

JSR Group CSR Report 2018 Highlight



With chemistry,
we can.

MATERIALS INNOVATION



JSR Corporation

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JSR Corporation



Materials Innovation

Today's world presents us with innumerable challenges. They include

- Global environmental issues, such as climate change, conservation of resources and biodiversity;
- Health-related issues, such as safe water, food and health care; and
- New issues relating to digital revolution-initiated changes in the social structure brought by advancements in AI and IoT;
- Issues related to the development of a society where all people are respected and have hope for the future

Various materials are utilized to effectively manage these issues and challenges as well as to form

the basis of products and mechanisms designed to improve the world.

By pursuing new possibilities for materials through the potential of chemistry,

and contributing to the development of society and a sustainable global environment,

JSR Group would like to ensure its own sustainable growth.

“Materials Innovation - We create value through materials to enrich society, people and the environment.”

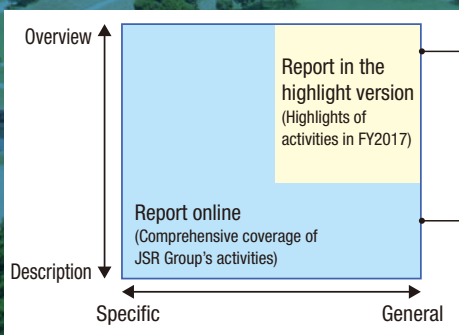
It is our corporate mission to pursue such possibilities through the integration of business activities

and CSR initiatives.

The CSR Report 2018: Formats

JSR Group's CSR Report 2018 is available both in online and highlight versions. The online version presents a comprehensive report on JSR Group's CSR activities. http://www.jsr.co.jp/jsr_e/csr/ The highlight version features highlights of JSR Group's CSR activities in FY2017.

Other corporate information (products, services, financial information, etc.) can be found on the JSR website: http://www.jsr.co.jp/jsr_e/



Highlight Version

Online Version



http://www.jsr.co.jp/jsr_e/csr/



Editorial Policy

Under the corporate mission of “Materials Innovation - We create value through materials to enrich society, people and the environment,” JSR Group aims to build and maintain good relations with all of our stakeholders and become an indispensable corporate citizen. We intend to resolve social issues by integrating management and CSR as well as demonstrating our corporate mission with actual results. In FY2017, which marked the initial fiscal year of our mid-term business plan JSR2019, we executed our activities by arranging identified CSR priorities into three approaches that take a stronger social perspective while achieving greater transparency and acceptability. They are: “Social Issues Attributable to JSR Group's Corporate Activity,” “Social Issues that JSR Group Can Help Resolve,” and “Basic Issues in JSR Group's Corporate Activity.”

Through this report, we aim to communicate our CSR activities during FY2017 to all stakeholders in an easily comprehensible way.

The report's Online Version provides a detailed account of our CSR activities. Its primary focus is on initiatives targeting priority issues that were arranged into the three approaches. It also includes a collection of data that organizes related details into an easy-to-reference format. This arrangement is intended to facilitate the reader's understanding of JSR's CSR activities in their entirety. In addition to the Online Version, we have published a Highlight Version in the form of a pamphlet that outlines the essence of our CSR activities in FY2017.

Referenced Guidelines

- Global Reporting Initiative (GRI) Standards (GRI-referenced)
- *Environmental Accounting Guidelines for Chemical Companies*, Japan Chemical Industry Association (JCIA)
- *Environmental Accounting Guidelines 2005 / Environmental Reporting Guidelines 2012*, Ministry of the Environment

Target Period and Fiscal Year

- The entire report
April 1, 2017, to March 31, 2018
(Some parts include activities and initiatives conducted since April 2018.)
- Portions of data concerning safety promotion activities
January 1, 2017, to December 31, 2017

Operations Covered

- The entire report
JSR Group: 54 companies
“JSR” and “JSR Group” are classified as follows:
JSR: JSR Corporation
JSR Group: JSR Corporation and Group companies
- Scope of data collection for RC reporting (environment, safety, health)
JSR: Head Office, Yokkaichi Plant, Chiba Plant, Kashima Plant, Yokkaichi Research Center (Performance Polymer Research Laboratories, Display Solution Research Laboratories, Fine Electronic Materials Research Laboratories, Advanced Materials Research Laboratories, and Edge Computing Research Laboratories), Tsukuba Research Laboratories
Group Companies: 13 domestic Group companies, and 10 overseas Group companies*
(Current as of May 31, 2018)

* For information about Group companies, see the asterisks (*) in JSR Group Companies on pages 25 and 26.

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JSR Group Profile

Responsible Care®

(“Responsible Care” is referred to as “RC” in this report.)

In the chemical industry, each company handling chemical substances is responsible for ensuring that safety, health, and environmental issues are addressed throughout the chemical lifecycle, from development and production to distribution, use and disposal, publishing the results of their activities and maintaining dialogue and communication with society—all voluntarily. This initiative is called “Responsible Care.”

Source: Japan Chemical Industry Association pamphlet

“Do You Know about Responsible Care?”

Information on RC is available online

Details and data concerning Responsible Care are provided in the Online Version.



JSR's Sustainability

Preparing for accelerating change in our times and society



Aiming to maintain sustainable growth in 2020 and beyond

The international situation has been undergoing dramatic changes in recent years. With such developments as the UK's decision to leave the EU, the US president's declaration of an "America first" policy, and the general secretary of the Communist Party of China's declaration that his nation is becoming a world leader, the world's power balance has collapsed and uncertainty about the future is growing. Meanwhile, advances in science and technology are gaining momentum in such areas as AI, big data, and "smart factories," and the wave of digitalization is coming with greater speed. I would like to begin this Top Commitment by looking back at JSR Group's course between FY2011 and FY2017 and examining how we have prepared for this age of accelerating change.

Aiming to achieve an ideal vision of itself in 2020 and beyond, JSR Group has been formulating and advancing mid-term business plans through three phases that began in FY2011 and will extend to FY2019. JSR20i3 (FY2011 to FY2013) was the first phase. Seeing the Petrochemical Products Business and Fine Chemicals Business as key JSR businesses, it anticipated slower growth in markets and looked for new business opportunities. The next mid-term business plan, JSR20i6 (FY2014 to FY2016), focused new attention on the Life Sciences Business and established it as a "third mainstay business" alongside the Petrochemical Products Business and Fine Chemicals Business. The current plan is JSR20i9 (FY2017 to FY2019). As

fears of a shrinking domestic market and slower growth in our client markets finally become realized, this plan looks to produce higher profits by leveraging SSBR (solution polymerization styrene-butadiene rubber) for fuel-efficient tires, the Semiconductor Materials Business, and the Life Sciences Business as three growth drivers. During the plan's initial fiscal year, FY2017, we successfully achieved strong performance based on increased sales of automobile tire materials and semiconductor materials and on growth in the Life Sciences Business.

The Life Sciences Business is the target of particular focus as we strive to become a company that can maintain sustainable growth in 2020 and beyond. We began research in this field in the early 1980s, and over the next 30 years or so have developed it into a key business for the next generation. We established JSR Life Sciences Corporation in 2012, and this company is now fully engaged in the development, manufacture, and marketing of medical products. Moreover, in 2016, we acquired KBI Biopharma of the United States and made Medical & Biological Laboratories Co., Ltd., a consolidated subsidiary. And in October 2017, we opened the JSR-Keio University Medical and Chemical Innovation Center (commonly known as JKIC) to develop through joint research with Keio University the innovative materials and products that will support new medical fields. Sales by the Life Sciences Business amounted to roughly 26 billion yen in FY2017 and are growing at a rate that should reach 40 billion yen in FY2018. Looking ahead, JSR Group will strive to breathe new value into the life science market, using the strengths that come with being a chemicals

company that is an "engineering" leader. As an example, we want to help lower swelling medical costs, which constitute a major social problem. Medical costs are skyrocketing primarily because of the long time and great expense required for new drug development. It is said that, on average, development takes about twelve years and costs between 300 billion and three trillion yen. We want to tackle this problem and spark innovation using the technologies JSR Group has developed in data science and other areas.

Responding to digitalization in specific business segments

We executed a series of actions in response to ever-accelerating digitalization in FY2017. The most important is the cultivation of data scientists. Some ten employees who received training at an American company last year can now handle programming on their own. They have produced tremendous results, including completing in two hours analyses that used to take three days. However, what is important here is not simply to have data scientists available. Instead, it is for all employees to eliminate their mental barriers to the dramatic changes that digitalization will inevitably bring, and for them to be ready to understand and utilize it. I think the first step toward responding to digitalization is to understand what programming is, what it can do, why it is necessary, and how it can be applied.

In our businesses, we executed a name change and reorganization of our Fine Chemicals Business's segments to create a new "Digital Solutions Business." Our aim here is to achieve a better fit with the coming digitalization age and generate greater growth. Additionally, we are making steady preparations to fully revamp JSR Group's core information systems into a platform that will make our daily corporate activities responsive to the digitalization age. This effort is linked to our vision of the ideal JSR in 2020 and beyond.

Contributing to the arrival of a sustainable society

Over its history, JSR Group has advanced its business with the aim of resolving social issues. It has done so with constant awareness of the impacts that it, a chemicals company that supplies materials, has on downstream companies and end users. At the present time, we place particular focus on three social issues: "the environment," "work styles," and "safety."

For "the environment," we are working under independently-set targets to tackle the challenges of Climate Change Mitigation and Environmental Impact Reduction. Within this context, we recognize that greenhouse gases and marine plastics are significant issues for us as a chemicals company. As for reducing our CO₂ emissions, we are making preparations toward seeing what JSR Group can do, including applying new technologies, based on guidelines of the Japan Chemical Industry Association, which is a participant in Keidanren's "Commitment to a Low Carbon Society."

We see reexamination of "work styles" to be an important challenge in achieving productivity capable of responding to coming changes. We are thus advancing reform that emphasizes changing the quality of work styles, rather



than simply reducing overtime hours. As part of this, we have renamed our effort "work-style innovation" in order to avoid falling into "reform for the sake of 'work-style reform.'" However, in evaluating our efforts thus far, I keenly feel that a top-down approach is as indispensable as a bottom-up approach. For example, changing work styles sometimes requires tremendous investment for the renovation of information systems and the like. Decisions concerning such investment are made in management meetings. Therefore, I think it may be necessary to change how management meetings are run in some cases.

And in the area of "safety," overall awareness of this issue is rising among employees based on our "Basic Philosophy for Occupational Health and Safety," formulated in 2016, and the "Courses of Action" that was put in place to implement it. We are now seeing the effects of this. On the other hand, a number of significant matters have also become evident. They include the necessity of safety education for specific age groups and the full implementation of safety measures in Group companies. We are currently exploring specific measures for resolving these matters and achieving even greater safety awareness. We will continue pushing JSR20i9 forward to address the challenges I have just described and realize a JSR Group that will grow sustainably in 2020 and beyond.

Moreover, we will practice corporate management that responds to the Ten Principles of the United Nations Global Compact and precisely grasps the SDGs* and other social issues. And we will contribute to the arrival of a sustainable society as a chemical company that proudly stands by its Corporate Mission: "Materials Innovation - We create value through materials to enrich society, people and the environment."

* Sustainable Development Goals (SDGs): International goals for the year 2030 that were set forth in "Transforming our World: The 2030 Agenda for Sustainable Development," a plan for action that was adopted at a UN summit in September 2015. They are comprised of 17 goals and 169 targets for achieving a sustainable world.

