# **Overview of Business**

We supply automotive parts that use rubber and plastic polymer technology globally

#### Product field -

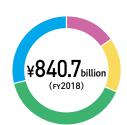


#### Sales revenue by product area

Weatherstrips ¥129.4 billion (15.4%) ¥334.1 billion (39.7%)

**Functional Components** ¥136.2 billion (16.2%) Interiors and Exteriors

Safety Systems ¥240.8 billion (28.7%)



#### **Automotive Parts**



Weatherstrips



Door glass runs





Opening trim weatherstrips



**Functional Components** 



Plastic fuel filler pipes



Plastic turbo ducts



Brake hoses



Interiors and Exteriors



Instrument panel modules and components



Radiator grilles



Console boxes



Safety Systems



Airbags



Steering wheels (with built-in airbags)



Pop-up hood actuators

#### **Other Products**



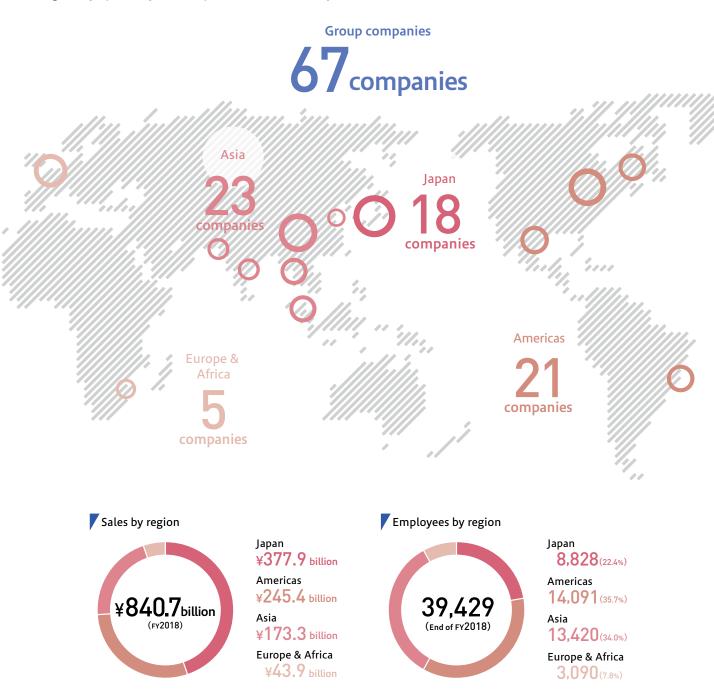




General Industry Products (Air purifiers, interior and exterior products for agricultural, construction, and industrial machines)

#### **Global Network**

With 67 group companies in 17 countries/regions, Toyoda Gosei swiftly meets the needs of customers around the world. We have established sales and engineering systems that are customer-oriented and community-based with globally optimal systems of production and delivery.

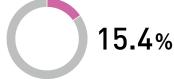


Note: Sales by region includes amounts for internal transactions within the Group, and so does not match the total value for consolidated sales.

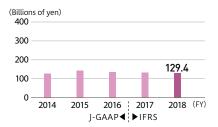
# Weatherstrips

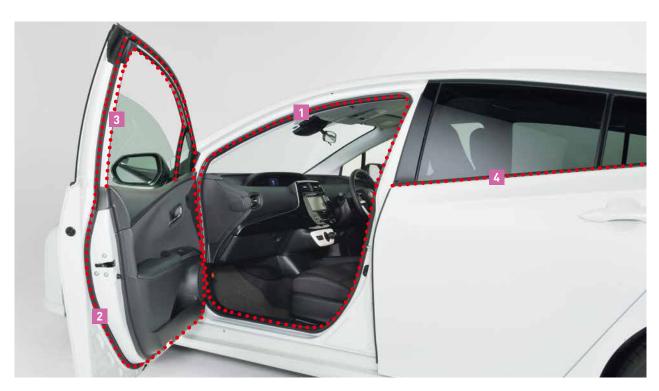
Weatherstrip products serve many functions. In addition to protecting the passenger cabin from rain, wind, and noise, they ensure the smooth functioning of doors and windows and give doors a satisfying sound when they close. We enjoy a top market share with global supply from 24 production sites worldwide and integrated manufacturing from materials development to in-house kneading of materials, product development and design, production preparations, and molding and processing. We continue to improve our product planning and production technology abilities, and actively propose new ideas to customers. We will also make further efforts for lighter weights and recycling.

