

Sustainability Report 2019 UD Trucks Corporation

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# Providing trucks the world needs since 1935

UD Trucks was founded by Kenzo Adachi in 1935 with the mission "to make the trucks the world needs today." We've continued to develop advanced technology, products, and services ever since, providing the transportation solutions our customers need. UD stands for Ultimate Dependability, and is at the core of everything we do.



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#### About this report

UD Trucks issues its Sustainability Report each year for the purpose of providing stakeholders with information about its social and environmental initiatives, including its future vision for sustainable innovation in the logistics industry.

#### Scope of the report

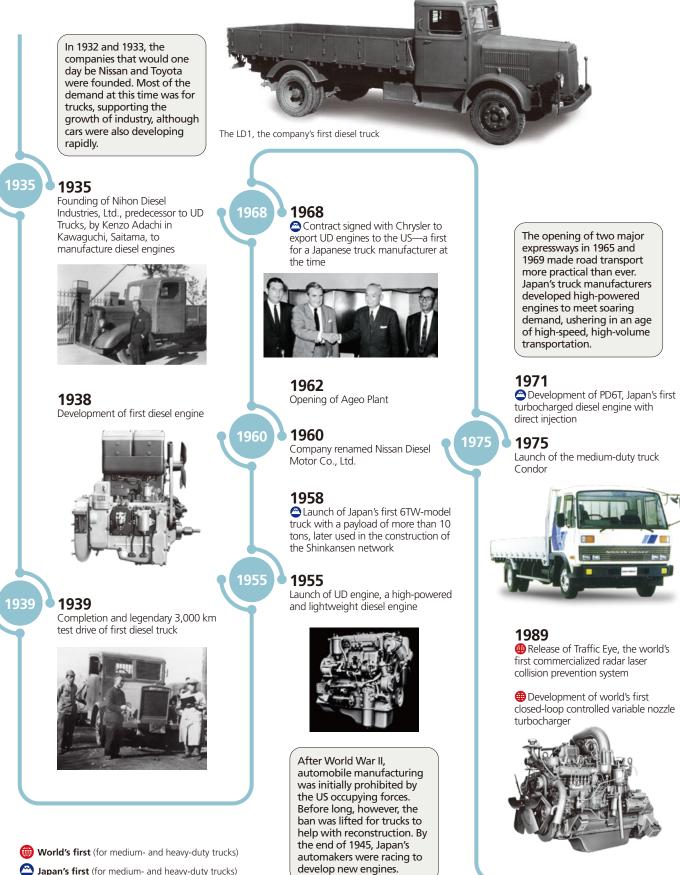
This report covers the activities of UD Trucks Corporation primarily in Japan. Some sections also cover the Company's activities in other countries.

#### **Reporting period**

This report mainly covers results and activities in fiscal 2018 (January 1 to December 31, 2018). Some sections also refer to results and activities in previous fiscal years, activities in fiscal 2019, and future plans and forecasts.

Published December 2019

# **UD Trucks: A history of innovation**



Japan's first (for medium- and heavy-duty trucks)

# 2007

Company joined Volvo Group

### 2004

2004

Launch of Quon, UD Trucks' flagship heavy-duty truck and world's first truck with urea SCR system for cleaner emissions

World's first truck with knee airbags and knee protectors



#### 2002

Controduction of Japan's first heavy-duty CNG engine in the Big Thumb

Development of world's first capacitator hybrid truck

### 1998

Cevelopment of GE13, Japan's first engine with electronically controlled unit injectors

### 1997

Controduction of Japan's first electric braking system (EBS) for heavy-duty trucks

### 1996

Introduction of Japan's first medium-duty CNG engine in the Condor

# 1995

Introduction of ESCOT, Japan's first electrically controlled automated manual truck transmission

### 1990

Launch of Big Thumb, offering lower emissions and improved comfort and safety

The 1990s were an age of rising environmental awareness across the world. In Japan, new restrictions on nitrogen oxide emissions were finalized in June 1992 and came into force in December of the same year. As climate change, demographic shifts, urbanization, and technical innovation intensify around the globe, new solutions like autonomous driving, electromobility, and connectivity attract attention.

# 2010

2010

2013

Company renamed UD Trucks Corporation

Claunch of UD Information Service, Japan's first remote diagnostic service

### 2013

Launch of Quester, a brand new heavy-duty truck developed for global growth markets



# 2014 2014

Launch of light-duty truck Kazet

Completion of merger with sales company, UD Trucks Japan Corporation



**2015** 80th anniversary of company's founding

# 2017

2017

Launch of new Quon and Condor, as well as medium-duty Croner and light-duty Kuzer for global growth markets



# **84** years of history

Founded in 1935 as a manufacturer of diesel engines, UD Trucks has always striven to meet the changing needs of society. The drive to overcome new challenges is in our DNA.

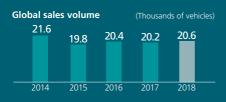
# 6,188<sub>employees\*</sub>

We believe that employee diversity and a workplace where everyone can exercise his or her individual talents to the utmost is the key to a productive and sustainable workforce. Our workforce includes people from 25 countries in Europe, Asia, Africa, Oceania, and the Americas.

\* Within Japan. Figure includes contract and temporary employees. As of December 31, 2018.

# 20,636 units sold globally in fiscal 2018

We sell our trucks all over the world, with Japan as our main market. In each market, we offer a wide range of transport solutions based on local needs.



# National service network of **165** customer (including independent dealers)

Sales and servicing in over **60**countries

In Japan and around the world, we offer quality service through our extensive network. Our telematics service monitors 60,000 trucks across Japan, and we offer client business 24-hour, 365-day support.

# Towards 2030

# Leading the way with sustainable transportation solutions

Japan's logistics industry is currently facing various challenges, including a shortage of drivers amid the growing popularity of online shopping services, as well as upwardly trending fuel prices and increasingly strict environmental regulations. For UD Trucks to help the industry overcome these challenges and continue to grow, I believe that two basic approaches are essential.

First, regardless of how the business environment changes, we must maintain an unwavering commitment to the principles that UD Trucks was founded on over a history spanning more than eight decades. That means staying true to the vision of the Company's founder, Kenzo Adachi, "to make the trucks the world needs today." Indeed, UD Trucks has provided countless technical innovations to the logistics industry—the lifeblood of society—and will continue passing down the Company's founding principles and traditions going forward.

Second, we must move forward with a long-term vision. The automotive industry commercial vehicle manufacturers included—is currently developing autonomous and electric vehicles as solutions for connectable and smarter logistics. To help accomplish these objectives, the Volvo Group will need to harness its collective capabilities and work with stakeholders to find the best solutions. Toward that end, UD Trucks created an innovation roadmap called 'Fujin & Raijin. Vision 2030.' in April 2018, laying out specific goals and innovative processes leading up to 2030.

Combining our founding principles and long-term vision, UD Trucks strives to be a leader in sustainable transportation solutions.

酒卷荐光

Takamitsu Sakamaki President and Representative Director

# 'Fujin & Raijin. Vision 2030.' Our innovation roadmap





Ð

Mass production of fully electric autonomous trucks

2020

Commercialization of autonomous driving in confined areas

2030

# 2019

Autonomous driving trials with customers, partners and other stakeholders

# 2018

Public demonstration of Level 4 autonomous driving using heavy-duty trucks

Transport is key to our social infrastructure, helping people and communities thrive. At UD trucks, our mission is to reshape transportation through creative thinking and innovation to help build the sustainable societies of tomorrow.

The transport industry faces many challenges: climate change, resource depletion, ageing populations, driver shortages, and safety concerns. The prosperity of future generations will depend on innovative technology, products, and solutions like autonomous driving, electromobility, and connected vehicles. We call this "smart logistics."

In April 2018, we unveiled a new roadmap for innovation that will guide our efforts through the next decade and beyond—'Fujin & Raijin. Vision 2030.'

# Our 2030 Vision Pioneering New possibilities

**Douglas Nakano** Senior Vice President of Technology

# Solutions the world needs today

Since our inception, UD Trucks has been committed to providing trucks and services that the world needs today. Numerous world firsts by UD Trucks have supported the technological advancement of the automotive industry. The most pressing problem faced by Japan's logistics industry today is a shortage of skilled drivers, coupled with the rapid growth in e-commerce deliveries. Compounding the situation are ever-stricter environmental regulations and upward trending fuel prices.

#### Advanced technologies featured in the heavy-duty truck used in the autonomous driving demonstration

Equipped with Level 4 autonomous driving technology (currently permissible in confined areas), the truck can drive autonomously on precisely designated routes while detecting oncoming objects.



#### Global positioning system (GPS)

This system enables the truck to drive on a designated route by using GPS. An even more advanced network-based RTK-GPS (Real Time Kinematic GPS) was used in the trial in Hokkaido.

# 3D Laser Imaging Detection and Ranging (LIDAR)

This technology helps ensure safe self-driving by detecting the presence of oncoming objects.



Most of us depend on logistics to enable the lifestyles that we take for granted.

Reshaping the logistics industry to be more efficient, sustainable and people-centric through innovation is the primary mission for UD Trucks and the Volvo Group as a whole. We have a responsibility to do this, and to lead the way.

