APTSIS 20

Medium-Term Management Plan (FY2016-FY2020)

APTSIS 20 Basic Policy

Aiming to remain a high growth/high profit-model company through businesses in the Performance Products, Industrial Materials and Health Care domains

Growth

Efficiency

Strengthening Foundations

Promotion of integration and synergies in the MCHC Group Accelerate overseas business development and advancing well-integrated management

Strengthen portfolio management with awareness of earnings

FY2018

Results

¥317.2 Billion

8.1%

12.7%

1.26

Core operating income

(Ratio of core operating income)

Net income attributable

to owners of the parent

ROE Attain ROE of more than 10%

to improve capital efficiency

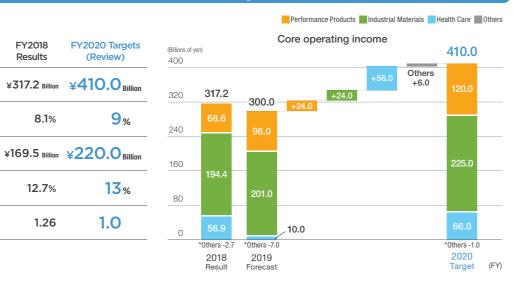
Net D/E ratio

Realize a highly productive corporate structure through cost-cutting and other measures

Strengthen the financial position

Thorough safety and compliance measures

Numerical Targets



Priority Management Measures in APTSIS 20

Performance Products

Industrial Materials

Health Care

Reinforcement and expansion of business foundation by strengthening portfolio management [P23-24] (Promoting the growth strategies)

- Positioning each business, subsidiary, and affiliate based on domain-specific indicators
- Accelerating resource allocation and portfolio optimization through periodical monitoring
- Consideration and acceleration of restructuring businesses equivalent to total sales revenue of ¥300.0 billion (Reconstruction of businesses equivalent to total sales revenue of ¥120.0 billion was carried out in FY2017-FY2018)

Generating synergies from the establishment of the new Mitsubishi Chemical Corporation (MCC) [P27-28] (The integration of the three chemical operating companies

- Aiming to achieve synergies from the integration of ¥50.0 billion by FY2020 (Growth through collaboration: ¥35.0 billion + operational efficiency: ¥15.0 billion)
- Total synergies and growth amounted to approximately ¥13.0 billion in collaboration and ¥14.0 billion in rationalization during the period from FY2016 through FY2018

Intensifying marketing and access to the global market P75-76 P79-80 P83

- Overseas revenue ratio FY2018 result: 42% → FY2020 target: 50%
- MCC established regional headquarters (2017)

Early commercialization of the seeds of next generation businesses P29-34 (R&D, open innovation, digital transformation)

Deepening KAITEKI Management, promotion of work style reform P45-46

Higher cash-generating capability owing to improved performance and asset reduction Reduction of cross holding shares Working capital reduction Reduction of cashes and deposits Assets sales Net cash flows from operating activities Improvement of profits and others Details of cash generated by asset reduction Changes in net cash flows from operating activities (Billions of ven) (Billions of yen) 500.0+a 500 500 450.0 80.0 400 400 300.0 300 300 100.0 160.0 Financial 200 200 structure reforms 100.0 100.0 60.0 100 100 100.0 100.0 100.0 (FY) 2018 2019 (FY) 2016-2020 2016-2018 2016-2020 2016 2017



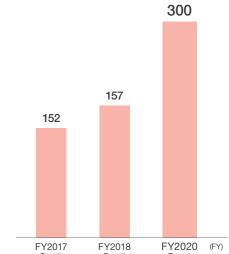
Sustainability Targets

As sustainability KPIs, we have introduced the sustainability indices (MOS) that reflect our material issues. The MOS Indices are divided into three categories: global environment items; health care items; and corporate responsibility initiative items. We are monitoring the progress of each index on a quantitative basis converted from the original point systems. We aim to achieve 300 points in FY2020.

5-year Plan (Original)

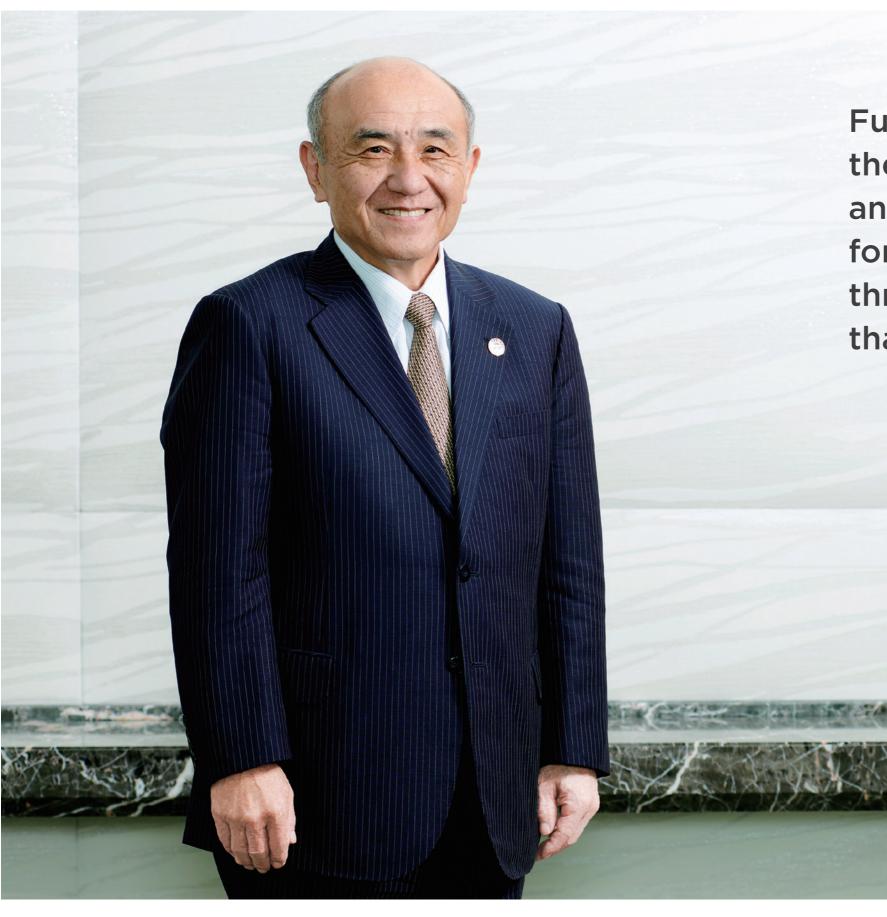






Progress of MOS indices

> Progress with Sustainability Management P41



Further strengthening
the management foundation
and accelerating transformation
for sustainable growth
through long-term management
that envisions the society in 2050

Hitoshi Ochi

Representative Corporate Executive Officer President & CEO

Looking back over the previous fiscal year as president of MCHC; Looking ahead to the future

In the over a decade since the establishment of Mitsubishi Chemical Holdings Corporation (MCHC) as a pure holding company, we have significantly restructured the business, working toward sustainable growth that balances our Performance Products, Industrial Materials, and Health Care domains. In particular, we have drastically reshaped our business portfolio by exiting commodity petrochemicals and inorganic products businesses, while consolidating Mitsubishi Rayon Co., Ltd., Taiyo Nippon Sanso Corporation, and pursuing acquisitions. With major structural reforms progressing smoothly, I passed the baton of my concurrent post as president of Mitsubishi Chemical Corporation to focus on my responsibilities at MCHC since April 2018, which allows me to lead further transformation.

In regard to strengthening corporate governance, I have been promoting the separation of management supervision and operational execution functions. We established a Corporate Executive Officers Committee to decide on important management matters for further flexibility, transparency, and independence. In addition, we revised MCHC Group Management Regulations in FY2018 to clarify the roles of the holding company and the operating companies. Furthermore, we have reinforced a monitoring framework that enhances internal control systems of each operating company for the purpose of reducing operating risks.

In respond to rapidly evolving technology while addressing increasingly complex social issues, I believe that it is crucial to develop a well-conceived medium- to long-term management plan for the Group's sustainable growth.

With people, society, and the planet, as well as advancing technology at its core, our new medium- to long-term basic management policy "KAITEKI Vision 30" demonstrates what we aspire to be in 2030, based on backcasting from 2050. In accordance with this policy, in the next fiscal year we will formulate the next medium-term management plan starting from FY2021. The plan is expected to include a shift to a business portfolio that considers both financial and social risk indices.

