

TEIJIN

TEIJIN LIMITED

<https://www.teijin.com>

To Be a Company that Supports
the Society of the Future

For Tomorrow, We Can Start Embracing Challenges Today.

Enhancing the Quality of Life

The Teijin Group's philosophy is to enhance the quality of life through a deep insight into human nature and needs, together with the application of our creative abilities.

Climate change, natural disasters, population aging, health concerns and food shortages. There is no lack of issues to be solved in this world. Among them, Teijin is working to offer solutions to the following, which we have identified as four important social issues to be solved: climate change mitigation and adaptation; achievement of a circular economy; safety and security of people and local communities; and realization of healthy and comfortable living for people.

Teijin has been attributing importance to embracing challenges since its founding. By respecting the dignity of all people, aiming for chemistry that is friendly to humankind and the global environment, and fostering chemistry, in the sense of positive interactions, between people, products and services, we will develop innovative technologies, products and services and create new value and interpersonal ties for the realization of a sustainable society.

For more details of the Corporate Philosophy, please scan the QR code.



Quality of Life

Teijin supports people's lives in various aspects across all areas of society.

We list some examples in the following.

Battery boxes for EVs

Our proprietary multi-material technology increases environmental efficiency and safety of batteries of Electric Vehicles (EVs).

Home healthcare

We help people with respiratory diseases improve their quality of life by providing them with home healthcare devices and services, such as oxygen concentrators and therapeutic devices for sleep apnea syndrome (SAS).

Primary structures of aircraft

Tenax carbon fiber reduces the weight of aircraft and thereby reduces fuel consumption and CO₂ emissions. It is 10 times stronger than steel, but the weight is one quarter.

Ultra-light ceiling material

Kal-ten soft and ultra-light ceiling material reduces damage to people and objects in the event of ceiling collapse. It's made of vertical non-woven fabric of polyester fiber.

High-value-added sports clothes

For sports and outdoor activities, we sell materials and clothes with high functionality, such as moisture-wicking, quick-drying and/or UV-blocking features, as well as a stylish design.

Pharmaceuticals

In addition to focusing on pharmaceuticals for "bone and joint diseases", "respiratory disease", and "cardiovascular and metabolic diseases", we are also attributing importance to the treatment of rare and intractable diseases, for which more support is needed.

Firefighter's uniforms

Teijinconex meta-aramid fiber contributes to the comfort and safety of firefighter's uniforms. It has a heat resistance of over 400°C and is a superior flame-proof product.

IT services for healthcare

We provide a range of IT solutions from the viewpoints of medical practitioners and patients, including solutions related to information about radiotherapy, employment management and medical records. Moreover, VitalLink patient information sharing service helps establish a comprehensive community healthcare system.

Automotive components

Applying Twaron para-aramid fiber with superior strength and durability into tires and friction products such as brake pads, drivers' comfort and safety can be enhanced with reduced noise and vibration. Also, Panlite polycarbonate resin, Multilon Polycarbonate/ABS based polymer alloy and Panlite film reduce the weight of car body and increases in-car comfort by controlling the noise and odor in the car, when used as a material for exterior parts such as headlamps covers and interior parts such as touch panel.

Electronic books

Mecha Comic online bookstore enriches people's lives. It enjoys one of the largest collections of manga-focused e-books, targeting smartphones, computer and tablet users.

Smartphone devices

Panlite polycarbonate resin with both a high refractive index and a low birefringence index, downsizes smartphone cameras, while further improving their performance. Moreover, LIELSORT innovative separator increases safety and lifetime of lithium-ion batteries.

Tennis racket frames

Tenax prepregs, intermediate materials made by pre-impregnating carbon fiber sheet with resin, and Twaron para-aramid fiber make sports gear such as tennis racket lighter, stronger and more durable.

Functional food ingredients

BARLEYmax special barley contributes to a healthy diet. It contains about twice as much total dietary fiber as ordinary barley and is used in rice balls sold at convenience stores and others.

List of Our Products and Services

Teijin strives to foster chemistry beyond the scope of its business and is creating products and services that support our daily lives.

We conduct business in four different fields, specifically, the materials, fibers and products converting, healthcare and IT businesses. We provide solutions for the realization of a sustainable society by making combined use of our strengths in the respective business fields.

Materials Business



Providing solutions in consideration of the global environment across a range of fields

Teijin's diverse materials are used in a wide range of fields, from clothes that protect people working in dangerous environments to industrial products such as automobiles, aircraft and electronic devices that are essential to daily life. By combining various materials, we will continue to develop and provide high-performance and high-quality products and contribute to sustainable growth and the achievement of progress of people's life.



Fibers and Products Converting Business



Realizing a comfortable and sustainable lifestyle with the power of fiber

In the fields of both apparel and industrial materials, we have been working to diversify applications and to create new markets with an integrated supply system covering everything from research and development up to the final products. We are enhancing initiatives in new business areas such as wearable products centered on sensing technologies, as well as working to expand markets in growing areas such as mobility, the environment and infrastructure.



Healthcare Business



Making use of the long-established business foundation to help people needing more support to solve their problems

To help people lead healthy lives in their own way, Teijin has long been conducting its healthcare business centering on medicine and home healthcare. Based on our long-established business foundation, we will develop unique products and services to provide incomparably advanced comprehensive healthcare services, thereby meeting the needs of individual customers.



IT Business



Creating unprecedentedly new value through innovative IT services

In the fields of IT services for healthcare and Internet-based business, we are fostering co-creation with customers and business partners based on our proven track record and high technological capabilities in the relevant fields toward providing new experiences, inspiration and convenient services. We'll continue to offer unprecedentedly new value, by developing new technologies and integrating them into a range of businesses.



Teijin's corporate DNA— carrying on the legacy by pushing through reforms and embracing challenges

In 1918, Teijin was founded as Japan's first manufacturer of artificial silk, later called rayon. Since then, against a background that included world-shaking events such as wars and oil crises, the company has been overcoming difficulties and fostering its own evolution to consistently take on the challenge of pioneering new business domains. As society and lifestyles change, Teijin adapts accordingly in order to help improve the quality of life of all people and become a company that supports the society of the future. To this end, no matter what circumstances arise, Teijin will never shy away from the next challenge.

