

# Toyota Industries Report

# 2017

Year ended March 31, 2017





## Message from the Chairman and President

Firstly, we would like to extend our sincere appreciation for your continued support of Toyota Industries Corporation and the Toyota Industries Group.

In fiscal 2017 (ended March 31, 2017), the global economy mildly expanded, driven by monetary and financial policies in respective countries despite a deceleration of the Chinese economy and the anticipated impact of the U.K.'s decision to leave the EU. Although modestly, the Japanese economy continued to grow due primarily to increases in capital investment and exports in addition to a recovery in consumer spending.

In this business environment, Toyota Industries Corporation and its Group companies ("Toyota Industries") undertook efforts to ensure customer trust through a dedication to quality first as well as to expand sales by responding flexibly to market trends. As a result, unit sales were strong in each business division; however, net sales in fiscal 2017 decreased owing mainly to the impact of exchange rate fluctuations. In terms of profit, despite cost reduction efforts throughout the Toyota Industries Group, sales efforts and declines in depreciation costs, we recorded a decrease in profit because of the impact of exchange rate fluctuations and an increase in labor costs.

With regard to the future economic outlook, the global economy is expected to continue growing. However, uncertainties surrounding the business environment preclude optimism, as the future trend in monetary easing in respective countries, protectionist policies spreading in developed countries, a further deceleration of the Chinese economy and the occurrence of terrorism and conflicts around the world require close monitoring.

Under these circumstances, Toyota Industries is further strengthening its business foundation and addressing key management issues to raise corporate value by leveraging the Group's comprehensive strengths.

As immediate tasks, we will endeavor to bolster our management platform to respond quickly to changes in the business environment that are accelerating year by year. Specifically, based on our quality first approach, we aim to build a stronger production foundation by maintaining and improving productivity on a global basis. Furthermore, we will strive to build a lean corporate structure by thoroughly eliminating waste, by pursuing excellence in quality, cost and product lead time throughout the global supply chain and by improving productivity in administrative functions. Moreover, we will strengthen risk management in order to quickly and appropriately respond to changes in the world situation.

Besides these approaches, we will work to hone our manufacturing capabilities, which are one of our core strengths, and further bolster product competitiveness. To this end, we will differentiate Toyota Industries not only through the development of technologies based on the keyword of the 3Es, which we define as "energy," "environmental protection" and "ecological thinking," but also through our production engineering technologies. In addition, we aim to leverage new growth potentials through several measures. They include taking advantage of such structural changes as progress in electrification and the rapid growth of e-commerce in the automobile and materials handling equipment markets on a global scale; creating and providing customers with new values; and utilizing the Internet of Things (IoT) and artificial intelligence (AI). To support such business development, we will continue our efforts to create a workplace environment that enables diverse human resources to fully demonstrate their abilities and develop personnel who can play active roles in the global arena.

In other areas, Toyota Industries will create a workplace environment that places top priority on safety; thoroughly enforce compliance, including observance of laws and regulations; and proactively participate in social contribution activities. By carrying out these initiatives, we aim to broadly meet the trust of society and grow harmoniously with society. With regard to protection of the global environment, we will undertake Group-wide initiatives in seeking to realize "a zero CO<sub>2</sub> emissions society in 2050."

Through these initiatives, we aim for sustainable growth of each business and strive to contribute to an enriched lifestyle and comfortable society around the world as described in Toyota Industries' Vision 2020 plan.

In closing, we would like to sincerely ask for your continued understanding and support.

July 2017





# Continuous Value Creation of the Toyota Industries Group

Based on the Basic Philosophy, Toyota Industries has provided products and services truly needed by society by leveraging the technologies and know-how cultivated for more than 90 years since our foundation. We will continue to strive for the sustainable growth of our businesses by further contributing to the realization of an enriched lifestyle and comfortable society.

**Basic Philosophy**  
[Respect for the Law]

[Respect for Others]

[Respect for the Natural Environment]

[Respect for Customers]

[Respect for Employees]

Toyota Industries is determined to comply with the letter and spirit of the law, in Japan and overseas, and to be fair and transparent in all its dealings. Toyota Industries is respectful of the people, culture, and traditions of each region and country in which it operates. It also works to promote economic growth and prosperity in those regions and countries. Through its corporate activities, Toyota Industries works to contribute to regional living conditions and social prosperity and also strives to offer products and services that are clean, safe, and of high quality. Toyota Industries conducts intensive product research and forward-looking development activities to create new value for its customers. Toyota Industries nurtures the inventiveness and other abilities of its employees. It seeks to create a climate of cooperation, so that employees and the Company can realize their full potential.



We encapsulated the spirit of founder Sakichi Toyoda in the Toyoda Precepts, which serve as Toyota Industries' corporate creed and upon which our Basic Philosophy is based.

**1926—**  
[ The Beginning ]

After putting a lot of effort into research and trials, Sakichi Toyoda finally invented and completed the Type G automatic loom. Toyoda Automatic Loom Works, Ltd. (now Toyota Industries Corporation) was established to manufacture the loom in 1926. Carrying on his spirit of being studious and creative, we embarked on a path to undertake the development and production of Japanese-made spinning machinery and automobiles.

**1953—**  
[ Diversification and Expansion of Businesses ]

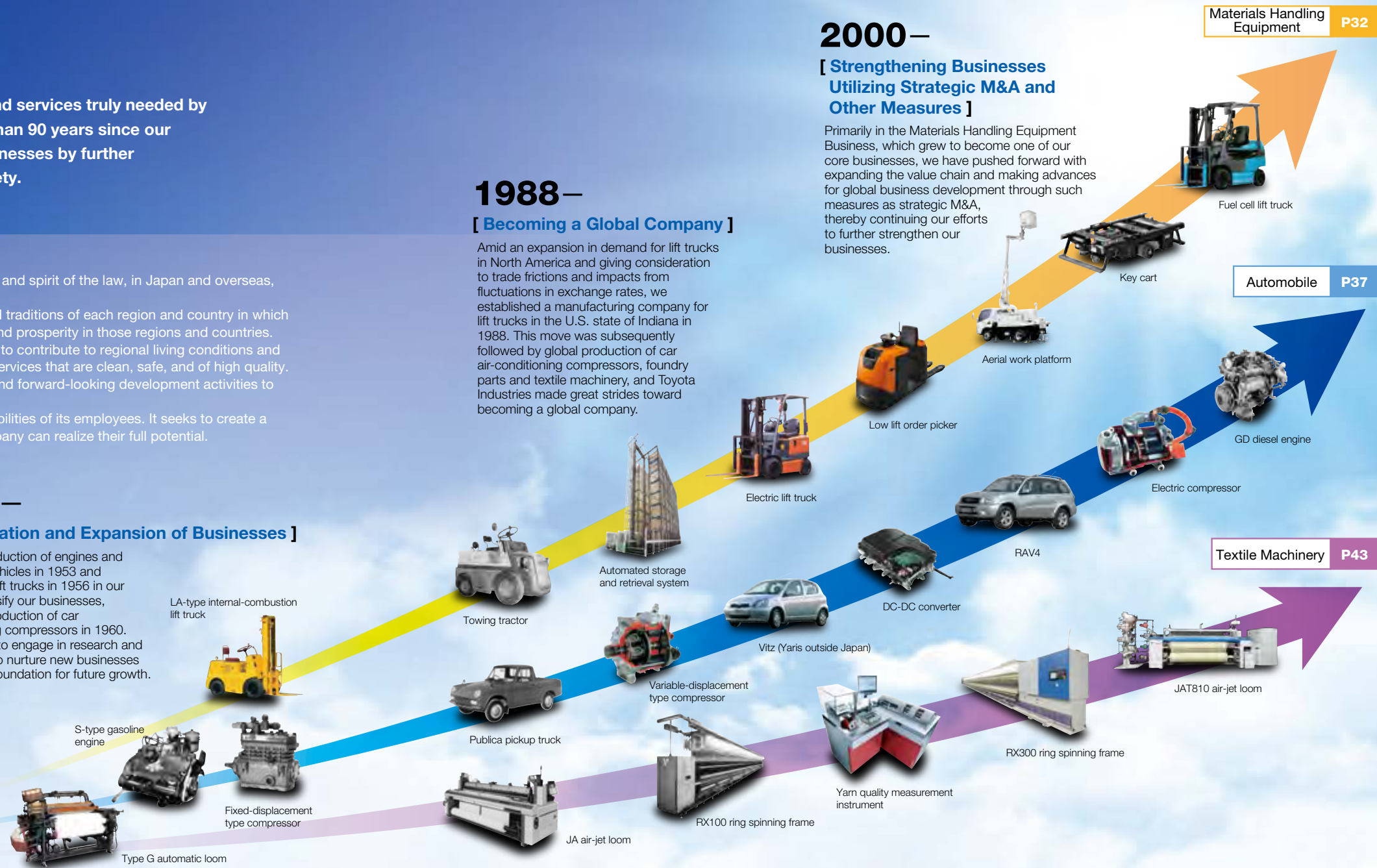
We began production of engines and assembly of vehicles in 1953 and production of lift trucks in 1956 in our efforts to diversify our businesses, followed by production of car air-conditioning compressors in 1960. We continued to engage in research and development to nurture new businesses and build the foundation for future growth.

**1988—**  
[ Becoming a Global Company ]

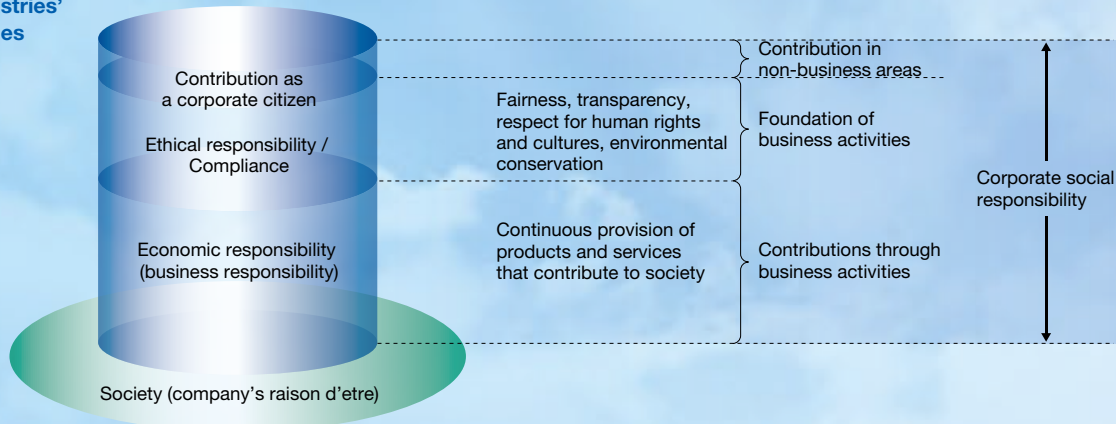
Amid an expansion in demand for lift trucks in North America and giving consideration to trade frictions and impacts from fluctuations in exchange rates, we established a manufacturing company for lift trucks in the U.S. state of Indiana in 1988. This move was subsequently followed by global production of car air-conditioning compressors, foundry parts and textile machinery, and Toyota Industries made great strides toward becoming a global company.

**2000—**  
[ Strengthening Businesses Utilizing Strategic M&A and Other Measures ]

Primarily in the Materials Handling Equipment Business, which grew to become one of our core businesses, we have pushed forward with expanding the value chain and making advances for global business development through such measures as strategic M&A, thereby continuing our efforts to further strengthen our businesses.



**Toyota Industries' CSR Activities**



**[Main Scope of CSR Activities]**

- Adhering to a quality first approach, we ensure *monozukuri* (manufacturing) that quickly responds to the diverse, ever-changing needs of customers. (Relationship with Our Customers)
- We encourage open procurement and seek co-existence and co-prosperity with our business partners (suppliers) based on mutual trust. (Relationship with Our Business Partners)
- We strive for timely and appropriate information disclosure while promoting good communications with shareholders and investors. (Relationship with Our Shareholders and Investors)
- We aim to create safe and secure workplaces where each and every associate can exercise their diverse potentials and play active roles. (Relationship with Our Associates)
- We fulfill our role as a good corporate citizen and actively undertake social contribution activities. (Relationship with Our Local Communities)

**Our Continuous Commitment**



# Toyota Industries' Value Creation Process

Toyota Industries divides its diverse businesses such as materials handling equipment, textile machinery, car air-conditioning compressor, car electronics, vehicle and engine into three units: solution, key components and mobility. We aim to contribute to our stakeholders by making the most of the core assets and strengths we have accumulated to date and by engaging in value creation in each unit.

## Core Assets and Strengths

- [Human Resources]**
  - Diverse human resources comprised of more than 50,000 employees
  - Human resources development that underpins sustainable growth
- [Product Development & Manufacturing Capabilities]**
  - Product development capabilities that leverage the advantages of engaging in diverse businesses
  - Manufacturing capabilities and production engineering that support high-quality and stable production
  - Know-how on in-house development of production equipment that contributes to the differentiation of product appeal
- [Global Network]**
  - Production bases around the world
  - Solid supply chain built on mutual cooperation with business partners
  - Extensive lift truck sales and service networks in respective regions
- [Financial Foundation]**
  - Sound financial foundation
  - High rating bestowed by rating agencies (fund procurement capability)

## Value Creation

Providing products and services that anticipate customers' needs by leveraging synergies among businesses

		Development	Production	Sales	After-Sales Services
Unit		Main products			
Solution	Materials handling equipment				
	Textile machinery				
		Offering unique solutions by engaging in everything from development to production, sales and after-sales services			
Key components	Car air-conditioning compressor				
	Car electronics				
		Providing key components of various products for automakers around the world by leveraging our technological capabilities			
Mobility	Engine				
	Vehicle				
		Contributing to further improving competitiveness of Toyota cars by leveraging our strengths in manufacturing capabilities			

\* Safety, environment, quality, cost and delivery



•Comfortable and attractive automobiles

**Mobility**

•Fuel-efficient engines with cleaner emissions

•Support for customers' greater logistics efficiencies

**Solution**

•Textile machinery that produces high-quality fabrics and yarns with soft texture

•Comfortable vehicle interior

**Key Components**

•Better fuel efficiency of automobiles

Contributing to Our Stakeholders



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### Editorial policy

In aiming to realize a deeper understanding of the Toyota Industries Group among a broad spectrum of stakeholders, the *Annual Report* and *Social and Environmental Report* have been combined into the *Toyota Industries Report* from the fiscal year ended March 31, 2008.

In addition to the Toyota Industries Group's management policies, the report provides easy-to-understand information regarding its business, social and environmental activities over the past year as well as its future direction.

### Period covered by the report

This report focuses on activities carried out in fiscal 2017 (April 1, 2016 to March 31, 2017), but also includes some information outside this period.

### Organizations covered in the report

Toyota Industries Corporation and its consolidated subsidiaries

### Reference guidelines

- Global Reporting Initiative (GRI) *Sustainability Reporting Guidelines* 4th edition (G4)
- ISO 26000
- Japan's Ministry of the Environment *Environmental Accounting Guidelines* (2005 Version)
- Japan's Ministry of the Environment *Environmental Reporting Guidelines* (2012 Version)

### Cautionary Statement with Respect to Forward-Looking Statements

This report contains projections and other forward-looking statements that involve risks and uncertainties. The use of the words "expect," "anticipate," "estimate," "forecast," "plan" and similar expressions is intended to identify such forward-looking statements. Projections and forward-looking statements are based on the current expectations and estimates of the Toyota Industries Group regarding its plans, outlook, strategies and results for the future. All such projections and forward-looking statements are based on management's assumptions and beliefs derived from the information available at the time of producing this report and are not guarantees of future performance. Toyota Industries undertakes no obligation to publicly update or revise any forward-looking statements in this report, whether as a result of new information, future events or otherwise. Therefore, it is advised that you should not rely solely upon these projections and forward-looking statements in making your investment decisions. You should also be aware that certain risks and uncertainties could cause the actual results of Toyota Industries to differ materially from any projections or forward-looking statements discussed in this report. These risks and uncertainties include, but are not limited to, the following: (1) reliance on certain customers, (2) product development capabilities, (3) intellectual property rights, (4) product defects, (5) price competition, (6) reliance on suppliers of raw materials and components, (7) environmental regulations, (8) success or failure of strategic alliances with other companies, (9) exchange rate fluctuations, (10) share price fluctuations, (11) effects of disasters, power blackouts and other incidents, (12) latent risks associated with international activities and (13) retirement benefit liabilities.

The fiscal year ended March 31, 2017 is referred to as fiscal 2017 and other fiscal years are referred to in a corresponding manner.

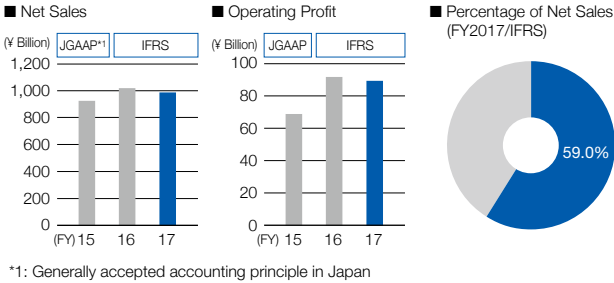
Outline of Businesses

Materials Handling Equipment

The smooth flow of goods links the world and enriches the lives of people and society. Toyota Industries meets diverse customer needs in logistics by providing a diverse range of materials handling equipment such as lift trucks and offering advanced and efficient logistics services. Through these businesses, Toyota Industries helps customers the world over.

The Materials Handling Equipment Segment develops, produces, sells and provides services for a broad range of products, from industrial vehicles centered around a full lineup of lift trucks (0.5- to 43-ton capacities) to materials handling systems. Lift trucks, which capture the top global market share\*2, are delivered to customers around the world under the TOYOTA, BT, RAYMOND and CESAB brands. Toyota Industries also strives to provide finely tuned after-sales services so that customers can always use our products in the best possible condition. While raising the level of after-sales services for developed countries, we are reinforcing our sales and service networks as well as enhancing service training for emerging countries.

\*2: Survey by Toyota Industries Corporation

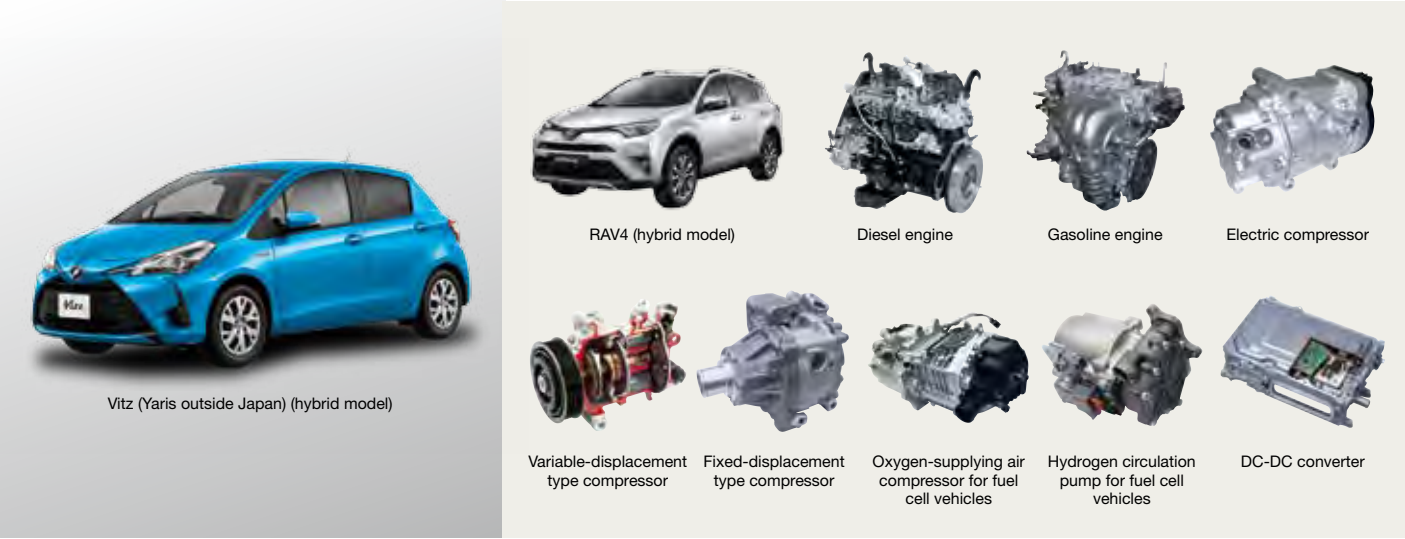
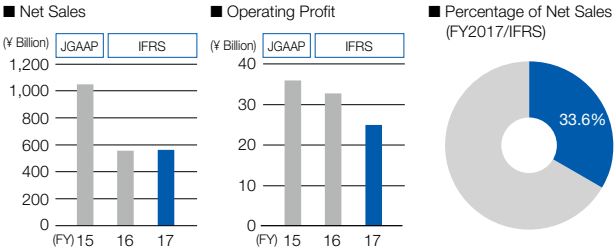


Automobile

Get behind the wheel with a solid, reassuring feel and enjoy comfortable driving. Besides vehicle assembly, Toyota Industries produces various components such as engines and compressors, the latter of which comprises the heart of car air conditioners to keep the vehicle interior comfortable, as well as car electronics. From vehicle assembly to parts production, the Automobile Segment engages in a wide range of car-related businesses, leveraging synergies among its business divisions in development and production.

Vehicle	With its strengths as an industry leader in safety, the environment, quality, cost and delivery, the Vehicle Business produces compact to midsize automobiles.
Engine	In addition to diesel engines produced under a comprehensive structure ranging from planning and development to production, we also produce gasoline engines.
Car Air-Conditioning Compressor	Toyota Industries' car air-conditioning compressors are highly acclaimed in terms of their reliability at high operating speeds and quiet operation in addition to such excellent environmental performance features as compactness, light weight and fuel efficiency. The Car Air-Conditioning Compressor Business captures the world-leading market share in unit sales*3.
Car Electronics	The Car Electronics Business develops and produces electronics products primarily for electric-powered vehicles such as hybrid vehicles.

\*3: Survey by Toyota Industries Corporation

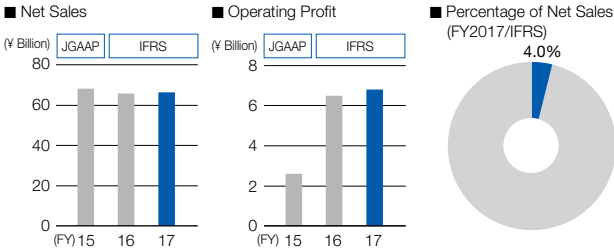


Textile Machinery

A soft texture caressing your skin and gently enveloping your body. Toyota Industries produces spinning machinery that spins high-quality yarns and high-speed, energy-saving weaving machinery that produces fabrics. We deliver textile machinery to customers around the world that incorporates advanced technologies and is imbued with our dedication to quality.

The Textile Machinery Division, our original business, began with the invention of the automatic loom by founder Sakichi Toyoda. Presently, we undertake fully integrated operations from development and production to sales and after-sales services for spinning machines that spin twisted fiber bundles into yarn and weaving machines that weave spun yarn into fabrics. Our textile machinery is supplied to markets worldwide. Thanks to superb reliability and high productivity, our air-jet looms have won extensive acclaim from customers around the globe, capturing the world-leading market share in terms of unit sales\*4.

\*4: Survey by Toyota Industries Corporation



# Consolidated Eleven-Year Summary

Toyota Industries Corporation  
Years ended March 31

Millions of yen

	International Financial Reporting Standards (IFRS)		Generally Accepted Accounting Principles in Japan (JGAAP)								
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>For the Year</b>											
Net sales	<b>¥1,675,148</b>	¥1,696,856	¥2,166,661	¥2,007,856	¥1,615,244	¥1,543,352	¥1,479,839	¥1,377,769	¥1,584,252	¥2,000,536	¥1,878,398
Operating profit (loss)	<b>127,345</b>	137,026	117,574	107,691	77,098	70,092	68,798	22,002	(6,621)	96,853	89,954
Profit before income taxes*1	<b>181,986</b>	191,386	170,827	138,133	86,836	80,866	73,911	31,756	14,343	126,488	108,484
Profit (loss)*2	<b>131,398</b>	194,270	115,263	91,705	53,119	58,594	47,205	(26,273)	(32,767)	80,460	59,468
Investments in tangible assets*3	<b>¥ 77,393</b>	¥ 75,418	¥ 126,395	¥ 109,479	¥ 89,459	¥ 58,404	¥ 38,254	¥ 26,963	¥ 104,495	¥ 104,205	¥ 129,023
Depreciation*3	<b>73,253</b>	78,253	70,782	64,153	57,954	59,830	62,372	73,238	87,219	83,744	74,449
Research and development expenses	<b>69,524</b>	65,432	47,785	46,326	39,057	32,070	27,788	26,826	33,646	36,750	34,548
Per share of common stock (yen):											
Earnings (loss) per share*2, *4											
Basic	<b>¥ 420.78</b>	¥ 618.34	¥ 367.06	¥ 292.76	¥ 170.36	¥ 188.02	¥ 151.51	¥ (84.33)	¥ (105.16)	¥ 257.50	¥ 189.88
Diluted	<b>420.78</b>	618.33	366.99	292.57	170.35	188.02	151.51	(84.33)	(105.16)	257.43	189.66
Share of equity attributable to owners of the parent	<b>7,125.37</b>	6,678.80	7,500.16	5,640.08	4,719.66	3,662.26	3,300.17	3,390.02	2,987.16	4,483.32	5,612.11
Cash dividends per share	<b>125.00</b>	120.00	110.00	85.00	55.00	50.00	50.00	30.00	40.00	60.00	50.00
<b>At year-end</b>											
Total assets	<b>¥4,558,212</b>	¥4,317,282	¥4,650,896	¥3,799,010	¥3,243,779	¥2,656,984	¥2,481,452	¥2,589,246	¥2,327,432	¥2,965,585	¥3,585,857
Share of equity attributable to owners of the parent	<b>2,240,293</b>	2,098,658	2,425,929	1,829,326	1,524,933	1,197,841	1,075,939	1,104,929	977,670	1,453,996	1,810,483
Capital stock	<b>80,462</b>	80,462	80,462	80,462	80,462	80,462	80,462	80,462	80,462	80,462	80,462
Number of shares outstanding (excluding treasury stock) (thousands)	<b>310,489</b>	314,226	314,155	313,730	312,207	311,687	311,564	311,570	311,577	311,589	312,075
<b>Cash flows</b>											
Net cash provided by operating activities	<b>¥ 239,094</b>	¥ 248,049	¥ 182,191	¥ 155,059	¥ 151,299	¥ 101,718	¥ 153,661	¥ 203,452	¥ 65,768	¥ 188,805	¥ 177,467
Net cash used in investing activities	<b>(86,925)</b>	(532,238)	(160,769)	(118,483)	(274,210)	(9,403)	(187,574)	(36,855)	(114,217)	(138,789)	(164,446)
Net cash provided by (used in) financing activities	<b>789</b>	124,495	(8,918)	6,183	7,050	10,279	(85,728)	(38,230)	120,971	(33,992)	(19,749)
Cash and cash equivalents at end of year	<b>243,685</b>	92,399	248,706	226,406	179,359	296,811	195,566	317,590	188,011	121,284	108,569
<b>Indices</b>											
Operating profit ratio (%)	<b>7.6</b>	8.1	5.4	5.4	4.8	4.5	4.6	1.6	(0.4)	4.8	4.8
EBITDA (millions of yen)*5	<b>¥ 276,193</b>	¥ 279,444	¥ 248,854	¥ 216,175	¥ 155,234	¥ 161,876	¥ 150,481	¥ 90,521	¥ 71,608	¥ 222,125	¥ 191,007
Return on equity (ROE) (%)*6	<b>6.1</b>	8.7	5.6	5.7	4.1	5.4	4.5	(2.6)	(2.8)	5.1	3.5
Return on assets (ROA) (%)*7	<b>3.0</b>	4.3	2.7	2.6	1.8	2.3	1.9	(1.1)	(1.2)	2.5	1.7
D/E ratio (%)*8	<b>43.6</b>	43.0	32.0	39.9	45.4	53.8	56.8	60.3	68.6	37.4	29.9
Ratio of share of equity attributable to owners of the parent*9	<b>49.1</b>	48.6	50.7	46.6	45.4	43.0	41.4	40.8	40.0	47.1	48.8
Number of employees (persons)	<b>52,623</b>	51,458	52,523	49,333	47,412	43,516	40,825	38,903	39,916	39,528	36,096

\*1: The figures prior to fiscal 2016 are ordinary income under JGAAP.

\*2: Profit (loss) attributable to owners of the parent

\*3: Investments in tangible assets and depreciation apply to property, plant and equipment. They do not include materials handling equipment leased under operating leases.

\*4: Earnings (loss) per share is computed on the average number of shares for each year.

\*5: Profit before income taxes + Interest expenses – Interest and dividends income + Depreciation and amortization (including assets other than property, plant and equipment)

\*6: Profit (loss) attributable to owners of the parent / Average share of equity attributable to owners of the parent at the beginning and the end of the fiscal year

\*7: Profit (loss) attributable to owners of the parent / Average total assets at the beginning and the end of the fiscal year

\*8: Interest-bearing debt / (Share of equity attributable to owners of the parent – Subscription rights to shares)

\*9: (Share of equity attributable to owners of the parent – Subscription rights to shares) / Total assets

Note: Toyota Industries has adopted IFRS beginning from the end of fiscal 2017. The figures in fiscal 2016 have been reclassified in accordance with IFRS.



# Consolidated Financial and Non-Financial Highlights

## Financial Information

(FY2017/IFRS)

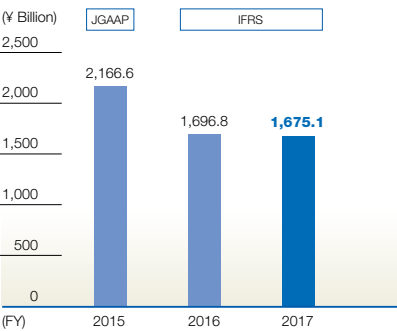
Net Sales	Operating Profit	Investments in Tangible Assets
¥ <b>1,675.1</b> billion	¥ <b>127.3</b> billion	¥ <b>77.3</b> billion
Depreciation	Research and Development Expenses	Share of Equity Attributable to Owners of the Parent
¥ <b>73.2</b> billion	¥ <b>69.5</b> billion	¥ <b>2,240.2</b> billion

## Non-Financial Information (CSR)

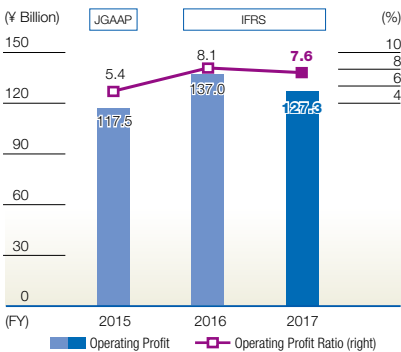
(FY2017)

Consolidated Number of Employees	Ratio of Non-Japanese Employees	Consolidated Subsidiaries
<b>52,623</b> persons	<b>60.4</b> %	<b>207</b> companies
Ratio of New Female Graduates in Administrative Positions (Non-Consolidated)	Ratio of New Female Graduates in Engineering Positions (Non-Consolidated)	Ratio of Employees with Disabilities (Non-Consolidated)
<b>40.7</b> %	<b>14.3</b> %	<b>2.27</b> %

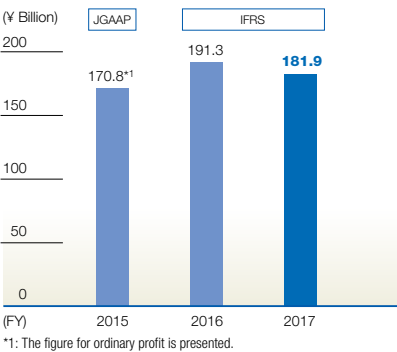
Net Sales



Operating Profit/Operating Profit Ratio

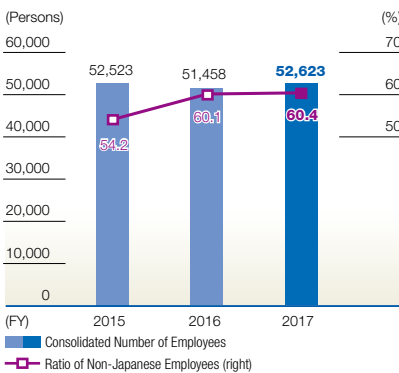


Profit before Income Taxes

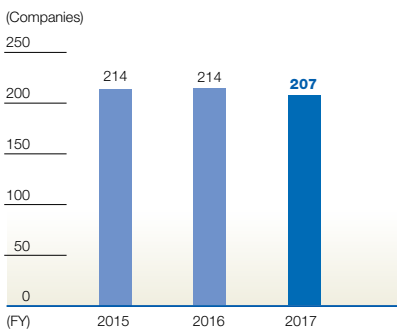


\*1: The figure for ordinary profit is presented.

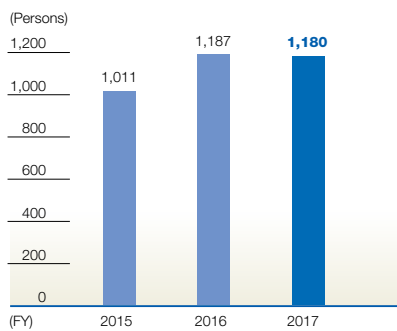
Consolidated Number of Employees/Ratio of Non-Japanese Employees



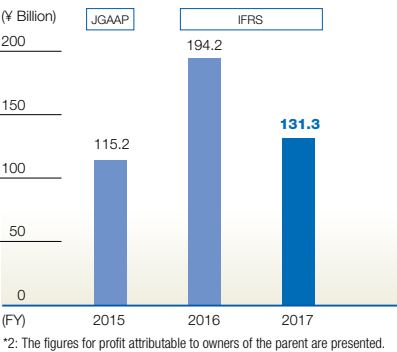
Consolidated Subsidiaries



Participants of Japan's Subcontracting Law Seminar

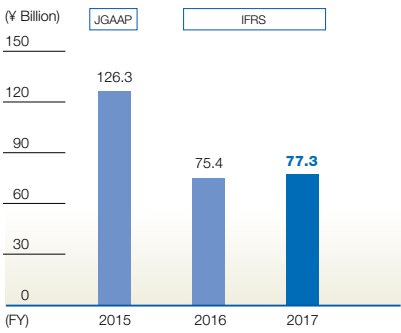


Profit\*2

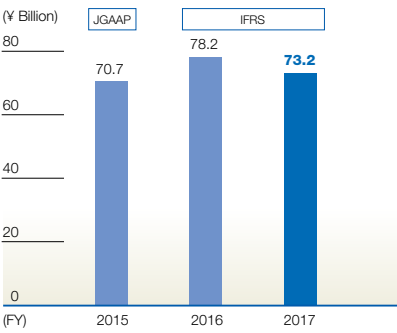


\*2: The figures for profit attributable to owners of the parent are presented.

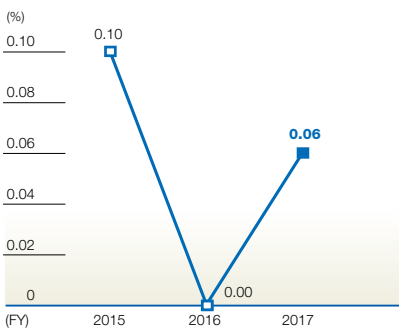
Investments in Tangible Assets



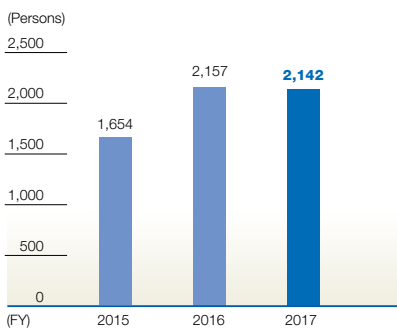
Depreciation



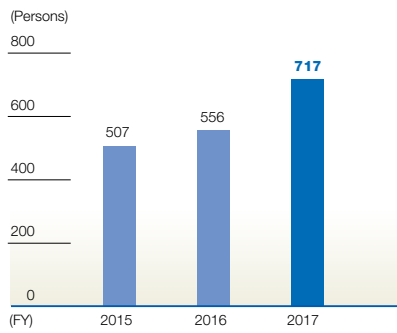
Frequency Rate of Lost Workday Injuries (Non-Consolidated)



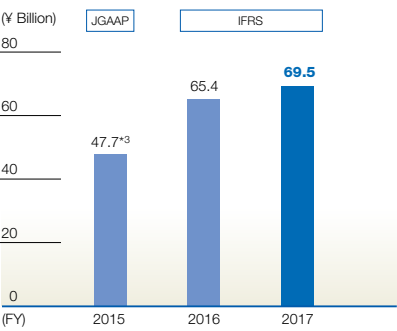
Participants of Age-Based Health Education (Non-Consolidated)



Persons Having Completed Guidance Program on Prevention of Lifestyle Diseases (Non-Consolidated)

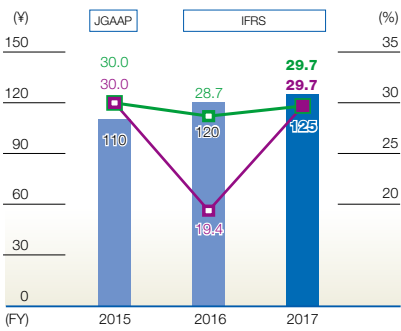


Research and Development Expenses



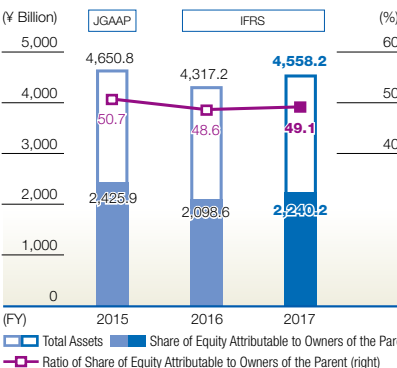
\*3: Excluding expenses for commissioned R&D, etc., as well as mass production-related expenses by engineering departments

Cash Dividends Per Share/Dividend Payout Ratio/Total Return Ratio\*4

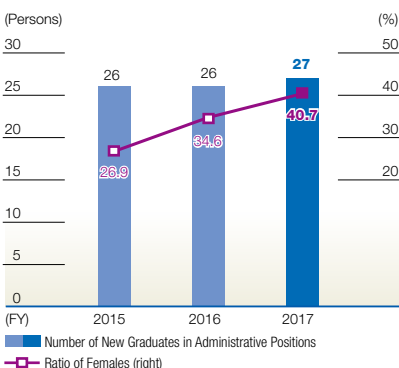


\*4: The figure for FY2016 includes the acquisition of treasury stock of 3,737 thousand shares in the amount of ¥17.99 billion.