Our efforts also bode well for 'Society 5.0,' a Japanese government initiative, which positions autonomous driving as a benefit for society—from reduced congestion and environmental impacts, to improved safety and convenience.\*

With the introduction of the heavy-duty Quon in 2017, UD Trucks has focused on supporting smart logistics—products and services that enhance fuel economy, environmental performance, drivability, safety, uptime and productivity. We optimize these products and services to the needs of our customers in the form of transport solutions. Our success in this area is backed up by the loyalty of our customers, and our reputation for excellence in innovation and reliability.

In short, our vision is to be a leader in truck

innovation and thereby contribute to a more efficient and sustainable transport system to meet tomorrow's challenges.

In April 2018, we announced our innovation roadmap—'Fujin & Raijin. Vision 2030.'

\* The Japanese government uses 'Society 5.0' to indicate initiatives to enhance the quality of life and boost productivity through innovation in what may be called the fourth industrial revolution, characterized by artificial intelligence, robotics and IoT, among other disruptive technologies.

#### **Milestones for tomorrow**

'Fujin & Raijin. Vision 2030.' is our innovation roadmap for the commercialization of autonomous trucks and fully electric trucks by the year 2030. Fujin is the Japanese god of wind; Raijin the god of thunder. Fujin symbolizes the power of movement (automation) and Raijin the power of energy (electromobility).

Automation and electromobility are key to making logistics more sustainable. As illustrated on page 6, our innovation roadmap takes a step-by-step approach together with customers to offer solutions for select automation and electromobility applications from 2020, moving towards full-fledged commercialization by 2030:

- 1) Level 4 autonomous driving demonstrations using heavy-duty trucks;
- Customer trials of Level 4 autonomous driving with heavy-duty trucks;
- 3) Commercialization of autonomous driving in confined areas .

This roadmap goes beyond refining our existing technologies in house. We cannot do this alone and will seek new partnerships to provide solutions for tomorrow.

Making autonomous and electric trucks an integral part of our transportation infrastructure requires broad collaboration with relevant stakeholders. We must work with the transport companies who actually use our products in their operations and coordinate with regulatory agencies, not to mention suppliers.

In order to incorporate the most innovative technologies, we anticipate new business relationships will form. Clarifying our vision and mission is essential to building long-lasting partnerships with such new stakeholders. In August 2019, our L4 autonomous driving trial in Hokkaido showed what can be



achieved through collaborative efforts with partners from both the private and public sectors. (More on page 10)

# Leveraging the power of the Volvo Group

By combining the strengths of UD Trucks and the Volvo Group, we can deliver more value for our customers. The Volvo Group's CAST platform (Common Architecture & Shared Technology), for example, offers an extensive array of core technologies for the development of vehicles across the Volvo Group.

UD Trucks, in turn, has a solid understanding of customer preferences in Japan and other predominantly Asian markets. Our global R&D team, numbering 850 (approximately 500 in Japan and 350 overseas), develops UD branded products in line with market needs.

UD Trucks ultimately decides what products to make and which technologies to employ. Taking advantage of CAST, UD Trucks works closely with engineers at Volvo Group headquarters, while working to develop our own technologies for specific markets.

We combine the Volvo Group's strengths with our own technology in many areas. For automation, this includes object recognition using onboard cameras, radar and LIDAR (Laser Imaging Detection and Ranging), in addition to incorporating decision-making software algorithms and vehicle control mechanisms for steering systems, brakes, and engines.

To develop electric vehicles tailored to customer needs, we are working on optimal solutions ranging from battery electric vehicle (BEV) systems to serial hybrid systems. Connectivity and digitalization also support smart logistics, including autonomous driving and electromobility. As a pioneer in this field, UD Trucks uses telematics to connect more than 60,000 trucks.

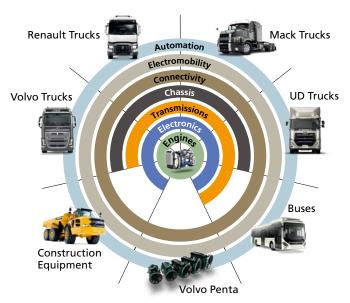
# Employees at the heart of our vision

Benefitting our customers and society is central to our Fujin & Raijin innovation roadmap. Our employees are at the heart of executing our vision of the future. My job is to support our people on this journey.

At the Tokyo Motor Show 2019, under the theme of "Innovation for Smart Logistics," we are encompassing technologies for Today, Tomorrow, and the Future towards 2030. While focusing on what we can do today, we are always considering how we can meet customer needs and society expectations in the years to come.

By the same token, this means we can never be satisfied and must strive to exceed the expectations of our customers and all stakeholders. We will continue to expand and solidify our position as an innovator and pioneer for sustainable transportation solutions.

### **Volvo Group CAST platform**



# Highlights

# Autonomous heavy-duty truck demonstration

# Japan's first Level 4 autonomous driving trial by heavy-duty truck on public roads

From August 5 to 30, 2019, UD Trucks jointly conducted a Level 4 autonomous driving trial with a heavy-duty truck together with Nippon Express Co., Ltd., a major logistics service provider, and Hokuren Agricultural Cooperative. Government officials, agriculture industry representatives and news media were on hand to observe a demonstration on August 29 at the Hokuren Sugar Refining Mill in Nakashari, Hokkaido. The autonomous truck operated on a typical delivery route, driving from the produce acceptance area to the final uploading area, with a portion of the route on a public road. This was Japan's first Level 4 autonomous driving trial by a heavy-duty truck on a public road.

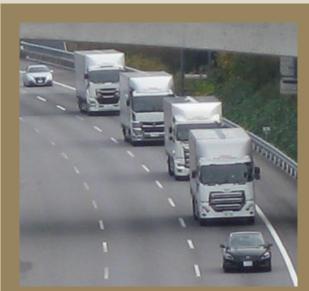


# Applying leading autonomous driving technologies

The specially adapted heavy-duty Quon employed network-based RTK-GPS (Real Time Kinematic Global Positioning System) and was driven at an average speed of 20 kilometers per hour under varying road surface conditions. UD Trucks President Takamitsu Sakamaki said, "Level 4 autonomous trucks can now be used in confined areas, helping address Japan's current shortage of truck drivers. We will continue collecting data through trials like these to meet the needs of customers and a wide array of stakeholders to enable the adoption of autonomous trucks as soon as possible."



A video of the driving trial has been made available.



UD Trucks joins a truck platooning project led by two government ministries, MLIT and METI.

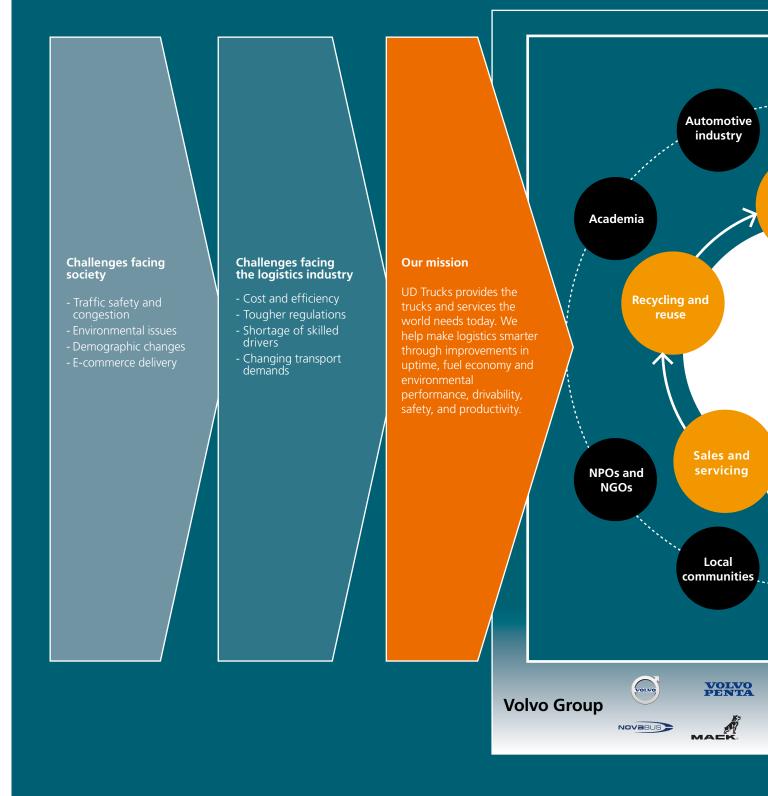
# A step closer to the widespread use of safe automated vehicles