Solutions for increasingly serious social issues

In the midst of globalization and rapid technology advancement in digitalization, biotechnology, robotics and others, the world is facing the escalating challenges such as pollution, climate change, water and food supplies, as well as poverty, income disparities, and educational opportunities. The United Nations declared the need for cooperation to achieve the SDGs (Sustainable Development Goals) in 2015, encouraging not only governments, but also corporations and citizens to make a united effort.

The MCHC Group has continued to reflect upon its role in society as a group that offers various solutions to address a range of social issues, and from FY2011 we have placed KAITEKI Management at our core. KAITEKI Management enables us to create value by solving social issues while achieving our own sustainable growth, and thus contribute to the global environment and sustainable development of society. This is my ambition to be a continuously growing group by addressing social concerns and delivering innovation.

The third stage of KAITEKI Management: Leveraging proactive individuals

In the first stage of KAITEKI Management, all employees acquired an understanding of KAITEKI value in order to

better leverage the concept in their own roles. In the second stage, we generated both economic value and social value by offering solutions against material issues which we identified based on global macro-trends analysis, while restructuring our business portfolio. As a result, we obtained recognition in the form of inclusion in the Dow Jones Sustainability World Index. Another key achievement was our improved profitability, namely, growing core operating income from around ¥100 billion to ¥350 billion.

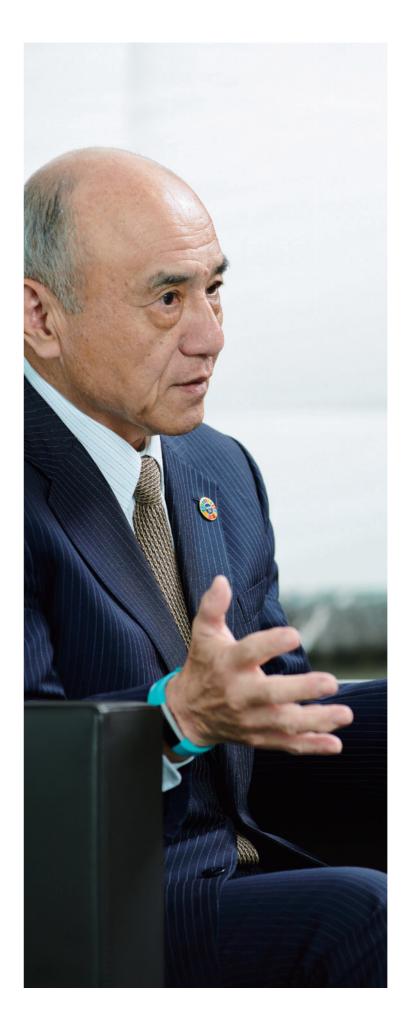
Now, moving into the third stage, we have redefined KAITEKI as "the sustainable well-being of people, society and our planet Earth" to express our determination and aspirational vision to attain health and well-being not only in our company or society, but also for all of humanity around the world. In order to achieve this vision, we dedicate more effort than ever. Each employee must take ownership of social issues and come up with ideas, which can become proactive action plans and be incorporated into business strategies for implementation. In other words: "dedication from forward looking individuals forges business strategy." It is each of us, as part of the MCHC Group, who makes the group to create value for the future.

Developing the people who can deliver innovation

Upraising innovative capacity is indispensable for the Group to attain sustainable growth and deliver solutions for social issues. In 2017, we established the Emerging Technology and Business Development Office to enhance research function at each operating company, spark creativity of researchers, and promote open innovation. This office plays a key role in advancing our medium-term innovative capabilities by accelerating digital transformation, strengthening our business venture capabilities through cooperation with startups and accelerators, and developing new business models. We will further expand our network of domestic and overseas research institutes and universities, primarily through The Global KAITEKI Center*, an allied center established within Arizona State University in the U.S., led by our subsidiary The KAITEKI Institute, Inc.

Such a shift requires integration of new technologies and perspectives into our system, which will come from employing talents from outside of the Group and mobilizing diverse internal talents. For this objective, we will also promote work-style reforms under KAITEKI Health and Productivity Management, while accelerating the personnel system reforms, revising the traditional seniority-based promotion system and the bulk hiring of new graduates. We will embrace true diversity both in Japan and abroad, thereby encouraging our "people" deliver innovation for a new age.

*The Global KAITEKI Center: See page 34



Safety and compliance are our management priority

The cornerstones of the Group are safety and compliance. Past disasters and events must not be forgotten. We ensure that thorough maintenance of production facilities are in place, as well as preventative measures using the latest technologies are properly planned and implemented. In addition, we will transfer expertise in operations and maintenance, and provide training on preventative measures at our 350 overseas subsidiaries. Regarding compliance, we will enhance the internal control system by applying tools such as the "internal control map," which was newly introduced to help us promptly follow changes of local laws, regulations, and standards in the countries where we operate. Ultimately, what matters most for us is "people", and I encourage each employee to take ownership of safety and compliance.

Listening to diverse opinions for value creation

Our business environment is rapidly changing, and the needs of society have become more diverse. In order to swiftly and accurately respond to these changes, we ourselves need to evolve. We must listen to a wide range of ideas and opinions, without being caught up in old thinking, and leverage diversity to enable value creation. Hearing various opinions through stakeholder engagement and dialogs is of great importance to me. With our KAITEKI Management, I am confident in achieving continued developments of both social value and economic value. I would like to express my deepest gratitude and appreciation to all stakeholders for their support and look forward to sustainable partnership.



Aiming for stable growth through continuous structural reforms, and new businesses that incorporate digital technologies and diversity

Reasons behind the revised targets of APTSIS 20

Era: Under the current medium-term management plan, *APTSIS 20*, it seems like the MCHC Group has experienced accelerated growth, due partly to acquisitions of industrial gas businesses in Europe and the U.S. What was the rationality behind the upward revisions to the FY2020 targets you made in December 2018?

Ochi: The most critical point in APTSIS 20 is to steadily grow our businesses to be as profitable as possible following the previously made structural reforms, including the period of the previous medium-term management plan. For us to be able to achieve this goal, APTSIS 20 sets out key strategies that include achieving growth in the performance products and industrial materials businesses through new business and product development founded on the integration of the three chemical operating companies and the expansion of the industrial gas business through acquisitions. Additionally, for the pharmaceuticals business, key success criteria is the rapid

development of product candidates with market potential in the U.S. and other overseas markets while taking into consideration patent cliffs. With these goals in mind, we have enhanced portfolio management driven by financial indices such as ROS and ROIC, that are set by business, and used the indices to restructure the businesses to ensure growth.

As a result of these actions, our core operating income is reaching ¥350 billion, a level we consider stable for earnings. There remain considerable uncertainties in the operating environment, such as U.S.-China trade frictions, but we will continue to strive towards realizing ¥410 billion in core operating income, a target set in *APTSIS 20*, by strengthening our business foundation while accelerating reforms aimed at achieving additional growth.

Era: I understand that you have been working to establish a solid business foundation while limiting volatility to ensure steady profit growth. Please explain the results of these efforts.

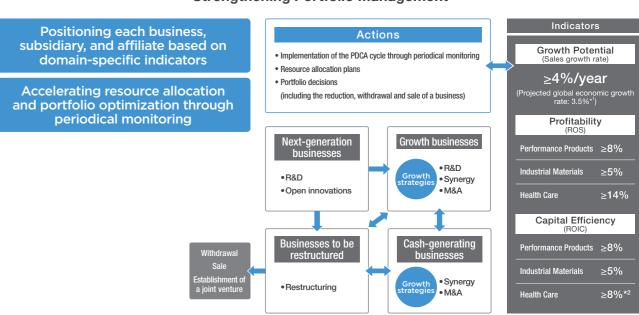
Ochi: For example, in the petrochemical business, which is a part of the Industrial Materials domain, we have been



reducing our assets with high revenue volatility as much as possible. In the methyl methacrylate (MMA) business, which boasts the world's top market share, we secured stable earnings while allowing for a certain level of volatility. In the first half of FY2018, we faced a tightening supplydemand balance for MMA, which caused the record high market prices. The market was stabilized later of the year, but even amid declining market prices, we maintained the

world's top market share and stable profits by developing highly cost-competitive products using proprietary production methods. In the industrial gas business, the effect of the acquisition in Europe and the U.S. in FY2018 has being contributed to the full-year earnigs from FY2019 onwards. Therefore, we expect to further stabilize and expand earnings in the future.

Strengthening Portfolio Management



*1. Average annual growth forecast from 2016 to 2020 by IMF *2. Calculated by excluding cash and deposits

As a leading company, focus on both social issues and business operations



Creating new businesses using internal and external expertise

Era: I have the impression that your performance product lineup is quite interesting due to its diversity. Based on my understanding, the same performance product can be used in various solutions.