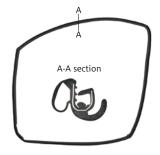
# Proportion of sales by product field

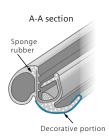


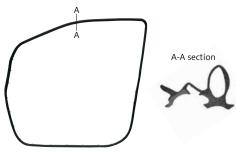
#### 5-year sales trends











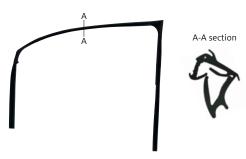
#### 1 Opening trim weatherstrips

Sponging processes for rubber using our materials development and production technology reduce weight by about 30%. Our lineup of fabric and other decorative variations is used where the parts are visible from the vehicle cabin.

2 Door weatherstrips

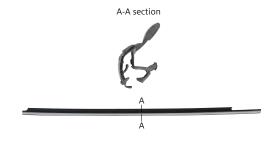
Location		Name
Japan	Shizuoka	Toyoda Gosei Co., Ltd. Morimachi Plant
	Mie	Hinode Gomu Kogyo Co., Ltd.
		Kaiyo Gomu Co., Ltd.
		Chusei Gomu Co., Ltd.
	Miyagi	TG East Japan Co., Ltd.
	Fukuoka	Toyoda Gosei Kyushu Co., Ltd.
Americas	America	TG Automotive Sealing Kentucky, LLC
		Meteor Sealing Systems, LLC
		LMI Custom Mixing, LLC
	Mexico	Toyoda Gosei Automotive Sealing Mexico, S.A. de C.V.
	Canada	Waterville TG Inc.
	Brazil	GDBR Industria e Comercio de Componentes Quimicos e de Borracha Ltda.

Location		Name
	Thailand	Toyoda Gosei Rubber (Thailand) Co., Ltd.
	India	Toyoda Gosei Minda India Pvt. Ltd.
		Minda TG Rubber Pvt. Ltd.
	China	Toyoda Gosei Star Light (Tianjin) Auto Parts Co., Ltd.
Asia		Toyoda Gosei (Foshan) Rubber Parts Co., Ltd.
ASId		Fuzhou Fu-Yue Rubber & Plastic Industrial Co., Ltd.
		Hubei Toyoda Gosei Zheng Ao Rubber & Plastics Sealing Science and Technology Co., Ltd.
	Taiwan	Tai-yue Rubber Industrial Co., Ltd.
Europe & Africa	Germany	Toyoda Gosei Meteor GmbH
	UK	Toyoda Gosei UK Ltd.
	Czech Republic	Toyoda Gosei Czech, s.r.o.
	South Africa	Toyoda Gosei South Africa (Pty) Ltd.



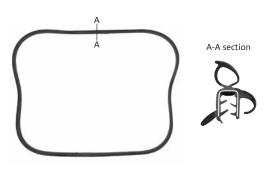
#### 3 Door glass runs

Weight has been reduced about 30% by switching from rubber to rubber-plastic admixtures and adopting innovative design that allows certain sections to be made thinner.



Outer weatherstrips





**5** Luggage weatherstrips

# Functional Components

Functional components such as fuel parts and flexible hoses support the basic automobile functions of running, stopping, and turning. We have a lineup of parts that are lighter and more compact than ever, giving us a top share in the world market with global supply from 21 locations worldwide. We are developing materials and products that take advantage of the characteristics of plastics and rubber—flexibility, electric insulation, heat resistant conductivity, and light weight—with a view to the widespread adoption of clean energy vehicles including PHVs, EVs, and fuel cell vehicles.