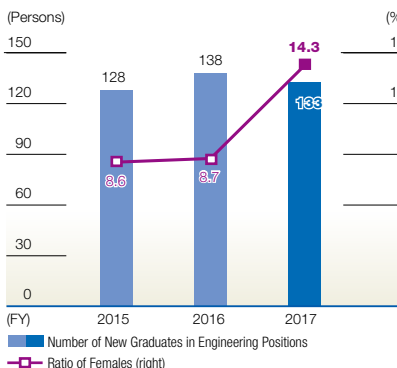
Total Assets/Share of Equity Attributable to Owners of the Parent/Ratio of Share of Equity Attributable to Owners of the Parent



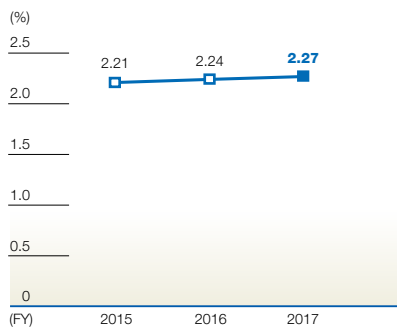
Number of New Graduates in Administrative Positions/Ratio of Females (Both Non-Consolidated)



Number of New Graduates in Engineering Positions/Ratio of Females (Both Non-Consolidated)



Ratio of Employees with Disabilities (Non-Consolidated)



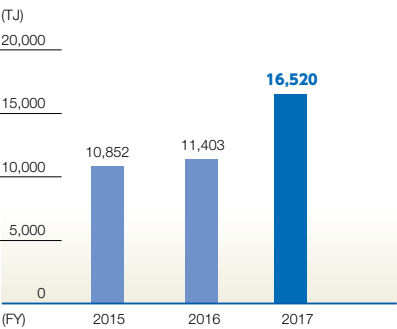


Non-Financial Information (Environment)

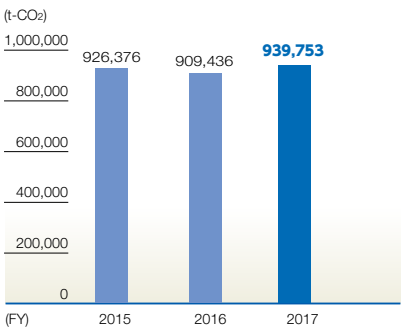
(FY2017)

Energy Consumption (Consolidated)	CO <sub>2</sub> Emissions (Consolidated)	Water Consumption (Consolidated)
16,520 TJ	939,753 t-CO <sub>2</sub>	4,661 km <sup>3</sup>
Discharge of Treated Wastewater (Japan Consolidated)	Raw Material Consumption (Consolidated)	Waste Generation (Consolidated)
2,370 km <sup>3</sup>	712,293 t	87,917 t

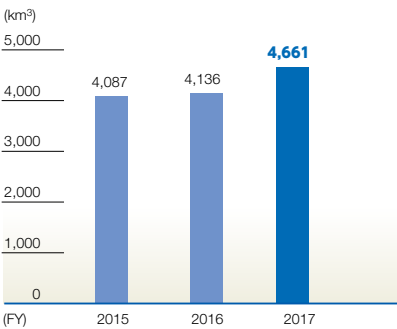
Energy Consumption (Consolidated)



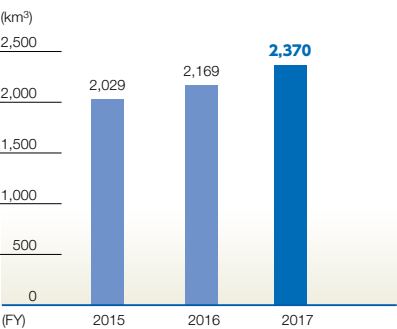
CO<sub>2</sub> Emissions (Consolidated)



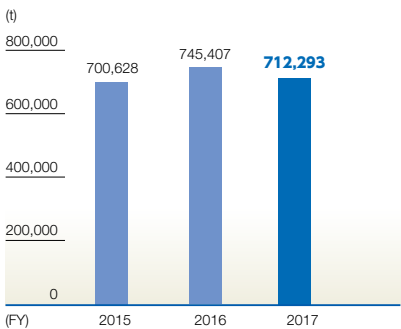
Water Consumption (Consolidated)



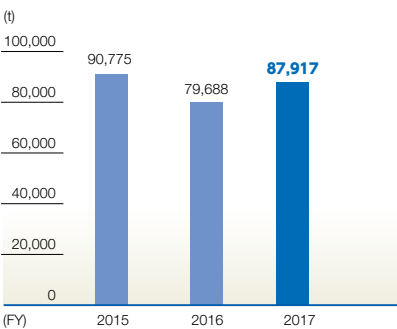
Discharge of Treated Wastewater (Japan Consolidated)



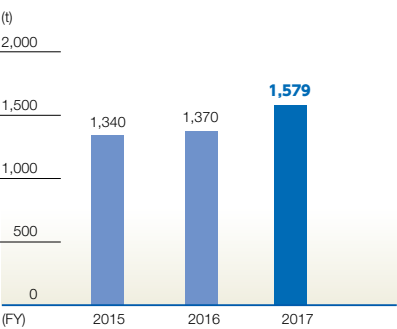
Raw Material Consumption (Consolidated)



Waste Generation (Consolidated)

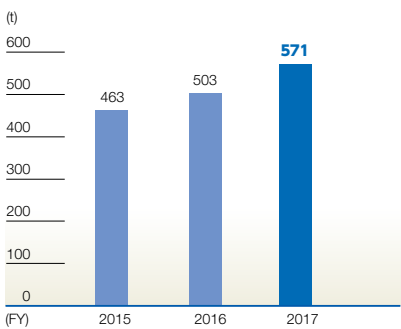


PRTR\*1 Law Designated Substances (Japan Consolidated)

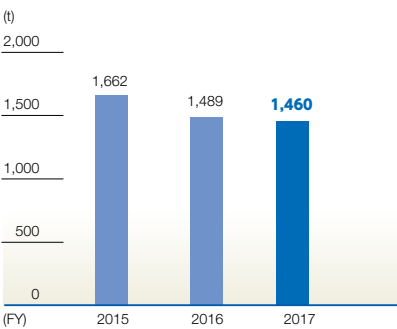


\*1: Short for Pollutant Release and Transfer Register, the PRTR law is a scheme whereby businesses measure the release and transfer of PRTR designated pollutants and report their performance to the government. The government then compiles this data and releases it to the public.

Emissions/Transfer of PRTR Law Designated Substances (Japan Consolidated)



VOC\*2 Emissions (Consolidated)



\*2: Short for Volatile Organic Compounds

Top Message

Remain Loyal to the Founding Spirit and Take Up Challenges More Than Ever in This Age of Change

In this section, I would like to talk about how Toyota Industries, which commemorated its 90th anniversary in 2016, intends to achieve sustained growth by responding to changes in social structure and customer needs while remaining loyal to our founding spirit and set of values.



Akira Onishi President







1 Learning from Our Own History

Looking back on our history, I feel fortunate that Sakichi Toyoda was our founder, both in business and spiritual aspects.

Let us first look at the business aspect. We were founded in 1926 to manufacture and sell the Type G automatic loom, which was invented and completed by Sakichi Toyoda, and celebrated 90 years in business in 2016. In 1933, then Managing Director Kiichiro Toyoda, who was Sakichi's eldest son, decided to enter into the automobile business based on his conviction and future vision and established the Automobile Department within the Company. This department was later spun off and evolved into Toyota Motor Corporation (TMC) and the Toyota Group. Some of our stakeholders may well know about this story, as TMC and its founder Kiichiro were featured in TV drama series in Japan. Not contenting himself with the success of the textile machinery business, he decided to advance into the automobile industry, which was still in its early stage of development, and turned the seed into a concrete business. I think this successful attempt to extend the reach from the core industry in one era to another core industry in the succeeding era may well be called a miracle. The success provided great encouragement to Toyota Industries to embark on full-fledged business diversification in the postwar period.

Next, let us talk about the spiritual aspect. The spirit of Sakichi Toyoda has been captured in the five articles of the Toyoda Precepts, which serve as Toyota Industries' corporate creed. The Toyoda Precepts, which were announced in October 1935 on the fifth anniversary of his passing, have not become dated, maintaining their universality. With many companies struggling to confirm their raison d'être, we are extremely grateful to have this distinct set of values to which we can always go back and find inspiration.



"Open the window. It's a big world out there!"  
(Words by Sakichi Toyoda)



Toyoda Precepts that reflect the spirit of founder Sakichi Toyoda, serving as our corporate creed and becoming the basis of our Basic Philosophy

Now, I would like to look back on our history from the perspective of business diversification. We started diversifying our business on a full scale in the postwar period in 1953, when demand for spinning and weaving machinery dropped sharply on the rebound to special procurements during the Korean War. We had focused almost solely on textile machinery up until then but began to seek business diversification in an effort to stabilize our business foundation and make a leap forward in the future. In the process, we launched production of engines, vehicle assembly and development and production of lift trucks and car air-conditioning compressors, all of which have become our mainstay businesses now.

For us, business diversification was a necessity because relying only on textile machinery provided a limited opportunity for growth. However, business diversification is never easy, often accompanied by many "lights" (fruits of success) and "shadows" (risks of failures). We were no exception and experienced several setbacks.

In 1954, with the aim of finding a new market, we made a major investment and established a company in Mexico to produce textile machinery. This was our first full-scale advancement into a market outside Japan, but the business environment turned difficult and forced us to withdraw from the country in 1959. We also initiated production and sales of tillers, farm tractors and other agricultural machinery in 1956. Again, products' unstable performance and cash-flow problems of sales dealers compelled us to totally withdraw from the field in 1969. More recently, we have withdrawn from consumer electronics-related businesses, such as liquid crystal displays (LCD), electronic substrates and organic electroluminescence (EL) products, and sold our stakes in several subsidiaries since 2000.

These withdrawals were as a result of painful decisions based on many factors, such

as changes in the business environment. Each had a certain impact but fortunately did not cause a devastating blow to our management. This was because Toyota Industries, then led by our predecessors, had implemented thorough risk management to prepare for worst-case scenarios. Also, I believe that our efforts have not been in vain because we have learned many lessons from the process leading to the failures. In particular, we learned a great lesson in that we accumulated important insight and know-how when engaging in risks involving business diversification and the startup of new businesses.

2 Business Management Based on Our Uniqueness

Here, I'd like to highlight some of the various characteristics of Toyota Industries. Each has been formed through our more than 90 years of history and represents our uniqueness.

**1) The Origin of the Toyota Group**

As mentioned earlier, Toyota Industries was founded to manufacture and sell the Type G automatic loom invented by founder Sakichi Toyoda and is considered the origin of the Toyota Group. That we are able to collaborate with Toyota Group companies and encourage positive competition in quality, cost and other areas provides us with a tremendous advantage.

Also, we hold a significant number of stocks in TMC and other Toyota Group companies. Such a capital connection is one means to ensure even closer collaboration among Group companies, which is essential in prevailing over ever-intensifying competition in the automobile industry. Financial stability facilitates investments for future growth.



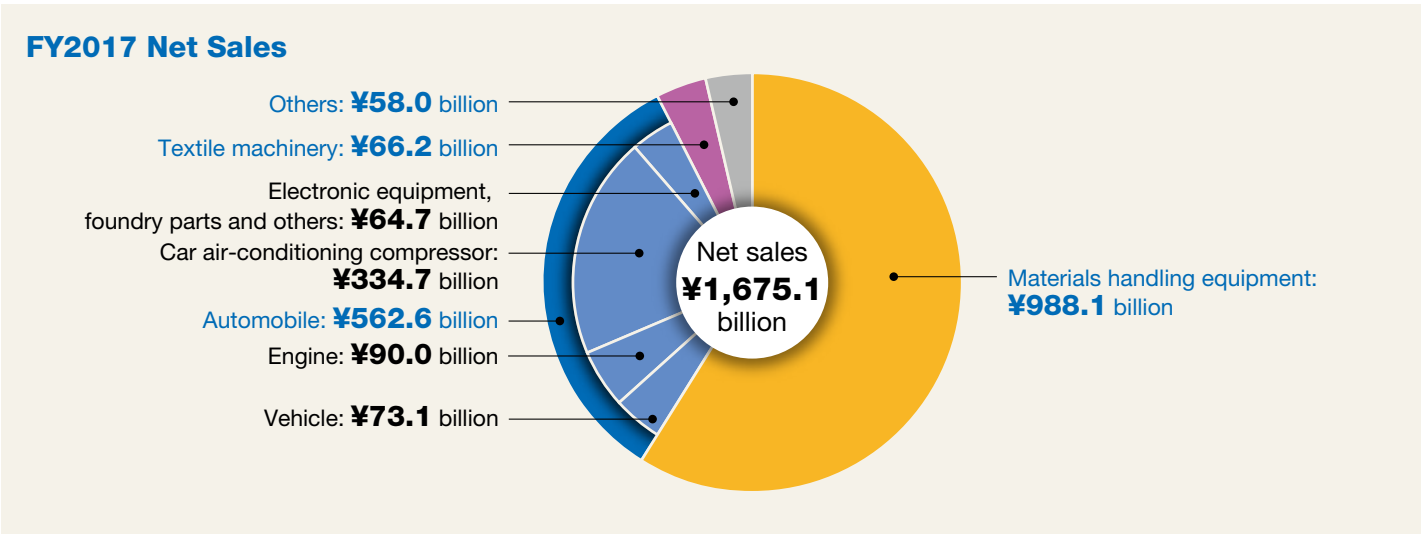
Employees assigned to Toyoda de Mexico S.A.



Type G automatic loom

2) Balanced Business Portfolio

A large portion of our business portfolio is accounted for by non-automobile businesses, mainly materials handling equipment, reflecting one of our characteristics of not exclusively relying on automobile-related businesses. This diversified business portfolio has translated into the dispersion of management risks and a more stable business performance, as underperforming results in one business segment can be covered





by favorable results of the remaining segments. Indeed, in our more than 90 years of history, we recorded an operating loss only once in fiscal 2009, in which results were negatively affected by the collapse of Lehman Brothers and the subsequent global financial crisis. This is proof of our strengths derived from engaging in diverse businesses.

3) The Name Did Not Speak for Itself

Our original company name was TOYODA AUTOMATIC LOOM WORKS, LTD. However, as we moved forward with business diversification, the ratio of textile machinery in total sales dropped to around 4%, causing a mismatch between the company name and its business portfolio. To reflect the actual portfolio and with a view to globalizing business, the company name was changed to TOYOTA INDUSTRIES CORPORATION in 2001. Our company name in Japanese still retains the “automatic loom” part in respect for our original business and founding spirit.

4) Aggressive M&A

Since acquiring BT Industries AB, the world’s leading manufacturer of warehouse trucks based in Sweden, in 2000, we have been proactively conducting M&A. We are one of the few companies in the Toyota Group to seize such opportunities, and expanding or reinforcing business by creating synergies through M&A is another of our unique characteristics. We do not, however, place priority on M&A. Our basic stance is to develop business on our own and leverage M&A to accelerate business transformation and complement areas in which we are lacking or weaknesses.

5) Holding the World’s No. 1\* Share for Three Products

We boast the world’s No. 1 share for lift trucks, car air-conditioning compressors and air-jet looms. Holding the top share for these unrelated products is perhaps another proof of our strengths originating from engaging in diverse businesses.

\* Survey by Toyota Industries Corporation

3 Overview of the Characteristics and Potential of Each Business

Here, I would like to provide an overview of our businesses along with the potential of each.

1) Materials Handling Equipment

We position materials handling equipment as one of our mainstay businesses and have implemented a range of initiatives to promote growth. For example, we made BT Industries into our subsidiary in 2000 and unified manufacturing and marketing operations by taking over TMC’s Industrial Equipment Sales Division in 2001, thereby establishing a structure to undertake comprehensive operations from development and production to sales and after-sales services. As a response to the global financial crisis that started in 2008, we worked to reinforce our management platform further in order to compensate for a drop in sales of lift trucks during the financial crisis and promoted sales expansion initiatives in the post-crisis market recovery period.

Since 2013, we have conducted M&A in rapid succession and expanded our value chain. These include U.S.-based Cascade Corporation, the world’s leading manufacturer of lift truck attachments; Tailift Co., Ltd., a Taiwan-based lift truck manufacturer with a strong presence in emerging countries; and the materials handling

equipment division of TMC’s U.S.-based sales financing subsidiary. As a result, we have steadily increased our global market share and expanded revenues. In the future, we will seek synergies with these companies for an even greater outcome.

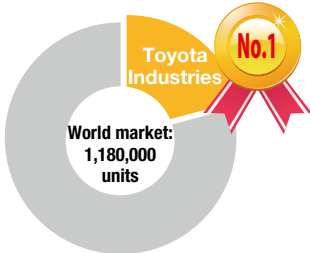
We see modest but sustained growth of the lift truck market mainly in emerging countries. In recent years, needs for automated and more efficient logistics have been growing in line with increasing e-commerce transactions, and we expect that a decline in the labor force in Japan and other countries will accelerate this trend. Under these circumstances, we have decided to further strengthen the Logistics Solutions Business that provides packaged system solutions to customers’ logistics-related issues as a new priority area. In April and May 2017, we acquired a 100% stake in two logistics systems companies, U.S.-based Bastian Solutions LLC and Netherlands-based Vanderlande Industries Holding B.V., by investing approximately ¥29.0 billion and ¥144.0 billion, respectively. While the aim of the acquisition of BT Industries was to complement our product lineup, the acquisition of the two companies was to extend the business domain to peripheral areas and facilitate a qualitative change of the Materials Handling Equipment Business.

In the Materials Handling Equipment Business, we engage in the full spectrum of operations from development and production to sales and after-sales services. This gives us a great deal of strategic leeway and allows us to conduct business with a sense of speed. We intend to accelerate business growth on a global scale by drawing on our strengths in the field of lift trucks, for which we hold the top market share, and by responding to all logistics needs of customers.

2) Automobile

We engage in automobile-related businesses while utilizing our strengths we gained

Market Share of Lift Trucks



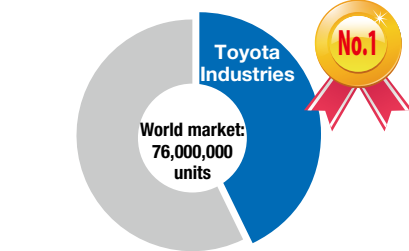
The size of the world market and market share are surveys by Toyota Industries Corporation (2016).





Top Message

Market Share of Car Air-Conditioning Compressors



The size of the world market and market share are surveys by Toyota Industries Corporation (2016).



On-site inspection at an engine production base in India (TIEI)



Local design operations at a car air-conditioning compressor production base in Germany (TDDK)

through our involvement in every aspect of an automobile, from vehicle assembly to such key components as engines, car air-conditioning compressors and car electronics products.

In the field of vehicle assembly, we have sought ways to achieve higher productivity and profitability in the smallest plant space as compared with other automobile body manufacturers in the Toyota Group and have accordingly implemented thoroughgoing *kaizen* (improvement) activities. Through these endeavors, we have achieved a lean production structure and higher quality. Our quality, in particular, is highly regarded by TMC, and we received a Special Award from TMC in 2016 as a token to celebrate our winning the Superior Award for Quality Performance for five consecutive years. By applying these strengths in other business fields, we have augmented our overall manufacturing capabilities. The Vehicle Business is also at the core of our manufacturing operations in that it assumes the role of disseminating the Toyota Production System to other business divisions.

In the Engine Business, we expect continued demand for diesel-engine automobiles for use as commercial vehicles and sports utility vehicles (SUV) mainly in emerging countries, where an expansion of the automobile market is anticipated. We will work to ensure the smooth transition and consolidation of diesel engine development and production functions from TMC into our operations and strive to cultivate expertise and set up an efficient business structure. We also plan to increase our competitive edge and subsequently expand sales of turbochargers mounted in diesel engines. As for gasoline engines, we will hone our already superior level of quality and flexible production structures to expand our product lineup.

In the Car Air-Conditioning Compressor Business, another mainstay business besides the Materials Handling Equipment Business, we hold a more than 40% share in the world market. With increasingly stringent automobile fuel efficiency regulations being enforced worldwide, we have always been leading the industry in the development of products with excellent fuel efficiency and environmental performance. At the same time, we have been meeting a broad range of customer needs with our extensive lineup of products for both internal-combustion vehicles and electric-powered vehicles. In terms of manufacturing, we are differentiating ourselves from the competition with superior production engineering capabilities that enable us to manufacture high-quality products as well as the ability to produce and supply products stably on a global basis. Moreover, we have expanded production outside Japan and reinforced our business in each region, staying close to our customers. As an example, we have increased the ratio of locally procured parts through such measures as producing key components in the United States. We will continue to take on the challenge of achieving a 50% world market share on the back of growing global automobile sales and an increase in the number of vehicles equipped with air conditioners due to global warming, and at the same time, by leveraging our strengths to expand sales.

With accelerated vehicle electrification, we expect an expansion in sales of hybrid vehicles (HV), plug-in hybrid vehicles (PHV), electric vehicles (EV) and fuel cell vehicles (FCV) in accordance with regional characteristics and user needs.

Amid this environment, the Car Electronics Business serves to capture the general and market trends in the field of automobile electrification through the provision of products to TMC and other automakers around the world. Going ahead, we will step up our efforts in our specialty fields in the respective business domains of drive systems, auxiliary power source devices and charging infrastructures. In addition, we aim to develop proprietary electrification technologies not only for products of other companies but also for our own lift trucks, car air-conditioning compressors and textile machinery.

This strategy will in turn serve to provide even greater competitiveness to these top share products.

3) Textile Machinery

In the Textile Machinery Business, we expect continued expansion of demand for yarns and fabrics for clothing and other daily essentials on the back of such factors as an increase in the world population and further economic growth mainly in emerging countries. The use for industrial purposes, such as circuit boards in IT products, is also expected to increase.

In the textile machinery industry, many players, including leading European manufacturers, are fiercely competing for survival. Our comprehensive corporate strengths are superior to these competitors, and we believe we are well positioned to benefit as a survivor of the competition. Additionally, Uster Technologies AG, a Swiss-based yarn quality measurement instrument manufacturer we acquired in 2012, excels at formulating effective brand strategies and is expected to contribute to an improvement of our profitability over the medium to long term.

As indicated above, we have been undertaking business by drawing on the strengths of each business and responding to changes in the market environment. Since 2000, we have also promoted our strategy of “concentration and selection.” More specifically, we have withdrawn from LCD and other consumer electronics-related businesses and sold our stakes in logistics-related subsidiaries while proactively promoting business partnerships and M&A to add greater strengths to our mainstay businesses. As a result of channeling management resources in a well-focused manner, we have been able to build a unique and distinct business portfolio.

4 Human Resources—Always the Most Important Management Resource

The first article of the Toyoda Precepts that encapsulate the spirit of founder Sakichi Toyoda starts with the phrase “Always be faithful to your duties.” The article signifies the importance of encouraging joint efforts and faithful execution of duties among all members of Toyota Industries regardless of their rank. The second article refers to “studious and creative,” which represents Sakichi’s personal conviction. I find it an important message that the precepts put the value of employees’ joint efforts first and foremost. There may be different interpretations for this, but I personally think it implies the importance of nurturing people and encouraging cooperation, because it is people who make a difference, inventing new things and realizing innovation.

We often say human resources are the most important asset of a company. People ultimately create value in every company operation, be it development, manufacturing or sales. Only when a company strives to nurture employees and ensure their own as well as their families’ happiness, can they exert their full potential, find their work rewarding and vitalize the company.

We also recognize that utilization of diverse human resources is another important issue. Toyota Industries is based in a rural area called Mikawa in Aichi Prefecture, and our corporate culture has inherently valued uniformity, unfaltering integrity and humility. However, our business and human resources became suddenly and increasingly diversified as we proceeded with rapid globalization of operations through such efforts as business diversification and M&A. Of the Toyota Industries Group’s total workforce of more than 50,000 employees, slightly over 30,000 are now non-Japanese. Rapid



Kariya Plant, a mother plant of car air-conditioning compressors



Global Learning Center (Nishio, Aichi Prefecture)



In-house skills contests





R&D meeting of the  
Materials Handling Equipment Business

globalization of operations poses a risk of causing insufficiencies in human resources development, but looking at the situation from a different angle reveals an opportunity to nurture globally capable human resources in an optimum environment. The environment allows many employees to interact with people of different backgrounds and value perceptions and to have a satisfying experience of extending their potential. With subsidiaries outside Japan, we intend to facilitate people-to-people interaction on a steady basis through personnel exchanges and joint projects in order to cultivate human resources who possess diverse values and play active roles in a global environment. In fact, after the acquisition of BT Industries, many of those involved have accepted cultural differences, and through patient, repeated communications, have generated a significant outcome both in terms of business and human resources development. These steady efforts during this time have become an important asset of Toyota Industries.

5 The Environment

In his book, *Sapiens: A Brief History of Humankind*, Israeli historian Yuval Noah Harari states: “We are more powerful than ever before, but have very little idea what to do with all that power.” About 70,000 years ago, we gained an ability to imagine, talk about and believe in things that do not physically exist (the Cognitive Revolution). From the Stone Age, when we began to spread from East Africa throughout the world, up until the present age, we have changed the ecosystem in a way that is beneficial to us, and in the process, have driven many living things to extinction. According to Harari: “We are consequently wreaking havoc on our fellow animals and on the surrounding ecosystem, seeking little more than our own comfort and amusement, yet never finding satisfaction. Is there anything more dangerous than dissatisfied and irresponsible gods who don’t know what they want?” In the urgent task of curbing global warming, the international community has failed to make concerted efforts. It is depressing to think of this as another example of the selfish actions of humankind. On the other hand, Harari admires

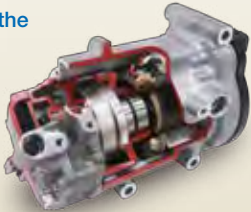
the power of humans to believe tomorrow will be better than today. We should start by doing whatever we can now and make constant and unwavering efforts.

In 2015, the Toyota Industries Group announced the Sixth Environmental Action Plan, a five-year plan covering the period from fiscal 2017 to fiscal 2021, in accordance with the Global Environmental Commitment that articulates our basic approach to environmental initiatives. Under the plan, we take on the challenge of establishing a zero CO<sub>2</sub> emissions society in 2050 and seek to create an enriched lifestyle in harmony with the natural environment. The plan’s keywords are “eliminating CO<sub>2</sub> emissions,” “recycling resources” and “protecting nature.”

As a corporate citizen, the Toyota Industries Group will proactively promote development of energy-saving, electrification and other technologies mainly in the fields of materials handling equipment and automobiles while developing and providing eco-friendly products. In this way, we will contribute to the realization of a zero CO<sub>2</sub> emissions society.

Product Development Supporting Electrification

(Products Mounted in the New Prius PHV)



ESBG27 electric compressor



New Prius PHV



DC-DC converter



On-board charger

6 Our Future Direction

As described earlier, we have a balanced business portfolio, not relying on one business but encompassing the Materials Handling Equipment Business (including the Logistics Solutions Business) and automobile-related and other businesses.

The Materials Handling Equipment Business is obviously a growth field. Also as part of this business, we need to respond flexibly to various forms of logistics. Reinforcement of the Logistics Solutions Business, in particular, represents our most significant “offensive” effort, and we regard this segment as a driver of our future growth. For the time being, our highest priority is to create a common vision with Bastian Solutions and Vanderlande, which we have acquired by making substantial investments, and to maximize synergies through collaboration between the two companies and our existing businesses of materials handling equipment and logistics systems in Europe, North America and Japan. We will regard it as a Company-wide effort and rotate the plan-do-check-act (PDCA) cycle toward achieving these goals. Early development of a relationship of trust and a structure of cooperation is important, and based on the resulting framework, we aim to produce steady and concrete outcomes.

Just as important is to implement “defensive” action (i.e., risk management) when conducting successful M&A. Building on our past experience, we will increase our sensitivity to impairment risk and take steady steps to ensure governance in the companies we have acquired by taking measures such as setting up an appropriate reporting system.

The automobile industry is also a growth industry, if we look at it from a global perspective, including emerging countries. Amid the severe global competition of many companies, we will forge ahead with R&D in such areas as the environment, safety, fuel efficiency and electrification while maintaining and improving our existing, stable business foundation. With several seeds of growth, we will go on the offensive by intensively focusing management resources, including the know-how we have accumulated at the company level, into this area.

These represent the direction we will pursue for the next few years. Each is a challenging task, and we will likely encounter difficulties in undertaking these tasks. Fortunately, our existing businesses are showing relatively stable business performance at the moment. By further increasing profitability of each business through such means as cost reductions, we are preparing for anticipated difficulties. Our stable financial foundation, which is another unique characteristic of Toyota Industries, and other factors will surely support overcoming the difficult challenges.

We will define our future course of action and implement a balanced mix of offensive and defensive initiatives in accordance with changes in the business environment. All members of Toyota Industries will make joint efforts toward steadily implementing these initiatives regardless of their rank.





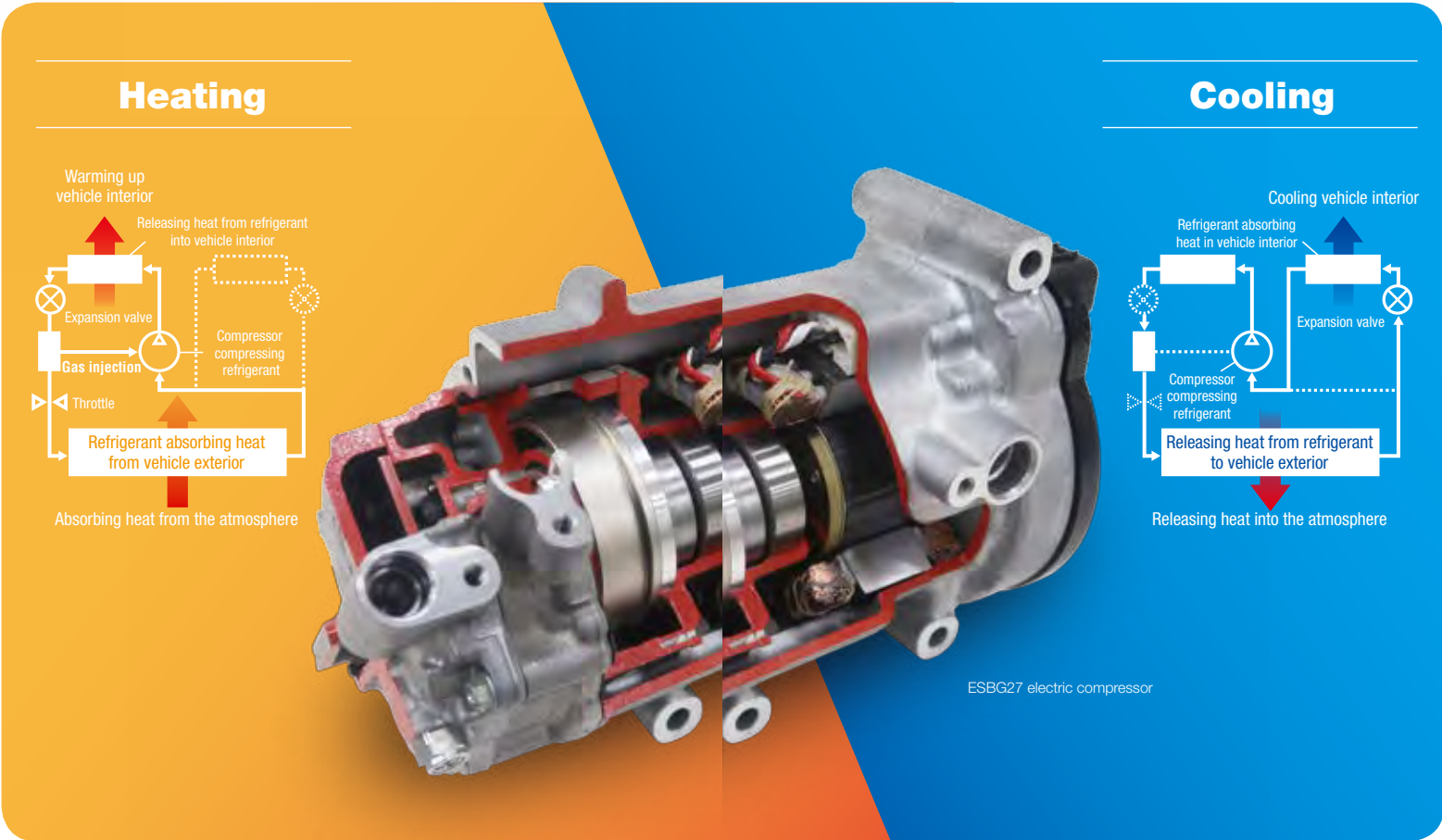
# Development and Production of Car Air-Conditioning Compressors Geared toward the Age of Electric-Powered Vehicles Ahead of the World

The new Prius Plug-in Hybrid (PHV) released by Toyota Motor Corporation (TMC) in February 2017 is fitted with the ESBG27 car air-conditioning compressor newly developed and produced by Toyota Industries. The compressor enables the vehicle's air conditioner to demonstrate sufficient heating capability under sub-zero temperatures while in EV mode that does not run the engine. It contributes to an improvement in both in-vehicle comfort and environmental performance.

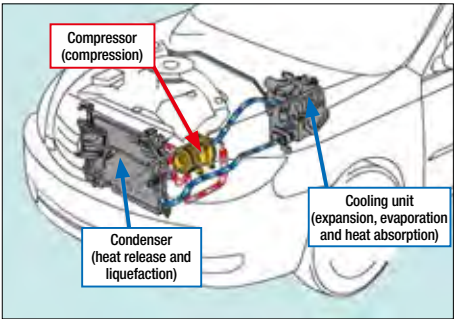


## Toyota Industries' Electric Compressors Sought after in the Age of Electric-Powered Vehicles

We have always remained the leader of the global electric compressor market, with our products constantly evolving with time. In the first-generation Prius hybrid vehicle (HV), our compressor was powered by the vehicle's engine, which was a cause of lower fuel efficiency because the engine had to be always turned on to operate the air conditioner. For the second-generation Prius, we took advantage of the HV's high-capacity battery and developed a compressor that was powered by a motor instead of the engine. This was the world's first electric compressor mounted on a mass-produced car. Following that, we released a compressor integrated with an inverter, which controls the motor's revolutions, and achieved reduced size, lighter weight and significantly easier vehicle mounting. Then, as HVs became ever more popular, we considerably improved the compressor's heating and cooling capability and operational quietness, for which we have earned high acclaim among many



## How a Car Air-Conditioning System Works



## What is a car air-conditioning compressor?

Heart of a car air-conditioning system, powered by the engine or a motor to compress refrigerant used for cooling vehicle interior

customers. Consequently, in April 2016, our cumulative unit sales reached a milestone of 10 million electric compressors.

## ESBG27 Offering Much Higher Heating Performance in EV Mode

A conventional electric-powered vehicle needs to operate both its air conditioner and electric heater to warm up the vehicle interior when the engine is not operating, such as in EV mode. This consumes a considerable amount of electricity, resulting in a shorter EV driving range.

The new Prius PHV has adopted an air conditioner with a heat pump, which can efficiently warm up the interior on its own in a cold climate, even at  $-10^{\circ}\text{C}$ , without using heat from the engine or an electric heater. This was made possible by our originally developed ESBG27, the world's first electric compressor with a gas injection function to be installed in a mass-produced car. The product has contributed to a longer EV driving range, greater fuel efficiency and higher in-vehicle comfort.