Ochi: Performance products are used in a wide range of applications, and their versatility forms the basis of our capability to provide a variety of solutions. Because performance products can be expanded into multiple markets, such as mobility and electronic displays, we can provide the diversified solutions needed in society. The performance product lineup represents a collection of technologies, and we are actively taking steps to further develop them.

Era: Is it correct to state that the source of the MCHC Group's profitability is the numerous applications of its products and that a combination of accumulated data and past experience form the foundation for generating added value?

Ochi: That's correct. Amid accelerating digitalization, materials informatics,*1 which enables the discovery of new substances using AI, is growing in popularity. However, the AI does not automatically derive applications of the discovered substances. We believe that materials informatics can be more widely applied by combining it with the production technology, expertise accumulated to date within the MCHC Group, thus integrating materials sicence with IT.

Leveraging open innovation

Era: In addition to leveraging in-house expertise, what initiatives have you been promoting to obtain a wide range of expertise from outside the company?

Ochi: I believe a technology platform is a key element to creating a new business, or to put it in other words, a good technology platform shows the strength of a company. Capitalizing on open innovation is essential to our success but it also depends on the extent of our technology platform and what areas we open up for collaboration with the external organizations. In order to keep up with new technological development accelerated by advanced digitalization, we are proactively hiring outside talent, particularly in the area of advanced technology and digital transformation, as well as strengthening our alliances with external organizations. Absorbing cutting-edge and diverse knowledge from outside sources stimulates the existing platform thus enabling us to accelerate our development speed and expand our capability to create new solutions.

Initiatives for social issues present the perfect opportunity to demonstrate the strengths of the MCHC Group

Era: Recently, ESG*2, including international initiatives such as TCFD*3, has been drawing more attention. You have been proactive to define a management approach that strikes an appropriate balance between financial and non-financial elements, thereby, positioning the MCHC Group as a leading company in this area. In particular, on environmental matters, you are addressing a wide range of issues such as mitigating negative environmental impacts of business activities and promoting energy conservations as well as expanding products that contribute to reducing greenhouse gas emissions. Could you tell me how the Group balances its business operations with environmental and social initiatives?

Ochi: The various social issues you mention have been attracting considerable attention and many stakeholders

consider them as relevant issues to their own lives. Not only investors but also the general public are assessing companies' efforts on social issues. For a while now, we at the MCHC Group have believed that our KAITEKI Management helps us to enhance corporate value through a value creation cycle that also prioritizes social issues in addition to economic efficiency. We have actively implemented initiatives to create corporate value alongside measures to solve global environmental challenges such as climate change and ocean plastic. In October 2018, we decided to support the recommendations made by the Task Force on Climate-related Financial Disclosures (TCFD), and we will increase corporate value by pushing forward with related activities under the TCFD and disclosing relevant information. We are now formulating the "KAITEKI Vision 30" to indicate the direction of our business activities towards 2030. As KAITEKI Management has now become embedded in our company, we can now take the next steps and offer concrete solutions for social issues through our businesses. We will continue to clearly communicate these initiatives to our stakeholders.

Era: In particular, you anticipate an involvement in the circular economy. Could you tell me about your approach?

Ochi: I believe that a circular economy is needed to ensure that resources enter a regenerative cycle. It is impossible to create new ecosystems unless we consider the entire supply chain and divide up the responsibilities while working together. For instance, we need to deliberate on how to design plastic products with added functionalities so that they can be easily collected and recycled. However, such design features must also consider consumer preferences to be accepted in the market. This is our real challenge towards circular economy, and we recognize that now is the perfect opportunity to demonstrate our strengths with advantageous of the Group.

Shareholder returns

Era: Although in FY2018 there was outflow of cash due to large-scale acquisitions of industrial gas businesses, stable cash flow is expected due to factors such as stabilized earnings and higher profits. Please tell us about your policy for future shareholder returns.

Ochi: Although we had a temporary deterioration in finances in FY2018 due to the increase in liabilities arising from



the large-scale acquisitions, we expect to set the annual dividend for FY2019 at ¥40 per share. While considering an appropriate balance between improving our financial position and investing in growth, we will endeavor to enhance shareholder returns by continuing stable dividends while aiming at a medium-term consolidated payout ratio of 30%.

^{*1} Materials Informatics: Al-based method to design new materials and explore

alternative materials rapidly and efficiently.
*2 ESG: Acronym of Environment, Social, and Governance. Each element is considered

necessary for corporate management and growth.
*3 TCFD: Task Force on Climate-related Financial Disclosures. Established in 2015 as

the first international initiative for discussing climate change issues in view of financial stability.



Under the current phase of our medium-term management plan, *APTSIS 20*, we recognize the challenges we face as acceleration of growth, improvement of profitability and strengthening of our financial foundation.

Since embarking on *APTSIS 20* in FY2016, right after completing significant structural reforms, we have seen stabilization of return on equity of 10% or above. Our next steps are to maintain these strong performance and reduce capital costs as well, with a view to enhance our corporate value.

Maintain ROE of 10% or above

In April 2017, three of MCHC Group's chemical operating companies were integrated into one company, Mitsubishi Chemical Corporation. With the purpose of measuring the positive effects from this integration, we set targets for achieving ¥35 billion from the synergy created between the businesses and ¥15 billion from operational efficiency, both of which we passed in two years. We attained approximately ¥13 billion against the former target, and ¥14 billion for the latter.

While we completed large-scale acquisitions of industrial gas businesses in Europe and the U.S. in FY2018, we are continually reviewing our business portfolio. Our total revenue

generated by the businesses under the reshaped portfolio, which includes both withdrawals from and newly established alliances with other companies, amounted to approximately ¥120 billion through FY2017 and FY2018 in aggregate. We are making steady progress towards increasing profitability.

Efforts for increased efficiency in strategic asset allocation are also progressing. Our approaches are: shortened our cash conversion cycle (CCC), establishment of a cash management system (CMS) in four regions (Europe, North America, Japan, and Asia), and divestitures of assets that do not meet certain threshold levels. Consequently, we attained ¥450 billion in terms of asset efficiency in the first three years since the 2016 start of *APTSIS 20*, outperforming the initial five-year target of ¥300 billion.

Efforts for Asset Efficiency

- Shorten the cash conversion cycle (CCC)
- Establish a cash management system (CMS) in four regions (Europe, North America, Japan and Asia)
- Sell assets with lowered ownership value by regularly verifying their value



CMS establishment in four regions



Capital cost reduction that bolsters KAITEKI value

We started focusing on achieving significant progress in the context of KAITEKI Management in FY2011, and now, based on our efforts to increase KAITEKI value as a corporate group, we can present the results through means such as integrated report. We are glad that MCHC's efforts have been positively acknowledged, for instance, we were selected as a constituent of Dow Jones Sustainability World Index, a globally prominent socially responsible investment (SRI) index, for the second consecutive year. In the future, we continue our dialog with our stakeholders to communicate our story guided by our ESG-focused approach for KAITEKI value creation.

In terms to Investor Relations information distribution, we have improved with our stakeholders service for international investors and analysts by introducing online streaming audio of financial result presentations for English-language speakers in FY2018. As part of investor engagements, we are committed to support in-depth discussions on our business developments by organizing an IR Day event, and to offer interactive communication including individual dialogs to institutional investors over the world. I am confident in the outcome of our initiatives that contribute to reducing corporate risks and capital costs, and will ultimately improve corporate value.

Results for FY2018 and outlook for FY2019

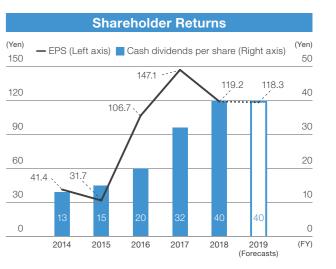
In FY2018, although the markets were favorable in the first half of the year, supply and demand for goods slowed down due to a lower demand in the latter half. However, while the business environment was generally harsh, MCHC achieved record sales revenue as well as its second highest core operating income and net income attributable to owners of the parent since FY2017. We implemented large-scale acquisitions in Europe and the U.S. in the Industrial Gases segment and faced temporary deterioration in the net D/E ratio and a decrease in the ratio of equity attributable to owners of the

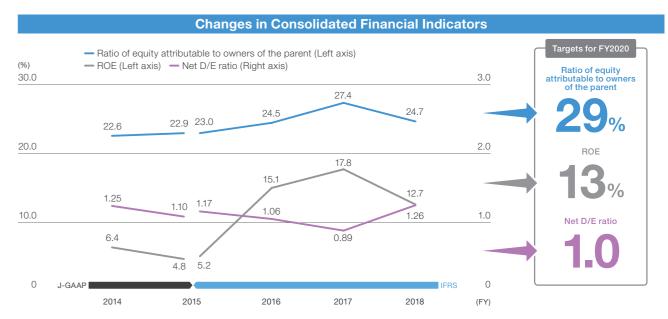
parent. We will strive to improve earnings as well as stabilize the financial position with the aim of making improvements as soon as possible.