Keep on Challenging

Constant dripping
wears away a stone.

1904

Taking on the challenge of manufacturing rayon in Japan

Rayon was commercialized in Western countries during the period around the end of the 19th century and beginning of the 20th century, becoming an instant hit around the world as a substitute for raw silk. In 1922, total global production of rayon came to exceed that of raw silk. Around the same time, Naokichi Kaneko, Seita Kumura and Itsuzo Hata started to conduct research to develop technology for the domestic production of rayon in Japan.



Seita Kumura



Itsuzo Hata



Naokichi Kaneko

1915

Achievements driven by the passion of the three founders

A factory to produce artificial silk has been established in Yonezawa in 1915 as a branch factory of Azuma Leather, which is under the control of Suzuki Shoten. Although encountering difficulties early on in developing a stable method for producing the fiber, through a determined process of trial and error they were eventually able to establish a technology for stable production by the end of 1917. In 1918, they launched Teikoku Jinzo-Kenshi Kaisha, Ltd, renamed Teijin Limited in 1962. Demand for domestic products increased with the escalation of World War I, and the company began a dramatic expansion of its business.

1931

Golden age and subsequent decline

Driven by the war boom, various economic stimulation measures, and improved product quality and processing technology, demand for rayon continued to expand until finally Japan topped the world in terms of rayon production. In 1933, during the golden age of Japan's rayon industry, the company's shares were listed on domestic stock exchanges. Subsequently, however, due to changing circumstances and a shortage of materials, the production of rayon decreased sharply. Even after Japan entered its high economic growth period, the textile industry continued to suffer from overinvestment in plant and equipment, and rayon followed a trajectory of decline.

Challenge

Using proprietary technology to develop synthetic fiber *Teviron*

In 1948, the company began to conduct research into synthetic fibers. Despite the research being frequently suspended due to the unavailability of materials, the company finally succeeded in developing a polyvinyl chloride fiber in 1955. The new product was named *Teviron* by combining the "Te" of Teijin with the "vi" of vinyl and the "ron" of the spelling of nylon in the Japanese katakana syllabary, which is used for foreign or loan words. The company promoted the sales of *Teviron* for use in clothes, household items and a range of industrial products and received prizes for this highly technologically advanced product, including the fifth Okochi Memorial Grand Technology Prize, Onshi Invention Award from the Japan Institute of Invention and Innovation and others.

Efforts bear fruit

1968

Promoting diversification by making effective use of the base technology

Teijin had remarkable success in the development of its Polycarbonate (PC) resin business and Polyethylene terephthalate (PET) film business and as a result sales of its chemical products increased about 20-fold over the decade starting from the latter half of the 1960s. At the same time, the company proactively launched new businesses, including those related to oil development, food, lifestyle, information and pharmaceuticals. It made particularly impressive progress in the field of pharmaceuticals business and continued to expand the businesses under the strong leadership of senior management as well as through bold investments in R&D and the implementation of diverse initiatives in partnership with other companies.

Challenge

Entering into the field of bone and joint diseases in the pharmaceutical business

Following our success in synthesizing active vitamin D3 through in-house drug discovery, in 1980 the active vitamin D3 preparation for kidney failure named *Onealfa* became our first product in this area to be approved for manufacturing. This preparation was expected to foster the absorption of calcium and support bone metabolism, and so we thought it would also contribute to the treatment of osteoporosis. At that time, osteoporosis was not widely recognized in society as a disease and no drug development method had been established for it. By applying technology then owned by our film business to quantify the contrasting density of films, we developed the microdensitometry (MD) method to easily measure bone mass based on the photographic density of a bone. By collecting a lot of data from healthy people for the diagnosis of osteoporosis, we were able to show that active vitamin D3 helps increase bone mass. Subsequently, in 1983, we obtained approval for the use of *Onealfa* for the treatment of osteoporosis. The Teijin Group thus took an important step toward the present development of its business in the field of bone and joint diseases.



Initial product package of independently developed *Onealfa*, our first product in its field to be approved for manufacturing

1980

Embracing a string of challenges to establish a robust organization

In the 1980s, Teijin expanded its business relating to a meta-aramid fiber called *Teijinconex*, which it had launched in 1971, and started the production of a para-aramid fiber named *Technora* in 1987. Also, in 1980, the company started to sell *Venilon*, the first pharmaceutical product it had developed independently, having had no previous experience in developing a pharmaceutical drug. The drug quickly became a hit in the market and had become a leading product within two years of its debut.

1992

Committing to environmental management

In 1992, Teijin formulated the Teijin Group Global Environmental Charter and Global Environmental Activity Goals and launched the material recycling business as part of its environmental management effort. Then in 1995, the company started to manufacture and sell *ECOPET*, PET fibers made from recycled PET bottles. This subsequently led to the establishment of a fiber-to-fiber recycling system. In 2000, Teijin acquired the business of a para-aramid fiber *Twaron* from Dutch company Acordis B.V. in order to start conducting operations in this high-value-added product field, while launching the chemical recycling of PET bottles. In 2008, it established a Composites Innovation Center to begin R&D on composite materials, which ushered in an age of new value creation by the company.

For eternity Changing endlessly



Opening the TEIJIN MIRAI STUDIO to introduce the latest technologies, products and services (2007)

2008

Starting of structural reforms

In order to deal with the adverse impacts flowing from the collapse of Lehman Brothers, Teijin started to reform its business structure. For fibers, the company changed the policy of expanding the polyester fiber business, withdrew from unprofitable business fields, and enhanced the high-performance fibers business. For resin products, it reviewed the global production system and enhanced the business structure in the downstream sector. For composite materials, Teijin reduced the so-called takt time to about one minute for the manufacture of *Sereebo* carbon fiber reinforced thermoplastic (CFRTP), thereby becoming the first in the world to mass-produce CFRTP. The company thus pushed ahead with organizational reforms and business development to provide solutions from the viewpoints of customers and the market.

2018

Creating the society of the future by undertaking reforms and embracing challenges

On June 17, 2018, Teijin celebrated its centennial. As a unique corporate entity operating in a range of business domains including the materials, healthcare and IT, Teijin is continuing to embrace challenges with a never-give-up attitude so as to provide solutions for the advancement of society as a chemical company that puts people first in its thinking. Recognizing that there are no prepared pathways for Teijin to follow to become a company that supports the society of the future, we will continue to undertake reforms and embrace challenges to create a new future through chemistry.

