TOYOTA

TOYOTA MOTOR CORPORATION

Integrated Report 2022

Integrated Report 2022

Fiscal year ended March 31, 2022

The *Integrated Report 2022* is intended to communicate to stakeholders Toyota's policies and strategies for addressing management issues to achieve its vision for the future. More detailed information is available from the Toyota Times website as well as Toyota's other reports and websites.

(Published November 2022)

Toyota's Reports and Publications

Integrated Report	
Toyota Times website ▶	
Securities Reports/SEC Filings	Sustainability Data Book
Financial Results/Operating Results	Corporate Governance Report
IR section of Toyota's website ▶	Sustainability section of Toyota's website ▶
Financial ◀ ·····	····· ▶ Non-financial

Period Covered

FY2022 (April 2021 to March 2022). Some initiatives in FY2023 (April to November 2022) are also included.

Scope of Report

Initiatives and activities of Toyota Motor Corporation and its consolidated subsidiaries, etc., in Japan and overseas

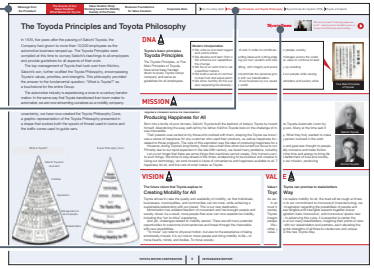
Reference Guidelines

This report was prepared with reference to the International Integrated Reporting Framework issued by the IFRS Foundation.

About the PDF

This file is an interactive PDF and can be navigated by clicking on the following elements.

Main menu	Jump to the beginning of each of the report's main sections
Sub-menu	Jump to specific parts within each section
Icons	Each section contains ❗ icons that link to related pages of the report as well as ▶ and ToyotaTimes icons that link to relevant web pages online. * Requires an internet connection.



Contents

Message from the President

I Believe in a Mobility Future That Only Carmakers Can Create

We are living in an era in which it is hard to predict the future. On top of the recent international tensions, strained supply of semiconductors, and soaring material prices, the CASE revolution is driving a transformation of car making itself. Steering our business forward has never been more challenging.

Amid these turbulent conditions, for the future of the planet and generations to come, all of industry, indeed, all of humanity must work to address the task of creating a carbon-neutral world.

I began efforts toward this end by advocating for a proper understanding of carbon neutrality.

“Carbon is our enemy, not the internal combustion engine or a particular powertrain.”

“We must reduce CO_2 emissions in all processes of producing, transporting, and using energy.”

“It’s important to pursue carbon neutrality based on each country’s energy and infrastructure situation while keeping open an array of technological options to accelerate CO_2 reduction and zero emission efforts.”

I have continued to emphasize these core points. To move forward, I think that, above all, we must put aside our doubts and just take action.

This is certainly true for the development of hydrogen engines. Hydrogen engines are far from ready for commercial release, but we have been striving to accelerate development by honing them on the front lines of motorsport. The development of hydrogen engines could allow us to leverage our wealth of internal combustion engine and, in turn, protect the jobs of our colleagues who have dedicated so much to their work with engines.

This approach is only possible because our engineers were quietly and diligently advancing cross-company development since long before the term “carbon neutral” became as common as it is now. I had just one message for them: Don’t stop because the future is unclear; because the future in unclear, give it a try.

Such efforts are not confined to hydrogen engines. At any given moment, numerous engineers are grappling with new, unprecedented technologies across Toyota.

My mission is to explore the path forward to the future while protecting jobs and the livelihoods of our stakeholders. At Toyota, we do not want to leave anyone behind. That is why we are striving to extend the range of our technological options by leveraging the achievements of our engineers, including those who came before us.

The Importance of Car Making Stories

Over the past 13 years, I have been working to return Toyota to its origins, the philosophy of “producing happiness for all.”

“Let’s make ever-better cars.”

“Let’s aim to be best-in-town, rather than being the best in the world.”

“Let’s work for the sake of others.”

Photographs by Noriaki Mitsuhashi / N-RAK PHOTO AGENCY

I have repeated these messages and demonstrated Toyota's philosophy and skills through action at the *genba* (the front lines) time and again, both as president and as a master driver.

By pursuing a best-in-town approach, we better understand what makes our customers and stakeholders happy and what doesn't.

By focusing on making ever-better cars, we discover the limits of what we can do by ourselves. We realize that, from development to after-sales, a car has a useful life spanning more than 20 years that is profoundly intertwined with the lives of our customers.

By bringing car development into the world of motorsport, the demanding conditions of racing allow us to hone both vehicles and people. I have always felt it important to place car making within the context of such stories. To me, our customers and stakeholders are the protagonists of these stories, along with every individual working at Toyota's *genba*.

Change at Toyota Is Apparent at the *Genba*

Our products, above all else, are the tangible manifestation of the ways Toyota has changed. Today, Toyota offers a wide variety of products that have become the preferred choice of customers around the world. I believe this is because the people working at Toyota have changed.

Toyota's efforts at the *genba* are underpinned by the many people, both inside and outside the Company, who have provided support to ensure the success of each new project. These diverse professionals work tirelessly, acting with mutual respect, sharing expertise, and making steady improvements to deliver ever-better cars to customers as quickly as possible.

Through these efforts, our colleagues strive to fulfill the philosophy of "producing happiness for all" using the time-honored skills of the TPS. I am grateful for such dedication, which I see as a clear sign of real change at Toyota.

A Mobility Future That Only Carmakers Can Create

Toyota is now transforming into a mobility company. Our products and services may change in the future, but, even so, I believe in a mobility future that only carmakers can create.

When asked what we do, I want Toyota members to respond with pride, confidence, and ambition: "I make cars." I see my mission as nurturing such individuals by passing on the legacy of Toyota's skills and philosophy.

We have reached this point after long years of struggle thanks to those who have supported us through both good and difficult times.

We would not have been able to change without the understanding and backing of our stakeholders.

"The future is something we create together."
"An industry united as one."
Based on these principles, we will continue to blaze the trail forward to the future with our many partners and colleagues.

Our Founding Spirit: For the Sake of Others

Sakichi Toyoda Sought to Ease His Mother's Burden

Sakichi Toyoda, the founder of the Toyota Group, was born the son of a carpenter in the village of Yamaguchi, now part of Kosai City, Shizuoka Prefecture, in 1867. Full of curiosity, Sakichi is said to have spent his early years reading a wide range of books, thinking about how he might make a contribution to society. One day, Sakichi was thinking about his mother, and how every evening she toiled at her loom, weaving fabric late into the night. He wondered if there might be a way to make her work easier. At the time, weaving was a laborious process, requiring the use of both hands and legs to control the threads of warp and weft in sequence. At the age of 23, Sakichi invented his first loom, the Toyoda Wooden Hand Loom, which could be operated with only one hand and greatly increased efficiency. He patented the loom in May 1891.

Seeking to more dramatically increase capacity, Sakichi turned his attention to developing a powered loom and invented Japan's first, the Toyoda Power Loom, for which he received a patent in August 1898.

Sakichi continued to invent and improve looms for more than two decades. This work came to head with the Non-Stop Shuttle Change Toyoda Automatic Loom, Type G, invented in 1924 in collaboration with his son, Kiichiro.

At the time, automatic looms had to be constantly watched over by human operators so that they could intervene when unpredictable anomalies, such as threads breaking, occurred. The Type G automatic loom used a mechanism to detect anomalies like running out of or breaks in the thread, stopping automatically in response.

Furthermore, the Type G automatically changed the loom's shuttle when the thread was close to running out. When changing the shuttles holding the weft thread, operators previously had to use their mouths to suck the end of the thread through the eye of the shuttle, inhaling cotton dust, which caused problems in the lungs of many workers. Sakichi, Kiichiro, and the colleagues invented a way to pull the thread through using a simple manual action that took advantage of the thread's tension.

The drive to serve others and make their work easier—like Sakichi's desire to ease the burden of his mother and employees—was carried on by his son Kiichiro and remains a core value of Toyota today.

The Type G automatic loom was said to boast the best performance of any loom in the world, improving productivity more than twentyfold and dramatically increasing textile quality. The success of the Type G empowered Kiichiro Toyoda to take on the challenge of establishing a Japanese automotive industry, which many at the time, more than 80 years ago, considered beyond the capabilities of Japanese industry. This was the work to which he would dedicate the rest of his life.

Making Domestic Cars and Establishing a Japanese Auto Industry

Kiichiro Toyoda, the son of Sakichi, was born in 1894. After graduating from college in 1921, he went to work at Toyoda Boshoku, his father's company, and traveled to Europe and the United States for the first time. In the 1920s, the streets of the United States were teeming with Ford Model Ts. The automotive era was dawning. In Japan, the number of imported automobiles was gradually rising, but their use was confined to the very wealthy.

Kiichiro was already determined to produce domestic cars and establish a Japanese auto industry. In 1926, Kiichiro was named managing director of the newly established Toyoda Automatic Loom Works, Ltd. and began studying automobiles in earnest. The company established an automotive department in September 1933 and in 1934 officially entered the automotive business, completing its first engine prototype.

In 1935, the first Toyoda Model A1 prototype passenger car was completed, and the Toyoda Model G1 Truck was announced. The very next year, in 1936, mass production of Model AA passenger cars commenced. Toyota Motor Co., Ltd. was established in 1937, with Kiichiro becoming its president in 1941.

Management Crisis, Labor Disputes, and Commitment to Providing Employment

In post-war 1949 Japan, measures to curb inflation rapidly stabilized prices, but the resulting reduction in the money supply plunged industry into serious funding shortages, triggering the so-called "Dodge Line Recession." The prices of iron, steel, and other materials rose, but the officially fixed price of automobiles stood unchanged, causing the profitability of the automotive industry to decline significantly.

In December of that year, Toyota Motor Co., Ltd. and its labor union signed a memorandum aimed at cooperating to overcome the crisis, stating that the Company was at all costs to avoid job cuts as a means of overcoming the crisis. Kiichiro had faced employment issues at Toyoda Automatic Loom Works during the Showa Depression in 1930 and was determined to never again allow such a situation to arise. His entry into the automotive industry had been in part a strategy to diversify and thereby avoid the recurrence of employment problems, so he was, of course, resolved to avoid job cuts at all costs in the face of the 1949 business crisis.

In January 1950, negotiations with the Bank of Japan began on the Toyota Motor Co., Ltd. reconstruction plan. In April of that year, Toyota Motor Sales Co., Ltd. was established to resolve the problem of delays in payments for vehicles, a major cause of the Company's financial troubles. Far from improving, however, the situation worsened further. As the Company's business results showed no sign of improvement, labor-management negotiations with the Toyota Motor Co., Ltd. labor union deteriorated into a protracted dispute. During collective bargaining that April, the Company made reconstruction proposals centered on job cuts that the labor union could not accept, and the dispute continued for another month and a half until a memorandum was finally signed in June.

Accepting responsibility for the labor disputes, Kiichiro Toyoda resigned as president of the Company in May 1950. In March 1952, he agreed to make his much-awaited return to the position, but, before he could do so, he passed away at the age of 57. Nevertheless, his aspirations were kept alive by his colleagues, who persevered with purely home-grown technologies as other Japanese automakers were forming technology alliances with U.S. and European manufacturers. These efforts led to the 1955 launch of the Toyopet Crown, the first passenger car to be developed and built entirely in Japan, a long-held dream of Kiichiro Toyoda.

The Spirit of Sakichi and Kiichiro Toyoda

Born into a poor family, Sakichi Toyoda was driven to make others' work easier, teaching himself in order to invent automatic looms and going on to build Toyota's foundations. Not content to simply follow the easy path set by his father, Kiicihro Toyoda took on the challenge of domestic car-making, which many at the time said was impossible, navigating tremendous social changes as he built the Company and the foundations of Japan's automotive industry. The spirit they embodied—of striving to stay ahead of the times and endeavoring to be studious and creative for the betterment of lives and society—lives on in Toyota today. It is the core of what makes us Toyota.

Sakichi's first invention: The Toyoda wooden hand loom (photo provided by the Toyota Commemorative Museum of Industry and Technology)

Type G automatic loom

Model A1 passenger car prototype completion ceremony

The Toyoda Principles and Toyota Philosophy

ToyotaTimes With an eye toward "Producing Happiness for All" - Selections from the Q&A session of Toyota's 1H/2Q financial results briefing

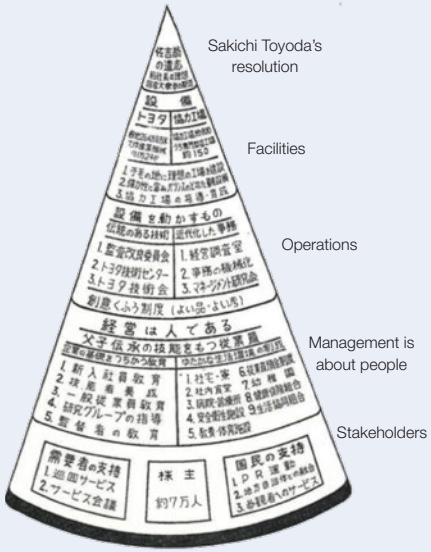
In 1935, five years after the passing of Sakichi Toyoda, the Company had grown to more than 10,000 employees as the automotive business ramped up. The Toyoda Principles were compiled at this time to convey Sakichi's teachings to all employees and provide guidelines for all aspects of their work.

The top management of Toyota that took over from Kiichiro, Sakichi's son, further codified the Toyota Philosophy, encompassing Toyota's values, priorities, and strengths. This philosophy provided the answer to the fundamental question, "What is Toyota?" as a touchstone for the entire Group.