Although the business environment is expected to remain uncertain in FY2019, we aim to improve financial performance to meet the target of net D/E ratio of 1.0 or below at the end of FY2020, the final year of *APTSIS 20*, expecting free cash flow to be ¥190 billion, ROS 7%, ROE 12% and a net D/E ratio 1.21.

Policy on shareholder returns

MCHC is striving to improve shareholder's value by increasing our corporate value — KAITEKI value. With regard to shareholder returns, we plan to achieve a consolidated dividend payout ratio of 30% based on the financial performance over a medium-term time horizon, while maintaining an appropriate balance between investments in growing businesses and efforts to strengthen the financial structure. We will also implement dividend payments in consideration of stability. Concerning dividends per share for FY2018, we paid an interim dividend of ¥20 per share and a year-end of ¥20 per share, or a full year of ¥40 per share, up ¥8 year on year. We expect to maintain the dividend for 2019 at the same level.





Innovation

Message from the CIO

Innovation, with global perspective and a sense of speed, is the engine of our sustainable business growth

Larry Meixner

Managing Corporate Executive Officer
Chief Innovation Officer

Social and technological changes are occurring more rapidly than ever before. This environment presents both challenges and tremendous opportunities for the MCHC Group. Innovation is the essential element to enhance our growth and profitability, but we cannot be successful using only the approaches of the past. We must accelerate our innovation cycle and aggressively expand our perspective beyond the chemical industry and beyond Japan. We must exploit new developments globally, wherever and whenever they occur.

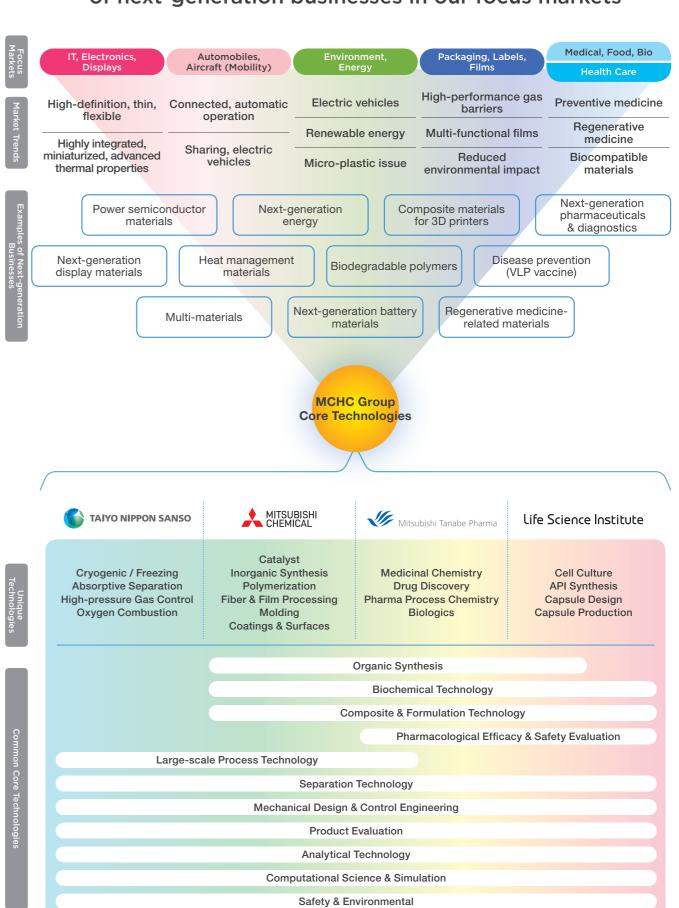
To achieve early commercialization of nextgeneration businesses in our focus markets, the MCHC Group takes a multi-dimensional approach to innovation. For current and adjacent technology and business areas, the wide-ranging R&D efforts of our four main Business Companies take the lead. We increasingly leverage synergies between multiple MCHC Group companies to create value. In addition, my team in MCHC's Emerging Technology and Business Development Office (ETBDO) is introducing new platform capabilities across the MCHC Group, notably in digital transformation, global venture engagement, and new market development. For example, digital initiatives to improve operational excellence are starting to impact our bottom line, and venture collaborations focused on near-term business growth are expanding rapidly.

These new platform capabilities established by ETBDO also have a critical role in creating the next major jump in shareholder value, by enabling expansion beyond our current technology and business areas. We established a new corporate venture capital fund and Silicon Valley-based subsidiary, Diamond Edge Ventures, Inc., in July 2018. Our first investments are opening doors to new markets for our current businesses, while acting as strategic entry points for disruptive innovation. We are creating new concepts for digital transformation of our supply chain and for emerging market platforms that could become dominant over the next 10 years.

We are also creating a compelling long-term vision for the MCHC Group. The KAITEKI Institute, Inc. is central to this effort. We are partnering with the World Economic Forum to develop policy frameworks in key areas such as 3D printing and healthcare data systems. And as the first foreign executive member of the Council on Competitiveness Nippon (COCN), I continue to promote deeper sharing of perspectives between Japanese businesses and the global community.

Now in my third year as Chief Innovation Officer, I have never been more excited about the future of our company. We are building the framework for growth and transformation now, with relentless focus on shareholder value. It all starts here... with innovation!

Driving early commercialization of next-generation businesses in our focus markets



Examples of MCHC Group Innovation

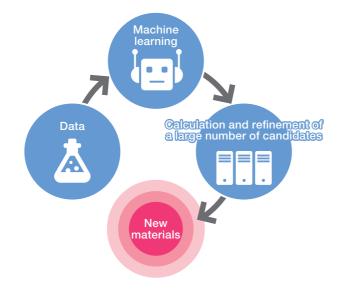
The wide-ranging R&D efforts of our four operating companies take the lead to create value.

Mitsubishi Chemical

Materials Informatics*

Mitsubishi Chemical Corporation actively encourages open innovation. For example, in the digital field, we are developing materials informatics (MI) technology for polymeric materials jointly with three other chemical companies and the National Institute for Materials Science. Furthermore, we have established a joint research division at The Institute of Statistical Mathematics (one of the institute of the Research Organization of Information and Systems) to strengthen the basis of MI technology. We will continue to enhance such initiatives as part of MCHC Group's digital transformation.

^{*} Materials Informatics: Al-based method to design new materials and explore alternative materials rapidly and efficiently



Mitsubishi Tanabe Pharma

Development of Plant-derived VLP Vaccines

Medicago Inc., a consolidated subsidiary of Mitsubishi Tanabe Pharma Corporation, has developed proprietary technology for producing vaccines using plant-derived virus-like particles (VLPs).

VLPs have the same external structure as viruses, and are attracting interest as a highly safe vaccine technology that confers strong immunity. In addition to enabling short-term and low-cost mass production, plant-derived VLP technology may overcome the reduction of effectiveness exhibited by vaccines grown in chicken eggs.

Medicago intends to apply for approval in the U.S. by the end of FY2019 and is continuing development to launch the vaccine in time for the 2021-2022 influenza season.





Structure of influenza virus

Taiyo Nippon Sanso

Metal 3D Printing

While the MCHC Group has long been engaged in 3D printing using polymer materials, Taiyo Nippon Sanso Corporation entered the metal 3D printing business in 2016. This technology is used to manufacture fully dense metallic parts with high accuracy for a variety of industries particularly aerospace and medical.

The quality of 3D printed parts depends significantly on gas atmosphere, and is therefore closely related to the welding technology we have developed over many years.

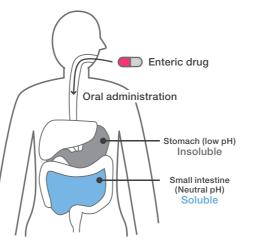
We are collaborating with five business partners, including Sintavia, LLC. Our strategy is to deliver total solutions including printers, metal powder, and prototyping services in addition to our core gas products. Taiyo Nippon Sanso aims to launch its new proprietary products by the end of FY2019 and commercialize additive manufacturing within a few years.