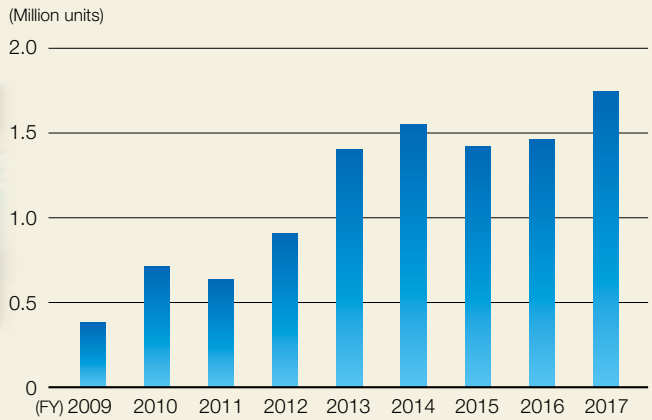
## Toyota Industries Continuously Meeting Changing Customer Needs

Toyota Industries offers a range of car air-conditioning compressors, from a compact, lightweight fixed-displacement type and a variable-displacement type with greater fuel efficiency for internal-combustion vehicles to an electric type for electric-powered vehicles. With this broad product lineup, we have satisfied the diverse needs of customers.

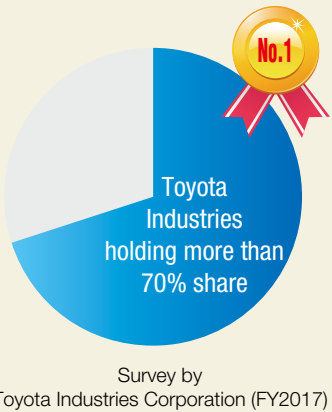
In recent years, enforcement of more stringent environmental regulations around the world and growing environmental consciousness among users have encouraged an increasing number of governments to implement a tax break program for electric-powered vehicles, including PHV, electric vehicles (EV) and fuel cell vehicles (FCV). These trends have spurred electrification of vehicles by automakers. Amid this environment, we have been leveraging our accumulated strengths in developing electric compressors that meet customer needs at a higher level and providing these compressors to automakers worldwide.



## Electric Compressor Sales



## World Market Shares of Electric Compressors





## Development and Production of a New Electric Compressor Effectively Utilizing Our Accumulated Technologies and Know-How Matched to the Age of Electric-Powered Vehicles

The launch of production of the new ESG27 electric compressor presented the world's first challenge for us to ensure stable mass production of the product that has become more complex with the addition of a gas injection function while maintaining a high level of quality.

Design, production engineering, quality assurance and manufacturing departments utilized their expertise in respective fields and closely collaborated to overcome issues one by one. As a result of their concerted efforts, mass production of the ESG27 successfully commenced as planned in September 2016.

In this section, four key project members talk about efforts undertaken in each department and about the strengths of Toyota Industries underpinning its development capability.

### Development Targets of the New ESG27 Electric Compressor

**Tsubai:** Even though the development of the ESG27 was officially launched in 2012, we actually started developing an electric compressor utilizing a heat pump for better heating performance in 2010, along with research into a gas injection method, anticipating market needs and more stringent environmental regulations.

The overall goal was to achieve sufficient heating capability at sub-zero temperatures by using only an air conditioner. This objective was made in response to customer complaints that the conventional heating technique requires the engine to run and thus consumes more fuel. While keeping that goal in mind, we set high targets from a comprehensive viewpoint for operational quietness, power saving, compactness, weight reduction and cost benefits in developing this compressor.



**Shinji Tsubai**  
Group manager, Group No. 31, Engineering Office No. 3, Engineering Department, Compressor Division

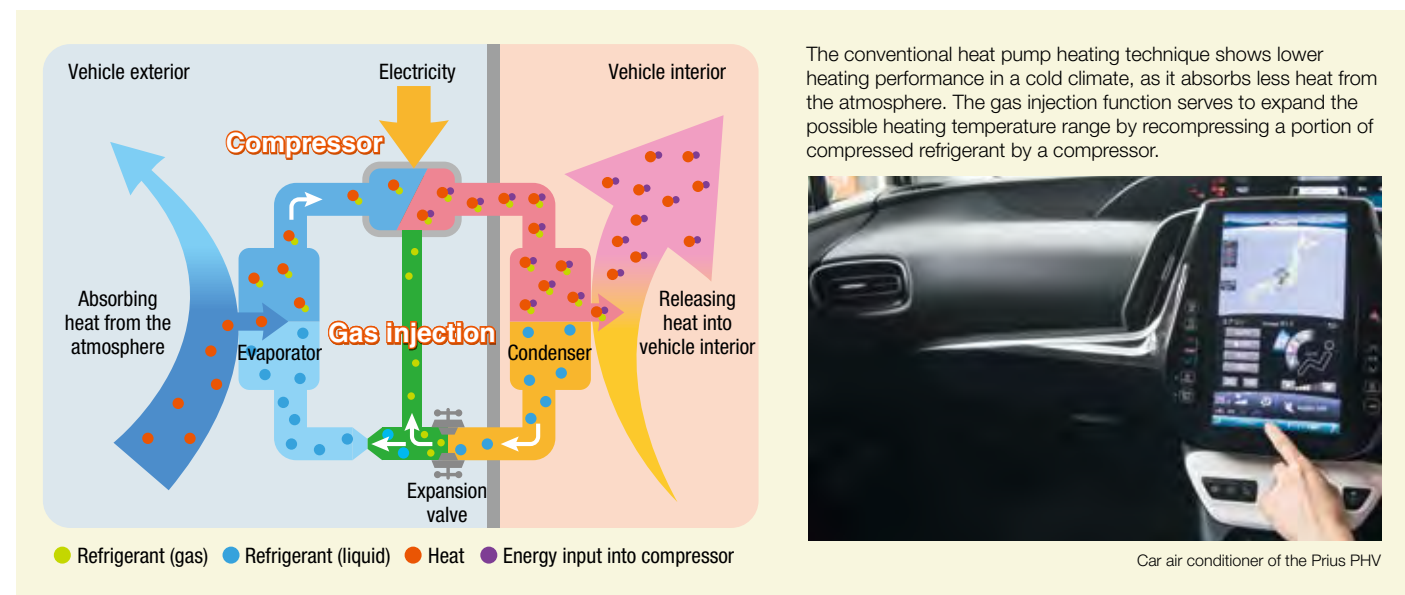
**Okagawa:** In the area of production engineering, our work was to integrate two sets of additional processes into an existing electric compressor production line: one for mounting new structures and functions added to the ESG27 and one for inspecting these. I remember that in the very initial stage of development when the product specifications were not yet finalized, project members from the four departments got together and examined every detail of the design drawings of the production line. It had to be easy for operators to work with, both in terms of assembly and inspection, and less prone to errors.

**Maeda:** Our objective in the field of quality assurance was to establish processes to assemble components into a product in the simplest possible manner for reducing quality risks and preventing defects. Initially, the ESG27 had a rather complex shape and structure, so we worked closely with members of the other three departments to make it simpler.



**Yoshihiro Okagawa**  
Group manager, Electric Products Assembly Group, Assembly Production Engineering Office, Production Engineering Department, Compressor Division

### Heating by a Heat Pump with Gas Injection Function



**Takayama:** In terms of manufacturing, we also dealt with the addition of new processes resulting from an increase in the number of components in the ESG27 through collaboration among the four departments. As a result, we were able to ensure that the new line allows operators to work easily and efficiently, eliminating the need for increased staffing.

### Characteristics of the ESG27 and Issues Associated with its Development and Manufacture

**Tsubai:** The adoption of a new “gas injection” mechanism in the ESG27 imposed challenges such as creating a route in which refrigerant flows. But ultimately, we were able to achieve the targeted heating capability. The ESG27 contributed to a nearly 30% increase\* in the heating capability of the car air-conditioning system of the new Prius PHV in a cold climate. In recognition, we received the Technology Development Award from TMC. Of course, this was not an accomplishment of the design process alone; we all faced and overcame difficulties.

**Okagawa:** The most difficult challenge in the area of production engineering was to deal with an increase in the number of components used in the ESG27 compared with our conventional electric compressors and integrate corresponding processes into a production line. We had to come up with the best way to incorporate processes to mount new functional components and inspect the proper functioning of these components. Working with the Quality Assurance Department, we devoted considerable efforts to determine reliable inspection conditions in order to assuredly perform a quality check during the limited time that components flow on the line and to define a method and level of inspection that can satisfy automakers.

**Maeda:** We should obviously challenge ourselves in pursuing higher performance in our compressors whether it is a new structure, new mechanism or new assembly process. On the other hand, new things always entail quality risks and likely create more defects. In resolving this contradiction and finding a trade-off, we sought to faithfully follow the concept of “*jikoutei-kanketsu* (build in quality with ownership)” to ensure that no defective products are sent to post-processes, along with measures to prevent defects in the first place.

**Takayama:** The mass production line of the new compressor went into operation in September 2016, and currently we manufacture around 5,000 units each month. We meticulously created a robust line and were able to meet the performance and quality targets and the scheduled launch of production. A very important point was to devise standardized procedures for processes that had relied on operators' experience and skills, so that anyone can perform the task.

\* Compared with the conventional heat pump heating system at the temperature of  $-10^{\circ}\text{C}$ . Surveys by Toyota Industries Corporation and DENSO Corporation.



**Hiroki Maeda**  
Working group leader, Electric Products Group, Quality Assurance Office No. 3, Quality Assurance Department, Compressor Division



### Strengths Underpinning Toyota Industries' Development Capabilities That Generate a Number of World Firsts

**Maeda:** While I was working on this project, I realized that our process from the launch of product design to mass production has become increasingly mature. This can be attributed to many factors. One of them is our accumulated know-how from the development of previous models. Thus, we did not have to struggle with anything that was unexpected. Our strengths stem from activities to carefully identify defects in each process and eliminate various risks. I think we should continue to hone our strengths in the future as well.

**Okagawa:** In the field of production engineering alone, we have an advanced set of proprietary technologies derived from the in-house development of production equipment. We also have achieved higher degrees of speed, precision and automation throughout the entire production lines. These enable us to excel in swiftly manufacturing products that demand extremely high quality and at the required quality level.

**Tsubai:** We hold the world's top share in the compressor market. As such, we do business with various automakers and are well positioned to capture information on what their next goals are and what kind of vehicles they envision, which allows us to provide designs finely matched to these needs. With demand for electric compressors expected to progressively increase, I hope to start development of a next-generation model soon, which is quieter to operate and demonstrates better heating performance at even lower temperatures with less energy consumption.

**Takayama:** Setting our sights higher, those of us at manufacturing departments would like to promote human resources development, engage in improvement activities and enhance our manufacturing capabilities further. Our goal is to combine the comprehensive strengths of Toyota Industries to gain greater customer satisfaction and continue to win out over the global competition.

**Tsubai:** Exactly. We will continue to develop compressors with greater product appeal.



**Hideki Takayama**  
Supervisor, Assembly Section, Manufacturing Department No. 1, Compressor Division



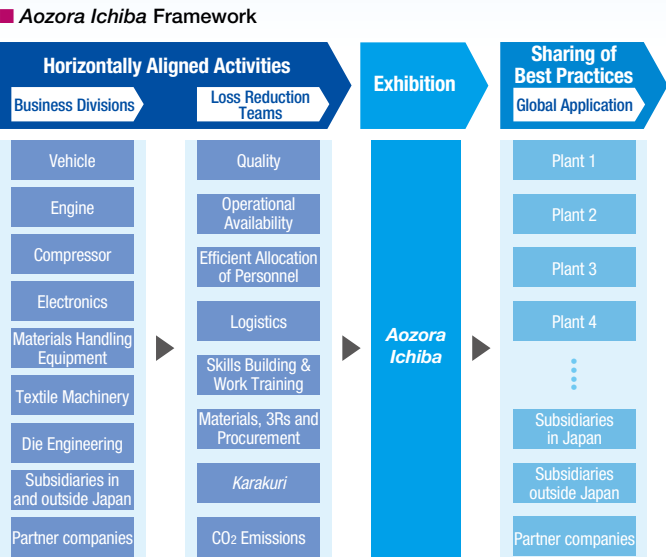
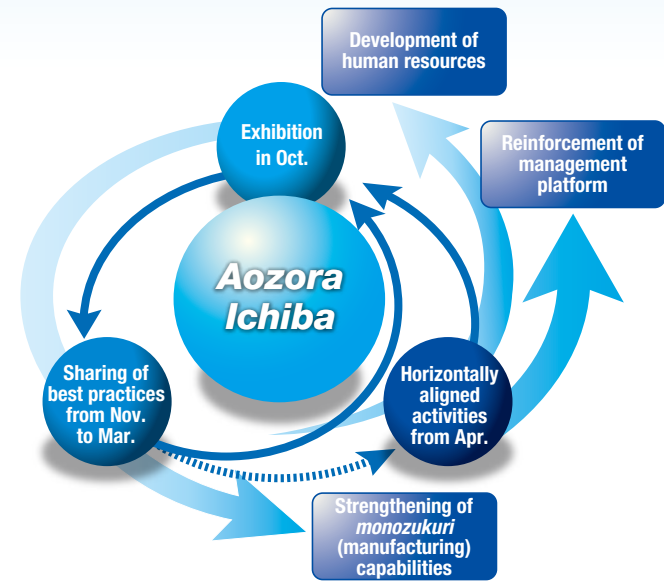
# Kaizen (Improvement) Activities across Diverse Business Domains—A Force to Drive Constant Evolution

Aozora Ichiba, a Cross-Organizational Exhibition to Globally Share Kaizen Examples Generated in a Horizontally Aligned Manner across All Business Domains



Building a robust, streamlined management platform is crucial for a company to survive and sustain growth in the ever-changing economic environment. Just as essential is constant business evolution that allows the company to flexibly respond to changes in customer needs and desired technologies, such as those resulting from the enforcement of more stringent environmental regulations, accelerated electrification and autonomous vehicle operations in the fields of vehicle and materials handling equipment businesses.

This Special Feature highlights an initiative called *Aozora Ichiba* (“open-air market”), which aims to share *kaizen* efforts globally among our consolidated subsidiaries and business partners and to reinforce the management platform of the entire Toyota Industries Group.



## Kaizen Embedded in Our DNA Underpinning Aozora Ichiba

Since its foundation, Toyota Industries’ spirit of *kaizen* has been passed down in its DNA. We have been promoting various types of *kaizen* initiatives that include QC circle activities by each workplace and Toyota Production System Jishu Kenkyu Kai (autonomous Toyota Production System study groups) in manufacturing departments. Our *Aozora Ichiba*, which is one such initiative, held its 16th exhibition in fiscal 2017.

■ Activity Approach of Each Loss Reduction Team

Quality Loss	Preventing both occurrence and recurrence of defects
Operational Availability Loss	Upgrading equipment and other maintenance activities
Efficient Allocation of Personnel Loss	Increasing the ratio of value-adding work through ingenuity in production processes
Logistics Loss	Improving in-plant logistics flows of products and parts
Skills Building & Work Training Loss	Increasing efficiency and standardizing work training
Materials Loss	Reducing secondary materials and other costs

In addition to the above, *Aozora Ichiba* also exhibits examples of various topics, including *kaizen* by *karakuri*, *kaizen* of business operations and sales expansion.

### Starting Out as a Small Project

*Aozora Ichiba* started in 2002 for the purpose of reducing costs associated with the purchasing of secondary materials used in production activities, such as cutting tools, work gloves, hard hats and other supplies utilized within a plant. Business divisions gathered to compare secondary materials they had purchased individually and successfully cut costs by switching to less expensive products or making bulk purchases. Later, with the launch of emergency profit improvement activities following the global financial crisis triggered by the collapse of Lehman Brothers in 2008, the *Aozora Ichiba* project changed drastically. Under the strong leadership of top management seeking a more robust management platform, we expanded the area of activities and quickly transformed it into a Group-wide initiative.

### Continued Evolution of Aozora Ichiba, Becoming a Place to Share Kaizen Ideas on a Global Basis

*Aozora Ichiba*, which has been evolving every year, is organized as follows. First, heads of manufacturing departments of each business division (Materials Handling Equipment, Vehicle, Engine, Compressor, Electronics and Textile Machinery, etc.) and the *Aozora Ichiba* administration office together select 10

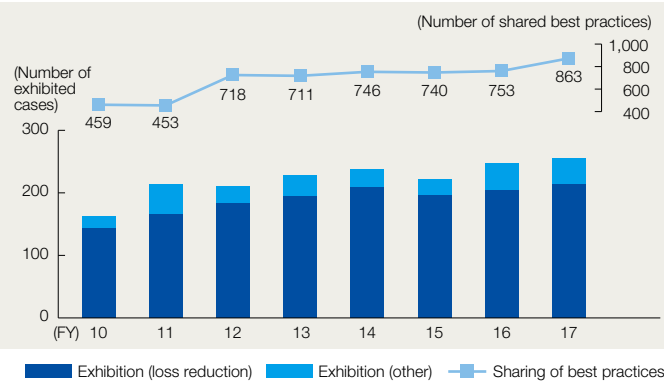
to 15 members to form six loss reduction teams in the areas of quality, operational availability, efficient allocation of personnel, logistics, skills building & work training and materials. Then, each team leads loss reduction efforts, which are horizontally aligned across business divisions, in its responsible area and works to generate *kaizen* ideas for a half year from April in accordance with its annual action themes. Their efforts culminate with the annual *Aozora Ichiba* exhibition, which displays a number of *kaizen* ideas, small ingenuities, more efficient work methods and other initiatives at production sites. The event literally serves as a market, in which participants from the Company as well as our consolidated subsidiaries and business partners from around the world earnestly look for and bring back applicable improvement examples to emulate in a way best suited for their respective workplaces and companies.

Tetsuji Ono, who is responsible for the handling of *Aozora Ichiba*, further explains: “Each team selects its own objectives and action themes at the beginning of a fiscal year under Toyota Industries’ Vision

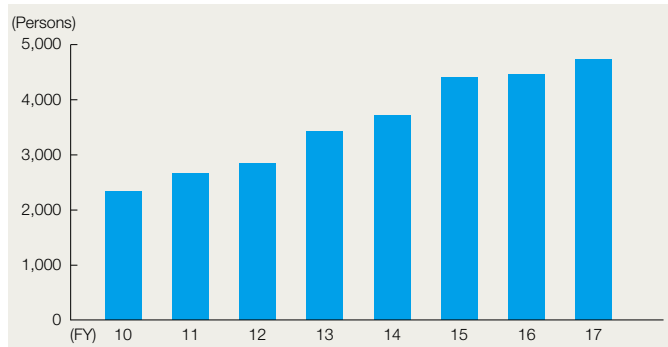


**Tetsuji Ono**  
Project general manager, Operations Management Consulting Office, Production Control Department, Production Headquarters

■ Numbers of Exhibited Cases and Shared Best Practices



■ Number of Visitors





2020 and works toward the *Aozora Ichiba* exhibition held in October. During the event, we present *kaizen* ideas through exhibiting panels, actual items, videos and demonstrations of mock production lines to help visitors understand how well these ideas work and to promote the sharing of best practices in their respective workplaces. Presentations are conducted by persons in charge, not by managers at a higher level, which serves to raise motivation. In recent years, we receive more participants from our bases outside Japan and see more cases of best practices in Japan shared around the world. This is proof that the initiative has been growing steadily on a global basis.” The number of visitors attending the event has been growing each year, exceeding 4,700 visitors in three days in fiscal 2017.

Ono continues: “We regard the event simply as a place to present our efforts. More important is the process, in which teams work for a year and absorb the *kaizen* approach and techniques through the sharing of examples and problem solving. One-year team activities also give members a chance to grow as they draw inspiration from ideas and techniques that are different from those in their respective business divisions. These activities also present a valuable opportunity to build relationships with colleagues from other business divisions. At the same time, sharing both best practices and issues has taken our Company-wide *kaizen* approach to a higher level.”

**The following presents specific *kaizen* examples of the Skills Building & Work Training Loss team and Quality Loss team from *Aozora Ichiba* in fiscal 2017.**

### Contributing to Shorter Skills Building Time and Improved Skills by Creating a Training Simulator That Reproduces Actual Work Environment

Sayuri Ishikawa of the Engine Division has participated in *Aozora Ichiba*’s Skills Building & Work Training Loss team ever since fiscal 2015. She recalls: “The experience has been a series of discoveries, while getting to know the different ways of doing things in other business divisions and plants.”

The team conducts activities under three loss reduction themes



**Sayuri Ishikawa**  
Human Resources Development Working Group, Management and Development Group, Administration Office, Manufacturing Department No. 1, Engine Division



Manufacturing staff supporting loss reduction activities



Practical training using hand-built assembly line training simulator

every year. Koichi Kawata, who had served as the head of the team, explains: “The first theme is to shorten the time required to build skills of workers new to manufacturing operations so that they can work on their own without supervision. This will reduce lost time for both trainers and trainees. The second is to prevent loss associated with quality defects or industrial accidents by acquiring good skills among workers. The third theme involves the elimination of waste caused by redundant or insufficient training and education.”



**Koichi Kawata**  
Assistant general manager, Administration Office, Manufacturing Department No. 1, Engine Division

From fiscal 2015 to fiscal 2017, the team exhibited a training simulator that uses an automatic guided vehicle (AGV) to reproduce an assembly line process. The simulator has evolved over the course of three years. “A training environment that closely replicates the actual work site has contributed to reducing the time required for building and improving skills,” explains Ishikawa. Trainees have regarded the simulator favorably, noting its ability to provide realistic, “moving” training not possible in the conventional fixed-type training equipment. The sharing of the practice has been proceeding well, with plants in Japan and India adopting similar training simulators.

The team holds regular meetings, and members bring issues raised in the meeting back to their respective workplaces to generate *kaizen* ideas with their superiors and colleagues for the next meeting. Ishikawa recalls: “We have been adding improvements to the AGV training simulator every year, such as increasing the types of work it can train. This has been a meaningful experience for me to have in-depth discussions with members from other business divisions about the themes we had to tackle as a team, while incorporating views of many colleagues in my office.” Recognizing the positive results of their activities, Kawata adds: “We have achieved significant *kaizen* in terms of on-site education and training. Besides that, I think Ms. Ishikawa has grown since she joined the team, and communication has become more activated within our office as well. The *Aozora Ichiba* initiative has generated combined results.”

### Achieving Zero Defects Based on Kaizen Learned from Another Business Division

For the *Aozora Ichiba* exhibition held in fiscal 2017, Tsutomu Kato of the Electronics Division served as the head of the Quality Loss team. He points out: “Different business divisions manufacture different products, but analysis methods used to reduce and eliminate defects are the same. Since divisions use these methods in their unique, specific ways, we can learn and notice many things every time we see other divisions’ approaches. That’s why I find activities to reduce quality loss interesting.”

Kato continues: “Our team presented a *kaizen* example in



**Tsutomu Kato**  
Manager, Manufacturing Section, Manufacturing Department, Electronics Division



Tablet device of the Engine Division, which the Electronics Division applied to its own *kaizen*



Tablet devices introduced by the Electronics Division

fiscal 2017 that applied a shipping inspection method employed in the Engine Division, which uses tablet devices to check products, to an assembly process of the Electronics Division.” Conventionally, the assembly process had been conducted using a procedure manual in paper form. The team developed a tablet device that displays instructions linked to the progress of the work. Using these devices installed at production lines, workers select parts and tools as instructed on the screen, and when that particular step is completed correctly, the system automatically switches the screen to the next step. “We just installed the devices recently, but we have already achieved zero defects in this assembly process,” adds Kato.

Another initiative in the Electronics Division also significantly contributed to the reduction of quality loss in fiscal 2017. Kato proudly explains: “We had been checking the quality of small printed circuit boards (PCB) both visually and by using automatic appearance testers, but sometimes defects had passed through these inspections. To reduce such defects, we started filming products with a video camera and displaying highly magnified images on a monitor. This has helped us increase our ability to detect defective products and reduce the inspection time to one-fourth of the time needed previously, while also reducing workers’ eye fatigue.”

Kato also adds: “*Aozora Ichiba* means a lot, as its activities actually generate positive results and serve to extend and deepen relationships with members of other business divisions. It offers the chance to grow, and in turn enables us to recognize new things, and achieve better *kaizen*.” The team will follow its roadmap and continue to tackle issues for the next *Aozora Ichiba* exhibition in fiscal 2018.



PCB inspection at the Electronics Division

### Promoting Activities Group-Wide and Aiming for Further Growth

The *Aozora Ichiba* initiative has now extended its scope from manufacturing operations improvements to business operations improvements and sales expansion, becoming a widespread initiative deeply rooted within Toyota Industries. Masanori Shirahama sums up the *Aozora Ichiba* activities to date: “I think the entire Toyota Industries Group, promoted under the leadership of top management, now understands the importance of standardizing and maximizing *kaizen*. *Aozora Ichiba* has now become a very good opportunity for us to explore and take back ideas for the next improvements.”

Shirahama also stresses the significance of the initiative: “On a global scale, the number of participants from our bases outside Japan has been increasing steadily. For example, our consolidated subsidiaries in China have jointly held their own *Aozora Ichiba*, while subsidiaries engaging in the manufacture of materials handling equipment in North America and Italy have brought back best practices of *kaizen* examples and adopted them. The initiative has also shown positive effects in terms of human resources development, as it presents a chance for diverse people from different business divisions to work as a team. They gain new knowledge by visiting other divisions’ production sites, which facilitates out-of-the-box

thinking. People, experienced and young employees alike, from all departments in Toyota Industries and from our consolidated subsidiaries and business partners from around the world are now involved. As a result, the numbers of improvements and the sharing of best practices have been increasing every year. I believe that the *Aozora Ichiba* initiative has certainly raised the level of our *monozukuri* capabilities.”

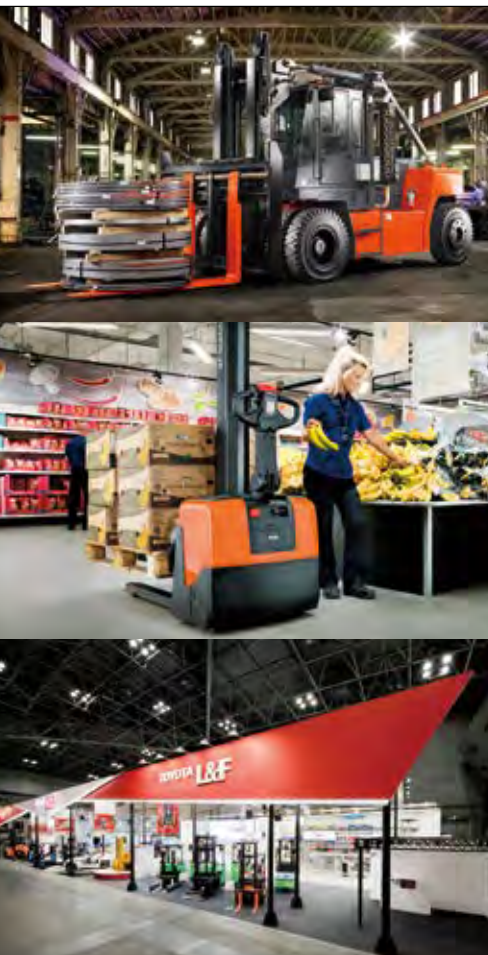
Looking ahead, Shirahama explains: “We intend to facilitate more active collaboration between production sites and their upstream processes, which include design and production engineering, to enhance our workplace capabilities. By doing so, we aim to further strengthen our management platform and support the Group’s growth from the aspects of quality, productivity and human resources development.”



**Masanori Shirahama**  
Senior technical executive, Production Control Department, Production Headquarters



Materials Handling Equipment	P32–36	Textile Machinery	P43
Automobile	P37–42		
Vehicle / Engine / Car Air-Conditioning Compressor / Car Electronics			



Materials Handling Equipment

As a market leader with an extensive knowledge of global logistics needs, Toyota Industries provides a range of materials handling equipment, mainly lift trucks, and logistics solutions to customers.

Strengths	<ul style="list-style-type: none"><li>• An extensive logistics-related product lineup both in the fields of materials handling equipment (internal-combustion lift trucks, electric lift trucks, fuel cell (FC) lift trucks, etc.) and materials handling systems (automated storage and retrieval systems, automatic guided vehicle (AVG) systems, automated lift trucks, etc.)</li><li>• High technological capabilities, including those linked to environmental and safety performance</li><li>• In-house development and production of key components, including engines and motors</li><li>• Production know-how that ensures high levels of quality and production efficiency</li><li>• Global, well-developed production, sales and service networks</li><li>• Total support services encompassing IT-based maintenance and inspection as well as operational management</li><li>• No. 1*1 in lift truck unit sales in the world</li></ul>
Opportunities	<ul style="list-style-type: none"><li>• Growing need for products with high energy savings and low environmental impact, driven by a rise in eco-consciousness</li><li>• An increase in logistics volume resulting from such factors as an expansion of e-commerce transactions, accompanied by a rising need for higher logistics efficiencies</li></ul>
Risks	<ul style="list-style-type: none"><li>• Restrained capital investment due to a slowing economy</li><li>• Weaker sales caused by intensifying competition</li><li>• Change in business environment triggered by entry of competitors from different industries</li></ul>

\*1: Survey by Toyota Industries Corporation

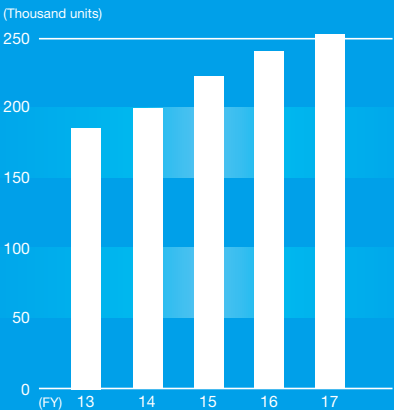
Net Sales  
(IFRS)

FY2016 FY2017  
¥1,019.4 billion → ¥988.1 billion

Operating Profit  
(IFRS)

FY2016 FY2017  
¥91.7 billion → ¥89.4 billion

Materials Handling Equipment Sales



Business Overview in Fiscal 2017

The materials handling equipment market in 2016 as a whole continued to expand globally due mainly to increases in unit sales in Europe and North America as well as a recovery in China, although unit sales in Japan were on par with the previous year. Amid this operating climate, Toyota Industries strengthened production and sales activities matched to respective markets and rolled out new products such as the sales launch in Japan of the new 1.0- to 3.5-ton electric lift trucks, “gene B.” As a result, unit sales of our mainstay lift trucks for fiscal 2017 improved in Europe and Japan, and increased by 14,000 units, or 6%, to a total of 253,000 units over the previous fiscal year. Net sales totaled ¥988.1 billion, a decrease of ¥31.3 billion, or 3%, attributable mainly to the impact of exchange rate fluctuations despite an increase in unit sales. In addition, in order to respond to structural changes in the logistics industry and reinforce its Logistics Solutions Business on a global scale, Toyota Industries acquired two major materials handling systems operators in the United States and the Netherlands in April 2017 and May 2017, respectively.

Toyota Material Handling Group (TMHG)

As a market leader in the materials handling equipment and logistics fields, Toyota Industries assists customers worldwide in attaining greater logistics efficiencies by delivering logistics solutions optimally tailored to their specific needs.

Under the TMHG management structure, we engage in business under the TOYOTA, BT, RAYMOND and CESAB brands. Mutually utilizing the development and sales strengths of each brand, TMHG is promoting business expansion on a global scale.

We basically carry out product development in three regions, namely Japan, the United States and Europe. Based on this structure, we develop and manufacture products in each region, which are matched to the specific local needs and characteristics, and ensure quick product delivery to customers. At the same time, we seek greater product appeal by conducting in-house development and production of key components of lift trucks, including engines and motors.

In addition to supplying such high-quality products, we place special emphasis on sales and services through our extensive networks. On the sales front, we respond to demands of customers who conduct business globally by augmenting our consultation team dedicated to handling cross-border and cross-regional matters. In terms of services, we assign a total of more than 10,000 experienced and knowledgeable service personnel to Japan, North America and Europe, our mainstay markets, to provide finely tailored services to customers. Our service personnel visit customers on a periodic basis and provide maintenance services to prevent troubles from occurring. When a problem does occur, they swiftly make a visit to the customer and promptly take appropriate action.

In the field of logistics solutions, in which we provide systems to solve customers’ logistics-related issues, sustainable market growth is expected globally due to the

recent, rapid expansion of the e-commerce market. Amid this environment, our operations extend beyond providing lift trucks and other materials handling equipment. We intend to reinforce our Logistics Solutions Business by leveraging our production and logistics know-how accumulated in manufacturing operations. At the same time, we aim to meticulously respond to customer needs both in terms of hardware and software by making effective use of the stronger value chain that includes sales financing, component production and after-sales services.

Business Activities in Fiscal 2017

With the continued growth of the world’s lift truck market in 2016, we carried out model changes of our mainstay lift trucks and worked to expand our lineup, while offering solutions designed to achieve greater logistics efficiencies, enhancing responsiveness to large-order customers and ensuring reliable after-sales services.

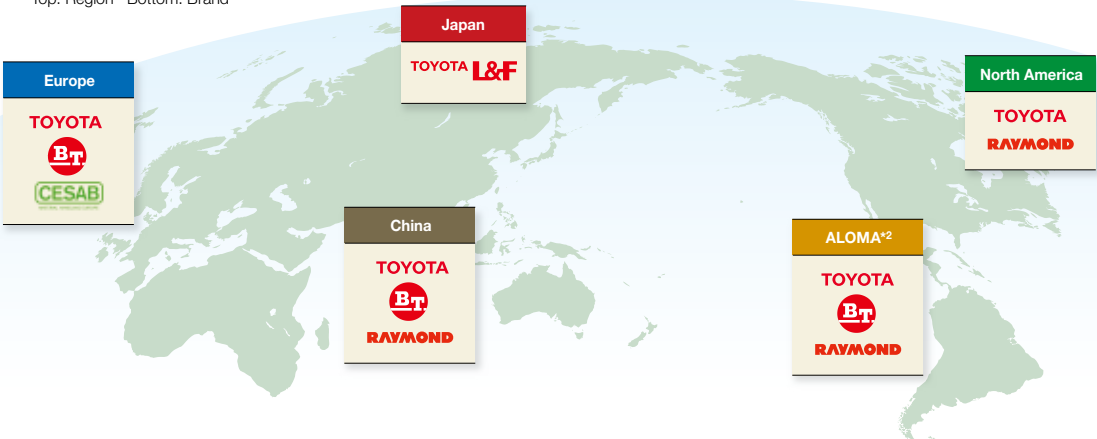
In quickly responding to growing environmental consciousness among customers and more strict emissions regulations, we released products such as a high-capacity internal-combustion model that satisfies the latest emissions



Telematics (operational management system)

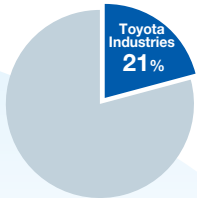
Toyota Material Handling Group Brands

Top: Region Bottom: Brand



Toyota Industries’ Global Lift Truck Market Share

(Survey by Toyota Industries Corporation, 2016)



\*2: ALOMA stands for Asia, Latin America, Oceania, Middle East and Africa.



standards and an electric model with a longer uptime. The extended lineup of such eco-friendly products enables us to accommodate customers' widely varying usage environments. In addition, to help customers achieve even higher logistics efficiencies, we responded to an increase in number and size of warehouses following an expansion of the e-commerce market and the resulting rise in logistics volume worldwide. We also enhanced the lineup of models equipped with telematics, which allows customers to manage the operational status of lift trucks on tablet devices.

Along with the enhancement of our lift trucks, we are stepping up our efforts to reinforce our capability to offer total solutions for logistics improvements. As part of these efforts, we made Bastian Solutions LLC, a major U.S. materials handling systems integrator\*3, a subsidiary in April 2017. Bastian is a turnkey contractor that offers an all-in-one service package from the selection of hardware and software best matched to customers' logistics issues to system development, network building and maintenance. In May 2017, Netherlands-based Vanderlande Industries Holding B.V., a major materials handling systems provider\*4, became a subsidiary. Vanderlande is a global market leader in the fields of materials handling systems for retail businesses and parcel/postal services as well as passenger baggage handling systems used in airports. It develops and manufactures materials handling equipment and related software in-house and has a particularly outstanding capability to start up large-scale projects in a short period. By strengthening our ties with these two companies, we intend to offer logistics solutions desired by customers on a global basis. Additionally, in the field of automated storage and retrieval systems and automatic guided vehicle (AGV) systems, we initiated feasibility tests of our experimental container transport AGVs and have been collecting data geared toward achieving efficient storage yard operations and building a safe working environment through full automation.

Meanwhile, Aichi Corporation, which possesses the top brand\*5 in the field of aerial work platforms in Japan, witnessed strong demand for equipment renewal by the electric power, telecommunication and railway industries as well as continued demand for social infrastructure work despite a cautious stance toward capital investment by certain companies in the leasing industry. Amid this environment, Aichi introduced new products and augmented its service structure. As a result, sales of aerial work platforms, its mainstay product, expanded, and Aichi posted sales exceeding the previous fiscal year's level.



