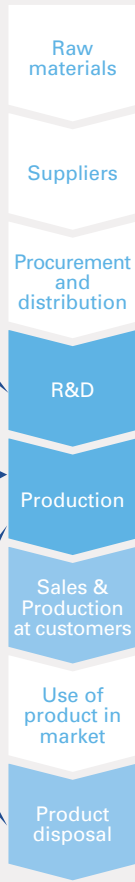


Overview of "JSR Sustainability Challenge"

Negative impacts



Animal testing
Life Sciences
 ✓ Request for regulatory compliance from pharmaceutical companies
 ✓ Mounting ethical demands from society

CO₂ emissions
Elastomers
 ✓ Thermal energy required in the petrochemical industry, which makes it difficult to shift to renewable energy

Plastic waste disposal
Plastics
 ✓ Negative attention after G7 adoption of the Ocean Plastics Charter in 2018
 Increasing calls for circular economy initiatives

Materials facing tighter regulations
Semiconductor Materials **Display Materials**
Plastics
 ✓ Tighter regulations due to potential negative impact on human health
 ✓ Demands to shift to alternative materials

Solvents
Semiconductor Materials **Display Materials**
 ✓ Used in our manufacturing processes and customer sites

Positive impacts

Digital Solutions

Semiconductor Materials
 Reduce semiconductor power consumption while improving nanotechnology to contribute to a smart society including IoT, AI and 5G. JSR's cutting-edge semiconductor materials can achieve miniaturization and high performance with less power. Adopting a higher performance GPU is expected to reduce power consumption by 280 times.

Display Materials
 Possible to reduce LCD TV power consumption 30% by boosting display brightness and low-temperature curing. As the No. 1 global supplier of alignment films for high-performance displays, JSR is poised to reduce power consumption for displays around the world.

Life Sciences

Improve drug development success rates and shorten development timeline for customers
 Through our contract development and manufacturing organizations (CDMO), timeline from drug discovery through mass production to approval of human clinical trials can be shortened from 12-24 months to 9 months.

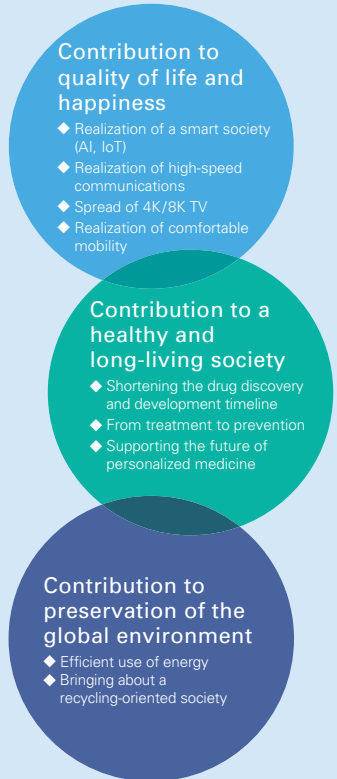
Elastomers

JSR Group products help offset greenhouse gases emitted by manufacturing processes by more than double through products that reduce greenhouse gas emissions within society
 With JSR's unique SSBR for fuel-efficient tires, reduction in CO₂ emissions from automobiles is expected to be 2.7 times greater than CO₂ produced during the manufacturing process.

Plastics

Promoting mono-materialization aimed at reuse of plastic resources
 Contributing to customers by incorporating new materials to convert composite materials to mono-materials. Easy recyclability and reduction of environmental burden by eliminating coatings for brightly colored materials, reducing the need for solvents. JSR is proposing a 50% weight reduction while maintaining rigidity.

Social value created by JSR through positive impacts



Contribution to quality of life and happiness
 ◆ Realization of a smart society (AI, IoT)
 ◆ Realization of high-speed communications
 ◆ Spread of 4K/8K TV
 ◆ Realization of comfortable mobility

Contribution to a healthy and long-living society
 ◆ Shortening the drug discovery and development timeline
 ◆ From treatment to prevention
 ◆ Supporting the future of personalized medicine

Contribution to preservation of the global environment
 ◆ Efficient use of energy
 ◆ Bringing about a recycling-oriented society