Model objects made by metal 3D printing

Life Science Institute

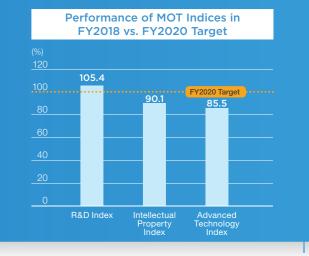
Development of Enteric Capsules



Qualicaps Co., Ltd., one of the Life Science Institute Group companies, is developing enteric capsules by applying the materials technology of MCHC Group. Enteric capsules protect their contents from gastric acid so that medicines can be released efficiently and directly into the small intestine. While enteric tablets and granules are usually produced by the coating method, Qualicaps applies enteric materials to the capsule. The development of enteric capsules shortens the formulation development period compared with other enteric formulations, enabling new medicines to be delivered to patients sooner.

Results of the MOT Indices (Management of Technology)

As part of our KAITEKI Management (see page 11), MCHC measures its progress toward developing powerful and sustainable technology platforms using Management of Technology (MOT) indices. The latest MOT indices are summarized using three main index groups (12 indices): R&D efficiency (R&D Index), technology superiority (Intellectual Property Index), and integration of cutting-edge technology and digital transformation (Advanced Technology Index). Our FY2018 results show good progress toward achieving the FY2020 targets. We continue to use the feedback from our MOT indices to strengthen our Group-wide technological competitiveness.



Mitsubishi Chemical Holdings

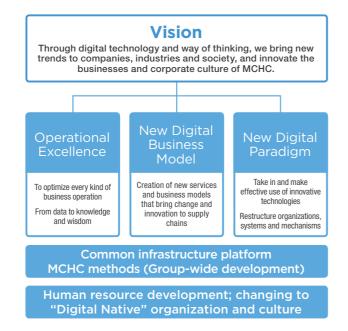
The Emerging Technology and Business Development Office, established in 2017, creates new opportunities for expansion beyond the perspective of our current business.

Digital Transformation

In order to realize digital transformation, we leverage both digital technology and "digital way of thinking" to solve problems relevant to our business.

From the viewpoint of operational excellence, we exploit machine learning, text mining, and optimization techniques in order to improve plant stability, optimize energy usage, and improve product quality. We continuously introduce these capabilities to the operating groups of MCHC.

In addition, we publish a "Digital Playbook" as a means to create new business models and optimize global business operations. And we actively develop new methods in key areas including materials informatics and quantum computing, ensuring that we remain current with emerging digital paradigms.



Corporate Venture Activity

We provide new growth opportunities across the entire MCHC Group through strategic partnership with promising startup companies worldwide. In July 2018, we established Diamond Edge Ventures, a new subsidiary company based in Silicon Valley (U.S.). We emphasize close collaboration between our Silicon Valley and Japan teams.

We invested in DigiLens Inc., a startup developing key materials and processes to enable Augmented Reality (AR) devices. We also initiated investment in areas ranging from industrial process control to 3D printing. We continuously introduced startups to MCHC business groups, leading to several promising joint projects. These initiatives allow us to create new business opportunities, build our global networks, and add an important dimension to our innovation processes across the MCHC Group.





The KAITEKI Institute

The KAITEKI Institute, Inc. (TKI) was established in 2009 to serve as a think-tank and to conduct research to realize a KAITEKI society, as envisaged by the MCHC Group, with an eye to the future in 20 to 30 years. TKI proposes solutions to future social issues by collaborating with academic experts globally.

Establishment of The Global KAITEKI Center



Arizona State University

On April 1, 2019, The Global KAITEKI Center was jointly established with its host institution, Arizona State University (ASU). ASU has one of the world's largest and most accomplished institutes specializing in concepts and technologies associated with sustainability. As a result, the university has been named the most innovative university in the U.S. Our goals for the Center are: to identify the challenges in realizing a sustainable society by effectively using the knowledge of ASU; to establish the concepts and develop the technologies required to solve those challenges; and to share our KAITEKI concept with the rest of the world. We will focus our efforts on social scientific issues as well as the chemical industry and circular economy.

Development Team for Sport Prosthetic Foot Blades



Ms. Kaede Maegawa

Top athlete in women's 100-meter sprint and long jump, and silver medalist in women's long jump (T42) at the World Para Athletics Championships (2017, London) The Team KAITEKI Project brings together experts from various fields, such as researchers in industry, government, academia, physical therapists, coaches and athletes. To contribute to people, society and the world at large, the project has the following three goals:

- To improve the performance of top para-athletes by developing prosthetic foot blades
- To broadly apply the developed technologies to walking assistance
- To ultimately eliminate the term "disability"

Our vision of society in the future is one in which use of a prosthetic foot or walking-assistance tool is not viewed as a "disability". We have developed prosthetic foot blades by bringing together technologies based on biomechanics, computational engineering, and materials science, and by cooperating with Ms. Kaede Maegawa, a para-track and field athlete whom we sponsor. The foot blades were launched as a business in April 2019.

Sustainability



In recent years, amid growing concern over global environmental and social issues, there has been an upward trend toward pursuing sustainability around the world following the adoption of the UN Sustainable Development Goals (SDGs) and the enforcement of the Paris Agreement. Accordingly, we recognize that expectations for the private sector has been growing, and this is suggested by the expansion of ESG investments.

Envisioning our ideal future

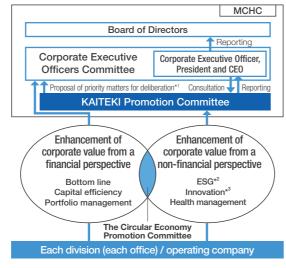
With an objective toward sustainable growth among disruptive changes in digital technology that are transforming the structure of the industry, companies must envision the ideal future with a long-term mindset and therefore take prompt actions for that future, instead of conventional approaches of growth strategies that are simply an extension of existing businesses. We have visualized what the MCHC Group should look like in 2030 considering the Earth, society, and people by backcasting from our vision of society in 2050. We are formulating a medium- to long-term basic management policy, "KAITEKI Vision 30" (see the upper figure on page 36), the framework of the strategy to realize what we should be in 2030. We will set clear targets for 2030, such as greenhouse gas (GHG) emission reductions, which will be

reflected in the next medium-term management plan.

Realizing an optimized recycling-oriented society

In order to address pressing issues including climate change and ocean plastic, we recognize the need to be proactive by transforming business models and innovation.

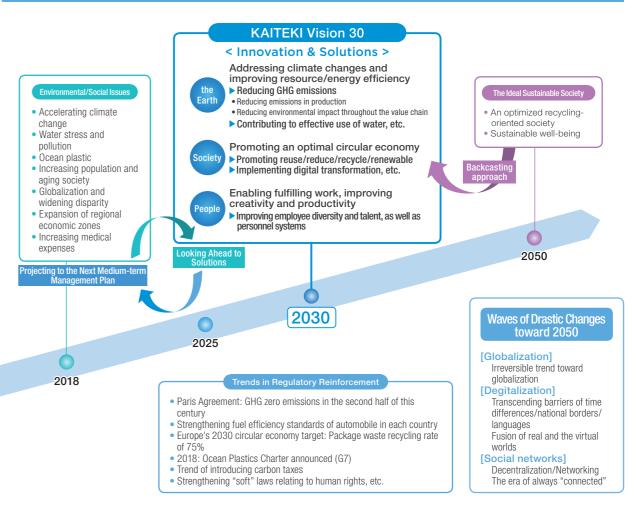
The MCHC Group's Structure for Promoting KAITEKI



*1 Where necessary *2 Governance issues are mainly addressed by committees such as the Nominating Committee *3 Determination of the direction of technologies, etc.

"KAITEKI Vision 30", the medium- to long-term basic management policy

Our core management policy targeting FY2030 is being formulated



With respect to climate change, the Group has made a concerted effort to reduce GHG emissions from its production activities of the Group, while developing products that will help reduce GHG emissions of our customers. In October 2018, we announced support for the recommendations of the Task Force on Climaterelated Financial Disclosures (TCFD). In a similar manner, we will enhance our climate-related disclosure, and recognize what society expects from us through dialogues with investors and other stakeholders while working to spark innovation in product development.

As a key element for realizing KAITEKI, one of our ambitious initiatives is the enterprise-wide promotion of circular economy, which will drastically change social mechanisms and industrial structures. In May 2019, we established the Circular Economy Promotion Committee and are considering specific development themes that can create both social and economic value (see page 38). However, we cannot build a circular economy on our own; the entire value chain must be involved. Therefore, we will build business models and collaborate with the initiatives that companies and organizations in our value

chain participate in (see page 40).

Truly putting our corporate philosophy into practice

To ensure further adoption of KAITEKI globally, we are further strengthening KAITEKI approach to penetrate our corporate philosophy in the Group. For each employee to take ownership of social issues and to address social issues through business activities, increased awareness of social issues is required from both organizations and individuals. Founded on this, we have held workshops for division managers and general managers to discuss the concept of KAITEKI since FY2018. With these workshops as a starting point, we will promote the adoption of KAITEKI in each workplace, empowering our employees to drive change and strive to put KAITEKI truly into practice.