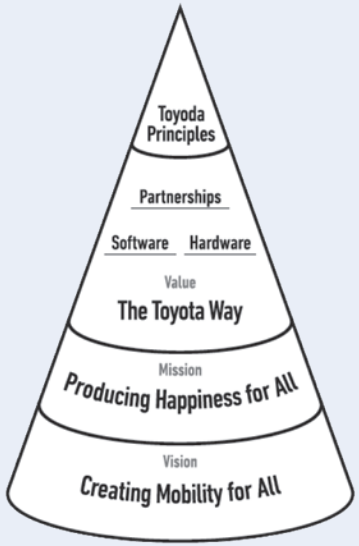
The automotive industry is experiencing a once-in-a-century transformation. In the same way that Toyota transitioned from loom maker to automaker, we are now reinventing ourselves as a mobility company.

To guide us as we push forward into the future amid an era of uncertainty, we have now created the Toyota Philosophy Cone, a graphic representation of the Toyota Philosophy presented in a shape that evokes both the spools of thread used in looms and the traffic cones used to guide cars.

What is Toyota?



Toyota Philosophy Cone



DNA

Toyota's basic principles

Toyoda Principles

The Toyoda Principles, or Five Main Principles of Toyoda, have since been handed down to every Toyota Group company and serve as guidelines for all employees.

Modern Interpretation

- We unite as one team regardless of rank in order to contribute to our people, society, and communities.
- We develop and learn from outstanding ideas and cutting-edge technologies across the world. We enhance our capabilities utilizing our own wisdom and create new value to continue to lead the change.
- We focus on work that is value-adding, with integrity and practicality, by avoiding superficial matters.
- We build a sense of community and promote the personal growth of our people while valuing mutual trust and equal partnership with our stakeholders.
- We show humility for the support of our business by our valued stakeholders and society while also respecting the diversity of the world.

Five Main Principles of Toyoda

MISSION

Toyota's mission since its foundation

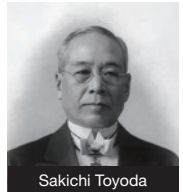
Producing Happiness for All

Born into a family of poor farmers, Sakichi Toyoda built the bedrock of today's Toyota by inventing the Toyoda Automatic Loom by himself. Abandoning the easy path left by his father, Kiicihro Toyoda took on the challenge of making cars. Many at the time said it was impossible.

Their passion was carried on by those who worked with them, shaping the Toyota we know today. What they truly wanted to make was a sense of happiness for any customer who used their products, as well as happiness for every person involved in the work related to those products. The core of this aspiration was the idea of producing happiness for all.

However, during Toyota's long history, there was a brief time when we turned our focus to numbers and gave less thought to people. Primarily due to our rapid expansion in the late 20th century, we faced many problems, including quality concerns and trade friction.

Let us not forget that there are some things that machines cannot create. Only humans can invest the time and energy to bring life to such things. We strive to stay ahead of the times, endeavoring to be studious and creative for the betterment of lives and society. Using our technology, we work toward a future of convenience and happiness available to all. This is our mission, producing happiness for all, and the core of what makes us Toyota



Sakichi Toyoda

Kiichiro Toyoda

VISION

The future vision that Toyota aspires to

Creating Mobility for All

Toyota strives to raise the quality and availability of mobility, so that individuals, businesses, municipalities, and communities can do more, while achieving a sustainable relationship with our planet. This is our new destination.

Motorization has enabled freedom of movement and has brought people and society closer. As a result, more people than ever can now experience mobility, including the "fun to drive" experience.

And yet, challenges related to mobility persist. There are still many potential opportunities to overcome inconveniences and break through the impossible with new possibilities.

"To move" can refer to physical motion, but also to the experience of being emotionally moved. It is our role to move people and bring mobility to life—to move hearts, minds, and bodies. To move society.

VALUE

Value that Toyota can promise to stakeholders

Toyota Way

As we work to realize mobility for all, the road will be rough at times.

In addition to our commitment to *monozukuri* (manufacturing), we must foster imagination regarding the possibilities of people and society. These tangible and intangible aspects together power Toyota: imagination fuels *monozukuri,* and *monozukuri* sparks new imagination. In advancing this cycle, it is essential to center the perspectives of our many stakeholders, imagining their points of view.

We work with our stakeholders and partners, each elevating the other, uniting the strengths of all three to create new and unique value. This is the new Toyota Way.

Toyota Production System (TPS)

Toyota Times


What is the Toyota Production System? Akio Toyoda's View

In May 2020, at Toyota's financial results briefing, President Akio Toyoda reflected on the efforts the Company had made over the previous few years, saying:

> "Over the past few years, we came to feverishly engage in both a fight to bring back **what makes us Toyota** and the complete redesign of Toyota for the future."

Revisiting messages President Toyoda gave starting from a few years ago, two of the things he repeatedly has said that makes us Toyota are the Toyota Production System, or TPS, and cost reduction.

In August 2020, at Toyota Motor Corporation in Japan, a new training program was started to nurture a select group of "TPS leaders" from various divisions across the Company. To emphasize the importance of the program and to share his own thoughts about TPS, President Toyoda joined the kick-off session.

1. Sakichi Toyoda Sought to Ease His Mother's Burdens

This training program was created for Toyota's management leaders who don't work at manufacturing front lines to gain a deeper understanding of TPS in order to help the Company accelerate its efforts to bring back the essence of what makes it Toyota as it looks to completely redesign Toyota for the future.

Toyoda
I was a little concerned to hear today's participants' statement of determination to "change Toyota any way possible by utilizing what's learned and obtained through this program."

There are two key concepts deeply rooted in Toyota since its foundation, or even before then. Does anyone know what they are?

Participant A
I think they are "Just-in-Time" and "automation with a human touch," or "*Jidoka*."

Toyoda
That's it! That's what I wanted to hear! (everyone laughs)

That's why I volunteered to be the lecturer today to help kick off the TPS training program. Hopefully, I can help narrow the gap between my understanding of *Jidoka* and Just-in-Time and yours.

First of all, let's talk about *Jidoka*. It'll be easier to explain the concept by first looking at the automatic loom invented by Sakichi Toyoda. Thinking about his mother, and how she toiled to weave fabrics every evening and late into the night, the young Sakichi wondered if there might be a way to ease her burden.

When Sakichi developed his first automated loom, both hands were used to control the threads of warp and weft. His invention allowed his mother to operate a loom using only one hand. It also helped improve quality, increasing overall efficiency and dramatically improving productivity.

> Often at Toyota, TPS is considered the process of making things efficient, and people talk about it as if changing work processes is TPS's purpose. But, I think the purpose should always be to make someone's work easier.

2. Improving Productivity Was Not the Main Purpose

> The Type G automatic loom is the machine that helped drive a redesign of Toyota's business. Automatic looms back then were always monitored by one operator, based on a mindset of "one person, one machine." Each person was the "guard" of their machine. This was because operators were unable to predict abnormalities.

With this automatic loom, Toyota was able to secure the capital required to shift its business model from an automatic loom manufacturer to a car manufacturer. This was because a world-leading automatic loom company in the United Kingdom asked Toyota to sell its automatic loom technology.

> The most common abnormalities that occurred when weaving fabric with automatic looms were when thread ran out or broke. The Type G was able to detect such abnormalities at a time when there were no sensors.
>
> When the thread ran out, it automatically changed to another wooden shuttle with a new thread.
>
> The shuttle needs to have the thread end out on the surface. Before this machine was invented, workers had to suck it out themselves. The problem was that there was a lot of cotton dust in the air in textile factories, which could damage workers' lungs when they inhaled deeply. Sakichi invented a new feature that automatically brought out the thread end. This invention was the result of Sakichi simply exploring a desire to do something for his team members on the manufacturing front lines who were suffering damage in their lungs.
>
> Thus, Sakichi determined what the abnormalities were and then came up with system to prevent or stop them. As a result, productivity improved—not the other way around. He did not do all this just to improve productivity.

3. How President Toyoda Sees *Jidoka* (Automation with a Human Touch)

> In my view, *Jidoka* is about being centered on people. It's about putting yourself in the shoes of someone working there. You can't just issue orders to improve efficiency or reduce resources from the safety of your position far from the front lines. Toyota also has this idea about adjusting the work per person to match the full output of one unit of manpower (pursuing *ichi-nin-ku* in Japanese).

This concept of *ichi-nin-ku* means the amount of work that one worker can or should accomplish in a day.

> We all only have 24 hours in a day. This applies equally to everyone. And employees spend a lot of that time devoted to work for a company. Knowing this, supervisors must make the work being done by team members as meaningful as possible. That is what Toyota's manufacturing front lines have been pursuing.

The focus is creating more free time for workers by eliminating waste in work processes to reduce overtime. Pursuing *ichi-nin-ku* means valuing each person's time.

4. How President Toyoda Sees Just-in-Time

A phrase that is commonly associated with the concept of Just-in-Time is "provide what is needed, when needed, in the amount needed." The key to understanding Just-in-Time is the idea of "lead time," the amount of time required for products or services to be delivered after they are ordered.

Toyoda
What comes to mind when you think about Just-in-Time?

Taking a "what is needed when needed" approach, to respond quickly to customer needs, there would need to be a lot of inventory, right? One finished vehicle consists of about 30,000 parts. So, it would follow that for a production line to flexibly produce orders quickly, a tremendous amount of inventory would need to on hand, right?

Participant B
But if we know and can meet what customers want...

Toyoda
Who do you mean by "customers"?

Participant B
Each downstream process... or our final end users.

Toyoda
But we sell around 10 million new vehicles annually, and that means we have the same number of customers. How can we understand what is needed by each specific customer? We can't, so instead, we have to have a lean operation in place to detect abnormalities right away and halt the pipeline so that we can make improvements quickly. And that's why we need Just-in-Time.

In this way, I think the key concept that makes Just-in-Time easier to understand is "lead time."

At Toyota, a common term for the next process in a workflow, whether it be in manufacturing or in an office, is "downstream process." Those in the downstream are considered a "customer." President Toyoda was trying to convince the participants to think of "Just-in-Time" in the context of the bigger picture, to consider not only the immediate downstream, but how things relate to the company as a whole to deliver Toyota's vehicles to the end customers "just-in-time."

5. Achieving the Lead Time of a Sushi Restaurant?

> Take, for example, sushi. When you go to an authentic sushi restaurant, are the finished orders just waiting in front of the chef? I don't think so. Each piece is made to order. You can't prepare every specification in advance for 10 million customers. It's important to understand what we can't do. The key, then, is trying to shorten lead time.

Toyota and Sports

ToyotaTimes  TOYOTA TEAMS & ATHLETES

Sports Embody the Values and Corporate Culture That Toyota Cherishes

Passion for Sports Passed Down Since Toyota's Founding

Toyota's passion for sports has been a constant since the Company's founding in 1937. That same year, founder Kiichiro Toyoda organized Toyota's first sports club, the track and field club. Since then, Toyota and its athletic clubs have grown and developed together. President Akio Toyoda explains why he thinks this came to be.

"More than 80 years ago, our founder Kiichiro Toyoda created a sports club along with the Automobile Division. But what was the sports club for? The spirit of "never giving up" and the spirit of working "for the team," which encourages effort on the behalf of others—I believe these were exactly the mindsets the founding members needed as they recklessly took on the challenge of establishing an automotive industry in Japan. Kiichiro must have felt that sports could help strengthen the values they should cherish, creating Toyota as we know it today.

Sports Clubs Grow alongside the Company

Sports Clubs Grow alongside the Company

Following the track and field club, a judo club was created in 1938. As the years went on, Toyota added more sports clubs to its roster, notably soccer, rugby, and volleyball clubs. Club activities were put on hold during the war years but resumed in earnest thereafter. Four clubs, including men's and women's volleyball clubs, were established in 1946 alone, and a total of twelve were set up in the five years from then to 1951.

1951 also marked the first-ever All-Toyota Games, an event in which Toyota Group companies competed with each other through various athletic events, representing growing enthusiasm for sports activities at Toyota.

Opening ceremony of the All-Toyota Games in May 1965

In 1964, Tokyo hosted the Olympic and Paralympic Games, a proud moment for the country that led to increased popularity of corporate sports leagues and teams in Japan. Around this time, Toyota helped establish a corporate-backed sports league, the Japan League, to allow companies from across the country to come together in friendly competition. Not only did this build solidarity among Toyota's employees, it helped forge ties across Japan's economic sector. It was also during this era that Toyota started to open and operate overseas, leading to a growing international view of the world, including with regard to sport activities.

By the 1970s, Toyota had 35 different sports clubs divided among its primary working locations in Japan. For example, the Tokyo office had basketball, while track and field club was in Aichi Prefecture, where the Tahara Plant is located, and at the Higashi-Fuji Technical Center in Shizuoka Prefecture, it was soccer. Some of these clubs started to include athletes that participated regularly in worldwide competitions. Sports had taken a prominent position in the minds of employees at Toyota.

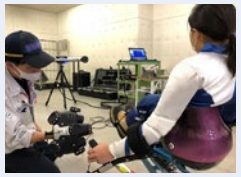
Internationally, Toyota made the decision to become the main sponsor of the Toyota Europe/South America Cup (Intercontinental Cup) soccer competition in the mid-1980s. This event brought together reigning champion clubs from the European and South American confederations in a competition to claim the distinction of the world's top club team. The event was renamed the "Intercontinental Cup" in 1984, and the "FIFA Club World Championship presented by Toyota" in the mid-2000s. Toyota continued to support the competition as its main sponsor for three decades until 2014.

Developing Sporting Equipment for the Paralympics—Seizing Opportunities to Transform into a Mobility Company Offering Freedom of Movement for All

It was around this time that the Olympic and Paralympic spirit spread to Toyota. In 2015, Toyota signed on to become the official worldwide mobility partner of the International Olympic and Paralympic Committees.