# Proportion of sales by product field 16.2% 5-year sales trends (Billions of yen) 400 300

136.2

2018 (FY)

200

100

2014

2015

2016 | 2017

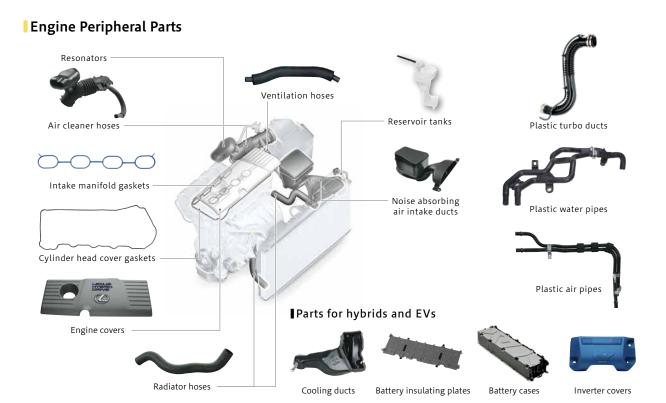
J-GAAP**∢** ▶IFRS

#### | Fuel Tank Peripheral Parts

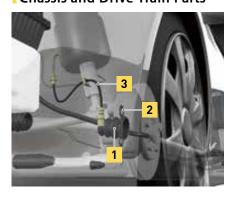


Location		Name
	Aichi	Toyoda Gosei Co., Ltd. Haruhi Plant
		Toyoda Gosei Co., Ltd. Heiwacho Plant
		Toyoda Gosei Co., Ltd. Inazawa Plant
	Shizuoka	Toyoda Gosei Co., Ltd. Morimachi Plant
	Kanagawa	Toyoda Gosei Co., Ltd. Kanagawa Plant
Japan	Aichi	FTS Co., Ltd.
	Mie	Hinode Gomu Kogyo Co., Ltd.
		Kaiyo Gomu Co., Ltd.
		Chusei Gomu Co., Ltd.
	Fukuoka	Toyoda Gosei Kyushu Co., Ltd.

Location		Name
Americas	America	TG Kentucky, LLC
		TG Fluid Systems USA Corporation
	Mexico	Toyoda Gosei Rubber Mexico, S.A. de C.V.
		Toyoda Gosei Irapuato Mexico, S.A. de C.V.
	Thailand	Toyoda Gosei (Thailand) Co., Ltd.
		Toyoda Gosei Rubber (Thailand) Co., Ltd.
Asia	India	Toyoda Gosei Minda India Pvt. Ltd.
ASIA		Minda TG Rubber Pvt. Ltd.
	Indonesia	PT. Toyoda Gosei Safety Systems Indonesia
	Taiwan	Tai-yue Rubber Industrial Co., Ltd.
Europe & Africa	Czech Republic	Toyoda Gosei Czech, s.r.o.



#### Chassis and Drive Train Parts









Column hole covers





2 Piston seals







# Interiors and Exteriors

Instrument panels, console boxes, and other interior parts contribute greatly to comfortable vehicle cabins, while exterior parts such as radiator grilles and back door garnishes affect overall vehicle design. These are all things noticed by customers, and demand a high aesthetic sense and high quality. We have built a global network with 22 production locations, spread our technical abilities from Japan to international locations, and refined our supply and competitive strengths. We are also taking advantage of our knowledge as a pioneer in LED development in efforts to develop automotive LED products.