Sustainability is our priority focus - we will strive to achieve the sustainability targets of *APTSIS 20*, and ensure continued growth by promoting further alignment between the business strategy and the sustainability strategy.

Circular **Economy**

Realizing a Recycling-oriented Society

The MCHC Group positions the circular economy as a critical strategy for comprehensively resolving environmental issues such as climate change, resources and energy. In order to achieve the recycling-oriented society, we strive to efficiently use resources throughout the entire life cycle from manufacturing process to treatment after product use.

Our Vision of Circulation

- Use and circulation of carbon as a resource (including carbon dioxide and plastic waste)
- Efficient use of water resources
- End of wastes





Recycling

- Chemical recycling
- Mechanical recycling
- Organic recycling*1

Manufacturing

- Efficient production activity
- Use of renewable energy
- Products designed with 4R

production processes Purification and reuse of waste water

· Reuse of wastes and byproducts generated in





Evaluating total impacts on environment throughout the products life cycle



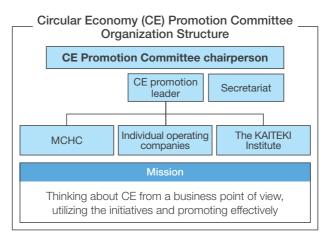
- Provide products that contribute to saving energy and resources
- Provide long-life products
- Appropriate treatment of products after use

Challenges to Achieving the Recycling-oriented Society

The Circular Economy Promotion Committee was established in May 2019 as a crossover between social value and economic value, to promote our group-wide shift to a circular economy.

The Group's Policy on the Circular Economy

In our vision to realize KAITEKI we will serve a recycling-oriented society through our innovation and business model transformation. We will create new value with innovative products and through an efficient utilization of resources, materials and

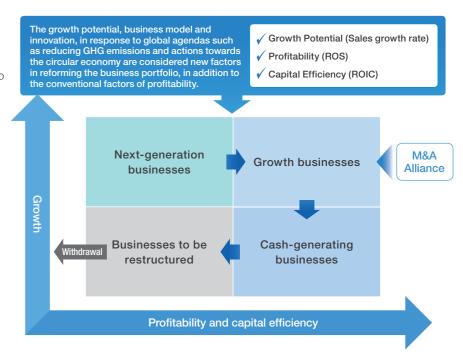


Examples of themes

- Development of recyclable materials and recycle technologies
 - Recycling of packaging and industrial materials Development of mechanical recycling and chemical recycling technologies
- 2 Enhancement of biotechnology-related business Business expansion of biodegradable polymers and plant-derived polymers and development of biocatalysts, etc.
- 3 Implementation of a c-LCA system and recommendations for reforming business portfolios

Business portfolio reforms

Reflecting the cross-over of social value and economic value in portfolio



^{*1} Organic recycling: technology to produce valuable products through composting and methane fermentation *2 LCA: life cycle analysis

Addressing the Plastic Waste Issues

Report in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD*)

In October 2018, MCHC announced its support for the final recommendations prepared by the Task Force on Climaterelated Financial Disclosures (TCFD), established by the Financial Stability Board.

The MCHC Group has worked to reduce environmental impact, promote energy-saving activities, increase the use of renewable energy, and expand product groups that contribute to the reduction of GHG emissions. Based on the TCFD's final recommendations, the Group will enhance these initiatives, progressively expanding its disclosure of related information as it strives to increase corporate value.

* In June 2017, TCFD announced the final recommendations concerning disclosure of information to encourage companies to voluntarily disclose to investors the impacts of climate change-related risks and business opportunities on corporate finances

Governance

MCHC identified climate change as a material management issue by conducting the materiality assessment (see page 13) under APTSIS 20, and have conducted appropriate measures. Several metrics are applied to the climaterelated issues to evaluate the progress of measures taken (see "Metrics and Targets" below). We monitor the progress against the target set for each operating company under the KAITEKI Initiative Structure (see page 35) centering on the KAITEKI Promotion Committee, an advisory body to the president of MCHC.

Structure			Roles				Activities in FY2018		
Board of Directors			Formulation of the basic management policy Supervision of overall management				Supervision through the execution reports of executive officers		
Outside Director Liaison Committee			Provision to outside directors of important information on management Frank exchange of views on management issues				Exchange of views on "KAITEKI Vision 30" (see page 36) (November)		
KAITEKI Promotion Committee [Structure] President, MCHC *Corporate Executive Officers, MCHC *CSO' of each operating company *Members of the Audit Committee, etc., MCHC Operating Companies			Deliberations on basic policy, etc. concerning the KAITEKI initiatives Monitoring through the activity reports of operating companies				Deliberations on "KAITEKI Vision 30": Concept on reduction of GHG emissions (February) Monitoring based on the management indices (MOS indices) (July and February)		
			Overseeing the progress of KAITEKI initiatives by the CSO of each company Reporting the progress of KAITEKI initiatives and MOS indices, etc.				Reporting the progress of MOS indices, etc. at the KAITEKI Promotion Committee (July and February)		
CSO: Chief Susta	ainability Offi	cer							
		Manageme		2020		2025	20	030	2050
Timeline of K	AITEKI Mana	gement (see page 1		and Disc					
			erm Management Plan APTSIS 20 Y2016 – FY2020) Aiming at next 3 to 7 Operating companies: Plan and implemen			ng at next 5 to 20 years MCHC: Setting the future direction of the Gro		the fatigue discotion of the Cooper building	
						_	the creation of basic strategic framework		asic strategic framework
			hange" as a material issues through materiality assessment, inities that are recognized as well as core measures underway.				We are formulating "KAITEKI Vision 30," the basic managemen policy toward 2030. Concept of responses to climate change (carbon management)		
Risk • Management of major risks according to the risk management system: Reporting on large-scale natural disasters as physical risks. PSB • Management of major risks according to the risk management system: Reporting on large-scale PBusiness				ration & solutions (business opportunities) ness risks ng long-term targets					
Metrics an	d Targe	ets					·		
Catego	ory			Report o	of FY2	018			Related Page
targets to assess risks and reduction of burdens contribution to the re Based on these, we		nent indices that assess the improvement of sustainability (MOS income the atmospheric environment such as in terms of greenhouse goduction of GHGs by providing products and services that contribute set targets for the final year of the medium-term management planent every year. For the progress in FY2018, please see page 42.				gases and the degree of te to reducing GHG emissions.		> Sustainability (MOS) indices [P43	
Scope 1 to 3 GHG emissions			issions on page 63 for the performance in FY2018.				> Enviror		> Non-financial highlights P63 > Environmental data/Independent Assurance Report P95-96
Corporate determined based or using indices includir remuneration determined based or using indices includir efficiencies, such as			issed evaluation of the remuneration of corporate executive officers in the degree of achievement of the targets for each fiscal year. Thing those associated with the improvement of sustainability in additinities associated with climate change through the promotion of the bs Securities Report				ne evaluation is determined by lition to economic and capital		> Corporate governance, remuneration [P52]

Plastics are widely used and indispensable in daily life, reflecting their ease-of-use. Global production of plastics has risen 20-fold*1 over the past 50 years, and yet their recycling rate remains as low as around 10%,*2 resulting in serious marine plastic pollution cause by a lack of proper waste treatment. As countermeasures against the plastic waste are required on a global scale, the MCHC Group, as a plastic materials provider, is also working to reduce the plastic waste generated throughout the value chain while also addressing the challenge through its products and technologies, including by developing recycling-friendly materials and technologies, and promoting its biodegradable polymer business. Furthermore, in collaboration with international initiatives, we will work to build a recycling-oriented society throughout the

Major Initiatives in Which the MCHC Group Participates Joined in Initiative Japan Initiative for Marine Environment September 2018

Japan Clean Ocean Material Alliance January 2019 (Chairperson of Engineering Committee) Alliance to End Plastic Waste

(Founding member / Executive Committee member)

Ellen MacArthur Foundation's Circular Economy 100

(Founding member)

March 2019 (The first Japanese chemical company to join the CE100)

*1 Reference: World Economic Forum (2016)

January 2019

F@CUS

value chain.



