business models.

Companies are required to clearly communicate to investors that their governance systems are effective. In particular, because a medium to long-term perspective is indispensable for initiatives related to a circular economy, it is important to show whether a process in which the management and the board of directors is involved has been incorporated, with their active participation in issues related to a circular economy toward the realization of a value creation story, and whether policies that are rooted in values are properly shared, internally. At the same time, through this governance, it is important to establish a PDCA cycle that utilizes key performance indicators (KPIs), as well as an evaluation of results (outcomes) that measures the achievement status of strategies for strategy reviews, in order to achieve a sustainable growth of corporate value.

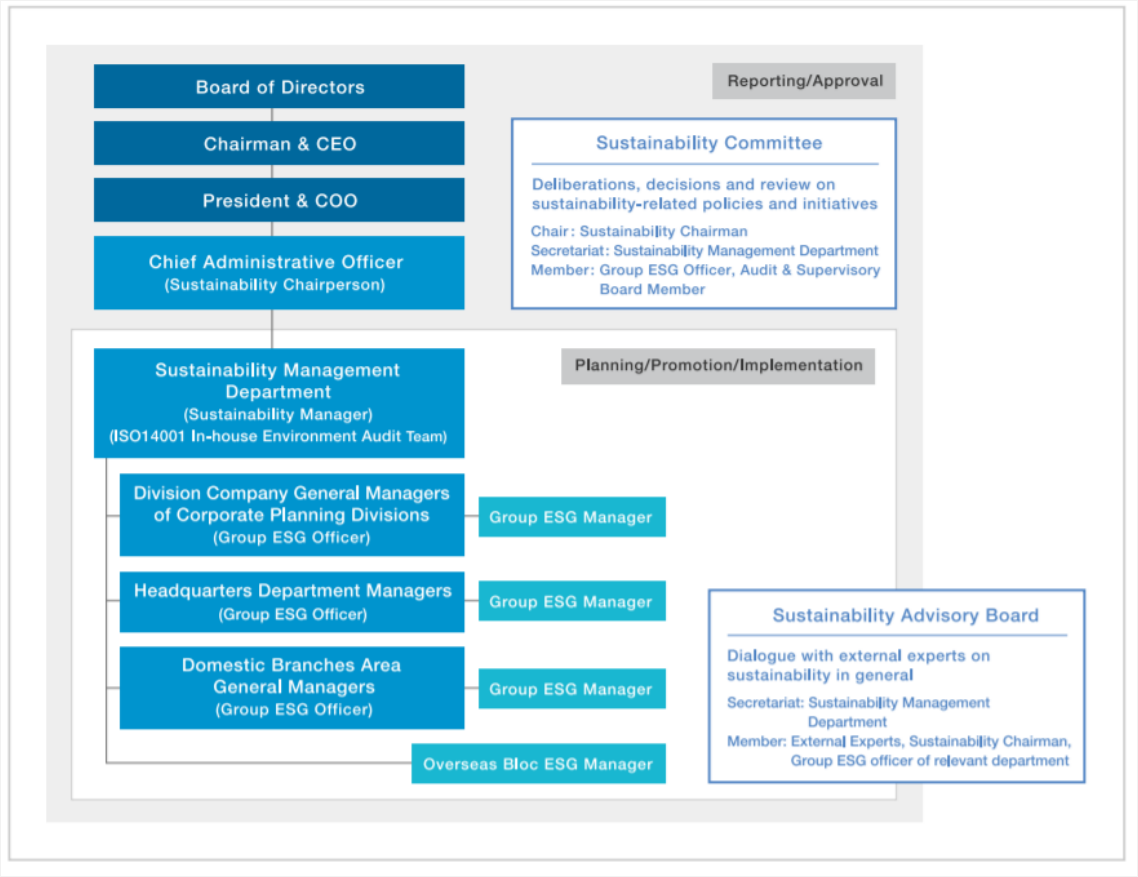
It is essential for investors to understand whether a company has a disciplined governance system and whether it is functioning properly, in order to gain an assurance that a company will steadily execute the initiatives related to a circular economy that are positioned in its value creation story, and achieve a sustainable growth of corporate value.

Key points of disclosure and dialogue

- ✓ In light of the fact that a medium to long-term perspective is indispensable for initiatives related to a circular economy, companies should indicate **whether a process in which the management and the board of directors is involved has been incorporated, with their active participation**, whether policies that are rooted in values are properly shared internally, and that a **PDCA cycle has been established to utilize the evaluation of the achievement status of strategies for strategy reviews**.
- ✓ In order to gain an assurance that a company will steadily execute the initiatives related to a circular economy that are positioned in its value creation story, and achieve a sustainable growth of corporate value, investors should understand whether the company has a disciplined governance system and whether the PDCA cycle is functioning properly.

Case Study 5: Establishment of a system for promoting sustainability

ITOCHU Corporation plans and formulates measures to promote sustainability on a company-wide basis in the Sustainability Management Division, which has been established under the Chief Administrative Officer (CAO), the officer in charge. The status of major sustainability activities is also reported regularly to the Board of Directors. In 2019, ITOCHU Corporation held a Sustainability Advisory Board with senior management and external experts on the theme of a circular economy, which was reflected in the company-wide promotion of sustainability.



Source: ITOCHU Corporation's ESG Report 2019 and ITOCHU Corporation's website

8. Key points of disclosure and dialogue

Values	✓ When companies position issues related to a circular economy as material issues for themselves, they should demonstrate that the following two points are positioned in an integrated manner, in their high-level company-wide policies, such as corporate philosophy and vision. (1) **Reasons for identifying issues related to a circular economy as material issues that the company should address through its business activities**, among the many social issues (2) **Basic direction for linking initiatives related to a circular economy to the growth of corporate value** ✓ If the above is also clearly mentioned in the management message, it will provide a basis for evaluating the company's viability. ✓ Investors should evaluate the rationale and reasonableness of the company's identification of issues related to a circular economy as material issues, and gain an understanding regarding whether the company's related initiatives constitute a coherent value creation story that is organically linked to its business model and strategy. They should do so while taking into account the fact that achieving a balance between economic value and social value contributes to a sustainable growth of corporate value.
Business model	✓ Companies should appropriately analyze **the market environment and its long-term trends (including the value chain and competitive environment, their market position, and the differentiating factors that give them a competitive advantage)** upon which their circular economy business model is based. They also need to consistently explain **how these factors lead to a sustainable growth of corporate value**, by linking them to the direct and indirect value delivered to customers. ✓ When doing so, companies should identify **the management resources and intangible assets that are essential to maintaining the competitive advantage of their business model** with regard to a circular economy, and present an integrated business model and strategy for the necessary **investments for developing and reinforcing those resources/assets.** ✓ Regarding the company's investments in their management resources and intangible assets, investors should appropriately recognize the impact of these investments on the company's competitive advantage and value creation, as well as measures to deal with potential risks to the security of such resources, and make medium to long-term investment decisions
Risks and opportunities	✓ Companies should summarize **the risks and opportunities for sustainable growth of their business models**, with reference to the inherent risks in relying on a linear economy and the opportunities created by transition toward a circular economy, that are likely to affect their business activities. ✓ At the same time, in order to create value by regarding the transition to a circular economy as an opportunity, companies should explain **how the initiatives will enable them to recover their investments over the medium to long-term, while maintaining the target profitability** in relation to their strategies, and **how such initiatives will contribute to sustainable corporate value**, along with evaluation indicators and methods. ✓ Investors should be able to evaluate how a company will respond to the risks identified from a medium to long-term perspective, or transform them into opportunities, based on the company's profitability and plan to recover the investment over the medium to long-term. They should no simply recognize the company's investment toward the current transition as an inefficient near-term cost, but should understand it organically, in conjunction with the corporate strategy.
Strategy	✓ Companies should summarize **how they will secure and strengthen the management resources and intangible assets** that support the competitive advantage of their business model. In addition, they should also describe what **measures they are taking to deal with the risk, etc. of losing these resources**, in the context of their **medium to long-term value creation story**, including a description of how they established the time frame. ✓ Investors should evaluate whether the strategies presented by the company are positioned within a consistent medium to long-term value creation story, in order to realize the goals presented in the business model, and to address the risks and opportunities identified by the company. When doing so, they should consider how the allocation of management resources and capital will contribute to a sustainable growth of corporate value, as well as the setting of the time frame, which is the premise for such allocation.
Indicators and targets	✓ Companies should set **targets as guideposts for executing strategies to grow corporate value, and key performance indicators (KPIs) to measure the degree of achievement** in advance,. They should present them to investors in a form that corresponds to the risks and opportunities identified in a circular economy, and explain **the self-evaluation which includes the results (outcomes)**. ✓ Investors should recognize that these indicators are not intended to be used to make simple comparisons between companies or industries, but rather to assist in understanding the degree of achievement of the strategies and value creation story of the company itself, through dialogue.
Governance	✓ In light of the fact that a medium to long-term perspective is indispensable for initiatives related to a circular economy, companies should indicate **whether a process in which the management and the board of directors is involved has been incorporated, with their active participation**, whether policies that are rooted in values are properly shared internally, and that a **PDCA cycle has been established to utilize the evaluation of the achievement status of strategies for strategy reviews**. ✓ In order to gain an assurance that a company will steadily execute the initiatives related to a circular economy that are positioned in its value creation story, and achieve a sustainable growth of corporate value, investors should understand whether the company has a disciplined governance system and whether the PDCA cycle is functioning properly.