Mitsunobu Koshiba
President
JSR Corporation

Integration of management and CSR creates benefits for both society and JSR Group through its contribution to the development of a sustainable global environment and society.

Under the corporate mission of “Materials Innovation - We create value through materials to enrich society, people and the environment,” JSR Group aims to build and maintain good relations with all of our stakeholders and become an indispensable corporate citizen. We intend to resolve social issues by integrating management and CSR as well as demonstrating our corporate mission with actual results.

JSR Group's Corporate Mission and Priority Issues

Corporate Mission

Materials Innovation

We create value through materials to enrich society, people and the environment.

Management Policies:

Fundamental Pillars of Management

- Continuous Creation of Businesses
- Enhancement of Corporate Culture
- Increase in Corporate Value

Management Policies:

Responsibility to Our Stakeholders

- Responsibility to Our Customers/Business Partners
- Responsibility to Our Employees
- Responsibility to Society
- Responsibility to Shareholders

Course of Action: The 4Cs

CHALLENGE
COMMUNICATION
COLLABORATION
CULTIVATION

Issues facing society
that need to be addressed

WE SUPPORT



Basic Issues in JSR Group's Corporate Activity

- Corporate Governance
- Compliance
- Risk Management
- Responsible Care



- Business Development for Higher Profitability
- Reinforcement of Global Competitiveness
- Nurturing of Next-Generation Businesses

Innovation

Social Issues that JSR Group Can Help Resolve

- Eco-Friendly Products
- Health and Longevity
- Better Access to Healthcare and Medical Care
- Quality of Life and Happiness

Sustainability

Social Issues Attributable to JSR Group's Corporate Activity

- Health and Safety Initiatives
- Environmental Impact Reduction
- Climate Change Mitigation
- Water Resources Conservation
- Waste Reduction
- Human Rights
- Labor Environment
- Diversity
- Supply Chain Management
- Communication with Stakeholders

Development of a Sustainable Global Environment and Society

Achieving JSR's Sustainability: Considering Work Styles of the Future

In the interest of integrating its management and CSR and helping realize a sustainable global environment and society, JSR Group discusses identified priority issues with experts and presents details on those discussions in its CSR reports.

This year, we selected “work-style innovation x digitalization” as the theme for the FY2017 discussion. With attention to future work styles seen from the standpoint of digitalization, we approached this theme by discussing two subtopics—“future work styles in a progressing ‘digital society’” and “current HR management challenges”—with invited experts. Through the discussion, we confirmed the initiatives that we must take toward ensuring JSR's sustainability.



Participants (honorifics omitted)

Outside experts (from the bottom left)

Mizuto Aoto

Representative of DAnCing Einstein (DAE) and Neuro-Inventor

Hiroko Nomura

Professor, College of Humanities, Shukutoku University

JSR (from the upper left)

Kei Sawada, Production Technology Department

Yoshikazu Yamaguchi, Senior Officer

Daichi Suemasa, Research and Development Department

Satomi Inomata, Corporate Communications Department

Takeshi Yuasa, Research and Development Department

Ikuyo Kamiya, Research and Development Department

Future work styles in a progressing “digital society”

Considering the roles of artificial intelligence (AI) and people in the future

Aoto: Quite honestly, no one knows how people will be working in 2025 and 2030. Nonetheless, I think daring to think about what isn't known and which doesn't seem to have an answer is one of the abilities that people will need in the future. AI excels at work in which answers are drawn out quickly.

Suemasa: My department's work is in R&D and the creation of new inventions, so I don't think it will be replaced by AI. I believe that, for us, the question will be how to make such creative work more efficient.

Yuasa: I agree. The R&D of certain businesses that exist now can probably be made more efficient with AI. But if we're starting a new business, no practical data exist, so AI cannot provide best performance. Indeed, I think humans must think about such areas where answers are not readily available.

Sawada: Right now, a lot of work is going into gathering data to advance AI's application. However, this work will be eliminated in the future as IT advances. People will likely need skills in arranging and distinguishing vast amounts of data and, further, creativity in utilizing the data.

Aoto: AI runs on programs and data that are provided to it by human beings. However, in the field of neuroscience, the mechanisms of the brain are being understood biologically, and the generation of AI based on speculation on how the brain may react to interpersonal services is already beginning. AI has the ability to randomly extract various forms of information, which is something people are not very good at. I sense that this will produce seeds for innovation. I feel that new creativity will be needed for determining how people will handle the seeds that AI produces.

What people will need as they learn to coexist with AI

Nomura: AI is writing articles on financial statement announcements for the Nikkei online edition. This and other developments show that AI is beginning to appear in fields that no one thought possible just a few years ago. A study by Oxford University created a stir when it concluded that 49% of Japan's jobs could be replaced by AI and robots. The report stated that “creativity” and “cooperation” will be needed for the jobs that cannot be replaced by AI and that only people can do. The word “cooperation” can be replaced with “social intelligence.” We will need to polish this ability in the years ahead.

Aoto: One point that will become necessary for accepting future uncertainty is “adaptability.” The human brain has difficulty accepting new things. On the other hand, it can process information on things it is familiar with efficiently. It is for this reason that people tend to choose things they are familiar with. We also know that men and women grasp environmental changes differently. First of all, we must consider things based on recognition of the nature and diversity of human beings.

Inomata: We will increasingly need communication skills in the future. If we look at tools for communication, first email and then LINE* appeared. At first,

I thought, “I don't need LINE.” But when I started using it, I found it to be quite handy. New and different communication tools will probably appear, so I think we must have the ability to adapt to those new tools.

* LINE

A communication app that was released in June 2011. It is reportedly used by more than 217 million people worldwide. Among its features are one-on-one and group chat functions and free calling.

Aoto: I think that as we hand over to AI more and more tasks that can be entrusted to it, people will become more human. What I mean is, we will act more with feeling, say emotion or a sense of unity. Even when viewed in terms of the brain, although we understand that each of the systems of theory and emotion operate in completely different parts of the brain, we largely see the significant degree to which emotional factors affect people's decision-making. Right now, we are often told “Don't get emotional” in the workplace. But I think that, conversely, it is possible that emotions will come to be valued.

Yamaguchi: Undoubtedly, there are many ways in which we move with emotion. Indeed, feelings of frustration can be a major driving force for people.

Aoto: Great value remains in human beings' efforts to process information that is difficult to arrange into a pattern and non-linguistic information within the brain. For example, there is the feeling of “strangeness” that we experience from time to time. You feel that something is odd, but you can't put it into words. I think the brain's ability to produce this feeling is a very important capability.

Sawada: Certainly, unexpected malfunctions can occur at manufacturing sites, perhaps due to gradually aging equipment, but sometimes the people there sense that something is wrong before it happens.

Suemasa: Even if we have AI analyze the causes of a research failure, AI reaches the same conclusions because it makes its evaluation based on data supplied by human beings. We then consider what to do next using clues gleaned from people's sense of strangeness and awareness.

Aoto: It's not just a feeling of strangeness. If we sense that “something about this is interesting” or “this may go well,” that feeling can lead to innovation. Isn't that the feeling that Steve Jobs and Kazuo Inamori* were so exceptional at grasping?

* Kazuo Inamori

A distinguished Japanese businessman and corporate manager. He is the founder of Kyocera Corporation.

Kamiya: It is said that even academic researchers benefit from the hope of encountering serendipity in their research. What is necessary for researchers and developers is foresight, or thinking about things that seemingly have no answer. I think the question of how well engineers can refine this will become more and more important in the future.

Failure brings forward progress.

Aoto: Failure is also very important. Mistakes happen, and we can make new discoveries from them. This is also one of the values that people bring. If we view failures in a negative light only, we will learn nothing and be left with nothing more than a bad feeling. That's why in our company we hold weekly presentations to learn by finding ways to laugh about our failures.

To the next page



Yuasa: In fact, until a great success is achieved, more than 90% of trial-and-error data results in failure. However, thanks to so many failures, remarkable improvements are made and eventually innovation occurs. It sometimes happens even in my own experience. Therefore, it is possible that what humans will need to do going forward is to fail or to take on challenges freely without constraints.

Aoto: To do this, it is important to have education that changes the way we look at failure. One of my favorite phrases is “An activity that stops at failure becomes a failure. If you continue until you succeed, the activity will become a success.” It adds that “A person who can see his failure as a good lesson is a person who will grow later.” Even when viewed from a scientific perspective, this conforms with the principle of rewriting emotions. If you fail, it is important to find ways to view that failure positively.

Nomura: The company must have a culture that accepts failure. Having the ability to learn from failure is also very important in career development.

Yamaguchi: Looking at the importance of failure, in one area, ten-thousand prototypes are made but only twenty are accepted. What this means is that 9,980 failures are allowed. In recent years we have been hearing the phrase “fail fast,” but JSR has had such a culture for a long time. No one knows what will happen when something becomes a project or business. Those of us in management must convey this to our employees.

Current HR management challenges

Challenges concerning the current assessment system

Suemasa: Looking at challenges concerning current human resources management, I think one point worth discussing is that the assessment method ultimately assesses progress toward initially-established targets. I think that we will need to have agile assessment that includes acceptance of failure as uncertainty grows in the years to come.

Yamaguchi: That’s right. In addition, although the assessment system has rules to some extent, there are aspects of it that depend on interpretation by the supervisors who are managing personnel. So I think the system should be made to have clearer numerical values for more objective assessment. We must think about assessment systems that improve employees’ motivation.

Aoto: Although assessment of results is important, it is also necessary to grasp the entire process. This is because the brain learns through what is called “episodic memory” (memory based on individual experiences). Emotional memory is always linked to episodic memory. If a person has an experience in which he was able to solve a mystery through repeated failure or made a new discovery or shared an emotion with other team members,

his brain will spontaneously link to it and learn, and this will provide motivation to take on the next task.

With diversity, awareness must go beyond systems.

Inomata: JSR is also tackling diversity issues, and various initiatives are underway that involve utilizing women. However, I feel that no matter how many new mechanism we put in place, we won’t make much progress unless awareness and thinking change with respect to individual women.

Nomura: The problem of awareness is quite big, isn’t it. “Unconscious bias” is receiving attention in diversity now. No matter how much we develop our systems and conduct training, this issue is not penetrating through the organization as well as it should because it is unconsciously imprinted upon the organization’s fabric that men and women should be a certain way. We must first get people to realize the fact that we are bound by such unconscious prejudice.

Aoto: By nature, men and women have differences that come biologically from their chromosomes. So it’s pointless to consider men and women exactly the same in all instances. Men and women have different brain structures and their corpora callosa, which link the brain’s left and right sides, have different sizes. It is also known that women are better at multitasking. Unless we develop a perspective that accepts these differences between the sexes, real equality will be unattainable.

Nomura: There is one more thing I would like to mention. If we think about why there are so many calls for the utilization of women, it is because, in today’s Japan, the difference between men and women in terms of share of management and continuous service years is too great compared to Europe and the United States. In other words, it is because women’s abilities are not being fully utilized. If we let things take their natural course, I think it will take a hundred years before we achieve a society in which men and women can participate actively and equally. If we don’t shorten this to at least 20 years or so, Japan will be fall behind the rate of change in the world. Japanese companies should be fully aware of this issue and execute measures.

Aoto: It may be possible to achieve HR management that puts the right people in the right positions, regardless of whether they are men or women, by accepting individuals and individual differences and applying AI to discern their particular abilities and character as well as likes and dislikes.