Approximately 300 Global Team Toyota Athletes from 50 countries and regions competed at the recent Olympic and Paralympic Games in Tokyo and Beijing. Toyota not only joined with Group members and partners around the world to cheer these athletes on, the Company worked with the event staff, developed sporting equipment, and supported athletes' second careers.

We believe that sports are not just about competition; first and foremost they are about bringing people together. In this spirit, we've worked with local chapters of the Special Olympics over the years, and in 2017 we became an official global partner.



The Special Olympics strives to create a better world by fostering the acceptance and inclusion of all people through sport and promotes Unified Sports, which joins people with and without intellectual disabilities on the same teams in order to build relationships of mutual understanding and support. We see the opportunity to work with Special Olympics as a way to expand our own view of the world and help create a more inclusive, harmonious society.

Sports Embody the Values of Toyota

Since its founding, Toyota has continued to believe in the power of sport to bring people together and boost morale, regardless of market conditions or the broader business challenges it faces. We are proud of the long history of our sports teams, and will continue to cherish them. The values of sport—taking on challenges, never giving up, teamwork, and respect—are also the values and corporate culture of Toyota.

Every day, across the globe, athletes demonstrate the values of humility, hard work, determination, and perseverance.

It is our admiration for these values that continues to drive us to support the creation of a more inclusive and sustainable society in which all people can start their impossible.

Making Ever-better Cars: Product-centered Management

At the November 2021 Nationwide Toyota Dealers Convention, President Toyoda Spoke About Product-centered Management.

Over the decades, Toyota has provided society with a wide range of products aimed at meeting customer needs, beginning with the Toyoda Model AA in 1936. Looking back on our history of car marking, I see two key themes.

The first is “sports cars.”

The 1960s were a key era for Toyota’s sports cars. This decade saw the birth of many sports cars that would eventually achieve legendary status, such as the Publica Sports, Sports 800, and 2000GT. Then, in the 1980s, Toyota launched the Supra, MR2, Celica, and Levin/Trueno. In this way, Toyota has created sports cars that bring together the most cutting-edge technological prowess of the era every two decades.

Why is that? I think it is because Toyota treats sports car development as the front line for developing the skills and knowledge that will be passed down as well as for human resource development. For Toyota, sports car development has been like a rite of renewal and rebirth carried out every 20 years.

Following this cycle, the next generation of Toyota sports cars should have hit the scene in the 2000s. They did not.

Around that time, Toyota was growing its vehicle sales, mainly outside Japan, and pursuing scale expansion. Amid that push, the role of its old renewal rite was forgotten, and sports cars disappeared from Toyota’s vehicle lineup.

I was not the only one who sensed how dangerous this was. Our test drivers, in fact, felt the danger more keenly than I did. I think that feeling was part of why Hiromu Naruse, then Toyota’s chief test driver, told me, very frankly, that he didn’t want to be preached to about cars by someone who didn’t know anything about them. But, he said, if I was interested, he would teach me to drive. That was the start of my journey, under the new nickname Morizo, to becoming a master driver.

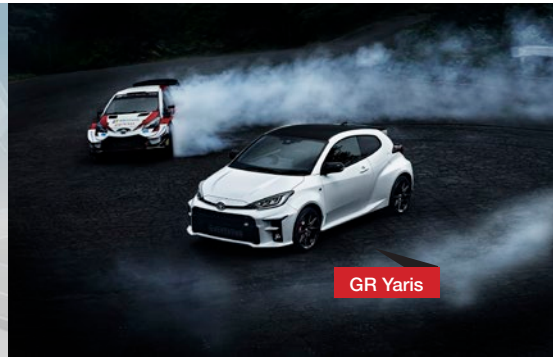
From there, though a decade late, Toyota went on to develop the LFA in the 2010s, recapturing the “secret sauce,” that flavor unique to Toyota and Lexus cars.

We went on to revive the 86 and the Supra as well, but all of these were made in collaboration with outside partners. We still wanted to once again make a sports car that would be all our own. This dream led to the development of the GR Yaris.

For years, I have constantly been talking about “ever-better car making.” Now, as the number of my colleagues taking action with me has grown, this has evolved into “ever-better car making from a starting point in motorsports.”

The second key theme is “long sellers.” Toyota’s long sellers have included the Crown and Corolla, which drove the motorization of Japan, as well as the Prius, which created the hybrid electric vehicle market. More rugged long sellers include the Land Cruiser, Hiace, and Probox. The Coaster and Century were long sellers, too. Indeed, Toyota boasts numerous models that have been beloved by customers for decades.

Despite this, when Toyota was focusing on the number of vehicles sold and making vehicles mainly for overseas markets, the position of long-selling cars within the Company shifted greatly. The Crown and Corolla began to undergo regular model changes based solely on an annual schedule, while rugged vehicles like the Land Cruiser and Hiace no longer had model changes at all. These long-selling cars had been beloved by customers and an integral part of their lives for so long, but now it was considered unimportant for them to change or evolve.



However, I believe that only by constantly changing to meet the needs of the times can a car be a long seller. We have already begun working to reclaim this approach.

The Vitz, as it was known in Japan, was unified under the name Yaris, which had taken root overseas, and we expanded its lineup to include the GR Yaris and Yaris Cross. Similarly, the Corolla lineup saw the addition of the Corolla Sport and Corolla Cross. Our strategy was to build a lineup tailored to current needs while leveraging the brand strength of our long sellers.

"Let's make ever-better cars."
This idea was the impetus for the transformation of Toyota's car making. Three pillars supported this transformation.

The first pillar, and the first that we took on, was the Toyota New Global Architecture (TNGA). To achieve excellent performance in the basic functions of a car—propulsion, turning, and stopping—a solid platform is essential.

However, creating a new platform and promoting standardization is not so easy. I found myself wishing that Toyota had moved away from the one-model, one-platform approach and implemented platform reforms while its sales volumes and revenues had been expanding.

During the very difficult time after the 2008 global financial crisis, when Toyota fell into the red and we could not increase unit sales, we all had to grit our teeth and work even harder. The fruit of this labor was a powerful tool—the TNGA.

I believe that it is precisely because we have the TNGA that we are able to restore the sports cars and long sellers that for so many years have supported the Toyota brand to their proper places and tackle the challenge of building up their lineups.

The second pillar is the in-house company system. A defining characteristic of Toyota is its full lineup of diverse vehicles that meet a comprehensive range of customer needs.

Offering a full lineup means that we must always have people who are passionate and responsible about creating cars in all genres, from sports cars to commercial vehicles. Ensuring this is the true objective of the in-house company system.

The lure of increasing unit sales and revenue in the short term is hard to resist. This is why we must nurture people and organizations capable of focusing and placing the highest priority on creating the cars that Toyota and society really need.

The final pillar is a figure at the top who can take final responsibility. It's embarrassing to say so myself, but I think that one thing that sets Toyota apart, that it has and other OEMs don't, is a master driver in top management. A president who can take responsibility for the "flavor" of the products we put out. A president who is able to definitively say "no" to projects, even ones that our development teams have worked hard on, if they don't have that unique Toyota/Lexus flavor.

Morizo, master driver, and president of Toyota.

Wearing these three hats at once, I have gone to front lines myself and worked alongside my colleagues these past 12 years. I am sure that all of that effort shows in our products.

By continuing to make ever-better cars, our brand will continue to evolve. This is what I believe to be the essence of product-centered management. It means not aiming to be the biggest in the world in terms of units sold, but aiming to be the best in town by creating better cars that bring smiles to customers' faces.

At first, when I spoke about making ever-better cars, few understood me, or tried. However, thanks to the support of my colleagues who believed in me and to the support of our dealers, I think that Toyota's products have slowly but surely changed for the better.

Going forward, we will continue to do our utmost to make ever-better cars.

I hope to convey the heart and the story of Toyota, which we put into every product, to all our dealers and as many customers as possible. Nothing would please me more than if that story were to become one of the many new stories connecting the hearts of our dealers and customers.

History of Toyota's car making
Two key words

1. Sports cars
2. Long sellers

The three pillars of ever-better car making

1. Platform reforms via the TNGA
2. In-house company system transforming people and organizations
3. A master driver in top management taking final responsibility

This Is Japan's Crown!

ToyotaTimes  President Toyoda's message to the world: "This is Japan's Crown!"

The new Crown, Toyota's flagship car, made its world premier on July 15, 2022. President Akio Toyoda spoke about the passion behind the many generations of the Crown to date and what it means to him to deliver the 16th-generation Crown—a car that represents Toyota and Japan and has undergone a major transformation from previous models—to customers around the world.

Photographs by Noriaki Mitsuhashi / N-RAK PHOTO AGENCY

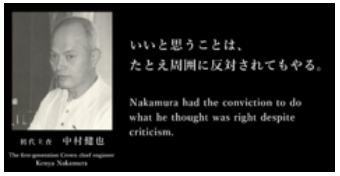
The Story of the Crown

The Crown's Foundation: Generations 1 to 3

The Crown's origin can be traced back to Toyota's founding era. 90 years ago, our founder Kiichiro Toyoda decided to take on the challenge of entering the automobile business. Driving this ambitious dream was his philosophy of enriching the lives of the Japanese people by creating a passenger car for the masses.

Production of Toyota's longed-for domestic passenger car finally began in January 1952, 15 years after the Company's founding. Kiichiro himself named the vehicle "Crown."

Appointed as the Crown's chief engineer was Kenya Nakamura. Driven by a strong sense of mission, Nakamura put all his energy into developing the Crown. He approached the task with the conviction to do what he thought was right despite strong opposition and criticism. No latest technology was ignored in the Crown's creation, including a double-wishbone suspension for the front wheels.



Reminiscing about the launch, Nakamura said, "It was like all of Japan was in the midst of a festival. When I apologized for something that wasn't good enough, customers consoled me by saying 'It's just a tiny scratch. No big deal.' It was like the whole country was giving me a boost forward."

In 1957, the Crown participated in an Australian rally, making it the first Japanese car to race in an international rally. Soon after, Toyota took another bold step by exporting the vehicle to the United States, marking its first passenger car export.

Then, in 1959, Toyota opened its Motomachi Plant specifically for producing passenger cars. Building a mass-production plant with an annual capacity of 60,000 units was a major decision, given that Japan's passenger car market was still in its infancy.

For Toyota, all its post-war challenges started with the first-generation Crown. I would say that car symbolized Japan's recovery and growth momentum.

The third-generation Crown was launched in 1967, the year that personal vehicle ownership began to take off in Japan. Kameo Uchiyamada took the reins as chief engineer after participating in the second-generation car's development under Nakamura's tutelage. Looking at cars in a parking lot, Uchiyamada noticed that lighter colors seemed to be gaining in popularity. Anticipating that more people would be using a Crown as a personal vehicle, he decided to make the third generation available in white. Widely known as the White Crown, this model became a driving force in Japan's motorization.

The years covered by the first three generations of the Crown constitute the car's foundational period.

The Crown Comes into Its Own Generations 4 to 8

Over the next two decades, the Crown matured, developing a unique presence sought out by customers.

Launched in 1971, the fourth generation adopted daring new styling for a new image in anticipation of intensified competition from foreign cars. However, partly due to quality issues, sales struggled. The lesson learned from this model, and taken to heart to this day, was this: The Crown must first and foremost meet customers' core needs.

From that point on, successive chief engineers pursued Crown development with great care to balance innovation and customer expectations. That approach to car-making bore fruit in the development of the seventh and eighth generations, led by chief engineer Kenichi Imaizumi. With its "Someday, a Crown" tagline, the seventh generation became a status symbol in Japan, followed by the eighth generation, which achieved the highest sales volume in Crown history.

I joined Toyota in 1984, and my first workplace was the Motomachi Plant. I was involved in the production preparation for the eighth generation, and I still remember how everyone took pride in their work. In the 1980s, the Crown had undoubtedly become Japan's flagship car. However, its growth peaked there. The Crown entered hard times from the ninth generation onward.

The Crown's Transformation: Generations 9 to 15

To start with, the Crown's positioning within Toyota changed. In 1989, Toyota launched the Lexus LS in Japan as the Toyota Celsior. This marked a major turning point in the history of the Crown, which had long served as Toyota's flagship car.

Then, after Japan's economic bubble burst in 1991, the Japanese economy fell into recession, dragging down with it demand for luxury vehicles. At the same time, competition from imports intensified. The ninth and 10th generations of the Crown hit the market amid these harsh headwinds. Chief engineer Hiroyuki Watanabe inherited the chief engineer role from Imaizumi of the "Someday, a Crown" days after working under him. Watanabe thus came to experience both prosperous and difficult times for the Crown. With his era, the Crown entered a period of transformation.

In the 2000s, Toyota accelerated its advances overseas, pursuing greater scale in sales and production. This gradually led to prioritizing models and markets that promised larger sales and profits.

With Crown sales in steady decline, there was growing concern that the model's end might be near. This sparked a sense of crisis that drove the development of the 12th-generation Crown, launched in 2003.

Mitsuhisa Kato, who headed development, said at the time, "There's no way I'm going to let the Crown end on my watch." With this determination, Kato took on the challenge of rebuilding the Crown. He redeveloped the platform and engine from scratch to achieve world-class driving performance.

Right around that time, I had just started driving training under my mentor, Hiromu Naruse. I still remember experiencing firsthand the driving performance of the Zero Crown. The Zero Crown indicated a new direction—a Crown with advanced driving performance.

In 2008, the global financial crisis struck, and I was appointed president after the Company plunged into the red. Despite the difficulties facing Toyota, we persisted in striving to transform the Crown.