[Key points by sector]
Chapter 3. Key points of disclosure and dialogue in the sector of resource circulation for plastics

1. Outline

Chapter 2 presented a common approach for the four items of values, the business model, strategy, and governance, which apply regardless of industry or materials sector. On the other hand, the characteristics of the associated risks and opportunities, as well as indicators and targets will differ, depending on the industry or materials sector. This chapter looks at the sector of resource circulation for plastics, as an area that particularly promotes disclosure and dialogue between companies and investors, and explains the background, along with the risks and opportunities and indicators and targets. (It is suggested to proceed with disclosure and dialogue while referring to page 14 for values, page 17 for the business model, page 30 for strategy, and page 35 for governance. Examples of disclosures related to values and the business model are provided at the end of this section.)

As mentioned in Chapter 1, resource circulation for plastics has become an urgent international issue of concern, in relation to issues such as resource and waste constraints and climate change, which was triggered by recognition of the marine plastic litter issue, and policies are being formulated rapidly in Japan and overseas. Along with this growing international interest, there is also a growing movement in sustainable finance, which focuses on resource circulation for plastics.

Against this backdrop, the business environment is changing, especially for companies in the plastics supply chain and companies that supply alternative materials. It has become particularly important for investors to gather information on initiatives by companies, and for companies to clarify how they will respond to resource circulation for plastics, how their business activities contribute to resource circulation for plastics, how their business is sustainable, and how they can transform risks into opportunities. Based on this background, we will take a look at the sector of resource circulation for plastics.

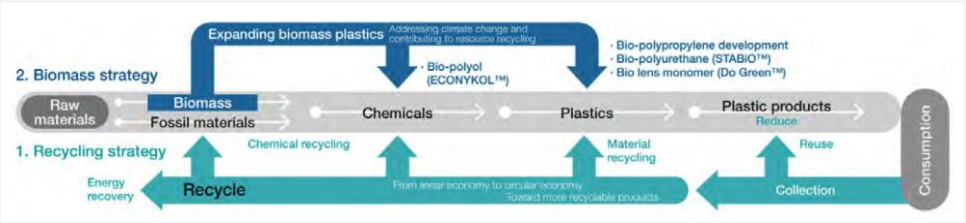
By referring to the items described below, companies can comprehensively communicate their values, business models, strategies, governance, etc. related to resource circulation for plastics to investors. Investors can evaluate the initiatives related to resource circulation for plastics of companies from a medium to long-term perspective, and make appropriate investment and financing decisions, promote the growth of corporate value and the sustainable growth of investee companies, and use them to assist in stewardship activities aimed at increasing medium to long-term investment returns for clients and beneficiaries. It is also hoped that mutual understanding in the sector of resource circulation for plastics will be deepened through these activities.

Case 6. A case in which values, business model, strategy, and governance are disclosed

The Mitsui Chemicals Group has set harmony with the global environment and the innovation and creation of materials and substances in its corporate vision. The Group has also set its sustainability goals as to seek business opportunities, strive to solve challenges through business activities, and to recognize future risks for the Group and uphold our corporate social responsibility in response to global ESG issues, such as the SDGs, in order to achieve mutual sustainable development for society and the corporate group.

In regards to climate change and plastic problems, the Group regards them as important social issues that need to be addressed seriously. The management vision indicates that the Group believes it is important to think that climate change and plastic problems are interrelated and to shift to a circular economy to solve these issues. In June 2020, the Group established the Climate Change/Plastic Strategy Department in the Corporate Sustainability Division to strengthen its response.

As for the plastics strategy, the Department is focusing on two strategies, (1) recycling strategy and (2) biomass strategy, with an eye on the entire value chain.



In order to accelerate the plastics strategy, a company-wide cross-sectional structure consisting of a Working Group and a Steering Committee has been established. Under this structure, the Working Group gathers candidate projects that align with the plastic strategy from across the company and works on firming up the details and conducting internal coordination of projects that are difficult for individual departments to implement on their own. The Steering Committee selects and approves projects from among those proposed by the Working Group and decides on resource allocation, thereby ensuring rapid decision-making.

(cont.)

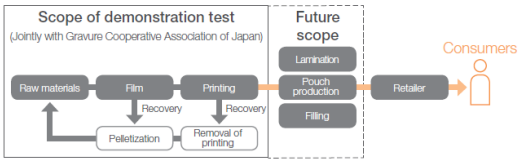
About the (1) recycling strategy, the Mitsui Chemicals Group has a policy of incorporating recycled materials into its business. Also, in addition to developing recycling technologies and packaging materials that are easy to recycle, the Group is supporting start-up companies that contribute to reducing waste plastics.

1. Recycling strategy Recycling of plastic resources

In the near future, policy incentives for products that contain recycled plastic and changing consumer attitudes may reduce sales opportunities for virgin plastic. Given this outlook, we intend to incorporate recycled materials into our business. We are exploring a broad range of possibilities, including chemical and material recycling of waste plastic, development of mono-material packaging, and support for startup businesses.

Start of materials recycling demonstration test for flexible packaging materials

We have begun demonstration testing for recycling waste plastic created from film processing and printing processes into film for flexible packaging materials. We are also testing a technology for cleaning and removing printing from printed film, and considering broadening our scope to include waste plastic generated in post-printing processes.



Partnering with the United Nations Environment Programme (UNEP) to support startups helping to reduce waste plastic

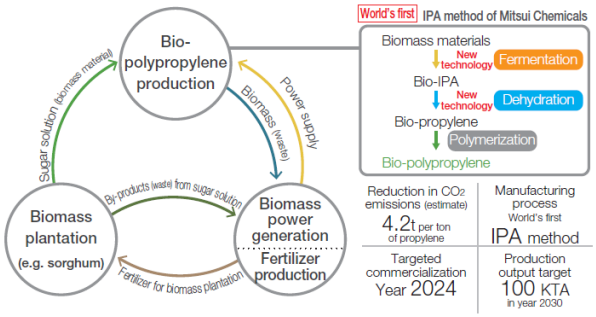
As a partner in the Asia Pacific Low Carbon Lifestyles Challenge initiative by UNEP, we have selected three innovative Asian startups. We will provide these companies with grants as well as technological guidance and management support in cooperation with UNEP.

With regard to the (2) biomass strategy, the Mitsui Chemicals Group is working to expand its biomass plastic product line. The Group is aiming to establish and commercialize the world's first bio-polypropylene production technology using its unique fermentation technology.

(cont.)

2. Biomass strategy　Expanding lineup of biomass plastic products

Biomass plastics made from plants—which grow by absorbing carbon dioxide—are expected to become widely available and more affordable up ahead. As we believe that a shift to biomass materials encourages the recycling of resources, curbs the use of new fossil fuels, and helps mitigate climate change, we aim to expand our lineup of biomass plastic products. In addition, we are taking on the challenge of establishing the world-first bio-polypropylene production process by harnessing our proprietary technology in which fermentation is a key reaction, with sights set on commercial application.



With regard to the issue of marine plastic waste, the Group is participating in domestic and international alliances to promote measures by joining forces with partners of the entire value chain.