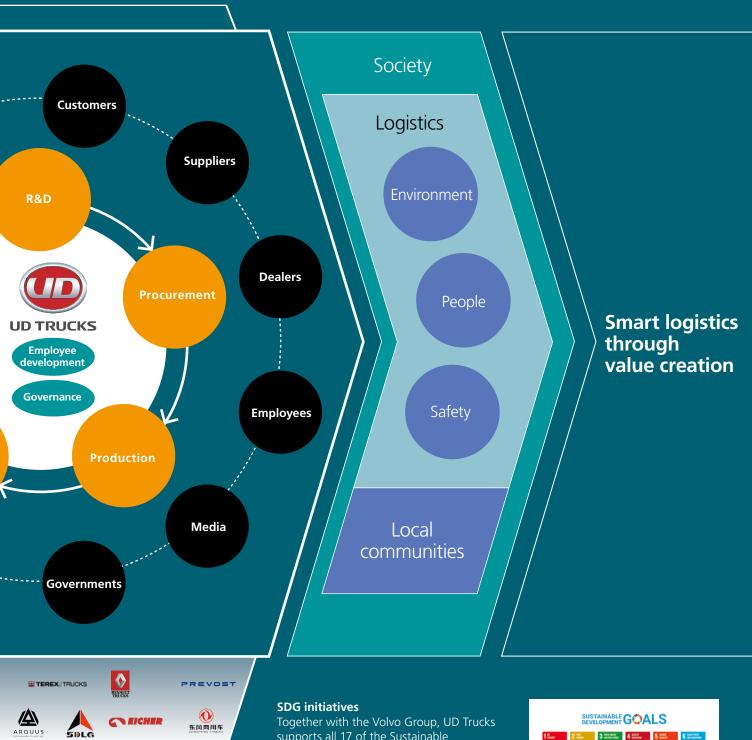
Japan's logistics industry is now confronting a shortage of drivers and the need to reduce vehicle emissions. Platooning, a type of automated driving that allows vehicles to drive closely together in groups, is one solution. The Ministry of Land, Infrastructure, Transport and Tourism is helping coordinate automated driving initiatives, including platooning applications, while giving the highest priority to safety and security. In short, it is assisting various companies to verify the feasibility of automated driving applications and sharing the results among all players in an effort to overcome technical hurdles.

#### Takahiro Hirasawa Director of Automated Driving Technology, oad Transport Bureau, Ministry of Land, Infrastructure, Transport and Tourism



# UD Trucks is working with stakeholders to resolve social challenges.





supports all 17 of the Sustainable Development Goals (SDGs) unveiled by the United Nations in 2015, with a particular focus on people, safety, communities, and the environment. We are constantly refining our initiatives based on business strategies and the needs of individual markets.





# **Customers**

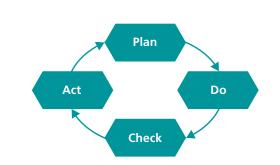
# **Improving quality**

# **Our approach**

UD Trucks strives to maintain and enhance quality across the entire value chain, from product development and manufacturing through to sales and aftermarket services. At the same time, the Company adheres to the Volvo Group Quality Policy, which is based on the principles of "customer focus," "commitment and participation by everyone" and "process approach and continuous improvement."

### ISO 9001 certification acquired

UD Trucks complies with the ISO 9001 international standard for quality management systems. The Company's Manufacturing Division acquired ISO 9001 certification in fiscal 2002, followed by the Product Development Division in fiscal 2016. UD Trucks works to continuously raise quality by applying a plan-do-check-act (PDCA) cycle.





# Measures for promptly dealing with quality-related issues

UD Trucks set up its Quality Action Group in 2017 to minimize the impact of any quality-related issues for customers. Spanning product development, manufacturing, and aftermarket services, the group is comprised of teams that handle trouble shooting, technical teams that support dealers and customers' sites, and branch office teams that directly respond to problems in their respective areas. The teams coordinate their efforts to quickly identify root causes and implement solutions. Through this arrangement, all teams promptly share quality-related information and quickly respond to the issue, ultimately leading to greater customer satisfaction.

#### Product development quality standards

UD Trucks carries out product development projects in collaboration with various organizations in the Volvo Group. The Company's Product Development Division has established its own quality assessment standards that incorporate processes shared throughout the Volvo Group. In accordance with these standards, the division specifies checkpoints at each stage of product development and confirms whether targeted levels of quality are achieved across a broad range of indicators, including a truck's performance, functions, durability and reliability. This process not only ensures higher quality but also shortens the total time required for product development.

# Quality assurance in manufacturing

Based on UD Truck's own quality management procedures, the Manufacturing Division conducts daily inspections of procured parts and manufactured items to check for quality defects throughout the production process and ensure targeted levels of quality. Refined through continuous improvement over several years, these quality management procedures have been adopted by all factories in the Volvo Group.



To reaffirm the importance of quality among employees, the division designates November of every year as Quality Month, during which all departments reconfirm their respective procedures, verify the progress of past actions to limit defects, and work to make technical improvements.

### Improving the skills of aftermarket service staff

To ensure that customers can safely and reliably use its vehicles, UD Trucks works to raise the quality of its aftermarket services through proactive measures for improving the skills of employees involved in maintenance and repairs.

For example, UD Trucks has been holding training workshops called Uptime Conferences at its head office since 2013 to provide technical support and quality-related information about new products for its dealer network. In 2018, about 350 mechanics and service parts engineers joined workshops covering multiple topics, including engines, truck models, and electronic control systems. They also discussed how to help customers maximize the uptime of their trucks.

UD Trucks also holds a worldwide competition called UD Trucks Gemba Challenge with the goal of enhancing the capabilities of employees involved in aftermarket services. Held bi-annually for periods of about six months, the competition tests the practical knowledge and skills needed for solving problems that can arise at service centers. By working through such tasks, teams of participants acquire new knowledge and skills. In 2018, about 1,300 participants from 347 teams—a record high—from various countries competed in the event, of which 12 teams faced off in the finals at the Company's head office.

# Disclosure of information concerning vehicle defects

In the event of a vehicle defect that could potentially affect customer safety or the environment, UD Trucks promptly discloses all relevant information in accordance with guidelines issued by Japan's Ministry of Land, Infrastructure, Transport and Tourism.

# Number of vehicle defects by manufacturer reported in Japan

	2016		2017		2018	
	UD Trucks	Volvo Trucks	UD Trucks	Volvo Trucks	UD Trucks	Volvo Trucks
Defects resulting in recall	4	3	6	1	9	1
Defects requiring improvement	0	2	0	1	1	0
Defects requiring servicing	4	6	5	3	7	3



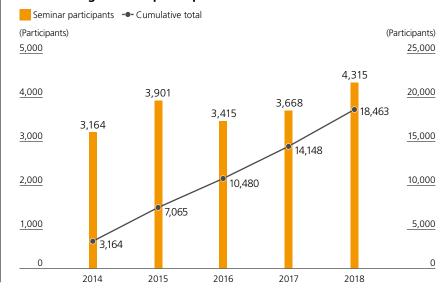


# **Improving safety**

### **Our approach**

UD Trucks carries out various initiatives for improving the safety of its trucks in accordance with the Volvo Group Safety Policy, which aims for "zero accidents with Volvo Group products." When developing products and services, UD Trucks researches how its trucks are actually used by customers and systematically examines potential safety issues. Through this approach, the Company has been equipping its trucks with a wide range of safety systems and features designed specifically for drivers and the conditions they operate in.

#### Safe-driving seminar participants since 2014



# Equipping trucks with advanced safety technology

In an effort to improve road traffic safety, UD Trucks has been developing advanced safe-driving technology and fitting its trucks with such systems. For instance, Quon model heavy-duty trucks come with Traffic Eye Brake, a system for automatically braking before a collision, and Driver Alert Support, which detects steering irregularities. In addition to these advanced systems, UD Trucks considers safety in the basic performance of its trucks. For example, its trucks are equipped with disc brakes designed for outstanding heat dissipation and resistance to brake fade. All of these systems not only help the driver operate the truck more safely but also make the road safer for other vehicles.

#### Testing driving performance in cold regions

To ensure that its trucks can operate dependably and safely in severe cold, UD Trucks conducts road tests every year in the city of Kitami, Hokkaido, where it is not uncommon for temperatures to drop to minus 20 degrees Celsius. In 2018, about 300 engineers and technicians conducted tests on six trucks during the extremely cold months of January and February. On a snow-covered course totaling about 1,000 meters, the trucks were tested under various road conditions, including icy, slushy, and potholed surfaces, for their powertrain and braking performance, as well as drivability, ice buildup, engine startup, and ability to stay in a traffic lane without sliding out. In addition, the trucks were tested on city streets and mountain passes culminating in as many as 300 kilometers per day.

# Providing safe-driving seminars to customers

UD Trucks invites customers to participate in safe-driving seminars. The seminars cover a broad range of topics, the dangers of driving under the influence, blind spots, defensive driving, and reducing human error. The programs combine lectures with hands-on training so that drivers can quickly acquire practical skills. Moreover, videos of actual accidents taken with drive recorders are used to give participants a real sense of how accidents can happen.

In 2018, 4,315 people participated in 145 sessions, compared with 3,668 people in 137 sessions in the previous year.

# Advanced safe-driving systems installed in Quon model trucks

### **Traffic Eye Brake**

Equipped with cameras and millimeter-wave radar technology, the Traffic Eye Brake system warns the driver of a possible collision with the vehicle ahead. If the distance becomes dangerously close, the system automatically applies the brakes while alerting the driver. UD Trucks adopted the system well in advance of the November 2019 deadline set by the Japanese government for equipping heavy-duty trucks with advanced emergency brake systems.