Aichi Corporation's aerial work platform

\*3: A form of business upon customer request that conducts logistics systems engineering and delivers a total solution package incorporating equipment mainly procured from outside sources

\*4: A form of business to provide solutions to customer logistics issues through a logistics system that includes both equipment and software  
\*5: Survey by Aichi Corporation

## Business Activities by Regional Market

### Japanese Market

With the Japanese lift truck market showing steady growth in 2016, Toyota Industries released eco-conscious products, undertook activities to expand sales of existing models and enhanced responsiveness to large-order customers. As a result, unit sales in fiscal 2017 increased 4% year-on-year to 42,000 units. Unit sales of Toyota Industries' lift trucks maintained the top position\*6 in calendar 2016 for the 51st consecutive year.

In the field of lift trucks, we released a high-capacity internal-combustion model that clears the most current emissions standards. With the release of this product, we became the first manufacturer in the industry\*7 to satisfy the latest 2014 standards in all models of our diesel-powered internal-combustion lift trucks. Regarding electric lift trucks, for which needs have been expanding in line with growing environmental consciousness among customers and an increasing number of larger warehouses, we initiated sales of the gene B, a new series of 1.0- to 3.5-ton electric lift trucks, in November 2016. In addition to operator comfort and safety, which have already gained high customer recognition in the previous model, the gene B offers greater performance and functionality, such as a longer uptime and higher water resistance. We also offer TOYOTA T\_Site\*8, an operational management system based on Internet of Things (IoT) technology, as an option to assist customers in achieving greater logistics efficiencies. Moreover, we launched sales of electric lift trucks equipped with lithium-ion batteries and FC lift trucks, thereby responding to customers' growing environmental consciousness and diversifying needs.



New gene B electric lift truck (released in November 2016)

In the field of logistics solutions, we are working to expand sales by leveraging our comprehensive strengths. We received an order from a leading delivery company for a total logistics support solution, covering everything from the establishment and operation of a distribution center to its continued improvements. Our solution meticulously meets the specific needs of the customer, such as a large volume shipment in a short time, and offers an IoT-based feature that combines smartphones and transmitters to monitor the work progress in real time. After the operation launch of the distribution center, we have been conducting follow-up activities to propose continued efficiency improvements and helping the customer achieve better logistics operations.

In September 2016, we participated in Logis-Tech Tokyo 2016. Under the concept of "building the future of logistics together with our customers," we exhibited our extensive product range, including internal-combustion lift trucks, electric lift trucks and FC lift trucks. Utilizing the largest-ever exhibition space, we also operated parts of a distribution center and an automobile production line to demonstrate our logistics solutions in an easy-to-understand manner.

\*6: Calculated by Toyota Industries Corporation, using data published by the Japan Industrial Vehicles Association  
\*7: Survey by Toyota Industries Corporation  
\*8: Telematics service (operational management system) for lift trucks, sales of which were launched on March 29, 2016



Logis-Tech Tokyo 2016

### North American Market

In the expanding North American lift truck market, Toyota Industries remained the market share leader in 2016\*9 with combined unit sales of TOYOTA and RAYMOND brands of approximately 83,000 units, down 2% from the previous fiscal year.

Toyota expanded its product offering with the launch of a high-capacity internal-combustion lift truck to meet the needs of customers handling heavy materials such as ports and lumber mills. Raymond introduced various products including a counterbalanced electric lift truck with enhanced performance and ergonomics, such as visibility and boarding, while adding an automated model tow tractor.

Toyota and Raymond work to enhance logistics solutions such as fleet management systems which



High-capacity internal-combustion lift truck

contribute to customer lift truck management and efficient operations. Through iWAREHOUSE Evolution, Raymond integrates lift truck and operator data providing scalable solutions for measurable warehouse improvement. Toyota also introduced a similar system under the name of T-Matics, which helps customers maximize their fleet utilization, control costs and optimize operations.



iWAREHOUSE Evolution

Toyota and Raymond will continue to develop products leveraging both brands' strengths, while further enhancing materials handling systems and logistics solutions to contribute to customers' efficient logistics. Through these initiatives, we aim to further solidify our leadership position.

\*9: Survey by Crist Information & Research, LLC, 2016

### European Market

The European lift truck market expanded in 2016, with strong growth in most major markets (except the U.K.) and a recovery in the Russian market. Amid this condition, Toyota Industries posted sales of 91,000 units, up 23% from the previous fiscal year, as a result of an enhanced product



lineup and proactive sales promotion activities.

Toyota Industries launched various new models in Europe including a counterbalanced internal-combustion lift truck with improved environmental performance, electric stacker truck featuring enhanced agility and usability, as well as a new AGV. In November 2016, Toyota Industries acquired a majority stake in SIMAI S.p.A., an Italian leading manufacturer of various industrial vehicles with strength in producing tow tractors for outside usage. With SIMAI, we further improved our capability to meet diverse customer needs.



BT Staxio stacker-type electric lift truck

In the area of sales activities, Toyota Industries promotes sales expansion activities leveraging our extensive networks and support structures, broad range of products, and logistics solutions systems and know-how. Each sales and marketing company in Europe actively organized and participated in sales promotional events in the market, aiming to increase contacts with customers while demonstrating our total logistics capability. In June 2016, we exhibited such environmentally superior products as an FC lift truck, electric lift truck equipped with a lithium-ion battery and internal-combustion lift truck with improved fuel efficiency at CeMAT 2016 held in Germany. In addition, we presented our operational management system that utilizes information and communications technologies as well as our lift truck automation technology for more efficient logistics



Toyota Industries booth at CeMAT 2016

operations. Through these efforts, a major French cold chain logistics supplier reached a fleet management agreement with Toyota Industries to manage their lift trucks throughout Europe in high recognition of our products and services. We will continue developing products that meet diverse needs of customers, while further improving our proposal capability, thereby contributing to the efficiency of our customers' logistics operations.

ALOMA\*10 and Chinese Markets

Toyota Industries covers the ALOMA markets of Asia, Latin America, Oceania, the Middle East and Africa as well as the Chinese market. We are serving these markets with a lineup consisting of TOYOTA, BT and RAYMOND brands. In 2016, while the ALOMA market was weak, the Chinese market expanded. Amid this market condition, although Toyota Industries enhanced its sales structure and after-sales service capability, unit sales declined 6% from the previous fiscal year to 37,000 units in fiscal 2017. In China, needs for internal-combustion lift trucks increased amid robust investment in the public sector while demand for electric lift trucks was strong mainly at distribution centers for retail industries. In this business environment, we responded to diversifying customer needs by enhancing sales and after-sales service networks, promoting sales of warehouse trucks and engaging in other activities. We will strive to meet needs for wider price range in collaboration with Tailift Co., Ltd., a consolidated subsidiary. The lift truck market in India was strong thanks to its robust economic environment. New product launches as well as various sales expansion and service activities led to strong business performance. We will aim to further expand sales by accurately identifying specific customer needs by business type and engaging in finely tuned marketing approaches. Toyota Industries will continue to enhance sales networks and structures in ALOMA and Chinese markets, while strengthening marketing capabilities by setting up regional offices in major countries along with other efforts, and pursue further sales expansion. In addition, we will further bolster relationships with distributors in each country through such efforts as distributor conferences and work with distributors to offer products and services that satisfy customer needs.

\*10: ALOMA is a Toyota Industries term for Asia, Latin America, Oceania, Middle East and Africa.

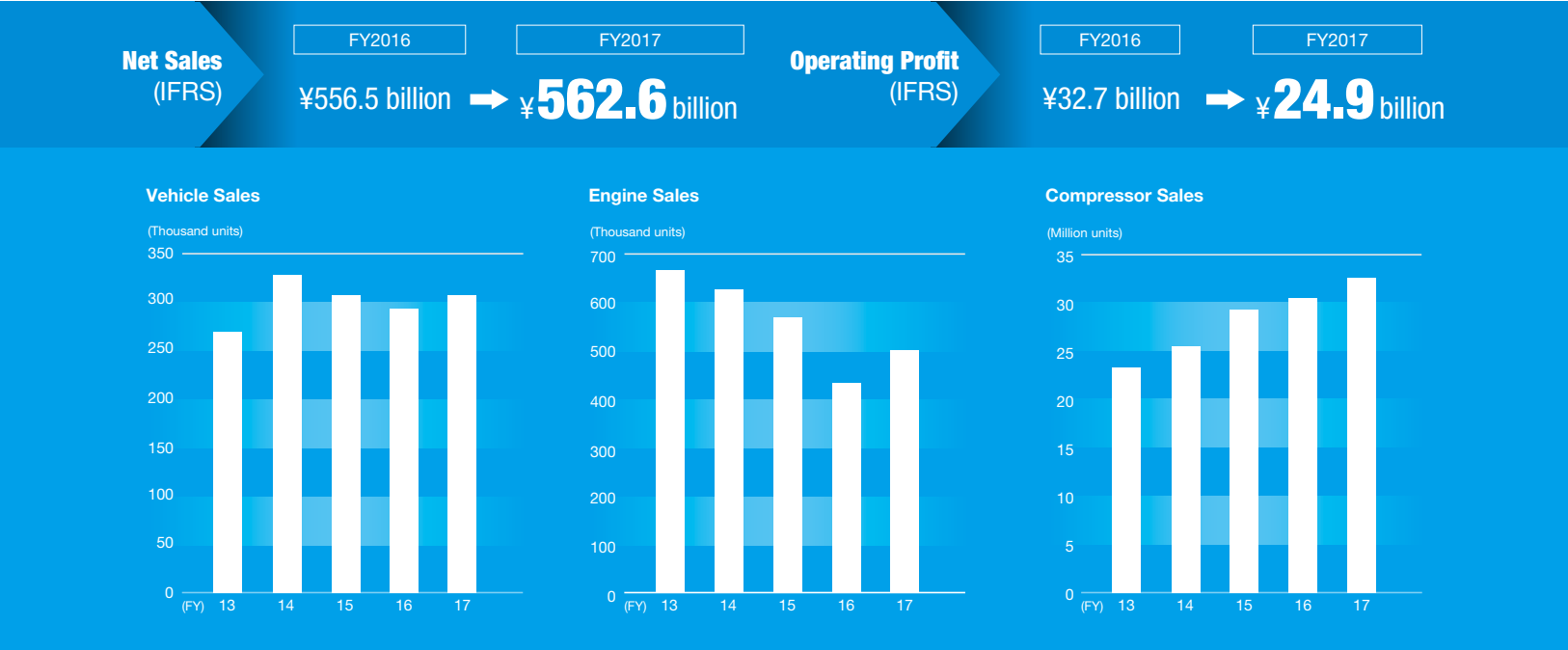


Automobile

In the fields ranging from vehicle assembly to engines, car air-conditioning compressors and car electronics, Toyota Industries continues to meet the expectations and trust of its customers.

Strengths	<ul style="list-style-type: none"><li>Highest-level production efficiency and quality among all Toyota-affiliated automobile body manufacturers (Vehicle assembly)</li><li>Know-how on the development and production of diesel engines and turbo chargers (Engine)</li><li>Ability to develop excellent products with greater fuel efficiency, quieter operation, compactness, weight reduction and easiness to mount on vehicles (Car air-conditioning compressor)</li><li>Global top-share* products for use in a full range of vehicles, from internal-combustion vehicles to hybrid vehicles (HV), plug-in hybrid vehicles (PHV), electric vehicles (EV) and fuel cell vehicles (FCV) (Car air-conditioning compressor)</li><li>Global production structure based on the concept of local production and local consumption (Car air-conditioning compressor)</li><li>Higher technological capabilities cultivated through the development and production of products for Toyota Motor Corporation (TMC) for external sales and for internal use (Car electronics)</li><li>Development, production and top-level quality of electronic parts and devices for electric-powered vehicles (Car electronics)</li></ul>
Opportunities	<ul style="list-style-type: none"><li>Increasing needs for energy-saving products due to stricter environmental regulations and growing environmental consciousness</li><li>Sales expansion of energy-saving products in line with growth of the automobile market</li></ul>
Risks	<ul style="list-style-type: none"><li>Shrinking of the automobile market caused by economic slowdown</li><li>Customers becoming reluctant to buy energy-saving products following less stringent environmental regulations</li><li>A drop in product competitiveness due to the yen's appreciation or a rise in raw material costs</li></ul>

\* Survey by Toyota Industries Corporation





## Vehicle

### Business Overview in Fiscal 2017

The automobile market expanded on a global basis, with Europe, North America and Japan registering strong sales among developed countries and China posting an increase among emerging countries.

In fiscal 2017, unit sales of the Vitz (Yaris outside Japan) and the RAV4 increased by 14,000 units, or 5%, over the previous fiscal year to 307,000 units. Various factors, including the addition of hybrid versions of the Vitz following the RAV4, served to push up net sales by ¥3.0 billion, or 4%, to ¥73.1 billion.

### Highest-Level SEQCD to Contribute to Production of Attractive Toyota Cars

Toyota Industries' comprehensive strengths lie in the highest level of safety, quality, cost and delivery among all Toyota-affiliated automobile body manufacturers. In 2016, we received the Special Award from TMC in recognition of earning the Toyota Quality Control Award program for five consecutive years.

In January 2017, following a minor model change of the Vitz, we initiated production of a hybrid model of the Vitz in addition to the conventional internal-combustion models. We are further strengthening our already superior level of safety, the environment, quality, cost and delivery (SEQCD). We also are working to leverage our ability to quickly start up production and a flexible structure in terms of vehicle models and production volume to contribute to production in Japan of Toyota vehicles.

### Development and Production of Plastic Glazing

Toyota Industries' plastic glazing has been used in the panoramic roof of TMC's hybrid vehicle Prius α (Prius + in Europe and Prius v in North America) and in rear and quarter windows of the 86 GRMN, a limited-edition model released by TMC.

Our plastic glazing retains the beautiful surface quality typical of a glass roof yet is approximately 40%\* lighter than its glass counterpart, improving vehicle fuel efficiency, which has become increasingly important, and thus contributing to the reduction of CO<sub>2</sub> emissions.

Toyota Industries will continue to develop attractive new products that leverage the distinctive characteristics of plastic glazing.

\* Survey by Toyota Industries Corporation

### "Our Vitz and RAV4" Initiative for Enhancing Appeal of the Two Car Models

As the sole producer of the Vitz in Japan and with the aim of turning the vehicle into a long-selling series, Toyota Industries collaborates with TMC and its dealers to make various suggestions under the banner "Taking the Lead in Making Our Cars More Attractive." In 2016, we co-produced the Vitz Shine, a regionally limited premium model. Similarly, to boost the appeal of the RAV4, we plan and develop special-edition vehicles that directly reflect the voice of our customers. Through these endeavors, we seek ways to create more appealing and satisfying vehicles for customers worldwide.

At the same time, we also undertake activities to expand our customer base by enhancing the appeal of the Vitz through our support to motorsports events.



Vitz at the opening competition of the 2017 Japanese Rally Competition Association

## TOPIC

The Nagakusa Plant in Aichi Prefecture, currently engaging in production of the Vitz and RAV4, marked a milestone reaching cumulative production of 10 million automobiles in October 2016, after 49 years and five months since its commencement of operation as a dedicated vehicle assembly plant in May 1967. Commemorating its 50th anniversary in 2017, the Nagakusa Plant intends to make a further leap forward by extending its business lines from production of quality automobiles to include product planning and development.



Ceremony to commemorate cumulative production of 10 million automobiles

## Engine

### Business Overview in Fiscal 2017

Despite a decline in sales of KD diesel engines, an increase in sales of GD diesel engines pushed up unit sales in fiscal 2017 by 67,000, or 15%, over the previous fiscal year to 501,000 units. Net sales increased by ¥11.4 billion, or 15% year-on-year, to ¥90.0 billion.

### Toyota Industries' Diesel Engines Highly Acclaimed by Customers Worldwide

Toyota Industries' diesel engines, mounted in a variety of Toyota vehicles sold around the world, have gained high market recognition for their clean emissions, fuel efficiency and high performance. The V-type 8-cylinder VD diesel engine is installed in the Land Cruiser for markets outside Japan, including Australia, Russia and the Middle East. As a successor model of KD diesel engines, we commenced production of GD diesel engines in June 2015. These engines, which are installed in TMC's Land Cruiser Prado and other vehicles, are equipped with a turbocharger, for which we participated in the development and started production in-house, and boast significantly higher performance.

An additional production line went into operation in January 2016 at our Hekinan Plant in Aichi Prefecture to manufacture the turbocharger to be mounted on GD diesel engines. In March, Toyota Industries Engine India Pvt. Ltd. (TIEI), a consolidated subsidiary in India engaging in the manufacture of engines, also initiated production of GD diesel engines. Going forward, we will seek to increase the ratio of locally procured parts and further improve productivity at this production base in India.



GD diesel engine



Turbocharger (mounted on GD diesel engines)



Ceremony to commemorate the opening of TIEI

### Developing Competitive Diesel and Gas/Gasoline Engines in Non-Automotive Fields

Toyota Industries' engines are highly renowned for their excellent environmental performance in non-automotive fields as well. These engines are used for a wide variety of applications, including our lift trucks, and adopted by GHP\*<sup>1</sup> manufacturers in Japan and CHP\*<sup>2</sup> manufacturers worldwide.

We expanded our lineup of industrial engines with the addition of the Toyota 1KD industrial diesel engine, which is equipped with a turbocharger developed in-house, and the Toyota 1FS gas/gasoline engine in March 2013, followed in December 2013 by the Toyota 1ZS industrial diesel engine also equipped with a turbocharger developed in-house.

These three engines offer downsized displacement compared with conventional models with equivalent output, which results in higher fuel efficiency, cleaner emissions and a reduction in size.

\*1: Short for gas heat pump; air conditioner driven by a gas engine  
\*2: Short for combined heat and power; co-generation system

### For the Creation of Better Engines

Fuel efficiency and emissions standards are becoming more and more strict, as called for in the twenty-first session of the Conference of the Parties (COP21) held in Paris, France, in November 2015 and as evidenced by India imposing increasingly severe regulations on diesel engines. On the other hand, we expect a continued and constant level of demand for powerful diesel-engine automobiles for use as commercial vehicles and sports utility vehicles (SUV) mainly in emerging countries. Under these circumstances, even before such trends toward more strict standards became prevalent, Toyota Industries has been carrying out development of next-generation automobile engines that can clear Euro 6 and other stringent emission standards, as well as engines for materials handling equipment and general purposes featuring greater fuel efficiency and lower costs. While gradually consolidating diesel engine development and production functions from TMC into the operations of Toyota Industries, we will further improve our development efficiency and reduce the time required for development in seeking to develop and manufacture more competitive diesel engines with higher environmental performance.

For our gas/gasoline engines, we will strive to develop and manufacture products with higher efficiency and greater fuel economy to bring satisfaction to customers worldwide.



# Car Air-Conditioning Compressor

## Business Overview in Fiscal 2017

In fiscal 2017, unit sales of car air-conditioning compressors rose 2.18 million units, or 7%, over the previous fiscal year to 32.55 million units as we posted an increase in sales globally, including Japan, Europe, China and North America. However, affected by exchange rate fluctuations, net sales dropped ¥8.2 billion, or 2%, from the previous fiscal year to ¥334.7 billion.

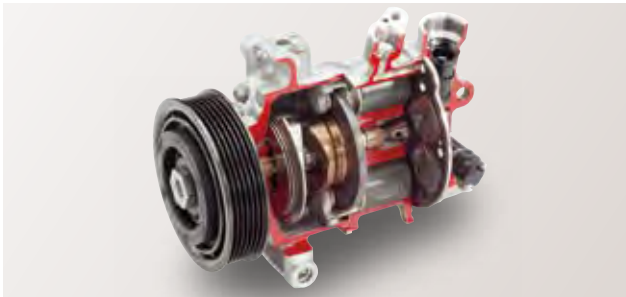
## Development Efforts Based on 3Es (Energy, Environmental Protection and Ecological Thinking)

More stringent fuel efficiency standards have been enforced in the United States, Europe, Japan and China, requiring automobiles to provide extremely high fuel efficiency performance.

Against this backdrop, in the field of car air-conditioning compressors to be mounted in internal-combustion vehicles, needs for greater fuel efficiency have been growing in both fixed-displacement and variable-displacement type products. In the United States, in particular, there was an accelerated shift from fixed-displacement type products to more fuel efficient variable-displacement type products.

Our variable-displacement type compressors, which are renowned for high fuel efficiency and reduced weight, have been adopted by the world's leading automakers, including TMC, Daimler AG, General Motors Company (GM), Volkswagen AG and Hyundai Motor Company.

In the United States, our SES series became the first compressor to be approved under the country's off-cycle credits program. The program gives off-cycle credits to technologies that can effectively improve fuel efficiency under its emissions regulations.



6SES14 compressor (variable-displacement type)

We are also focusing on an optimum balance between performance and prices of fixed-displacement type products targeting emerging countries while concentrating on development of a variable-displacement type compressor with considerably greater fuel efficiency.

In the field of fixed-displacement type compressors, we newly developed the SVE series vane type compressor for compact vehicles. We successfully improved air-conditioning capability by 20% without increasing its size and made it the lightest among other compressors in the same class. It has been adopted in Suzuki Motor Corporation's new Swift. We aim to promote unit sales by increasing the number of models fitted with the compressor.



SVE08 (fixed-displacement, vane type)

Since initially being installed in the second-generation Prius, our electric compressors for HVs and EVs have been mounted in all of TMC's HVs from the fourth-generation Prius to the LS600h.

To offer attractive products to the growing number of automakers worldwide now actively engaged in the development of HVs, we developed the ESB series, which is even more compact, fuel efficient and lighter weight. The ESBG27 compressor mounted in the new Prius Plug-in Hybrid uses a Gas Injection Cycle to improve its heating capability in cold regions by roughly 30%\* and help the vehicle extend its electric motor driving range. It is the first time in the world that a compressor with the Gas Injection Cycle has been adopted in a mass-produced car. (See Special Feature 1 on pages 24–27 for details.)

Besides TMC, Ford Motor Company, Renault S.A.S., Honda Motor Co., Ltd., Nissan Motor Co., Ltd. and other automakers, which are already using our electric compressors in their respective HVs, PHVs and EVs, we will continue to ramp up our efforts to expand sales to other automakers.

\* Compared with conventional heat pump heating system under -10°C environment. Survey by Toyota Industries Corporation and DENSO Corporation



ESBG27 compressor (electric type)

## Augmenting Technical Support Capabilities

We station our sales engineers in the United States, Germany, Italy and China and provide technical support locally, promoting sales expansion and activities to prevent

quality issues from occurring.

In fiscal 2014, two of our consolidated subsidiaries, namely, Michigan Automotive Compressor, Inc. (MACI) in the United States and TD Deutsche Klimakompressor GmbH (TDDK) in Germany, began to conduct design operations locally. A reduction in development lead time resulting from our local design operations has been received favorably by automakers. We plan to continue this initiative in the future.

Through these and similar initiatives, we aim to improve the quality of our compressors through faster evaluation processes and better evaluation techniques while preventing external leaks of our development and evaluation know-how.

## Enhancing Development Capability by Creating Evaluation Facilities In-House

We are creating more evaluation facilities in-house for achieving even higher superiority in terms of technology development.

Our mother plants in Japan have been reinforcing their evaluation functions by designing and creating evaluation facilities in-house that simulate more realistic vehicle environments. With the goal of executing swift and detailed evaluations jointly with local automakers, we are globalizing our evaluation functions in a phased manner.



Local design operations at TDDK

## Establishing Optimum Global Production and Supply Structures

To respond to growing demand for variable-displacement type compressors triggered by the enforcement of more stringent fuel efficiency standards, we are proceeding with augmentation of corresponding production capacities and commenced local production of key functional parts at our production bases in North America. In Europe, ASEAN countries and China as well, we are expanding production capacities and increasing the ratio of locally procured parts to accommodate growing demand for car air-conditioning compressors.

### TOPIC

TDDK initiated operation as a production base outside Japan for Toyota Industries' car air-conditioning compressors for Europe in April 2000, and its cumulative production reached a milestone of 40 million units in June 2016. Currently, TDDK mainly manufactures variable-displacement type products with high efficiency and fuel economy as well as low environmental impact. In March 2015, TDDK moved ahead of its competitors and obtained ISO 50001 certification, an energy management system standard that has been drawing much attention recently. By conducting energy reduction activities at a higher level, TDDK is contributing to the curbing of global warming.



TDDK's plant

## Worldwide Bases of Car Air-Conditioning Compressors (As of March 31, 2017)



Toyota Industries' car air-conditioning compressors are widely adopted by automakers around the world, garnering the No. 1\* position in global sales.  
\* Survey by Toyota Industries Corporation



## Car Electronics

### Business Overview in Fiscal 2017

Net sales of electronics products increased, mainly supported by sales of DC-DC converters, DC-AC inverters and other devices to TMC.

### Performance and Significant Role in Electric-Powered Vehicle Field

Toyota Industries develops and produces electronic components and devices for electric-powered vehicles, including HVs, PHVs, EVs and FCVs. In addition to TMC, we are promoting new business to other automakers across the world.

### Auxiliary Power Source Devices

An on-board charger converts AC voltage from the power grid into DC voltage of high-voltage batteries in vehicles.

We developed an on-board charger for the new Prius Plug-in Hybrid. The product realized better battery charging output that is 1.7 times higher than that of conventional models and has improved charging efficiency thanks to our proprietary control system. By integrating a charging system electronic control unit (ECU) and by increasing cooling performance, we succeeded in reducing its size by 50%, thereby making it easier to mount on a vehicle.



On-board charger mounted in the new Prius PHV



DC-DC converter mounted in the new Prius

A DC-DC converter converts the high voltage of HV batteries into a lower voltage level to supply power to standard electrical devices such as ECUs, lights and wipers.

For the fourth-generation Prius, by developing the world's first thick copper substrate with excellent heat dissipation capability and highly integrated components on the circuit board, we reduced the volume by 50% and weight by 60% compared with the product used in the third-generation Prius.

Backed by our technologies acquired in the field of DC-DC converters for HVs, in 2013 we successfully developed and started sales of a DC-DC converter for start-stop systems, which can compensate for a voltage drop at the time of engine restart, and have been promoting its sales to automakers.

A DC-AC inverter is equipped to use home electric appliances in a vehicle and has drawn a great deal of public recognition for its use as an emergency power source after the Great East Japan Earthquake. Since commencing production in 1995, we have achieved total production of 20 million units in March 2017.

In addition, we develop and produce inverters for electric car air-conditioning compressors for HVs and other electric-powered vehicles. These inverters have been contributing to increasing the product appeal of our car air-conditioning compressors.

We have also leveraged our inverter technologies related to electric car air-conditioning compressors and successfully developed a highly efficient, low-cost inverter for hydrogen circulation pumps. The new inverter has been adopted in TMC's MIRAI FCV.

### Core Components for Drive Systems

The new fourth-generation Prius offers a four-wheel drive (4WD) model for the first time in the series and is fitted with our rear inverter for 4WD. This product converts the DC voltage of HV batteries to AC voltage and feeds power to the 4WD rear motor. The adoption of a forced air-cooling system eliminates the need to install cooling water piping, thereby providing greater ease in mounting the inverter on vehicles. The inverter also features quieter operation as it is mounted near the cargo space.



4WD rear inverter mounted in the new Prius

### Charging Infrastructure

Toyota Industries sells public-use charging stands and home-use charging units for PHVs and EVs, which have been jointly developed with Nitto Kogyo Corporation. Cumulative unit sales reached 13,000 units in March 2017.

Our new public-use charging stand, which was released in October 2015, consists of one main control stand that offers charging functionality as well as such features as communication, IC card-based user authentication and billing, and low-cost, charging-only sub-stands. One main control stand can control up to 10 sub-stands, thereby reducing the initial costs of installing multiple charging stands. We are positioning this new charging stand as a standard model of the charging infrastructure.



Charging stand for PHVs and EVs

### Accelerating Development Activities to Contribute to a Low-Carbon Society

Electrification is expected to become more widespread with the enforcement of more stringent fuel efficiency standards by many countries and higher environmental consciousness among customers. Targeting the high-growth, electric-powered vehicle market not only in the field of automobiles but also in the field of materials handling equipment and other non-automotive products, we will accelerate our development efforts to enhance the appeal of our products in the fields of HVs, PHVs, EVs and FCVs and will also work to augment our production structure with the aim of contributing to a low-carbon society.

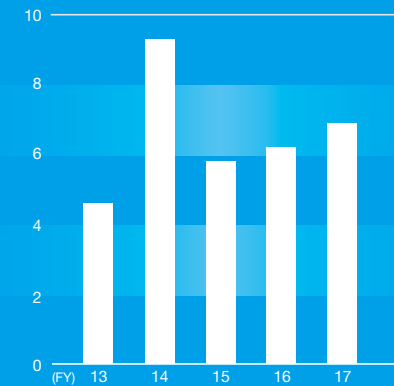
## Textile Machinery

Carrying on the philosophy of founder Sakichi Toyoda, which reflects his strong commitment to manufacturing, Toyota Industries responds to a broad range of needs with its extensive product lineup, from air-jet looms, for which we enjoy the world-leading market share\*<sup>1</sup> in unit sales, to ring spinning frames and roving frames.

\*1: Survey by Toyota Industries Corporation

### Air-Jet Loom Sales

(Thousand units)



### Strengths

- Global, well-developed service network
- Ability to develop products that excel in high-speed operations, reliability and energy-saving performance
- Broad product lineup both in the spinning and weaving machinery fields
- World-leading market share in unit sales of air-jet looms

### Opportunities

- A rise in textile demand in line with an increase in the world population
- Increasing need for high-quality and highly functional yarn and textile products, following the economic growth of emerging countries

### Risks

- Changes in each government's policies concerning promotion of the country's textile industry
- Economic slowdown
- A decline in capital investment due to a drop in raw cotton and yarn prices
- Weaker sales due to intensifying competition

### Net Sales (IFRS)

FY2016

¥65.6 billion

FY2017

→ ¥66.2 billion

### Operating Profit (IFRS)

FY2016

¥6.5 billion

FY2017

→ ¥6.8 billion

### Business Overview in Fiscal 2017

The textile machinery market was on a recovery path mainly in the primary markets of China and other emerging countries in Asia. While sales of spinning machinery declined, sales of weaving machinery expanded with unit sales of air-jet looms increasing 700 units, or 10% year-on-year, to 6,900 units. As a result, net sales were on par with the previous fiscal year at ¥66.2 billion.

### Model Change of Water-Jet Loom



LWT810

In October 2016, Toyota Industries participated in ITMA ASIA + CITME 2016, an international textile machinery exhibition held in Shanghai, China, and launched sales of the LWT810 water-jet loom.

This product utilizes the upgraded version of our

beating-up\*<sup>2</sup> technology, which we have accumulated in the past, and enables more stable production of complex textiles. Customer reviews have been favorable for its greater ease of use through a new function panel and less space requirement realized by adopting a new SC inverter.

\*2: A process in weaving of pushing the last weft yarn inserted through the warp yarn to the fell to keep it securely in place

### Participation in India ITME 2016

Toyota Industries participated in India International Textile Machinery Exhibition (India ITME) 2016 held in Mumbai, India, in December 2016, jointly with Kirloskar Toyota Textile Machinery Pvt. Ltd. (KTTM), a consolidated subsidiary producing textile machinery in India. Toyota Industries exhibited the JAT810 air-jet loom to showcase its wide electronic shedding device that allows the weaving of a broader range of fabrics and demonstrated the weaving of denim. KTTM displayed the RX300 high-speed ring spinning

frame and demonstrated the spinning of mosaic yarn\*<sup>3</sup>. The exhibition provided an opportunity to appeal the Toyota Industries Group's broad range of technologies.

\*3: A special yarn newly developed by Toyota Industries, which is made by alternating or mixing two rovings in different colors, offering a considerable degree of freedom in color and design choices



KTTM booth



Toyota Industries booth

### Uster's Product Winning a Red Dot Award

Uster Technologies AG, a Swiss-based consolidated subsidiary producing yarn quality measurement instruments, received a Red Dot Award\*<sup>4</sup> in the product design category for its yarn evenness tester, USTER® TESTER 6. The award recognized the product's excellent functionality and beautiful exterior design.

\*4: One of the world's largest design competition hosted by Design Zentrum Nordrhein Westfalen of Germany



USTER® TESTER 6



Corporate Governance	P44–49	Relationship with Our Shareholders and Investors	P53
Relationship with Our Customers	P50–51	Relationship with Our Associates	P54–57
Relationship with Our Business Partners	P52	Relationship with Our Local Communities	P58–59

Corporate Governance

Toyota Industries strives to enhance its corporate value in a stable manner over the long term and maintains society's trust by earnestly fulfilling its social responsibilities in accordance with its Basic Philosophy. To that end, Toyota Industries endeavors to further enhance its corporate governance in its efforts to maintain and improve management efficiency and the fairness and transparency of its corporate activities.

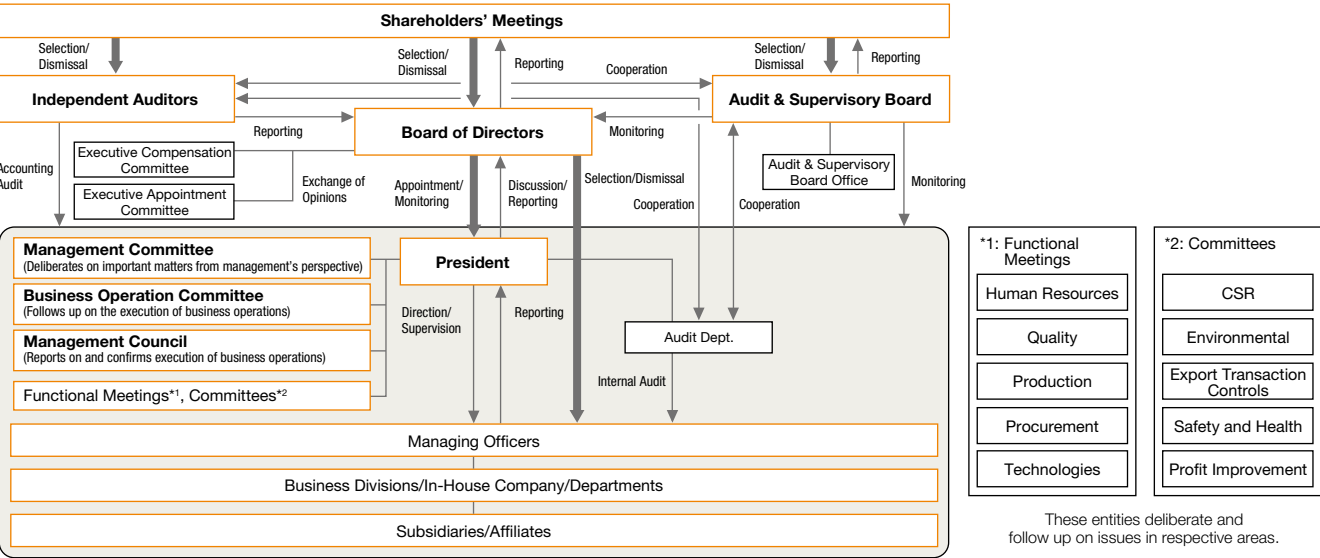
Corporate Governance Structure  
Implementation Structure

Toyota Industries convenes monthly meetings of the Board of Directors to resolve important management matters and monitor the execution of duties by directors. We also appoint outside directors who have a wealth of experience and knowledge concerning business management. They attend meetings of the Board of Directors and give opinions and ask questions as deemed necessary. Through this supervisory function of outside directors, we ensure the legality and validity of the Board's decisions as well as directors' execution of duties from an objective perspective. The Management Committee, which is composed of

directors at the executive vice president level and above as well as relevant managing officers and audit & supervisory board members, deliberates on a variety of issues concerning important management matters such as our corporate vision, management policies, medium-term business strategies and major investments.

Toyota Industries has a divisional organization system, with significant authority delegated to each business division. For especially crucial matters, however, we have established the Business Operation Committee to enable the president to meet with the heads of each business division regularly to monitor and follow the status of their business execution. At meetings of the Management Council, directors, managing officers and audit & supervisory board members convene to report and confirm the monthly status of business operations and share overall deliberations at Board of Directors meetings and other management-related information.

In addition, issues pertaining to human resources, quality, production, procurement and technologies are discussed at the corresponding functional meetings. We have also put in place committees to deliberate on more specific matters, such as corporate social responsibility (CSR), the environment and export transaction controls. These functional meetings and committees discuss important matters and action themes in respective areas.



(As of June 9, 2017)  
Toyota Industries' Corporate Governance Reports are available at: <https://www.toyota-shokki.co.jp/> (in Japanese)

Audit & Supervisory Board System

Toyota Industries has adopted an audit & supervisory board system. Two full-time audit & supervisory board members and three outside audit & supervisory board members attend meetings of the Board of Directors to monitor the execution of duties by directors. At the same time, meetings of the Audit & Supervisory Board are held once a month to discuss and make decisions on important matters related to auditing. The full-time audit & supervisory board members carry out auditing by attending primary meetings and receiving reports directly from directors. Additionally, we have assigned dedicated personnel, while audit & supervisory board members monitor the legality and efficiency of management through collaboration with independent auditors and the Audit Department.