Problem of marine plastic waste

The problem of marine plastic waste owes to plastics that have escaped from the process for recycling resources and ended up in marine environments due to inappropriate waste management. Stopping waste from flowing into rivers and the sea is of utmost importance, which requires a united effort by companies in the entire plastics value chain. We aim to tackle the issue of marine plastic waste by participating in global alliances such as the Alliance to End Plastic Waste (AEPW) and domestic alliances such as the Japan Initiative for Marine Environment (JaIME) and the Japan Clean Ocean Material Alliance (CLOMA).

ALLIANCE TO END PLASTIC WASTE

(Source) Mitsui Chemicals Report 2020, Mitsui Chemicals

Column: How Mitsui Chemicals formulated and disclosed its strategy and what the company did to make it work

At Mitsui Chemicals, as the plastic waste problem gradually increases its seriousness, by regularly sharing changes in the situation among the management team, the CEO began to say both internally and externally, in his own words, "We must work on this as a plastics manufacturer,".

Before the strategy was formulated, due to the experience, there were some concerns regarding taking initiatives on recycling and biotechnology businesses that require advanced investments and the profit in early stage is unlikely. As a result of repeated open discussions, including risks in meetings attended by all executives, the clear will of “Tackle as a company-wide issue” was announced from the management perspective and such concerns were overcome. In addition, the creation of a steering committee structure under the CTO for decision-making, including the allocation of company-wide resources, is enabling the Group to accelerate its efforts to implement strategies speedily as a Group-wide project.

In terms of disclosure, the report is particularly interesting to investors in the way that it provides a concrete framework for the steady implementation of the strategy, and conveys its effectiveness, and the thinking in the words of the management team. Particularly, the report contains information, such as (1) how the strategy is incorporated into the management structure, (2) how investment decisions are made, and (3) what kinds of discussions take place in the management team.

(Source) Interviews with Mitsui Chemicals

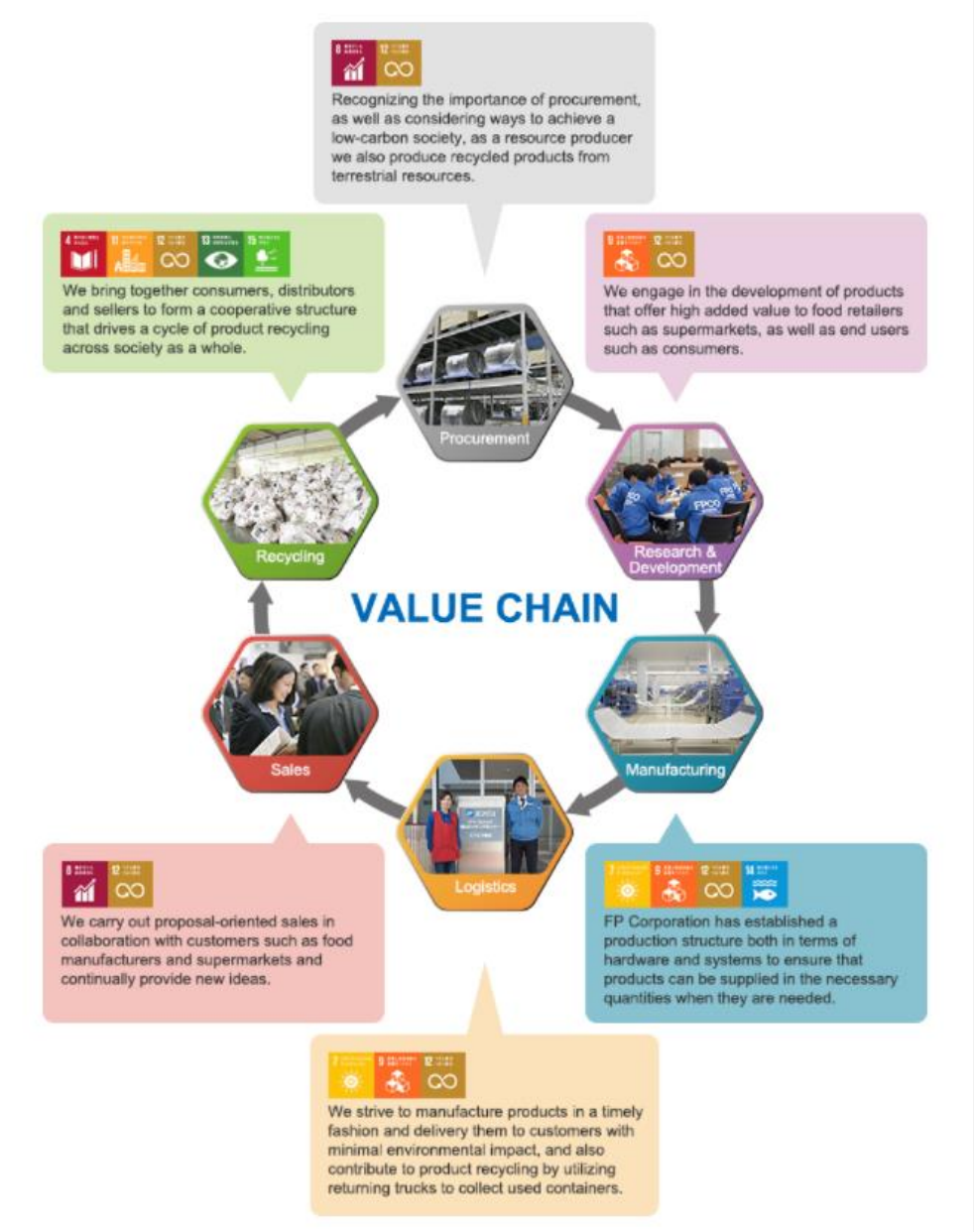
Case 7. A case in which values and business model are disclosed

FP Corporation has established an environmental policy, the basic principle of which is to contribute to the realization of a society in which sustainable development is possible in harmony with the environment, based on the recognition that the preservation and protection of the global environment are the most important issue.

Basic Principle

Based on the recognition that preserving and protecting the global environment is an issue of the highest priority, FP Corporation operates its business according to the basic principle of contributing to the realization of a sustainable society in harmony with the environment.

In addition, its report describes the company's value chain, explains the company's products and services provided at each stage, and shows how the company's business contributes to solving social issues by clearly stating the correspondence with the SDGs.



(cont.)

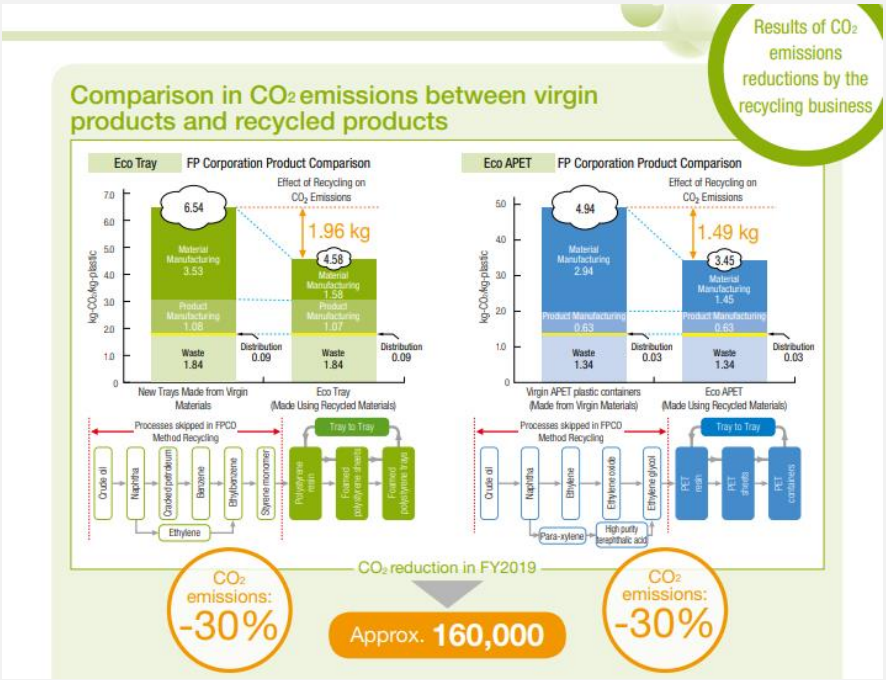
<Value chain for environmental impact reduction>

In 1992, FP Corporation commenced sales of the environmentally friendly Eco Tray (foamed tray), and in 2007, began collecting transparent containers. In 2012, the company released Eco APET transparent containers, which contained recycled material from used PET bottles and enabled their commercialization. The company has thereby constructed a system of procuring used containers and PET bottles to be the materials used to make products, which reduces the environmental impact. In addition, since FP Corporation has its own logistics system, it is able to draw up logistic plans by itself and collect used containers using empty trucks after product delivery, which is one of the keys to realize the FPCO method circular recycling system.