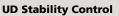
#### Lane Departure Warning System

Utilizing cameras that monitor both sides of the traffic lane, the Lane Departure Warning System lights up and buzzes to alert the driver if the truck appears to deviate from the traffic lane when driven over 60 kilometers per hour.



#### Driver Alert Support

The Driver Alert Support system is designed to estimate the driver's level of concentration by measuring steering irregularities with a camera that detects the position of the truck relative to traffic lanes and other vehicles. If the driver's concentration is deemed to fall below a certain threshold, the system sounds an alarm and two stages of messages (one to stay focused and the next to take a rest) shown on a multi-display.



The UD Stability Control system uses sensors to detect road conditions under which the truck could become unstable, such as slippery road surfaces on curves. When such conditions are detected, the system slows down the engine and appropriately applies the brakes on each tire to maintain stability.





# Customers

# Supporting our customers

### **Our approach**

Aiming to be the best choice for customers, UD Trucks actively creates opportunities for promoting the benefits and performance of its products to customers. Moreover, UD Trucks is involved in helping its customers operate their businesses profitably and overcome challenges, such as securing enough truck drivers, increasing utilized truckload capacity, and complying with environmental regulations.

# Assisting women in the trucking industry

UD Trucks periodically organizes seminars and test driving events for female truck drivers with the intention of helping alleviate the shortage of drivers in Japan's trucking industry. In 2018, the program included a presentation by a female engineer, a factory tour, test drives of Quon heavy-duty trucks, and a question and answer session.

The presentation was given by a UD Trucks employee in charge of product development. She emphasized the importance of ergonomically designed truck cabs for making truck driving work more comfortable and user-friendly, which is often requested by female truck drivers. She showed how handrails, in particular, were designed to improve safety and make it easier to get in and out of the cab.



#### **Opportunities for** female truck drivers

In Japan today, while trucks deliver over 90% of all cargo (on a tonnage basis), a shortage of truck drivers is a serious problem facing the country. Only 2.4% of truck drivers are women in Japan, so efforts are being made to attract more women to the industry by improving working conditions. The Ministry of Land, Infrastructure, Transport and Tourism even launched a project in 2014 to provide support for women who aspire to become truck drivers.

Playing a part in these efforts, UD Trucks invited 23 female truck drivers to the UD Experience Center at its head office in January 2018 to give them an opportunity to test drive the Quon heavy-duty truck and participate in a discussion about improving working conditions and drivability. This was the second time the event was held.

During the test drive, the women evaluated the user friendliness of the Quon, which is ergonomically designed to make driving easier for anyone. While all of the women were truck drivers, several did not hold a heavy-duty license. However, many were so impressed with the drivability of the Quon that they expressed a desire to acquire a heavy-duty license. Based on this feedback, UD Trucks reaffirmed its conviction that providing fuel-efficient trucks that are easy to drive, even by beginners, will help attract new people to the industry and alleviate the shortage of drivers.



# Instruction on how to drive more economically

Since 2007, UD Trucks has been holding eco-driving seminars aimed at equipping truck drivers with practical skills and knowledge about how to improve fuel efficiency while driving. During the seminars, truck drivers learn and practice special fuel-saving techniques for maneuvering and decelerating. The seminars also make use of the UD Information Service, a wireless communications system for collecting and analyzing data on a truck's location and movements, enabling evaluations of vehicle speed, gear changing, and other driving-related factors. Participants have found this to be very insightful and helpful for objectively understanding their driving habits and making improvements accordingly.

In 2018, a total of 1,018 truck drivers participated in seminars held at 81 locations nationwide. Their fuel efficiency improved by 24.9% on average after taking the seminars according to data analysis, demonstrating how this initiative is helping customers improve mileage and reduce CO<sub>2</sub> emissions.

# Message from a participant in the test-driving event for women "I want to drive a heavy-duty truck."



Not too long ago, driving was rather stressful because I couldn't accelerate and decelerate as I was used to after our two-ton delivery trucks were replaced with models that have automatic rather than manual transmissions. Now, however, I want to drive a heavy-duty automatic truck since test-driving the Quon, which I find very easy to drive. I am currently preparing to get a heavy-duty truck license.

Yoko Ichiyanagi Nippon Express Co., Ltd.

#### Motivating truck drivers worldwide to develop their skills

Every year, UD Trucks holds a global driving skills competition called the UD Extra Mile Challenge for drivers of its trucks, with the goal of motivating the drivers to develop their capabilities and help operators make maximum use of its products and services. In 2018, winners of regional qualifiers competed in the final round of the competition in October at the Company's head office in Japan. A driver representing Singapore who won the Quon category remarked that after diligently preparing for the event over the past year, the competition proved to be a valuable experience as he learned a great deal about conserving fuel, proper cargo storage, and many other aspects of truck driving.

# Prompt and useful customer service

UD Trucks has established a customer service call center made available with a toll-free telephone number for customers to ask questions, provide feedback and make requests. To help the center's operators effectively handle calls, the Company has prepared a guidebook explaining responses to all foreseeable inquiries. The center's procedures and operations are also regularly reviewed to ensure that it continues to provide prompt and helpful customer service. In 2018, the center handled a total of 3,791 calls compared with 4,691 in 2017.



# **Business partners**

# Strengthening our partnerships

# **Our approach**

To help commercial vehicle operators run their businesses successfully, it is essential for an automaker to develop and manufacture vehicles tailored to their needs and to provide after-sales services for the long term. From that standpoint, UD Trucks recognizes that its suppliers and independent dealers are indispensable business partners. Accordingly, it strives to forge strong business partnerships while working to raise customer satisfaction and adhering to Volvo Group policies.

### Volvo Group procurement in 2018

# 270.3 billion Swedish kronor

of goods and services were purchased.

2.5 billion parts for 40 factories worldwide were delivered.

# 96%

of automotive product suppliers passed CSR self-assessment.

### Percent of purchases by region

# **51,000** Tier 1 suppliers

Around 6,000 automotive product components suppliers accounted for about 91% of the purchases.

91% of automotive-related procurement was purchased from suppliers certified with ISO 14001 or equivalent standard.

Europe	North America	Asia	South America	Africa and Oceania
62%	26%	7%	4%	1%

# Ensuring responsible procurement

When procuring raw materials and equipment along with services and goods that are essential for daily operations, UD Trucks purchases in accordance with Volvo Group policies from suppliers around the world. The Company's management understands that issues of public interest, locally based production, compliance with tariff agreements, viable means of transportation and prohibition of conflict minerals are vital for maintaining sustainable supply chains, and requests its suppliers to work towards the sustainability of their respective communities.

#### Human Rights Due Diligence Program

The Volvo Group initiated its Human Rights Due Diligence Program to identify, analyze and prioritize risks related to the sustainability of its supply chains, and take appropriate countermeasures. A key component of the program are sustainability audits of suppliers, through which suppliers' sites are visited and evaluated with respect to labor, human rights, and health and safety conditions. In 2018, the audits targeted 35 suppliers located mainly in China, India, and South Africa. In 2019, the Volvo Group plans to use the results of its sustainability audits to establish criteria for selecting suppliers at the procurement stage.

Along with these activities, the Volvo Group has been working to raise awareness of sustainable procurement among its employees and the public, and began offering an e-learning course on this topic for all procurement department members in 2018. It also offers a training program covering human rights, environmental performance, and business ethics to its suppliers through Drive Sustainability, a Europe-based partnership of 10 global automakers formed for the purpose of promoting sustainability in the auto industry. In 2018, the Group trained staff from around 100 suppliers from numerous countries, including China, Thailand, Spain, and Hungary.

# Balancing people, planet, and profit

The Volvo Group aims to maintain a good balance between people, the planet, and profits throughout its entire supply chain. Toward that end, the Group has been requesting all of its suppliers to complete a sustainability self-assessment questionnaire and adopt best practices. In 2018, the Group took the final steps toward issuing a code of conduct for suppliers to specify and explain its basic expectations for them with respect to human rights, labor conditions, health and safety, responsible sourcing of raw materials, environmental performance, and business ethics.

Meanwhile, the Volvo Group has been examining the impact of raw materials used in its products in regards to the environment, society, and governance. Drawing from the results of a report issued by Drive Sustainability and the Responsible Minerals Initiative (RMI), the Group implemented a conflict minerals program covering tin, tungsten, tantalum, gold, and cobalt. To conduct due diligence and proactively ensure transparency in its procurement of these minerals, the Volvo Group became a member of RMI, which is an international NGO that studies responsible procurement in the auto and electronics industries.