Appointment of Independent Members of Management

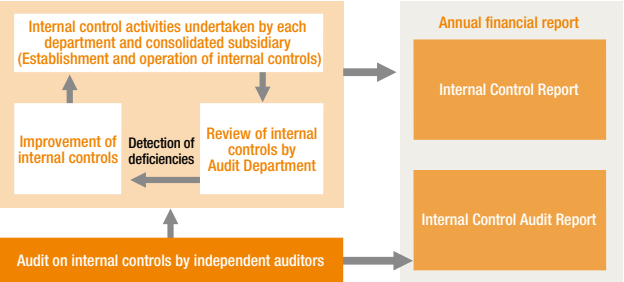
As a publicly listed company, Toyota Industries strives to ensure the fairness and transparency of management. Following the Securities Listing Regulations stipulated by the Tokyo Stock Exchange and Nagoya Stock Exchange, respectively, to further enhance our corporate governance Toyota Industries has appointed as independent members of management two outside directors and two outside audit & supervisory board members who are deemed to have no conflicts of interest with our shareholders.

Internal Control System

In accordance with the Companies Act, in May 2006 Toyota Industries' Board of Directors adopted the Basic Policies for the Establishment of an Internal Control System (Basic Policies) to ensure compliance, risk management as well as the effectiveness and efficiency of business operations by incorporating these policies into each business segment's annual policies and day-to-day routine management. The CSR Committee, at its meeting held in March, assesses the progress made in implementing the Basic Policies in the year under review and determines actions for the coming year, including reviewing the implementation structure and enhancing day-to-day operational management.

Furthermore, based on the Financial Instruments and Exchange Law (so-called Japanese Sarbanes-Oxley Act (J-SOX)), we have established and appropriately operated an internal control system to maintain the reliability of financial reporting. The system's status and progress

Internal Control Assessment System (Based on J-SOX)



are reviewed by the Audit Department and audited by independent auditors. We determine which Toyota Industries Group companies fall within the scope of J-SOX based on the degree of impact on the reliability of financial reporting. We determined that our internal controls over financial reporting as of the end of fiscal 2017 were effective, and accordingly, submitted an Internal Control Report in June 2017. The report was reviewed by independent auditors and judged fair in their Internal Control Audit Report.

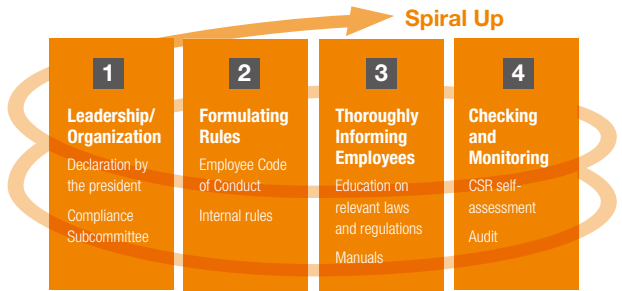
Compliance

Four Pillars of Compliance Activities

We believe that compliance means both adhering to laws and regulations and observing ethics and social norms. In order to ensure compliance, it is vital to instill an awareness of compliance in each and every employee.

Under the strong leadership of top management, we promote compliance throughout the Toyota Industries Group, including consolidated subsidiaries in and outside Japan, by formulating a Code of Conduct and thoroughly informing employees together with checking and monitoring compliance.

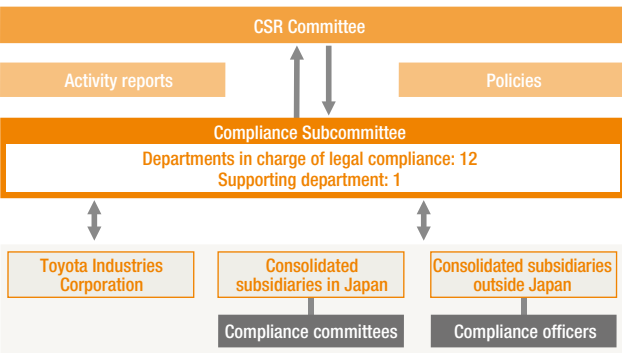
Four Pillars of Compliance Activities



Establishment and Reinforcement of Implementation Organization

To promote compliance throughout the Toyota Industries Group, we have established the Compliance Subcommittee (led by an executive in charge of the Legal Department) as a subordinate organization to the CSR Committee. Every year, the subcommittee formulates an action policy and conducts a follow-up check on the progress of corresponding activities twice during that year.

Organization for Promoting Compliance





## Formulation of Code of Conduct and Dissemination

Toyota Industries has formulated and distributed to executives and all employees the Toyota Industries Corporation Employee Code of Conduct, which serves as conduct guidelines that should be observed by employees, and has been providing familiarization training. Subsidiaries in and outside Japan have formulated their own Code of Conduct appropriate to their respective business lines and corporate cultures. Toyota Industries' 31 consolidated subsidiaries in Japan and 74 consolidated subsidiaries outside Japan have already created their own Code of Conduct and have been working to instill an awareness among their employees.

Simultaneously, to prevent significant risks of bribery and violations of antitrust laws, in addition to the Code of Conduct we have formulated corresponding regulations and been undertaking activities to familiarize employees with these regulations. Regarding bribery, Toyota Industries formulated the Global Guidelines for Bribery Prevention. Particularly, in countries with a high risk of bribery, each base has developed internal rules in accordance with the applicable laws in respective countries and been conducting activities to familiarize employees with them. As for antitrust laws, we have put in place a system to conduct a check and review before and after employees of Toyota Industries contact competitors. We are also familiarizing all employees that they are prohibited from any acts that may possibly constitute a violation of antitrust laws. Since fiscal 2016, we have set up antitrust law compliance month and have been conducting enlightenment activities at relevant departments.

## Thoroughly Informing Employees about Applicable Laws and Regulations

Toyota Industries provides required legal knowledge to employees according to their job ranks or positions, familiarizing them with the initial responses that should be followed upon the occurrence of a problem and educating them on risk management. Through new employee education, rank-based education and workplace meetings, we provide easy-to-understand guidance on "what to do" and "what not to do" in order to improve their compliance awareness based on laws and corporate ethics, using the

### Example Topics of e-Learning Materials

#### Courses started up to fiscal 2016

•Environment (water quality and waste) •Japan's Personal Information Protection Law •Compliance hotline •Prevention of bribery •Insider trading regulations •Copyrights •Japan's subcontracting law (general overview) •Sexual harassment and abuse of power in the workplace •Product liability •Basics of contracts •Export/import transaction controls •Management of confidential information •Illegal activities •Response to industrial accidents, etc.

#### Courses established and revised in fiscal 2017

•Compliance •Traffic safety •Japan's subcontracting law (prevention of delay in payment) •Human rights •Environmental risks •Coping with stress, etc.

\*Provided to all employees of Toyota Industries Corporation and its consolidated subsidiaries in Japan. Additional and revised courses are under consideration.

Toyota Industries Corporation Employee Code of Conduct as an instructional material.

Over the four years since fiscal 2014, we have created and disseminated 39 e-learning materials (including revisions to the existing materials) in order to cultivate a deeper understanding of compliance among employees of Toyota Industries Corporation and its consolidated subsidiaries in Japan and to create an environment in which employees foster compliance consciousness on their own.

In addition, in fiscal 2017 we invited external lawyers to hold executive legal seminars on "management of subsidiaries in China" and "post-acquisition management of subsidiaries" for directors, managing officers and audit & supervisory board members.

### Promoting Education on Code of Conduct

In fiscal 2017, we developed a video material describing the Code of Conduct, which employees of the Toyota Industries Group should observe, in seven languages (Japanese, English, Chinese, Spanish, Portuguese, Indonesian and Vietnamese) to assist relevant education in our consolidated subsidiaries in and outside Japan. The material has been distributed to the corresponding subsidiaries and used in their respective education programs.



Japanese-language Code of Conduct video material



English-language Code of Conduct video material

## Compliance Hotline

The Toyota Industries Group has in place a whistle-blower system for employees to report and seek consultation on compliance-related issues. In Japan, North America, Europe and China, in particular, we operate a compliance hotline (external helpline) that allows employees and their families to seek advice from external experts on compliance-related matters without being exposed to negative consequences, as well as to ensure the early discovery and prevention of issues. In fiscal 2017, we received 70 reports and inquiries from within Toyota Industries and from its consolidated subsidiaries in Japan on such matters as labor management, working environment and ethics. After verifying each report and inquiry, we have taken appropriate action regarding each case. We also started operating a hotline for our major business partners to report and inquire about possible compliance violations by Toyota Industries employees. Through this initiative, we ensure the early discovery and prevention of issues and intend to become a "company on which society places greater trust." We plan to make this hotline available to more business partners in the future.

## Activities in the Toyota Industries Group

We have set up compliance committees at subsidiaries in Japan and appointed compliance officers at subsidiaries outside Japan in our efforts to promote autonomous activities in respective communities in collaboration with the Compliance Subcommittee. In fiscal 2017, we continued to carry out activities in line with local needs.

### Activities in Japan

We held a conference of compliance personnel from 31 consolidated subsidiaries in Japan to share the latest information on applicable laws, introduce tools for employee education and exchange views on responses when a case of misconduct occurs.

### Activities in North America

We held the Compliance Officer Conference in North America with participation of compliance officers from 20 bases. A lecture by a lawyer and a presentation on required actions were given about often changing legal systems in the United States, including obligations imposed on government contractors and response to labor law changes. After the conference, these 20 bases have been fully implementing coordinated measures.

### Activities in Europe

In Europe, the regional headquarters have been promoting employee education on the Code of Conduct at respective bases. In terms of preventive legal measures, these headquarters have been identifying and assessing compliance risks and implementing appropriate measures for selected priority matters.

### Activities in China

In China, compliance officers from seven bases attended the Compliance Officer Conference. In fiscal 2017, the focus of activities was placed on "moral (education)" and "labor laws," and we created and disseminated relevant educational materials for use at all bases in China. Each base conducted education using these materials. We also

held a legal seminar for managers in the procurement department of each base to increase their knowledge on legal matters related to daily operations and improve their awareness of compliance.

### Activities in Asia, Oceania and South America

We have been providing compliance officer training with the aim of upgrading compliance activities. In fiscal 2017, we provided guidance on how to conduct employee education and held case studies on responses to misconduct for compliance officers from five bases in India, Indonesia and Vietnam.

### Cross-Regional Activities

We held the Four Regions Compliance Conference in the United States attended by 19 compliance personnel from four regions (Japan, North America, Europe and China) to share information on and discuss the establishment of a whistle-blower system appropriate for each region. We also selected a new compliance logo of the Toyota Industries Group. Using this logo, we will strive to further increase compliance awareness.

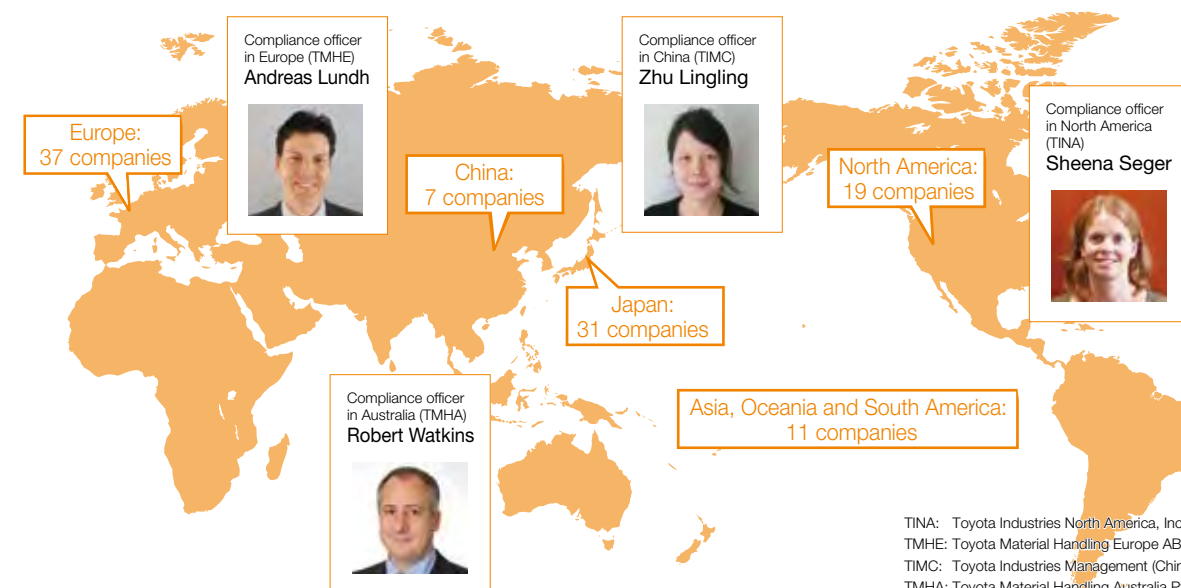


Four Regions Compliance Conference



New compliance logo

### Compliance Committees (in Japan) and Compliance Officers (outside Japan) (As of March 31, 2017)



TINA: Toyota Industries North America, Inc.  
TMHE: Toyota Material Handling Europe AB  
TIMC: Toyota Industries Management (China) Co., Ltd.  
TMHA: Toyota Material Handling Australia Pty Limited



Management of Confidential Information

Basic Perspective

We recognize that the personal information of customers, employees and business partners as well as information concerning our technologies and sales activities are assets that need to be protected. Accordingly, we are making our utmost efforts to safeguard confidential information and strengthen its management as one of the CSR areas.

Implementation Structure

Toyota Industries has set up the Information Security Subcommittee (led by an executive in charge of the General Administration Department) as a subordinate organization to the CSR Committee to promote proper management of confidential information, taking appropriate actions against the risk of leakage of confidential information and complying with laws such as the Unfair Competition Prevention Act and the Act on the Protection of Personal Information.

To thoroughly implement the initiatives adopted by the subcommittee, we appoint information security managers\*1 and information security administrators\*2 at each department. We strive to raise awareness about information security among their staff by holding workplace meetings and conducting self-checks regarding their information security practices.

In fiscal 2017, to counter an increase in risk for leakage of confidential information we decided to perform a more thorough check of the history of data being taken off the premises upon retirement as well as reviewed the content of security incident or accident training at the headquarters.

Activity Examples

Activities up to fiscal 2016

Activities by Toyota Industries

- Rank-based group education
- Restrictions on taking photographs on company premises
- Attaching a security cable with a lock to all PCs to prevent unauthorized removal off the premises
- Restricting the copying of electronic data on recording media
- Monitoring of email correspondence
- Requiring employees to sign a confidentiality agreement and checking the history of electronic data being taken off the premises upon retirement

Activities in collaboration with other Toyota Group companies

- “Information Security Awareness Month” activities in May and October to raise employee awareness and conduct auditing by checking off-the-premises removal of personal computers and recording media, etc.

New activities in fiscal 2017

- Checking the history of hard copies being taken off the premises upon retirement
- Reviewing the content of security incident or accident training at the headquarters, etc.

Our consolidated subsidiaries in and outside Japan also appoint respective information security managers and information security administrators. We have also developed common guidelines concerning management of confidential information, which have been distributed among these subsidiaries, and follow up on their activities on a periodic basis in our efforts to raise the level of confidential information

management throughout the Toyota Industries Group.

\*1: Head of each department

\*2: A person within the department, appointed by the head

Risk Management

Basic Perspective

Based on the Basic Policies for the Establishment of an Internal Control System in compliance with the Companies Act, Toyota Industries is working to strengthen regulations and a structure to promote risk management. We regard the following aspects as the basics of risk management and implement initiatives accordingly.

- Incorporating measures to prevent and reduce potential risks into daily routines and following up on the progress of implementation
- Ensuring quick and precise actions to minimize the impact on business and society when a risk becomes apparent

Implementation Structure

Business divisions and other departments at the Head Office develop and promote annual action policies that integrate measures to prevent and control risks related to quality, safety, the environment, personnel, export transactions, disasters and information security. Progress is assessed and followed up by each functional management entity such as the CSR Committee and the Environmental Committee. At the same time, functional departments at the Head Office such as those responsible for quality, safety and the environment formulate rules and regulations and manuals from a Group-wide perspective, including consolidated subsidiaries. By confirming and following up on the progress through operational audits and workplace inspections, they provide support for raising the level of risk management at each business division and consolidated subsidiary.

We have also formulated the Crisis Response Manual, which defines our initial response to a problem or a crisis. This manual lays out basic rules to be followed when a risk becomes evident and a problem or crisis occurs. The aim is to ensure quick reporting to top management, perform an accurate assessment of the impact on society and business activities and minimize damage through appropriate actions. The content is reviewed and revised as deemed necessary in response to changes in businesses and the surrounding environment.

Response to Possible Major Earthquake

We consider the occurrence of a major earthquake as one of the most significant risks. Since fiscal 2011, we have been implementing disaster prevention measures that focus on three basic policies, namely placing maximum priority on human life; placing top priority on the recovery of local communities; and ensuring the quickest possible recovery.

Furthermore, we divide these measures into the three categories of “precautionary, pre-disaster mitigation,” “initial response to be followed immediately after the disaster” and “restoration of production,” and are respectively making

Company-wide efforts.

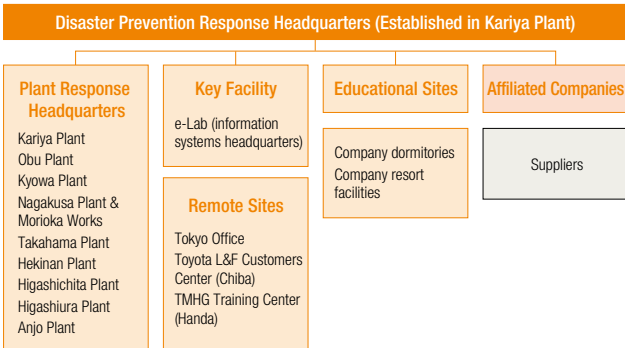
In fiscal 2017, based on the results of a review of our efforts in the previous fiscal year, we conducted training such as disaster drills in more realistic settings. We intend to continuously upgrade our activities.

Disaster Prevention Structure

We strive to reinforce our disaster prevention structure to enable smooth transition from the initial response stage to the production restoration stage.

The Disaster Prevention Response Headquarters, led by the executive vice president and consisting of representatives from the functional departments at the Head Office, is responsible for collecting information from plants and other relevant parties and making Company-wide decisions based on the information collected.

Disaster Prevention Structure



Efforts to Cultivate Human Resources through Training

1. Training at Disaster Prevention Response Headquarters

As one important role assigned to the Disaster Prevention Response Headquarters that oversees Company-wide disaster response, we conduct simulation training in which employees collect information on damages to both inside and outside the company premises, swiftly make decisions and disseminate these decisions throughout Toyota Industries.

Since fiscal 2015, assuming the occurrence of a disaster during nighttime and on a weekend or holiday, we have been providing training to members selected from the functional departments who live close to the Head Office in order to further enhance our real-time response capabilities.



Reviewing policies on resumption of operations and how to return home



Disaster response meeting

2. Training at Plant Response Headquarters

a) Workshops

In fiscal 2017, the major topic of our Company-wide discussion was the “creation of a structure that is truly functional in an emergency.” We worked to increase our

response capabilities by reviewing and revising our disaster prevention structure and flow of activities, thereby ensuring a quick and smooth transition from initial response activities to restoration activities.



Discussion at a workshop



Identifying inadequacies and items to be improved

b) Tabletop Exercise

We provide training to the head (plant manager) and members of each Plant Response Headquarters to ensure that we promptly make an initial response, offer support to local communities and launch restoration activities in case of a disaster. In fiscal 2017, we added training on the procedures to formulate a restoration plan to further raise awareness of each member for disaster prevention.



Determining whether to stop operations and how to provide support activities



Discussing a restoration plan

3. Training for Restoration

a) Power Restoration Drill

Each plant has developed procedures to restore power supplies, including electricity and gas, which are essential in restoring production activities. Starting from fiscal 2015, each plant conducts *genchi genbutsu* (go and see for yourself) training on a periodic basis. Through the training we are identifying problems and making improvements to step up our efforts to ensure quick restoration activities.

Since fiscal 2016, we have selected a model business division and standardized restoration procedures. We are conducting phased implementation of the initiatives taken at the model business division throughout Toyota Industries.



Drill to restore a primary power source

b) System Restoration Drill

The e-Lab, responsible for managing Toyota Industries’ data servers, has created procedures to restore critical data after a disaster. We conduct annual restoration drills jointly with Toyoda High System, Incorporated, a consolidated subsidiary engaged in development and operation of information infrastructures and systems, and work to improve our readiness for quick restoration.

4. Training for Identifying Disaster Damage

We repeatedly conduct drills jointly with our affiliated companies and business partners in order to familiarize them with the use of IT tools to quickly identify the damage status during a disaster.



Relationship with Our Customers

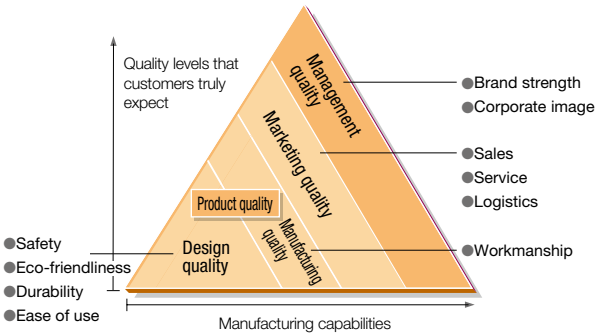
Adhering to a quality first approach, Toyota Industries practices *monozukuri* (manufacturing) that quickly responds to the diverse, ever-changing needs of customers.

“A product should never be sold unless it has been carefully manufactured and fully tested in the commercial trial, with completely satisfactory results.”  
(from 80 Years of Toyota Industries through Photos)

Carrying on the spirit of founder Sakichi Toyoda, Toyota Industries strongly believes that quality is the lifeblood of a company. Focusing on quality first and ensuring customer safety and reassurance are our most important responsibilities to our customers and form the basis of our approach to CSR.

Toyota Industries strives to maintain and improve the total quality of our corporate activities, which encompasses not only “product quality” but also “marketing quality” and “management quality.” “Product quality” is embodied in the safety, eco-friendliness, durability, ease of use and workmanship of our products, while “marketing quality” entails excellent sales and service in addition to these attributes and “management quality” further enhances our overall corporate image and brand strength in terms of all of these attributes.

Types of Quality Sought by Toyota Industries



“We should express our gratitude to our customers by providing them our best quality products.”  
(from Toyota Industries’ Quality Guidelines)

Placing top priority on our “Customer First” philosophy, Toyota Industries undertakes product development that meets customer expectations.

At Toyota Industries, development of a new product entails defining specific goals to incorporate quality in every stage from product planning and design to production preparation, production, sales and after-sales services. We perform a design review (DR), which allows a product to proceed to the next stage only when a responsible business division head examines and approves whether the product has reached the target quality level.

Should a defect occur after the product launch, the quality assurance departments of each business division

immediately devise necessary measures. At the same time, a probable cause is identified from both technical and structural aspects, and if deemed necessary, the new product development system itself is reviewed to prevent a recurrence in the successor model.

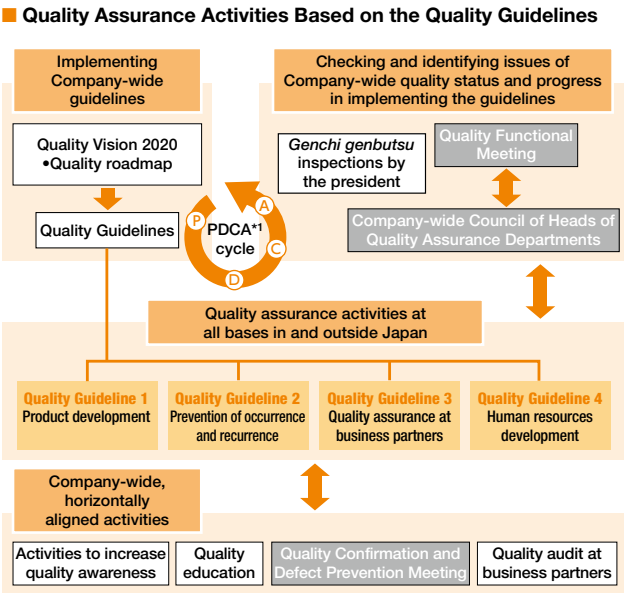
Activities Based on the Quality Guidelines

Quality forms the basis of our operations and is essential in attaining the goals of our Vision 2020. As such, we formulated our Quality Vision 2020, which defines our philosophy in ensuring quality.

**Quality Vision 2020**

All members in the Toyota Industries Group ensure quality first and build in quality with ownership at their own workplaces and positions in an effort to continuously supply attractive products/services that anticipate global customers’ needs.

To achieve the goal of this vision, we issue the Quality Guidelines, which identify priority quality-related issues to be implemented in each fiscal year, to all production bases in and outside Japan and engage in quality assurance activities accordingly. The implementation status of these guidelines is reviewed by top management at the Quality



\*1: PDCA (Plan, Do, Check, Act)



Genchi genbutsu inspection by the president

Functional Meeting chaired by the head of the Production Headquarters\*2 for identifying additional issues and devising countermeasures. Issues raised are followed up at meetings of the Company-wide Council of Heads of Quality Assurance Departments chaired by the head of the Quality Control Department\*2. The president also checks on the outcome of these activities through *genchi genbutsu* inspections.

\*2: As of March 31, 2017

Initiatives to Prevent Defects

To achieve a level higher quality control and assurance, heads of all business divisions, quality assurance departments and engineering departments share information on defect prevention activities upon new product development or launch of mass production at the Quality Confirmation and Defect Prevention Meeting. Additionally, we provide education on a periodic basis not only to employees of Toyota Industries but also to our business partners to improve work procedures and mechanisms for defect prevention.

If a defect is found in a product after its launch, we implement thorough measures to prevent a recurrence and apply the results to other business divisions.

We have been strengthening measures to prevent the occurrence of similar defects in all products we develop and manufacture in the future.

Initiatives to Raise Quality Awareness

To ensure that we live up to our customers’ expectations in terms of quality, we believe it is important to have a high degree of quality awareness on an individual level. That is why we engage in various activities to raise quality awareness, including organizing various events during Quality Month. As a new initiative in fiscal 2017, we published two quality-related booklets to promote higher quality awareness.

One of the booklets, which is for all employees, reaffirms the origin of our quality assurance activities and includes such topics as the introduction of a Company-wide quality management structure in 1982 and details of the Deming Prize we received in 1986. This booklet was translated into English and distributed to major production bases outside Japan.

Based on the results of quality awareness questionnaires that have been conducted since fiscal 2016, we also created a booklet for engineering departments to facilitate the application of statistical quality control methods.



Booklets to raise quality awareness

Providing Support to Business Partners

Since improving the quality of our products requires concerted efforts with our business partners in and outside Japan, we are strengthening joint quality assurance activities with major business partners.

In each quality audit, we determine priority areas, confirm the improvement status of the previously identified deficiencies and provide quality education on items that should be reinforced in order to cultivate a deeper understanding of *kaizen* (improvement). As a result of these activities, in fiscal 2017 we successfully reduced the quantity of defective products delivered to us by about 30% from the previous fiscal year.

These activities enable our business partners to attain the level of quality assurance that Toyota Industries requires and establish a culture to foster quality assurance on their own.

Promoting Human Resources Development

Toyota Industries provides systematic quality education to all employees to help them acquire quality assurance skills needed in actual operations.

Our production bases outside Japan also promote *kaizen* efforts and human resources development through quality control (QC) circle activities. We visit subsidiaries outside Japan to give hands-on instructions for promoting QC circle activities and train QC circle instructors. As a venue for presenting activity results, we hold the Global QC Circle Convention and Regional QC Circle Convention every year and provide workshop sessions to raise skills.

We are working to reinforce our foundation for quality assurance based on the belief that manufacturing starts with nurturing excellent personnel.



Global QC Circle Convention



Regional QC Circle Convention in China



Relationship with Our Business Partners

Toyota Industries encourages open procurement and seeks co-existence and co-prosperity with our business partners (suppliers) based on mutual trust. We also facilitate environmentally preferable purchasing, CSR-oriented procurement practices, human resources development and disaster prevention activities for a possible major earthquake.

Fair Business Transactions Based on an Open Door Policy

To achieve open procurement, we provide fair and equal opportunities to all potential business partners on our Website. We comprehensively evaluate our business partners based on such factors as quality, price, adherence to delivery times, technological capabilities and management information. We also assess their initiatives for safety, the environment and compliance as we strive for the timely and stable procurement of excellent products at lower costs based on fair business transactions.

Co-Existence and Co-Prosperity Based on Mutual Trust

We work hard to realize co-existence and co-prosperity with our business partners based on mutual trust. Every year, we hold procurement policy meetings and top manager seminars for major business partners to facilitate mutual understanding and cooperation. In addition, we provide such programs as quality management and technical skills training, guidance directed toward kaizen at their production sites and safety and health education throughout the year.

Reducing Environmental Impact through Environmentally Preferable Purchasing



Environmentally Preferable Purchasing Guidelines

In order to create environmentally friendly products, we aim to procure parts, raw materials and equipment from business partners that give sufficient consideration to the environment. In October 2016, we published the sixth edition of our Environmentally Preferable Purchasing Guidelines, which we have formulated to enforce “green” purchasing. In the sixth edition, we responded to the increasing global call for stricter environmental requirements throughout the product lifecycle by adding to the guidelines the goals we are pursuing for the year 2050 as well as provisions to ensure greater environmental management in our entire supply chain.

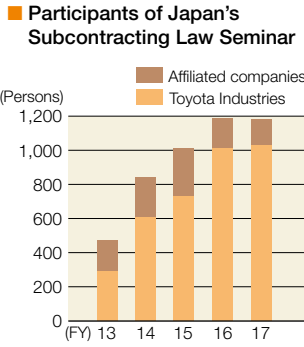
Localization of Business for Good Corporate Citizenship

In view of increased local production outside Japan, we promote procurement from local business partners in order to contribute to the local community through consolidated subsidiaries as a good corporate citizen.

Promoting Human Resources Development

We proactively provide education to enhance procurement knowledge both internally and externally. In fiscal 2017,

we provided training on Japan’s subcontracting law to strengthen compliance, with seminars attended by 1,030 Toyota Industries employees and 150 participants from affiliated companies. We also held seminars for those who have missed previous ones, and all applicable individuals have completed this training. Along with sharing a model to develop procurement professionals across all procurement departments of Toyota Industries with the aim of improving the knowledge of procurement personnel, we have started providing basic education on procurement as well as financial education. We also work with Hoeikai, an organization consisting of our business partners, to provide support to strengthen the management platforms of member companies through Toyota Production System (TPS) activities in manufacturing and QC circle activities.



Efforts toward Future-Oriented Trade Practices

In September 2016, the Ministry of Economy, Trade and Industry released Basic Policies for Future-oriented Trade Practices, requesting all industries in Japan to “formulate voluntary-based action plans toward the further introduction of fair trade and the improvement of added value across whole supply chains.” Accordingly, we conducted a review of our payment conditions for subcontracting business partners and decided to entirely switch from payment in bills and notes to payment in cash starting from fiscal 2018. As part of our efforts to become a “company on which society places greater trust,” we established a business partner hotline, through which we receive their opinions and inquiries and external lawyers take appropriate action for each case.

Business Continuity Plan (BCP) Activities for Possible Major Earthquake

In the wake of a series of earthquakes that hit Kumamoto in 2016, we reviewed our previous BCP activities and identified deficiencies. In further promoting our BCP activities, we are making concerted efforts with business partners to reduce associated risks by implementing specific measures. In fiscal 2017, as a new initiative to ensure the smooth launch of a production restoration phase after a disaster, we provided production restoration workshops (tabletop exercises) to our major business partners.

BCP Activities						
Topic		FY2013	FY2014	FY2015	FY2016	FY2017
Action policy		Determining current status	Reinforcing disaster mitigation			
						Production restoration
Scope of activities		Hoeikai (business partners)				
			Suppliers of major parts			
Activities	Supply chain surveys	Improving accuracy through periodic surveys				
	Mitigation workshops		Tabletop exercises			
	Disaster mitigation plans		Formulation, aggregation and review			
	Genchi genbutsu confirmation				Confirmation	
	Training for determining extent of damage			Periodic training		
	Production restoration workshops					Tabletop exercises

Relationship with Our Shareholders and Investors

We aim to obtain an appropriate company valuation in stock markets through timely and appropriate information disclosure while promoting good communications with shareholders and investors.

Basic Perspective

Toyota Industries continually carries out timely and appropriate information disclosure for shareholders and investors. In this way, we raise management transparency so that we obtain an appropriate company valuation in stock markets. We proactively provide not only information required under disclosure laws and regulations but also information on our management policy and business activities. Also, we engage in various investor relations activities to facilitate productive dialogue with shareholders and investors.

General Shareholders' Meeting

We hold our annual general shareholders’ meeting early to avoid the date on which many companies hold their respective shareholders’ meetings so that more shareholders can attend. We are further facilitating the exercise of voting rights of our shareholders by allowing them to exercise such rights via the Internet and by joining the electronic voting platform for institutional investors. We held our 138th General Shareholders’ Meeting on June 10, 2016, in which a record-high 475 shareholders participated. To foster a better understanding of our business activities, we invited our shareholders for a lift truck plant tour following the general shareholders’ meeting.

Number of Participants		(Persons)				
		134th	135th	136th	137th	138th
Shareholders’ meeting		363	396	348	418	475
Plant tour		132	185	144	163	198

Investor Relations Activities

For institutional investors and securities analysts, our management conducts briefing sessions to explain our quarterly financial results, including business performance, progress achieved at each business division and future initiatives. In addition to accepting individual interviews and making visits to institutional investors, in fiscal 2017 we hosted information sessions for the Materials Handling Equipment Business and car air-conditioning compressor plant tours. These events serve to showcase our business policies, our approach to manufacturing and on-site initiatives and facilitate a deeper understanding of Toyota Industries. As for institutional investors outside Japan, we visit some of them to explain our management policies and business overview. We also participate in conferences hosted in Japan by securities companies and hold individual meetings. For individual investors, we hold company information

sessions mainly in regions in Japan where our bases are located to promote an understanding of our business and management policies. Our Website also provides descriptions of our business details and strengths in an easy-to-understand manner. Opinions and requests we collect through various means of communications with shareholders and investors are fed back to executives and relevant business divisions to reflect them in our future business activities.

Major IR Activities

For institutional investors and securities analysts in Japan
•Quarterly financial results briefings •Individual interviews/visits •Small meetings •Teleconferencing •Company-hosted business information sessions/plant tours •Issuing/delivering Toyota Industries Reports
For institutional investors outside Japan
•Individual interviews/visits •Teleconferencing •Participation in conferences hosted by securities companies •Issuing/delivering Toyota Industries Reports
For individual shareholders and investors
•Company information sessions •Company-hosted plant tours •Issuing/delivering notice of general shareholders’ meeting •Issuing/delivering business reports



Company-hosted information session for the Materials Handling Equipment Business (September 2016)



Q&A session after a car air-conditioning compressor plant tour hosted by Toyota Industries (December 2016)

Returning Profits to Shareholders

We strive to continue paying dividends from retained earnings at the consolidated dividend payout ratio of roughly 30% and meet the expectations of shareholders upon comprehensively taking into consideration such factors as business results and demand for funds. For fiscal 2017, Toyota Industries increased annual cash dividends by ¥5.0 over the previous fiscal year and paid annual cash dividends per share of ¥125.0 (interim cash dividend per share of ¥60.0 and year-end cash dividend per share of ¥65.0).



Relationship with Our Associates

Our ultimate goal is to create safe and secure workplaces for everyone, where each and every associate can exercise their diverse potentials and play active roles.

Building a Safety-Oriented Culture That Aims for Zero Industrial Accidents

In accordance with our fundamental policy of “creating people capable of autonomously maintaining occupational safety and health,” Toyota Industries strives to prevent industrial accidents and occupational disorders as well as realize better work environments.


Based on the idea of building “a homelike atmosphere at work that is warm and friendly” as stated in the Toyoda Precepts, we clarified the “true meaning of safety” and “optimal safety we seek” and formulated the Safety Vision in fiscal 2014. Under this vision, all associates of the Toyota Industries Group are undertaking the task of establishing a safety-oriented culture.

In fiscal 2017, we continued to promote primarily “activities aimed at establishing a safety-oriented culture” and “safety measures from human, object and administrative standpoints based on risk assessment.”

**Safety Vision**

Each and every associate in the Toyota Industries Group, guided by the spirit of our corporate creed, aims to create a corporate culture that places a top priority on maintaining safety in all areas and focuses on mutual courtesy and safety as well as realizing workplaces where associates work each day with a sense of happiness and pride.

July 1, 2013



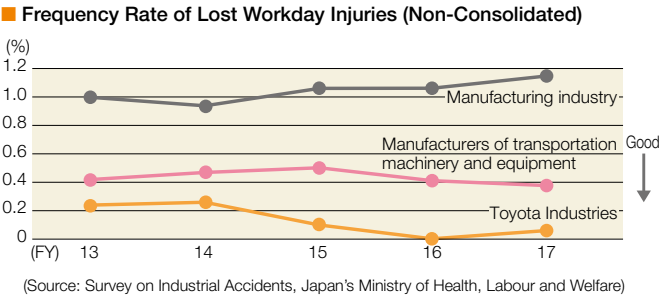
For a safety culture to firmly take hold, strong awareness among all associates is vital. It is equally important that they recognize health and safety issues in the workplace and plan and sustain their own activities to reduce industrial accidents under the leadership of managers and supervisors.