< Value chain for providing high value-added products>

Another value chain that FP Corporation operates is the cycle of creativity that adds extra value to products. In order to meet the diversifying needs associated with changing lifestyles, it is necessary to continue ensuring the utility of food trays and containers, including their ability to ensure hygiene, resist heat, cold and oil, provide ease of operation, and reduce food waste and CO_2 emissions. The six teams that make up the value chain, namely procurement, product development, manufacturing, logistics, sales, and recycling, propose their own ideas, and the product development team is continuously working to put them into tangible form.

In addition, the company believes that measures to address climate change form one of the basics of management. In its environmental management plan FP Corporation Eco Action 50 (FPEA-50), five working groups in each team (product development, production, logistics, sales and office) are established. These working groups are setting the targets and implementing activities to reduce total CO_2 emissions across the FP Corporation Group. The report shows the CO_2 reduction effects of the recycling business.



(Source) FP Corporation, The FP Corporation Report 2020

FP Corporation website, FP Corporation's ESG, https://www.fpco.jp/en/en_esg.html

2. Points specific to the sector of resource circulation for plastics

(1) Risks and opportunities

In disclosure and dialogue in the sector of resource circulation for plastics, it is important for investors who take a medium to long-term perspective, to understand companies' risks and opportunities that affect stakeholders, as described in "Risks and opportunities" on page 25. When disclosing information and engaging in dialogue with investors, companies should identify the threats and risks to the sustainability of their business models, manage those risks, and communicate how they can be linked to opportunities by relating them to strategies. It is also important to evaluate and disclose how the identified risks and opportunities will have a financial impact on the company.

In the Guidance, in order to serve as a reference point for disclosure and dialogue, Table 4 summarizes the risks and potential financial impacts of not properly conducting resource circulation for plastics, as well as examples of opportunities associated with promoting resource circulation for plastics. In summarizing these risks and opportunities, we referred to the risks related to the transition to a low-carbon society in the Recommendations of the TCFD, namely "policy and legal," "technology," "market," and "reputation," as well as a classification by physical risks, and summarized the risks and opportunities for each of these items. A summary is also presented, according to each stage of the life cycle (Table 7).

In addition, when companies seize business opportunities and revise their management strategies, which are not limited to the sector of resource circulation for plastics, it is necessary to consider the investment that will be required for new initiatives, as well as the impact of such initiatives on existing businesses. In this regard, Table 5 also summarizes points to note in promoting resource circulation for plastics. It is important for companies to explain how the initiatives will enable them to recover their investments while maintaining the medium to long-term target profitability in relation to their strategies, and how such initiatives will contribute to sustainable corporate value, along with evaluation indicators and methods.

Investors are required to evaluate the sustainability of a company's initiatives and business, by taking into account the risks and opportunities that the company is exposed to due to resource circulation for plastics in Japan and overseas from a medium to long-term perspective, along with the fact that the opportunities may lead to increased profits and reduced costs, while also remaining aware of the short-term impacts on the company.

- ✓ **Policy and legal**

  As described in "Domestic and international trends in resource circulation for plastics" (page 6), many countries are proceeding with concrete formulation of their policies for resource circulation for plastics. Companies need to understand how these policies will affect a company's initiatives, and ultimately its corporate value. For example, in the future, in addition to a strengthening of regulations and changes in taxation systems surrounding the production of raw materials, manufacturing and use of products, and disposal and recycling of plastics internationally, there may be risks such as the regulations on the import of plastic waste that are currently being introduced in China and other Asian countries.

  In addition, domestic and international policy trends, such as stricter regulations on greenhouse gas emissions in the field of climate change countermeasures, have led to changes in the business environment for producing raw materials, manufacturing and use of products, and disposal and recycling of plastics. If international

frameworks for the disclosure of climate-related financial information are further developed, the risk may arise that a wide range of companies that constitute the plastics supply chain, such as facilities that use fossil resources as raw materials, will become stranded assets.

On the other hand, if a company can appropriately respond to such changes in the business environment by reducing the use of plastics derived from fossil resources, and promote the use of materials derived from renewable resources (paper, biomass plastics, etc.) based on the premise that it will be more sustainable, the company will be able to obtain opportunities such as cost reductions via “reduce” activities, and reduce risks associated with the use of fossil resources.

- ✓ **Technology**

  Technological and other innovations that promote resource circulation for plastics can have a significant impact on initiatives by companies. For example, if a company continues to rely on existing technologies when the market as a whole is developing new technologies such as alternative plastic materials, biomass plastics, environmentally friendly design, and advanced recycling technologies, it may lose its market and social acceptance, or its manufacturing and sales costs may become relatively expensive, resulting in a loss of competitiveness.

  On the other hand, the development of new technologies, products, and services related to new environmentally friendly materials, product design, and recycling can create new opportunities by opening up new demand and markets, and improving competitiveness through differentiation from other companies

- ✓ **Market**

  The market is the premise of the value chain that forms a business model, and a company’s initiatives are greatly affected by changes in the supply and demand of the involved resources, products, and services. For example, as shown in a poll regarding environmental issues (Cabinet Office, August 2019)[17], there has been a change in consumer behavior in recent years, in light of the plastic litter issue. Such changes in factors such as consumer demand can pose a risk.

  On the other hand, by accurately grasping these changes in customer demand, and developing environmentally friendly products and services that contribute to resource circulation for plastics, a company can create new opportunities through the expansion of that market.

- ✓ **Reputation**

  Reputation relates to the perceptions of potential customers, employees, and the community regarding a company’s business activities. For example, due to social demands for the 3R of plastics and the use of renewable resources, reputational risks may arise, such as the deterioration of a company’s brand image, and the possibility of not being able to attract ESG investment and financing.

  On the other hand, by responding appropriately to demand from markets and society for environmental action, and by maintaining transparency, a company can expect to gain a high evaluation from stakeholders, including investors, and strengthen trust relationships.

- ✓ **Physical (direct) impact**

  If plastic litter is not disposed of properly, it may have an impact on the environment, which in turn can affect the sustainability of a company’s initiatives. For example, if resource circulation for plastics is not properly carried out in Japan and overseas, there are concerns that plastic litter could leak into the environment, damaging the oceans and other forms of natural capital.

[17] (in Japanese) https://survey.gov-online.go.jp/r01/r01-kankyou/index.html

Table 4: Risks and their potential financial impacts and opportunities, presented by "policy and legal," "technology," "market," "reputation," and "physical (direct) impact"

	Risk	Potential financial impact	Opportunity
Policy and law	● **Regulatory or tax changes** around plastic production, distribution, use, consumption, and disposal ● **Restrictions on the import** of plastic waste into China and other countries ● **Tightening of regulations on greenhouse gas emissions** in the field of climate change; the risk of **Stranded assets** of facilities etc. that use fossil fuel feedstock	● Increased operational costs (e.g., increased waste management costs) ● Depreciation and impairment of assets due to policy changes, and early retirement of existing assets ● Increased costs due to fines and court results, and decreased demand for products and services	● **Reduce risks** related to fossil resource use and greenhouse gas emissions ● **Cost reduction** through improved resource efficiency ● **Expansion of the market** due to the increased volume of domestic treatment
Technology	● **Technical issues related to waste treatment and recycling**, such as quality deterioration of recycled materials and chemical management ● **Decline in competitiveness of existing technologies** due to development of new materials and technologies, such as plastic substitute materials and bioplastics ● **Decline in competitiveness of existing products and services** due to the emergence of innovative environmentally friendly products and services etc.	● Decline in demand for products and services ● Early retirement of existing assets	● **Creation of opportunities through technology** for material selection, product design, sorting, recycling, etc. ● **Creation of opportunities with new materials**, such as plastic alternatives and bioplastics ● **Improvement of competitiveness** through the development of innovative and environmentally friendly products and services
Market	● **Changes in consumer demand** ● **Insufficient supply** of recycled materials and alternative materials due to increased demand	● Decreased demand for products and services due to changes in consumer preferences ● Increased manufacturing costs due to changes in input prices (e.g., raw material prices) and production requirements (e.g., waste treatment)	● **Expansion of the market for products and services** that are valued for their 3Rs (use of recycled and alternative materials) and use of renewable resources ● **Increased demand** for recycled and alternative materials etc.
Reputation	● **Social demand** (3R, use of renewable resources, etc.) ● **Damage to the brand values** ● **Declining interest among ESG investors**	● Decline in revenue due to lower demand for products and services ● Decline in availability of capital (credit)	● **Improved reputation** by responding to the environmental demands of international markets and society ● **Gaining interest from ESG investors**
Physical (direct) impact	● **Adverse effects on ocean and other natural capital** caused by plastic waste leakage into the environment	● Risk of having to respond to pollution caused by plastic waste discharged into the environment	● **Creation of a market for products and services** that contribute to the prevention of plastic waste leakage into the environment