What should be done to raise job efficiency?

Sawada: There are still cases where efficiency improvement has not been achieved. Sharing information takes time and effort—for example, when the production technology sector and manufacturing sites share data to study processes.

Yuasa: One problem I see is how to respond to the growing number of discussions and meetings. Even if we change the way we work by bringing in useful tools and the like, we end up losing time we can control for ourselves when more and more meetings are scheduled.

Kamiya: In my department, teams were formed to move meetings along by preparing an agenda and assigning facilitators (people who move the meeting along in a productive direction) and timekeepers. I think these teams have done a good job of shortening meeting times. We have also introduced the free address system to our offices. This system makes it easier for us to communicate with each other. In this and other ways, I feel we are beginning to make progress in improving job efficiency.

Nomura: As you just mentioned, you have positive examples for dealing with discussions and meetings. Why don’t you try extending them laterally to other parts of your organization? I also think that speaking frankly on a routine basis will help shorten meeting times. It might be a good idea to introduce mechanisms that support informal communication.

Kamiya: We have been implementing various approaches, starting with work-life balance followed by work-style reform projects. But there is talk that these approaches are not about reducing overtime. So, honestly, we’re not really sure which direction we’re going. I get the sense these approaches haven’t penetrated well among ordinary employees.

Yamaguchi: That’s a problem on the management side. One item included in the fiscal 2018 schedule for the mid-term business plan is “reconfirm the vision and provided value of each department.” In other words, it is a call to reexamine why we do a certain operation—for what end, for whom, and for what purpose. This may eliminate the need to prepare documents and reduce work as a result. From this perspective, changing the way we work is work-style innovation.

Nomura: The true objective of work-style reform is not to reduce overtime work. So it is important for management to strongly communicate this message. If the purpose of the program is not communicated, overtime work might become something done for free and you could end up putting employees in a tough spot. With regard to the advancement of women’s participation and work-style reform, there is data showing that productivity does not improve much when only systems are changed but does improve when those efforts are combined with IT. So you still have room to consider ways of combining them.

Connecting the ideas of young people to the next generation

Yamaguchi: Traditionally, if you mentioned the word “work,” people thought of doing a job and receiving pay for it. But I feel that there will be a change

from this concept. When I was in university, I heard the phrase “the dictionaries that are in our heads contain the word kando (movement based on emotion) but not rido (movement based on reason).” I always thought that was the truth. We stay up to play games and read books even when we’re tired because we find them interesting. People do not act unless they feel some kind of empathy or inspiration. Looking at this from my perspective, I am reminded that getting employees to feel that in their work and working with enthusiasm is the challenge.

Aoto: Summing up our discussion today in my own way, I’d say that it’s about “enjoying Chaos as individuals.” A world heretofore unimagined will be born and uncertainty will increase with the growing presence of AI. This means what we will need is a state of mind oriented toward enjoying it. As a result, people will become more human and each individual will become more like him or herself. And I think that we will enter a time when individual differences are valued.

Nomura: I think we will enter a time when stronger human communication skills are required. Efforts to reform work styles and advance women’s participation are unlikely to succeed unless we practice a different kind of communication. For example, women who work short hours must talk with their supervisors about their current circumstances and their needs. Their supervisors won’t understand those matters unless women actively communicate with them. At the same time, supervisors must also create an environment that permits their subordinates to speak comfortably. In this sense, I think you could say that work-style reform equals communication reform.

Yamaguchi: We have had a very meaningful time today, having heard two experts and young JSR employees discuss some important topics. I feel that the most important thing is to link the ideas that you, the members of the younger generation, expressed today to the next generation. It is our job in management to continuously lay the groundwork so that even one or two of the things we discussed today will be realized ten or twenty years down the line. The exact same thing will be applicable when the time comes for you young people to enter management. I think this will give JSR Group sustainability in its true sense. Thank you all for a very enlightening discussion.

Facilitator
Hiddenori Imazu
Program member of the academic association
“Japan Forum of Business and Society”

May 9, 2018, at JSR Corporation Headquarters
The content appearing here has been summarized from the actual dialogue. Please see JSR’s CSR website “Dialogue with Stakeholders” for the complete text.



Social Issues that JSR Group Can Help Resolve

Looking to ensure that the corporate body known as JSR Group continues to survive and grow over the next twenty or thirty years, we will resolve priority issues by seeing “business” and “CSR” as one and the same, and by establishing three points of attack: “Social Issues that JSR Group Can Help Resolve,” “Social Issues Attributable to JSR Group’s Corporate Activity,” and “Basic Issues in JSR Group’s Corporate Activity.” Particularly when it comes to “Social Issues that JSR Group Can Help Resolve,” we know that we must move quickly and boldly in response to changes in society’s needs. Quite simply, we will need to be a company with innovative strength and sustainability.

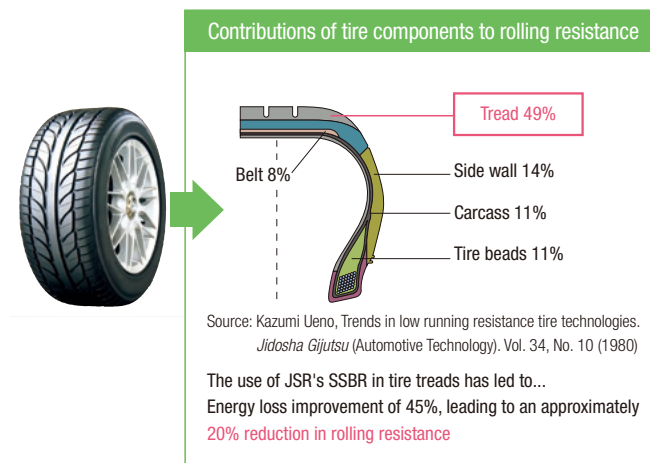
Our new mid-term business plan JSR20i9, which started in April of 2017, lays out growth scenarios for JSR Group in each of our main businesses: the Elastomers Business, the Digital Solutions Business, and Life Sciences Business.

We will help resolve social issues through business activities that are in line with these three business growth scenarios.

SSBR: A Synthetic Rubber for Low Fuel-Efficient Tires with Great Potential in the Effort to Solve Global environmental Issues

Fuel-efficient tires are environmentally-friendly products and yet maintain their ability to stop safely and securely. JSR Group’s solution polymerization SBR (SSBR) has received positive feedback from customers. JSR Group designed SSBR using technology that more readily facilitates rubber molecules and tire reinforcing material molecules to bond tightly, which reduces internal friction and rolling resistance.* In addition, this is achieved without changing the characteristics of rubber that enable tires to stop. SSBR allows large reductions in environmental impact through the entire lifecycle of the tire, from the material selection and its usage to disposal. Automobiles will still require tires even after automotive engines are replaced with electric motors. Thus, demand for SSBR is high both in countries and regions where environmental standards are high, such as Japan and Europe, and in emerging nations where reducing environmental impact is an urgent

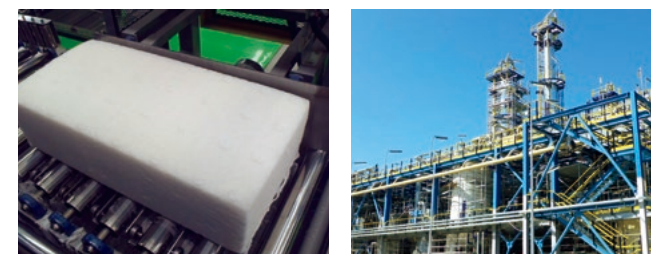
issue. SSBR is currently manufactured in two countries: At the Yokkaichi Plant in Japan and JSR BST Elastomer in Thailand. Additionally, production is scheduled to start at JSR MOL Synthetic Rubber in Hungary in 2018. We will continue helping to solve global environmental issues by meeting the global demand for fuel-efficient tires.



* Rolling resistance: Resistance in the direction opposite to the direction of tire rotation. Caused by tire deformation, ground contact friction, and air resistance.



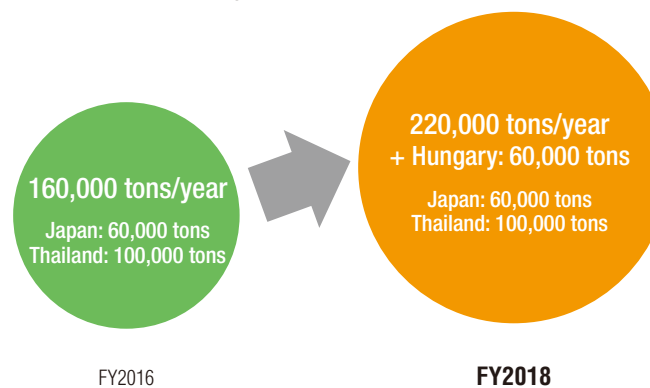
JSR BST Elastomer Co., Ltd. (Thailand)



SSBR before packing

JSR MOL Synthetic Rubber Ltd. (Hungary)

SSBR production capacity



A New “Open Innovation” Base for Generating New Business New Research Wing of the Yokkaichi Plant (Center of Materials Innovation)

JSR maintains research centers and laboratories for the Elastomers Business and Digital Solutions Business (Semiconductor Materials, Display Solution, etc.) in the Yokkaichi Plant. With the arrival of JSR’s 60th anniversary in 2017, we began operations at a new type research building, one that is in addition to these facilities, with a view to further growth in the future.

Purpose of the new research building

There are five R&D bases within the Yokkaichi Plant: The Performance Polymer Research Laboratories, which is associated with the Elastomers Business, and the Display Solution Research Laboratories, Fine Electronic Materials Research Laboratories, Advanced Materials Research Laboratories, and Edge Computing Research Laboratories, which are associated with the Digital Solutions Business. The new research building will primarily focus on research oriented toward generating new business. For this reason, it will set research themes that anticipate market needs and enable a flexible research system that is highly responsive to customer demand based on close collaboration with the five research centers and laboratories. Moreover, to improve our ability to create innovation, which is the source of JSR’s competitiveness, we will give it an environment that produces spontaneous conversation and collaboration among diverse fields, making it a base for functional interaction among individual research centers and laboratories. We will also study its application in externally-linked research activity as a base for open innovation.



New research building: Exterior

Outline of the new research building

Name: Center of Materials Innovation

Location: 100 Kawajiri-cho, Yokkaichi-shi, Mie (within the JSR Yokkaichi Plant)

Total floor space: 7,286 m²



New research building: Space for interaction



Characteristics of the new research building

We will promote “cross-field interaction among research centers and laboratories” and “interorganizational team-building” by establishing free-address offices and interactive spaces for the first time in a JSR research facility. The third-floor administrative office is a free-address office without fixed seating. Near the third-floor office, we set up spaces for personnel interaction by adjusting the floor height to create mezzanine-like floors (Floor 2.5, Floor 3.5, and Floor 4.5) and give employees the freedom to choose where they want to work.