Challenge

Becoming the first in the world to take on the challenge of using carbon fiber reinforced thermoplastic (CFRTP) as a material for a structural component of mass-produced vehicles

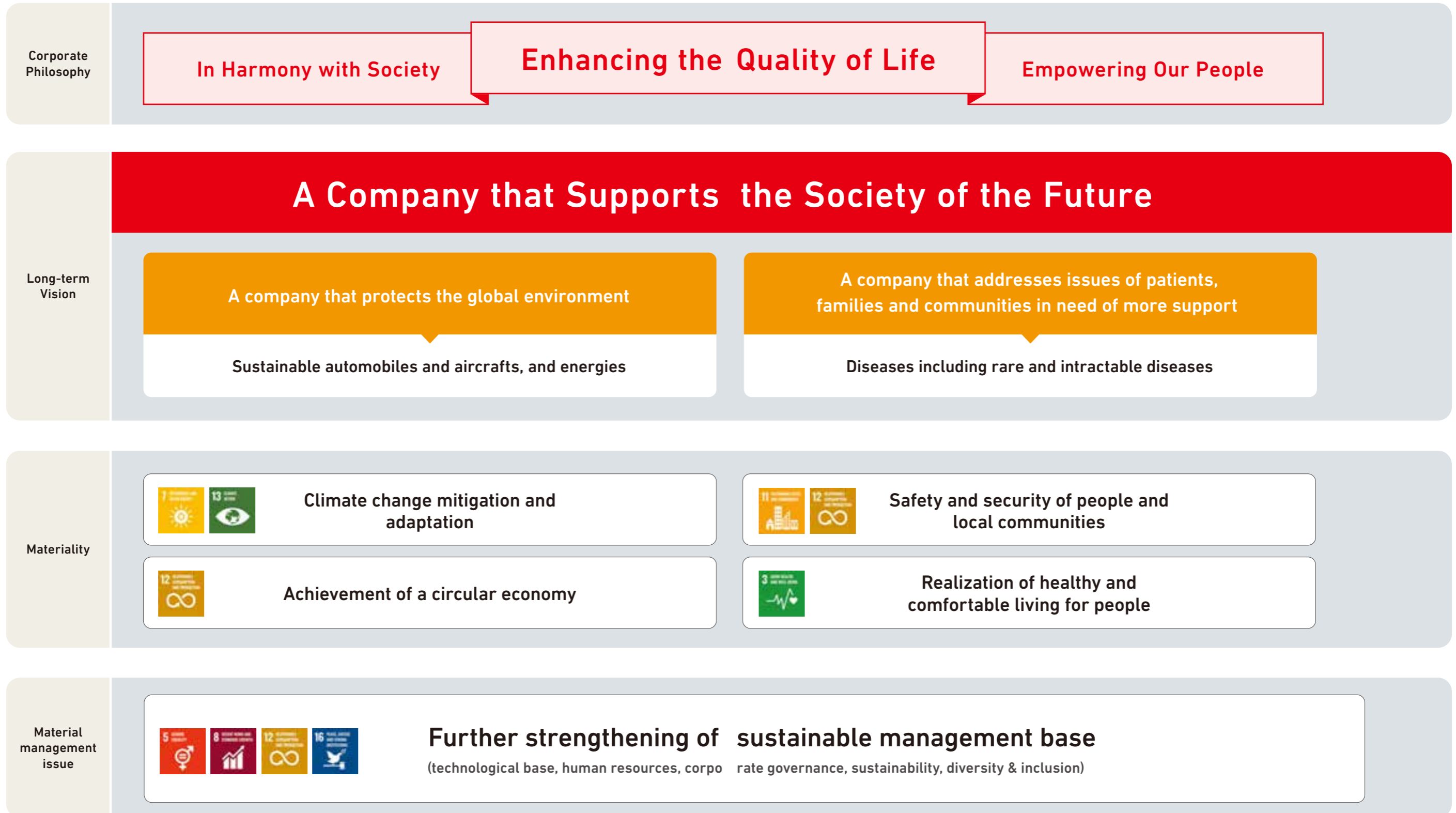
In 2011, we started a joint project with General Motors to reduce the weight of car bodies by using the CFRTP mass manufacturing technology that we had developed in the same year. For the project, we reviewed the resin-fiber combination while also improving the design to develop a CFRTP with greater resistance to vertical load and shocks than conventional composite materials. As a result, in 2019, our *Sereebo* CFRTP was adopted for the pickup boxes on two models of General Motors vehicles. Compared with pickup boxes made of steel, the *Sereebo* boxes were 40% lighter with around 10 times the shock resistance. They also provided high corrosion resistance and greater recyclability. *Sereebo* thus became the first CFRTP to be used in a structural component of a mass-manufactured vehicle.



General Motors' pickup truck for which the *Sereebo* CFRTP is used as a material for the pickup box

To Be a Company that Supports the Society of the Future

In order to contribute to enhancing people's quality of life, Teijin has been tirelessly embracing challenges and pursuing reforms since its founding. It has also been conducting a range of projects in consideration of sustainability. In order to minimize adverse impacts caused to the global environment and society, Teijin has been addressing five issues of materiality as a company that protects the global environment for a sound and bright future for the Earth, society and humanity as a whole and as a company that helps people in need of more support, such as patients and their families, as well as local communities to solve their problems.





“I want to help make remote locations closer through the power of materials.”

Mizuki Sasaki

Aerospace Business Group, Teijin Carbon Europe GmbH

Creating an “aircraft of the future” as one of the world’s leading carbon fiber manufacturers

As a Teijin Group company, Teijin Carbon Europe (TCE) engages in the Group’s carbon fiber business in Europe. Specifically, it manufactures carbon fibers and also develops and manufactures intermediate materials and components by processing carbon fibers. Since its founding, TCE has been providing innovative solutions in a range of fields, including aerospace, automobiles, civil engineering, medicine and sports. I joined Teijin Limited in 2015 and was initially assigned to the department engaging in the development of carbon fiber composite materials to be used in the main wings and fuselages of aircraft. I was later transferred to the department in charge of selling aerospace materials, where I provided



customers in Japan and Asia with technological support. In 2021, I was seconded to TCE in Germany, where I am now working as an application engineer to provide customers in Europe with technological support while also supervising the progress of development projects.