### Proportion of sales by product field



#### 5-year sales trends



#### Interiors

Instrument panel modules and components



Location		Name
	Aichi	Toyoda Gosei Co., Ltd. Inazawa Plant
		Toyoda Gosei Co., Ltd. Bisai Plant
		Toyoda Gosei Co., Ltd. Seto Plant
	Kanagawa	Toyoda Gosei Co., Ltd. Kanagawa Plant
Japan	Aichi	Toyoda Gosei Interior Manufacturing Co., Ltd.
		TGAP Co., Ltd.
	Nagano	Hoshin Gosei Co., Ltd.
	Shizuoka	TG Opseed Co., Ltd.
	Fukuoka	Toyoda Gosei Kyushu Co., Ltd.
Americas	America	TG Missouri Corporation
		TG Kentucky, LLC

Location		Name
	America	Toyoda Gosei Texas, LLC
	Mexico	Toyoda Gosei Irapuato Mexico, S.A. de C.V.
Americas	Canada	TG Minto Corporation
	Brazil	GDBR Industria e Comercio de Componentes Quimicos e de Borracha Ltda.
		Pecval Industria Ltda.
	Thailand	Toyoda Gosei (Thailand) Co., Ltd.
Asia	India	Toyoda Gosei South India Pvt. Ltd.
	China	Tianjin Toyoda Gosei Co., Ltd.
		Toyoda Gosei (Foshan) Auto Parts Co., Ltd.
	Taiwan	Fong Yue Co., Ltd.
Europe & Africa	UK	Toyoda Gosei UK Ltd.

## Air conditioner register with LED lighting

Wireless power transfer technology based on magnetic resonant coupling is used for the first time in an automotive part. This is also a means to prevent wire breakage from repeated manipulations of the knob and give greater freedom of design.





LED cabin lamps



Assist grips

#### Exteriors

#### Radiator grilles

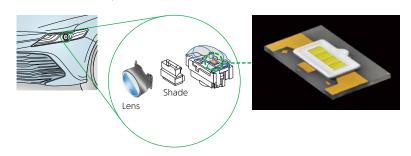
We satisfy all sorts of user design preferences with our decorative technology, such as plating and painting, and molding technology.



Back door garnishes



#### Automotive headlamp LEDs



#### Millimeter wave compatible emblems

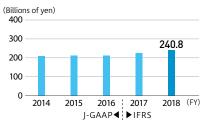
Our decorative and molding technologies have enabled the development of vehicle emblems that are transmissible to millimeter wave radar while maintaining a plating-like shine.



# Safety Systems

We supply airbags that lessen the impacts on vehicle occupants during accidents, pop-up hood actuators that lessen the impact on the heads of pedestrians who are hit, and steering wheels with attractive designs from 20 production sites worldwide. We will continue our development efforts for airbags with ever higher performance while at the same time developing technologies that meet the needs of emerging markets and actively pursuing technical development that integrates preventive safety.

# Proportion of sales by product field 28.7%





Location		Name
	Aichi	Toyoda Gosei Co., Ltd. Heiwacho Plant
		Toyoda Gosei Co., Ltd. Bisai Plant
1		Ichiei Kogyo Co., Ltd.
Japan	Nagano	Hoshin Gosei Co., Ltd.
	Miyagi	TG East Japan Co., Ltd.
	Fukuoka	Toyoda Gosei Kyushu Co., Ltd.
	America	TG Missouri Corporation
Americas	Mexico	TAPEX Mexicana, S.A. de C.V.
	Brazil	GDBR Industria e Comercio de Componentes Quimicos e de Borracha Ltda.

Location		Name
	Thailand	Toyoda Gosei (Thailand) Co., Ltd.
	Vietnam	Toyoda Gosei Haiphong Co., Ltd.
	India	Toyoda Gosei South India Pvt. Ltd.
		Toyoda Gosei Minda India Pvt. Ltd.
Asia		Minda TG Rubber Pvt. Ltd.
	Indonesia	PT. Toyoda Gosei Safety Systems Indonesia
	China	Tianjin Toyoda Gosei Co., Ltd.
		Toyoda Gosei (Zhangjiagang) Co., Ltd.
	Taiwan	Fong Yue Co., Ltd.
Europe & Africa	Czech Republic	Toyoda Gosei Czech, s.r.o.
	South Africa	Toyoda Gosei South Africa (Pty) Ltd.