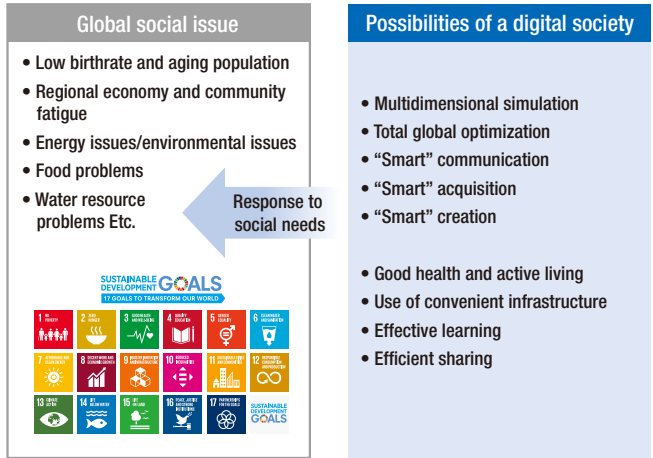
New research building: Free-address office

To Contribute to the Evolving Digitalization-Based Society (Digital Solutions Business)

Society and the Coming Digital Revolution

Today, when life without computers and the internet is no longer imaginable, are about to happen. For now, computers can only be run by programs; however, they are gradually gaining the ability to learn on their own (in a phenomenon called “cognitive computing”). The devices which we use directly—the personal computers (PCs), tablet computers, and smartphones equipped with semiconductors, displays, cameras and the like—are in fact terminal devices that connect the virtual world (a vast aggregation of various data) with people and things. Cloud computing (the “Cloud”) stores and shares data through these terminal devices and the internet. The world of the Cloud is a growing virtual space composed of artificial intelligence (AI) and other technologies that dramatically become smarter by learning from enormous amounts of collected data. In the future, it will not be just “people” who are linked to this virtual space through their smartphones; indeed, many “things,” such as cars and manufacturing equipment, will also be linked to the virtual space as “edge devices” through various sensors (creating a phenomenon known as the “Internet of Things”: IoT). As a result, an unfathomably vast amount of data (“Big Data”) will be aggregated there. AI will continue to get smarter, and eventually the day when we “people” use advanced AI unconsciously in

daily life will come. Furthermore, AI will make automation of diverse and complex operations through robotics possible. The application of such technical innovation and data will allow us to address “global social issues = true customer needs,” which is something we have been unable to fully address heretofore. This will encourage economic growth gained by utilizing new technologies and data and also help solve various international issues. Our goal is to help bring about a more prosperous society for each and every person of the world.



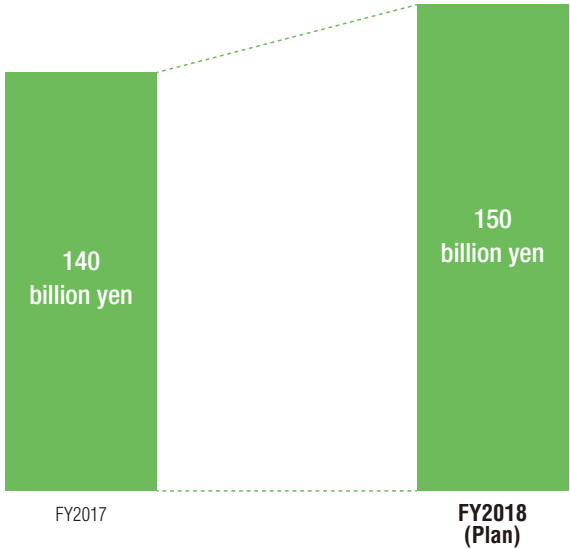
Source: Prepared based on materials of the Ministry of Economy, Trade and Industry's "New Industrial Structure Vision"

Added Value for Society by the Digital Solutions Business

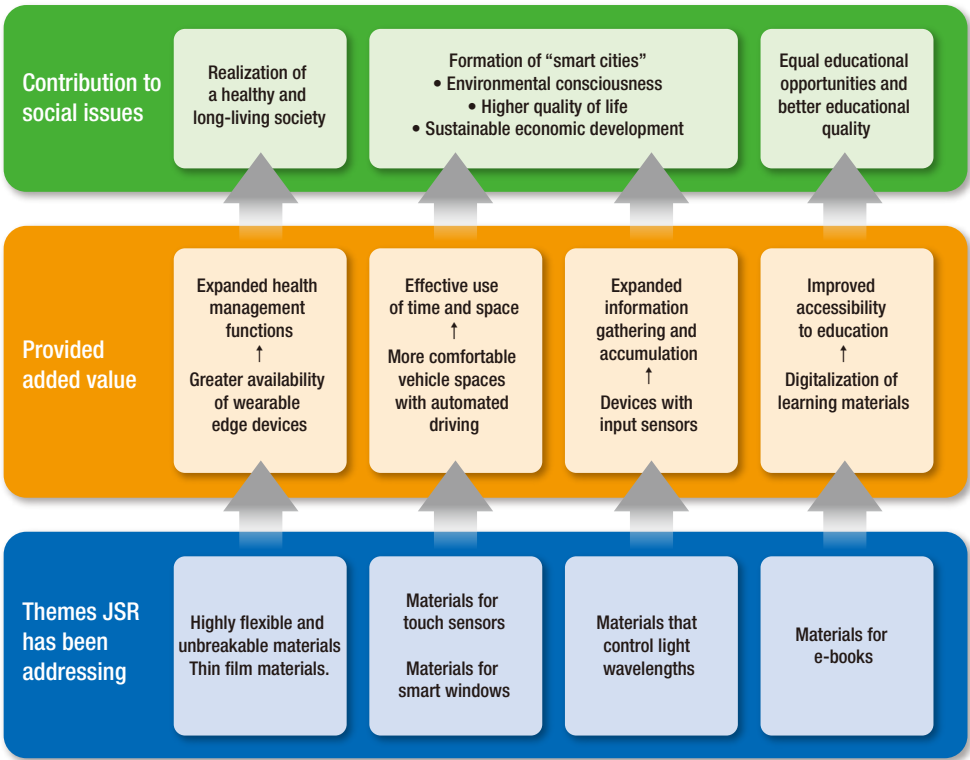
The digital solutions business of the cognitive computing age will need more than a materials-based approach whereby it simply supplies functional chemical products—specifically, differentiated high-value products. It will also require an approach that involves providing solutions that are matched to customers’ needs. For this reason, JSR’s Digital Solutions Business ascertains information and knowledge on cutting-edge social trends quickly and precisely as an organization, and with focus on the customer, it enables them to link to expeditious solutions. It provides added value for the resolution of social issues through products. For example, to address the social issue of realizing a healthy and long-living society, it is developing materials for wearable devices that will make constant health management possible. Also, to tackle the social issue of ensuring equal educational opportunities, it is developing e-book materials that will help to improve educational accessibility.* JSR’s Digital Solutions Business will quickly respond to social change and contribute to the developing society utilizing IoT and Big Data.

* Educational accessibility: The ability to access and use educational environments without physical, informational, institutional, or psychological impediments, regardless of disability or other physical or mental circumstances or living environment.

Projected sales by digital solutions business

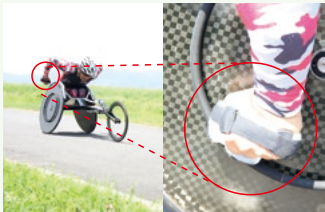


Examples of added value provided for social growth, using the development of Big Data and IoT as a driving force



Working to Improve the Performance of Paralympic Athletes with 3D Technology Participation in the Sports and Health Innovation Consortium

JSR is a participant in the Sports and Health Innovation Consortium,* a body led by Keio University’s Shonan Fujisawa Campus that conducts technical development to support athletes and others concerned. One of the activities of the consortium is research to improve performance by applying 3D technology to create equipment matched to individual athletes engaged in Paralympic competition. JSR joined the consortium in October 2015 as part of its effort to develop business through 3D printing and associated materials technologies. Since then we have been developing gloves for wheelchair competition. Gloves for wheelchair competition take time to produce because they are hand-made by each athlete. Translating a glove’s original shape into 3D data and then producing gloves using a 3D printer makes it possible to repeatedly reproduce gloves that fit and also shorten the time required to make them. Furthermore, making slight adjustments to the 3D data can produce gloves that are even easier to use and can help improve athletes’ performance. We will continue to provide new value that is useful to society through collaborative industry-academia initiatives such as this.



A wheelchair track-and-field event and competition glove



A glove for wheelchair competition

* Sports and Health Innovation Consortium
The Sports and Health Innovation Consortium is comprised of several private companies and represented by Professor Yuji Ogi of Keio University’s Shonan Fujisawa Campus. With the opening of the 2020 Tokyo Olympic and Paralympic Games on the horizon, the consortium’s aim is to conduct technical development to support athletes and others concerned through “digital humanics,” an approach that “makes a science of capturing human movements in digital form and expressing and assisting them digitally.” It further aims to use this as a starting point for creating technologies and businesses that will help solve quality-of-life-related social issues in the areas of sports, medicine, nursing, caregiving, and welfare.

Contributing to a Healthy and Long-Living Society and Better Access to Healthcare and Medical Care (Life Sciences Business)

One in every three Japanese persons is expected to be over 65 years of age by 2035 (according to the survey conducted by Statistics Bureau, Ministry of Internal Affairs and Communications in September 2014). This super-aging society is already creating issues such as increased medical care expenses and elder-to-elder nursing. Extending healthy life expectancy without daily assistance or care is now an issue that our society faces. Development of personalized medicines which enhance the efficacy of therapies by matching treatment methods more precisely to the condition of the individual patient will increase healthy life expectancy in the future. Healthcare methodologies and techniques will likely change during the coming years. Examples of this shift include the development of diagnostic technologies for early detection of disease as well as advances in highly effective treatments and pharmaceuticals to treat serious diseases at early stages. JSR Group's Life Sciences Business, which contributes to personalized medical care and other fields, is the Group's third base business, following the Elastomers Business/Plastics Business and Digital Solutions Business.

Medical Care Trends and JSR's Life Sciences Business Fields

Speeding up the practical application of advanced therapies for quick delivery to patients—that's JSR's challenge. As drug development becomes increasingly sophisticated, the cost and time required to develop drugs is growing and becoming a major issue within the pharmaceuticals industry. It has been reported that, between 2006 and 2014, the cost required for major pharmaceuticals companies of the world to commercialize one molecule as a drug was between 3.2 and 32.3 billion dollars (roughly between 300 billion and 3 trillion yen).*1 Moreover, the average length of time needed for a new drug to reach the

market was 12 years.*2 Advancements in innovation and analytical technologies as well as new understanding of biology have made drug discovery—and particularly the biologics and precision medicine fields—more complex. In accordance with such medical care trends, JSR Group is developing businesses centered on the bio-pharmaceuticals and advanced diagnosis fields. Moreover, we will continue working to raise treatment development success rates, shorten development periods and improve treatment efficacy in bio-pharmaceuticals-centered fields.

*1 Source: Shuhmacher, Gassman, Hinder, Journal of Translational Medicine
*2 Source: California Biomedical Research Association

Structure of the Life Sciences Business

JSR has built the structure of its Life Sciences Business through mergers and acquisitions to help bring greater efficiency and shorter time frames to the drug development process. KBI Biopharma Inc., a company that become a consolidated subsidiary in 2015, possesses powerful technologies in biopharmaceuticals analysis and manufacturing process development. It undertakes contracted analysis and manufacturing process development from pharmaceutical companies as well as contracted manufacturing of commercial drugs. Selexis S.A., which we acquired in July 2017, is a company that develops cell lines capable of efficiently and stably culturing proteins such as antibodies that become the basis of drugs. It accepts contracts for the development and supply of the optimal cell lines in accordance with proteins to be cultured. Combining Selexis' high-performance cell lines and KBI's analysis and process development technologies allows us to shorten the time required for drug development. JSR makes a contribution by using this capability in materials development to provide the various culture mediums and purification materials that are used in the manufacture of biopharmaceuticals. Using Selexis and KBI as platforms for evaluating such advanced materials and utilizing them for development helps us enhance the efficiency of our materials development.