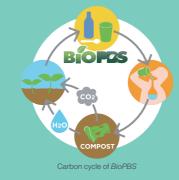


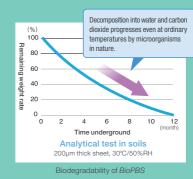


Building a resource-saving and carbon-circulating society: Biodegradable Polymer, BioPBS

Expectations for the use of bioplastics to help in build a recycling-oriented society are increasing. BioPBS is a plant-derived biodegradable polymer developed by Mitsubishi Chemical Corporation and manufactured by PTT MCC Biochem Company Limited, a joint venture established in Thailand with PTT Global Chemical Public Company Limited (Thailand). Microorganisms in the environment decompose BioPBS into water and carbon dioxide, thus causing only a small environmental load. In addition, thanks to its plant origin, the product is carbon neutral as the carbon dioxide released by its incineration is fully absorbed by plants. Paper cups made using this material were first released in October 2018, and since then we have accelerated the development of its applications for food-related products that include such items as coffee capsules, cutlery and straws as well as covering materials used in agriculture such as mulch films.

The development of new materials through public-private-academic partnerships is important to promote the plastic resource circulation strategy, and for this reason, the development and demonstration of applications are being implemented with the government's support. Thus, the MCHC Group is contributing to the circulation of global resources with Japanese technologies by setting up cutting-edge material businesses not only in Japan but also in key locations abroad.



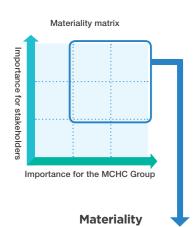




Growth Strategy for Advanced Polymers P75

^{*2} Reference: OECD, Improving Markets for Recycled Plastic (2018) R. Geyer, J. Jambeck and K. Law, "Production, use, and fate of all plastics ever made," Science Advances, Vol. 3 (2017)

Progress with Sustainability Management



Based on the materiality (important issues; see page 13) identified in the medium-term management plan *APTSIS 20*, the MCHC Group has set the core measures and targets for sustainability. We will take action based on the results of this materiality assessment, to help solve social issues and increase our corporate value.

Core Measures

Energy and resources

Climate change

Material issues related to the global environment

Material issues related to social systems

issues related to the Compits organizational structure

Water

Food and Dev

Product responsibility

Contribution to communities

Health and wellness

Human development and training

Medical care

Occupational health and safety

Human rights awareness

Information security and privacy

Diversity and inclusion

Address the depletion of natural resources and energy saving by switching to renewable raw materials, curbing the use of rare metals, reducing raw fuel consumption and promoting 3R and zero emissions.

Reduce GHG emissions, promote LCA and utilize low-carbon resources and energy, while creating and expanding business opportunities that mitigate or adapt to climate change.

Use water resources efficiently and clean wastewater while helping to solve water resource issues by providing safe and clean water through our products and services.

Develop solutions to food and agricultural issues by preserving food resources, resolving maldistribution and providing products and services that improve agricultural productivity.

To ensure that customers can use products and services without concern, pursue initiatives to ensure the quality and safety of products throughout their lifecycle and minimize adverse effects on the environment.

Broadly contribute to society through business activities while deepening understanding of various communities and continually responding to their requests and expectations.

Promote the use of health information and disease prevention by improving lifestyle habits through self-medication and expanding healthcare products and services, and contribute to the improvement of people's health.

Improve patient QOL and help people's lives and health by developing pharmaceuticals that meet unmet medical needs and improving medical care through regenerative medicine and remote medicine technologies.

Offer equal opportunities in hiring, placement, promotion and skills development, while acquiring and developing human resources for the medium to long term. Raise employee awareness of the Corporate Philosophy and increase corporate value by implementing the philosophy.

Implement safety management in accordance with national and regional laws and regulations and make workplaces safe while maintaining and improving the physical and mental health of employees.

Respect the dignity and rights of all people in corporate activities and require that business partners refrain from violating human rights or engaging in inappropriate discrimination.

Recognize the importance and responsibilities associated with protecting information assets and manage information properly to prevent leakage of confidential information of customers, business partners, MCHC or other parties.

Incorporate a diverse range of human resources and views without regard to nationality, age or belief, and promote diversity and inclusion through our corporate activities, thus enhancing corporate value.

Sustainability (MOS) Indices

Since FY2011, the MCHC Group has been using the Management of Sustainability (MOS) Indices to quantify and visualize its contribution to sustainability as its own management indicator for promoting sustainability. This report describes MOS Indices-related achievements (table below) and efforts (pages 43–44 and 46) in an easy-to-understand manner with reference to the International

Integrated Reporting Framework of the International Integrated Reporting Council.

For details of these achievements, please visit the following

Website (Sustainability)

https://www.mitsubishichem-hd.co.jp/english/sustainability/



	Sustainability (MOS) Indices (Data elements)	Assessment Criteria	FY2018 Plan	FY2018 Result	FY2020 Target	Related SDGs
	Reduce burden on the atmospheric environment (GHG, SOx and NOx emissions)	Per-unit impact on the environment (LIME / ¥100 million)	540	499.0	548.7	
The	Reduce burden on the water environment (Total phosphorous, total nitrogen in wastewater and COD emissions)	Per-unit impact on the environment (LIME / ¥100 million)	6.5	5.5	6.1	6 CLEAN WATER TO CHARGED TO CHARGE TO CH
global	Reduce burden on the soil environment (total landfill)	Per-unit impact on the environment (LIME / ¥100 million)	4.4	5.5	5.1	12 RESPONSELE DIXEMPTER ACTION ACTION ACTION
The global environment	Promote use of renewable energy	Volume of renewable energy generated and supplied (MW)	56.0	55.6	50.0	∞
	Provide products and services that contribute to reducing GHG emissions	Contribution to the reduction of GHG emissions (hundreds of millions of tons-CO ₂ equivalent)	0.81	0.75	1.5	14 DET PRECONNECTES 17 PARTINESANDS 17 PARTINESANDS
	Provide products and services that help solve water resource problems	Volume of reused water supplied (hundreds of millions of tons)	5.6	5.6	17	
Social systems	Provide products and services that help solve food problems	Growth in sales of related products and services (%)	11.3	12.3	30	3 GOODMEATH 6 CLEAN MATER AND MALLERING BACKSAMEATHN
	Provide products and services that contribute to a comfortable society and better lifestyles	Growth rate in the comfort value provision index (%)	14.7	8.8	40	-W
	Customer satisfaction index (Results of customer satisfaction survey)	Points	27	22	47	9 PROJETY MOVEMBER 11 SISTEMBRE THES AND COMMON TES
	Improvement index in the number of complaints	%	40	20.0	50	12 RESPONSEE 17 PARTITION OF THE GOALS
	Improvement index in communication with business partners (Regarding CSR procurement, status of initiatives such as distribution of guidelines, checklists, monitoring of the situation, interviews/visits/audits)	Points	77.8	86.8	100	AND THE STATE OF T
Company ar	Contribution index for pharmaceuticals provision (Contribution to treatment, increased effectiveness)	Points	11.4	11.8	15	
	Vaccine provision index	Points	7.7	7.8	14	2 CODINATION O COORDINATION O CONTRACTOR O C
Company and its organization	Improvement index in awareness of compliance (Results of awareness survey)	Points	21.0	15.8	21	12 BEFORE THE TOTAL THE THE TOTAL TH
onal structure	Reduction rate of environmental incidents	%	100	20	100	
	Employee wellness index (Employee satisfaction, rate of taking paid leave, rate of number of days of sick leave, percentage of female managers)	Points	11.7	11.3	16	

Case Studies of addressing the Materiality

Oxygen burner to save energy in the production process

MCHC's Materiality

Energy and resources Climate change





Taiyo Nippon Sanso Corporation developed the Innova-Jet F.H. oxygen burner to achieve significant energy savings in the forehearth in the glass manufacturing process. This burner is designed to change the direction of flames periodically to ensure uniform heating of a wider area with fewer burners. In fact, the temperature distribution measured at the bottom of the test furnace shows that the uniform temperature distribution can be obtained even if the number of burners is reduced to less than half of the existing air burners. It was also confirmed that fuel consumption can be reduced by 65% compared with using air burners. The company is working to apply this technology in the steel, glass and ceramic industries to save energy and reduce CO₂ emissions.

Joint research on a new treatment for malaria initiative to improve access to medicines in developing countries

MCHC's Materiality

Medical care







Mitsubishi Tanabe Pharma Corporation provides support for the development of new drugs to treat infectious diseases such as malaria, tuberculosis and neglected tropical diseases in developing countries by investing in the Global Health Innovative Technology Fund (GHIT Fund), established as a public-private-civil sector partnership, specialized in research and development of global health care.

