Business Overview

Since Toyoda Gosei's establishment in 1949, we have been providing products and services with high functionality and quality based on our synthetic rubber, synthetic plastics and their formulation technologies in cooperation with various stakeholders involved in development, design, procurement, production and sales.

FY2022 Results

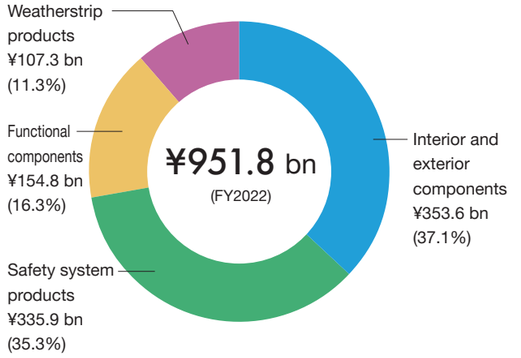
Revenue
¥951.8 bn

Operating profit
¥35.0 bn

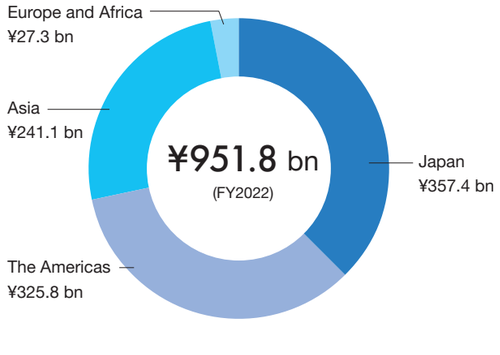
Profit attributable to owners of parent
¥16.0 bn

FCF
¥22.0 bn

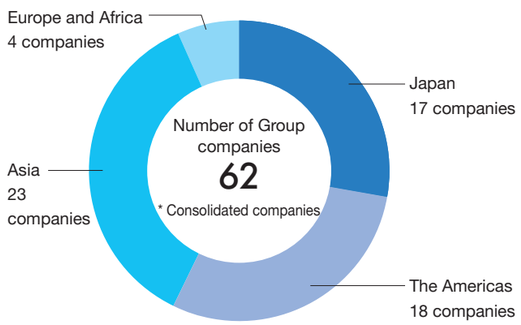
Revenue by business area



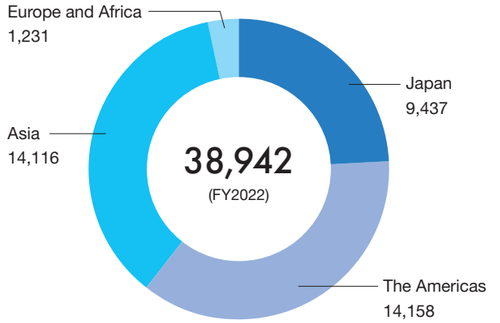
Revenue by region



Number of locations by region



Number of employees by region



Safety System Products


Airbags


Steering wheels (with built-in airbags)


Pop-up hood actuators

Interiors and Exteriors


Instrument panels and components


Radiator grilles


Console boxes

Functional Components


Plastic fuel filler pipes


Plastic turbo ducts


Brake hoses


High-pressure hydrogen tanks

Weatherstrip Products


Door glass runs


Opening trim weatherstrips

Other Areas


LED products


Air purifiers (general industry products)


e-Rubber products


Re-S eco-brand

Initiatives and Progress toward the 2030 Business Plan

SS (Safety Systems) Business Area

With our strength in product development using world-class CAE technology*1, we provide high-quality, low-cost airbags to all regions to solve social issues and achieve business growth.

*1 Computer-aided engineering (CAE) analysis technology in the mechanical design process

Issues
- Product development in response to changing accident patterns
- Developing a system to respond to the globally expanding market
- Product development in response to the transformation of the automobiles

Strengths
- Product development using world-class CAE technology
- Development and production bases covering an expanding geographical area
- Ability to propose system solutions that include airbags and peripheral components

Priority Initiatives for FY2022

In 2022, we were able to receive orders nearly at the forecast level by identifying target vehicle models, including key models for major Japanese automobile manufacturers and BEVs for North American and Chinese automobile manufacturers. In those orders, our new high-performance products, such as far-side airbags, received wide recognition and has become an advantage in order-taking activities.

Enhanced Global Production System through Collaboration with Partner Companies

We purchase inflators and bag base fabrics, which are elemental parts of airbags, from specialized manufacturers who are our partners. We share our growth strategies, including order receiving strategies, with our specialized manufacturers and work together to strengthen our competitiveness and supply capabilities by improving development efficiency through personnel and technology exchange, and by implementing shared local procurement and production in targeted regions.