JSR markets Amsphere A3, a high-capacity Protein A chromatography resin used in the process of manufacturing antibody drugs, and KBI plays a major role in developing and expanding the sales of this product. Crown Bioscience Inc., which JSR acquired in 2018, provides services that can improve the efficiency of drug discovery research. Crown possesses the world's largest number of PDx*3 models. The use of diverse PDx models that are built from various patients' cancer tumors permits drug testing in an environment approaching that of the human body prior to clinical trials in humans. This helps improve the probability of success at the clinical trial stage. Additionally, Crown also accumulates data on genes, proteins, and other components of various cancer tumor types. By testing proteins that will become drug candidates with PDx models and analyzing them with a database, Crown can identify candidates for factors (biomarkers) that influence drug effects. Doing this makes it possible to select only those patients who possess factors on which the drug is effective and permits the efficient planning of clinical trials. Furthermore, when a candidate drug substance being developed is actually approved and put to practical use, it becomes possible to evaluate its effects prior to drug administration by diagnosing the presence of biomarkers. In this way, the contract research services that Crown provides contribute not only to greater efficiency in the drug development process but also to the development of precision medicine.

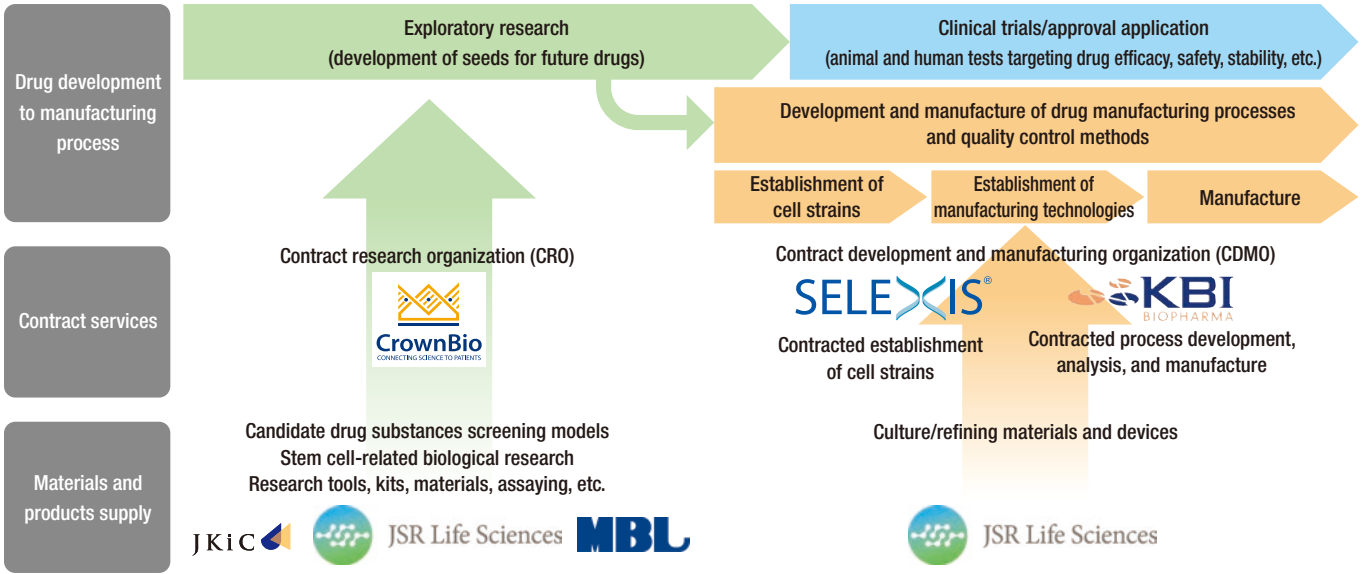
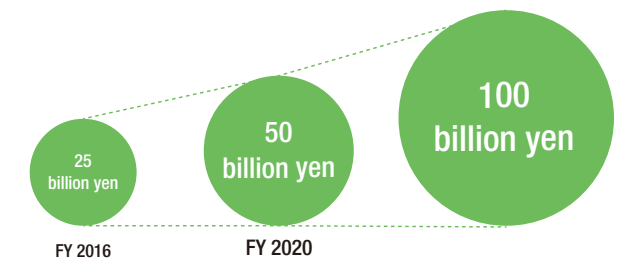
*3 PDx: Patient Derived Xenograft. The transplantation of human patient-derived cancerous tissue into an immunodeficient mouse. It is more effective than conventional methods in the screening of anticancer drugs because assessments can be conducted in an environment that better approximates that of the human body.

Medical & Biological Laboratories Co., Ltd. (MBL), which became a consolidated subsidiary in 2015, supplies various research reagents that are used in the contract research services provided by Crown. It is also contributing to the growth of precision medicine by turning biomarkers into diagnostic reagents. The JSR-Keio University Medical and Chemical Innovation Center (JKiC), an organization based on industry-academia collaboration that was launched with Keio University in October of 2017, is exploring seeds that will further precision medicine and developing

screening models that will contribute to more efficient candidate drug substances screening. The results of these activities are being provided to society through Crown and other members of JSR Group and contributing to more efficient and shorter drug development processes and the growth of precision medicine. By adding Crown, a contract research organization, to the Group, JSR can now eliminate gaps at contact points with customers who conduct exploratory drug research. Additionally, JSR has completed rebuilding its business operations framework through the series of M&As that was described above. As a result, JSR's Life Sciences Business can now seamlessly provide value in areas ranging from the supply of products and services for drug discovery processes in the pharmaceutical industry to GMP*4 manufacturing. It is expanding strategic basic research, diagnostic reagent development, and contract drug discovery and development services on the upstream side of the drug development process, and also expanding everything from the establishment of cell strains to manufacturing process development and contract GMP manufacturing services in the biopharmaceuticals manufacturing processes on the downstream side. JSR Group will supply innovative services, products, and materials for all processes associated with the development of new treatments to pharmaceutical companies, biotech, and academia.

*4 GMP: Good Manufacturing Practice. An international standard pertaining to drug manufacture and quality assurance.

Projected sales by the Life Sciences Business



Our customers and business partners, employees, society, shareholders, and other stakeholders will be affected in various ways as our scope of business grows. JSR Group will deepen mutual understanding with each stakeholder and meet their expectations.

Health and Safety Initiatives (Accident Prevention/Occupational Health and Safety)

Philosophy

Based on our “Basic Philosophy for Occupational Health and Safety” and “Course of Action,” we are “moving toward becoming a ‘mutually enlightened organization’ in terms of (1) extremely safe behavior, (2) enhanced human resources and organizational strength, and (3) optimal risk management and security measures” as a vision of where we want to be in FY2020.

Basic Philosophy and Course of Action for Occupational Health and Safety

(1) Basic Philosophy for Occupational Health and Safety

At JSR Corporation, safety is our highest priority and the foundation of all of our activities. Accordingly, we will create safe worksites and strive to maintain physical and mental health, with the goal of ensuring a safe return home at the end of each workday.

(2) Courses of Action

- 1. No matter the situation, we will act with safety foremost in mind.
- 2. We will comply with established rules and never fail to act in accordance with safety basics.
- 3. We will maintain safety by identifying and eliminating both actual and potential hazards.
- 4. We will strive to create comfortable work environments and promote physical and mental health.
- 5. Through communication and ingenuity, we will aim to achieve 100% employee participation in all safety activities.

Health and Safety Vision for 2020 (Basic Policy for Security Management)

(1) Extremely Safe Behavior

The Basic Philosophy for Occupational Health and Safety has penetrated through the organization, the Courses of Action are established as applying to everyone, and safety competency is improving through independent safety activities.

(2) Enhanced Human Resources and Organizational Strength

High personal skills, organizational ability, and a healthy organizational culture are being maintained with the establishment and execution of the education and training programs needed for organizational management.

(3) Optimal Risk Management and Security Measures

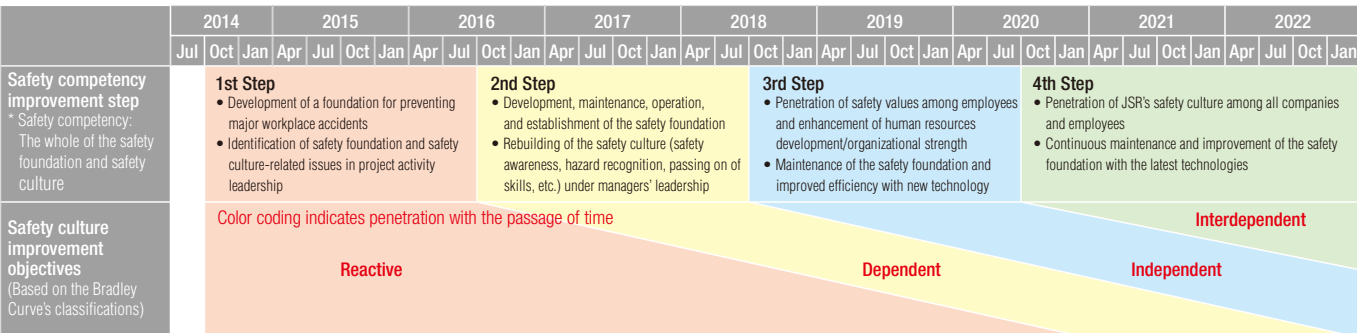
Security measures corresponding to risk importance are being efficiently and effectively implemented using new technologies.

* Regular activity verifications (by JSR and third parties) will be conducted to confirm progress toward fulfilling the vision.

FY2017 Activities

In FY2017, we efficiently operated the safety foundation we have developed heretofore and worked to improve our safety technologies. We also strengthened our activities in process safety. As for our safety culture, we focused on initiatives for passing on technologies from older to younger workers and building risk recognition, and continued our efforts to spread safety-related values among our employees. We intend to continue these activities and verify their effects in FY2018.

Medium-Term Plan



Notes:
Reactive: No action unless an accident happens; response by instinct
Dependent: Management by a supervisor/safety officer; doing what one is told to do
Independent: Action on a personal level; ability to act alone without being told
Interdependent: Working on colleagues; mutual awareness with colleagues
(Source: DuPont)

(1) Promoting Safety Assessment

We unfailingly promote independent safety activities as part of our approach to process safety and workplace safety. One important basis for these activities is risk assessment.

Using multiple risk assessment methods to ensure completeness, we identify serious risks and execute both infrastructure- and human-based countermeasures to deal with them.

(2) Optimizing Organizations and Systems for Safe Plant Operation

1) Review of manufacturing-related organization and operations

We reexamined the number of people needed in each manufacturing section, split organizations so that managers can fully grasp what is happening within them, and expanded staffs. We are now seeing improved workplace communication and other benefits as a result. We will continue ascertaining the effects of this organizational review and also look at how functions and roles are shared with other concerned departments.

2) Improvement of the educational system

We have set desired levels for ranks of the job hierarchy and are striving to provide HR education that allows employees to reliably achieve those levels. We are also conducting assessments of individual employees' ability to operate specific equipment items and processes as well as their comprehensive abilities, and using them to maintain and improve organizational strength.

(3) Building of a Safety Culture-Level Self-Diagnosis System

Because “safety culture” differs greatly depending on the company, business location, or workplace, it is important for organizations to accurately grasp their own safety culture level when building it. To periodically monitor the safety culture level of each workplace, we prepared a safety culture questionnaire and began using it primarily in manufacturing-related departments.