"Let's make a car that attracts people at first glance! To do that, you can change whatever you want." That's how I encouraged the development team to redesign the Crown. We transformed the vehicle styling, renewed the vehicle platform, and honed the driving performance at the Nürburgring. By doing so, we created the 14th-generation "Reborn Crown" and the 15th-generation "Connected Crown."

Over the past 20 years, we have explored Crown's evolution while facing the challenge of the changing times.

A New Crown Story

Then came the time to develop the 16th generation. To draw a comparison with Japanese history, Japan's final feudal dynasty happened to end after 15 generations. I was resolved to do whatever it took to create a new era for the Crown.

So, I asked the development team, "Why don't we go back to our origins and seriously think about the next Crown?" With that, development of the 16th generation got under way. Taking these words to heart, the Crown team started revisiting the passion put into the Crown by past chief engineers.

Kenya Nakamura is quoted as saying, "Selling things to people with conviction means creating something that feels good in one's heart and has within it the true heart of the customer. Only when a customer gets behind the wheel of such a car will they say: 'This has got my attention. This is what I want to drive.' The chief engineer's role is to offer cars like that to the world."

This is the origin of our chief engineer system, and I believe it is also the origin of our continued efforts to make ever-better cars.

Two years after they began, the Crown team has created a Crown for the coming era. When I first saw this new Crown, I said "This looks interesting." And, when I got out of the car after driving it, I said, "Now that is a Crown."

Today, a new Crown is born—the 16th generation. To us, it is similar in significance to when Japan welcomed the modern age about 150 years ago.

The Development of the New Crown

Hiroki Nakajima
President, Mid-size Vehicle Company

I'd like to tell the story of the new Crown's development.

A little more than two years ago, we were working on a partial redesign of the 15th-generation Crown. I shared details of the project with President Toyoda, but he did not approve it, saying: "Is this truly going to result in evolution? Why don't we start thinking more seriously? Maybe we should skip a partial redesign."

Looking back, I believe those words marked the true beginning of the development of the 16th-generation Crown. We started by revisiting the passions of successive chief engineers to thoroughly reexamine what the Crown was all about.

We realized anew that there were no fixed rules governing the shape of the car or its drive system. The only common thread since the beginning was the engineers' spirit of innovation and challenge. This prompted us to understand how we had tied ourselves down with arbitrary rules over time.

At the time, I recalled the two messages President Toyoda had been repeating since taking office: "Let's make ever-better cars," and "let's aim to be the best in town, not the best in the world." I realized that the Crown is a long-time seller because the past chief engineers constantly challenged themselves to create an ever-better Crown with a best-in-town focus to make customers happy.

This caused us to drastically change our approach. We freed ourselves from set ways of thinking and started exploring a new Crown that would make customers happy. That's how the Crown Crossover's development began.

President Toyoda gave us the green light when we showed him the vehicle's shape and packaging. Around that time, he also gave us a new task. He said: "Why don't we also think about a sedan?"

Frankly, I couldn't believe what I had just heard. But, I thought it was because he saw our changes since deciding to skip a partial redesign. We had a different mindset because we returned to the Crown's origin, and he wanted us to apply that mindset to making a sedan version.

From there, we proposed four different models, thinking that we also needed a hatchback and a station wagon to meet diverse needs. This is how we came to the final lineup.


Photographs by Noriaki Mitsuhashi / N-RAK PHOTO AGENCY

The Four Versions of the Crown

Let me once again introduce to you our four versions of the new Crown.

First, the Crossover. This Crown is the result of fusing a sedan and an SUV. Its packaging allows for ease of entry and exit, provides an elevated viewpoint, and makes the vehicle easy to drive. Its driving performance, underpinned by a new hybrid system, marks an evolutionary advance, making it a sedan like no other.


Photographs by Noriaki Mitsuhashi / N-RAK PHOTO AGENCY

Next, the Sport. This Crown is a new form of sporty SUV, a spirited and creative car with easy-to-drive packaging that offers an agile and sporty driving experience.


Photographs by Noriaki Mitsuhashi / N-RAK PHOTO AGENCY

Third, the Sedan. As an orthodox sedan, this Crown was developed with a focus on a feeling of quality and comfort, as well as a new formal expression. It is also well-suited for use as a chauffeured vehicle.


Photographs by Noriaki Mitsuhashi / N-RAK PHOTO AGENCY

Last, the Estate. This Crown, a highly functional SUV, enables users to enjoy driving performance with power to spare as well as an active lifestyle in a mature atmosphere. The rear seats fold to form a completely flat cargo area, making this model a cross between a station wagon and an SUV.


Photographs by Noriaki Mitsuhashi / N-RAK PHOTO AGENCY

These four models are united under the Crown name. Starting with the launch of the Crown Crossover, we will roll them out in succession over the next year and a half.

Two Initiatives That Made the New Crown Possible

Developing these four models at the same time was no easy task. What made it possible were Toyota's in-house company system and the TNGA. We couldn't have presented the new Crown today without them.

The first element, the in-house company system, was introduced in 2016. Each in-house company's members feel strongly attached to and place the highest priority on the cars they are in charge of. Each company's mission is to make decisions and act on their own initiative.

At the Mid-size Vehicle Company, we were able to put the Crown first and foremost. And, as president, I was able to execute the project based on my responsibility and judgment. That's what really mattered.

We had to review our previous development process, thoroughly eliminate waste, and secure resources. We placed responsibility for the product planning and development processes in the hands of a single team, promoting everyone's awareness of themselves and their colleagues as professionals and communicating more closely than ever before to accomplish our mission.

Next, the second element, the TNGA. In 2012, in pursuit of making ever-better cars, we kicked off the TNGA initiative to drastically improve basic vehicle performance through the integrated development of innovative vehicle platforms and powertrains. Over the past ten years, the TNGA has matured and evolved, enabling us to turn the Crown into a series. TNGA-based platforms have enhanced basic vehicle performance, including styling that entices people at first glance, as well as drive and ride quality that makes people want to keep on enjoying it.

The new Crown is even more developed. The Crown Sport, for example, offers a stylish appearance along with interior comfort and usability thanks to a new dedicated platform and larger-diameter tires.

TNGA powertrains, with an emphasis on direct and smooth performance, have achieved both excellent driving performance and fuel efficiency while helping lower vehicles' center of gravity.

That evolution has continued. For example, in the Crown Crossover, the engine and front electric motor are directly connected, and the rear wheels have a dedicated large electric motor, achieving powerful driving with a total output of 350 horsepower and a robust 550 newton-meters of torque. This model also employs a new hybrid system that uses precise four-wheel-drive control of vehicle posture.

The Crown has long served as the flagship of the Toyota brand. We will put all of our energy into simultaneously developing these Crown models by applying to the fullest our in-house company system and TNGA, building flagship-quality vehicles for our customers. I hope you will look forward to them.

Japan's Underlying Strengths for the World to Experience

To conclude the presentation, President Toyoda spoke about what it means to him to bring a car that represents Toyota and Japan to the world.

I believe that the philosophy of producing happiness for all has always been at the core of the Crown. This flagship vehicle has represented Japanese success and pride, joining together Japan's world-class technology and skilled workforce. The new Crown is full of these underlying strengths.

That is why, with this series, we will once again take on the world. The new Crown will be available in approximately 40 countries and regions, with an expected annual sales volume of some 200,000 units.

Nothing would make me happier than if we could help restore vitality to Japan by making the Crown a Japanese car loved round the world. I sincerely want the world to know what Japan's Crown is all about.

In closing, let me say a few words to customers around the world. I'm so excited to announce today that this new Crown family of vehicles will be offered not just in Japan, but globally, for the very first time. Customers from around the world will now get a chance to drive this historic Japanese nameplate born out of passion, pride, and progress—a car that could very well be our crowning achievement!

We hope to create a new story for Japan's Crown with all of you.

Making Ever-better Cars: From a Starting Point in Motorsports

Recently, President Akio Toyoda has often been adding "from a starting point in motorsports" when using the phrase "ever-better car making." He spoke about the idea behind this at the press conference announcing the 2022 TOYOTA GAZOO Racing drivers and management members.

In 1952, shortly before his death, Toyota founder Kiichiro Toyoda wrote the following.


Kiichiro Toyoda

> "The Japanese automobile production industry must master the art of manufacturing passenger vehicles. In order to test the durability and performance of their cars, companies ought to participate in auto races, demonstrate the full performance of their vehicles, and compete for superiority. This will both lead to progress in their vehicles and spark the enthusiasm of automobile fans. Such races must not be regarded as a simple matter of curiosity, for they are indispensable to the development of Japan's automobile manufacturing industry."

I think that these words provide the core principle of "ever-better car making from a starting point in motorsports." There were two cars that led me to this core principle.

I rode in the first of these cars with racer Kamui Kobayashi at Gamagori four months before entering the Super Taikyu 24-hour race. It was while I was in the car that I made up my mind to enter the race. Although four months was hardly enough time for the engineers to prepare, I safely finished the 24-hour race as well as three subsequent races. For each race, they continued to improve the car, making it stronger and faster.

The other car is the GR Yaris.

We made this car for a specific purpose: to win the World Rally Championship.

Until now, Toyota has made its race cars by modifying its mass-production cars. That was the limit of what we could do. The GR Yaris is our attempt to flip this approach by designing a race car from the ground up. From the initial stages of development, we reached out to professional drivers to have them drive the car. When problems came to light during their drives, they were fixed, and then we had them drive the car again. Development progressed nimbly, and the car evolved into one that is fun to drive. As Morizo (my driver name), I partnered with this car on the Gamagori dirt course for training to hone my driving skills.

Drive it, break it, fix it, strengthen it, drive it again, and break it again. By repeating this process, the engineers not only advanced the car's development, they also changed themselves. I think that they came to understand Kiichiro's words not just intellectually, but in a deeper, visceral way.

Come to think of it, it has been 14 years since Hiromu Naruse and I drove used Altezzas in the 24 Hours of Nürburgring endurance race. Racing on the streets toughens people up and makes cars stronger. I want to enable Toyota to make cars that way again. That may be what I have been working toward all along.

In 2009, when I became president, I implored our employees to make ever-better cars. Since then, I often get asked what kind of cars are ever-better cars.

I have a certain idea of what makes a better car. It's not necessarily the same as someone else's idea of a better car. What makes a better car depends on the driver. It is for this reason that cars can only be made in the streets and not at a desk.

However, back in 2009, not many people understood what I meant by this. It's not enough to simply tell someone that the streets make the car. I knew I had to show them what it means. That's why I continued to take part in the 24 Hours of Nürburgring endurance race.

"The streets make cars and toughen people up" became something of a catchphrase. However, changes in car making do not happen so fast.

On the front lines, each department was focused on its own specialized area of car making, and they were not handling the overarching car making process as a united team.

That was when I first went to Le Mans. It was the year after the car driven by Kazuki Nakajima, which was in the lead, suffered a mechanical failure just before the finish line. When I dropped into the pit, the drivers talked with me. In a qualifying race, Kamui Kobayashi had seized pole position with an astounding time. He passed the trophy to me while thanking me. It made me want to get closer to the drivers and race alongside them.

Racing, however, is hard. That year, only Kazuki's car finished the race, with the team coming in 8th overall, and 2nd in its class. The other two cars had to be retired from the race. After the race, the drivers said to me, "We're sorry it won't be at the very top, but would you stand on the winner's podium with us?"

The difference between first and second place podium was a height of about 70 centimeters. I thought, is this frustration—this second-place podium—the highest we can reach? I desperately wanted to help the drivers stand at the top. I wanted to prove that Toyota could make the kind of strong car that they would want to drive. I swore to myself, standing on that podium one level down, that we would change Toyota to be capable of the kind of car making needed to achieve that, no matter what.

That year, we took on another new challenge: The World Rally Championship, or WRC. We entrusted the task of putting together a team from scratch to Tommi Mäkinen. A legend himself, having won the WRC four times, he knew how to win. However, that was not the only reason I asked for his help. There were many things I wanted to learn from him, with his knowledge of a wide range of cars, including those of Mitsubishi and Subaru. We made only one promise to each other: to make the Yaris at the end of the season the strongest Yaris ever. The team kept this promise.

Our current team principal, Jari-Matti Latvala, was a star driver for other teams before Toyota returned to the WRC. He was such a star, in fact, that I waited in the hotel lobby for him to come out when I first went to watch the WRC. Since then, he has helped secure numerous victories as a Toyota driver, and this season, as team principal, became a triple crown holder.

Over the past five years, Latvala has, without a doubt, constantly helped make the Yaris stronger as both a driver and principal. For next year's WRC, to which Toyota will bring a new car, I am sure he will assemble a team of professionals that is like a close family and hates to lose.

Recently, I have been deliberately adding "from a starting point in motorsports" to the phrase "ever-better car making."

For 12 years, people have told us that there's no way that Toyota can realize this kind of car making. Now, however, Toyota has finally changed, realizing a kind of car making in which not only its engineers and mechanics, but its professional drivers, professional engineers, and professional mechanics all work together, as a team, to advance car making.

Now that this team has come together, we have at last reached the point where we can begin ever-better car making from a starting point in motorsports.

Motorsports are a starting point for ever-better car.

We will leverage motorsports to make ever-better cars, from the top categories driven by professional drivers, to customer motorsports driven by amateur racing drivers, the sports cars driven by our many customers, and even down family cars, and beyond that, automated driving.

As for myself, what I know is that I love cars, and I love driving.

I am very fortunate to now have others who love cars, love driving, and are passionate about motorsports working alongside me.

Fuji Motorsports Forest Project

Toyota, Fuji International Speedway Co., Ltd., and TOYOTA FUDOSAN CO., LTD. are promoting the Fuji Motorsports Forest ("Forest") project in Oyama, Shizuoka Prefecture.