Sales Expansion through High Value-Added Products

With changes in vehicle body structure and cabin interior design due to the shift to BEVs, as well as HOD*2 and HMI*3 for automated driving, there is a growing need for steering wheels with different designs and additional functions. We have also developed steering wheels with irregular shapes and high value-added steering wheels that incorporate touch sensors and LEDs, and many automobile manufacturers have shown an interest in these products.

Designs that create an EV-like feel

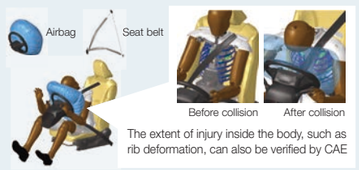
Ergonomic spoke angles
Built-in grip detection and heater function

Figure 1. High value-added steering wheel concept

*2 HOD: Abbreviation for hands-on detection. The system detects whether the driver is holding the steering wheel or has released the driver's hands from the wheel and sends a signal to the vehicle side.
*3 HMI: Abbreviation for human-machine interface. A device that allows humans and machines (vehicles) to exchange information.

Future Initiatives toward 2030

With an eye toward 2030, we aim to capture the second largest market share in the industry in order to contribute to reducing the number of fatalities and injuries in traffic accidents.
In addition to existing customers, sales expansion efforts will focus on the growth regions of China and India. In China, we are boosting production capacity by constructing a new plant in South China, and in India, we are strengthening our development capabilities by enhancing R&D and ramping up production capacity by expanding the Neemrana plant.
To win out in the competitive field of seat belts and airbags, we will strengthen our competitiveness through collaboration with seat belt manufacturers and by using CAE technology, which is one of our strengths. We will also conduct development of new concept occupant protection devices, such as lap airbags, that improve the degree of freedom in cabin interior design and accommodate diverse riding postures.



The extent of injury inside the body, such as rib deformation, can also be verified by CAE

Figure 2: Development of airbag and seat belt set (CAE)

A bag integrated into the seat belt inflates to protect the occupant

Figure 3. Lap airbag

IE (Interiors and Exteriors) Business Area

We will conduct development of products and manufacturing technologies that respond to changes in automobiles (BEVs and subscription-based services) and the diversification of user needs, and will expand our business by developing environmentally-friendly materials (including the use of recycled materials) and manufacturing facilities while being environmentally conscious.

Issues
- Development of products and production technology in anticipation of changes in design and functional needs and future customer trends
- Cost reduction and productivity improvements through automation and improved production technology
- Provide value-added products in response to the trend toward subscription-based services
- Expansion of carbon-neutral material production facilities

Strengths
- Capabilities to develop, design, and produce high quality decorative variations, transparent products, and mechanical products
- Factories equipped with the latest production technology for major manufacturing processes (molding, painting, etc.) and new manufacturing processes (hot stamping, etc.)

Priority Initiatives for FY2022

We developed the world's first emblem that combines millimeter-wave radar transparency and luminescence functions, which contributes to the advanced functionality and designs unique to BEVs, and this led to its adoption in Japan.
We began production of radiator grilles using the hot stamping manufacturing method as a decorative variation to meet customer needs, and proceeded to offer them to our customers.
In the midst of the ongoing parallel production by manufacturers of a wide variety of different vehicles, including HEVs and BEVs, we expanded the Seto Plant to enable a wider range of variations of large painted products such as radiator grilles and back door garnishes, our main products, that are highly functional and meet the design needs of customers. In addition to improving productivity at the plant, we are also working to reduce CO_2 emissions by making the new building all-electric for implementing manufacturing that is also environmentally friendly.

Luminescent millimeter-wave emblem

Hot-stamped grille

Seto Plant (Image after construction of new building)

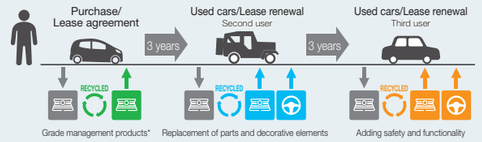
Future Initiatives toward 2030

We are aiming to expand our business by developing products and production technologies that anticipate changes in design and functional needs and customer trends (lighting, seamless design, etc.).
In response to the trend toward automobile subscription services, we will strive to add value to interior and exterior components by utilizing our advanced decorative technologies to add interchangeable decorative elements and safety functions.
To achieve carbon neutrality, we aim to expand the use of ELV materials in our products and increase the production of recycled materials. We will also promote use of electric equipment and electrification (molding machines, painting equipment) to reduce CO_2 emissions.