4 Knee airbags



5 Seat cushion airbags



6 Side airbags



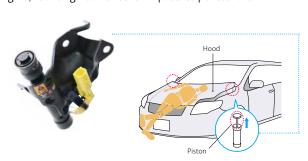
7 Rear-seat center airbags



8 Rear-end impact airbags

#### Pop-up Hood Actuators

These actuators lift the hood and widen the space between hood and engine, reducing head or other impacts to pedestrians.



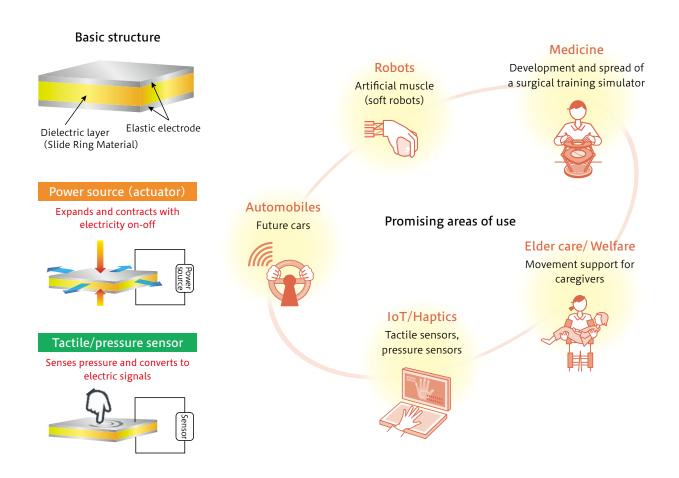
#### Steering Wheels

Our lineup of attractively designed wooden, leather, and wood grain steering wheels are used by a wide range of customers.

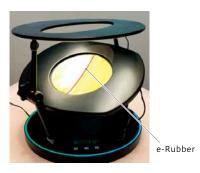


#### le-Rubber

We are continuing to develop e-Rubber, an innovative, soft, polymer device that uses supramolecular Slide Ring Material. e-Rubber is promising for use in a wide range of fields as a power source or as touch or pressure sensors.



#### **Exhibit examples**



Heart surgery training simulator (SupeR BEAT)

Using e-Rubber, which moves in quick response to electricity turning on/off, the simulator faithfully reproduces the beating of the heart.



Tactile robot hand (under development)

This tactile robot hand can feel the softness of objects with sensors in the fingertips.



Haptics; eR Hapt [irn/pt] (under development) Haptics Sharing transmits the tactile sensation of nearby people to your fingers. An object's hardness and softness is reproduced at a distance.

e-Rubber

#### **IGaN** power devices

With the application of LED technology, we are developing products that contribute to higher efficiency and greater compactness of power conversion equipment.



Power transistors (under development)

Using gallium nitride (GaN) crystallization technology, we are developing products that contribute to greater efficiency and compactness of power conversion equipment.

#### LEDs

LEDs with new added value are being developed.



Deep ultraviolet LED light source modules

An LED module that emits deep ultraviolet light (UV-C), which has a sterilizing effect, is used for purposes such as water sterilization (ensuring drinking water, purifying wastewater)



Solar LEDs

Red, green, blue phosphor is irradiated with violet light to achieve a color tone close to sunlight.

#### **General Industry Products**

We have used our automotive parts and LED technology to develop and produce products in various other fields.

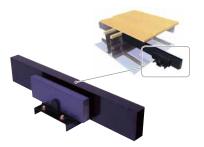


Air purifiers

We handle many different variations in function, design, color and more.



Interior and exterior products for agricultural, construction, and industrial machinery



Dynamic dampers