To this end, managers and supervisors observe workplaces from a viewpoint of workers and strive to visualize issues through *genchi genbutsu* dialogue, share goals with workers and cultivate a sharper sensitivity to problems.

Since many of the issues that have become apparent often show trends specific to individual business divisions, we hold sessions to report the results of work observations to encourage matching response actions within each business division.

As typical examples of safety culture activities, we encourage point-and-call practices to check safety, instruct associates to use hand rails when going up or down stairs and let associates remind each other to mutually raise awareness. As a result of these activities, we have increased opportunities to hold safety dialogue within Toyota Industries and cultivated stronger awareness among all associates, making steady progress toward zero industrial accidents.

In fiscal 2017, we continued to record no accidents caused by production facilities. However, as there were human-induced accidents, such as injuries while handling heavy objects and while walking, the frequency rate of lost workday injuries rose to 0.06. We will continue to implement and expand unfaltering initiatives to instill a safety culture



among associates to achieve zero industrial accidents.

There was an industrial accident at another company, which involved an explosion in a heating furnace that uses combustible gas. Following the accident, our top management conducted focused inspections on gas-fired equipment used within the Toyota Industries Group. Using the information released by public offices and other organizations, we performed checks on the ventilation setting at the time of ignition, safety devices used to check the combustion conditions, functions of the automatic and emergency gas shut-off valves and the contents of operational manuals, and confirmed that our procedures and equipment ensure safety in all of our assumed scenarios. We will continue to seek the latest safety technology for increasing safety and endeavor to curb industrial accidents by repeatedly conducting risk assessments.



Overseas, we again held a health and safety regional meeting at bases in Europe and North America.

These meetings focused on increasing collaboration among bases in each region and aimed to ensure legal compliance, build a safety-oriented culture and improve health and safety technology and measures. Participants exchanged views on how to apply cause analysis methods to prevent a recurrence of an industrial accident and how to ensure safety in logistics operations while using vehicles within a plant. For the former, in particular, we created a manual that compiles issues found so far to deepen an understanding of the importance of cause analysis and our approach to preventive measures.



We will continue to reinforce ties among bases within Japan and among bases in each region, with the ultimate goal of establishing the highest level of health and safety culture in respective regions.

Initiatives for Health Management and Improvement

As a task for the medium term, we are promoting health improvement of associates, mainly focusing on prevention of lifestyle diseases and mental health support activities, to counter risks associated with aging and greater stress.

For prevention of lifestyle diseases, we conduct periodic age-based health education for all associates. We also feed back to associates the results of an annual health checkup and measurements conducted on the same day, including physical fitness, body fat percentage and amount of fat around internal organs, along with advice to improve lifestyle habits. Our health checkup is designed to provide motivation for better health by letting associates think about their health over the course of the one-day program.

In addition, we conduct enhanced follow-up activities after annual health checkups. As one effort, we provide health promotion guidance to associates below the age of 40 in addition to specific health guidance required by the Japanese government. By doing so, we encourage associates to improve lifestyle habits early on in order to prevent or ameliorate symptoms of metabolic syndrome. Our company cafeterias also offer healthy meals to help associates maintain and promote their health.

As part of mental health support activities, we have in place a system to offer early consultation through a health-related hotline. Other activities include upgrading our self-care/line-care

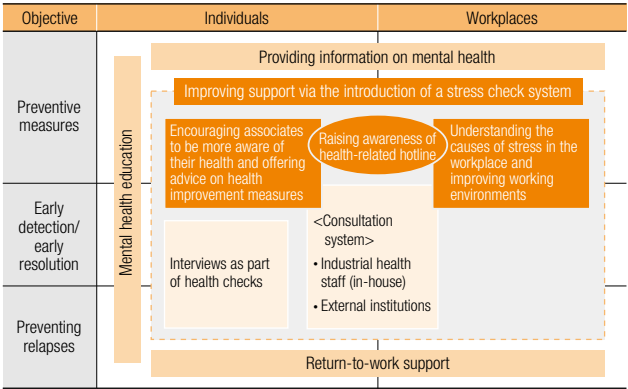


Age-based health education

Major Health Promotion Activities in Fiscal 2017

Participants of age-based health education (non-consolidated)	(2,142 persons)
Persons having completed guidance program on prevention of lifestyle diseases (non-consolidated)	(717 persons)
Stop smoking enlightenment events	
•World No Tobacco Day: One-day no smoking (May 31)	
•No Smoking Days: Half-day no smoking (for nine days)	
Participants of stop smoking campaigns (held jointly with health insurance association)	(29 persons)
Participants of walking events (held jointly with health insurance association)	(5,025 persons)

Improving Mental Health Support Systems (Introducing a Stress Check System)



education to prevent new cases of mental health problems and operation of a return-to-work support program for persons on long-term leave for prevention of relapses. We have successfully achieved positive results through these activities.

In fiscal 2017, we introduced a stress check system and conducted a check on all associates. The results were fed back to all participants with suggestions for improvement, and we set up an individual interview with a doctor for those wishing to do so. We also provided feedback of group analysis results to each workplace, as encouraged by the Ministry of Health, Labour and Welfare. We promoted effective data utilization in improving working environments by feeding back the results along with tips for improvement to all department heads. Our in-house industrial health staff and external institutions also provided improvement support to departments needing to implement countermeasures.

Enhancing Team Strength

Toyota Industries believes that it is essential to enhance team strength so that each associate can work with vitality and the Company can achieve sustainable growth.

We believe that team strength is made up of “technical skills” that form the basis of manufacturing operations, “management skills” to make maximum use of technical skills and a “spirit of harmony” that supports both. While further enhancing our team strength, we are striving to extend and hand it down beyond all business domains, generations and geographic regions.



Technical Skills

To develop skills to support manufacturing, the Technical Learning Center, one of our training facilities, plays the central role in associate education, offering basic skills training at the Technical Training School and facilitating efforts to enhance the skills of young technical staff through in-house skills contests. We also work to cultivate highly skilled specialists through participation in the national and international skills competitions.

At the 54th National Skills Competition\* held in 2016, the Toyota Industries team won one gold medal in the “electrical welding” category and received prizes in various other categories, thereby attaining medals for the 16th consecutive competition.

\* Skills competition for determining Japan's top young engineers



54th National Skills Competition (electrical welding)



Number of Medals Won at the National Skills Competition

	FY2013	FY2014	FY2015	FY2016	FY2017
Gold medal	—	1	1	1	1
Silver medal	1	2	3	2	3
Bronze medal	4	3	1	3	1
Total	5	6	5	6	5

Management Skills

We conduct TICO Business Practices (TIBP) training targeting associates in administrative and engineering fields, with the aim of mutually sharing the thinking and values that the Company gives importance to, as well as to improve our associates’ problem-solving capabilities. TIBP training programs are also provided at subsidiaries outside Japan in our efforts to raise the level of management skills throughout the Toyota Industries Group.

Spirit of Harmony

We are creating a bright, energetic and caring work environment that fosters a dynamic workforce and allows every member to demonstrate his or her capabilities both as an individual and as a team. We are proactively encouraging communication not only during work hours but also through social gatherings, sports days, summer festivals, Group-wide *ekiden* long-distance relay races and cheer squads for various sports events.

Establishing Work Environments Where Diverse Human Resources Can Play Active Roles

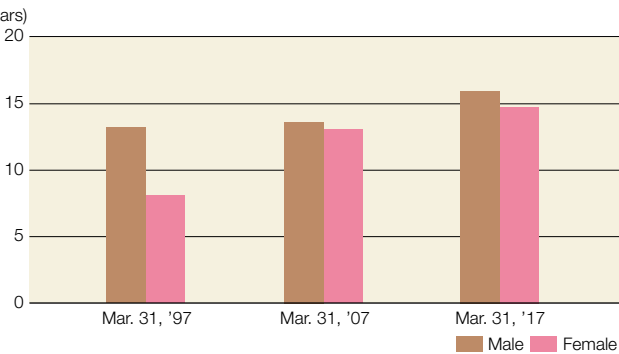
We are implementing a variety of measures to create work environments where a diverse range of human resources can fully exercise their capabilities. These include promoting active roles of female associates, supporting the employment of persons with disabilities and creating an environment in which older associates can work more actively.

Promoting Active Roles of Female Associates

We have been formulating plans to harness a more diverse range of human resources and continuing to carry out activities since 2008.

We have been working to enhance support systems through such measures as introducing “a shorter work-hour system for child care.” We also introduced a telecommuting system in April 2014. As a result, the average length of service increased overall in administrative and engineering positions, with a significant rise for female associates.

Average Service Years by Male and Female Associates (Administrative and Engineering Positions, Non-Consolidated)



In addition, by introducing “a return-to-work (“welcome-back”) system,” which allows associates who have left work to care for children and family members or to accompany their spouse for a job transfer to get reinstated under certain preconditions, we provide an environment for associates to work at Toyota Industries for longer years with peace of mind.

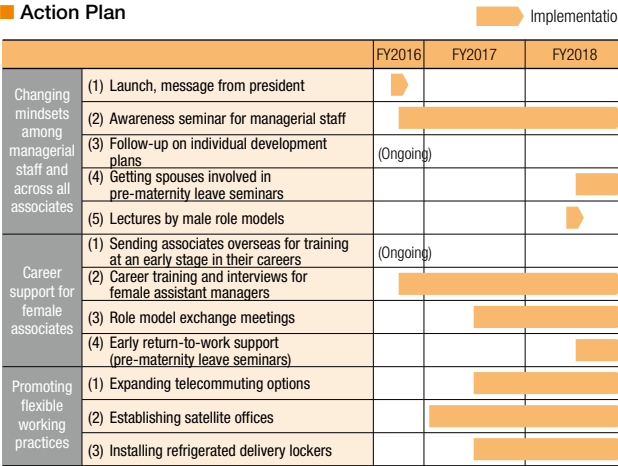
In terms of measures to promote more active roles for female associates, we have set the target of increasing the ratio of female graduate recruits to 40% in administrative positions and 10% in engineering positions, and tripling the number of female associates in managerial positions by the year 2020 compared with 2014, and intend to step up activities to achieve our goal.

In 2015, we set up a project to promote more active roles for female associates, comprising 11 males and females from different departments.

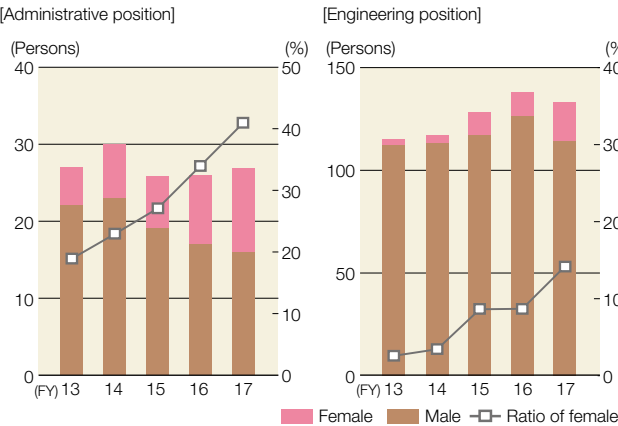
This project was key for the identification of issues and formulation of policy proposals in promoting the increased active roles of female associates through discussions and exchanges among project members and stakeholders. The results of these discussions formed the basis for the development of a Company-wide action plan in clarifying the initiatives for this project.

In carrying out the action plan, we specifically focus on the initiatives to change the mindset among managerial staff and across all associates, provide female associates career support and promote flexible working practices.

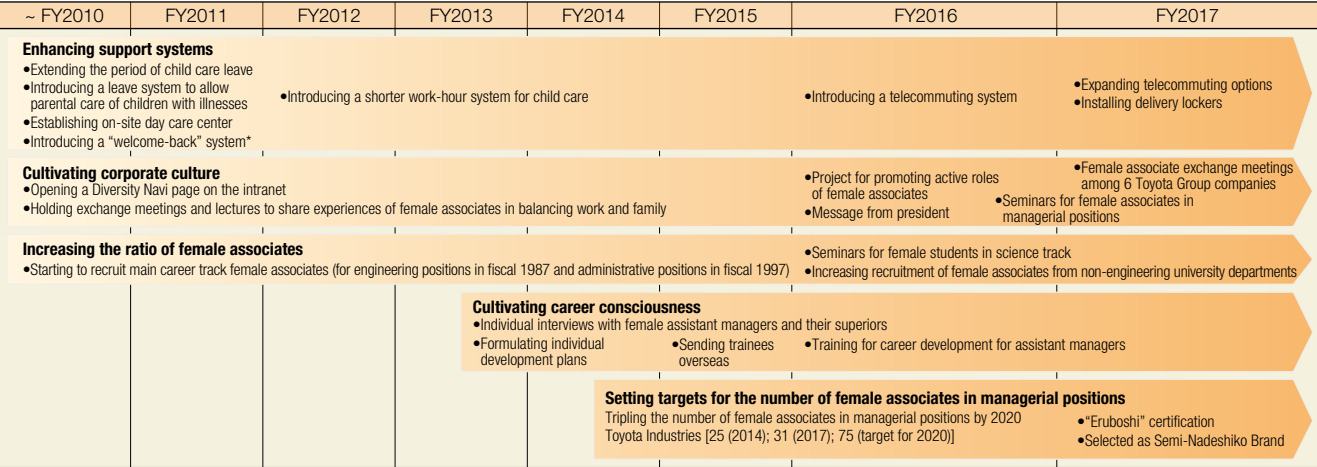
In fiscal 2017, we held a seminar for about 1,000 managerial staff members who directly engage in the mentoring and development of associates. The aim was to promote an understanding of how female associates regard their career paths as well as the environment in which they



Hiring of New Graduates (Non-Consolidated)



Initiatives for Promoting Active Roles of Female Associates



\* A system to enable reinstatement under certain preconditions

are working and to raise awareness of human resources development that takes into account their life events.

In order to create an environment to allow associates who are balancing work and child/nursing care to work with higher motivation and pursue career development, we expanded our telecommuting system in October 2016, which promotes the early return to work from a break in their career.

Rather than merely appointing more female associates to managerial positions, we are working to improve workplaces so as to offer females a wider range of jobs and higher quality of work and to enable female associates to fulfil their individual potential.

We were certified by the Aichi Labour Bureau as a “Female-Friendly Company” in January 2016 and received “Eruboshi (“L Star”: L stands for Lady, Labour and Laudable)” certification from the Ministry of Health, Labour and Welfare in October of the same year. The latter certification is given to companies making excellent efforts in promoting active female roles in the workplace.

In March 2017, we were selected as a Semi-Nadeshiko Brand, a status investors may find appealing when making investment decisions. The designation is granted to publicly listed companies that are outstanding in terms of encouraging the empowerment of women.

We will continue to promote activities aimed at creating more active roles for female associates.



Training for career development for female assistant managers



Seminar for managerial staff members

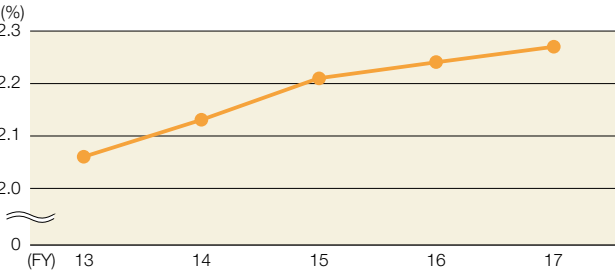


Female associate exchange meeting among six Toyota Group companies

Employment of Persons with Disabilities

We respect the idea of people with and without disabilities working together and sharing life and work values. Under this basic policy, we continue to employ persons with disabilities every year. They are assigned to a variety of sections and work with other members to perform their designated tasks. In fiscal 2017, the ratio of associates with disabilities on a non-consolidated basis was 2.27%.

Ratio of Associates with Disabilities (Non-Consolidated)



Creating a Work Environment for Older Associates

We focus on creating a better work environment for older associates by adjusting the height of jigs in production lines and modifying processes to compensate for deterioration of vision so that they can work with less stress.

Moreover, since the introduction of a re-employment system for associates who reach the mandatory retirement age of 60, the number of associates who choose to continue working has been increasing. In response, we hold “55 Career Training” for associates reaching the age of 55 to give them an opportunity to envision life and work after the age of 60 and think about how they should work during the remaining pre-retirement period.



Relationship with Our Local Communities

With a view toward creating an enriched and healthy society and ensuring its sustainable growth, we fulfill our role as a good corporate citizen and actively undertake social contribution activities in every region where we do business.

Activities as a Good Corporate Citizen

Based on “Respect for Others” as described in our Basic Philosophy, we strive to fulfill our role as a good corporate citizen in every region where we do business and actively engage in social contribution activities to realize an enriched and healthy society. In our activities that emphasize social welfare, youth development, environmental protection and community contribution, we not only provide cooperation and support through personnel, facilities, funds and know-how but also strive to closely connect with participants. To foster employees’ awareness of their ties to society and raise their interest in contributing to society, we make enlightenment efforts such as providing a venue for volunteer activities and sharing information on volunteer activities that encourage the participation of all employees. Employee associations\* are actively undertaking various activities to contribute to local communities, mainly in the areas of supporting welfare facilities and protecting the natural environment.

\* Voluntary organizations formed by employees at each job level

Structure for Promoting Social Contribution Activities

The CSR Committee deliberates on policies of our social contribution activities while the Social Contribution Group within the General Administration Department at the Head Office takes the initiative in carrying out activities.

Major Social Contribution Activities of Toyota Industries and Group Companies

Theme	Activities
Social welfare	Events to interact with persons with disabilities • “Walk Rally (orienteering),” harvest festival, festival Support for welfare facilities • Support for charity bazaars at facilities by providing goods • Volunteer work for facility cleanup/repair/pruning/weeding • Support for sales of products from facilities for persons with disabilities by providing opportunities to set up stalls • Volunteer listening activities at elderly care facilities <b>Donation to a breast cancer enlightenment NPO through a charity running event (Belgium) (P59)</b> Support for feeding the homeless and needy (Australia) Donating Christmas presents for less fortunate children (U.S.A.)
Youth development	Support for Youth Invention Clubs • Monozukuri workshops for elementary school children during summer vacations • Holding handmade kite-flying competitions • Running craft corners at local events Providing plant-hosted environmental education to elementary school children Holding mini concerts at elementary schools <b>Donation to an organization supporting sound youth development (U.S.A.) (P59)</b>
Environmental protection	Initiatives for forest conservation • Tree thinning activities for conservation of prefecture-owned forests • <b>Producing and donating benches made of thinned wood (P58)</b> • Tree-planting activities for reforestation <b>Cooperating in a government-led environmental program (Indonesia) (P59)</b>
Community contribution	Participation in local traditional event (Mando Festival) Road cleanup activities in areas around plants Activities to raise awareness for traffic safety Crime prevention patrols <b>Holding a drill on how to use fire extinguishers at an elementary school (P58)</b> Highway cleanup activities (U.S.A.) <b>Donating toilets and desks to elementary schools and conducting health and hygiene education (India) (P59)</b>
Other	Holding charity concert Support for international NGO in collecting spoiled postcards, bell marks and others Periodic blood donation drives

(Activities without country designation were conducted in Japan.)

Activity Examples of Toyota Industries and Consolidated Subsidiary (Japan)

Toyota Industries Corporation	Environmental Protection
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Donating Benches Made of Thinned Wood

In collaboration with Aste, a public interest foundation engaging in forest conservation, Toyota Industries donated 12 benches made of thinned Japanese cypress to kindergartens and children’s day care centers. This initiative aims to promote the sound development of forests and effectively utilize thinned wood. At a donation ceremony held at a kindergarten, we performed a skit to explain what is happening to satoyama (village forests) in an easy-to-understand manner and convey the importance of conserving forests to children.



Skit by employees participating in a donation ceremony

Consolidated Subsidiary	Community Contribution
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Holding a Drill on How to Use Fire Extinguishers at an Elementary School

SKM Corporation, engaging in building management, security services for facilities and management and brokerage of real estates, conducted a drill on how to use fire extinguishers for about 90 fourth graders at a nearby elementary school, utilizing the skills accumulated through routine training by its security department. On the day of the drill, after a lecture on fires and a Q&A session, each child actually shot off a fire extinguisher. We will continue to contribute to local communities through these and similar activities.



Drill for children to practice using a fire extinguisher

Activity Examples of Consolidated Subsidiaries (Outside Japan)

Belgium	Social Welfare
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Donation to a Breast Cancer Enlightenment NPO through a Charity Running Event

**Toyota Material Handling Belgium NV/SA (TMHBE)**  
Subsidiary engaging in sales and servicing of materials handling equipment

From TMHBE, 18 employees participated in a charity running event to support the Susan G. Komen® organization, an NPO fighting against breast cancer. The event solicits donations from runners according to the distance they run, and the company donated the matching amount to the NPO. The funds raised through the event are used to support efforts to increase the breast cancer examination rate, help patients find a job and promote therapeutic research.



Employees who participated in the charity running event

U.S.A.	Youth Development
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Donation to an Organization Supporting Sound Youth Development

**TD Automotive Compressor Georgia, LLC (TACG)**  
Subsidiary producing car air-conditioning compressors

In September 2016, TACG employees collected snacks and beverages and raised donation funds for the Boys & Girls Clubs of America. The organization offers a variety of support programs for economically or socially challenged youth having difficulty leading a stable life to help them achieve sound growth.



Employees who participated in the donation drive

Indonesia	Environmental Protection
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Cooperating in a Government-Led Environmental Program

**P.T. TD Automotive Compressor Indonesia (TACI)**  
Subsidiary producing car air-conditioning compressors

TACI cooperated in the Adiwiyata Program, an environmental program for the sustainable growth of society run by the Ministry of Environment and Ministry of Education of Indonesia. The program encourages respective schools to address environmental issues and convey to children the importance of environmental conservation. At a school in Cikarang, 20 TACI employees supported the development of a system to produce a fertilizer from organic waste.



Employees who cooperated in the environmental program

India	Community Contribution
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Donating Toilets and Desks to Elementary Schools and Conducting Health and Hygiene Education

**Toyota Industries Engine India Pvt. Ltd. (TIEI)**  
Subsidiary producing engines

TIEI constructed girls’ restrooms at an elementary school in the Krishna district, which is located near its plant and had been in need of more girls’ restrooms. TIEI also donated desks and chairs to and conducted health and hygiene awareness education at other elementary schools. Along with these efforts, TIEI conducted a variety of community contribution activities, including planting trees for beautification of areas surrounding its plant.



Employees who participated in awareness education



Environmental Initiatives

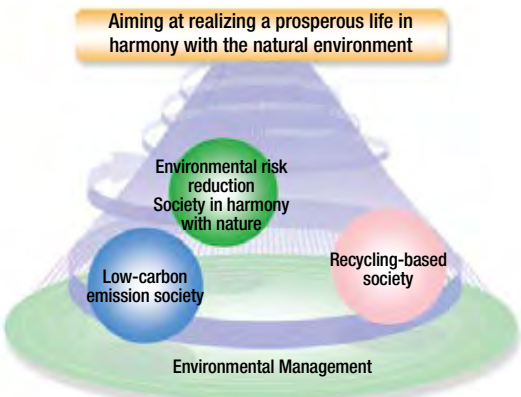
Vision for Environmental Activities	P60	Reducing Environmental Risk and Establishing a Society in Harmony with Nature	P68–69
Structure to Implement Environmental Management	P61	Environmental Management	P70–73
Sixth Environmental Action Plan	P62–63	Environmental Impact Flow and Environmental Accounting	P74
Establishing a Low-Carbon Emission Society	P64–65	Third Party Assurance of Environmental Performance Data	P75
Establishing a Recycling-Based Society	P66–67		

Vision for Environmental Activities

We have defined our aspirations in 2050 and launched the Sixth Environmental Action Plan in fiscal 2017.

Global Environmental Commitment

As one tenet under our Basic Philosophy, Toyota Industries works to contribute to regional living conditions and social prosperity and also strives to offer products and services that are clean, safe and of high quality. Accordingly, in February 2011, we established the Global Environmental Commitment, a specific environmental action guideline, to be shared and implemented throughout the Toyota Industries Group. The entire Toyota Industries Group will dedicate concerted efforts to realizing a prosperous life in harmony with the natural environment.



Notional Diagram of Global Environmental Commitment

Aspirations in 2050 and the Sixth Environmental Action Plan

The Global Environmental Commitment, which represents our basic approach to environmental activities, specifies the four action themes, namely, 1) establishing a low-carbon emission society; 2) establishing a recycling-based society; 3) reducing environmental risk and establishing a society in harmony with nature; and 4) promoting environmental management. For each action theme, we have defined our aspirations in 2050.

Aspirations in 2050

- 1 Establishing a low-carbon emission society  
⇒ Globally take on challenge of establishing a zero CO<sub>2</sub> emissions society
- 2 Establishing a recycling-based society  
⇒ Take on challenge of minimizing the use of resources
- 2 Reducing environmental risk and establishing a society in harmony with nature  
⇒ Generate positive influence on biodiversity
- 4 Promoting environmental management  
⇒ Enhance consolidated environmental management and promote enlightenment activities

As a milestone toward achieving our aspirations in 2050, we have formulated the Sixth Environmental Action Plan, a new five-year plan for the period from fiscal 2017 to fiscal 2021, and will resolutely undertake activities in accordance with the plan.

(See the Sixth Environmental Action Plan on pages 62–63 for details.)

TOPIC

Sharing Environmental Vision across the Toyota Industries Group

We created a panel summarizing our newly formulated aspirations in 2050 and the Sixth Environmental Action Plan. Each Group company has posted this environmental panel to raise employee awareness and appeal our approach to outside parties.



Tokyu Co., Ltd.



TOYOTA L&F Shizuoka Co., Ltd.

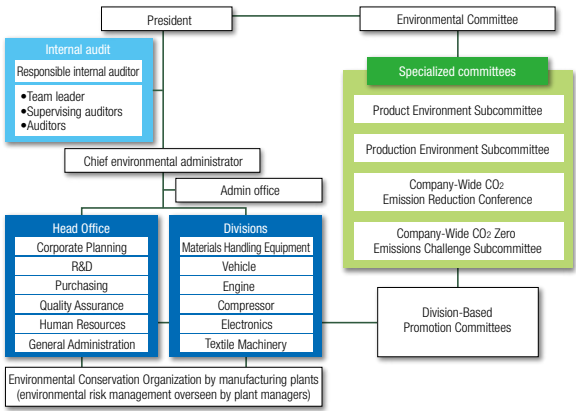
Structure to Implement Environmental Management

Positioning environmental response as one of its most crucial management issues, Toyota Industries is enhancing its environmentally oriented corporate management on a global basis through the promotion of consolidated environmental management.

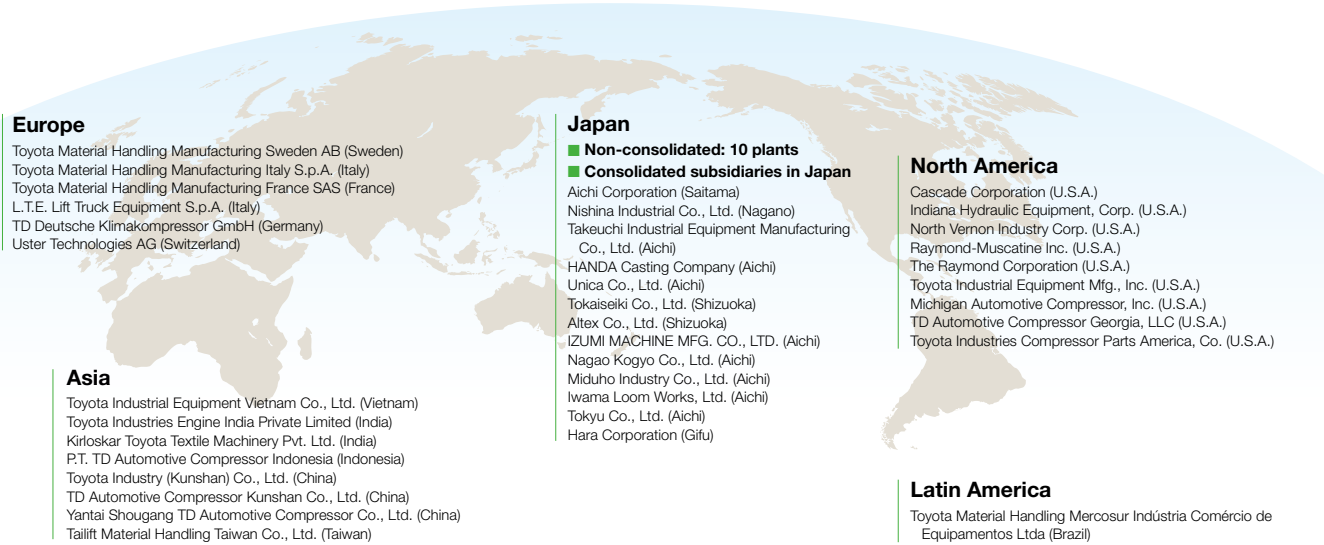
Promotion of Environmental Management System

Toyota Industries has positioned environmental response as one of its most crucial management issues. To quickly reflect top management's decisions on business operations, Toyota Industries has established and been operating a Company-wide integrated environmental management system (EMS), with the president at the top. In August 2016, another specialized committee, the Plant CO<sub>2</sub> Zero Emissions Challenge Subcommittee, was established.

Environmental Management Structure



Main Companies Subject to Consolidated Environmental Management (As of March 31, 2017)



Introductory course for environmental audits



Sixth Environmental Action Plan

The results of our activities in fiscal 2017 showed steady progress across the board toward achieving respective targets for fiscal 2021.

Progress of Sixth Environmental Action Plan

With an eye to realizing a prosperous life in harmony with the natural environment through the establishment of a sustainable society, we formulated the Sixth Environmental Action Plan for the period from fiscal 2017 to fiscal 2021

and are promoting activities according to the plan. Through activities undertaken during fiscal 2017, we made steady progress toward achieving respective targets for fiscal 2021.

Production Related

Segments	Action Policies/Specific Actions	FY2017 Achievements					FY2021 Targets
		Subject	Scope	Control Items	Base Year (FY)	Achievements	Targets
Establishing a Low-Carbon Emission Society	Reduce CO <sub>2</sub> emissions from production activities <ul style="list-style-type: none"><li>Develop and introduce production engineering technologies with lower CO<sub>2</sub> emissions</li><li>Reduce CO<sub>2</sub> emissions by fully implementing improvement activities on a daily basis</li><li>Develop innovative CO<sub>2</sub> reduction technologies that utilize clean energy</li><li>Manage greenhouse gases other than CO<sub>2</sub></li></ul>	CO <sub>2</sub> emissions	Non-consolidated	Total emissions	2006	-20%	-10%
			Global	Emission volume per unit of production*1	2006	-22%	-26%
			Non-consolidated			-27%	-30%
	Reduce CO <sub>2</sub> emissions from production-related logistics <ul style="list-style-type: none"><li>Improve transportation efficiency through such measures as modal shift and better cargo loading efficiency</li></ul>	CO <sub>2</sub> emissions from logistics	Non-consolidated	Emission volume per unit of production	2007	-35%	-28%
Establishing a Recycling-Based Society	Promote measures against resource depletion by recycling waste <ul style="list-style-type: none"><li>Reduce the volume of discarded materials by taking action at the source, such as improving yields and other measures</li><li>Promote internal reuse</li></ul> Promote effective resource utilization in production activities <ul style="list-style-type: none"><li>Reduce use of packaging materials</li><li>Monitor water input and output in each country/region and develop and promote appropriate measures</li></ul>	Waste generation volume	Japan consolidated	Emission volume per unit of production	2006	-29%	-27%
			Non-consolidated			-30%	-29%
Reducing Environmental Risk and Establishing a Society in Harmony with Nature	Further reduce emissions of substances of concern <ul style="list-style-type: none"><li>Minimize the use of substances of concern by promoting efficient production activities</li></ul>	VOC*2 emissions	Non-consolidated (automobile body)	Emission volume per unit of production	2006	-36% (24g/m <sup>2</sup> )	-36% (24g/m <sup>2</sup> )

Product Related

Sixth Environmental Action Plan Targets			FY2017 Achievements
Segments	Action Policies	Specific Actions	
Establishing a Low-Carbon Emission Society	Reduce CO <sub>2</sub> emissions through product and technology development	<ul style="list-style-type: none"><li>Develop technologies that contribute to an even greater level of energy efficiency</li><li>Develop products and technologies that respond to electrification</li><li>Develop technologies to enable weight reduction</li><li>Reduce energy loss</li><li>Develop technologies for the realization of a hydrogen-based society</li></ul>	<ul style="list-style-type: none"><li>Developed electric towing tractor</li><li>Developed next-generation electric compressor</li><li>Developed plastic glazing rear window</li><li>Developed air-jet loom</li><li>Developed next-generation air compressor for fuel cell vehicles</li></ul>
Establishing a Recycling-Based Society	Implement initiatives to promote 3R (reduce, reuse and recycle) design for effective resource utilization	<ul style="list-style-type: none"><li>Reduce use of resources through longer product life</li><li>Reduce use of resources through standardization, modularization and reduction of components</li><li>Reduce use of resources through development of technologies to enable weight reduction and downsizing</li><li>Promote reuse of components and resources</li></ul>	<ul style="list-style-type: none"><li>Developed 4-wheel counterbalanced electric lift truck</li><li>Developed DC-DC converter for plug-in hybrid vehicles</li></ul>
Reducing Environmental Risk and Establishing a Society in Harmony with Nature	Reduce emissions to improve air quality in urban areas in all countries and regions	<ul style="list-style-type: none"><li>Develop engines that meet future regulations</li></ul>	<ul style="list-style-type: none"><li>Developed engine compliant with Australian EURO 5 emissions regulations</li></ul>
	Manage chemical substances contained in products	<ul style="list-style-type: none"><li>Investigate chemical substances contained in products and manage switching over of SVHC*3 and other substances of concern to other substances</li></ul>	<ul style="list-style-type: none"><li>Supported chemical substance management at consolidated subsidiaries</li><li>Conducted survey on chemical substances contained in products</li></ul>

Others

Sixth Environmental Action Plan Targets			FY2017 Achievements
Segments	Action Policies	Specific Actions	
Reducing Environmental Risk and Establishing a Society in Harmony with Nature	Augment activities related to protection of biodiversity	<ul style="list-style-type: none"><li>Share the biodiversity guidelines across all Toyota Group companies and contribute to the expansion of a habitat for living organisms</li><li>Formulate and promote plans to link activities and bring more greenery by undertaking activities for conservation of biodiversity throughout the Toyota Industries Group, including at consolidated subsidiaries in and outside Japan</li></ul>	<ul style="list-style-type: none"><li>Participated in All Toyota Green Wave Project</li><li>Devised plans for biodiversity protection activities within company premises</li></ul>
Promoting Environmental Management	Augment and promote consolidated environmental management	<ul style="list-style-type: none"><li>Build a global environmental management system and promote related activities to:<ul style="list-style-type: none"><li>Comply with environment-related laws in each country and region</li></ul></li><li>Formulate a medium-term plan based on visualization of environmental risks and conduct activities to prevent risks from occurring</li><li>Enhance risk communication with relevant organizations and local residents</li><li>Achieve the highest-level environmental performance in each country and region</li></ul> <ul style="list-style-type: none"><li>Enforce strategic environmental management that integrates environmental activities and business activities</li></ul>	<ul style="list-style-type: none"><li>Implemented measures for wastewater risks</li><li>Diagnosed environmental risks at non-production bases</li><li>Promoted activities to familiarize the Sixth Environmental Action Plan among consolidated subsidiaries in and outside Japan</li></ul>
	Enhance education and enlightenment activities	<ul style="list-style-type: none"><li>Extend the scope of Toyota Industries' enlightenment activities to consolidated subsidiaries in and outside Japan</li><li>Give back to society the outcomes of enlightenment activities</li></ul>	<ul style="list-style-type: none"><li>Posted environmental panels at Toyota Industries Group companies</li><li>Conducted environmental awareness survey among employees</li></ul>
	Promote environmental activities in collaboration with business partners	<ul style="list-style-type: none"><li>Ensure compliance with laws and regulations and improve environmental performance based on the Environmentally Preferable Purchasing Guidelines</li></ul>	<ul style="list-style-type: none"><li>Revised the Environmentally Preferable Purchasing Guidelines</li></ul>
	Improve eco-conscious brand image	<ul style="list-style-type: none"><li>Pursue higher brand image through proactive information disclosure</li></ul>	<ul style="list-style-type: none"><li>CDP*4 climate change: ranked B (on a performance band of A to F)</li><li>CDP water: ranked C (on a performance band of A to F)</li><li>Nikkei's Environmental Management Survey: ranked 36th (out of 1,733 target companies)</li></ul>

\*1: We manage emissions in each business by using either unit of production or unit of sales as a basic unit of emissions. The weighted average of reduction rates of all businesses is used as our management index.  
\*2: Volatile Organic Compounds  
\*3: Substances of Very High Concern  
\*4: An international NGO undertaking a project through collaboration among institutional investors to call for disclosure of strategies against climate change issues and greenhouse gas emissions data to leading companies around the world  
† Details of the Sixth Environmental Action Plan are available at:  
[https://www.toyota-industries.com/csr/environment/management/plan\\_6/index.html](https://www.toyota-industries.com/csr/environment/management/plan_6/index.html)



Establishing a Low-Carbon Emission Society

We position the curbing of global warming as our most crucial environmental task. We have been working to reduce CO2 emissions in our global business activities and at the same time accelerate our efforts to develop more environment-friendly products.