Customer (Toyota)

Customer (Nissan)

Development Concept
- Varying design expressions by luminescence/non-luminescence (+ light control)
- Hidden functions (millimeter wave, translucency) (body color paint)



Value-added products (image)

* Differentiated solutions that match the grade (car model grade)

Initiatives and Progress toward the 2030 Business Plan

FC (Functional Components) Business Area

In addition to expanding global sales of fuel system products to meet vehicle weight reduction and emission regulations, we will enhance development of products for the increasing number of electric vehicles, build production systems, and aim for further growth through new environmentally-friendly businesses.

Issues

- Development of low-CO_2 emission products for BEVs (natural-derived materials, use of material recycling, more lightweight designs, etc.)
- Development of products for BEVs, development of fuel system products (including CN fuels, e-fuels, etc.), and securing production resources

Strengths

- Development of environmentally-friendly products by leveraging our expertise in the rubber and plastic fields
- Technology and manufacturing for high-quality production of critical safety parts
- Global supply system

Priority Initiatives for FY2022

We are implementing an all-round strategy for BEVs and FCEVs by investing resources in cutting-edge development and capital investment. We have brought to market large high-pressure hydrogen tanks for FCEV trucks that run on hydrogen, and we expect needs to grow for these tanks in the future. The tanks are being used in the mass-market fuel cell light-duty trucks that CJPT*, a joint partnership in which Toyota Motor Corporation, Isuzu Motors Limited, and other companies have invested, is introducing to the market.

Large high-pressure hydrogen tank

CJPT's mass-market fuel cell light-duty truck

Commercial vehicles such as transport trucks are required to have a long cruising range and to fill up in a short time, and so FCEV trucks are expected to become widely used. We will contribute to achieving a hydrogen society through the development and production of high-pressure hydrogen tanks, a key component of FCEVs.

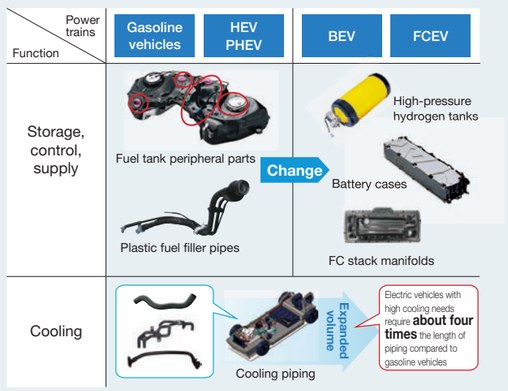
As for carbon neutral initiatives, we have successfully reduced the weights of our products through thinner wall thickness and material substitution from metals to plastics by designing and developing manufacturing methods utilizing our expertise in the rubber and plastics fields, which are our strengths.

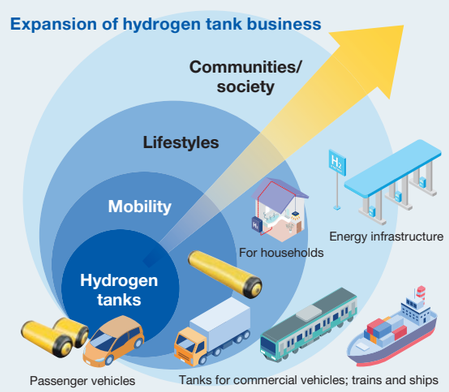
* Commercial Japan Partnership Technologies Corporation

Future Initiatives toward 2030

We will expand our business in all directions, including the development of low-cost fuel system products for sealed tank systems for HEVs and PHEVs, cooling piping and battery pack products for BEVs, and full-scale mass production of tanks for FCEV passenger vehicles and commercial vehicles.

We will also effectively use rubber resources through our proprietary desulfurization and regeneration technology to achieve carbon neutrality, as well as use naturally derived materials and recycled materials by leveraging our expertise in polymer materials.





WS (Weatherstrips) Business Area

We will shift to a sustainable business based on carbon neutrality and circular economy, and aim to solve social issues and secure reliable profits through recycling and quietness technologies.