Table 5: Examples of points to note in promoting resource circulation for plastics

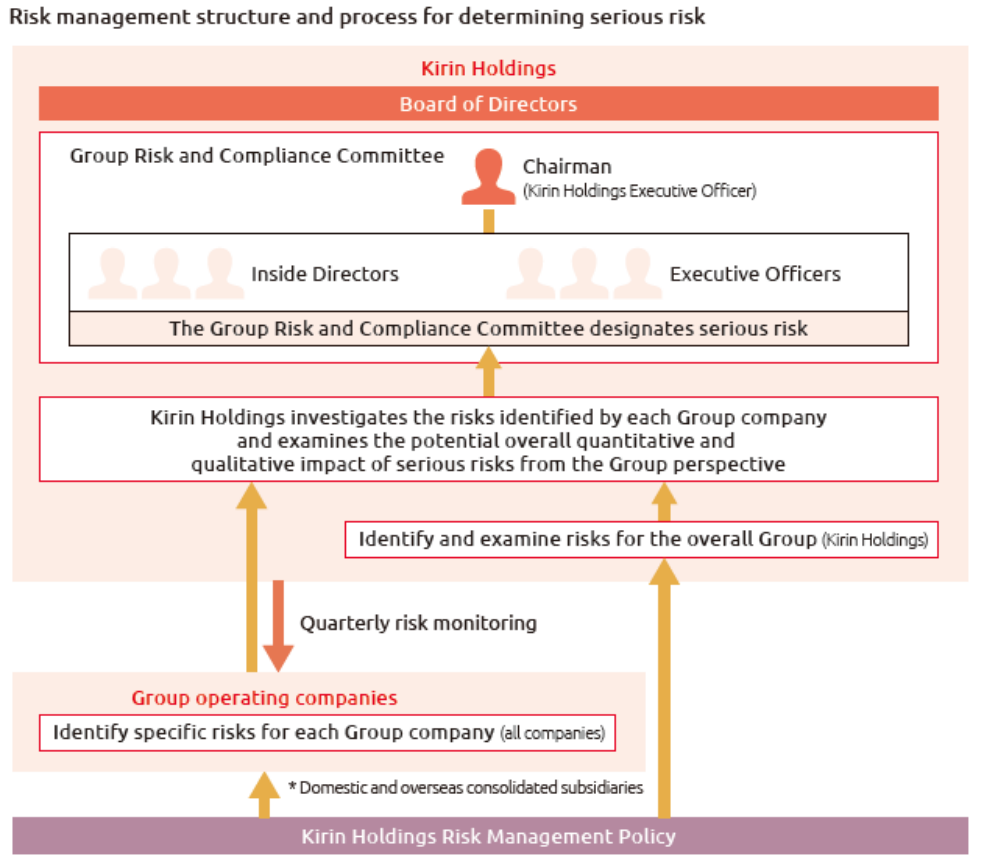
- Financial impact of upfront investments in R&D of new technologies and alternative materials, facilities, new business models, etc.
- Possibility of not being able to receive investment and loans from investors who focus only on short-term profitability
- Decline in demand due to a loss of existing customers who prioritize price over environmental considerations
- Possibility of tightening in the supply of recycled and alternative materials, and increasing procurement costs due to demands from markets and society for environmental action

Case 8: A case in which *risks and opportunities, indicators and targets*, and *governance* are disclosed

Kirin Holdings Company discloses its risk management system and the process for determining important risks.

<Risk management system>
Kirin Holdings has established the Group Risk and Compliance Committee to oversee risk management activities. The Committee consists of internal directors and executive officers of Kirin Holdings and is chaired by the executive officer in charge of risk, thus establishing a risk management system that involves management. In addition, each Group company has established its own committee to oversee risk management, and the risk is monitored on a quarterly basis between Kirin Holdings and the Group companies.

<The process of identifying important risks>
With regard to the process of determining important risks, each Group company identifies and examines unique risks to their businesses from both the quantitative and qualitative perspectives in accordance with the Kirin Group's risk management policy. The administrative office of the Group Risk and Compliance Committee (Corporate Strategy Department, Kirin Holdings) consolidates and carefully examines these risks, and the Group Risk and Compliance Committee deliberates on risks that have a large impact and high incidence, as well as risks that are common to the entire Group, and determines them as important risks for the Group.



(cont.)

In addition, in the CSV Report, the risks posed by plastic containers, such as PET bottles, and the goals and business activities to address them are set and disclosed.

Risk related to the execution of strategies, business, and other

Business field	Serious risk	Risk content and main potential impacts	Main countermeasures and page in this report with information
1. Serious risks in each business domain			
Food & Beverages	Risk from responding to changes in the business environment such as in demographics, markets, competition, and taste preferences	• Potential shortfall to sales plan due to delays responding to environmental changes or competitor developments • Potential for business development to not advance as anticipated	Pages 29–30 (Enhancing Kirin Beverage's marketing capabilities) Pages 48–50 (Segment and Business Overview)
	Risk of impact from law amendments (liquor tax)		
Pharmaceuticals	Risk to pharmaceutical R&D and product quality and of side effects	• Potential halting of R&D due to uncertainty about drug safety or efficacy, potential of identifying an unexpected side effect after marketing • Potential suspension of product production or a product recall	Pages 43–44 (CSV Stories) Page 51 (Segment and Business Overview)
	Risk related to overseas business development and supply stability	• Potential hindrance to global structure development plan, potential for increased demand or other factors to impact product supply stability	
Health Science	Risk of not being able to provide differentiated products and services related to social issues	• Potential delay in R&D of new materials, potential of becoming unable to provide effective products and services • Potential inability to construct a superior business model or appropriate organizational or governance systems	Pages 15–20 (Special Feature: Growth Strategies for the Health Science Domain)
	Risk of inability to increase added value due to insufficient organizational capability in new fields		
2. Common risks in each business domain			
Securing and training of human resources	Risk of inability to adequately secure and train human resources to advance Group management and with the expertise necessary for business activities	• Potential inability to develop an organizational capability with a competitive advantage	• Focus the organizational culture on value creation, develop an HR management system, promote diversity Pages 31–34 (Development of our Human Resources)
Information technology	Risk related to delays installing enterprise resource planning (ERP) software and higher development costs	• Potential impacts on operating efficiency and the management base restructuring or upgrades	• Invest the necessary management resources to avoid delay installing ERP and monitor the development of information systems
Product safety	Risk of unexpected quality issues beyond the scope of quality assurance measures	• Potential high costs or constricted business activity due to product discontinuation, recall, or compensation claims	• Set up, operate, and audit the effectiveness of a quality assurance system • Foster an organizational culture prioritizing safe and reliable products and services
Compliance	Risk of actions that violate laws, regulations, or the expectations of society, such as bribery	• Potential of legal punishment, litigation, social sanctions, and loss of customer trust	• Promote compliance by establishing internal regulations and providing employee training
Disasters, accidents, and supply chain events	Risk of major natural disasters, such as an earthquake, unseasonable weather, cold summer, drought, typhoon, torrential rain, or forest fire; pandemic disease; or other type of disaster or accident	• Potential need to close business sites or reduce or suspend business activities	• Review the business continuity plan (BCP), conduct training, enable teleworking or working from home
Environmental issues	Risk of issues concerning plastic containers, such as PET bottles, risk from greenhouse gas emissions and global warming	• Potential for a slow response or an inability to respond to social concerns or rising expectations for the Company • Potential higher cost to respond to environmental issues	• Activities to achieve higher goals based on the revised Long-Term Environmental Vision Pages 39–42 (CSV Stories)
Human rights	Risk of human rights issues associated with the Kirin Group, its partners, or its procurement operations	• Potential substantial impact on business activities in the country or globally	• Measures to ensure human rights based on the Kirin Group Human Rights Policy
Alcohol	Risk of future restrictions worldwide on alcohol sales	• Potential decline in alcohol consumption, potential decrease in corporate brand value	• Self-regulate advertising and promotional activities and measures to eliminate harmful consumption of alcohol Pages 45–46 (CSV Stories) Page 66 (Risk Management)
Finances and taxes	Fund procurement risk, foreign exchange risk, tax risk	• Potential increase in funding costs, fluctuation in yen conversion value due to exchange rates, and additional tax burden	• Secure appropriate financing, comply with tax laws in all countries

The risks presented above do not represent all potential risks to the Kirin Group.
Potential future circumstances presented in the table are based on the judgment made by the Company as of December 31, 2019. For additional information, please see the Kirin Holdings securities report.