Innovative material that is robust but lightweight

Carbon fiber is 10 times stronger than steel with only a quarter of the weight. When most people pick up carbon fiber products, they are surprised at how light they are, and the carbon fiber is indeed innovative in that it makes robustness compatible with a lightweight design. Basically, carbon fibers are combined with resin and other materials to create composite materials which, due to their high resistance against fatigue, rust and chemicals, are expected to be used in various applications. Carbon fibers have been used in sports gear and bicycles since about 50 or 60 years ago, and they have recently also been used more widely in automobiles and aircraft. In particular, *Tenax*, Teijin’s carbon fiber boasts the world’s top-level quality and market share, being mainly used in aircraft. In fiscal 2021, sales of the product increased for various applications, including use in aircraft, wind turbines and recreational equipment. Demand for international passenger flights has been dropping due to the pandemic, but as we are anticipating

a recovery of such demand we are now fostering the development of intermediate materials for adoption in aircraft.

To go carbon neutral

Primary structures including the main wings and fuselage account for a large proportion of an aircraft’s total weight. Accordingly, by using carbon fiber intermediate materials to reduce the weight of an aircraft, its fuel efficiency can be substantially improved, which will in turn help reduce CO₂ emissions for the entire fleet. In Europe, where there is greater public awareness regarding the environment and recycling, we have already been requested by our customers to provide them with a solution that includes a method to recycle the materials and products that we have supplied to them. We have already started to recycle carbon fibers and will further pursue the possibilities provided by carbon fibers to contribute to the creation of a sustainable society from a range of aspects.

Providing solutions that put people first

We are also working to increase the efficiency of our production process as another big challenge. Until now, Teijin has been supplying carbon fibers to aircraft manufacturers and intermediate materials manufacturers. Going forward, however, we will shift our focus to the manufacture of intermediate materials for use in aircraft construction. The aircraft industry was badly affected by the pandemic on a short-term basis but the market is expected to achieve further growth over the long term and aircraft manufacturers will accordingly make more aircraft, for which they need to increase the efficiency of their production processes. In response, we have developed a method to substantially shorten the time required to implement the process to harden the



Structural aircraft component made by using the *Tenax* carbon fiber

resin to be used in aircraft production from the traditional five to six hours to as little as 20 to 30 minutes by adjusting the combination of equipment and materials used.

I was previously conducting manufacturing and development activities as an engineer, but now I am supporting customers in solving their problems, for which I visit their sites in person to see how they use our products and services. Teijin is thus going beyond simply supplying carbon fibers to customers to develop technologies in consideration of their actual production processes, which is another source of strength for the company.

Aiming for an “aircraft of the future”

Leading manufacturers in the aircraft industry, which use a lot of carbon fiber, are based in the United States and Europe. Accordingly, Teijin has located its production bases for the carbon fiber business in these regions. I am now working in Wuppertal in western Germany with colleagues from around the world. It takes a long time to develop a product in the aircraft industry, and the materials that we propose to our customers will not be used immediately. We are therefore always looking ahead with the expectation that our materials will be used in aircraft in 10 or 20 years’ time.

As the use of carbon fibers continues to expand in the aerospace industry, the cruising distance will also increase to make places that are presently too far for us to visit closer to us. As employees of a company that supports the society of the future, we are working every day to materialize this vision. Thinking about how the technologies that I have helped develop might be used in the aircraft of the future gives me a lot of job satisfaction. I really hope to one day be able to fly on an aircraft that uses materials I have worked on.



Initiatives for the Realization of a Sustainable Society

Climate change mitigation and adaptation

Light, highly durable and safe automotive components

In 2023, Teijin Automotive Technologies' glass fiber sheet molding compound (GF-SMC), which is made by impregnating glass fiber with thermoset resin, was adopted as a material for the doors, rear quarter panels and tailgate inner and outer panels of Lotus Cars' new Emira premium sports car. Teijin Automotive's *TCA Ultra Lite* glass fiber composite material is up to 40% lighter than conventional composite materials but has excellent strength and durability. The material is E-coat oven capable, while providing the Class A surface expected for a premium vehicle.



Cables made from *Twaron* para-aramid fiber adopted as mooring lines for demonstration of floating offshore wind power generation



Twaron makes it possible to produce lightweight tendons with a minimal stretch and high breaking load, all while maintaining the lowest diameter. Teijin Aramid has also committed to taking back the mooring lines after end-of-life for recycling. This helps keep the oceans clean and helps secure a sustainable future.

Developing a new fuel cell unit and pressure vessel unit

In 2023, in order to promote the use of fuel cells and broaden the scope of their application, Teijin developed a fuel cell unit that integrates within itself all the components necessary for fuel cell operation as well as a companion pressure vessel unit to supply hydrogen to the fuel cell unit. By promoting the widespread use of the units in various applications through examinations and trial use at construction sites, we are contributing to reducing environmental impacts caused by CO₂ emissions and others.



Teijin includes "Climate change mitigation and adaptation" and "Achievement of a circular economy" in its issues of materiality and as such has been working to introduce green energy, reduce its energy consumption and improve its recycling technologies.

Achievement of a circular economy

Successfully produced *Twaron* using recycled material

With a great sense of accomplishment, we can share a major milestone: Teijin Aramid successfully produced *Twaron* using recycled feedstock. We are the first aramid manufacturer in the world to use recycled material on industrial-scale trial aramid production. The high-modulus filament yarn produced with recycled content has the same exceptional strength and durability as our original renowned *Twaron* fibers. The milestone shows our dedication towards circular aramid.



Developing *ECOPET* as a polyester fiber that can coexist with the Earth

Since 1995, we have been manufacturing and selling *ECOPET* polyester fiber as an environment-friendly material that was created to respond to resource depletion, increasing CO₂ emissions and environmental pollution. As a polyester fiber made from recycled materials—namely, used PET bottles that have been through a material recycling process and chemically recycled polyester fiber scrap that would otherwise end up as landfill—*ECOPET* is used in a range of products including clothes, consumer goods such as interior furnishings, and automotive interior parts and other industrial components.