Forest aims to be a playground and social gathering place for all ages where people can enrich their lives and enjoy learning about and participating in the world of mobility and motorsports. The facilities in the area will offer a variety of experiences for everyone from adults to children, creating a Mobility and Motorsports City of the Future.

Centered around the Fuji International Speedway circuit, Forest will consist of various facilities where visitors can enjoy motorsports culture, such as the Fuji Speedway Hotel, which offers a luxury experience; the Fuji Motorsports Museum, which exhibits historic racing cars symbolizing from across the decades; and garages of Japan's leading racing teams. There are also spas and restaurants for the enjoyment of all visitors. The first facilities opened in autumn of 2022.

Message from President Akio Toyoda

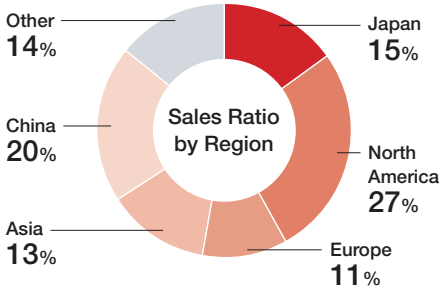
May 3, 1966 marked the final race of the first Japanese Grand Prix ever held at Fuji Speedway. That day, 56 years ago, was also my 10th birthday, and my father took me to the Fuji Speedway Paddock. I remember the roar of the engines and cheering of the fans—it was a very exciting birthday present. The "old guys" in front of the cars all looked very serious but also seemed to be enjoying themselves. I think that formative experiences like that one helped me grow up into Morizo, an old guy who loves cars. An old guy who loves motorsports.

I want to share this kind of formative experience with the kids of today. That is the motivation behind the Fuji Motorsports Forest. We want it to be a place where people who work in the field of motorsports can do so more energetically. We want racing teams to gather here with that same motivation in mind. If I listed all the motivations behind Forest, it would be endless. We will turn this area in Fuji into a place that those who enjoy motorsports, those who work in motorsports, adults and children, will want to come to.

Motorsports are critical for the development of the automobile industry. For this reason, we will sow the seeds of the future of motorsports at Fuji. The speed at which they grow may differ, but we will nurture these seeds to grow into an incredible forest that many people can enjoy.

Meeting Diverse Global Needs with Our Full Lineup (Toyota and Lexus Vehicle Sales for the Fiscal Year Ended March 2022)

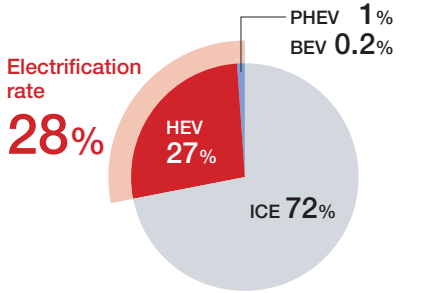
Global



Sales by Series

(Thousands of units)

Series	Units
Corolla	1,312
RAV4	980
Yaris	743
Camry	685
Hilux	605
Highlander	466
Tacoma	268
C-HR	232
Levin	221
Lexus RX	199



(Thousands of units)

Powertrain	Sales
Internal combustion engine (ICE)	6,808
Hybrid electric vehicle (HEV)	2,565
Plug-in hybrid vehicle (PHEV)	116
Battery electric vehicle (BEV)	16
Fuel cell electric vehicle (FCEV)	5
Total	**9,512**

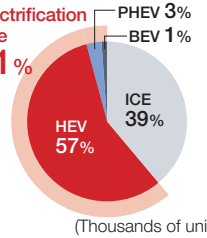
Europe

Sales by Series

(Thousands of units)

Series	Units
Yaris	215
Corolla	186
RAV4	150
C-HR	114
Aygo	70
Proace	70
Camry	48
Hilux	36
Land Cruiser Prado	25
Lexus UX	20

Electrification rate 61%



(Thousands of units)

Powertrain	Sales
ICE	398
HEV	587
PHEV	28
BEV	9
FCEV	1
Total	**1,023**

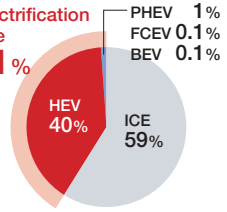
Japan

Sales by Series

(Thousands of units)

Series	Units
Yaris	191
Roomy	134
Corolla	124
Hiace	87
Aqua	85
Raize	85
Alphard	80
Voxy	58
Sienta	50
Probox	47

Electrification rate 41%



(Thousands of units)

Powertrain	Sales
ICE	825
HEV	557
PHEV	10
BEV	1
FCEV	2
Total	**1,396**

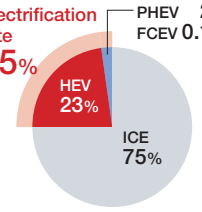
North America

Sales by Series

(Thousands of units)

Series	Units
RAV4	470
Camry	312
Corolla	301
Highlander	292
Tacoma	267
4Runner	151
Sienna	123
Lexus RX	111
Tundra	94
Venza	66

Electrification rate 25%



(Thousands of units)

Powertrain	Sales
ICE	1,927
HEV	602
PHEV	59
BEV	—
FCEV	3
Total	**2,591**

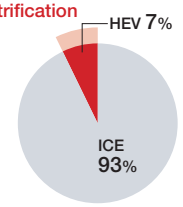
Asia (excluding China)

Sales by Series

(Thousands of units)

Series	Units
Hilux	214
Corolla	153
Innova	130
Yaris	114
Fortuner	101
Vios	86
Avanza	78
Rush	68
Calya	36
Raize	33

Electrification rate 7%



(Thousands of units)

Powertrain	Sales
ICE	1,152
HEV	90
PHEV	0
BEV	0
FCEV	—
Total	**1,243**

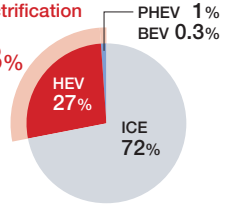
China

Sales by Series

(Thousands of units)

Series	Units
Corolla	305
Camry	237
Levin	221
RAV4	199
Highlander	146
Wildlander	138
Avalon	113
Lexus ES	105
Yaris	85
Vios	70

Electrification rate 28%



(Thousands of units)

Powertrain	Sales
ICE	1,376
HEV	517
PHEV	17
BEV	5
FCEV	—
Total	**1,915**

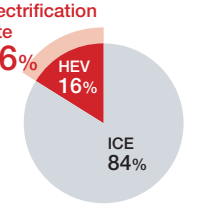
Other

Sales by Series

(Thousands of units)

Series	Units
Hilux	315
Corolla	242
Land Cruiser	125
Yaris	117
RAV4	90
Fortuner	62
Camry	60
Land Cruiser Prado	59
Granvia	30
Rush	30

Electrification rate 16%



(Thousands of units)

Powertrain	Sales
ICE	1,130
HEV	211
PHEV	1
BEV	0
FCEV	0
Total	**1,343**

Initiatives to Achieve Carbon Neutrality: Battery EV Strategies

ToyotaTimes


Toyota Reveals Full Lineup of Battery Electric Vehicles: Toyota's Briefing on BEV Strategies


Toyota Strengthens BEV Lineup to Keep Offering Options for Everyone (Full Text of President Toyoda's Presentation)

Photographs by Noriaki Mitsuhashi / N-RAK PHOTO AGENCY

On December 14, 2021, Toyota held a briefing on its battery electric vehicle (BEV) strategy.

Toyota announced at the briefing that it is boosting its plans for BEV sales in 2030 from 2 million to 3.5 million units and that Lexus is aiming for BEVs to account for 100 percent of its sales in Europe, North America, and China by the same year, followed by BEVs accounting for 100 percent of its sales globally starting in 2035.

These ambitious figures and the array of planned-for-launch BEVs on the stage at the briefing led some observers to suggest that Toyota, which had been viewed by some as not having a positive position on BEVs, had changed its policy and shifted to focusing on BEVs. However, in his presentation, President Akio Toyoda stressed the importance of having diverse options. He also shared his sentiments regarding the people of the automotive industry. The following is a selection from his remarks.

Toyota's Part for Carbon Neutrality

Today, I would like to talk about Toyota's strategy for achieving carbon neutrality—particularly our strategy for battery electric vehicles (BEVs), which represent one of the most promising options.

I believe that achieving carbon neutrality means realizing a world in which all people living on this planet continue to live happily. We want to help realize such a world. This has been and will continue to be Toyota's wish and our mission as a global company.

For that challenge, we need to reduce CO_2 emissions as much as possible, as soon as possible.

We are living in a diversified world and in an era in which it is hard to predict the future. Therefore, it is difficult to make everyone happy with a one-size-fits-all option. That is why Toyota wants to prepare as many options as possible for our customers around the world.

We believe that all electrified vehicles can be divided into two categories, depending on the energy that they use.

One category is that of "carbon-reducing vehicles." If the energy that powers vehicles is not clean, the use of an electrified vehicle, no matter what type it might be, would not result in zero CO_2 emissions.

The other category is that of "carbon-neutral vehicles." Vehicles in this category run on clean energy and achieve zero CO_2 emissions across the whole process of their use. We at Toyota will do our utmost to realize such vehicles.

The Toyota bZ Series Revealed

The Toyota bZ means going "beyond Zero."

Our goal is not merely to reduce CO_2 emissions and other negative impacts to zero. Our goal goes beyond that, to freedom of movement and fun to drive for all.

For the bZ series, we developed a dedicated platform for BEVs to meet the diverse needs of the global market.

We will not only add BEV options to existing vehicle models but will also offer a full lineup of reasonably priced mass-production models, such as the bZ series, to meet the needs of all kinds of customers.

By doing so, we hope to deliver to customers around the world unique and beautiful styling, the fun-to-drive aspects of BEVs, and the experience of a life with BEVs.

Offering a Full Lineup of BEVs

Toyota is a global company supported by customers around the world.

The Toyota brand now offers more than 100 models of engine-only vehicles, hybrid electric vehicles, plug-in hybrid electric vehicles, and fuel cell electric vehicles in more than 170 countries and regions.

The Lexus brand has introduced more than 30 models of engine-only vehicles, hybrid electric vehicles, and plug-in hybrid electric vehicles in more than 90 countries and regions.

Furthermore, we will expand the options for carbon neutral vehicles by offering a full lineup of BEVs. Specifically, we plan to roll out 30 BEV models by 2030, globally offering a full lineup of BEVs in the passenger and commercial segments.

Many Years of Accumulated Experience Gives Toyota a Competitive Edge

We aim to achieve global sales of 3.5 million BEVs per year by 2030.

By 2030, Lexus aims to realize a full lineup of BEVs in all vehicle categories and to have BEVs account for 100 percent of its vehicle sales in Europe, North America, and China, for total sales of 1 million units globally. And, it aims for BEVs to make up 100 percent of its global vehicles sales in 2035.

To achieve these goals, we have invested in various areas for a long time.

In the area of vehicle development, in 1997, Toyota launched the Prius, the world's first mass-production hybrid electric vehicle. But, in fact, our development of BEVs had started well before that.

In 1992, we established the Electric Vehicle Development Division, and we introduced the RAV4 EV to the market in 1996.

After that, in the 2000s, we demonstrated our small prototype commuter EV e-com in various places. Furthermore, in 2012, we introduced the COMS, an ultra-compact EV, and the compact eQ EV. Thus, we have long explored the potential of BEVs.

We launched the C+pod and C+walk this year and have accelerated the development of BEVs, including the e-Palette, that provide people with freedom of movement in various scenes.

At the same time that we started the development of BEVs in the early 1990s, we also began the development of fuel cell electric vehicles, which run on hydrogen. In 2002, we introduced the Toyota FCHV to the market and went through various demonstrations. In 2008, the vehicle was redesigned into the Toyota FCHV-adv.

Based on such long-term efforts, in 2014, the first-generation Mirai was finally launched. Since then, using these technologies to power other vehicles, such as buses and large trucks, our fuel cell electric vehicles have also continued to evolve.

In the area of batteries, Toyota has continued to research, develop, and produce batteries in-house for many years.

In 1996, we established what is today Prime Earth EV Energy. While refining our technologies related to nickel-metal hydride batteries, we started accelerating the development of lithium-ion batteries in 2003.

Furthermore, since establishing our Battery Research Division in 2008, we have been advancing research on solid-state batteries and other next-generation batteries. Last year, we established Prime Planet Energy & Solutions to accelerate integrated efforts in the battery business.

Over the past 26 years, we have invested nearly 1 trillion yen and produced more than 19 million batteries. We believe that our accumulated experience is an asset that gives us a competitive edge. Going forward, we will increase our new investment in batteries from the 1.5 trillion yen announced in September 2021 to 2 trillion yen, aiming to realize even more advanced, high-quality, and affordable batteries.

When it comes to natural resources, Toyota Tsusho began conducting lithium and other surveys as early as 2006 and has been working to secure stable sources.

And, in the area of energy, Toyota Tsusho has been working to secure renewable energy sources, such as wind and solar power generation, for more than 30 years.

Furthermore, at manufacturing plants, we are aiming to achieve carbon neutrality by 2035 by continuously making steady improvements toward reducing energy use and by expanding the use of innovative production engineering technology.

In this diversified and uncharted era, it is important to flexibly change the type and quantity of products produced while keeping an eye on market trends.

We believe that the reduction in lead times and use of high-mix, low-volume production methods that we have cultivated through the Toyota Production System, along with the steady efforts of Japanese manufacturing, will enable us to be competitive going forward.

We will continue to advance initiatives in all areas together with our many partners.

"The Future Is to Be Created by All of Us."