Summary

CO2 Emissions (Production Activities)

FY2017 Results

Total emissions (non-consolidated)

20% reduction (vs FY06 level) FY21 target: 10% reduction (vs FY06 level)

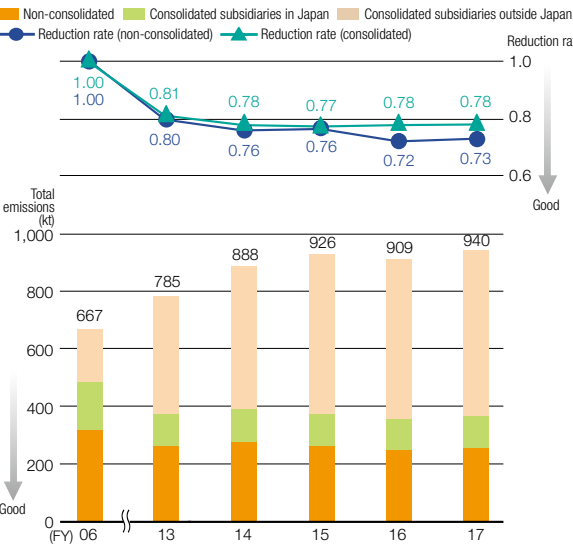
Emission volume per unit of production (global)

22% reduction (vs FY06 level) FY21 target: 26% reduction (vs FY06 level)

Under the Sixth Plan, we are working toward achieving fiscal 2021 targets of reducing total non-consolidated CO2 emissions from production activities by 10% and global emission volume per unit of production by 26%, both from the fiscal 2006 level. In fiscal 2017, we attained the specified targets by continuing to undertake Company-wide activities to reduce the amount of air used in production activities and encouraging energy just-in-time (JIT) efforts in production processes. In addition, we established the Plant CO2 Zero Emissions Challenge Subcommittee and embarked on a discussion as to how we should contribute to the realization of a zero CO2 emissions society.

Initiatives for Establishment of a Low-Carbon Emission Society

CO2 Emissions (Non-consolidated/Consolidated subsidiaries in and outside Japan)



Saving Energy by Adding a Device at a Washer to Blow Air Intermittently

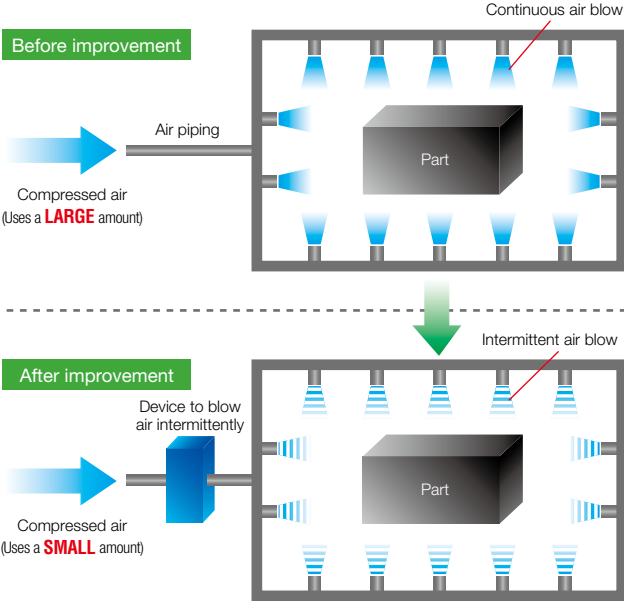
In its ongoing effort to reduce the amount of compressed air used in production activities, Toyota Industries worked to reduce the amount of air used by a washer in an engine processing line in fiscal 2017.

Conventionally, water droplets left on a part after washing had been removed by continuously blowing air. This caused a drop in air pressure, which in turn required a large amount of air to compensate for the pressure drop.

To solve the problem, we installed a device that automatically blows air intermittently and succeeded in saving energy while keeping the air pressure at a sufficient level. The results were reductions in the amount of air used by about 25% and in annual CO2 emissions by around four tons.

The same washer is used in a number of other production lines within Toyota Industries. As the application of a similar device Company-wide can offer profound energy-saving effects, the project won a Best Practice Award in fiscal 2017 under our internal award program to recognize excellent environmental improvement activities.

Blowing Air Intermittently at a Washer



Munenori Sato (left)  
Takato Morishita  
Planning Group No. 2,  
Planning Office, Plant  
Engineering & Environment  
Department, Head Office  
(As of December 31, 2016)

Through collaboration with related departments, we achieved an improvement that ensures quality and saves energy. We plan to spread the information about this improvement so that it will be adopted in many more equipment.

Reducing CO2 Emissions by Reducing the Time to Maintain Preheated Temperature of a Die Cast

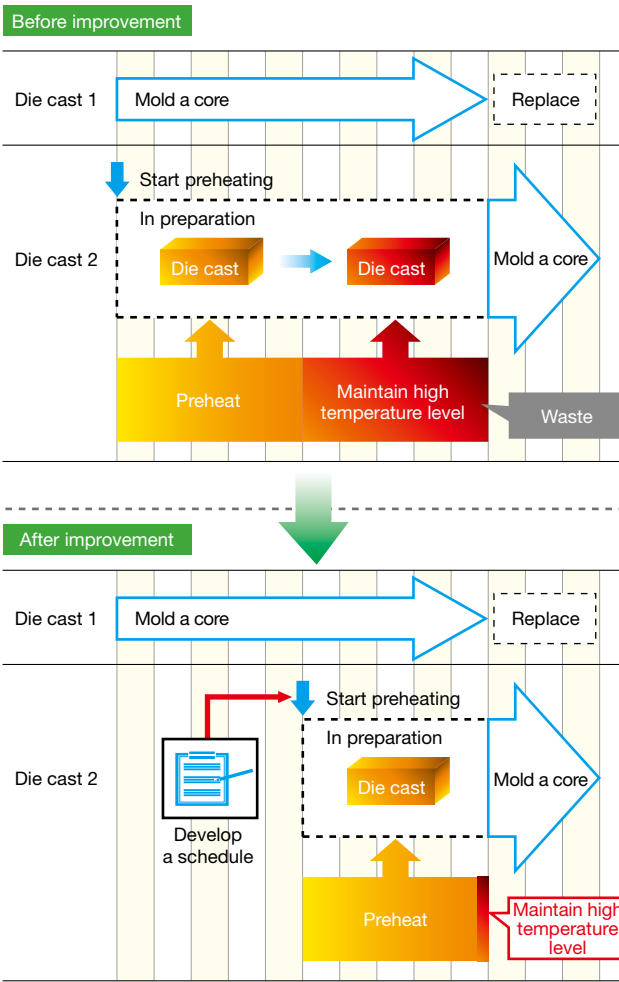
A production process of foundry parts uses a die cast and a casting sand core to be fitted inside the die cast. To mold the core, the die cast has to be preheated to and maintained at an appropriate temperature.

In the conventional process, the preheating of the next die cast had been initiated immediately after the start of production of a preceding foundry part, which means a considerable amount of energy had been consumed to maintain its temperature before actual use.

In countering the situation, we first surveyed the time required to preheat each die cast in order to allow management of an overall preheating schedule. Then, we started adjusting the preheating timing of each die cast according to a daily production plan and successfully reduced the extra time required to keep the preheated temperature. As a result, we achieved some 97% reduction in the amount of energy used for temperature maintenance, and consequently, reduced annual CO2 emissions by about 96 tons.

This project won an Excellent Practice Award in fiscal 2017 under our internal award program to recognize excellent environmental improvement activities as an outstanding day-to-day improvement example for the energy JIT efforts currently promoted by Toyota Industries.

Reducing Time to Maintain Preheated Temperature of a Die Cast



Certification of Environmentally Friendly Products

Toyota Industries has been proactively promoting development and design of eco-conscious products. As part of the efforts, we launched the Environmentally Friendly Product Certification System in fiscal 2007, which certifies products that possess exceptionally high environmental performance, and have been showcasing these products to the public. With the addition of one product in fiscal 2017, a total of 20 products have obtained certification under this system since its launch.

We will continue to promote the development of eco-conscious products in the future as well.

Product Certified in Fiscal 2017

gene B (8FB10 – 8FB30 and 8FBJ35) electric lift truck with 1.0- to 3.5-ton capacity

Key features to reduce environmental impact

The lift truck is equipped with a new AC motor and motor driver and features an improved rate of recovering energy generated when the brake is applied, which lead to a significant reduction in power consumption compared with our previous models.

Power Consumption  
Approx. 12% lower power consumption (1.0- to 2.5-ton capacity)  
Approx. 17% lower power consumption (3.0- to 3.5-ton capacity)  
(Compared with previous models)





# Establishing a Recycling-Based Society

With a view to establishing a recycling-based society, we have been striving to reduce resource consumption.

## Summary

### Waste Generation Volume (Production Activities)

#### FY2017 Results

Waste generation volume per unit of production (non-consolidated)

**30% reduction** (vs FY06 level) FY21 target: 29% reduction (vs FY06 level)

Waste generation volume per unit of production (non-consolidated/consolidated subsidiaries in Japan)

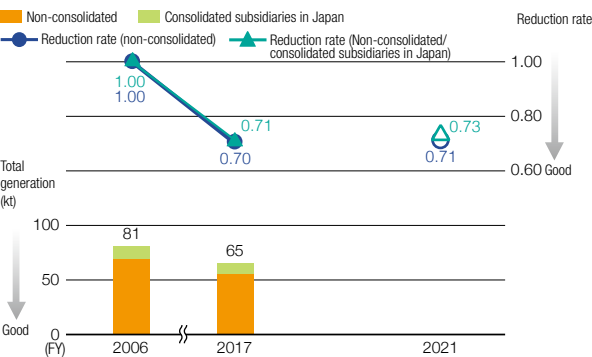
**29% reduction** (vs FY06 level) FY21 target: 27% reduction (vs FY06 level)

In seeking to minimize resource consumption in 2050, we are making efforts to reduce our waste generation volume by implementing measures to reduce resource consumption at the source and promoting internal reuse of waste.

In the Sixth Plan, we set out targets of reducing waste generation volume per unit of production compared with the fiscal 2006 level by 29% on a non-consolidated basis and by 27% for Toyota Industries and its consolidated subsidiaries in Japan. Accordingly, we have been promoting activities toward these targets.

### Initiatives for Establishing a Recycling-Based Society

#### Waste Generation (Non-consolidated/Consolidated subsidiaries in Japan)



#### Extending the Life of Cutting Tools

The Hekinan Plant, an engine production base in Aichi Prefecture, has been conducting improvement activities to achieve a longer life for cutting tools used in production lines.

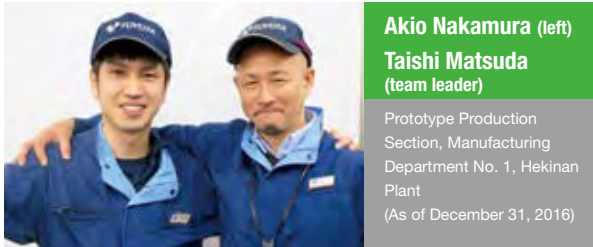
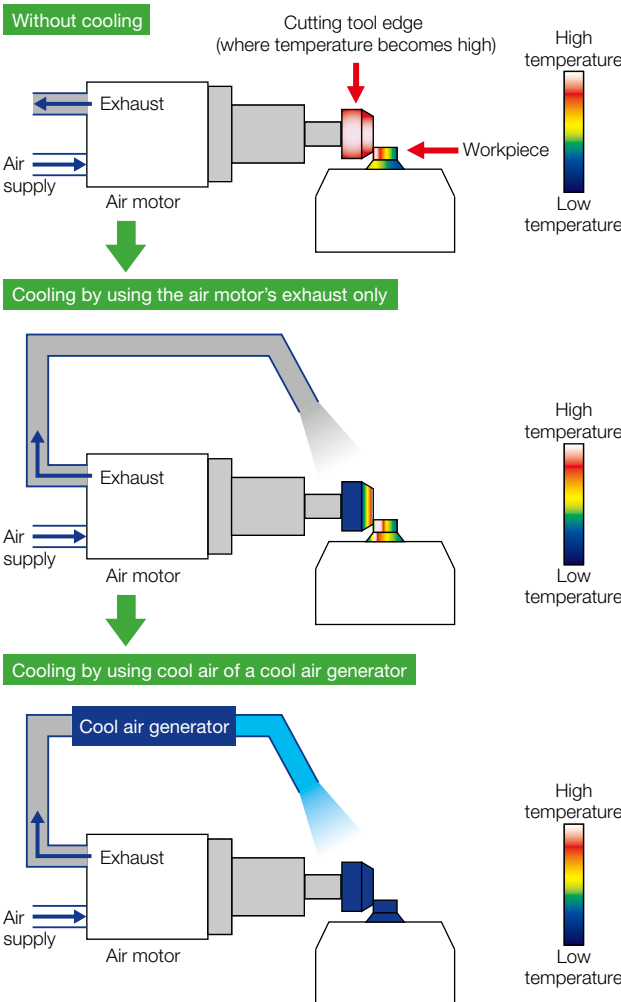
Their latest effort was to extend the tools' life by lowering the high temperature generated at the edge of a rapidly

rotating tool with the contact with a workpiece.

Previously, the plant's production lines adopted a dry cutting technique that does not use a cutting fluid. This caused cutting tools to turn hot easily and reach their life early. In this dry cutting technique, the plant endeavored to achieve the level of cooling performance equivalent to that attained with the use of a cutting fluid. They considered several cooling methods, including the one to utilize exhaust of an air motor used to rotate a tool, collaborated with relevant departments to accumulate necessary data and found out that a commercially available cool air generator that can take in air and discharge cool and warm air separately is fit for the purpose. Installing the generator enables the cooling of cutting tools via the air motor's cool exhaust and made it possible to achieve our original target. Cutting tools now last about 1.8 times longer than before.

This improvement has already been applied to other Toyota Industries plants, and the generator has been proven effective both in terms of cooling (using its cool air) and warming (using its warm air). We will continue our activities to generate excellent ideas under the motto "Continue improvements, however small."

#### Efforts to Extend the Life of Cutting Tools



Akio Nakamura (left)  
Taishi Matsuda  
(team leader)

Prototype Production  
Section, Manufacturing  
Department No. 1, Hekinan  
Plant  
(As of December 31, 2016)

The Prototype Production Section makes resourceful efforts and improvements in order to provide better technologies for use in production lines. We will continue to contribute to production activities while promoting communication within our section and with other relevant departments.

#### Recovering Used Cutting Fluid with Improved Discharge Plate

The Kariya Plant, a production base of textile machinery in Aichi Prefecture, created a discharge plate to better recover used cutting fluid generated in a cutting process of foundry parts and to reuse the recovered fluid.

The plant had already been recycling used cutting fluid but had discarded the fluid containing metal chips. In order to more finely remove metal chips from used fluid, the plant worked to modify the discharge plate, on which used fluid containing metal chips flow down.

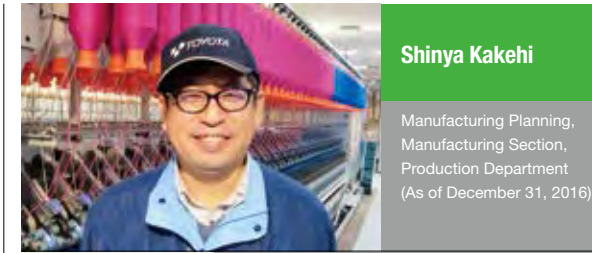
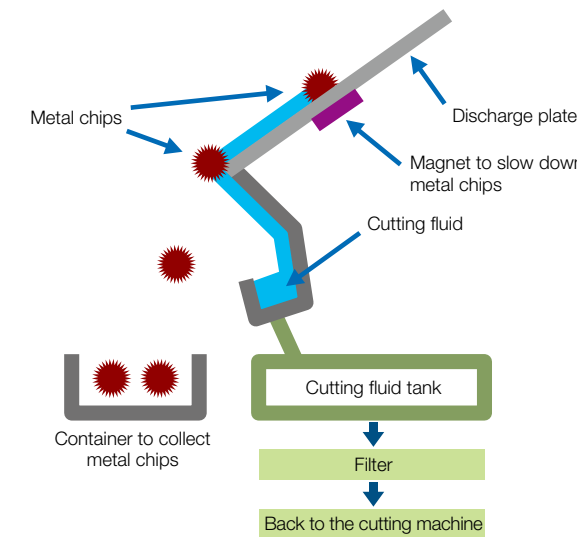
The improvement involved placing magnets on the back of the plate to slow down metal chips while allowing used cutting fluid to slide down the plate. After a number of trials and errors, appropriate magnetic power and optimum locations of magnets were determined.

The improved discharge plate has allowed the plant to reuse 20 tons of used cutting fluid annually. It has been adopted by other Toyota Industries plants in their cutting machines, and they have added their own improvements, such as changing the shape of the discharge plate, for better results. The project won a prize in the Creativity category in the Fiscal 2017 Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology.



Improved discharge plate

#### Mechanism of the Improved Discharge Plate



Shinya Kakehi

Manufacturing Planning,  
Manufacturing Section,  
Production Department  
(As of December 31, 2016)

An improvement of the used cutting fluid recovery process had already been done before, but it did not become widespread due to a workability problem. So, it was the second trial. We are very satisfied with the improvement we came up with this time because it works great without imposing an extra burden on workers. We will continue our improvement activities while gathering seeds of improvements on-site.

#### Conducting Water Risk Assessment

Toyota Industries uses water in many processes, for example, for washing products and cooling production lines. Globally, consumption of water, which is one of the most important resources, is increasing in line with growth in the world's population. Flooding and other water-related natural disasters due to climate change cause serious impact. We duly consider that these factors present risks to our business activities.

In fiscal 2017, we assessed water risks at each base as part of efforts to identify and mitigate risks associated with water resources to our business activities. We used Aqueduct, a global water risk mapping tool developed by the World Resources Institute (WRI), and various public databases available in corresponding regions. The assessment revealed no "extremely high" water risks for any of our bases. Based on the assessment results, we will implement appropriate measures in our bases, starting with those found to have higher risks. Simultaneously, we will work to assess and mitigate water risks in our supply chain as well while seeking ways to conserve water resources.



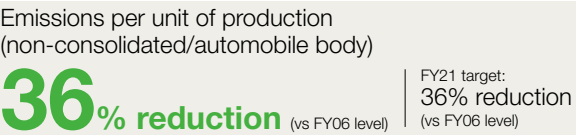
Reducing Environmental Risk and Establishing a Society in Harmony with Nature

We have been making efforts to reduce the use of substances of concern while carefully monitoring the latest trends in environmental laws and regulations on a global basis. At the same time, we have been promoting activities for conservation of biodiversity toward realizing a society in harmony with nature.

Summary

VOC Emissions (Production Activities)

FY2017 Results



Under the Sixth Plan, we set a target of reducing emission volume per unit of production for volatile organic compounds (VOC) from the automobile body painting process by 36% from the fiscal 2006 level and have been striving to reduce VOC emissions. In fiscal 2017, we continued our efforts to increase the recovery rate and enhance maintenance and management of thinner, a solvent used for cleaning. Consequently, we were able to cut down emission volume per unit of production in fiscal 2017 by 36%.

Strengthening Management of Chemical Substances at Consolidated Subsidiaries Outside Japan

Many of the chemical substances needed for our production activities may cause adverse effects on the environment. Thus, appropriate management of chemical substances is crucial in ensuring safe handling and minimizing potential harmful effects.

To appropriately manage chemical substances contained in raw materials and products, we have been assisting our consolidated subsidiaries outside Japan in establishing a



Study group session at a production base in India

system to manage chemical substances.

In fiscal 2017, we started providing such support to three companies.

We will continue to provide support and undertake activities to prevent violations of chemical substances regulations at production bases outside Japan.

Initiatives for Conservation of Biodiversity

We believe that it is important to undertake business activities while continuously paying attention to the impact of these activities on the natural environment. Based on this belief, we have formulated the biodiversity policy and been promoting initiatives accordingly. The policy clearly stipulates that we seek to reduce the impact of our business activities on biodiversity and work with local communities for conservation of biodiversity.

Participation in the Aichi Prefectural Government Ecological Network Forum

Toyota Industries has been collaborating with the Aichi prefectural government in its initiative to foster the development of ecological networks for the realization of biodiversity-conscious local communities. In January 2017, we participated in the Aichi Prefectural Government Ecological Network Forum through a poster exhibition. The exhibition showcased our Biotope at the East of Obu Station, which we have developed on Company-owned idle land in Obu City, Aichi Prefecture, in collaboration with diverse organizations and individuals, including the prefectural government, companies, NPOs, expert bodies and local community members, with the aim of forming a link to the local natural environment. We will continue to cooperate with other organizations and contribute to the development of ecological networks within the entire prefecture.



Poster exhibition

All Toyota Biodiversity Conservation Activities

Toyota Industries has been taking part in the Green Wave Project, a biodiversity conservation initiative undertaken jointly by Toyota Group companies. The project conducts

various activities, including development of a wooded area within the plant premises and conservation of natural habitats of living organisms, and aims to extend its reach from Toyota Group companies to local communities and governments.

Our activities under the project in fiscal 2017 included participation in the Fujimae Tideland Cleanup Campaign, which was an All Toyota event; publication of a booklet that compiles initiatives of each company in the Toyota Group; and hosting study group sessions for development of a quantitative environmental assessment method. We plan to expand the project throughout the Toyota Industries Group to form a broader circle of collaboration.



Logo used in Green Wave Project activities

Environmental Learning Using Our Biotope

In August 2016, we invited local children to our Biotope at the East of Obu Station and held a nature observation event to explore aquatic organisms.

On the day of the event, the children closely interacted with nature, learning about non-native species as well as about the biotope itself, catching organisms living in the



Children drawing organisms caught in the pond



Participants of the nature observation event

pond and looking up their names in picture books, and drawing pictures of these organisms.

We will continue to develop our biotope in the hope of contributing to conservation of the local ecosystem.

Conducting WET\*1 Testing

For effluents released from its production bases, Toyota Industries sets and endeavors to comply with voluntary standard values, which are more stringent than those stipulated under law.

In fiscal 2017, in addition to complying with these voluntary standard values, we conducted WET testing at two production bases in Japan to evaluate the environmental impact of their effluents on organisms.

\*1: Short for Whole Effluent Toxicity, a WET test is used to assess the aggregate toxic effect of a facility's wastewater by using bioresponse of algae, crustacea and fish.



Water sampling for WET testing

Revisions to the Environmentally Preferable Purchasing Guidelines

Toyota Industries defined its aspirations in 2050\*2 in its environmental vision in March 2016, and accordingly, revised the Environmentally Preferable Purchasing Guidelines in October 2016.

Key Revisions

Environmentally conscious practices throughout the product lifecycle, from the purchase of raw materials to end use by customers and disposal

Strengthening environmental management of the entire supply chain, including secondary and tertiary business partners

Augmenting initiatives in such areas as greenhouse gas (GHG) emissions, resource recycling and biodiversity

We will continue to collaborate with our business partners toward the implementation of appropriate environmental management within the entire supply chain.

\*2: Our aspirations in 2050 represent our goals under the four action themes (establishing a low-carbon emission society; establishing a recycling-based society; reducing environmental risk and establishing a society in harmony with nature; and promoting environmental management) as declared in our Global Environmental Commitment.



Environmental Management

Toyota Industries proactively discloses its initiatives for reduction of environmental risk and other environmental information.

Status of Compliance with Environmental Laws

Toyota Industries carries out soil and groundwater surveys at its plants and performs purification when the survey results reveal that soil or groundwater contains substances exceeding standard values. We also disclose the progress of purification efforts in the corresponding Toyota Industries Report and at local community meetings.

In a voluntary soil and groundwater survey conducted at the Kariya Plant in Aichi Prefecture, we have confirmed that certain substances were above their standard values. We reported the incident to the Aichi prefectural government on June 1, 2016 and disclosed the relevant information to the public.

In accordance with the results of the survey, we are implementing purification measures under the guidance of Aichi Prefecture while placing the highest priority on not to cause any inconvenience to local residents.

In fiscal 2017, there were no incidents of violations of environmental laws.

Measurement results are available at: <https://www.toyota-industries.com/csr/environment/>

Measures to Prevent Irregular Effluent Discharges from a Rainwater Drainage System

In order to prevent water contamination by irregular effluent discharges, we have been implementing a measure to avoid external leakage from rainwater discharge outlets throughout Toyota Industries since fiscal 2012.

More specifically, we have been installing a system to



Water quality monitoring equipment



Water gate

constantly monitor rainwater quality at rainwater discharge outlets, and if there is a problem in the quality, to stop the release of rainwater into public areas at a water gate or reroute it back to a wastewater treatment facility.

In fiscal 2017, we installed water quality monitoring equipment and a water gate at the rainwater discharge outlet of the Higashiura Plant in Aichi Prefecture, thereby completing the implementation of the measure against the risk of undesirable external leakage of rainwater in all production bases in Japan.

Adding More Monitoring Tanks to Wastewater Treatment Facilities to Reduce Risk of Irregular Effluent Discharges

From fiscal 2015 to fiscal 2017, we undertook the task of reducing the risk of irregular effluent discharges at the Kyowa Plant in Aichi Prefecture. Our specific efforts were: 1) implementing the aforementioned measure at the rainwater discharge outlets to prevent external leakage; and 2) separating drainage systems for wastewater from production processes, non-industrial wastewater and rainwater to apply appropriate treatment depending on respective water qualities.

In fiscal 2017, we added two more monitoring tanks to the wastewater treatment facility of the plant. We now have three separate monitoring tanks, one each for the reception phase, monitoring phase and discharge phase, which allow us to reliably stop external leakage of irregular effluent discharges into public areas when the water quality is found unfit for release.

These measures have led to not only lower risk of irregular effluent discharges from our plants but also better energy and resource savings through less burden on the wastewater treatment facility.

Conducting Environmental Risk Diagnosis at Non-Production Sites

Toyota Industries has been striving to reduce environmental risks not just in production bases but also in Company housing and dormitories, Company-owned welfare facilities and other non-production sites.

In fiscal 2017, we conducted a *genchi genbutsu* (go and see for yourself) environmental risk diagnosis at 23 such sites in Japan. Specifically, we performed a quantitative assessment by checking equipment installation measures at facilities, the boundary and the discharge outlets within each site and by examining their operational status.

We will continue to prioritize necessary countermeasures based on the assessment results and formulate a medium-term action plan.

Facilities and equipment subject to assessment	Oil and chemical tanks, storage warehouses, waste storage yards, kitchens, car wash stations, piping, manholes, water purifier tanks, power generators, boilers, small compressors and air conditioners
Diagnosis results (sample)	<div><div>Oil and chemical tank</div><div>Leakage</div><div>Discharge</div><div>Inspection</div></div> <div><div>Water purifier tank</div><div>Odor</div><div>Legally required inspection</div><div>Routine inspection</div></div>



On-site risk diagnosis

Holding Environmental Seminars

We hold environmental seminars to raise employees' environmental awareness. In fiscal 2017, we selected "taking on the challenge of establishing a zero CO2 emissions society" as the lecture's main theme and invited Mr. Kou Sakata of the Institute of Applied Energy to talk about "a scenario for spreading the use of CO2-free hydrogen." From Toyota Industries and its consolidated subsidiaries, 182 employees and executives attended the

lecture to deepen their understanding of the possibility of hydrogen as a driver of a sustainable society.



Environmental seminar

Running an Environmental Booth at the Shokki Festa

We run an environmental booth at the Shokki Festa, an annual event jointly held by Toyota Industries and its labor union.

In fiscal 2017, under the theme of "people and nature in harmony" we hosted various environment-related events at the booth. They included handing out flower seedlings and compost made from branches from pruned trees on the Company premises and fallen leaves, creating eco-friendly shopping bags and holding a quiz rally on nature and organisms.

Attended by many visitors, including employees and their families as well as local community members, the booth provided an opportunity for them to think and get to know more about biodiversity in a fun way while drawing their favorite animals and flowers on eco-friendly shopping bags and answering quizzes on the blessings of nature.



Environmental booth



Activity Examples of Consolidated Subsidiaries (Outside Japan)

Reducing CO2 Emissions by Using Renewable Electricity

Our subsidiaries engaging in production or sales and servicing of materials handling equipment in Europe have been promoting the use of renewable energy, such as solar, wind and hydraulic power, as part of their efforts to reduce CO2 emissions.

Two of our sales and servicing subsidiaries, namely, Toyota Material Handling Deutschland GmbH (TMHDE) in Germany and Toyota Material Handling Nederland B.V. (TMHNL) in the Netherlands, have installed a rooftop solar panel system that respectively generates 28% and 5% of their annual electricity consumption.

Moreover, Toyota Material Handling Manufacturing Sweden AB (TMHMS) and Toyota Material Handling Manufacturing Italy S.p.A. (TMHMI), production subsidiaries in Sweden and Italy, respectively, and TMHNL have purchased renewable electricity certificates, which as a total of the three companies are equivalent to approximately 28,005 MWh of annual electricity consumption and about 2,927 tons of CO2 emissions. Through the purchase of these certificates, the three companies have contributed to lower CO2 emissions.



Renewable electricity certificate and TMHMS staff



Renewable electricity certificate and TMHMI staff

Reducing CO2 Emissions by Switching to LED Lighting

Our consolidated subsidiaries outside Japan have been promoting reduction of CO2 emissions by proactively switching to LED lighting. For example, Yantai Shougang TD Automotive Compressor Co., Ltd. (YST), a subsidiary producing car air-conditioning compressors in China, has replaced all plant and office lights with LED lighting.

Elsewhere, Toyota Industry (Kunshan) Co., Ltd. (TIK), a subsidiary producing automotive parts and materials handling equipment in China, has switched 90% of its lights to LED lighting. At Toyota Industrial Equipment Mfg., Inc. (TIEM), a subsidiary producing materials handling equipment in North America, 85% and 50% of lights in its plant area and office area, respectively, are now using LED lighting. TIEM plans to complete the replacement in its plant area in fiscal 2018.

Recycling All Wastewater

In India, Toyota Industries Engine India Pvt. Ltd. (TIEI), a subsidiary producing automotive parts, and Kirloskar Toyota Textile Machinery Pvt. Ltd. (KTTM), a subsidiary producing textile machinery, have been recycling and effectively utilizing all wastewater.

For example, the two companies apply purifying treatment to wastewater from production processes, such as liquid waste of coolants and used cooling water, and reuse it in production processes. Non-industrial wastewater is also treated in-house and used to water trees and flush toilets.

Local Community Event Held during Environment Month

During Environment Month held in every June, YST hosts an environmental event for local community members.

In the fiscal 2017 event, YST exhibited posters and materials to highlight the importance of activities for saving energy and curbing global warming. YST also handed out original paper fans to visitors to increase their energy-saving awareness.



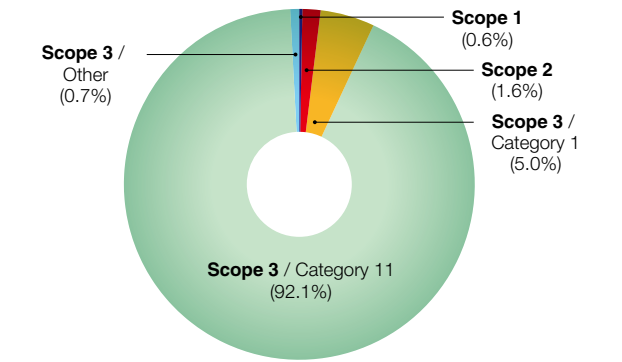
Environmental event

GHG Emissions in the Supply Chain

We recognize that measuring the three scopes defined by the GHG Protocol and turning the results into specific efforts to reduce CO2 emissions are important in creating a low-carbon society. Scopes 1 and 2 are GHG emissions from our business activities, the former being direct emissions from our use of fossil fuels and the latter being indirect emissions from the use of purchased energy resulting from generation of electricity by power plants and other facilities. Scope 3 emissions are indirect emissions associated with each product from the purchase of raw materials to end use by customers and disposal.

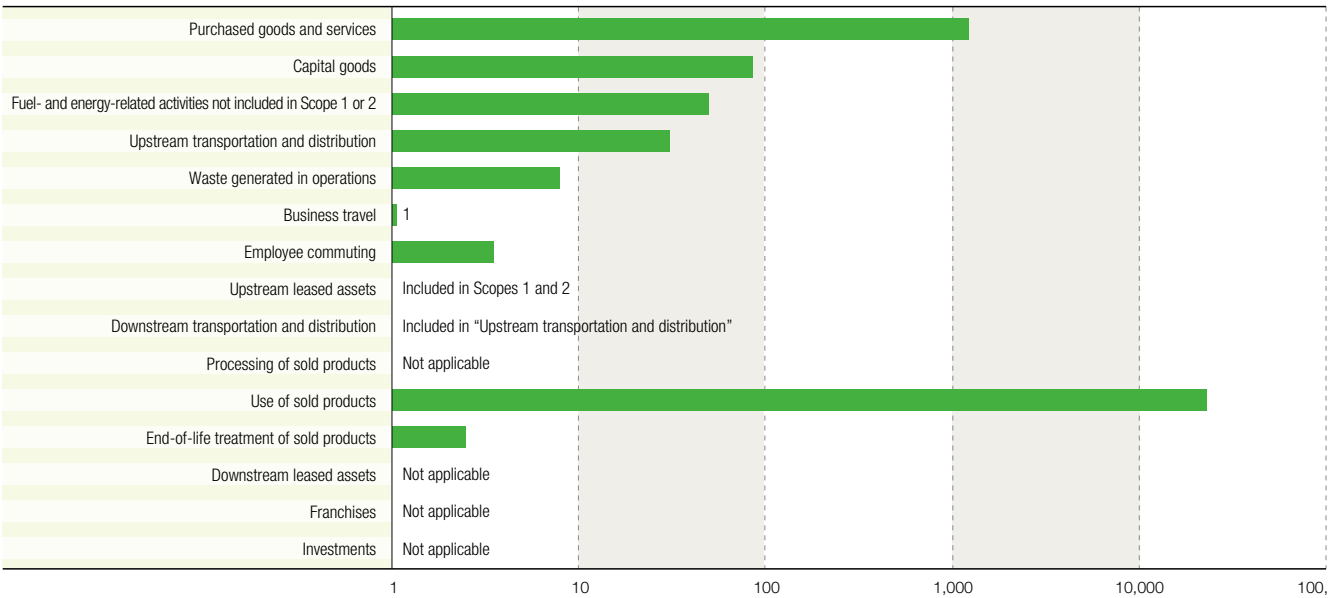
In the fiscal 2017 results, combined Scope 1 and 2 emissions accounted for 2.2% of the total emissions, with

GHG Emissions in Supply Chain (FY2017)



Emissions from Toyota Industries' business activities	Scope 1	Direct emissions from Toyota Industries through the use of fossil fuels, etc.
	Scope 2	Indirect emissions from the use of purchased energy resulting from generation of electricity by power plants, etc.
Emissions other than from Toyota Industries' business activities	Scope 3	Emissions associated with purchase of raw materials, end use of Toyota Industries' products by customers and disposal of products

Scope 3 Emissions by Category (FY2017)



Calculated by using the emissions associated with employee business travel as the baseline set at 1

Scope 3 emissions reaching 97.8%. The largest source of emissions, which accounted for 92.1%, was Category 11 (Use of sold products) under Scope 3, followed by Category 1 (Purchased goods and services) also under Scope 3, which accounted for 5.0%.

Going forward, we will continue to monitor GHG emissions within the entire supply chain and accordingly promote CO2 emissions reduction activities.

Detailed data is available at:

<https://www.toyota-industries.com/csr/environment/process/scope3/index.html>

Proactive Disclosure of Environmental Information

Toyota Industries fosters environmental communication with our stakeholders through proactive disclosure of environmental information. In fiscal 2017, Toyota Industries was evaluated to be in the performance band of B in the CDP\* climate change survey.



Since fiscal 2015, we have been participating in the Ministry of the Environment's project for the establishment of a framework for disclosure of environmental information and examining the ideal way to disclose our environmental information. We will continue to upgrade our method of disclosure and contents to be disclosed.