Establishment of *Re:ism* in response to issue of plastic marine waste

In 2021, Teijin launched a new material recycling project for used polyester fishing nets in cooperation with four companies specializing, respectively, in the manufacture of fishing nets, plastic molding, textile processing and resin treatment. Participants in the project share roles in the supply chain from the collection of end-of-life fishing nets to the sale of products made by recycling the nets into resin pellets and then using the pellets as raw materials for the creation of new products, such as trays and stationery goods.



Quantifying environmental impact to make further improvements

For Teijin to contribute to the realization of a sustainable society and become a company that supports the society of the future, we need to quantify the environmental impact caused by the Teijin Group's business activities. To meet this requirement, we conducted life cycle assessments in line with the ISO 14040 and

14044 standards to precisely calculate the environmental impact caused by our production processes. We use the results to generate innovative technologies and ideas for reducing our CO₂ emissions and they are also useful for our customers and end users. But this is only the first step toward achieving our targets. Based on the calculation results we will identify what points need to be improved and then conduct activities to make the necessary adjustments through internal innovation and collaboration with other participants in our value chain. Moreover, we also need to address the depletion of resources as this is one of the major environmental

issues faced by chemical manufacturers today. For the Teijin Group, which is engaged in the materials industry, this means developing products and solutions that can contribute to creating a circular economy. In April 2023 we newly established a department for environmental solutions to conduct innovative R&D activities for sustainability and fostering the development of solutions, such as those related to clean energy and circularity. For the realization of the circular economy in particular, we will cooperate closely with partners across the industry as we recognize that we cannot do it on our own.



Smitha Sundaram, PhD
Corporate Sustainability Manager, Corporate Sustainability Team Europe, Sustainability Development and Engagement Department



Aiming for a society
where everyone can receive
home healthcare services
with peace of mind

“I want to make Teijin an entity that people can really rely on.”

Minako Uchida
Operation Department, Teijin Pharma Limited

Developing Japan’s first therapeutic oxygen concentrator

Teijin Pharma is conducting business with a focus on pharmaceuticals and home healthcare. I belong to a department related to home healthcare, which provides artificial respirators and CPAP equipment used for the treatment of sleep apnea syndrome (SAS) as well as oxygen concentrators. Teijin Pharma is the first company in Japan to develop a membrane-type therapeutic oxygen concentrator. The company also engaged in the development of a new treatment method called “home oxygen therapy” (HOT) for chronic respiratory impairment patients, who had no choice but to be hospitalized. HOT enables patients to be treated at home and has thus clearly helped them improve their Quality



of Life (QOL). Moreover, the company urged the government to include HOT within the scope of national health insurance benefits and introduced an oxygen concentrator rental system for medical institutions as part of its untiring efforts to not only develop and sell the equipment but also popularize the therapy.

Providing solutions beyond simply developing the device

Going even further beyond the development and provision of oxygen concentrators, we have also built up a local support service system. Specifically, we provide users of our oxygen concentrators with support through our home nursing station, an around-the-clock call center and a monitoring system using the cell phone communication network. Also, we make use of our *D-MAP* disaster response support system to check the safety of patients using the equipment in the event of a disaster. We are now living in an age characterized by uncertainty, and I think demand for such support services will only increase.

Establishing an around-the-clock maintenance & management system

In order to ensure the safety of HOT, we need to establish a maintenance and management system for our

oxygen concentrators installed in patients’ homes so that we can provide management and troubleshooting services while maintaining their privacy. To support patients using our equipment and continue the supply of oxygen to them even in the event of an emergency or disaster, we need to do more than just supply the equipment and provide them with a 24-hour support service. Accordingly, we station nurses and equipment maintenance personnel at our 129 sales offices* located across Japan to provide patients with attentive services.

* As of March 2023

Safety check records provide valuable data

The maintenance and management system needs to keep operating even in an emergency. Based on the lessons learned from the Great Hanshin-Awaji Earthquake and Niigata Prefecture’s Chuetsu Earthquake, Teijin Pharma has been advancing its unique disaster countermeasures, including *D-MAP*.

If disaster strikes, those in charge at each sales office will first check the safety of patients who are using our oxygen concentrators for HOT. Under the *D-MAP* system, reports sent out by local governments about large-scale earthquakes exceeding the specified intensity and about flood damage and others will be automatically received by the system to identify users of HOT equipment in the afflicted areas. We will then call these users by phone to ask them about the following: the operational status of the oxygen concentrator; how much oxygen is remaining in the cylinder; their planned evacuation destination; and the availability of an oxygen concentrator at such destination. If necessary, our representatives will visit the patient to offer emergency support.

Providing solutions that put people first

Only 10 minutes after the occurrence of the Great East Japan Earthquake, about 25,000 users of our oxygen concentrators living in the afflicted areas were identified and we implemented necessary measures for these people in cooperation with local governments and medical institutions. Our employees visited the patients in person to evaluate their situation, and I think forming close connections with patients through such people-oriented services has given Teijin a boost in terms of its strength.

All records of our disaster responses are kept by the company as valuable data. These data help us to share information about circumstances and measures taken in disaster-afflicted areas across the country and to develop even better systems and products based on past experiences.

At our department, we worked on building a system for sharing safety data with partner medical institutions, and now we can provide these institutions with the

data accumulated by our company through the system.

Aiming to enhance the safety of patients

At the time of the Great Hanshin-Awaji Earthquake, we had not yet established a system like the present one and so we used paper records to exchange information within the company about patients using our oxygen concentrators. It therefore took us about two weeks to check the safety of these patients. Based on the lessons learned from this experience, we created a manual on the home healthcare services to be provided in the event of earthquakes and other disasters and increased the stock of oxygen cylinders. Then the experience of the 2007 Chuetsu Earthquake in Niigata Prefecture led us to build the *D-MAP* system.

We subsequently continued to improve the system based on our experiences with the Great East Japan Earthquake, Kumamoto Earthquake and other large-scale disasters, and now we can use the system to obtain information in real time. I hope that we will be able to link local governments and medical institutions with the system for speedy data sharing, but this is not easy due to the need to protect personal information. I would like to tackle this issue as one of the challenges to be met in the future.