In FY2017, we acted to improve the precision of our safety culture maturity evaluations by having an outside organization conduct a third-party evaluation and then comparing the results to results of our own questionnaire. We will

continue improving and evaluating this questionnaire so that we may ascertain strengths and weaknesses at the company, business location, and workplace levels and tie what we learn to the building of our safety culture.

(4) The Safety and Health Activity Forum

The Safety and Health Activity Forum is a JSR Group initiative at which all business establishments of the Group present exemplary safety and health activities. Its objectives are to improve employees' safety awareness and to raise the quality of safety and health activities. Each year, we select presentation themes after conducting a careful screening of examples of safety activities that were nominated by each establishment.

The FY2017 forum was held on July 21, “Safety Day.” The following presentations were made.

After the presentations, a panel discussion was held by the presenters and became the scene of a lively discussion on “eradicating unsafe behaviors.”

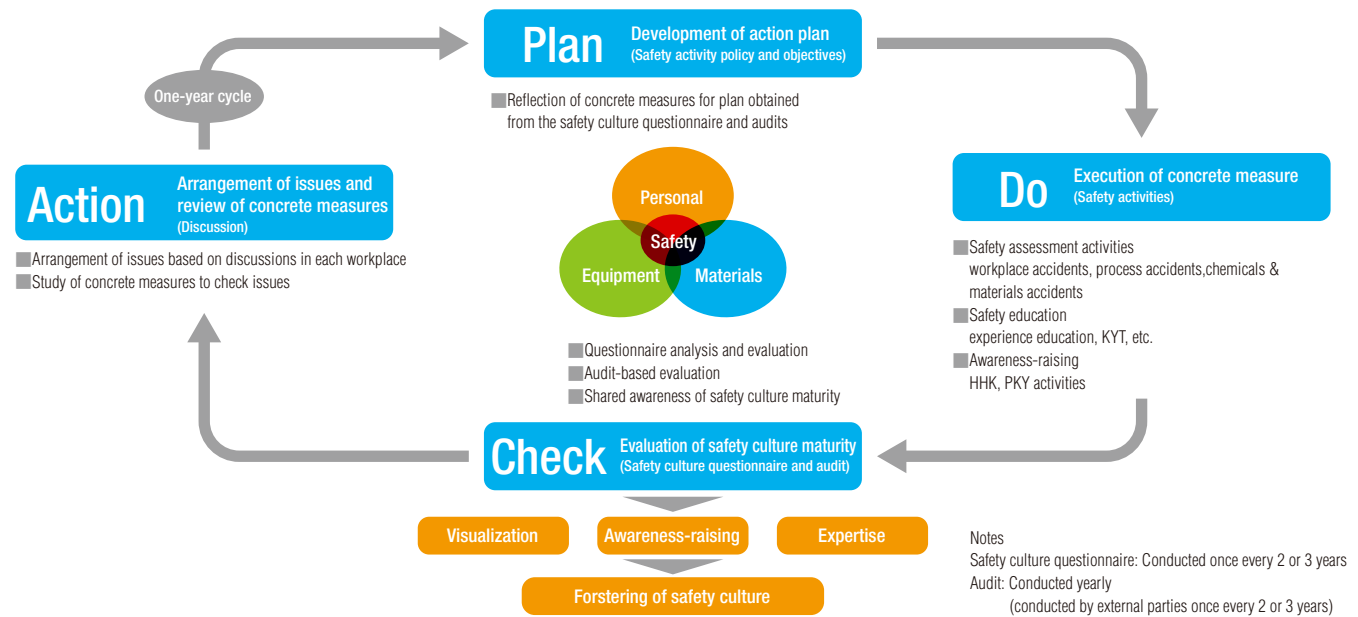


A presentation at the FY2017 JSR Safety and Health Activity Forum

List of presentation at the FY2017 JSR Safety and Health Activity Forum

Presenting group	Title
Yokkaichi Plant Development Dept.	Cultivating and Strengthening Safety Activities
Chiba Plant Environmental Safety Dept.	Reducing Risks in the Chiba Plant's Disaster Response
Kashima Plant Manufacturing Dept.	Safety Activities for Improving Emergency Response Capability and Safety Awareness
Yokkaichi Plant Testing Dept.	Department-Wide Safety Promotion Activities
Yokkaichi Plant Manufacturing Dept.	Focusing on Safety following a Major Workplace Accident
Yokkaichi Plant Manufacturing Management Section	Observing people's safety actions

PDCA cycle for safety culture fostering

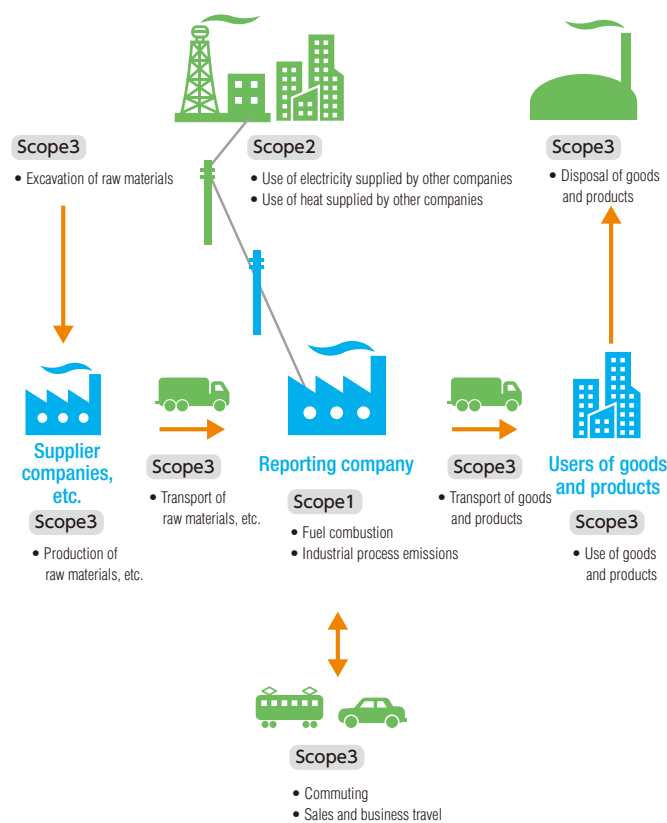


Notes
Safety culture questionnaire: Conducted once every 2 or 3 years
Audit: Conducted yearly
(conducted by external parties once every 2 or 3 years)

Climate Change Mitigation and Environmental Impact Reduction

Initiatives to reduce Greenhouse Gas Emissions in the Supply Chain

Amid a global trend whereby businesses are managing greenhouse gases indirectly emitted from their supply chains and disclosing their emissions, JSR Group has launched initiatives to calculate and ascertain emissions and reduce emissions based on the Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain issued by Ministry of the Environment, Government of Japan.



● Response to Scope 1 and Scope 2

We have established CO₂ emissions reductions targets in our Medium-Term Environmental and Chemical Management Plan and endeavor to reduce our greenhouse gas emissions through energy-conservation activities. In FY2012, we established our “System to Reduce Total CO₂ Emissions from Three plants by 6% Compared to FY1990,” and achieved our goal with a CO₂ emissions reduction of approximately 9% compared to FY1990 in FY2017.

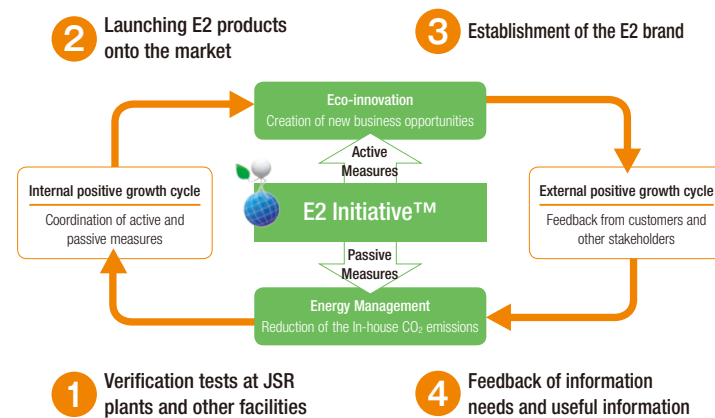
● Response to Scope 3

We are systematically implementing initiatives to reduce our transport-sector energy as a specified shipper under the amended Energy Conservation Act. In FY2017, as a result of policies to transport goods and raw materials by railway and ship, we achieved a modal share of approximately 86%, thus maintaining last year’s high level, and successfully held down per-unit transportation energy.

Working to solve Environmental Issues through Deployment of the E2 Initiative™

Because both humans and innumerable other living things share this planet Earth, we must make an earnest effort to deal with environmental issues. JSR Group has adopted its E2 Initiative™ as a concept to simultaneously reduce environmental impact and create new business opportunities using the environmentally-friendly aspects of our products. The E2 Initiative™ is based on “Eco-Innovation,” which is designed to create business opportunities based on the environment, and “Energy Management,” which is focused on reducing CO₂ emissions. It is a concept that allows us to create value both in active and passive ways. As we shifted our concept of value from the conventional two approaches of “differentiation” and “cost,” our new concept of “environmental performance” has become essential. By using the “Life Cycle Assessment (LCA)” to evaluate the “environmental impact” of our products from the design stage in the product development to the use of the product, we are working to solve environmental problems throughout business operations.

The E2 Initiative™ Concept



Introduction of a natural gas-fired turbine cogeneration system

The Yokkaichi Plant installed a natural gas-fired turbine cogeneration system in April 2010. By using natural gas instead of coal, a heavy oil-fired steam boiler and condensing steam turbine system, this new system helped us to cut CO₂ emissions by approximately 35,000 tons in FY2017.



Natural gas-fired turbine cogeneration system (Yokkaichi Plant)

Communication with Customers

The Corporate Mission of JSR Group “Materials Innovation - We create value through materials to enrich society, people and the environment”. We believe that an important role of JSR Group is to offer innovative materials and excellent products that meet our customers’ needs through communication with them and to contribute to the making of a better society. We also link communication with our business partners to improvements in our business activity.

Receipt of Infineon Technologies’ Best Quality Award 2017

At Global Supplier Day 2017, held on November 8, 2017, Corporate Vice President Quality Management Andreas Heitzer of Infineon Technologies, a world leader in semiconductor solutions (on the right in the photo), presented JSR Micro N.V. with his company’s Best Quality Award 2017. This prestigious award recognizes Infineon’s most outstanding supplier. It was presented to JSR Micro N.V. in appreciation for its long service as a high-quality supplier.



On the left is JSR Micro N.V.’s President, Bart Denturck

The trophy awarded to JSR Micro N.V.

Communication with Business Partners

Holding of agency meetings and presentation of agency awards (Specialty Elastomer Department, Elastomers Business)

Since 2013, we have been holding annual meetings with our agencies. The purposes of these meetings are to nurture a sense of unity with our agencies with an eye to strengthening sales and to improve their knowledge of our products by sharing problems, grasping raw materials trends, and introducing products. We also recognize domestic and overseas agencies that have made particularly noteworthy contributions to global sales.