Issues

- Establish a sustainable sealing product business despite the use of rubber materials that are difficult to recycle due to their high CO_2 emissions
- To meet the growing need for quietness due to the shift to electrification while reducing product costs

Strengths

- Rubber desulfurization and regeneration technology
- Product development and evaluation technologies that contribute to quietness improvement by leveraging knowledge in the rubber and plastics fields

Priority Initiatives for FY2022

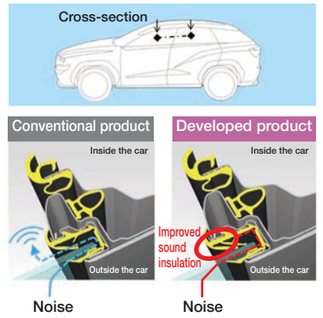
Initiatives Leveraging Our Strengths

We are conducting initiatives to reduce waste and CO_2 emissions by utilizing our rubber desulfurization and regeneration technology and reusing rubber waste from our plants. In FY2023, the Morimachi Plant (Shuchi-gun, Shizuoka Prefecture) also obtained ISCC certification, an international certification for sustainable products made from recycled and other renewable materials, to provide products with high environmental value by meeting growing demand for recycled products due to growing environmental awareness.

Furthermore, in order to enhance product added value, we are continuously working together with the Experimental Department to develop quietness technologies. We identify vehicle weaknesses that contribute to quietness, and develop and propose quietness-enhancing products that improve these weaknesses.

Also, to improve our manufacturing capabilities and profitability, we are implementing automation of processes and cost reduction initiatives through elimination of processes requiring high skills. In FY2022, we started mass production of glass run products, which are used in Lexus.

Recycled rubber produced from our proprietary technology



Future Initiatives toward 2030

To further promote carbon neutrality and circular economy, we aim to improve the quality of recycled rubber and increase the amount of recycled rubber produced.

At the same time, we will work to further reduce CO_2 emissions and improve the recycling rate while conducting studies on switching some products to plastics according to the characteristics of the products.

In addition, we aim to improve overall business profitability by developing technologies to expand the scope of use of recycled rubber and plastic materials and by developing sealing structures that maintain high quietness performance and cost competitiveness.

Life Solution Business

In addition to expanding our LED businesses, including UV-C, we are conducting initiatives to develop businesses for new fields such as power semiconductors.

Issues

- Further expand our industrial machinery parts and LED business and increase sales
- Accelerate establishment of technologies for quick business development in new fields

Strengths

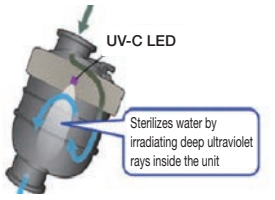
- Knowledge of LED field and materials
- Industry-academia-government collaboration

Priority Initiatives for FY2022

UV-C LED Business

We have been developing various products that sterilize water and air using UV-C LEDs, which are effective in eliminating viruses and bacteria, and have developed a water purification unit with a compact design that is one-third the size of conventional units. This product is being used by major home appliance manufacturers and is installed in EcoCute, which was developed against the backdrop of the recent increase in hygiene awareness. We will continue to expand our lineup of water purification units that can efficiently sterilize water according to the specific application and performance required by our customers. Our UV-C LEDs enable sterilization even in confined areas where it could not be done before. In the future, we will contribute to mercury-free and energy-saving designs by replacing mercury lamps.

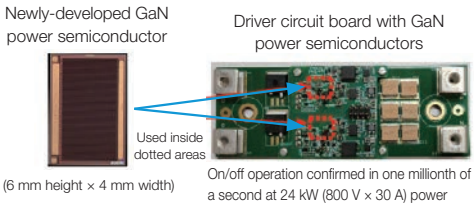
- High sterilization performance (sterilizes 8 ℓ of water in 1 minute)
- Uses LED cooling by running water for enabling compact size. Can be installed in confined spaces.



Compact water purification unit

Power Device Business

Power devices are widely used to control electric power in industrial equipment, cars, home appliances, and other equipment. In order to achieve carbon neutrality throughout society, next-generation power semiconductors that can reduce power loss during control are expected to be adapted for practical use in a growing number of applications. GaN power semiconductors are characterized by high-speed operation, but their application in a wider range of fields requires higher voltages (higher power). Following last year's announcement of the successful fabrication of 6-inch seed crystals, we announced operation verification of the world's top-class high-voltage, high-speed horizontal GaN power semiconductors. (June 2023)



GaN power semiconductor and driver circuit board with GaN power semiconductors

Future Initiatives toward 2030

To establish the above products as our mainstay products, we are steadily developing them according to their respective plans, but for UV-C LEDs, there are issues to be addressed in module design, production preparation capability, and exit strategies.
In the area of power devices, the challenge is to improve the degree of technological completeness and establish a supply chain with an eye on finished marketable products. In the area of new value creation, we are developing a microwave power supply, but there are issues in system development, quality assurance, and production system.
We will work to resolve these issues by efficiently accelerating our efforts to realize our goals.