

# Growth strategies in each business field



Mobilize all our resources and connect the huge changes before us to a leap into the future

**Yoshiyuki Fujita**

Chief of Automotive Business Headquarters  
Chief of Safety & Health Promotion Division /  
Corporate Officer

## Strategies in each field with a focus on “winning moves”

The effects of the novel coronavirus made FY2020 a very challenging year. Early 2021 was a continuation of the period of enforced restraints, but in our automotive business we understood that it was an important time for preparation to leap forward soon after. With higher added value and cost reduction of existing products as a given, we are actively investing resources for the development of products and technology that meet new needs. Together with consolidation, we are

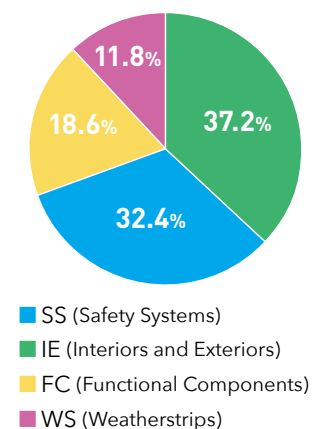
steadily sowing seeds with a view to the future.

In the field of Safety Systems, we are strengthening assessments in developed nations and responding to the increased demand for airbags amid rising interest in safety in developing nations. Functional Components are important safety parts equivalent to airbags, and while we will of course continue to supply parts for gasoline vehicles, where we have built up a track record globally, we are also putting energy into the development of high value-added products for the electric vehicles that will become widespread in the future. Also of utmost importance in Interior and Exterior parts and Weatherstrips is to cut costs

### Strategy by segment/business field

Business field / Segment	SS Safety Systems	IE Interiors and Exteriors	FC Functional Components	WS Weatherstrips	New Technology	Total
Japan	➔	➔	➔	➔		➔
Americas	➔	➔	➔	➔		➔
Asia	➔	➔	➔	➔	➔	➔
Europe	➔	➔	➔	➔		➔
<b>FY2025 sales image</b>	¥350 billion	¥300 billion	¥150 billion	¥100 billion	¥100 billion	
	Growing sales in most regions	Energy focused on regions where profits can be earned	Growing sales in most regions	Energy focused on regions where profits can be earned	Faster commercialization	

### Sales ratio of each business field



Note: Assumed exchange rate \$1=¥100

and to increase our cost competitiveness so that we do not lose out to local manufacturers in China and elsewhere. We will also make use of the knowledge we have cultivated up to this time in efforts to develop products that contribute to the achievement of carbon neutrality, and try to start up new areas of businesses. In addition to individual strategies, we believe it is critical to thoroughly refine the new added values that will be our “winning moves” in each of our four fields, so that we can prevail in the competition with other companies.

### Organizational restructuring that is promising for further synergistic effects

Structural reinforcement from the reorganization carried out in June 2021 will accelerate growth in the automotive field. We established an “Automotive Business Center” in addition to existing automotive part engineering divisions so that, together with increasing the speed of decision-making, we could find inter-disciplinary solutions to issues that are important to the entire corporation. This will advance the digital transformation that will lead to carbon neutrality, an important global issue, and work-style reforms. It will also increase the speed of our work.

We have also introduced a project system in the development of products and technology, and are strongly advancing development that crosses over essential fields in refining our “winning moves.” Starting with total proposals for vehicle interiors based on the Safety System and Interior/Exterior product fields, we are mobilizing all our resources to create products and systems that will provide safety, comfort, and well-being at a high level.

### Our response to the COVID-19 pandemic has been a test for our future

During the coronavirus pandemic, hedging risks in global supply chains has been an issue for many companies. In our automotive business, we implemented measures in accordance with our business continuity plan centered on the Production Administration Division, saying to ourselves “Never stop the customer’s production!” Specifically, we implemented a timely production plan that allowed us to deal with significantly varying production volumes, responding as needed while quickly sharing information with our locations across the globe. This was supported by a system to gather and list information at each location, which changed moment by moment. With an accurate understanding of things such as the timing for materials and parts depletion, we switched to equipment alternatives or bridge production\* when supply was stopped. This allowed us to make the best decisions on a case-by-case basis, such as ensuring a safe stock for unique products. We will further develop this system in the future and intend to build structures so that stock and distribution status can be controlled in real time.