Energy plays a critical role in achieving carbon neutrality. At present, the energy situation varies greatly from region to region. That is exactly why Toyota is committed to providing a diversified range of carbon-neutral options to meet whatever the needs and situations might be in every country and region.

It is not us but local markets and our customers who decide which options to choose.

As for why we try to keep so many options open, in terms of business management, one might think it would be more efficient to focus on fewer choices. However, we believe that being able to quickly adapt to changes in the future is more important than trying to predict the future, which is uncertain. That is why we want to keep options available for our customers until the right path is clear.

We at Toyota aim to be a company that contributes to the global environment, seeks to bring happiness to people, acts, and stays close to its customers. To sum it up, we want to become a company that produces happiness for all, for both individuals and society.

We want to pass on an ever-better future for the children of today and those who will come after them. We always want the future to be brighter.

I believe that the future is to be created by all of us together. Japan's automotive industry is home to our 5.5 million colleagues who have supported Japanese manufacturing and mobility. And, we have many more colleagues throughout the world.

If we all take action with unity of mind and with will and passion, we will be able to leave behind many smiling faces and a beautiful Earth for the next generation.

That is what I believe and that is what we will achieve.

Investing Up to 730 Billion Yen in Battery Production

In August 2022, Toyota announced that it will invest up to 730 billion yen in Japan and the United States toward supplying automotive batteries for BEVs, aiming to begin battery production between 2024 and 2026.

Through this investment, we aim to boost production capacity by up to 40 GWh. Toyota will continue working to build a supply system that can steadily meet the growing demand for BEVs around the world.


(Photo: Noriaki Mitsuhashi/N-RAK PHOTO AGENCY)

ToyotaTimes

Answers to Five Questions about Toyota's BEV Strategy (Report on Media Q&A Session)

"Do you like battery EVs?" Akio Toyoda's Response

At a Q&A session with the media after his presentation, President Akio Toyoda talked about his ideas.

Is This a Strictly BEV Shift or Part of a Multi-solution Approach?

——Going forward, are you going to focus more on BEVs than other electrified vehicles? Or has your strategy of BEVs being just one part of a full lineup of electrified vehicles not changed?

Akio
We have made the utmost efforts toward achieving carbon neutrality, and we will continue to do so going forward.

Toyota is a global company with a full lineup of products. We have seen changes in the energy situation in each country, and the way customers use vehicles is diversifying.

It is the customers, not we at Toyota, who choose which options to use. So, no solution will come from our decision alone.

What we will do is have a wider range of available options, and make serious efforts across our full lineup of options.

We want to be prepared to meet customer and market expectations and preferences more quickly, and more flexibly. In this way, I believe that we will be able to enhance our competitiveness, and that is how we will be able to survive.

Just because I drive a hydrogen-powered vehicle, it does not mean that I am prioritizing it over others.

All of our employees, suppliers, affiliated companies, and the 5.5 million people working in the automobile industry, have made serious efforts in Japan toward achieving carbon neutrality.

Toyota does business worldwide, and our full lineup of products is key to our global operations. I hope you see that we are putting our all into this approach.

Why Not Pursue 100% BEVs across the Whole Lineup?

——As the largest carmaker in the world, why are you targeting only 35 percent of your current volume? Why not go for 100 or 50 percent BEVs, as many of your competitors have now done? Why is 3.5 million sufficient in your mind?

Akio
With a baseline toward 2035, we want to increase our carbon-neutral vehicle offerings as much as possible.

However, the energy situations in individual countries are having a big impact on the path to carbon neutrality. That is the reality. I hope you understand that this is something Toyota cannot control.

If no sufficient clean energy and charging infrastructure exists in a market, expanding our BEVs and limiting options will result in inconveniencing customers. We want to avoid that.

When we look at the global market, it is a diversified market that we are dealing with, and that is what Toyota does. Diverse solutions are necessary in diverse situations. Also, the best solution for the average person will not necessarily be the best solution for everyone.

Therefore, as we are in uncharted territory with lots of uncertainty about the future, we want to take a diversified approach. That is why we have worked hard to maintain our full lineup. We will take on this challenge together with our suppliers, affiliated companies, and partners. That is what I would like you to understand.

Toyota vehicles are used all over the world to fill various needs, not just for one particular market or one specific need.

Thoughts on Preserving Jobs

——Your suppliers are closely watching this announcement, since some of them could face major impacts. What are your thoughts on employment within the industry?

Akio
First of all, it is the market and customers who decide which carbon-neutral options to choose. This is the premise here.

The numbers related to carbon neutrality that we have heard so far are goals for 2040 or 2050.

We don't want to be a company that sets an appealing target but doesn't bother trying to achieve it once the announcement is done. What we are announcing today is a bit more in the near term. Many of the cars that you are looking at right now will be launched on the market very soon.

Looking at the run up to 2030, what we presented today will be a good tool to start discussions and take action with various stakeholders while leaving room to imagine more what the next eight years will be like.

By presenting a guideline in the product planning area, we will be able to examine the potential impact on our suppliers or our production plants.

The automotive industry accounts for 75% of the components procured from suppliers and there are tier one, tier two and tier three suppliers supporting the industry. Even if we emphasize the importance of keeping many options available, any shift toward carbon neutrality can be a critical issue for suppliers who have until now produced only engine-related parts.

We can't just tell these suppliers that we have no use for them anymore because that's what the market chose. I would like to evolve the automotive industry such that the people and companies who have been pursuing existing businesses for decades will not feel that their efforts were in vain, and we will continue to show respect for their meaningful work.

The future is not determined by the goals presented by leaders, but by purposeful passion and action. Looking toward the goal for carbon neutrality in 2050, what the future looks like in 2050 will change depending on how we act in the next few years, five years, and ten years, and we want to make the change happen.

The future will not suddenly emerge from the present; rather, the future will be created by the accumulation of present moments as they become the past. We hope that you will allow us to leave many options open in this process.

It is not true that we are not fully committed because our goal is not 100% BEVs. We hope you will understand that we would very much like to continue our work in this industry.

Evaluation by Environmental Groups and the Future of Engines and BEVs

——An environmental group put Toyota at the bottom of the climate action rankings. Let me ask you again. What is Toyota's position on BEVs? Also, what is the future plan for engine development?

Akio
It is their ranking, and we take it seriously, but if we are still not considered proactive toward BEVs with our 3.5 million BEV target and 30

new models to come, I have to ask, what exactly are we supposed to do to improve our evaluation?

Vehicles are for individual customers. One vehicle, one customer. It's not a percentage business, so it's the absolute numbers that we want them to look at when evaluating.

No matter how many vehicles we sell, we will make and deliver them to customers one by one, without compromise.

Whatever powertrain they use, or whatever type of BEV they may be, Toyota and Lexus vehicles should continue to offer the value of fun to drive. We will continue to make products with that unique Toyota and Lexus character that makes customers happy.

We will continue to take proactive action for carbon neutrality. In a world where there is no one right answer, we are committed to solving problems with a wide variety of options. We hope you understand that we are working really hard on every option.

President Toyoda stressed the importance of Toyota's multi-solution strategy while strengthening BEVs. This represents not only Toyota's way of fighting for the future, but also its history of listening to customers and responding to their needs.

(Photo: Noriaki Mitsuhashi/N-RAK PHOTO AGENCY)

In other words, it is the result of Toyota's commitment to diversity.

Toyota is now moving with all its power toward carbon neutrality while leaving no one in the industry behind, and without giving up on any technology that still has potential.

This strong will to leave no one behind has been, and will continue to be, at the center of Toyota's full-lineup strategy.

"Do you Like BEVs?"

During the question and answer session, there was a moment in which President Akio Toyoda revealed his candid thoughts.

——I was quite surprised with today's announcement, but what I want to know more about are President Toyoda's true feelings about BEVs. Personally, President Toyoda, do you like BEVs or not? If it's difficult to respond as the president of the company, you can respond as driver Morizo.

Akio

If I have to answer, honestly, in the past I was not interested in Toyota's BEVs, but I am getting interested in the BEVs that we are now developing for the future.

After improving my driving skills, I test-drove a battery electric Toyota 86 for the first time here at MEGA WEB. The comment that I gave after my test drive was that "Yep, it's an electric vehicle."

We have the Lexus brand and the Toyota brand, and we are an OEM pursuing distinctiveness in each brand. But when it comes to BEVs, the car tends to become more like a commodity.

I think you saw through to my honest feeling. Of course, I support BEVs in terms of business, but the question is whether I support them as driver Morizo.

I'm a master driver, and in the training I went through back in the day, I always drove an FR vehicle. But, I now participate in rally races and the Super Taikyu races. In these motorsports, I drive four-wheel drive vehicles as well.

My sensibility as a master driver has changed with these vehicles. I now think that electric motors have higher efficiency than gasoline-only-powered vehicles. If we have a good four-wheel drive platform, it can become an FF vehicle or an FR vehicle through control technology.

So, with that kind of control technology, I think Morizo will be able to drive fast and safely on any circuit or rally course.

Nori-san (rally driver Norihiko Katsuta) has won the All-Japan Rally Championship this year. The professional drivers of ROOKIE Racing are very active in various motorsports circuits. Seeing these achievements, I have growing expectations that the driving skills of these professional drivers will be reflected in our vehicles to make them safer and more fun to drive.

At the same time, this platform has enabled us to make vehicles that allow amateur drivers like me to enjoy driving on various roads, however rough, whether it's a mountainous road or snowy road or whatever. This is a big change for our company.

Control technology plays a key role there, but it alone can't push major improvements. If we try to create driving flavor only through control technology, it's like trying to dress up overcooked noodles by adding crispy tempura.

But, over the past several years, starting with our Toyota New Global Architecture (TNGA) initiatives, we have made steady improvements in the vehicles' basic frame, chassis, and body rigidity under the banner of "let's make ever- better cars." We also opened the Shimoyama proving ground, and we are now testing and developing cars under tough conditions there.

With this environment, I think we are now at a point where we can develop safer and faster vehicles with more fun-to-drive aspects. I look forward to developing such cars, including BEVs, moving forward.

That's why it's not just a business matter anymore. As driver Morizo, I have strong expectations for and a desire to give my feedback to our development, such as "making this kind of car would be fun" or "as an automaker we want to create autonomous driving that is unique, even in an era of autonomous driving."

We will continue to make serious efforts in BEVs and other powertrains, such as fuel cell electric vehicles, hybrid electric vehicles, and gasoline-only vehicles that make exciting sounds.

I'm still quite serious about them as Morizo and as the president of Toyota. We're working with our colleagues and partners very seriously in all of these fields. We want to provide customers with vehicles that can make them happy.

This comment could only come from Akio, who takes the wheel himself and is responsible for the driving feel of Toyota vehicles as Master Driver Morizo. "We will continue to make ever-better cars with BEVs"—this might be the very message that he wanted to convey the most to car enthusiasts.

Initiatives to Achieve Carbon Neutrality: The Development and Supply of Batteries

ToyotaTimes

Integration with Vehicles—The Strengths of Toyota's Battery Development Strategy

Blazing a Path toward the Future of Electrified Vehicles through the Integrated Development of Batteries and Vehicles

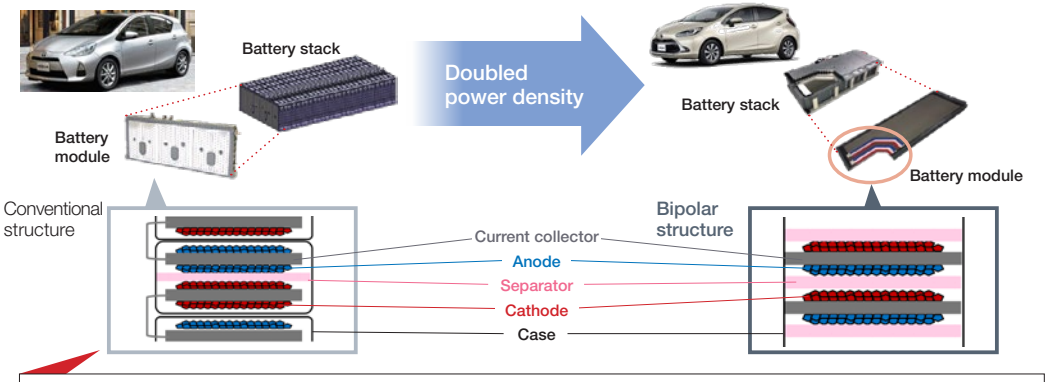
Toyota's Plans for a Full Lineup of Batteries

In addition to promoting a full lineup of electrified vehicles, we have been developing and manufacturing a full lineup of batteries. These development efforts are organized by type of electrified vehicle. For HEVs, our focus is on power output, or instantaneous power, while for PHEVs and BEVs, our focus is on capacity, what we might call "endurance."

As for batteries for HEVs, we have been continuously upgrading nickel-metal hydride batteries and lithium-ion batteries, taking advantage of their respective characteristics. In particular, we took on the challenge of developing a bipolar nickel-metal hydride battery for the Aqua, which underwent a full-scale redesign completed in July 2021. Thanks to our efforts, we are the first in the world to commercialize this type of onboard battery for driving. Compared with the batteries used in the previous generation of the Aqua, the output density has been doubled, giving the car powerful acceleration. We are currently engaged in development aimed at creating more advanced lithium-ion batteries by the second half of the 2020s.