It also lists the container and packaging initiatives as one of its 19 CSV (Creating Shared Value) commitments.

- Achievement indicator: Percentage of recycled resins in the domestic PET bottle resin content
- Target for 2027: 50%

Specific activities related to the containers and packaging initiatives include the following, as well as research and development to be carried out in the future.

- Establishment of a plastic policy (February 2019)
- Concretization of a plan to increase the amount of recycled resin to be procured
- Launch of Kirin Nama-cha decaffeinated made from 100% recycled resin (2019)
- Weight reduction of PET bottles

(Source) Kirin Holdings, KIRIN CSV REPORT 2020

Case 9: A case in which *risks and opportunities* and *indicators and targets* are disclosed

Seven & i Holdings Co., Ltd., identifies its material issues related to sustainability and discloses corresponding risks and opportunities, as well as the mechanisms for reducing risks and creating opportunities.

Material Issue 3 **Non-Wasteful Usage of Products, Ingredients and Energy**

Risks
Physical damage to stores/distribution network due to climate change, etc.

Opportunities
Cost reductions by saving energy, reducing waste, recycling, changing energy sources, etc.

Initiatives to Reduce Risk and Create Opportunities
1) Policies: Corporate Action Guidelines, 『GREEN CHALLENGE 2050』
2) Organizations: CSR Management Committee and its Environment Subcommittee

Material Issue 5 **Building an Ethical Society and Improving Resource Sustainability Together with Customers and Business Partners**

Risks
Human rights problems in the supply chain leading to interruption of product supply, deterioration of product quality and/or loss of social trust, etc.

Opportunities
Enhancement of competitiveness through sustainable raw material procurement, and expansion of sales opportunities by offering products and services addressing ethical consumption, etc.

Initiatives to Reduce Risk and Create Opportunities
1) Policies: Corporate Action Guidelines, Business Partner Action Guidelines, Basic Policy on Sustainable Procurement
2) Organizations: CSR Management Committee and its Consumer Affairs and Fair Business Practices Subcommittee, Environment Subcommittee

Green Challenge 2050, one of the mechanisms for risk reduction and opportunity creation, shows the targets for 2030 and the vision for 2050, including the percentage of environmentally friendly materials used in containers and the amount of plastic products used.

『GREEN CHALLENGE 2050』

Vision	Theme	Targets for 2030	2050 Vision
Decarbonized society	Reduction of CO_2 emissions	Reduce emissions from Group store operations by 30% (compared to FY2014).	Reduce emissions from Group store operations by at least 80% (compared to FY2014).
		Reduce emissions across our entire supply chain (scope 3 emissions) in addition to our own emissions (scope 1 + 2 emissions).	
Circular economy	Measures against plastic	Containers used in our original products (including *Seven Premium*) to be 50% made with environmentally friendly materials (e.g., biomass, biodegradable material, recycled material or paper).	Containers used in our original products (including *Seven Premium*) to be 100% made with environmentally friendly materials (e.g., biomass, biodegradable material, recycled material or paper).
		Zero use of plastic shopping bags. Shopping bags to be made of sustainable natural materials (e.g., paper).	—
	Measures against food loss and for food recycling	Reduce food waste by 50% (amount generated per million yen in sales) (compared to FY2014).	Reduce food waste by 75% (amount generated per million yen in sales) (compared to FY2014).
		Increase recycling rate of food waste to 70%.	Increase recycling rate of food waste to 100%.
Society in harmony with nature	Sustainable procurement	50% of the raw food ingredients used in our original products (including *Seven Premium*) to be ones that guarantee sustainability.	100% of the raw food ingredients used in our original products (including *Seven Premium*) to be ones that guarantee sustainability.

(Source) Seven & i Holdings Co., Ltd., Seven & i Management Report

(2) Indicators and targets

In disclosure and dialogue in the sector of resource circulation for plastics, as described in “Indicators and targets” on page 32, it is suggested that companies set targets and appropriate key performance indicators (KPIs) to grow their corporate value, and then present their progress and self-assessment to investors in a qualitative manner. When doing so, the type of indicators to be adopted could be based on the Resource Circulation Strategy for Plastics[18] and the milestones set forth in the strategy[19], the Osaka Blue Ocean Vision[20], and the international literatures. In addition, investors need to recognize that these indicators and targets are not intended to be used to make simple comparisons between companies or industries, but rather to assist in understanding the degree of achievement of the strategies and value creation story of the company itself, through dialogue.

The relevant indicators were organized based on the risks and opportunities summarized above (Table 6 and Table 7).

[18] (in Japanese) https://www.env.go.jp/press/106866.html

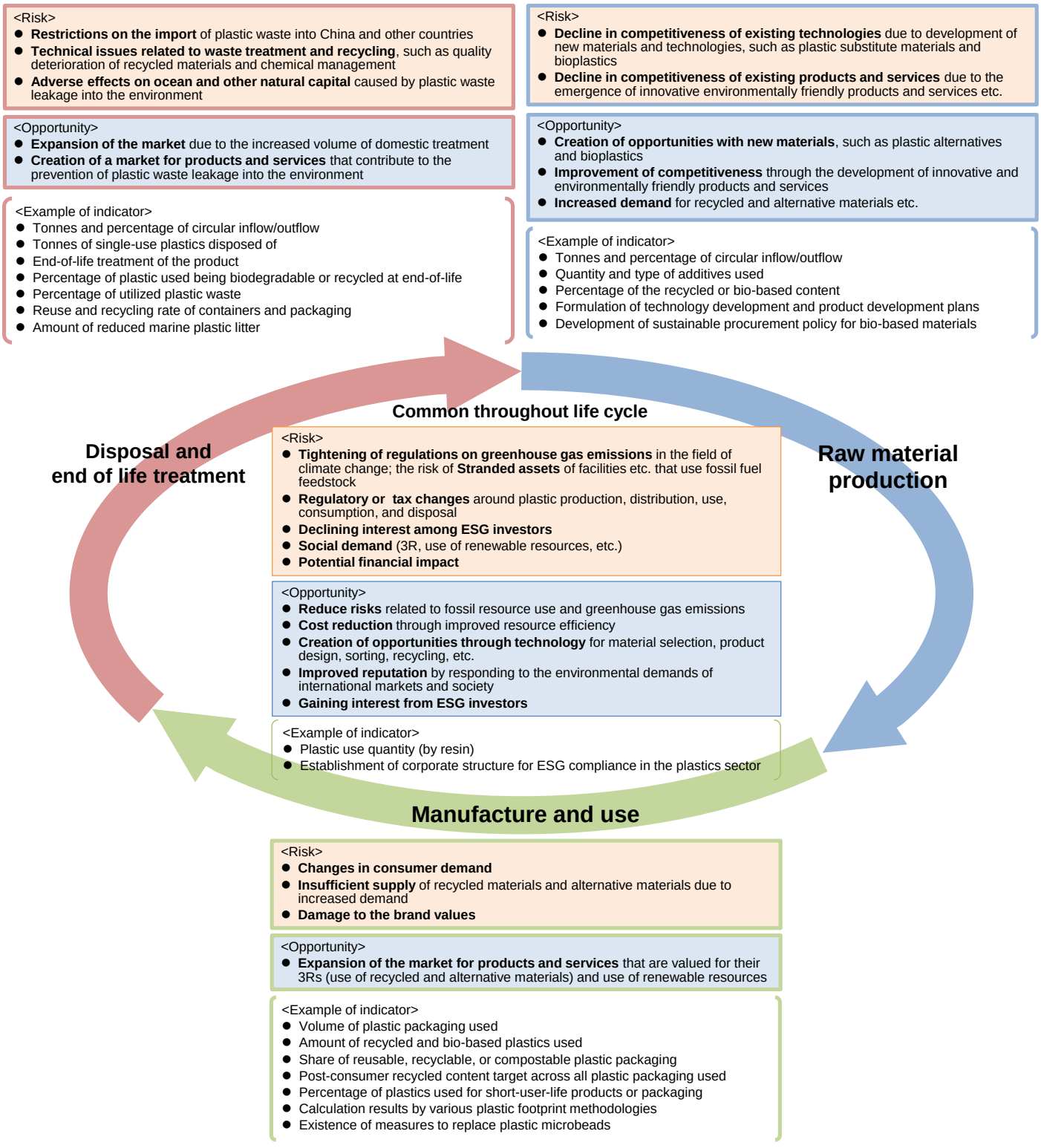
[19] The Resource Circulation Strategy for Plastics (formulated in May 2019) sets out six milestones.
(1) Cumulative suppression of 25% of single-use plastics by 2030
(2) Reusable/recyclable design by 2025
(3) Reuse/recycle 60% of containers and packaging by 2030
(4) Effective use of 100% of used plastics by reuse and recycling etc. by 2035
(5) Double the use of recycled content by 2030
(6) Introduce about 2 million tons of bio-based plastics by 2030