Being thrown into this drastically changing environment has again deepened our confidence in the effectiveness of the emergency response strategy we have been putting into place. Our online remote support for production startups and other adaptations made under coronavirus restrictions became an opportunity for us to rethink the things we did as a matter of course, and transform our working style in line with the new normal. The crisis situation we are currently facing is an opportunity for new company growth. Once beyond this major crisis, we will continue to respond flexibly to new needs and all other changes, making a huge leap forward to stay one step ahead of competitors.

\*Production of a certain product at more than one plant at the same time



# SS Business Area (Safety Systems)



**Tadashi Yamamoto**  
 Chief of SS Business Area  
 Deputy Chief of Automotive Business Headquarters /  
 Corporate Officer

This business area started when we developed the first plastic steering wheel in Japan in 1954, and the mass production of driver's side airbags in 1989. Since then we have commercialized various types of airbags for protection during side impacts and for rear seat passengers. We have now reached full 360° coverage that protects people in vehicles from impacts at all angles.

Through the supply of various safety system products that help to reduce fatalities from traffic accidents, we will continue to contribute to a safe, secure, and comfortable mobile society and to achieving the SDGs.

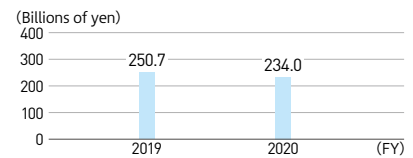
### Strengths

- Technical ability to develop and produce high-performance, low-cost airbags
- High quality production technology for key safety parts
- Higher added value in coordination with IE business area

### Opportunities

- Needs for improved airbag safety due to stricter assessment standards in developed nations
- Growing use of airbags due to rising concern about vehicle safety in developing nations
- Higher functionality of products with the spread of autonomous driving

### Revenue



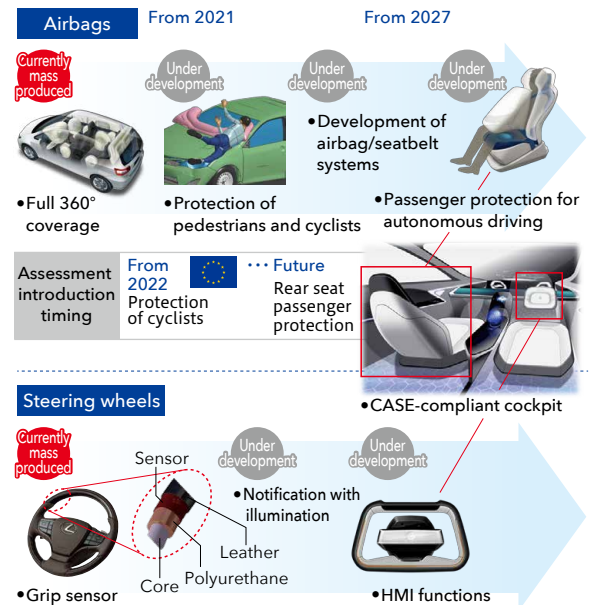
### Strategy for coming years

We are moving forward aggressively with efforts for new technology related to impact and preventive safety, to deliver safety and security to all people on the move.

**Short term** In developing nations, our focus is on ensuring competitiveness as the demand for airbags grows with rising concern about safety. In India, this includes a collaboration with Daicel on the localization of inflators. In developed nations, we are expanding product variety for the protection not only of people inside vehicles but also pedestrians, in response to the differing assessments in each region. With speedy product development that takes advantage of our accumulated knowledge, we will respond to new needs and promote technical development that proposes ways to help solve hidden problems in mobility.