The company also provided its pharmaceutical compound library to Medicines for Malaria Venture (MMV), a research

Spreading and implementing the corporate philosophy

MCHC's Materiality Human development and training



At the MCHC Group, it is individual employees who are the driving force behind value creation. We are working to nurture a corporate culture that encourages all employees to regard social issues as their own and to strive to achieve KAITEKI in their workplaces and companies based on a shared understanding of the Group's vision. To this end, we have conveyed the views of our top executives through the in-house magazine and have distributed copies of the Brand Book to employees. Moreover, since FY2018, we have been holding a workshop to revitalize human resources and organizations,

Reduction of Fuel Consumption Rate

Item	Unit	Conventional	Innova-Jet F.H.	
Oxidant	-	Air	Oxygen	
Furnace temp.	°C	1,100	1,100	
Fuel consumption*	-	100	35	
Reduction rate	%	-	65	

^{*} The amount used in the air burner is set to 100.



institution focused on the treatment of malaria, via the GHIT Fund. Through the joint research, the company obtained two lead compounds derived from one of promising three hit compounds as candidates for new anti-malarial drugs.

This joint research moved into the next stage in April 2019 and the company has been running two-year program to create candidates for new anti-malarial drugs using a grant from the GHIT Fund.



targeting divisional and departmental managers who are supervising individual workplaces. (In FY2018 we held the workshop eight times with the participation of 160 managers.)

Through these measures we are instilling the philosophy of KAITEKI and implementing specific initiatives across our workplaces via their leaders.



KAITEKI worksho

Water Management at the MCHC Group

MCHC's Materiality
Water







Of all the water resource on Earth, the available amount of freshwater is only about 0.01%. The water crisis is worsening because of the increase in water consumption due to population growth and economic development and the expansion of areas suffering from water shortages caused by climate change. In response, global companies must play a greater role in the effective use of water and improvement of water quality through their operations.

Approach to Conserving Water Resources

The Group is working to preserve water resources mainly by reducing its business activities' impact on water resources and contributing to solving water supply-and-demand issue through its products.

Water Risk Assessment and On-site Surveys

The MCHC Group is conducting risk assessments through on-site interview surveys and other means to the sites deemed to have high water risks. We identified the plants with potential high water risks by using the Global Water Tool provided by the World Business Council for Sustainable Development (WBCSD) and assessing the possibility of high water stress at the plants. In FY2017 we conducted on-site surveys at 11 locations in Japan and three abroad and have been expanding the scope of the survey since FY2018. Through on-site interview

surveys we evaluated the level of water management and water use reduction measures implemented by the plants considering the social needs, such as contribution to local communities and prevention of water pollution.

Today, as a result of taking appropriate risk control measures, none of our plants have water risks that could adversely affect our activities, even those where drought and other water issues used to pose a risk. We will continue to conduct on-site surveys to reduce water risks and conserve water resources.

Examples of Countermeasures for Water-related Risks

Measures to Prevent Water Pollution Mitsubishi Chemical's Okayama Plant

The plant constantly monitors water quality by using a continuous analyzer installed at the end of the drain. Plant operators also conduct regular on-site patrols, visually inspecting water and checking for equipment and system defects. The plant also has a system to automatically shut the downstream water gate in case the analyzer shows an abnormal value.



Water gate

Effectively Reusing Water Mitsubishi Chemical's Ibaraki Plant

The plant uses large amounts of cooling water in the chemicals manufacturing process. In order to reduce the amount of freshwater withdrawn from local water resources, the plant reuses the cooling water several dozen times.



Cooling tower

Securing Safe Water

The water treatment and supply system of Mitsubishi Chemical Aqua Solution Co., Ltd. supplies safe drinking water by advanced membrane filtration of groundwater. The decentralized water system enables the dual supply of water in addition to the public water supply system, thus ensuring the water supply in the event of disaster. It increases the disaster response capabilities of facilities where water supply is prioritized, such as disaster base hospitals and core manufacturing facilities.



Membrane filtration system for groundwater

KAITEKI Health and Productivity Management, **Human Resource Development**

The MCHC Group believes that "people" are the driving force behind the sustainable growth of society and the company. People are also a key management resource. We are promoting KAITEKI Health and Productivity Management* to help each employee realize their potential to the fullest.

" "Kenkokeiei," which means Health and Productivity Management in Japanese, is a registered trademark of the Workshop for the Management of Health on Company and Employee, an NPO. In terms of using "KAITEKI Health and Productivity Management," the trademark is authorized to be used by the NPO.



Initiatives for KAITEKI Health and Productivity Management

The MCHC Group promotes KAITEKI Health and Productivity Management to boost creativity and productivity of diverse people who contribute to a realization of KAITEKI through improving health and reforming work-styles. Using a PDCA (plan, do, check and act) cycle and based on three core KPIs (see page 46), we are pushing forward initiatives related to human resource development, promoting diversity, supporting flexible work-styles, and improving health conditions. We developed and introduced a proprietary system, i² Healthcare, to support employees' health more than a year ago. As a result, many of our employees now use wearable devices to monitor their sleep quality, exercise, heart rate, and other indicators in real time, raising their health awareness and improving self-care.

The ideal state of individuals and the organization

For the MCHC Group to achieve sustainable growth in the face of accelerating changes in the business environment, the Group must have systems in place to maximize the potential of individuals and organizations. As part of strategic investments in human resources, we have introduced an ICT-based communication

infrastructure system, and are enabling flexible workstyles, such as telework, to boost productivity and creativity. In addition, we have been exploring what individuals and the organization should be thorough discussions to formulate the medium- to long-term basic management policy "KAITEKI Vision 30" (see page 36). We are also planning to reinforce efforts to develop employees with digital skills and leverage external resources as part of our shift to a data-driven business model. A diverse workplace that fosters vitality is the foundation of an organization with a culture of openmindedness and high levels of trust. We will foster a corporate culture that sparks creativity in each employee and promotes the drive to create new value.

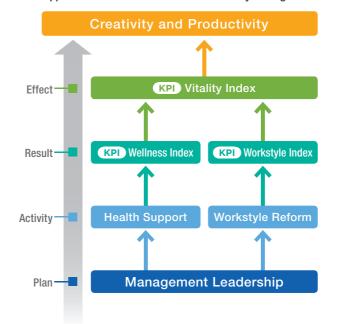
ICT-based Health Support System

"i2 Healthcare"

A proprietary system that enables each employee to see personal health data on their devices, integrating health data collected daily via wearable devices, health checkup results, and work-style related information.



Approach to KAITEKI Health and Productivity Management



Three Core KPIs for KAITEKI Health and Productivity Management

Description FY2018 Result

Vitality Index

Index for employees' job trust and growth

71.1_{pt} (+ 8.1 y/y) **O** 15pt

Increase positive choices by 15 point or more in the health survey*1

Workstyle Index

Index for levels of workstyle initiatives

70.6pt

Increase positive choices by 10pt or more in the health survey

Wellness Index

Index for health checkup items, lifestyle quality and level of life satisfaction

47.6pt

10pt

by one item (= 10 points) or more.

*1 We conduct the health survey to assess each employee's awareness and approach to

Case Studies of addressing the Materiality

Empowerment of Diverse Human Resources

Implementing the "Experience JAPAN" training program

For sustainable growth, companies need a corporate culture that encourages diverse employees to fulfill their potential and collabolate each other

To foster multicultural communication, Mitsubishi Chemical Corporation has a program to help local employees working at overseas bases understand Japanese business customs through OJT, experience cultural differences and build

a network with fellow emplovees working in



Achieving a Balance between Life Events and Work Mitsubishi Tanaha P

Helping employees on childcare leave to continue active careers

The MCHC Group helps employees to work flexibly according to their stage of life.

Mitsubishi Tanabe Pharma Corporation has introduced a program to help those on childcare leave return to work and continue an active career. Under the program, employees are given opportunities to study MBA subjects and languages online during their leave, as well as financial support to employ babysitters after returning to work. The company thus supports time-constrained employees to be more successful at workplace.

Health Promotion

Life Science Institute

Holding a health measurement

Employees cannot work with vigor and satisfaction unless they are physically and mentally healthy.

Life Science Institute, Inc. holds a special health measurement event which involves measurements that are different to a regular health checkup. In the event, the cognitive functions of employees are assessed to learn how they are using their brains while also having their capillaries visually examined. This helps make participants more aware of their health, and each participant receives the results and advice individually.

Development of Human Resources in charge of On-site Safety

Taivo Nippon Sanso

Established the "Technical Academy" to help employees improve technical skills and safety

For workplace safety, the MCHC Group believes it is important to improve the work environment and urge individual employees to be more aware of risks.

Taiyo Nippon Sanso Corporation opened the Technical Academy in June 2018 as a technical training facility. The Academy is equipped with different types of simulators, including those using virtual reality (VR), to enable employees to virtually experience typical on-site incidents, including getting caught in machinery and falls, as well as incidents involving high-pressure gas, such as cylinders overbalancing and gas leaks. These simulators help employees to be aware of risks at work.