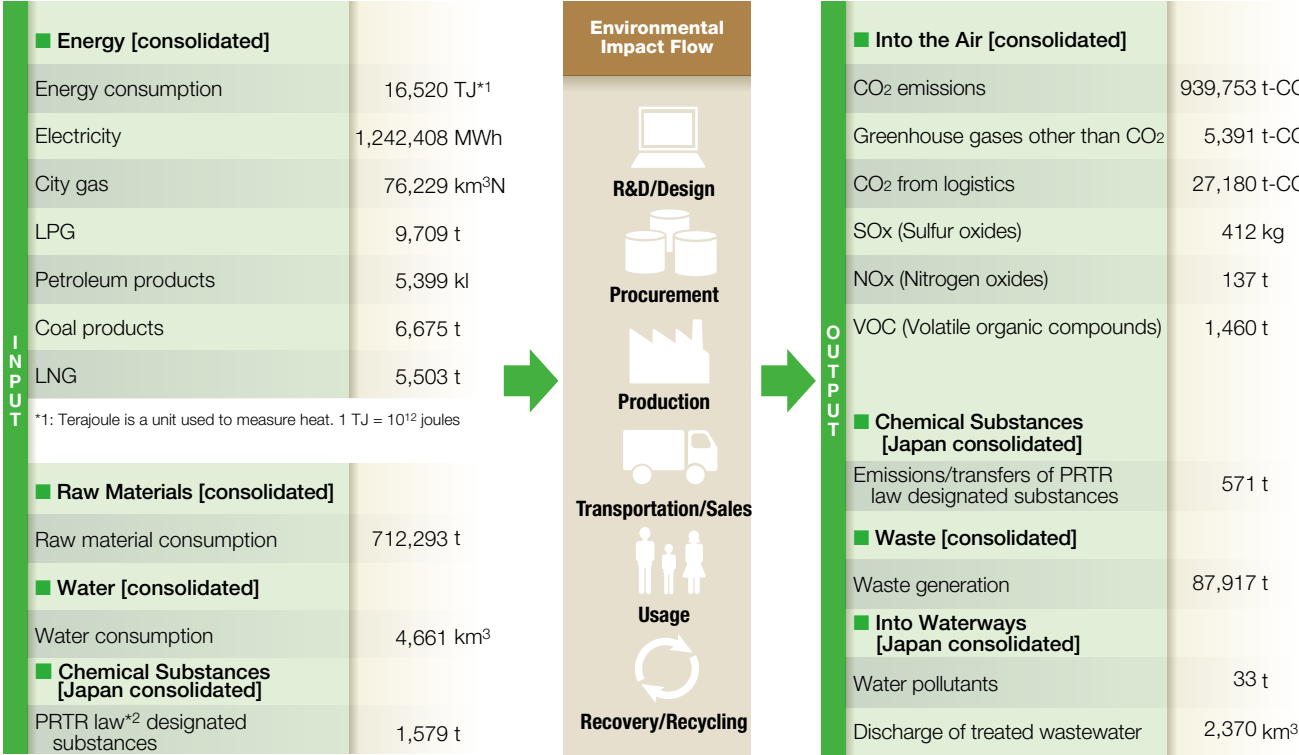
\* An international NGO undertaking a project through collaboration among institutional investors to call for disclosure of strategies against climate change issues and GHG emissions data to leading companies around the world



Environmental Impact Flow and Environmental Accounting

In this section, we provide an overall picture of environmental impact resulting from our global business activities and report the results of environmental accounting (environmental conservation cost, environmental conservation benefits and economic benefits of environmental conservation initiatives).

Environmental Impact Flow





Financial Section

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Consolidated Statements of Comprehensive Income	P81
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Consolidated Statements of Cash Flows	P84–85

† Toyota Industries has adopted IFRS beginning from the end of fiscal 2017.  
The figures in fiscal 2016 have been reclassified in accordance with IFRS.

Corporate Information

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Note:  
For details on the consolidated financial statements, please refer to the financial results and securities report, which are posted on the following Website: <https://www.toyota-industries.com>

Comparison of FY2017 Results (Japanese GAAP) and FY2017 Results (IFRS)

1) Impact on Net Sales

(¥ Billion)		
JGAAP	IFRS	Difference
2,250.4	1,675.1	-575.3

- <Primary Differences>
- Offsetting supply-for-a-fee transactions: -¥561.9 billion  
Net amounts equivalent to value-added sales are recognized as revenue.  
(Breakdown) Vehicle: -¥484.1 billion  
Engine: -¥77.6 billion, etc.
  - Deduction of sales incentives: -¥13.1 billion  
Sales incentives are recognized as the actual discount and deducted from net sales.

2) Impact on Operating Profit

(¥ Billion)		
JGAAP	IFRS	Difference
122.9	127.3	+4.4

- <Primary Differences>
- Discontinuation of amortization of goodwill: +¥7.5 billion  
The Company no longer amortizes goodwill on a regular basis and determines whether to conduct an impairment loss every fiscal year.
  - Change in depreciation method: -¥1.7 billion  
The depreciation method has been changed to the straight-line method, the same as amortization.  
The useful lives of machinery have been standardized throughout the Toyota Industries Group.
  - Reclassification: -¥2.3 billion  
Among non-operating profit/expenses, line items other than financial profit/expenses are reclassified into operating profit/expenses.

3) Impact on Total Assets

(¥ Billion)		
JGAAP	IFRS	Difference
4,428.6	4,558.2	+129.6

- <Primary Differences>
- Fair market valuation of unlisted stock: +¥57.7 billion
  - Change in depreciation method: +¥34.3 billion
  - Discontinuation of amortization of goodwill: +¥14.7 billion
  - Recognition of development assets: +¥12.0 billion



# Consolidated Statements of Financial Position

Toyota Industries Corporation  
For the years ended March 31, 2016 and 2017

	Millions of yen		
	Transition date (April 1, 2015)	2016	2017
<b>Assets</b>			
Current assets			
Cash and cash equivalents	¥ 248,706	¥ 92,399	¥ 243,685
Trade receivables and other receivables	475,415	624,240	646,542
Other financial assets	92,189	273,410	174,301
Inventories	192,947	195,982	194,427
Income tax receivables	8,640	7,170	21,106
Other current assets	37,926	38,958	42,356
Total current assets	1,055,825	1,232,161	1,322,420
Non-current assets			
Property, plant and equipment	740,171	815,399	833,329
Goodwill and intangible assets	203,042	189,207	185,813
Trade receivables and other receivables	999	1,005	149
Investments accounted for by the equity method	14,332	13,593	8,673
Other financial assets	2,677,218	2,028,284	2,161,509
Net defined benefit assets	22,283	11,651	18,129
Deferred tax assets	31,812	22,599	23,800
Other non-current assets	3,729	3,379	4,386
Total non-current assets	3,693,589	3,085,121	3,235,791
Total assets	¥4,749,415	¥4,317,282	¥4,558,212

	Millions of yen		
	Transition date (April 1, 2015)	2016	2017
<b>Liabilities and Equity</b>			
<b>Liabilities</b>			
Current liabilities			
Trade payables and other payables	¥ 354,643	¥ 355,882	¥ 387,333
Corporate bonds and loans	146,789	190,844	311,663
Other financial liabilities	138,667	75,440	71,807
Accrued income taxes	15,225	48,051	11,163
Provisions	5,653	9,336	7,397
Other current liabilities	19,072	20,186	21,237
Total current liabilities	680,051	699,741	810,603
Non-current liabilities			
Corporate bonds and loans	625,382	711,424	665,890
Other financial liabilities	121,632	106,248	79,375
Net defined benefit liabilities	88,062	88,942	92,552
Provisions	6,245	6,888	6,479
Deferred tax liabilities	756,584	517,854	567,803
Other non-current liabilities	14,927	16,868	19,039
Total non-current liabilities	1,612,834	1,448,227	1,431,140
<b>Total liabilities</b>	2,292,886	2,147,969	2,241,744
<b>Equity</b>			
Share of equity attributable to owners of the parent			
Capital stock	80,462	80,462	80,462
Capital surplus	105,592	105,517	105,417
Retained earnings	705,521	855,317	954,503
Treasury stock	(41,509)	(41,266)	(59,272)
Other components of shareholders' equity	1,541,262	1,098,627	1,159,181
Total share of equity attributable to owners of the parent	2,391,330	2,098,658	2,240,293
Non-controlling interests	65,198	70,655	76,174
<b>Total equity</b>	2,456,528	2,169,313	2,316,467
<b>Total liabilities and equity</b>	¥4,749,415	¥4,317,282	¥4,558,212



## Consolidated Statements of Profit or Loss

Toyota Industries Corporation  
For the years ended March 31, 2016 and 2017

	Millions of yen	
	2016	2017
Net sales	¥1,696,856	<b>¥1,675,148</b>
Cost of sales	(1,291,859)	<b>(1,278,378)</b>
<b>Gross profit</b>	404,997	<b>396,769</b>
Selling, general and administrative expenses	(266,894)	<b>(268,354)</b>
Other profit	10,879	<b>11,411</b>
Other expenses	(11,956)	<b>(12,480)</b>
<b>Operating profit</b>	137,026	<b>127,345</b>
Financial income	67,264	<b>63,734</b>
Financial expenses	(13,536)	<b>(10,067)</b>
Share of profit (loss) of investments accounted for by the equity method	632	<b>974</b>
<b>Profit before income taxes</b>	191,386	<b>181,986</b>
Income taxes	(52,865)	<b>(44,420)</b>
<b>Profit from continuing operations</b>	138,521	<b>137,565</b>
Profit from discontinued operations	61,435	—
<b>Profit</b>	199,956	<b>137,565</b>
Profit attributable to:		
Owners of the parent	194,270	<b>131,398</b>
Non-controlling interests	5,685	<b>6,167</b>
<b>Earnings per share</b>		
<b>Basic</b>		
Continuing operations	¥ 422.80	<b>¥ 420.78</b>
Discontinued operations	195.54	—
<b>Earnings per share—basic (yen)</b>	618.34	<b>420.78</b>
<b>Diluted:</b>		
Continuing operations	422.79	—
Discontinued operations	195.54	—
<b>Earnings per share—diluted (yen)</b>	618.33	—

## Consolidated Statements of Comprehensive Income

Toyota Industries Corporation  
For the years ended March 31, 2016 and 2017

	Millions of yen	
	2016	2017
<b>Profit</b>	¥199,956	<b>¥137,565</b>
Other comprehensive income:		
Items not to be reclassified into profit or loss		
Profit (loss) from FVTOCI financial assets	(409,198)	<b>77,802</b>
Remeasurements of defined benefit plans	(7,022)	<b>4,862</b>
Other comprehensive income of affiliates accounted for by the equity method	(18)	<b>21</b>
Total items not to be reclassified into profit or loss	(416,239)	<b>82,686</b>
Items that can be reclassified into profit or loss		
Foreign currency translation adjustment	(35,492)	<b>(18,913)</b>
Cash flow hedges	(556)	<b>1,242</b>
Other comprehensive income of affiliates accounted for by the equity method	(689)	<b>162</b>
Total items that can be reclassified into profit or loss	(36,737)	<b>(17,509)</b>
Total other comprehensive income	(452,977)	<b>65,177</b>
<b>Comprehensive income</b>	(253,021)	<b>202,743</b>
Total comprehensive income attributable to:		
Owners of the parent		
Continuing operations	(316,549)	<b>197,355</b>
Discontinued operations	61,475	—
Total owners of the parent	(255,074)	<b>197,355</b>
Non-controlling interests	2,053	<b>5,387</b>



# Consolidated Statements of Changes in Equity

Toyota Industries Corporation  
For the years ended March 31, 2016 and 2017

	Millions of yen					
	Share of equity attributable to owners of the parent					
	Capital stock	Capital surplus	Retained earnings	Treasury stock	Other components of shareholders' equity	
					Profit (loss) from FVTOCI financial assets	Remeasurements of defined benefit plans
Balance at April 1, 2015	¥80,462	¥105,592	¥705,521	¥(41,509)	¥1,541,869	¥ —
Profit	—	—	194,270	—	—	—
Other comprehensive income	—	—	—	—	(409,158)	(6,830)
Total comprehensive income	—	—	194,270	—	(409,158)	(6,830)
Repurchase of treasury stock	—	—	—	(20)	—	—
Disposal of treasury stock	—	(30)	—	263	—	—
Dividends	—	—	(37,699)	—	—	—
Changes in ownership interest of subsidiaries	—	(44)	—	—	—	—
Changes in non-controlling interests as a result of change in scope of consolidation	—	—	—	—	—	—
Reclassified into retained earnings	—	—	(6,774)	—	(56)	6,830
Other increases (decreases)	—	—	—	—	—	—
Total transactions with owners	—	(75)	(44,474)	242	(56)	6,830
Balance at March 31, 2016	¥80,462	¥105,517	¥855,317	¥(41,266)	¥1,132,655	¥ —
Profit	—	—	131,398	—	—	—
Other comprehensive income	—	—	—	—	77,521	4,811
Total comprehensive income	—	—	131,398	—	77,521	4,811
Repurchase of treasury stock	—	(36)	—	(18,011)	—	—
Disposal of treasury stock	—	(0)	—	5	—	—
Dividends	—	—	(37,609)	—	—	—
Changes in ownership interest of subsidiaries	—	(62)	—	—	—	—
Changes in non-controlling interests as a result of changes in scope of consolidation	—	—	—	—	—	—
Reclassified into retained earnings	—	—	5,395	—	(584)	(4,811)
Other increases (decreases)	—	—	—	—	—	—
Total transactions with owners	—	(99)	(32,213)	(18,005)	(584)	(4,811)
Balance at March 31, 2017	¥80,462	¥105,417	¥954,503	¥(59,272)	¥1,209,592	¥ —

	Millions of yen						
	Share of equity attributable to owners of the parent					Non-controlling interests	Total equity
	Other components of shareholders' equity				Total		
	Foreign currency translation adjustment	Cash flow hedges	Subscription rights to shares	Total			
Balance at April 1, 2015	¥ —	¥ (679)	¥72	¥1,541,262	¥2,391,330	¥65,198	¥2,456,528
Profit	—	—	—	—	194,270	5,685	199,956
Other comprehensive income	(32,799)	(556)	—	(449,344)	(449,344)	(3,632)	(452,977)
Total comprehensive income	(32,799)	(556)	—	(449,344)	(255,074)	2,053	(253,021)
Repurchase of treasury stock	—	—	—	—	(20)	—	(20)
Disposal of treasury stock	—	—	—	—	232	—	232
Dividends	—	—	—	—	(37,699)	(1,670)	(39,369)
Changes in ownership interest of subsidiaries	—	—	—	—	(44)	117	72
Changes in non-controlling interests as a result of change in scope of consolidation	—	—	—	—	—	5,059	5,059
Reclassified into retained earnings	—	—	—	6,774	—	—	—
Other increases (decreases)	—	—	(65)	(65)	(65)	(103)	(168)
Total transactions with owners	—	—	(65)	6,709	(37,597)	3,403	(34,193)
Balance at March 31, 2016	¥(32,799)	¥(1,235)	¥ 6	¥1,098,627	¥2,098,658	¥70,655	¥2,169,313
Profit	—	—	—	—	131,398	6,167	137,565
Other comprehensive income	(17,618)	1,242	—	65,957	65,957	(779)	65,177
Total comprehensive income	(17,618)	1,242	—	65,957	197,355	5,387	202,743
Repurchase of treasury stock	—	—	—	—	(18,048)	—	(18,048)
Disposal of treasury stock	—	—	—	—	5	—	5
Dividends	—	—	—	—	(37,609)	(2,290)	(39,899)
Changes in ownership interest of subsidiaries	—	—	—	—	(62)	30	(31)
Changes in non-controlling interests as a result of changes in scope of consolidation	—	—	—	—	—	30	30
Reclassified into retained earnings	—	—	—	(5,395)	—	—	—
Other increases (decreases)	—	—	(6)	(6)	(6)	2,360	2,354
Total transactions with owners	—	—	(6)	(5,402)	(55,721)	131	(55,589)
Balance at March 31, 2017	¥(50,417)	¥ 6	¥—	¥1,159,181	¥2,240,293	¥76,174	¥2,316,467



# Consolidated Statements of Cash Flows

Toyota Industries Corporation  
For the years ended March 31, 2016 and 2017

	Millions of yen	
	2016	2017
<b>Cash flows from operating activities:</b>		
Profit before income taxes	¥191,386	<b>¥181,986</b>
Profit before income taxes from discontinued operations	93,025	—
Depreciation and amortization	143,836	<b>148,957</b>
Impairment losses	2,034	<b>2,136</b>
Interest and dividends income	(66,367)	<b>(62,862)</b>
Interest expenses	10,588	<b>8,111</b>
Share of (profit) loss of investments accounted for by the equity method	(632)	<b>(974)</b>
(Increase) decrease in inventories	(7,602)	<b>(3,010)</b>
(Increase) decrease in trade receivables and other receivables	(25,448)	<b>(16,249)</b>
Increase (decrease) in trade payables and other payables	9,189	<b>28,589</b>
Others	(112,404)	<b>(16,772)</b>
<b>Subtotal</b>	<b>237,607</b>	<b>269,912</b>
Interest and dividends income received	66,364	<b>63,186</b>
Interest expenses paid	(10,401)	<b>(8,374)</b>
Income taxes paid	(45,521)	<b>(85,630)</b>
<b>Net cash provided by operating activities</b>	<b>248,049</b>	<b>239,094</b>
<b>Cash flows from investing activities:</b>		
Payments from purchase of property, plant and equipment	(150,598)	<b>(164,225)</b>
Proceeds from sales of property, plant and equipment	10,044	<b>10,167</b>
Payments for purchases of investment securities	(716)	<b>(30,612)</b>
Proceeds from sales of investment securities	375	<b>7,591</b>
Payments for acquisition of subsidiaries' stock resulting in change in scope of consolidation	(9,717)	<b>(2,855)</b>
Proceeds from sales of subsidiaries' stock resulting in change in scope of consolidation	140,097	—
Payments for loans made	(570)	<b>(607)</b>
Proceeds from collection of loans	914	<b>958</b>
Payments for bank deposits	(358,634)	<b>(373,122)</b>
Proceeds from withdrawals of bank deposits	120,735	<b>480,742</b>
Payments for transfer of business	(277,643)	<b>(3,269)</b>
Others	(6,523)	<b>(11,691)</b>
<b>Net cash used in investing activities</b>	<b>(532,238)</b>	<b>(86,925)</b>

	Millions of yen	
	2016	2017
<b>Cash flows from financing activities:</b>		
Payments for acquisition of subsidiaries' stock not resulting in change in scope of consolidation	(155)	<b>(131)</b>
Proceeds from sales of subsidiaries' stock not resulting in change in scope of consolidation	524	<b>463</b>
Net increase (decrease) in short-term loans (within three months)	23,839	<b>16,384</b>
Proceeds from short-term loans payable	127,110	<b>36,921</b>
Repayments of short-term loans payable	(68,105)	<b>(114,087)</b>
Proceeds from long-term loans payable	153,980	<b>63,242</b>
Repayments of long-term loans payable	(38,574)	<b>(36,084)</b>
Proceeds from issuance of corporate bonds	25,481	<b>80,068</b>
Repayments of corporate bonds	(46,965)	<b>(20,000)</b>
Payments for repurchase of treasury stock	(20)	<b>(18,048)</b>
Cash dividends paid	(37,699)	<b>(37,609)</b>
Cash dividends paid to non-controlling interests	(1,670)	<b>(2,290)</b>
Proceeds from payments by non-controlling interests	102	<b>2,245</b>
Others	(13,352)	<b>29,714</b>
<b>Net cash provided by (used in) financing activities</b>	<b>124,495</b>	<b>789</b>
<b>Translation adjustments of cash and cash equivalents</b>	<b>3,386</b>	<b>(1,672)</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(156,307)</b>	<b>151,286</b>
<b>Cash and cash equivalents at beginning of period</b>	<b>248,706</b>	<b>92,399</b>
<b>Cash and cash equivalents at end of period</b>	<b>¥ 92,399</b>	<b>¥243,685</b>



# Board of Directors, Audit & Supervisory Board Members and Managing Officers

(As of June 30, 2017)

## Directors

### Chairman | Tetsuro Toyoda

Apr. 1970 Joined Toyota Motor Sales Co., Ltd.  
Feb. 1991 Vice President of Toyota Motor Sales, U.S.A., Inc.  
Jun. 1991 Director of Toyota Industries Corporation (TICO)  
Jun. 1997 Managing Director of TICO  
Jun. 1999 Senior Managing Director of TICO  
Jun. 2002 Executive Vice President of TICO  
Jun. 2005 President of TICO  
Jun. 2013 Chairman of TICO (current)  
Jun. 2016 Chairman of the Central Japan Economic Federation (current)



### President | Akira Onishi

Apr. 1981 Joined Toyota Industries Corporation (TICO)  
Jun. 2005 Director of TICO  
Jun. 2006 Managing Officer of TICO  
Jun. 2008 Senior Managing Officer of TICO  
Jun. 2010 Senior Managing Director of TICO  
Jun. 2013 President of TICO (current)



### Executive Vice President | Kazue Sasaki

Apr. 1977 Joined Toyota Industries Corporation (TICO)  
Jun. 2003 Director of TICO  
Jun. 2006 Managing Officer of TICO  
Jun. 2008 Senior Managing Officer of TICO  
Jun. 2010 Director of TICO  
Jun. 2011 Senior Managing Director of TICO  
Jun. 2013 Executive Vice President of TICO (current)



### Executive Vice President | Shinya Furukawa

Apr. 1977 Joined Toyota Motor Sales Co., Ltd.  
Jun. 2005 Director of Toyota Industries Corporation (TICO)  
Jun. 2006 Managing Officer of TICO  
Jun. 2008 Senior Managing Officer of TICO  
Jun. 2010 Senior Managing Director of TICO  
Jun. 2015 Executive Vice President of TICO (current)



### Executive Vice President | Masaharu Suzuki

Apr. 1976 Joined Toyota Industries Corporation (TICO)  
Jun. 2008 Managing Officer of TICO  
Jun. 2011 Senior Managing Director of TICO  
Jun. 2016 Executive Vice President of TICO (current)



### Director | Takuo Sasaki

Apr. 1980 Joined Toyota Motor Co., Ltd.  
Jun. 2009 Managing Officer of Toyota Motor Corporation (TMC)  
Jun. 2011 President of Toyota Financial Services Corporation  
Jun. 2011 Advisor of TMC  
Apr. 2013 Managing Officer of TMC  
Apr. 2015 Advisor of Toyota Industries Corporation (TICO)  
Jun. 2015 Senior Managing Director of TICO  
Jun. 2016 Director and Senior Managing Officer of TICO (current)



### Director | Kan Otsuka

Apr. 1977 Joined Toyota Motor Co., Ltd.  
Jun. 2008 Managing Officer of Toyota Industries Corporation (TICO)  
Jun. 2012 Senior Managing Officer of TICO  
Jun. 2013 Director of TICO  
Jun. 2016 Director and Senior Managing Officer of TICO (current)



### Director | Taku Yamamoto

Apr. 1979 Joined Toyota Industries Corporation (TICO)  
Jun. 2007 Managing Officer of TICO  
Jun. 2012 Senior Managing Officer of TICO  
Jun. 2014 Director of TICO  
Jun. 2016 Director and Senior Managing Officer of TICO (current)



### Outside Director | Shuzo Sumi

Apr. 1970 Joined The Tokio Marine & Fire Insurance Co., Ltd. (Tokio Marine)  
Jun. 2000 Director and Chief Representative in London of Tokio Marine  
Jun. 2002 Managing Director of Tokio Marine  
Oct. 2004 Managing Director of Tokio Marine & Nichido Fire Insurance Co., Ltd. (Tokio Marine & Nichido)  
Jun. 2005 Senior Managing Director of Tokio Marine & Nichido  
Jun. 2007 President and Chief Executive Officer of Tokio Marine & Nichido  
Jun. 2007 President and Chief Executive Officer of Tokio Marine Holdings, Inc. (Tokio Marine Holdings)  
Jun. 2013 Chairman of the Board of Tokio Marine & Nichido  
Jun. 2013 Chairman of the Board of Tokio Marine Holdings (current)  
Jun. 2014 Director of Toyota Industries Corporation (current)



### Outside Director | Kenichiro Yamanishi

Apr. 1975 Joined Mitsubishi Electric Corporation (Mitsubishi Electric)  
Apr. 2006 Executive Officer of Mitsubishi Electric  
Apr. 2008 Senior Executive Officer of Mitsubishi Electric  
Apr. 2010 Representative Executive Officer and President & CEO of Mitsubishi Electric  
Jun. 2010 Director, Representative Executive Officer and President & CEO of Mitsubishi Electric  
Apr. 2014 Chairman of Mitsubishi Electric (current)  
Jun. 2015 Director of Toyota Industries Corporation (current)



### Outside Director | Mitsuhsa Kato

Apr. 1975 Joined Toyota Motor Co., Ltd.  
Jun. 2004 Managing Officer of Toyota Motor Corporation (TMC)  
Jun. 2006 President of Toyota Technocraft Co., Ltd.  
Jun. 2006 Advisor of TMC  
Jun. 2007 Retired from Advisor of TMC  
Jun. 2010 Retired from President of Toyota Technocraft  
Jun. 2010 Senior Managing Director of TMC  
Jun. 2011 Senior Managing Officer of TMC  
Jun. 2012 Executive Vice President of TMC  
Jun. 2015 Director of Toyota Industries Corporation (current)  
Apr. 2016 Chairman of Toyota Central R&D Labs., Inc. (current)  
Apr. 2017 Director of TMC  
Jun. 2017 Senior Advisor of TMC (current)



## Audit & Supervisory Board Members

### Full-Time Audit & Supervisory Board Member | Toshifumi Ogawa

Apr. 1976 Joined Toyota Industries Corporation (TICO)  
Jun. 2006 Managing Officer of TICO  
Jun. 2010 Senior Managing Officer of TICO  
Jun. 2012 Director of TICO  
Jun. 2013 Senior Managing Director of TICO  
Jun. 2016 Audit & Supervisory Board Member of TICO (current)



### Full-Time Audit & Supervisory Board Member | Kohei Nozaki

Apr. 1980 Joined Toyota Industries Corporation (TICO)  
Jun. 2007 Managing Officer of TICO  
Jun. 2010 Senior Managing Officer of TICO  
Jun. 2014 Audit & Supervisory Board Member of TICO (current)



### Outside Audit & Supervisory Board Member | Hans-Juergen Marx

Oct. 1978 Assistant Professor of Faculty of Literature, Nanzan University  
Apr. 1986 Professor of Faculty of Literature, Nanzan University  
Apr. 1993 President of Nanzan University  
Apr. 2000 Professor of Faculty of Humanities, Nanzan University  
Apr. 2008 Chairman and Director of Nanzan School Corporation  
Jun. 2010 Audit & Supervisory Board Member of Toyota Industries Corporation (current)  
Apr. 2017 President of Fuji Women's University (current)



### Outside Audit & Supervisory Board Member | Takahiko Ijichi

Apr. 1976 Joined Toyota Motor Co., Ltd.  
Jun. 2004 Managing Officer of Toyota Motor Corporation (TMC)  
Jun. 2008 Senior Managing Director of TMC  
Jun. 2011 Director and Senior Managing Officer of TMC  
Jun. 2013 Advisor of TMC  
Jun. 2013 Director and President of Towa Real Estate Co., Ltd.  
Jun. 2015 Audit & Supervisory Board Member of Toyota Industries Corporation (current)  
Jun. 2015 Retired from Advisor of TMC  
Jun. 2015 Executive Vice President of TMC  
Jun. 2015 Retired from Director and President of Towa Real Estate  
Apr. 2017 Director of TMC  
Jun. 2017 Senior Advisor of TMC (current)



### Outside Audit & Supervisory Board Member | Akihisa Mizuno

Apr. 1978 Joined Chubu Electric Power Co., Inc. (Chubu Electric Power)  
Jun. 2008 Director, Senior Managing Executive Officer and General Manager of Corporate Planning & Strategy Div. of Chubu Electric Power  
Jun. 2009 Representative Director and Executive Vice President of Chubu Electric Power  
General Manager of Corporate Planning & Strategy Div. and General Manager of Affiliated Business Planning & Development Dept.  
Jun. 2010 President & Director of Chubu Electric Power  
Jun. 2015 Chairman of the Board of Directors of Chubu Electric Power (current)  
Jun. 2016 Audit & Supervisory Board Member of Toyota Industries Corporation (current)



## Managing Officers

### Senior Managing Officers

**Takuo Sasaki\***  
**Toshifumi Onishi**  
**Kan Otsuka\***  
**Taku Yamamoto\***  
**Keiichi Fukunaga**  
**Junichi Harada**

\* Concurrently serving as directors

### Managing Officers

**Yukihisa Tsuchimoto**  
**Takashi Ito**  
**Toshiya Yamagishi**  
**Mikihiko Okamoto**  
**Yojiro Mizuno**  
**Masahiro Kawaguchi**  
**Yuji Ishizaki**  
**Keizo Hara**  
**Kiyotsugu Kurimoto**

**Masafumi Kunito**  
**Toshihiko Shimizu**  
**Koichi Ito**  
**Yasushi Kawai**  
**Hiroaki Kayukawa**  
**Toru Inagawa**  
**Hiroshi Matsumoto**  
**Kota Otoshi**  
**Norio Wakabayashi**

**Kazunari Masuoka**  
**Kazunari Kumakura**  
**Hiroaki Matsuda**  
**Hisashi Ichijo**  
**Nobutomo Yasui**  
**Shunji Sugimoto**  
**Hisanori Miyajima**

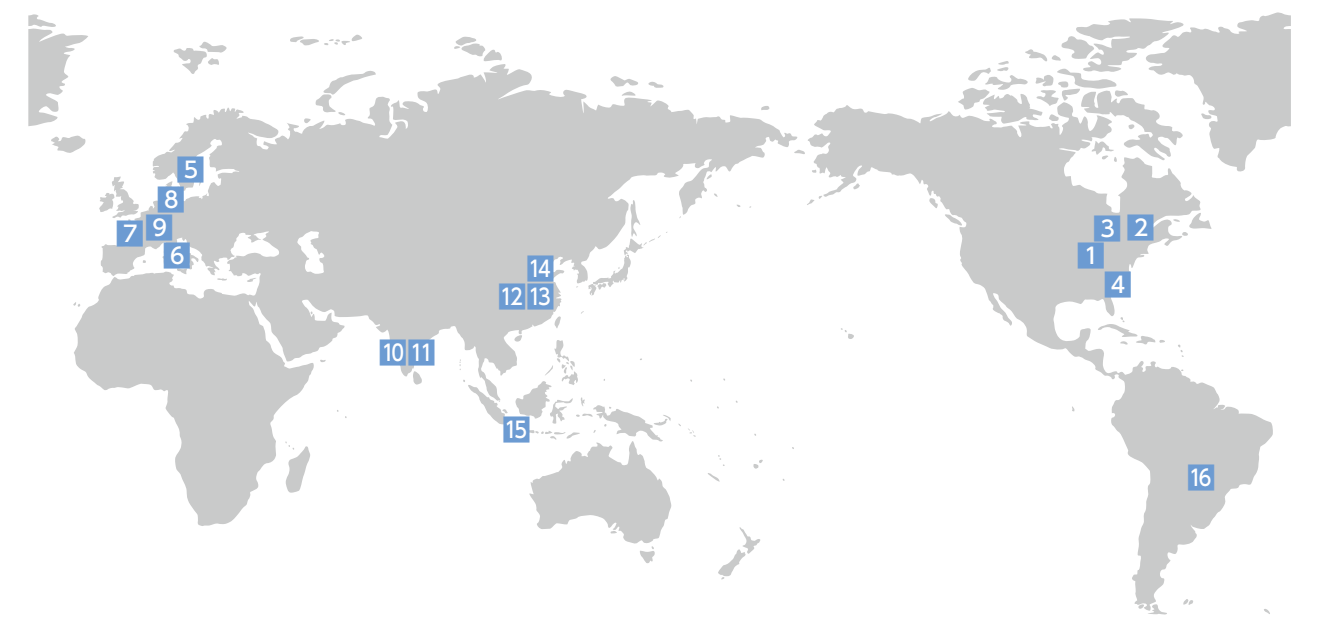
Major Production Bases

(As of March 31, 2017)

Major Plants (Parent Company)

Plant	Location	Main Products	Start of Operations
Kariya Plant	Kariya-shi, Aichi	Textile machinery, compressors	1927
Obu Plant	Obu-shi, Aichi	Compressor parts	1944
Kyowa Plant	Obu-shi, Aichi	Electronic equipment, automotive press dies, production facilities, engine parts	1953
Nagakusa Plant	Obu-shi, Aichi	Vehicles	1967
Takahama Plant	Takahama-shi, Aichi	Materials handling equipment, materials handling systems	1970
Hekinan Plant	Hekinan-shi, Aichi	Diesel engines, gasoline engines	1982
Higashichita Plant	Handa-shi, Aichi	Foundry parts, diesel engines	2000
Higashiura Plant	Higashiura-cho, Chita-gun, Aichi	Compressor parts	2002
Anjo Plant	Anjo-shi, Aichi	Electronic equipment	2007

Major Plants (Outside Japan)



Company Name	Country	Location	Main Products	Year of Foundation
1 Toyota Industrial Equipment Mfg., Inc.	U.S.A.	Columbus, Indiana	Materials handling equipment	1988
2 The Raymond Corporation	U.S.A.	Greene, New York	Materials handling equipment	1922
3 Michigan Automotive Compressor, Inc.	U.S.A.	Parma, Michigan	Compressors	1989
4 TD Automotive Compressor Georgia, LLC	U.S.A.	Pendergrass, Georgia	Compressors	2004
5 Toyota Material Handling Manufacturing Sweden AB	Sweden	Mjölby	Materials handling equipment	1946
6 Toyota Material Handling Manufacturing Italy S.p.A.	Italy	Bologna	Materials handling equipment	1942
7 Toyota Material Handling Manufacturing France SAS	France	Ancenis	Materials handling equipment	1995
8 TD Deutsche Klimakompressor GmbH	Germany	Bernsdorf	Compressors	1998
9 Uster Technologies AG	Switzerland	Uster	Textile machinery	1875
10 Toyota Industries Engine India Private Limited	India	Bengaluru	Diesel engines	2015
11 Kirloskar Toyota Textile Machinery Pvt. Ltd.	India	Bengaluru	Textile machinery	1995
12 Toyota Industry (Kunshan) Co., Ltd.	China	Kunshan, Jiangsu	Automotive parts, materials handling equipment, etc.	1994
13 TD Automotive Compressor Kunshan Co., Ltd.	China	Kunshan, Jiangsu	Compressors	2005
14 Yantai Shougang TD Automotive Compressor Co., Ltd.	China	Yantai, Shandong	Compressors	2012
15 P.T. TD Automotive Compressor Indonesia	Indonesia	Bekasi	Compressors	2011
16 Toyota Material Handling Mercosur Indústria e Comércio de Equipamentos Ltda	Brazil	São Paulo	Materials handling equipment	2004

Investor Information

(As of March 31, 2017)

Corporate Head Office

TOYOTA INDUSTRIES CORPORATION  
2-1, Toyoda-cho, Kariya-shi, Aichi, 448-8671, Japan  
Telephone: +81-(0)566-22-2511  
Facsimile: +81-(0)566-27-5650

Date of Establishment

November 18, 1926

Common Stock

No par value  
Authorized: 1,100,000,000 shares  
Issued: 325,840,640 shares  
(including treasury stock)  
Share unit: 100 shares

Capital Stock

80,462 million yen

Stock Exchange Listings

Tokyo and Nagoya (Ticker Code: 6201)

Number of Shareholders

17,102

Independent Accountant

PricewaterhouseCoopers Aarata LLC  
Sumitomo Fudosan Shiodome Hamarikyu Bldg.  
8-21-1 Ginza, Chuo-ku, Tokyo, 104-0061, Japan

Transfer Agent

Special Account Management Institution

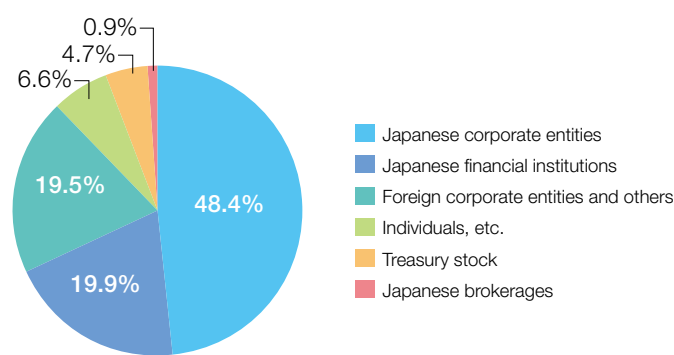
Mitsubishi UFJ Trust and Banking Corporation  
1-4-5, Marunouchi, Chiyoda-ku, Tokyo, 100-8212, Japan

Major Shareholders

Name	Number of Shares Held (Thousands)	Percentage of Total Shares in Issue (%)
Toyota Motor Corporation	76,600	23.51
DENSO Corporation	29,647	9.10
Towa Real Estate Co., Ltd.	16,291	5.00
Toyota Tsusho Corporation	15,294	4.69
The Master Trust Bank of Japan, Ltd. (Trust Account)	10,852	3.33
Japan Trustee Services Bank, Ltd. (Trust Account)	9,731	2.99
Nippon Life Insurance Company	6,580	2.02
Aisin Seiki Co., Ltd.	6,578	2.02
Aioi Nissay Dowa Insurance Co., Ltd.	4,903	1.50
Toyota Industries Corporation Employee Ownership Program	4,160	1.28
Total	180,640	55.44

Notes: 1. Toyota Industries Corporation also holds 15,351 thousand shares of treasury stock but is excluded from the above list.  
2. Shares held for the purpose of trust services of respective banks are as follows:  
The Master Trust Bank of Japan, Ltd. (Trust Account) 10,852 (Thousands)  
Japan Trustee Services Bank, Ltd. (Trust Account) 9,731 (Thousands)

Distribution of Shares







## TOYOTA INDUSTRIES CORPORATION

2-1, Toyoda-cho, Kariya-shi, Aichi 448-8671, Japan

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