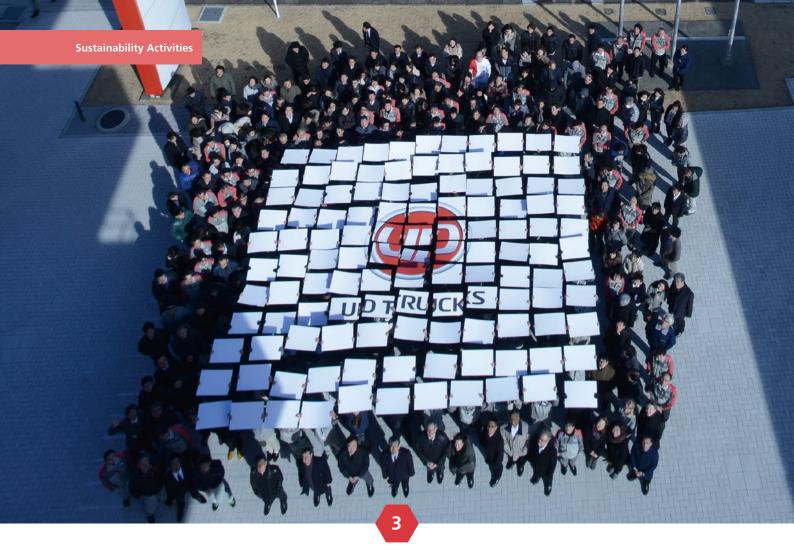
# Working in partnership with independent dealers

In addition to its own network of dealers, UD Trucks supplies products and services to customers through six companies that operate a total of 32 independent dealerships. While respecting the corporate traditions and local business practices of each of these dealerships, UD Trucks works closely with them towards the common goal of improving customer satisfaction, and invites them to the same training programs and events as its own dealers to help their employees acquire more skills and expertise.

#### Helping aftermarket service personnel improve their skills

Every year, UD Trucks holds a training event called the Uptime Conference and an international skills competition called the Gemba Challenge for the purpose of enhancing the expertise of its mechanics, service parts engineers and other aftermarket service personnel. In 2018, 40 employees from independent dealers joined the Uptime Conference, while 41 people from 11 teams competed in the Gemba Challenge.





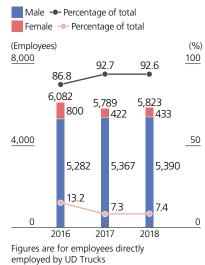
# **Employees**

# Empowering our people

# **Our approach**

In order to develop people that can thrive anywhere in the world, UD Trucks provides effective and practical training programs, and assists employees with career development through a fair and transparent evaluation system. These programs and systems emphasize the importance of respect for individuals, self-actualization, diversity, teamwork, taking responsibility for one's work, and open communication. The Company uses employee attitude surveys and other tools in an effort to create an open and comfortable workplace that allows all of its members to make the most of their capabilities.

# **Employee data in 2018** Number of employees by gender



# **319** newly hired employees



Comprised of 177 new graduates and 142 mid-career employees

# **25** nationalities

Australia, Belgium, Bolivia, Brazil, Canada, China, France, Germany, India, Indonesia, Ireland, Japan, South Korea, Malaysia, Myanmar, Nepal, South Africa, Spain, Sri Lanka, Sweden, Thailand, the Philippines, Turkey, Ukraine, United States, and Vietnam

As of December 31, 2018

# Promoting diversity and inclusion in the workplace

At UD Trucks, differences among employees are embraced and respected based on an understanding that diversity is essential for the Company to succeed globally. Accordingly, while striving for sustainable growth, UD Trucks actively promotes diversity and a working environment that allows each individual to maximize his or her potential. The Company assesses how employees feel about diversity in periodic employee attitude surveys, which cover factors related to gender, nationality, and age. The surveys also incorporate questions on inclusion, such as the extent that employees feel valued as important members of their teams. The results of these surveys are then used towards diversity and inclusion management initiatives.

In 2018, these initiatives included workshops on preventing harassment, seminars on diversity and inclusion for managers, and employee and management meetings on gender equality. Moreover, during its annual Diversity & Inclusion Week in October, the Company held an event on women's empowerment featuring presentations by Toko Shirakawa, a well-known female journalist in Japan, and Tetsuya Ando, a representative from NPO Fathering Japan.

# Employee-led efforts to promote diversity and inclusion

At UD Trucks, various efforts to promote diversity and inclusion are led by employees throughout the Company in addition to campaigns initiated by human resources. This grass roots approach has been fostering a corporate culture that values diversity and inclusion.

# Raising awareness of diversity and inclusion

UD Trucks has established a dedicated internal organization called Diversity &



Inclusiveness Community Japan. With the president serving as director, the organization is made up of male and female employees from different departments, age groups and nationalities. It held a variety of events in 2018, including harassment prevention workshops and training sessions for managers in charge of diversity and inclusion activities. Members were also involved in planning, publicizing and managing events and programs during the Company's annual Diversity & Inclusion Week.

# Support for improving the skills of female employees

A volunteer group called the Women's Inclusive Network (WIN) has been set up in the Company for the purpose of helping female employees develop their skills and abilities. The group planned and carried out various activities in 2018, including roundtable discussions about women's issues together with management, workshops on emotional and physical health, and communication skills training.

# Putting employees first

UD Trucks recruits new employees in consideration of their skills and aspirations as well as management's

medium- and long-term strategies. In fiscal 2018, the Company hired 177 new graduates and 142 mid-career employees. Management also makes proactive efforts to facilitate the success of female employees in the workplace, and had appointed 52 women to various management positions as of December 31, 2018. In addition, all new job postings are advertised internally to provide equal opportunities for employees, and, in principle, current employees are given preference over external candidates.

# Helping employees grow and develop

UD Trucks places importance on developing and refining the expertise and capabilities of its employees to equip them with the skills they need not only for their current jobs but also for the future. Toward that end, the Company set up a committee in 2017 to put forward specific measures for developing human resources, which have included the adoption of a new training management system and upgrading training facilities. A "learning day" was also held at the head office in 2018 to make employees more aware of the need for skills development and to explain training programs made available by the Company.



#### **Rewarding performance**

UD Trucks has established an employee evaluation system designed to help its members develop their skills and gain valuable feedback on their job performance. Through the system, all employees set goals each year and confirm their progress with supervisors semi-annually. The accomplishment of these individual goals provides a basis for salaries and bonuses under the Company's remuneration system, which also takes into account the performance of teams and the Company as a whole.

# Conducting employee attitude surveys

Employee attitude surveys are conducted on a regular basis in order to assess how employees feel towards the Company and demonstrate how their ideas and opinions are regarded as important. With a view to continually increase the overall score of the survey, management organizes various interactive events throughout the year, including town hall meetings and Swedish-style group coffee breaks called *fika*, and regularly shares relevant news and information on employee engagement efforts across the company.

# Promoting a healthy work-life balance

UD Trucks has put in place various systems and policies designed to help employees maintain a healthy balance between their working and personal lives.

# Main systems and policies for supporting work-life balance

- Childcare leave system
- Nursing care leave system
- Telecommuting system
- Flex-time system
- Anti-harassment policy
- Reduction and elimination of overtime



# Occupational health and safety

The Company's management oversees a wide range of initiatives designed to maintain safe workplaces and assist employees with healthier lifestyle choices.

#### Improving pedestrian safety

UD Trucks has clearly separated pedestrian routes and vehicle lanes on the premises of its head office and Ageo Plant in order to create a safe environment for employees and visitors. It has also constructed sidewalks separated from traffic by greenery on the street leading to the main gate of the premises to ensure public safety, especially for local school children.

#### Fitness check-up for employees

In June 2018, UD Trucks held a fitness check-up for employees at its head office fitness center. Fitness indicators, including their weight, body mass index, muscle and fat mass, basal metabolism rate and visceral fat level are checked. Based on the results, fitness instructors would give advice on diet and exercise. About 50 participants also joined relaxation sessions and yoga classes designed for alleviating lower back pain.

#### Helping employees manage stress

Stress assessments are routinely held in the Company's workplaces. Employees are encouraged to meet with physicians or counselors if their results indicate high stress levels, and their job responsibilities may be reduced based on the advice of the physicians.



# **Learning Day**





Members of the Human Resources Division introducing a project management training program



Demonstrating how to use the training management system

As one of its human resources development initiatives, UD Trucks held a learning day for its employees in August 2018, with over 2,000 employees participating. The event built on the Company's past efforts to create a supportive environment for employees to develop their skills. Those efforts include the adoption of a training management system in 2017 that allows employees to easily acquire information on training programs. Learning day was intended to raise awareness of training opportunities among employees while fostering a culture of learning.

Held in the head office auditorium, the event featured motivational talks by managers followed by five hands-on workshops covering various fields that the Company specializes in. Outside the auditorium, two booths were set up to consult with employees directly, with one demonstrating how to use the training management system and the other displaying information about project management, which is one of the training programs made available by the Company.

The majority of participants gave the event high marks in a follow-up questionnaire, with many expressing satisfaction that they obtained the specific information they had wanted. Others commented that they had gained an even greater appreciation for the importance of learning. UD Trucks plans to continue holding learning days in the future with the goal of increasing participation in training programs and raising awareness of skills development among employees.

#### **Comments from an event organizer**

# Providing opportunities to enhance the capabilities of our employees

This was our first time to hold a learning day, so our biggest challenge was to generate interest among employees and encourage them to participate. Before the event, we used posters and a website to clearly explain the benefits of participating, and on the day of the event, we organized various games and activities to create some excitement. Thanks to these efforts, many employees participated, which greatly contributed to our human resources development objectives. The event demonstrated that employees are very interested in learning, so we are motivated to provide them with useful tools and exciting training opportunities going forward.