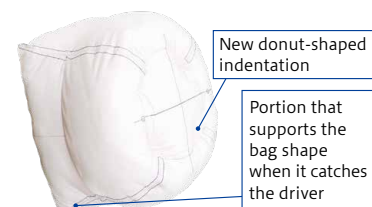
**Medium and long terms** To prepare ourselves for the spread of autonomous driving in the future, we are developing high value-added products such as airbags that can be used with seats designed to have a greater level of freedom and steering wheels that sense the condition of the driver. We are also collaborating with other companies in development with the aim of being a supplier that can contribute to total safety, including systems that take a holistic approach to airbags and seat belts.

### Products Increased variations, higher functionality



### TOPICS Developing driver-side airbag with new structure

A driver-side airbag with a new structure for safer protection was announced in July 2021. This new product, in addition to mitigating impacts to the head and chest by deploying instantaneously on impacts from the front, has a donut-shaped indentation in the deployed surface that can catch the head to minimize rotation during impacts from an angle. It can meet the stricter vehicle impact safety assessment standards that are expected in North America and elsewhere in the future.



## IE Business Area (Interiors and Exteriors)



**Junichiro Kako**  
Chief of IE Business Area  
Deputy Chief of Automotive Business Headquarters / Corporate Officer

We are broadly expanding our interior products, such as instrument panels and console boxes that make interiors more pleasant, and our exterior products related to vehicle design, such as radiator grilles. Most IE products are very visible, and in addition to functionality it is important to ensure a high esthetic appeal.

We are working to expand our business by developing products and production technology based on new and changing needs brought about by CASE.

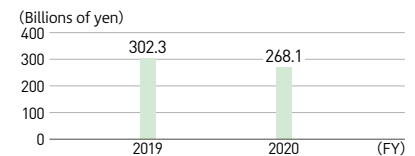
### Strengths

- Development and production system for global supply, from design to manufacturing
- Production technology capabilities for many types of high-quality decoration, including painting, plating, films, and soft surfaces

### Opportunities

- Growing needs for new decorative products that make vehicle individuality stand out
- Growing needs for new functions associated with electrification and autonomous driving
- Increasing demand for safety-related parts (radar transparent emblems)

### Revenue



### Strategy for coming years

We aim for further business growth with strengthened development of products and production technology, firmly based on changing design and functional needs from CASE.

#### Short term

We are expanding large molding and painting equipment to reliably absorb demand in growing products and regions. We are also reducing costs through simplification and commonality of functional product design, such as consoles, and development of production technologies centered on automation of assembly processes. Spreading these efforts globally will raise our competitiveness.

#### Medium and long terms

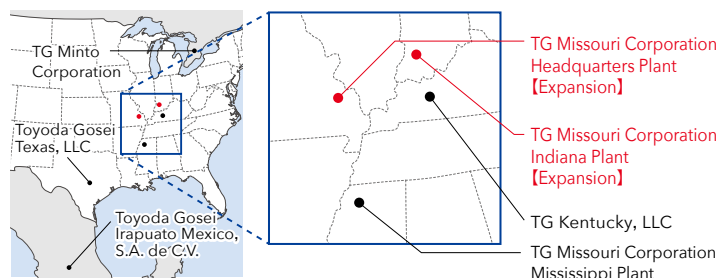
We are integrating new design and functional needs associated with vehicle electrification and autonomous driving, and will develop high value-added products such as functional lighting, HMI, and sensor-compatible garnishes. In addition to development of environmentally-friendly materials and decorative technologies to achieve carbon neutrality, we will lead the industry in innovative product design and production technology development for easy disassembly.



#### TOPICS

### Enhancing Production Capacity for Interiors and Exteriors in North America

To respond to growing sales of radiator grilles and other interior and exterior products, we will expand the TG Missouri Headquarters Plant and purchase a new building at the Indiana Plant for molding machines and painting booths. With this investment of roughly four billion yen, we have brought in the latest energy-saving equipment and are conducting environmentally-friendly manufacturing.