An agency meeting

Communication with Shareholders and Investors

Shareholders’ Meetings

JSR Group has implemented a variety of measures to facilitate the exercise of shareholder voting rights. These include the holding of the general shareholders’ annual meeting at an earlier date to avoid the typical peak period of shareholders’ meetings, earlier notification for the meeting, the adoption of a voting system via Internet, participation in electronic platforms for the exercise of voting rights by institutional investors, the listing of invitations to shareholders’ meetings on our website in both Japanese and English, and the introduction of smartphone compatibility. We aim to make documents attached to invitations to our shareholders’ meetings easy to understand. To this end, we provide not only legally required content, but also other useful information, such as information regarding our products and an overview of our mid-term business plan. Additionally, we make effective use of graphs, photographs, and color printing. We also employ various methods to enhance understanding of JSR at ordinary general meetings of shareholders. They include displaying panels that present JSR, explaining our business conditions with visual and audio media, and presenting a briefing on the mid-term business plan by the President. In FY2017, we participated in several seminars for corporate investment analysts. We hold a total of nearly 250 meetings for investors in Japan and overseas per year. Feedback on opinions and questions received through these meetings is shared with management on a regular basis. With regard to the global development of JSR Group companies, we voluntarily introduced IFRS* from March 2018 in an effort to improve the comparability of financial information regarding international capital markets.

* International Financial Reporting Standards

JSR held a briefing and observation tour for securities company analysts and the media.

On February 21, 2018, we held a briefing on JSR Group’s Life Sciences Business for securities company analysis and members of the mass media. We also conducted an observation tour of the JSR-Keio University Medical and Chemical Innovation Center (JKiC), which is a joint research facility run by JSR and Keio University’s School of Medicine. During the Life Sciences Business briefing, we presented the business’s positioning within JSR and our strategy for it; the circumstances of the biopharmaceuticals market, which is the business’s client market; and the globally growing collaboration among Group companies that is being achieved through acquisitions. And during the tour of KJiC, which is built in the grounds of Keio University’s School of Medicine, we helped participants get a better understanding of the center by presenting its facilities and research.



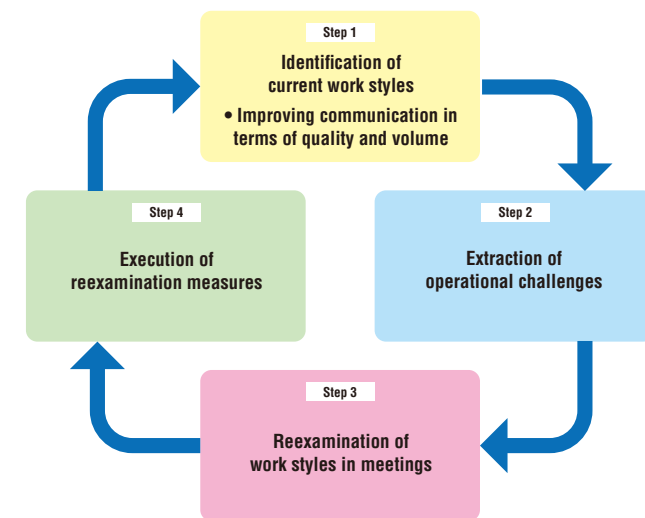
Analysts and the media meetings

Communication with Employees and Society

Work-Style Innovation

For eight months that began in July 2017 and ended in February 2018, four teams selected from within JSR joined a work-style reexamination project organized by Work Life Balance Inc. The teams began with in-depth discussions on their objectives; specifically, what their essential mission is, what they want to become, and what they want to do with the time that is produced. They then moved to actual reexamination, where they gave continuous attention to the visualization and standardization of operations while acquiring know-how and methods from consultants. The project's results were presented to the President and other members of management through a final report session that was held in February 2018. Additionally, seminars for managers were held in parallel with the teams' activities for the purpose of broadly sharing know-how acquired through the project with other departments.

Work-style reexamination project: The process



Participation in the “IkuBoss Company Alliance”

In May of 2017, JSR joined the “IkuBoss Company Alliance,” and initiative launched by a specified nonprofit organization called Fathering Japan (Chief Representative: Tetsuya Ando). The alliance is a network of companies that recognize the necessity of the “IkuBoss”^{*} movement in an age of diversifying staff makeups and are attempting to cultivate the ideal “boss” by actively changing awareness among their management ranks. JSR is the 147th company to join.

Since FY2010 we have been promoting diversity as a management strategy with the aim of fostering an organizational culture and systems that accept different values and various work styles. This is based on our belief that creating innovation with the involvement of diverse human resources is essential in responding to changing external environments

and developing global business.

Through our participation in the IkuBoss Company Alliance, we will make further advancements in creating environments that allow diverse human resources to succeed.

^{*} “IkuBoss”: A boss (manager or management position) who enjoys his or her own work and personal life, produces results for his or her organization, and supports the careers and daily lives of his or her subordinates and staff by considering their work-life balance.



Mr. Tetsuya Ando, Chief Representative of Fathering Japan, a specified non-profit organization (left), and Mr. Yasufumi Fujii, JSR Officer

JSR was Recognized under the 2018 Certified Health and Productivity Management Organization Recognition Program.

JSR was recognized as one of the “White 500” enterprises under the 2018 Certified Health and Productivity Management Organization Recognition Program (large enterprise category), a scheme run by the Ministry of Economy, Trade and Industry (METI) and Nippon Kenko Kaigi. This designation, which we also received last year, acknowledges our standing as a listed company that practices outstanding health and productivity management. Moreover, two members of JSR Group—JSR Micro Kyushu Co., Ltd. and Japan Coloring Co., Ltd.—were recognized under the Certified Health and Productivity Management Organization Recognition Program (SME category). Both companies were similarly recognized last year.

The “Certified Health and Productivity Management Organization Recognition Program” examines large enterprises, SMEs and other organizations engaging in initiatives for overcoming health-related challenges in regional communities or for promoting health-conscious activities led by the Nippon Kenko Kaigi, and recognizes those enterprises engaging in particularly outstanding efforts for health and productivity management.



Education and Social Education

JSR Group provides support for next-generation development and education opportunities through our continued efforts to provide education and internship opportunities to students both in Japan and abroad. We also provide career experience opportunities.

The Yokkaichi Plant accepted nine students from a nearby high school for a workplace experience program.

The participants learned about work and safety in the plant through a plant tour and practical activities in a miniature plant.



Practice operation in the miniature plant



Safety training

In October 2017, employees of JSR's Kashima Plant gave lessons for three different classes of second-year students (75 students) at Hasaki Daiichi Junior High School in Kamisu City. Three experiments titled “Synthetic Rubber,” “Balls that Bounce and Balls that Don't,” and “Unbreakable Plastic” were performed in the classes. The instructors used JSR's mascot—known as Mr. Molecule—to help explain the peculiarities of materials and the relationship between molecules.



A visiting lesson

Environmental activities

JSR Group continues to help with local clean-up activities of roads, coastlines, and rivers at domestic and overseas offices and plants. Following last year, JSR BST Elastomer (Thailand) again participated in the International Coastal Cleanup event organized by the Ocean Conservancy NPO based in the US. In 2017, 75 employees and their families helped clean Mae Ram Phueng Beach and Namrin Payung Beach in cooperation with other companies located in the same industrial park, other local businesses, educational institutions, and community volunteers. This event is held on the third Saturday in September all around the world to clean beaches, lakes, seas, and rivers in various countries. The participation of nearly 500,000 people in 91 different countries makes this one of the largest marine conservation project in the world.



Employees and their families participating in an International Coastal Cleanup activity

Social Welfare Activities

The Table for Two Program

JSR Group's Tokyo and Yokkaichi Districts have participated in the Table for Two (TFT) program since February 2010. The TFT program provides food to children in Africa through the sharing of meals. When a participant purchases TFT-specified food, it will provide both a healthy food alternative and an opportunity to donate 20 yen per meal, which is enough to pay for a single serving in developing countries with school lunch programs. In addition, Cup for Two beverages are also offered through vending machines at JSR Yokkaichi Plant.



Thanksgiving letter received from Table for Two International

Our initiatives targeting “Basic Issues in JSR Group’s Corporate Activity” support our efforts to address “Social Issues that JSR Group Can Help Resolve” and “Social Issues Attributable to JSR Group’s Corporate Activity.”

Corporate Governance

Tackling Corporate Governance as an Important Management Challenge

JSR continues to focus on the enhancement of corporate governance as an important management challenge.

As a company with Audit & Supervisory Board members, JSR principally monitors and oversees the execution of duties by directors and the management through its Board of Directors and Audit & Supervisory Board members. We have continuously strengthened the function of management supervision, improved efficiency in decision making and business duties execution, and enhanced the transparency and soundness of our business management to raise corporate value over the medium to long term. To that end, we have implemented measures that include the introduction of an officer system; the appointment of outside directors and Audit & Supervisory Board members who are independent from the company and have extensive business experience and expertise; the establishment of a Remuneration Advisory Committee and Nomination Advisory Committee, the majority of whose members are independent outside directors; and the introduction of performancebased remuneration covering the medium and long term.

Additionally, we are strengthening our management monitoring and oversight functions by appointing two independent outside Audit & Supervisory Board members with extensive and sophisticated expertise (one is a lawyer and the other is a certified public accountant qualified as a certified public tax accountant) to the three-member Audit & Supervisory Board.

Moreover, we strive to ensure and improve the effectiveness of internal control by systematically conducting internal audits through an organization specialized in internal audit that is independent from business divisions and reports directly to the president (“Corporate Audit Department”), by strengthening collaboration between the Corporate Audit Department and Audit & Supervisory Board members, and by instituting a reporting system whereby important issues are reported by directors and employees to the Audit & Supervisory Board members when deemed necessary.

Compliance

Promoting Corporate Ethics Activities based on Three Pillars

To live up to our management policy, which requires us to fulfill all responsibilities to our stakeholders, we advance Group-wide corporate ethics activities, monitor and enhance our legal compliance, and promote respect and safeguarding of human rights in line with JSR Group Principles of Corporate Ethics.

(1) We ensure that employees at all Group companies can become acquainted with JSR Group Principles of Corporate Ethics in their native language or in a language

in which they are proficient. Moreover, we provide e-learning programs and training developed for all employees of JSR Group companies in Japan.

(2) We work to grasp and improve corporate ethics-related issues by conducting surveys on awareness of corporate ethics that target all JSR Group employees.

(3) We operate two types of hotline (internal reporting channel). For employees, we have an internal hotline connected to contact points for each JSR Group company or the Corporate Ethics Committee and an external hotline connected to a designated independent attorney. In addition, we have another external hotline connected to an independent and specialized outside organization that is capable of handling communication in Japanese, English, Chinese, Korean, and Thai. Six reports were received via the hotlines in FY2017. We have also set up a “Hotline for Business Partners” for receiving reports from business partners of Group companies in Japan. No reports have been received since the hotline was opened in FY2014.

Legal Compliance Measures

Every JSR Group member defines legal compliance regulations that form the basis of its legal compliance. Moreover, in order to solidify compliance, JSR Group regularly reviews and improves compliance by self-checking the degree to which the business operations of all Group companies are legally compliant each year. It also strives to increase awareness of laws and regulations by providing legal training and to instill commitment to compliance.

JSR Group is thoroughly publicizing important points that demand legal compliance among employees in Japan, South Korea, and China by issuing Japanese, Korean, and Chinese versions of JSR’s Compliance Handbook. The Chinese Version is issued to not only Group companies in China but also JSR departments and Group companies that sell products, supply samples, or otherwise engage in business dealings with Chinese enterprises. Through it, we are working to ensure thorough understanding and practice of legal compliance in China.