Chikako Kitayama Training and human resources development manager Volvo Group University



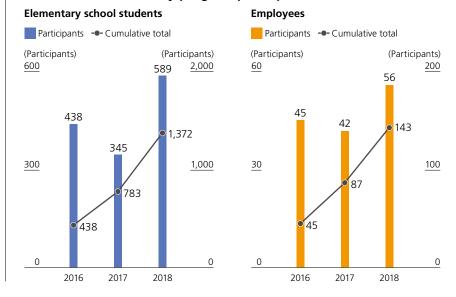
# **Community engagement**

# Engaging with communities

### **Our approach**

UD Trucks draws from the expertise and talents of its people and makes use of its facilities and resources to support communities. The Company strives to forge strong ties with its many stakeholders, including the communities it operates in and its partners in the automotive industry, through initiatives aimed at creating shared value. Starting from this approach, UD Trucks is working to help pave the way for a sustainable society.

# Number of traffic safety program participants



# Road safety instruction for elementary school students

Among prefectures in Japan, Saitama has a comparatively high number of fatal road accidents involving medium- and heavy-duty trucks\*. As a truck manufacturer based in Saitama, UD Trucks recognizes its responsibility to help prevent road fatalities, and has been conducting traffic safety programs for elementary school children in the city of Ageo since 2016. Through the program, elementary school students learn about road safety and participate in activities with actual heavy-duty trucks to demonstrate their blind spots and the space required when turning corners (specifically the different arcs taken by the front and rear wheels).

Over three years up to 2018, 1,372 students have participated in the program and 143 employees have served as instructors. The practical activities involving the trucks in particular have been very valuable learning experiences for the children according to their teachers.

\* Based on data published by the Japan Trucking Association

# Helping senior citizens use the internet

In the city of Ageo, employees from the Company's IT Division offer instruction on how to use the internet for local residents aged 60 and older. The employees initiated the program in 2016 with a desire to use their skills to give something back to the city. The program is intended to improve the quality of life of older residents who are largely unfamiliar with the internet by teaching them how to access news and information related to their interests.



# Diverse nationalities meet school children

In August 2018, UD Trucks held an event to provide Japanese elementary students with an opportunity to meet people from various countries. The event was organized in collaboration with local education boards in the area in which the Company's headquarters is based. Fifty-five students in grades five and six were given the chance to communicate in English with international employees working at UD Trucks. The students introduced themselves in English and participated in a quiz aimed at guessing the home country of the employees. While interacting in English was challenging for many of the students, the experience was enjoyable for everyone.

### Futsal court for an orphanage

In 2019, 67 group employees from various countries worked together to

build a futsal court at an orphanage near the Company's head office in Japan. The employees were members of the teams competing in the final round of the UD Trucks Gemba Challenge aftermarket skills competition. Children at the orphanage are highly motivated to play soccer, especially since the facility has produced a number of professional soccer players, so the completion of the court was very special for them. On the same day, the employees also repaired old equipment and constructed a wooden deck and benches.

# Support for communities damaged by torrential rains

UD Trucks donated five million yen to the Japanese Red Cross Society to support people in areas of Western Japan that were severely damaged by flooding and landslides caused by torrential rains in July 2018. The Company also helped ensure that relief supplies could be delivered in the damaged areas by providing tracking information for telematics-equipped trucks to ITS Japan, a non-profit organization. UD Trucks provides tracking information for trucks during disasters and emergencies through its own information service to help determine the best delivery routes in consideration of damaged roads.





# Reducing our environmental footprint

### **Our approach**

The Volvo Group has been working to minimize environmental impacts throughout its history, and established the Volvo Group Environmental Policy for that purpose. In 2018, the Volvo Group began implementing the policy and declared that environmental initiatives are important for realizing the Group's mission. Guided by this policy, UD Trucks has been implementing environmental conservation initiatives in all of its business activities with the aim of minimizing its environmental impacts.

### The Volvo Group Environmental Policy

Environmental progress is a key element in our mission to drive prosperity through transport solutions.

The following principles provide direction for the work:

- Continually reduce life-cycle environmental impacts as an enabler for increased sustainability and customer success
- Demonstrate responsible care for the environment wherever we operate and build trust by adhering to our Code of Conduct.
- Minimize resource use, emissions and waste and utilizing means within our sphere of influence to create change towards a circular economy and to further improve our competitiveness

#### **Environmental management organization**



# ISO 14001 certification acquired group-wide

UD Trucks has acquired ISO 14001 certification for environmental management. Beginning with its Ageo Plant in 1998, all of UD Trucks' plants and affiliated companies acquired certification by 2017, allowing the entire group to implement an ISO 14001-compliant environmental management system. Leveraging the benefits of this group-wide system, UD Trucks is currently working to achieve the objectives and targets of its environmental action plan.

# Auditing of environmental management system

UD Trucks conducts an annual internal audit of its environmental management system to ensure that it functions effectively. During the audits, a team of qualified audit committee members verify whether the system is being implemented properly and complies with company rules and relevant environmental laws and regulations.

In addition, the system is audited every year by an accredited certification body to verify its compliance with the ISO 14001 international standard for environmental management. Between May and August 2018, such an audit was carried out to confirm that the Company had incorporated 2015 revisions of the standard.

# Reducing environmental impact over the product life-cycle

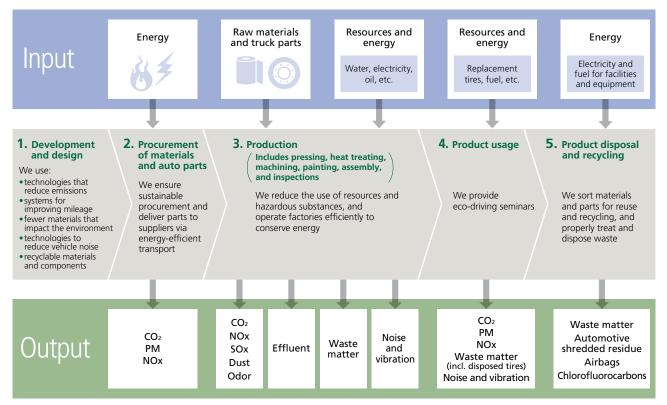
UD Trucks analyzes the environmental impacts of its trucks at each stage of the product life-cycle, beginning from product development and design through to the disposal and recycling of parts and components. Based on the results of its analyses, the Company strives to reduce the impact of its products and operations on the environment by using resources efficiently and producing more environmentally conscious trucks.

#### **Pursuing better fuel efficiency**

The fuel that trucks burn is not only a major expense for commercial vehicle operators but also a source of CO2 emissions, which are a major contributing factor to climate change. For that reason, UD Trucks is constantly improving the fuel efficiency of its trucks. Like other truck manufacturers in Japan, UD Trucks has been subject to stricter fuel efficiency standards for heavy-duty vehicles since 2015, with specific targets set for each weight class. Over 98% of all trucks sold by the Company in 2018 complied with these targets, reflecting its efforts to equip trucks with leading-edge fuel-saving technologies. UD Trucks has also achieved its own targets for average fuel consumption since 2012.

In addition to pursuing technical innovations for improving fuel efficiency, UD Trucks has been holding eco-driving seminars for truck drivers in every region of Japan to offer practical advice and tips on driving more efficiently.

### Material flow



The main environmental impacts of trucks over the entire product life-cycle are due to emissions of CO<sub>2</sub> and exhaust gases containing particulate matter (PM) and nitrogen oxide (NOx) at the product usage stage.

# Improving fuel efficiency with industry-leading technologies

UD Trucks has continually improved the fuel consumption of its heavy-duty trucks by equipping them with a wide range of industry-leading technologies, including in-vehicle displays for advising drivers, optimally designed engine systems, and advanced functions for precisely controlling driving speed. Indicating the effectiveness of these technologies, compared with Japan's fuel efficiency standards for heavy-duty vehicles set in 2015, the Company's flagship Quon heavy-duty truck beat targets by over 5% in over 90% of tests.

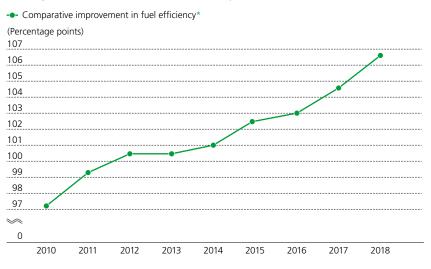


The Quon's driveline is designed to improve fuel efficiency

#### Major technologies applied in heavy-duty trucks

Vehicle	<ul> <li>Fuel Coach system for advising drivers on fuel-efficient driving</li> <li>Foretrack function for predicting the road ahead based on scanned data</li> <li>Aerodynamic designs including front bumper-fitted air dams and newly developed wind deflectors</li> </ul>
Engine	<ul> <li>Ultra-high-pressure fuel injection systems</li> <li>Optimally shaped combustion chambers</li> <li>Optimally designed induction systems</li> <li>Variable speed water pumps</li> </ul>
Power train	<ul> <li>ESCOT Roll system for minimizing the decline in speed when coasting</li> <li>Acceleration limiter for ensuring gradual speed increases</li> <li>Soft Cruise Control function for controlling acceleration</li> </ul>

#### Average improvements in fuel efficiency of UD-brand trucks



\* The percentages were calculated using the harmonic average of the fuel efficiency achieved by medium- and heavy-duty trucks sold each year, with the base year of 2015 set as 100%.