# FC Business Area (Functional Components)



**Yutaka Ogasawara**  
 Chief of FC Business Area  
 Chief of WS Business Area  
 Deputy Chief of Automotive Business Headquarters /  
 Corporate Officer

Toyota Gosei supplies crucial components, such as fuel and brake parts, that support the basic automobile functions of running, turning, and stopping. With high quality as a given and ongoing efforts for lighter weight and greater compactness, we have continued to maintain a top class share globally over many years. Taking the enormous changes coming with vehicle electrification as an opportunity, we will try to expand our business in safety parts, where the barrier to entry by other companies is high, while also contributing to carbon neutrality.

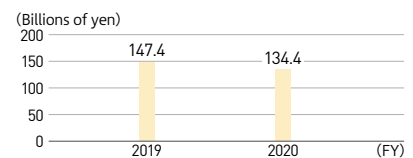
### Strengths

- Technology and manufacturing that support high quality in key safety parts
- Global supply system

### Opportunities

- Growing demand for related parts with the advance of vehicle electrification
- Growth of environmentally-friendly products (need for lighter weight)

### Revenue



### Strategy for coming years

We aim for further growth by building development and production systems with a view to the proliferation of electric vehicles, and starting up new, environmentally-friendly businesses.

**Short term** Market trends indicate gasoline and hybrid electric vehicles will be the main types of vehicle for the time being, and global sales will grow as products such as plastic fuel filler pipes and fuel tank peripheral parts meet the needs for lighter vehicle weight and exhaust gas restrictions. We aim to steadily expand sales with smooth production preparations for developing nations where demand is expected to continue. At the same time, we are also investing resources in advance development and equipment for the future electrification of vehicles.

**Medium and long terms** Leveraging the knowledge we have built up in battery and thermal control and other areas, we will grow our business for electrified vehicles with high pressure hydrogen tanks for fuel cell electric vehicles, cooling pipes that efficiently cool the many batteries in these vehicles, and battery cases. For carbon neutrality, we are starting new businesses centered on new materials and material recycling, and also working on production process innovations.

Power trains	Gasoline vehicles		HEVs PHEVs		BEVs		FCEVs	
	Functions							
Storage/control/supply	Fuel Tank Peripheral Parts		Changes		High pressure hydrogen tanks		Battery cases	
	Plastic fuel filler pipes				FC stack manifolds			
Cooling	Cooling pipes		Growing volume		Electric vehicles have high cooling needs, and pipe length is about four times that in gasoline vehicles			

### TOPICS Start of operations at the Inabe Plant, which will contribute to carbon neutrality

We started producing high pressure hydrogen tanks, a key component in FCEVs, at our Inabe Plant in November 2020. This is a model plant for environmental friendliness, where in addition to our own solar power generation, wind power generation, and hydrogen fuel cell power generation, we purchase green energy from natural energy sources. All of the electricity used at the plant is derived from sustainable sources. We will increase production capacity sequentially in the future in response to the spread of FCEVs.



# WS Business Area (Weatherstrips)

These products, which we supply globally, are attached to doors and window frames and serve many roles, including protecting the vehicle cabin from rain, wind, and noise, and in the smooth opening and closing of doors and raising and lowering of windows. We are proud of our top class world share, and are building the best production layouts centered on developing nations. We are steadily building profit with efforts to improve quietness, for which demand is rising with the spread of electric vehicles, and the promotion of rubber recycling technology that contributes to a recycling-oriented society.