We revised the Compliance Handbook’s Japanese version during FY2017 and redistributed to employees in April 2018.The revision covered content pertaining to recent cases of data falsification and fabrication at other companies and revisions of related laws.

The number of Group companies is growing, particularly in the Life Sciences Business. In light of this, we are focused on supporting the formulation of legal compliance regulations in all Group companies.



Compliance Handbook (Japanese, Korean, and Chinese versions)
Each version is customized in terms of law names and other details to its respective country.

Risk Management

Working to reinforce risk management

JSR Group believes that “preventing a major crisis from occurring” and “minimizing major crises’ impacts on business activities” are important management roles. The Group has formulated Risk Management Policies and established a Risk Management Committee through which it actively pursues risk management activities.

Every year, we identify potential risks that could have a particularly significant impact on business continuity. We organize those risks into the “JSR Group Risk Factors” and are executing countermeasures to reduce them. For example, in FY2016 we conducted an “information security incident” drill to prepare for a cyber attack, which is one of the JSR Group Risk Factors. We also held BCP training for JSR Group companies in Japan during FY2017. This BCP training was the first ever held for the purpose of strengthening the crisis response capabilities of headquarters for accident and crisis control in Group companies. Our senior management monitors these measures and regularly reviews the JSR Group Risk Factors and then reflects the results on risk management activities for the following fiscal year.

Moreover, as an initiative aimed at business continuity, our Head Office formulates Business Continuity Plans (BCM) that envision scenarios in which our plants shut down for a certain period of time. We also systematically conduct disaster drills and evacuation drills at our plants and offices to improve our crisis responsiveness and minimize impact. As for our physical

infrastructure, we are proceeding with step-by-step seismic reinforcement. In particular, we are conducting seismic retrofitting at our production bases and manufacturing facilities after establishing independent standards that are even stricter than those required by law.



Crisis management training at the Head Office



General disaster drill conducted jointly by plants and offices in the Kashima District (JSR, Japan Butyl, and Kraton JSR Elastomers)

Participation in the United Nations Global Compact

JSR Group became a participant in the United Nations Global Compact in April 2009. As such, we will more proactively fulfill our corporate social responsibilities with recognition that businesses operating on a global level must make a greater commitment to human rights, labor, the environment and anti-corruption, as expressed in The Ten Principles of the United Nations Global Compact. We will also advance initiatives oriented toward achieving the “Sustainable Development Goals” (SDGs) that were adopted by the United Nations in 2015 through our business activities.

The Ten Principles of the United Nations Global Compact

- 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
- 2: make sure that they are not complicit in human rights abuses.
- 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- 4: the elimination of all forms of forced and compulsory labour;
- 5: the effective abolition of child labour; and
- 6: the elimination of discrimination in respect of employment and occupation.
- 7: Businesses should support a precautionary approach to environmental challenges;
- 8: undertake initiatives to promote greater environmental responsibility; and
- 9: encourage the development and diffusion of environmentally friendly technologies.
- 10: Businesses should work against corruption in all its forms, including extortion and bribery.

The Sustainable Development Goals (SDGs)

The SDGs are comprised of 17 goals and 169 targets that all United Nations member states will strive to achieve by 2030 for the purpose of bringing sustainability to the global environment and people’s lives. In addition to conventional development goals, such as eradicating extreme poverty and hunger, the SDGs also cover challenges faced by developed countries, among them the promotion of gender equality, creation of a strong employment environment, reexamination of production and consumption, conservation of marine and forest resources, and development of safe communities.

UN SDGs <https://sustainabledevelopment.un.org/?menu=1300>



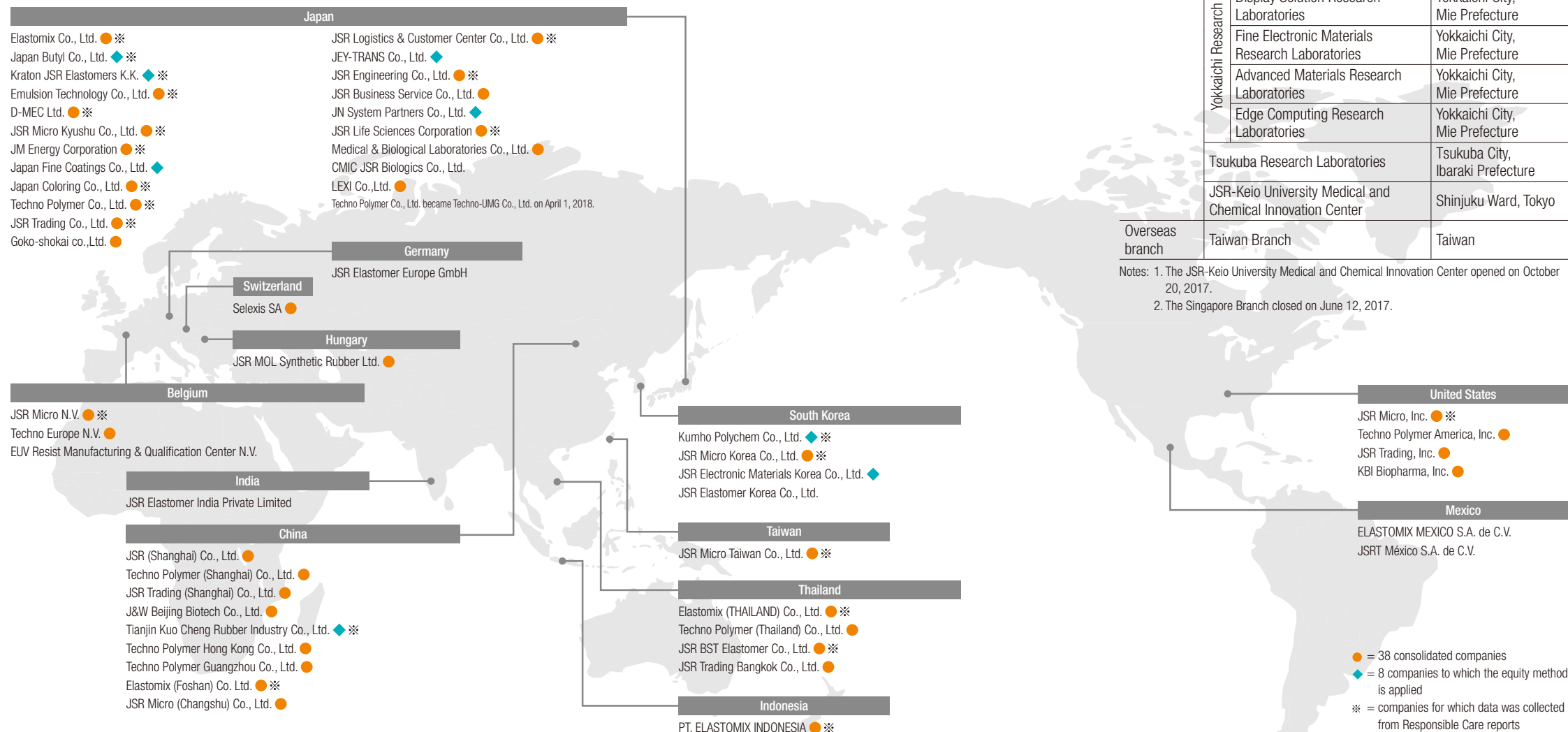
Inclusion in ESG indexes and socially responsible investment (SRI) indexes and stocks (Current as of July 1, 2018)

JSR Group CSR activities have been evaluated by outside organizations. We have earned inclusion into the following ESG indexes and socially responsible investment (SRI) indexes and stocks.



Additionally, JSR Group has continually been ranked in the Global Compact 100 since FY2013.

JSR Group Companies (as of March 31, 2018)



JSR Profile (as of March 31, 2018)

Company name: JSR Corporation
Established: December 10, 1957
Head office: Shiodome Sumitomo Building, 1-9-2 Higashi-Shimbashi, Minato-ku, Tokyo, Japan
Representative Director: Mitsunobu Koshiba
Capital: 23.4 billion yen
Number of employees: 7,203 (consolidated)

JSR Operations (as of March 31, 2018)

Head office	1-9-2 Higashi-Shimbashi, Minato-ku, Tokyo, Japan
Branches	Nagoya Branch Nagoya City, Aichi Prefecture
Plants	Yokkaichi Plant Yokkaichi City, Mie Prefecture
	Chiba Plant Ichihara City, Chiba Prefecture
	Kashima Plant Kamisu City, Ibaraki Prefecture
Research centers and laboratories	Performance Polymer Research Laboratories Yokkaichi City, Mie Prefecture
	Display Solution Research Laboratories Yokkaichi City, Mie Prefecture
	Fine Electronic Materials Research Laboratories Yokkaichi City, Mie Prefecture
	Advanced Materials Research Laboratories Yokkaichi City, Mie Prefecture
	Edge Computing Research Laboratories Yokkaichi City, Mie Prefecture
	Tsukuba Research Laboratories Tsukuba City, Ibaraki Prefecture
	JSR-Keio University Medical and Chemical Innovation Center Shinjuku Ward, Tokyo
	Taiwan Branch Taiwan

Notes: 1. The JSR-Keio University Medical and Chemical Innovation Center opened on October 20, 2017.
2. The Singapore Branch closed on June 12, 2017.

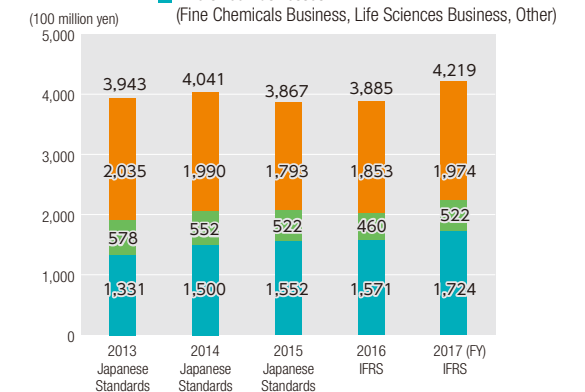
Major JSR Group Businesses (as of March 31, 2018)

The manufacture and sale of the following products

Type of business		Main products
Petrochemical Business	Synthetic rubbers	Styrene-butadiene rubber, butadiene rubber, ethylene-propylene rubber and other synthetic rubbers and refined processed products
	Thermoplastic elastomers	Thermoplastic elastomers and related processed products
	Emulsions	Latex for paper processing, general industrial-use latex, acrylic emulsion, refined processed products made from raw latex, and other products
	Functional chemicals	High-performance coating materials, high-function dispersant, industrial particles, latent heat storage materials, heat reflection paint material, battery material, and other products
	Other	Chemical products such as butadiene monomers
Diversified Businesses	Plastics	Synthetic resins such as ABS resin, AES resin, AS resin, and ASA resin
	Semiconductor Materials	Lithography materials (photo resist and multi-layering materials), CMP materials, packaging materials, etc.
	Display Materials	Color LCD materials, anti-reflection film materials, functional coating, and other products
	Edge Computing	Heat-resistant transparent resin, functional films, high-performance UV curable resins, stereolithography, photo molding, and other products
	Life Sciences Business and other materials	Life sciences (in vitro reagents for diagnostics and/or research, raw materials for such reagents, bioprocess materials, contract development and manufacturing of biopharmaceuticals) and Lithium ion capacitors

Financial Information

Net Sales (consolidated) ● Elastomers ■ Plastics
■ Diversified Businesses (Fine Chemicals Business, Life Sciences Business, Other)



Operating Income (consolidated)