# Chemical substance management

UD Trucks strictly manages the chemical substances used in its products, specifically those included in the Global Automotive Declarable Substance List, in accordance with industry standards and laws concerning the production, import, management, and recycling of chemical substances.

# Managing chemical substances before and during manufacturing

At the product development and design stage, UD Trucks determines what chemical substances will be used at the manufacturing stage, including chemicals used by suppliers. It then registers relevant data with the International Material Data System, a database jointly managed by automobile manufacturers worldwide.

At the production stage, UD Trucks reports to the government each year on its usage of chemicals subject to Japan's Pollutant Release and Transfer Register, which is a system for restricting and controlling the discharge of designated chemicals into the environment. The Company also makes efforts to replace hazardous chemicals with less harmful alternatives, and properly comply with revisions of relevant laws or regulations.

# Helping the Volvo Group reduce CO<sub>2</sub> emissions

In 2011, the Volvo Group became the first automobile manufacturer to join Climate Savers, a World Wildlife Fund (WWF) initiative that brings global corporations together in effort to reduce greenhouse gas emissions. The Group then set the goal of reducing CO<sub>2</sub> emissions from its factories by an average of 12% by 2014 compared with its result in 2008. The Group exceeded its target early, cutting emissions by 20% in 2013. Riding that momentum, the Volvo Group stepped up its efforts and set a new target of reducing emissions by 8% over the 2013 result by 2020.

To help achieve this goal, UD Trucks has established a number of committees comprised of members of all relevant divisions, including a committee charged with saving energy, to set targets and formulate action plans. In 2013, the Company succeeded in reducing CO<sub>2</sub> emissions by 61.3% compared with the 1990 result, beating its target of 39% by a wide margin. Building on that track record, UD Trucks is currently working to offset growth in emissions resulting from rising production volume to help the Volvo Group achieve its 2020 target.

# Reducing waste matter at the product disposal stage

The final disposal of a truck at a dealer's site accounts for the largest amount of waste matter during the product life-cycle. For that reason, UD Trucks has



Workplace recycling areas are set up on each floor of the head office building

established its own waste-management system and created waste sorting management standards for all of its dealers in 2014. In accordance with the standards, each dealer has installed disposal facilities and properly sorts waste materials during truck disassembly and disposal. In addition, the Company delivers service parts in returnable packages to dealers to facilitate the reuse of materials.

UD Trucks looks for ways to make disassembly work easier and use resources more efficiently starting from the product development stage. For example, bumpers are designed to be simply disassembled into three components, headlights can also be easily dissembled into interchangeable lens and LED units, and fenders are made from recyclable materials.

At the production stage, UD Trucks

works to reduce and recycle waste matter with the goal of minimizing the amount of waste it disposes in landfills. In 2018, the Company reduced the volume of waste sent to landfills by 99.9% compared with the amount in 1990, and achieved its target of limiting landfilled waste to under 1% of total waste generated.

In order to improve its waste management system, UD Trucks concluded a consulting agreement with a company that specializes in waste disposal in April 2015. Through this partnership, UD Trucks has been using only highly reputable disposal firms, administering and submitting all necessary reports to government agencies, and keeping records on the amount of waste disposed in an effort to strictly comply with laws and regulations concerning waste management.

# Environmental event held for community leaders

In November 2018, UD Trucks invited 11 officials from a neighborhood association near its head office in the city of Ageo to a meeting about the environment. At the meeting, employees explained measures for reducing environmental impact at the Company's Ageo plant and head office building, and presented plans for developing more environmentally conscious products. The officials expressed their appreciation for being given the opportunity to learn about how UD Trucks considers the local environment in its business activities, and their desire for it to actively contribute to the community and environmental conservation in the future as a good corporate citizen.



# **Environmental performance data**

# History of ISO 14001 certification by plants and subsidiaries

1988	Ageo Plant
2004	Kounosu Plant (Sold to Global Component Technologies Corporation in January 2015)
2004	Hanyu Plant (Sold to UniCarriers Corporation in March 2016)
2005	DRD Co., Ltd. (Sold to Persol Tempstaff Co., Ltd. in June 2013)
2005	Techsus Co., Ltd. (Acquired by UD Trucks Corporation in July 2013)
2006	N-Tech Co., Ltd. (Sold to Kihara Manufacturing Co., Ltd. in March 2015)
2008	Japan Vehicle Co., Ltd. (Acquired by UD Trucks Corporation in July 2011)
2009	Volvo Logistics Corporation Japan Co., Ltd. (Acquired by UD Trucks Corporation in April 2014)

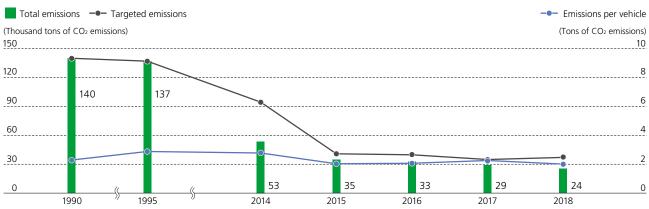
#### PCBs used at the Ageo Plant in 2018

Equipment containing PCBs	Weight* (kilograms)
Capacitors	2,804
Ballasts	25,367
Transformers	800**
Total	28,971

\* The figures include estimated amounts. \*\* The weight includes the transformer unit.

### **Energy and CO<sub>2</sub> emissions**

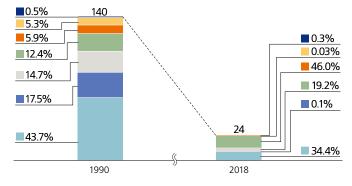
#### CO<sub>2</sub> emissions



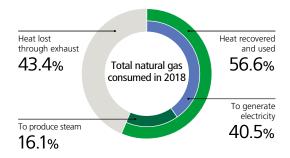
### CO<sub>2</sub> emissions by energy source

📕 Electricity 📕 Heavy oil 📃 Coke 📕 Diesel oil 📕 City gas Liquified petroleum gas 🚺 Other

(Thousand tons of CO<sub>2</sub> emissions)

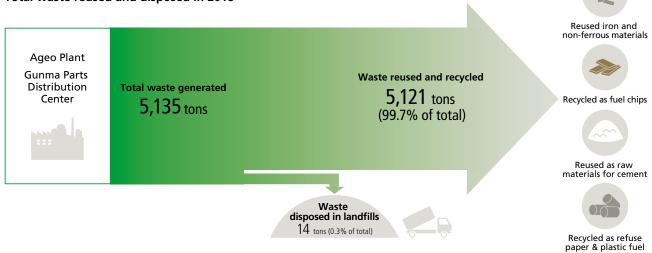


#### Heat usage from large-scale natural gas cogeneration systems



#### Resources

Total waste reused and disposed in 2018



# Amount of total waste disposed and percent reused or recycled

Waste disposed in landfills --- Target\* Percent of total waste reused or recycled (Tons of waste) (Percent) 20,000 100 99.8 89.4 99.7 99.8 99.7 99.7 2,000 80 68.5 1,000 60 100 40 19,268 2,273 50 20 0 22 21 **1**4 13 **1**6 0 2014 1990 1995 2018 2015 2016 2017

\* UD Trucks began setting ambitious targets in 2004 following initiatives for recycling and reducing waste implemented by the Japan Automobile Manufacturers Association.

#### Water consumption

Total water consumed	Water consumed per vehicle produced
(Thousand cubic meters of water) 2,500	(Cubic meters of water) 100
2,000	80
2,070	60
1,643	40
500	20
0 (( ((	382 317 340 <sub>0</sub>
1990 1995 2014 2015 20	016 2017 2018

### Regulated chemical substances handled by the Ageo Plant in FY2018

Kilograms per year Emissions Mileage Regulation Volume Disposed or Consumption Chemical substance Recycled handled number processed by products Atmosphere Waste Water Soil 53 Ethylbenzene 16,633 6,475 0 0 0 1,876 8,196 86 80 Xylene 30,982 9,369 0 0 0 2,043 19,124 446 296 1,2,4-Trimethylbenzene 2,191 1,102 0 0 0 524 0 564 297 3,491 1,3,5-Trimethylbenzene 4,124 483 0 0 0 41 109 1,244 300 Toluene 6,153 4,062 0 0 0 85 763

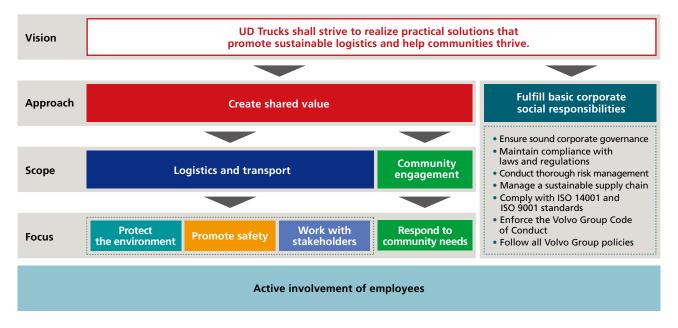
Amounts shown in the graphs for energy and CO<sub>2</sub> emissions as well as resource-related data are combined results from the Ageo Plant and Gunma Parts Distribution Center. Amounts shown in the graphs for water consumption and total waste disposed and percent reused or recycled, however, include results from other plants up to fiscal 2017.