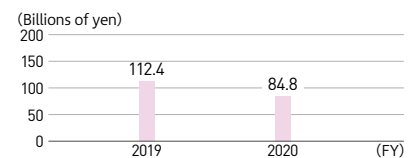
### Strengths

- High share with global supply system (top 3 globally)
- Rubber recycling technology

### Opportunities

- Rising needs for quietness with vehicle electrification
- Contributions to carbon neutrality using rubber recycling technology

### Revenue

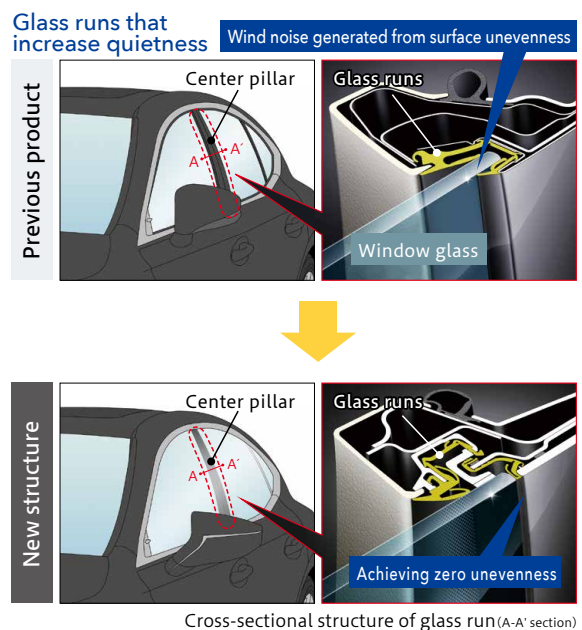


### Strategy for coming years

We aim for reliable profits by building the best production networks globally and developing products that meet new needs.

**Short term** Weatherstrips are products that require processing know-how, and to ensure reliable profits we are introducing autonomous processes that rely less on operator skill ahead of our competitors, while also reorganizing production globally and building a production network that is cost competitive with manufacturers in developing nations. We are also reducing waste by advancing rubber recycling technology and developing products that use recycled rubber as we move toward manufacturing with a reduced environmental impact. This will also lead to new businesses.

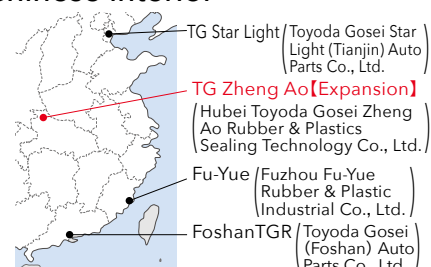
**Medium and long terms** With no engine noise, sounds that occur with vehicle motion stand out more in electric vehicles and the demand for interior quietness will increase as these vehicles come into widespread use. We are developing products specifically for quietness, which both reduce wind noise and improve sound insulation performance at high levels. Furthermore, with replacing rubber products with plastic products and maximum use of rubber recycling technology, we will contribute to building a sustainable society by replacing existing products with products that contribute to carbon neutrality.



### TOPICS

### Core location for expanding our business in the Chinese interior

The TG Zheng Ao Plant was enlarged and production equipment was increased in May 2021, doubling the weatherstrip production capacity from the level in FY2018. Following TG Start Light in northern China and Foshan TGR and Fu Yue in southern China, TG Zheng Ao became our fourth production base in China in 2018. With its enhanced production system, we will grow our business in the Chinese interior where future growth is expected. Elsewhere, we will respond to demand in the developing nations of India and Mexico where demand for weatherstrip products will increase in the future.



## Life Solution Business

In January 2021, the non-automotive fields of LEDs, e-Rubber, general industry products, and GaN power semiconductors were brought together in the Life Solution Business Headquarters. The planning, sales, and engineering divisions were integrated with the aim of accelerating commercialization. We will first raise our name recognition in the consumer products field with the supply of technologies and products that enhance people's lives and contribute to the SDGs, such as e-Rubber, where product applications are progressing, and UV-C (deep UV) LEDs, which are promising as light sources for disinfection, and then move them into automotive products.