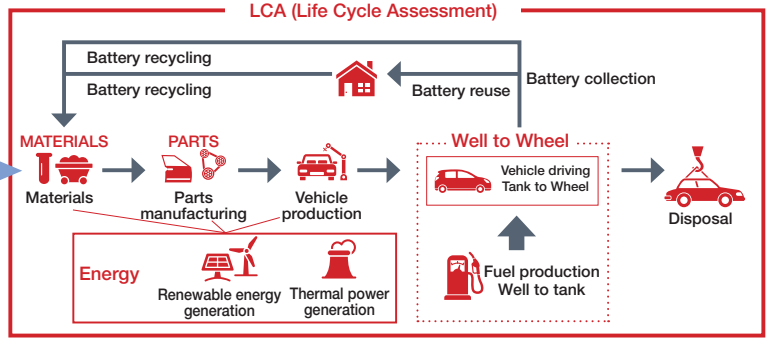
Bipolar Nickel-metal Hydride Battery

In the new Aqua—the world's first use as a vehicle drive battery



Taking up the challenge of innovating battery structure for more powerful acceleration
Power density doubled from the conventional batteries for the Aqua

What Is Carbon Neutrality?
In the case of industrial products, carbon neutrality means reducing CO_2 emissions to net zero throughout the product life cycle, from the procurement of raw materials, manufacturing, and transportation through to use, recycling, and disposal.



Striking a Balance among Five Factors

To develop batteries that our customers can use with peace of mind, we focus on producing products that optimally balance five factors: safety, long service life, high-level quality, good yet affordable, and outstanding performance.

For example, a longer service life affects a vehicle's residual value. In terms of cruising range, outstanding performance based on high energy density is crucial. On the other hand, over-emphasis on charging speed may increase the danger of overheating or even fire and thus decrease battery safety.

This concept has remained unchanged since batteries were installed in the first-generation Prius, and it applies to all the batteries in all of our electrified vehicles.

Toyota is committed to balancing the five factors, as too much emphasis on one could be detrimental to the others. That is why we believe that the integrated development of batteries and vehicles is essential.

How batteries are used depends on how the vehicles in which they are installed are used. The environments in which vehicles are operated differ according to each vehicle's mode of use—as a taxi or for commuting, for example—as well as geographic location. These factors will affect such conditions as charging frequency and battery temperature. Accordingly, we carry out mock driving tests that assume a diverse range of vehicle usage modes in order to obtain data on actual operating environments and provide feedback to inform the evaluation and design of batteries.

To determine the balancing point of the five factors discussed above, it is necessary to obtain driving data that includes driving conditions and usage environments, find out what the conditions would be like if batteries were used instead, and repeatedly verify what is happening inside the batteries. Such steady and earnest efforts for both batteries and vehicles are the secret behind Toyota's advantages.

Toyota's Efforts for Batteries That Enable Peace of Mind

Here, we introduce three examples of the effort required to produce batteries that can be used safely, using lithium-ion batteries as the focus of our explanation.

The first example is about our pursuit of safety. It is known that each battery cell shows signs of localized abnormal heat generation during spirited driving or other driving that places a large load on the battery. By analyzing the phenomena occurring inside the battery and conducting a vast number of model experiments, we have been able to clarify the effect of driving style on the battery, as well as the mechanism of this effect. Based on the results, we have been able to detect signs of abnormal local heating of cells through multiple monitoring of voltage, current, and temperature of individual cells, blocks of cells, and the entire battery pack. The battery is then controlled to prevent abnormal heat generation. We adhere to our concept of ensuring safety, security, and reliability right down to the local areas within each battery when it comes to BEV systems.

The second example is our commitment to long service life. We have applied the technologies that we have cultivated through the development of batteries for HEVs to PHEVs, and the batteries in the C-HR BEV have a much higher capacity retention rate after 10 years than the batteries hitherto used in our PHEVs. The battery in the Toyota bZ4X, which was launched in 2022, was developed targeting world-class capacity retention of 90 percent after 10 years.*

* Estimated value is calculated assuming average usage set by Toyota using individual battery cells. Actual battery capacity retention ratio when installed in a vehicle environment may vary depending on customer use conditions, usage environment, and driving methods. Therefore, a 90% battery capacity retention ratio after 10 years is not guaranteed.

The third example has to do with our efforts to achieve high-level quality. If metallic foreign matter enters a battery during the manufacturing process and causes a direct electrical connection between the anode and cathode, the possibility of product failure increases. To address this issue, we confirm the shape, composition, size, and possible effect on endurance of every piece of foreign matter that could enter during the manufacturing process, and we

clarify how that item may affect the battery. Based on this analysis, we are extremely attentive to the size and shape of foreign matter, and we are managing processes in a way that is aimed at preventing the generation or entry of relevant foreign matter.

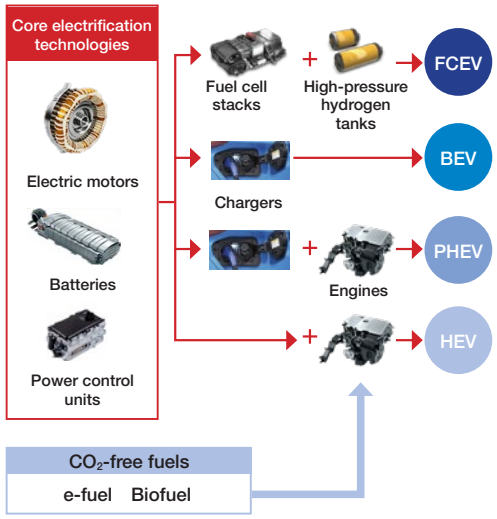
Halving Battery Costs through the Integrated Development of Vehicles and Batteries

To popularize BEVs, we strive to reduce costs via the integrated development of vehicles and batteries to provide BEVs at a reasonable price.

To start with, we aim to reduce the costs of batteries themselves by 30% or more by developing materials and structures. Then, for the vehicle, we aim to improve power consumption, which is an indicator of the amount of electricity used per unit of distance, by 30%, starting with the Toyota bZ4X. Improved power efficiency leads to reduced requirements for battery capacity, which will result in a cost reduction.

Through the integrated development of vehicles and batteries, we aim to reduce the battery cost per vehicle by 50% compared to the Toyota bZ4X in the second half of the 2020s.

Technologies Supporting the Full Lineup of Electrified Vehicles



Using Solid-state Batteries Starting with HEVs

In the near future, the energy density of conventional lithium-ion batteries per unit of weight is expected to peak. Accordingly, vigorous efforts are now under way to develop next-generation lithium-ion batteries, aiming to achieve longer service life, greater energy density, more compact size, and lower costs. At Toyota, we push ahead with the development of such batteries by employing the following three approaches.

For liquid batteries, which use a liquid electrolyte, we are taking on the challenge of realizing material evolution and structural innovation. In addition to these two approaches, we are aiming to commercialize all-solid-state batteries that employ a solid electrolyte instead of a liquid electrolyte.

As such, our wide-ranging development efforts are aimed at creating three types of batteries. By the second half of the 2020s, we hope to improve the characteristics of each type so that we can provide batteries that can be used with peace of mind.

With regard to all-solid-state batteries, we promote development aimed at achieving higher output, longer cruising range, and shorter charging times. In June 2020, we built a vehicle equipped with all-solid-state batteries and conducted test runs on a test course to obtain driving data. Based on that data, we continued to make improvements, and in August 2020, we obtained license plate registration for vehicles equipped with all-solid-state batteries and conducted test drives on actual roads.

In the course of development, we discovered that the fast movement of ions within all-solid-state batteries could enable them to achieve higher output. On the other hand, we found that these batteries tend to deteriorate faster due to the formation of gaps within the solid electrolyte, posing an issue of shorter service life. Therefore, continued development of the solid electrolyte materials themselves is needed.

We will start the introduction of all-solid-state batteries in HEVs, as these vehicles require high output and we have a wealth of accumulated know-how regarding these vehicles. We will release these batteries to the market as soon as possible in order to gain customer feedback and continue to improve them.

Flexible Battery Supply

With the rapid expansion of EV usage, we are working to build a flexible system that can stably supply the required volume of batteries at the required time while meeting the needs of various customers around the world.

To this end, we will establish the necessary technologies by conducting a certain amount of in-house production in the pursuit of our battery development concept of achieving batteries that can be used with peace of mind. We will then cooperate and collaborate with partners who understand and will put this concept into practice. We will also proceed with discussions with new partners in some regions.

Our approach to production within the Group can be described as “starting up using small basic units.” This approach draws on lessons learned from the global financial crisis. It is difficult to notice latent risks when production is growing. Because of this, we have to take a risk-controlled approach to growth based on Toyota’s philosophy of “making only what is needed, when it is needed, and only in the amount needed.”

For example, the production of all-solid-state

Toyota Concept for Battery Development

Universally applied to HEV, PHEV, BEV, and FCEV batteries

Security

Safety | Long service life | High-level quality

Aiming to create safe batteries that can always be used with peace of mind over their entire lifetime, have high resale value, and that contribute to the building of a resource-recycling society

Affordable, high-quality products | High-level performance

Giving electrified vehicles meaning through dissemination
Increasing customer choice

Highly balancing 5 factors to provide reliable batteries

Next-generation BEVs

Unique Toyota BEVs that utilize technology cultivated through years of HEV development

Battery Cost Targets: Integrated Vehicle-battery Development

Battery development

Greater than 30% reduction in the cost of a single battery

- Development of low-cost materials: Cobalt-free, nickel-free, and new electrode materials
- Manufacturing process innovation: New development of battery manufacturing processes and battery material processes
- New structure: Integrated structure of battery cells and packs to match the vehicle
- Evolution of battery control model: Fuller use of battery capacity with a focus on safety, security, and long service life

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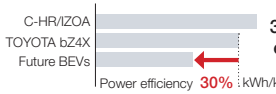
Vehicle development



30% improvement in power efficiency = 30% reduction in battery capacity (30% cost reduction)

Achieve the following by utilizing and developing technologies cultivated through the production of electrified vehicles:

- Reduction of vehicle driving resistance to suit electrified vehicles
- Further expansion of energy regeneration
- Optimal energy/thermal management of entire vehicle and components
- Optimally efficient design and control of entire powertrain system

batteries will start with batteries for HEVs, which we have been developing for years and require a small battery volume, rather than building a massive production line for batteries for BEVs, which require a larger volume of batteries. This will not only enable us to accelerate the release of the products but also position us to better focus on improving manufacturing technologies. Moreover, Toyota's strategy of "starting up using small basic units" is also meant to enable the Company to swiftly respond to the ever-changing stages of the product cycle, in which new technologies arrive as the manufacturing costs for older models come down and stabilize.

Effective Reduction of CO_2 Emissions with Few Batteries

Since the introduction of the first-generation Prius in 1997, Toyota has introduced PHEVs, FCEVs, and BEVs while continuing to improve their performance. Our more than 20 years of producing HEVs have resulted in cumulative sales reaching 19.8 million units as of March 2022.

According to a Toyota estimate, the CO_2 emissions reduction effect of three HEVs is equivalent to the reduction effect of one BEV. Accordingly, Toyota's HEVs sold to date achieve a CO_2 reduction effect equivalent to about 6.0 million BEVs. The volume of batteries for HEVs that we have produced thus far is the same as that of the batteries for about 280,000 BEVs. In other words, we can say that the batteries needed for 280,000 BEVs have been used to achieve the CO_2 emissions reduction effect of 6.0 million BEVs.

Providing the Fuel Cell System of the Second-generation Mirai Globally

In the field of fuel cell electric vehicles (FCEVs), we released the completely redesigned Mirai in December 2020. Premised on the use of an FCEV system, the second-generation Mirai was developed with the goal of delivering a futuristic premium car that would be genuinely appreciated and sought after by our customers. Specifically, we strove to deliver a vehicle that could win drivers' hearts during and after driving, if not from the moment they first catch sight of it.

Moreover, Toyota aims to become a fuel cell (FC) system supplier supporting the realization of a hydrogen-powered society. In line with this aim, we provide a variety of business operators with a compact FC system module package that we have developed. This package consists of FC stacks for the second-generation Mirai, which boast higher performance, as well as air supply, hydrogen supply, cooling, power control, and other FC system-related parts.

In North America, we have unveiled a new prototype for an FC commercial heavy-duty truck that uses the second-generation FC system installed on the new Mirai. This truck boasts considerably improved performance, including more powerful acceleration and flexible driving response. Furthermore, having attained a maximum loaded weight of 80,000 pounds (approximately 36 tons) and a cruising range of 300 miles (more than 480 kilometers), the truck is designed to accommodate a wide range of commercial truck needs. We will conduct the verification testing of this new FC truck in actual cargo transport operations.

Utilizing e-Fuel Made from Hydrogen

To achieving carbon neutrality, we are also considering a revolutionary approach expected to drastically curb CO_2 emissions through the combination of such carbon-neutral fuels as biofuel and e-Fuel made from hydrogen with high-efficiency engine and motor technologies. Not only is the above approach practicable via the use of existing infrastructure, it could help us reduce CO_2 emissions from all types of vehicles currently in use.

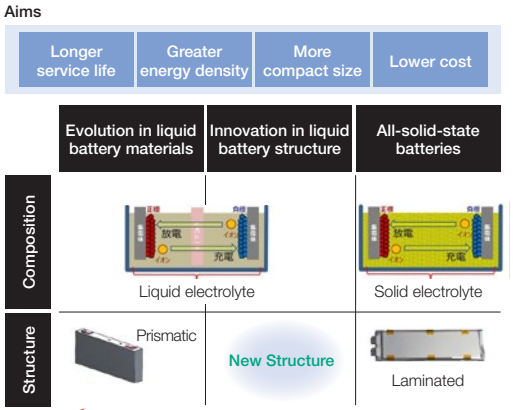
For example, when gasoline vehicles are fed gasoline mixed with a certain amount of e-Fuel, their CO_2 emissions decline to a level on par with emissions from HEVs. The mix of e-Fuel in gasoline will similarly curb the CO_2 emissions from HEVs to a level on par with PHEVs, and emissions from PHEVs to closer to the level of BEVs.