[20] https://www.mofa.go.jp/ic/ge/page25e_000309.html

Table 6: Risks, opportunities, and indicators presented by "policy and legal," "technology," "market," "reputation," and "physical (direct) impact"

	Risk	Opportunity	Example of indicator (from literature etc.)	Example of indicator (adopted by company)
Policy and law	● **Tightening of regulations on greenhouse gas emissions** in the field of climate change; the risk of **Stranded assets** of facilities etc. that use fossil fuel feedstock ● **Regulatory or tax changes** around plastic production, distribution, use, consumption, and disposal ● **Restrictions on the import** of plastic waste into China and other countries	● **Reduce risks** related to fossil resource use and greenhouse gas emissions ● **Cost reduction** through improved resource efficiency ● **Expansion of the market** due to the increased volume of domestic treatment	● Tonnes of single-use plastics disposed of ● Volume of plastic packaging used ● Tonnes and percentage of circular inflow/outflow ● Plastic use quantity (by resin) ● Quantity and type of additives used ● End-of-life treatment of the product ● Percentage of plastic used being biodegradable or recycled at end-of-life ● Percentage of plastics used for short-user-life products or packaging ● Percentage of utilized plastic waste	● Mitsubishi Chemical HD: Reduction of resource volume (equivalent tons of heavy oil) ● Suntory: Percentage of PET bottles made of recycled or plant-based materials, amount of plastic used, and recycling rate ● Sony: Amount of virgin oil-based plastics per product unit
Technology	● **Technical issues related to waste treatment and recycling**, such as quality deterioration of recycled materials and chemical management ● **Decline in competitiveness of existing technologies** due to development of new materials and technologies, such as plastic substitute materials and bioplastics ● **Decline in competitiveness of existing products and services** due to the emergence of innovative environmentally friendly products and services etc.	● **Creation of opportunities through technology** for material selection, product design, sorting, recycling, etc. ● **Creation of opportunities with new materials**, such as plastic alternatives and bioplastics ● **Improvement of competitiveness** through the development of innovative and environmentally friendly products and services	● Formulation of technology development and product development plans	● Kao: Quantity of innovative film-based packaging penetration for Kao and others per annum ● Kaneka: PHBH production capacity (will be gradually expanded to 100,000 to 200,000 tons per year by 2030) ● Novamont: Renewable and responsibly sourced content on average across all bioplastics produced
Market	● **Changes in consumer demand** ● **Insufficient supply** of recycled materials and alternative materials due to increased demand ● **Potential financial impact**	● **Expansion of the market for products and services** that are valued for their 3Rs (use of recycled and alternative materials) and use of renewable resources ● **Increased demand** for recycled and alternative materials etc.	● Percentage of the recycled or bio-based content ● Amount of recycled and bio-based plastics used ● Share of reusable, recyclable, or compostable plastic packaging ● Post-consumer recycled content target across all plastic packaging used ● Reuse and recycling rate of containers and packaging	● FP Corporation: Amount of products recycled (tons/year) ● Sony: Amount of recycled plastic used in products ● Seven & i HD: Amount of plastic-made shopping bags ● Seven & i HD: Percentage of environmentally friendly materials (e.g., biomass, biodegradable and recycled materials and paper) used in containers in original products ● Kao: Reduction in plastic consumption due to the adoption of refill and replacement product, and reduction in plastic consumption due to the adoption of compact packaging sizes ● Mitsubishi Chemical HD: Growth rate in provision of resource recycling services (%) ● Veolia: Revenue from plastic processing ● TOMRA Systems: Collection amount of high quality beverage plastic bottles
Reputation	● **Social demand** (3R, use of renewable resources, etc.) ● **Damage to the brand values** ● **Declining interest among ESG investors**	● **Improved reputation** by responding to the environmental demands of international markets and society ● **Gaining interest from ESG investors**	● Establishment of corporate structure for ESG compliance in the plastics sector ● Development of sustainable procurement policy for bio-based materials	● Mitsui Chemicals: Creation of a new Climate Change/Plastics Strategy Department within the Corporate Sustainability Division ● NatureWorks: Percentage of feedstock certified as sustainably and responsibly managed
Physical (direct) impact	● **Adverse effects on ocean and other natural capital** caused by plastic waste leakage into the environment	● **Creation of a market for products and services** that contribute to the prevention of plastic waste leakage into the environment	● Calculation results by various plastic footprint methodologies ● Amount of reduced marine plastic litter ● Existence of measures to replace plastic microbeads	● Kao: Use of naturally derived scrubbing ingredients in face wash, body wash and toothpastes

Table 7: Risks, opportunities, and indicators according to each stage of the life cycle



Case 10: A case in which values, business model, strategy, and indicators and targets are disclosed

Suntory Holdings Limited determined its priority sustainability themes through a materiality assessment, and it has made public its commitments and initiatives for each theme. Suntory states its 2030 target of achieving 100% sustainability in PET bottle materials as well in the Suntory Group Plastic Policy.

Sustainability themes and commitments (excerpts only related parts)

Theme	Commitment	Related SDGs
CO_2	In order to promote a decarbonized society and to address climate change, we reduce carbon emissions through the introduction of the latest energy-saving technologies and the use of renewable energy at our facilities as well as in our operations throughout the value chain. [Initiative] Target towards 2030, Environmental Vision toward 2050	
Raw ingredients	With regard to agricultural products and other raw ingredients that are essential to our products, we cooperate with business partners across the supply chain, identify social and environmental issues, and promote sustainability initiatives that enable us to grow together, thereby enriching our communities. [Initiative] Sustainable Procurement	
Containers and packaging	We consider the environment throughout the product life cycle—from product design, packaging materials, and containers, to transportation and recycling after consumption—and work to achieve a circular economy. [Initiative] Suntory Group Plastic Policy 3Rs in Containers and Packaging	

Suntory Group Plastic Policy

Expressing gratitude toward the Blessings of Nature that are the source of Suntory's products, the Suntory Group will provide strong leadership for transforming into a recycling-oriented and zero carbon society to bring about a world where diverse animal and plant life shines and resonates. With its diversity in usage and convenience, plastic has made our lives easier.
The plastic containers and packaging we use serve a useful function, but to prevent them from having a negative impact on the global environment, we will promote problem-solving efforts together with various stakeholders. Each employee of Suntory will work on taking responsible action to solve problems and take the initiative in bringing about a sustainable society.

1. Recycle & Renewable:

(1) Aim to switch all the PET bottles used globally for Suntory products to be made of recycled or plant-based material by 2030, achieving zero use of virgin petroleum-based materials.

(2) Actively work and collaborate with government agencies, industry, environmental non-governmental and non-profit organizations for the measures necessary to develop an efficient recycling system based on the situation of each country where we do business.