**Ryo Onishi**  
Chief of Life Solution Business Headquarters / Corporate Officer

### Examples | Commercialization of UV-C (deep UV) LEDs in three fields

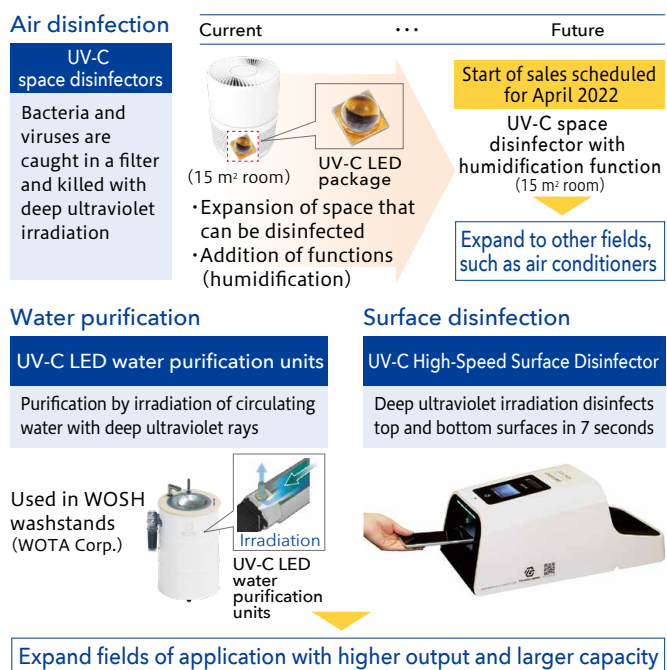
We first achieved commercialization of UV-C LED products in FY2020, and with the recently rising awareness of infection prevention are selling various products in the three fields of space disinfection, water purification, and surface disinfection.

In the field of space disinfection, we began selling UV-C space disinfectors in December of last year. These are products in which bacteria and viruses are caught in a filter and killed with irradiation from UV-C LEDs. We plan to sell new products with improved disinfection function and an added humidification function in April 2022.

In the field of water purification, Toyoda Gosei UV-C LED water purification units are used on "WOSH" portable washstands that were launched in November of last year by WOTA Corporation.

In the field of surface disinfection, we began shipping our Disinfection Box in May of last year and launched a UV-C High-Speed Surface Disinfector in November.

We will continue to raise output and increase capacity and expand the fields of application.

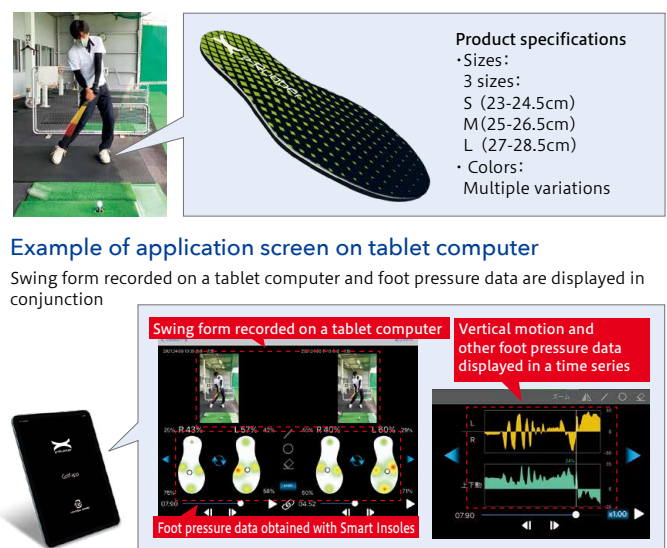


### Examples | Smart Insoles using e-Rubber

e-Rubber, a next-generation rubber that functions with electricity and physical force, is used in the Super BEAT heart surgery training simulator that was launched in October 2019, and we have continued to seek partners with whom we can expect to grow this business.

In a second round of commercialization in FY2021, we are using e-Rubber's feature as a pressure-sensitive IoT sensor in the planned launch of Smart Insoles, which visually represent foot pressure data. Verification tests are currently underway with a sports manufacturer. Foot pressure data during golf swings are collected with Smart Insoles and analyzed, which can lead to improved form.