Our employee, delivering oxygen cylinders to one of the afflicted areas of the Great East Japan Earthquake

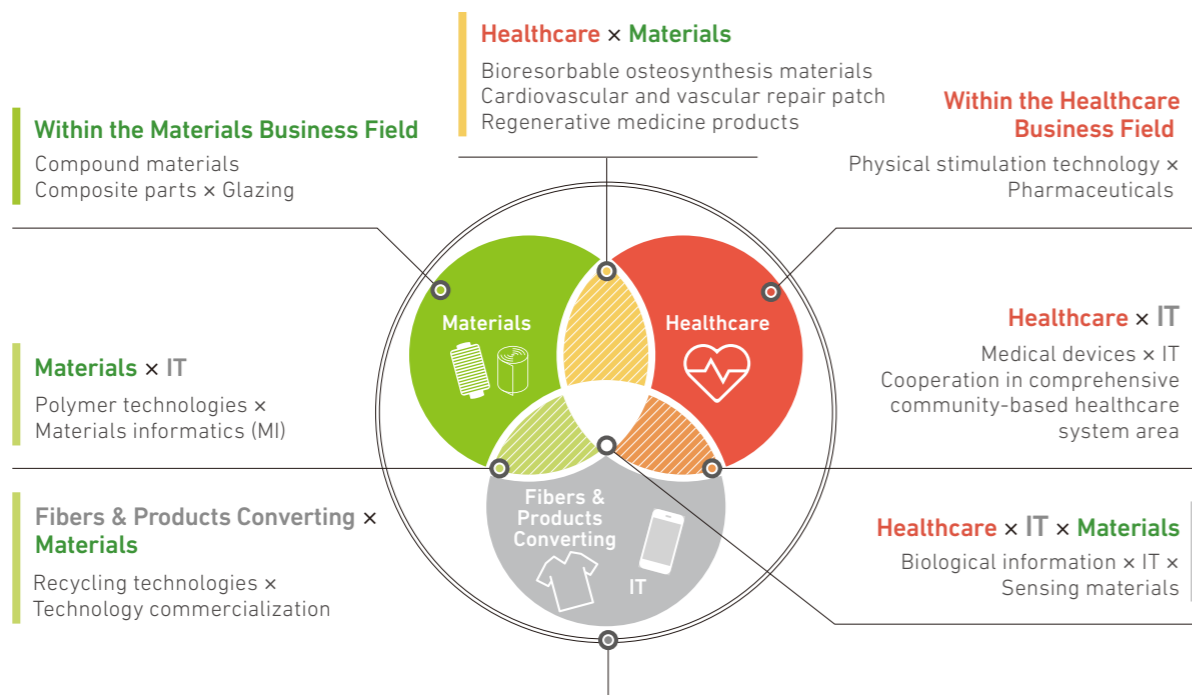
To provide peace of mind in the society of the future

We aim to make our company one that is relied upon by medical practitioners and patients in every region. Wanting to make Teijin an entity that people can truly depend on, we are working tirelessly to make improvements. Disasters such as earthquakes, heavy rain events and others have recently been occurring more frequently. Under such circumstances, I hope we will be able to make use of the safety check data collected from across the country to help people living in the society of the future to enjoy greater peace of mind.

Fostering Innovation

Collaboration beyond business and organizational boundaries

We are enhancing collaboration among our more than ten R&D bases in Japan and overseas and our Group companies in order to revitalize the entire organization for the creation of innovative products and services.



Open Innovation

Companies, Public R&D Institutions, Academia, etc.

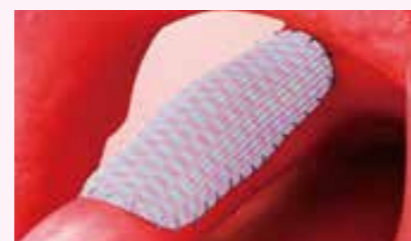
- Alliances
- Accelerator programs
- Collaborative R&D
- Corporate venture capital
- Consortiums

We are promoting open innovation with a view to new business creation. To that end, not only do we have in place a comprehensive in-house network covering R&D, production, and sales, we are also forming extensive networks with external organizations, thereby pursuing such efforts as collaborative R&D and information and personnel exchanges.

FOCUS

Healthcare × Materials Cardiovascular Patch

We developed the Cardiovascular Patch in partnership with Osaka Medical and Pharmaceutical University and Fukui Tateami Co., Ltd. by making use of our polymer-based product design technology and medical equipment development know-how. The patches, which are used for the treatment of congenital cardiac disease, stretch in accordance with the physical growth of the patient and as such does not inhibit the growth of tissue. They are therefore expected to help reduce the risk of reoperation.



Teijin defines innovation as a series of activities that include creating products/services, establishing a business in order to provide them, and generating profit from the business. In pursuing innovation, it aims to demonstrate the comprehensive strength and agility that are unique to the Teijin Group for the solution of issues that will be faced by the society of the future.

Organization that enables diverse people to thrive and achieve self-realization

The Teijin Group upholds “Empowering Our People” as part of its corporate philosophy.

We are implementing a range of measures to allow employees to make unique contributions on a global scale, take on the challenge of fostering creative innovation and be part of a diverse workforce.

Globalization of the personnel system

Each region in which we operate, that is, Japan, Europe, the United States, China and Asia-Pacific, has a director in charge of human resources who reports directly to the Chief Human Resources Officer. These directors share personnel strategies to build a personnel system that can centrally respond to both regional and global strategies.

Development of human resources and global talent management

For the development of future global management leaders, Teijin implements a leadership programs for selected employees from Teijin Group companies across the world. Measures taken for such human resources development include strategic personnel assignment, appropriate personnel evaluation, a mentor system involving current members of the management team, and KPIs for the participation of women and non-Japanese employees in management. In addition, we have an overseas practical training program for the speedier development of global talent as well as an internal job recruitment system.