2. Reduce & Replacement:
Reduce the amount of plastic used by changing the design of containers and packaging and look for the introduction of alternative containers that do not negatively impact the environment in order to effectively utilize resources.

3. Innovation:
Actively invest in innovation for materials and processes that improve the recycling rate and minimize environmental impact.

4. New Behavior:
Promote activities that drive change in consumer behavior. Each Suntory employee will work to change their lifestyle, promote sorting and collection, and actively participate in social contribution activities such as cleaning up rivers and beaches.

(Source) Suntory Group Sustainability Vision (https://www.suntory.co.jp/company/csr/philosophy/),

(cont.)

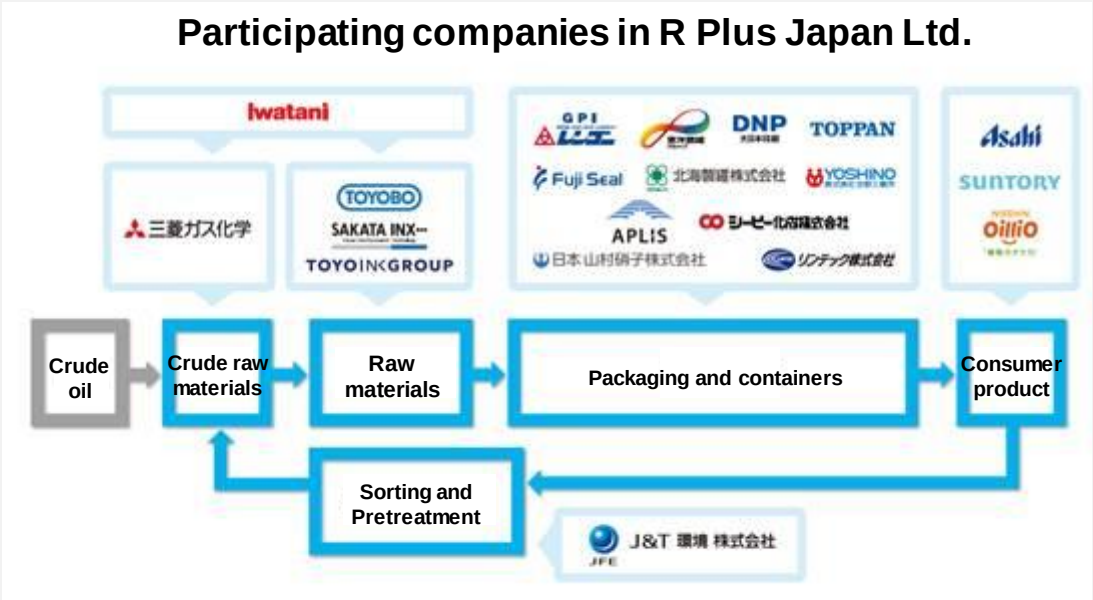
The Suntory Group also has invested in R Plus Japan Ltd.—a joint venture company focused on the recycling of used plastics—alongside other companies that make up the plastics value chain. The technology that R Plus Japan is aiming to commercialize is an efficient recycling technology for used plastics that has less of an environmental impact than conventional technologies. This new technology was discovered during the Suntory Group's joint-development efforts to create PET bottles made from 100% plant-derived raw materials with a US biochemical venture firm. The new technology presented by R Plus Japan is an impressive innovation expected to contribute to a more efficient recycling of plastics with lower CO_2 emissions and less energy used than before.

<About R Plus Japan>

- Established in 2020 by 12 cross-industry Japanese companies that make up the plastics value chain with a goal of realizing a sustainable society by contributing to the solution of the plastics issue
- Joint venture company focused on the recycling of used plastics
- Number of member companies increased to 20 companies (as of December 2020)
- Technical points:
  - R Plus Japan utilizes a chemical recycling technology that converts common plastics, including PET bottles, back into raw materials for plastics (benzene, toluene, xylene, ethylene, propylene, etc.) in a single conversion step.
  - Foregoing a process used in conventional chemical recycling allows the new technology to reduce CO_2 emissions and energy requirements.

This technology was established with a goal of recycling more used plastics more efficiently.
Below can be seen the participating companies across the value chain (as of December 2020)

Participating companies in R Plus Japan Ltd.



(Source) Provided by Suntory Holdings

Column: Challenges and solutions in developing and disclosing the Suntory Group Plastic Policy

In the Suntory Group Plastic Policy, Suntory Holdings has set high aspirations for the realization of a recycling-oriented and zero carbon society, with a specific aim to switch all PET bottles they use globally to recycled or plant-based materials by 2030.

When setting its target, the company undertook the following actions:

- Understanding both the mechanisms and realities of resource recycling in each country where they operate, and the implications for business operations when developing their approach
- Close communication with group companies to align the Suntory Group vision across diverse business models, sizes, and market positions

After thorough discussions on ideals and feasibility in contributing to a sustainable global society, the Suntory Group was able to set and announce its challenging target.

Setting a clear target allowed them to establish the direction of future actions across the Suntory Group, as well as further promote understanding, engagement and initiative both inside and outside the company.

For example, the Suntory Group Plastic Policy outlines that the company will provide strong leadership for transforming into a recycling-oriented and zero carbon society based on the four pillars of (1) Recycle & Renewable, (2) Reduce & Replace, (3) Innovation, and (4) New Behavior. By emphasizing the importance of not just innovations (such as light-weighting packaging, development of new raw materials, and development of recycling technologies), but also the promotion of activities that drive change in individual behavior, Suntory encourages a company-wide approach where each employee, regardless of department or function, will work to take initiative in bringing about a sustainable society.

Chapter 4. Conclusion

A variety of efforts have been made in Japan and overseas toward the efficient use of resources and proper waste disposal. However, as the global population increases, the demand for resources, energy, and food is increasing, along with an increase in the amount of waste, and environmental problems such as climate change are growing more serious. Accordingly, there is a growing need for a transition from a linear economy of mass production, mass consumption, and mass disposal to a circular economy, as soon as possible.

In order to realize the transition to a circular economy, it is particularly important to consider the role of companies that are embedded in global supply chains, whose business activities have a significant impact on society and the economy, and who are expected to lead innovation in technologies and business models, as well as the role of investors that supply and circulate the funds that drive businesses in financial markets. To further enhance the circularity of the products and services they provide, companies are required to promote initiatives to create innovations in technologies and business models, and to appropriately visualize their initiatives to investors in their integrated reports, annual reports, and other disclosures. The appropriate provision of funds by investors to such companies will lead to the realization of innovation and growth by these companies. The resulting profits will be returned to investors and invested in further innovation, thus establishing “a virtuous cycle of economy and the environment.”

Throughout the Guidance, we have emphasized that the transition to a circular economy will enhance the sustainability of a company’s business activities, and can also represent a source of competitiveness in the medium to long-term. The environment surrounding corporate management has become more uncertain, and the demand from society for sustainability has increased in recent years. In order for companies to grow their corporate value over the medium to long-term, it is necessary to develop and implement management strategies that synchronize corporate sustainability (the sustainability of a company’s earning power) and social sustainability (the future shape and sustainability of society), by extending the time axis which serves as the premise for strategic planning. The world is now reaching a point where neither companies nor the investors who benefit from their profits can survive over the medium to long-term, without an awareness of sustainability transformation (SX).

It is hoped that the Guidance will encourage companies and investors to share the current situation, and will promote the active disclosure of information on their circular initiatives, as well as appropriate evaluation and funding by investors based on dialogue with companies. Circular initiatives are diverse, and with the development of digital technology and changes in consumer preferences, they are expected to become even more diverse in the future. Due to this diversity, some companies have said that they do not know how to communicate their initiatives, while investors have concerns about how to evaluate corporate initiatives, and promote dialogue and engagement. However, the essence and importance of circular initiatives will remain unchanged, and such initiatives cannot be realized in a single step. Accordingly, it is important to think of it as a transition toward an ideal state. Rather than seeking disclosure and dialogue after gaining a full understanding, companies and investors should work together to create a common understanding, and work on the transition to a circular economy over the medium to long-term. It is hoped that the Guidance will help to build such a collaborative relationship, and contribute to the transition to a circular economy, as a result.

Appendix

Study Group for the Guidance

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The Financial Services Agency (FSA)

(Secretariat)

The Ministry of Economy, Trade and Industry (METI) and the Ministry of the Environment (MOE)