In the future, in addition to expanding the areas of application of pressure-sensitive IoT sensors, we will spread into other sports and the healthcare field, including in frailty prevention, as "intangibles" businesses.



## Corporate Venture Capital

For “Venture into Innovation, New Mobility,” the first of the three pillars of activity set forth in the 2025 Business Plan, our mid-range business plan, we are making agile investments in startups. The main aims are to develop new products leveraging the technology of the companies in which we invest and obtain a strategic return in the creation of new business. We will continue long-term support, including providing management resources to these companies, so that both of our businesses can grow.



**Mitsuhiro Nawashiro**

Deputy Chief of Corporate Strategy Headquarters  
Deputy Chief of Research and Development Headquarters, Chief of Product Development Center, Deputy Chief of Life Solution Business Headquarters / Corporate Officer

### To realize new businesses quickly, we will grow together with our partners through investment

Toyota Gosei’s Corporate Venture Capital Dept. was established in 2019 to achieve, through investment in startups, the goals of supplementing the technology in our existing businesses, acquiring future technology that will be the seeds for new business, and accelerating development by bringing the venture spirit of the companies into which we invest to Toyota Gosei.

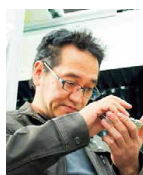
In selecting companies for investment, we have considered six fields that are promising for synergy with our own core technologies: (1) next-generation automotive parts, (2) robotics, (3) semiconductors, (4) materials, (5) production technology, and (6) SDGs. Since January 2021, based on the changing external environment, we have expanded this to include carbon neutrality, healthcare, and intangibles. A specific example of synergy achieved in the past is a fixture that supports assembly work that was fabricated with the use of the 3D printer technology of a company in which we invested. Taking advantage of features of that company’s technology in which recycled materials can be used in materials, we replaced the traditional metallic fixtures in our plants with recycled plastic, reducing our environmental impact. While creating products and businesses, we will continue to communicate and share issues for the growth of the businesses in which we invest, and hope move on to the next step together. It is said that it generally takes 7 to 10 years to obtain a return on venture investments, but we will grow together with our investment partners as One Team so that we can bring that forward as much as possible.

#### List of companies in which Toyota Gosei has invested

Company name	Technology	Category	
IMUZAK Inc.	Molds, microfabrication	Production technology	
QBIT Robotics Co., Ltd.	Service robots	Robotics	
Slab Inc.	3D printer	Production technology	
TRYETING Inc.	AI	Materials	
Uhuru Corporation	Cloud	Intangibles business	
Ossia Inc.	Wireless power	Next-generation parts	
WOTA Corp.	Portable water purifiers	Semiconductors/SDGs	
Ball Wave Inc.	Chemical sensors	Healthcare	
Counterworks, Inc.	Retail DX support	Intangibles business	
Genial Light Co., Ltd.	Healthcare applications of optical technology	Healthcare	
E-ThermoGentek Co., Ltd.	Thermoelectric generation modules	Carbon neutrality/production technology	

### Slab Slab Inc.

We are making efforts for higher accuracy and speed of plastic 3D printers that can use recycled materials, and developing production technology to speed up product development and increase efficiency of low-volume, high-mix production. Joint development of general-purpose material manufacturing and production equipment will produce a synergistic effect.



**Seiichi Yuyama**  
President

3D printers create solid value and we are conducting joint development with Toyota Gosei so that they can be used as an effective tool in making automobiles in the future.

### E-thermo

#### E-ThermoGentek Co., Ltd.

As one aspect of increased renewable energy use at Toyota Gosei, we have been generating power ourselves using solar, geothermal and other sources. In collaboration with a company that has original thermoelectric power generation technology that converts heat to electricity, we will develop a power generation system for the effective use of the thermal energy discharged during the molding and processing of rubber and plastic products.