Improving working conditions

Teijin is working for establishment of flexible personnel evaluation and treatment systems, including remote work, as far as the productivity is maintained and increased. Also, for work-life balance, employees are encouraged to take childcare leave and can also use systems for long-term nursing care, volunteer leave and for taking leave to accompany a spouse who has been transferred overseas. Teijin has also made the Teijin Group Health Management Declaration to clarify the values that embrace workplaces that promote good mental and physical health and has been officially certified as a corporation achieving outstanding health and productivity management for six years in a row.

work with Pride
 Index to evaluate LGBTQ-related measures implemented by companies, etc.

Granted the highest rating for three years in a row

D&I AWARD
 Index to evaluate diversity promotion measures taken by companies

Granted the highest rating for two years in a row

NADESHIKO BRAND
 Index to evaluate listed companies in terms of women's empowerment

Included in the index for five years from 2018 to 2022

For details about our diversity & inclusion efforts, please scan the QR code.

FOCUS

Overseas practical training program



Takuya Inagaki
 Implantable Medical Device Strategy Department,
 Regenerative Medicine & Implantable Medical Device Division,
 New Business Development Unit

Making more contributions to research with an overseas network and a global perspective

Through the three-month training program, I met more than 130 people, including venture capital representatives and U.S. Food and Drug Administration examiners, and learned how interpersonal relations are built in the United States. I also learned about overseas trends in the healthcare industry and became concerned about the limited amount of information that is available in Japan. After returning home, I therefore began to follow overseas macro trends and developments more proactively and held meetings with offshore companies, thereby improving the quality of my work. R&D competition in the healthcare industry is getting more and more fierce, which makes it more important for us to find partners for open innovation. By taking advantage of the network and mindset that I built through the training, I intend to make contributions to the business as a researcher armed with a global perspective.

Sustainability

To realize a sustainable society, we manage risks and opportunities for our company and promote various activities related to issues such as corporate ethics and compliance, product liability (PL) and quality assurance as the basis of our sustainable business management. In order to minimize the impact of our business activities on the environment, we have also established KPIs for greenhouse gases, water, hazardous substances and landfill waste and are bolstering our initiatives. These efforts have given us an excellent reputation internationally, as evidenced by Teijin being listed on key global socially responsible investment (SRI) indexes. In 2023, Teijin was included in the S&P Global Sustainability Year-book 2023, being selected as a company demonstrating excellence in sustainability as measured on a global scale.

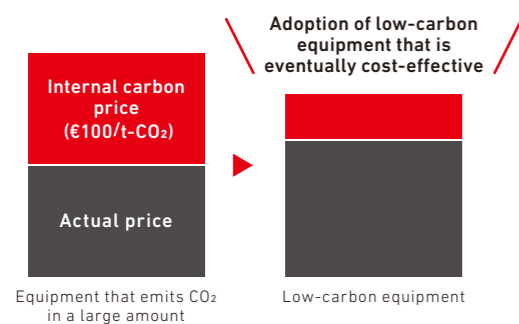
Key measures

- Reduce greenhouse gas emissions
- Make efficient use of resources and minimize waste
- Prevent pollution and manage chemical substances
- Improve employee health and satisfaction

Long-term environmental targets (vs. FY2018)

Climate Change (Group CO ₂ emissions)	FY2030: 30% reduction (total amount) FY2050: Net zero emissions
Climate Change (Supply Chain CO ₂ emissions)	FY2030: 15% reduction (total amount) Amount of total emissions < Avoided CO ₂ emissions
Water	FY2030: 30% improvement (volume of freshwater intake per sales unit)
Hazardous Substance	FY2030: 20% improvement (hazardous chemical substance emissions per sales unit)
Resources Recycling	FY2030: 20% improvement (volume of landfill waste per sales unit)

Internal carbon pricing



The Teijin Group established and introduced an internal carbon pricing (ICP) system in fiscal 2020. We calculate the virtual costs of our CO₂ emissions based on our global internal carbon price (€100/t-CO₂) and use the results to reflect it on our investment decisions regarding capital investment, M&A and long-term agreements on the procurement of renewable energy. Through ICP, we will foster the implementation of investment plans that contribute to the reduction of CO₂ emissions toward the achievement of our long-term target for CO₂ emissions reduction, while also preparing for possible rises in the global carbon price.

Launching a joint project to foster the effective use of recycled materials and environment-friendly design for a sustainable product life cycle



In 2022, Teijin partnered with Fujitsu Limited to launch a joint project to realize a blockchain-based commercial platform for enhancing the environmental value of recycled materials for manufacturers. The aim of initiative is to foster the effective use of recycled materials and environment-friendly design by collecting and analyzing environmental impact-related data across the value chain as well as by providing environmental impact-related information, including proof of origin, for recycled materials. In 2023, by utilizing the platform built through the initiative, the two companies also started a joint project to enhance the environmental value of recycled resources in the production of bicycle frames. Under this project, we are tracking and managing the data on the materials and resources used in bicycle frames and their environmental impact, evaluating the feasibility of the data collection process, and verifying the value of the data visualized through the process.

Partnership with the Envision Racing Formula E Team



The Teijin Group supports the activities of the Envision Racing Formula E Team, which exists to inspire the generations to tackle climate change and accelerate the transition to e-mobility and renewable energy. Through this partnership, we are demonstrating our corporate attitude toward climate change mitigation and adaptation to a range of stakeholders on a global stage while also aiming to boost the profile of our technologies and products that can help the automotive industry reduce its environmental impacts.

Social contribution

Co-sponsoring the All Japan High School Soccer Tournament

As part of our effort to make social contributions through measures such as supporting amateur and youth sports, we have been co-sponsoring the All Japan High School Soccer Tournament since 1991. We also donate soccer balls made from *CORDLEY*, our artificial leather, to schools whose teams represent their prefecture in the Tournament.

Supporting students in and outside Japan through scholarship loans

The foundation was established in 1954 to commemorate the achievements made by Seita Kumura, a founding member of Teijin Limited. The scholarship loan program is one of the oldest offered by the Japanese corporate sector, and about 1,700 students specializing in science and engineering have received financial support under the program to date.

For details about our sustainability-related activities, please scan the QR code shown on the right.