# Our CSR framework

UD Trucks has created its own framework for fulfilling its corporate social responsibility (CSR) and guiding related activities in a focused and systematic manner. The purpose of this framework is summed up by the Company's vision of providing practical solutions that promote sustainable logistics and help communities thrive. Toward that end, UD Trucks is aiming to create shared value with stakeholders and the communities it serves by working with them to overcome challenges. The Company focuses on community engagement as well as logistics and transport, the industry most closely linked to its business, while drawing on its know-how, technical expertise, human resources and network of facilities to make positive and lasting contributions. Within the industry, it makes concerted efforts to protect the environment and promote safety while working together with stakeholders.

At the same time, UD Trucks works to fulfill its basic corporate responsibilities across all of its business activities. Accordingly, it carries out measures to ensure sound corporate governance, strengthen compliance with laws and regulations, maintain management systems certified by the International Organization for Standardization (ISO), and closely follow the Volvo Group Code of Conduct and other important group policies.

This framework was designed to comply with the Volvo Group's CSR policies and reflect the Company's business strategies and brand characteristics. Under the framework, UD Trucks encourages its employees to become actively involved in a wide range of CSR initiatives.



# The Volvo Group Code of Conduct

Aiming to ensure that its business activities are carried out ethically and in compliance with the laws of every country it operates in, the Volvo Group has specified basic principles and conduct for all employees around the world to follow in the Volvo Group Code of Conduct. UD Trucks has been taking a variety of measures to maintain an in-depth awareness of the code among all of its members, such as producing and distributing promotional posters and a handbook that explains exemplary cases related to the code. Articles about the code and videos of panel discussions on related topics among managers and representatives from various Company departments are also featured on UD Truck's intranet.



A poster promoting the Volvo Group Code of Conduct



# **CSR** management system

At UD Trucks, social contribution activities are overseen by the manager in charge of CSR and environmental management. This manager along with the managers in charge of corporate communications and brand management, respectively, comprise the Company's CSR senior management team. In addition to coordinating CSR activities across all divisions and compiling information on those activities, the team formulates CSR-related strategies and plans as well as initiatives for raising awareness of the Company's social contribution activities among employees and the public. To ensure these strategies and plans are consistently implemented company-wide, CSR managers are appointed in each division, and they jointly hold regular meetings to share inter-divisional information and plan specific activities. They report on the progress of these activities to executive management, and receive instructions, resolutions, and approvals from executive managers.

# Systems for ensuring compliance

UD Trucks carries out its business activities based on the Volvo Group Code of Conduct, which is organized under the five key principles of respecting one another, earning business fairly and lawfully, separating personal interests from business activities, safeguarding company information and assets, and communicating transparently and responsibly. UD Trucks regularly offers training and e-learning courses for employees and managers

# **Risk management**

At UD Trucks, efforts to strengthen risk management are led by the Security Management Division. Tasked with a diverse range of responsibilities, the division oversees the safety of employees and visitors at all workplaces, safeguards confidential information and intellectual property, handles emergency response activities,

# Information security

Based on the Volvo Group's information security policies, UD Trucks has taken measures for maintaining the security of its information and data, and has been putting an information security governance system in place. To guard against an information system breakdown caused by a disaster, the Company stores and manages electronic information at an earthquake-resistant data center in addition to its head office. It has also stepped up



in order to ensure that all members understand these principles of the code. It also provides training courses specifically for new employees as well as personnel in charge of certain duties.

Furthermore, UD Trucks has also set up an internal whistleblower system and audit program for facilitating prompt and proper responses to any cases of wrongdoing or suspicious actions.

formulates crisis management and business continuity plans, and makes preparations for resuming operations in the event of a disaster. UD Trucks has been maintaining safe and secure operations thanks to the division's ongoing efforts to identify risks and takes proactive steps to prevent them from materializing.

measures for preventing data breaches resulting from cyber-attacks, and regularly provides training sessions on improving information security to its dealers nationwide. In addition, UD Trucks strictly manages and protects all personal information it possesses in accordance with the Volvo Group's privacy policies. UD Trucks is a leading Japanese commercial vehicle solutions provider, active in more than 60 countries on all continents. Since its inception in 1935, the company has been an innovation leader with a clear vision to provide the trucks and services the world needs today. The company is committed to go the extra mile for smart logistics with the most dependable solutions for all customers.

# **Company overview**

(As of October 1, 2018, unless otherwise stated)

Company name	UD Trucks Corporation
Date of foundation	December 1, 1935
Head office address	1-1, Ageo-shi, Saitama 362-8523, Japan
Capital	77.5 billion yen
Number of employees	6,188 employees including contract and temporary employees (as of December 31, 2018)
Main business	Japanese business Development, manufacture, export, and sales of heavy-duty trucks; sales of medium- and light-duty trucks; manufacture and sales of vehicle components; maintenance and sales of service parts for trucks and buses; import and sales of Volvo brand products.
	Businesses outside of Japan Development, manufacture, and sales of heavy-, medium-, and light-duty trucks for growth markets; manufacture and sales of vehicle components; maintenance and sales of service parts for trucks and buses.
Domestic group companies	VFS Japan Co., Ltd.; New-Mech Co., Ltd.
Main locations outside of Japan	UD Trucks Singapore Office; UD Trucks Bangkok Plant; parts distribution centers in Singapore, the United Arab Emirates and South Africa

# Officers



representative director

Joachim Rosenberg Executive chairman and



Takamitsu Sakamaki President and representative director



Jan Gurander Director



Masahiro Otsuki Auditor



Asia	16,221
Africa and Oceania	4,034
South America	319
Total	20,574

# **Products sold by UD Trucks**



#### **UD Trucks brand trucks**

Quon heavy-duty truck, Condor medium-duty truck, and Kazet light-duty truck for the Japanese and other mature markets, and Quester heavy-duty truck, Croner medium-duty truck, and Kuzer light-duty truck for growth markets



#### Volvo trucks

Imported Volvo brand heavy-duty trucks, particularly the Volvo FH lineup of 4×2 and 6×4 tractors for the domestic market



#### Volvo Penta engines

Imported Volvo Penta brand industrial and marine engines for the domestic market, including forklift and pleasure craft engines, and installation and technical support for original equipment manufacturers



#### Volvo construction equipment Imported Volvo brand construction equipment, including wheel loaders and articulated dump trucks for the domestic market

UD Trucks is a member of the Volvo Group, a global enterprise headquartered in Gothenburg, Sweden. The Volvo Group manufactures trucks, buses, construction equipment, and marine and industrial engines, while also providing financial services. Employing about 100,000 people worldwide, the Group manufactures its products at factories in 18 countries and sells them in more than 190 markets.

### Volvo products in everyday life



The Volvo Group's products help ensure that people have food on the table and roads to drive on. Its vehicles enable people to travel to their destinations and deliver goods to keep production plants running.



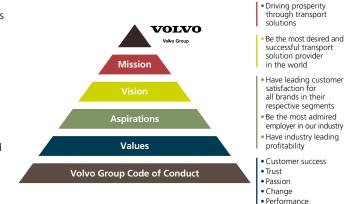
The Volvo Group's engines, machines and vehicles can be found at mining and construction sites and in the middle of forests.



The Volvo Group's products are a part of daily life. They take people to work, distribute goods, and collect rubbish. The Group is developing tomorrow's public transport solutions with an increased focus on electrification.



The Volvo Group's products and services are present at sea, whether one is at work on a ship, on holiday on a pleasure boat, or in need of urgent help from sea rescue services.



### Volvo's basic approach to CSR

"Driving prosperity through transport solutions" is the Volvo Group's mission. To fulfill it, the Group has formulated a vision backed by specific aspirations for all of its members. To foster a corporate culture underpinning this future direction, Volvo Group is promoting values for every employee to share and integrate in all operations, with a view to grow its business while helping make the world more sustainable.

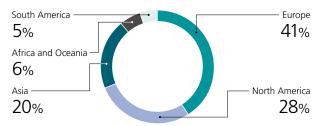
In addition, the Volvo Group has created a Code of Conduct that specifies basic principles and conduct for all employees to follow, and clearly explains business ethics and compliance-related issues relevant to all business activities.



#### **Results of key performance indicators in 2018**

SEK: Swedish krona. The US dollar to SEK exchange rate averaged approximately 0.10 dollar per SEK in November 2019.

#### Share of net sales by market



#### Share of net sales by revenue type



# **UD Trucks Corporation**

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