Corporate Governance

The Teijin Group reformed its governance system in 1999 to enhance its corporate governance ahead of others in the industry. We have also long been working to increase the diversity of the Board of Directors and the Board of Statutory Auditors, with the former having had female outside directors since 2018 and the latter having had female outside auditors since 2003. Furthermore, to ensure the independence of the Board of Directors, meetings are chaired by an outside director and outside directors account for 50% of members. In addition to the Nomination and Compensation Advisory Committee, which is composed of outside directors, the CEO and the chairperson (unless the position of chairperson is vacant), we also have an Advisory Board made up of both Japanese and international experts to provide advice from the broad and long-term perspective to the Board of Directors. In addition, we are working to raise the awareness of all Group employees of the Corporate Code of Conduct and the Corporate Standards of Conduct to enhance compliance across the Teijin Group.

Corporate Code of Conduct of the Teijin Group

Together

We are united in building shared, sustainable values through mutual respect for our unique differences.

Environment, Safety & Health

We put the global environment, human safety and health as our top priorities when conducting business.

Integrity

We act with integrity in compliance with laws and regulations, and show respect for human rights and the local communities in which we operate.

Joy at Work

We are committed to building a fulfilling and joyous workplace, where each of us is passionate about our work.

INnovation

We challenge ourselves for transformation and provide innovative solutions, anticipating the needs of our customers and society.

GLOBAL NETWORK

The Teijin Group has about 170 companies in more than 20 countries around the world, and about 20,000 employees with diverse backgrounds who are active on the world stage.

For details of our bases outside Japan, please scan the QR code or click the link shown below.
<https://www.teijin.com/about/group-worldwide/material/>



Teijin Aramid B.V.



Teijin Carbon Europe GmbH



Teijin Automotive Technologies NA Holdings Corp.



Japan

Japan

54 companies

9,594 employees

Europe

Netherlands / Germany / Portugal / Czech Republic / France / Spain / UK / Luxembourg

23 companies

2,902 employees



Teijin Iwakuni Factory

North America/Latin America/Oceania

US / Mexico / Brazil

40 companies

5,495 employees



Teijin Polyester (Thailand) Limited

Asia

China / Thailand / Vietnam / Malaysia / Singapore / South Korea / Myanmar / India / Indonesia

52 companies

4,493 employees

Total

169 companies

22,484 employees

As of March 31, 2023

CEO Message

Becoming a Company that Supports the Society of the Future by Facing Social Issues and Approaching the People

The world is in a period of great social, economic, and political upheaval, and circumstances are constantly changing. At the same time, we must not stop in our efforts to make steady progress toward the SDGs, which were set as a roadmap to ensure that humankind can continue to live on the Earth.

In order to realize its long-term vision of becoming a company that supports the society of the future, the Teijin Group is committed to protecting the global environment while also working to solve issues affecting people, including patients in need of greater support and their families, and local communities. Teijin is one of only a few companies that engage in both the mental & physical care of people as well as the care of the Earth on which we all live. Our strength and purpose lie in addressing issues facing society as a whole and forming close connections

with the people involved. In our pursuit of increasing the significance of our existence as an enterprise and in our effort to accelerate the creation of new value, we are promoting diversity and inclusion in the workplace so that all of our employees with different values and experiences can maximize their potential.

The Teijin Group has overcome many difficulties in its more than 100-year history and has continued to grow. I believe that we are equipped with the DNA to always evolve in this changing world. By building a strong team of individuals who have diverse ideas but share the same vision, we will make Teijin a company that can sustainably deliver value to society.

I ask all of our stakeholders for their continued support and guidance as we strive for the growth of the Teijin Group.



A. Uchikawa
President and CEO, Teijin Limited

Corporate Data

Company Name	Established	Capital
TEIJIN LIMITED	June 17, 1918	71,833 million yen (as of March 31, 2023)

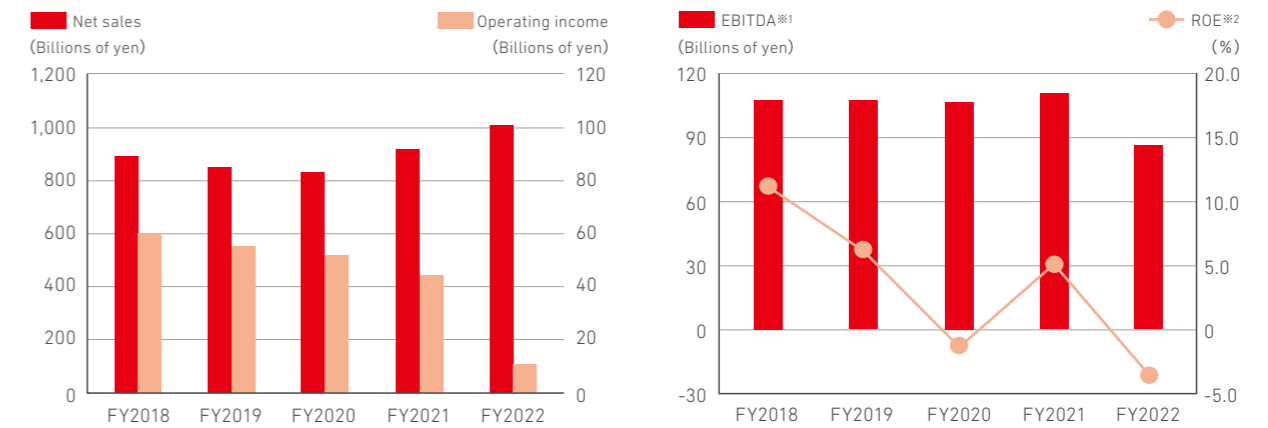
[Head Offices]

Tokyo Head Office
Kasumigaseki Common Gate West Tower
2-1, Kasumigaseki 3-chome, Chiyoda-ku,
Tokyo 100-8585, Japan
Phone: +81-3-3506-4529

Osaka Head Office
Nakanoshima Festival Tower West,
2-4, Nakanoshima 3-chome, Kita-ku,
Osaka 530-8605, Japan
Phone: +81-6-6233-3401

Higobashi Office
Higobashi Shimizu Building,
3-7, Tosabori 1-chome, Nishi-ku,
Osaka 550-8587, Japan
Phone: +81-6-6459-2110

Consolidated Financial Results



※1 EBITDA = Operating Income + Depreciation & Amortization
 ※2 ROE = Profit attributable to owners of the parent company / shareholder equity

Business Domain & Earnings Structure (Fiscal 2022)