Development of an FC System for Maritime Applications

Toyota is applying its FC technologies for maritime applications and provides them to Energy Observer Developments (EODev). Headquartered in France, EODev is a company that conducts research on renewable energy. By conducting trials in demanding marine environments that vary by location, EODev continues to probe the possibilities of renewable energy.

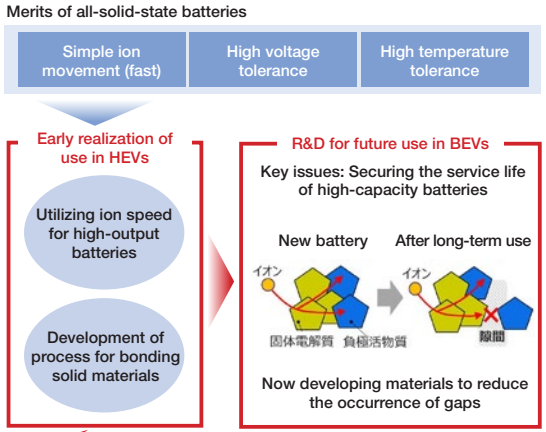
In February 2020, EODev's ship *Energy Observer* carried out testing of a Toyota FC system at sea. In October 2020, we announced the use of Toyota FC modules on a pleasure boat, as well.

Next-generation Lithium-ion Batteries



Taking on the challenge of developing a wide range of batteries for the second half of the 2020s
Providing BEVs equipped with batteries with improved characteristics that enable driving with peace of mind

Outlook of and Challenges Associated with All-solid-state Batteries



First considering vehicles that can best utilize the characteristics of all-solid-state batteries
Overcoming challenges and envisioning rollout from HEVs to BEVs

Battery Procurement and Collaboration Structure

Future direction based on local conditions
Strengthen collaboration with partners and consider new cooperative structures
Rapid start-up of production within the Toyota Group

Initiatives to Achieve Carbon Neutrality: Hydrogen Engines

ToyotaTimes  Super Taikyu 2022

The Evolution of Efforts to Produce, Transport, and Use Hydrogen through a Year of Racing

June 2022 marked a year since the racing debut of a hydrogen engine developed by Toyota.

Hydrogen engines work like modified versions of conventional gasoline engines, powered by burning hydrogen directly as fuel. The fuel is 100% pure hydrogen, unmixed with gasoline. As no fossil fuels are burned, hydrogen-engine vehicles emit almost no CO_2 when in operation—only that from the combustion of minute amounts of engine oil. The hydrogen engine is thus one option that offers great potential to contribute to carbon neutrality while making use of technologies for internal combustion engines built up over the decades and protecting engine-related jobs in the automotive industry.

In late 2020, after taking a test drive in a hydrogen engine prototype car, master driver Morizo (President Akio Toyoda) decided on the spot to enter a hydrogen engine car in Super Taikyu Series races. The development of race vehicles is dramatically faster and more agile than that of mass-production vehicles. We decided that racing would provide the ideal environment for honing our hydrogen engines being developed with the goal of achieving carbon neutrality.

Looking at the overall route to the market release of a hydrogen engine car, we are currently a little less than halfway there. The finish line is still far ahead, and there are still many issues to be figured out, but we are steadily moving forward. Over the course of a year of racing with hydrogen engines, our hydrogen engine technologies and initiatives to use hydrogen have evolved. At the same time, the number of like-minded partners who have joined our efforts to produce, transport, and use hydrogen has expanded from eight at the starting line to 25 as of August 2022.

With regard to hydrogen production, the range of available energy sources for producing hydrogen has expanded to include solar power from Yamanashi Prefecture and Namie Town, Fukushima Prefecture; geothermal energy from Obayashi Corporation; lignite from Kawasaki Heavy Industries, Ltd., Iwatani Corporation, and Electric Power Development Co., Ltd. (J-Power); and sewage biogas from Fukuoka City.

To transport hydrogen, Commercial Japan Partnership Technologies Corporation has improved its FC light-duty trucks, changing from a metal tank to a lightweight resin liner tank that can transport hydrogen at higher pressure, achieving an approximately four-fold increase in the amount of hydrogen transported annually.* In addition, as a first step in procuring hydrogen from overseas, hydrogen transported by air to Japan by Kawasaki Heavy Industries, Iwatani Corporation, and J-Power on a trial basis was used as fuel in Toyota's hydrogen-powered vehicles.

As for using hydrogen, we are working to improve cars and engines through agile development in the demanding environment of motorsports. Over a year of racing, our hydrogen engines have evolved significantly, increasing power output by 20%*, torque by 30%*, and cruising range by 20%*, while hydrogen filling time has been reduced from approximately five minutes to 90 seconds.* We have also raced with a GR86 modified to use another, non-hydrogen carbon-neutral fuel. The partners who joined us through racing in the Super Taikyu Series are now accelerating initiatives outside of racing to achieve carbon neutrality.

Expanding Hydrogen Initiatives Globally

Our efforts to develop hydrogen engine cars are extending beyond Japan. In August 2022, Morizo put a hydrogen engine car (a GR Yaris) through its paces in a demonstration run during the ninth round of the World Rally Championship (WRC) in Belgium. This enabled us to highlight the potential of hydrogen as an option for achieving carbon neutrality in Europe. We also plan to enter a hydrogen engine car in an endurance race in Thailand in December 2022. Through our efforts to use hydrogen that began with hydrogen engine vehicles in the Super Taikyu Series races in Japan, and gradual growth in understanding of our assertion that carbon is our enemy, not internal combustion engines, hydrogen has come to be seen as an option for the future. Going beyond national, regional, and industry borders, we will continue to push forward with our partners.

*Figures as of June 30, 2022

Photographs by Noriaki Mitsuhashi / N-RAK PHOTO AGENCY

Initiatives to Achieve Carbon Neutrality: *Monozukuri* (manufacturing)


Is Manufacturing Past Its Prime? Toyota Chief Production Officer Says "No"

Taking on the Challenge of Embodying Skilled Manufacturing, a Key to the Future

Manufacturing has long been the main driving force behind Japan's industrial development. However, we cannot take it for granted that Japan's strength in manufacturing will last forever. This strength, which has been nurtured over many decades, could be lost for good if we fail to hold on to it. Japan is an earthquake-prone country, and its manufacturing prowess has been refined by adversity. In truth, Japan's manufacturers have been made even stronger by overcoming one natural disaster after another.

When the Great East Japan Earthquake struck in 2011, our plants and equipment suffered grave damage due to the unprecedented scale of the disaster, and the restoration of their operations took a long time. However, having gone through this trial, we have become even better at minimizing disaster damage through the emergency handling of equipment and immediate crisis response in other areas.

When the COVID-19 pandemic forced automakers to suspend production in 2020, we voluntarily started to produce masks, face shields, and foot-operated disinfectant application devices. We also employed our TPS (Toyota Production System) to assist in the production of such goods as medical gowns. In sum, it was proven that our response to emergencies has become prompter and more proactive.

When a fire broke out at a semiconductor parts manufacturing plant in 2021 and forced it to halt production, we pulled together to support its restoration efforts. With our teams in charge of parts procurement and equipment manufacturing demonstrating outstanding collaboration, the damaged equipment was reconstructed in two months. We thus accomplished a difficult task that would otherwise require at least seven months.

Monozukuri (manufacturing) is about developing people. It is not an exaggeration to say that Japan, which turns hardships into strengths, is an optimal place for manufacturing.

A Path toward a "Green Factory"

Toyota is currently taking on the challenge of creating a "green factory" on various fronts to realize a target of reducing the volume of CO_2 emissions from its plants worldwide to zero, that is, achieving carbon neutrality, by 2035.

Our commitment to the above target was announced in June 2021.

We believe that striving for carbon neutrality presents an opportunity to fundamentally innovate manufacturing.

Technological Development Aimed at Contributing to Carbon Neutrality

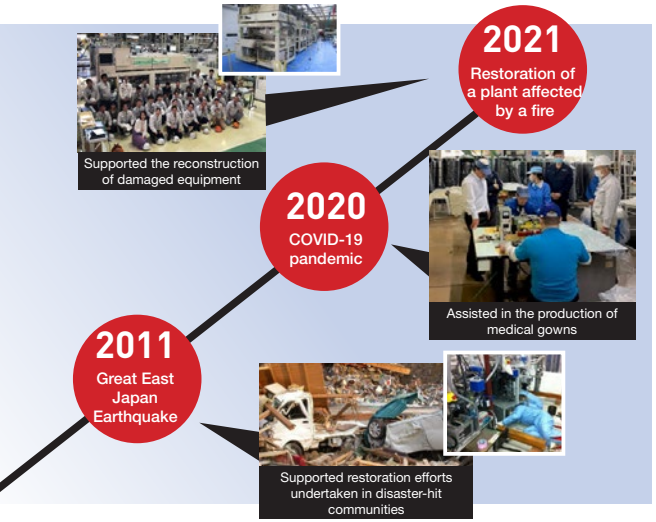
For example, we are engaged in technological development that makes full use of new ideas.

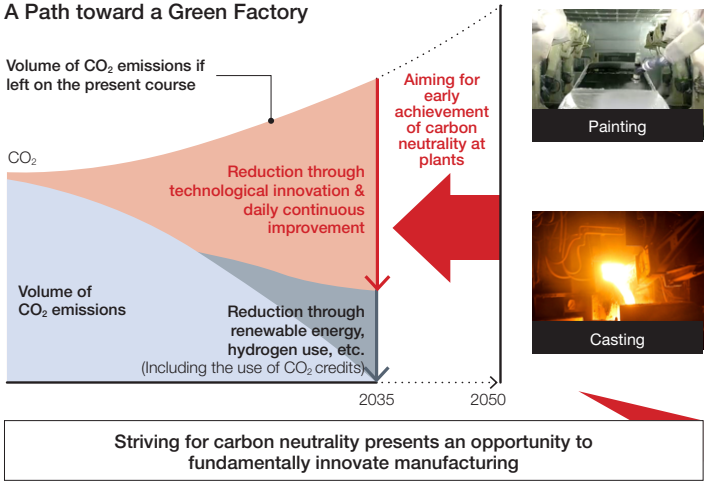
Painting and casting are the most carbon-intensive automobile manufacturing processes. Based on new ideas, we are taking on technological development focused on decarbonizing the above two processes.

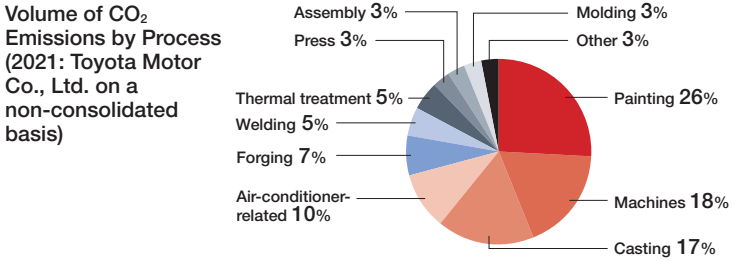
Conventional air-spray technologies are designed to deposit paint over broad areas. Moreover, with the air blown toward the target surface rebounding off it and scattering paint particles, only approximately 70% of the paint being sprayed successfully adheres to the target surface while the remaining 30% goes waste. To eliminate such waste, our airless painting machines take advantage of the world's first technology that uses static electricity to cause fine paint particles to adhere to the target surface. This technology enables us to achieve a coating adhesion efficiency of more than 95%. Furthermore, having combined this technology with the innovative concept of a rotating paint ejection head, we have made it possible to create even finer paint particles with minimal variation in size, thereby achieving even higher painting quality. In addition to curbing CO_2 emissions from our manufacturing operations via the introduction of airless painting machines, we are also able to reduce the size of paint recovery equipment as the volume of waste paint is considerably smaller. Thus, airless painting machines will help us achieve a significant reduction in the volume of CO_2 emissions.

Also, in an effort to upgrade the press molding process for body panels, we are striving to make use of in-mold coating technology in which paint is applied to body panel parts as they are shaped within the metal press molds. The integration of press molding and painting into one process is an epoch-making idea that could eliminate the conventional painting process.

Other new ideas include replacing paint with adhesive film, effectively eliminating the painting process. Adhesive films can be customized to make them special, and they can also be replaced for fun. Drawing on this idea, we intend to take on a new business in which we renovate used vehicles, make them look fantastic, and offer them to the users of the KINTO subscription service.

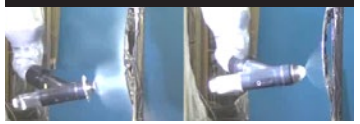






Development of Technologies That Embody New Ideas

Case 1: Splatter-free painting



Coating efficiency: 70%

Coating efficiency: 95%

Case 2: Elimination of the painting process (in-mold coating)

In-mold coating serves as a key to integrating press molding and painting processes

Materials used in the process

Karakuri for Non-powered Devices

We wonder if some of our readers have heard of *chahakobi* dolls, tea-serving dolls manufactured in the Edo period. Such mechanical dolls, designed to carry cups of tea to guests and collect empty cups, perform combinations of simple fundamental movements *(karakuri)* and can be considered a precursor to robots. The Japanese term *karakuri* generally refers to non-powered mechanical automata operating through a combination of gears and shafts. They can therefore be deemed the ultimate carbon-neutral devices.

At Toyota's Honsha Plant, we maintain a production line called the TPS basic line. This facility was built upon our predecessors' wisdom as well as our ingenuity. In fact, going back to the concept of *karakuri,* we have created an automated line that does not use sensors or control devices.

The use of *karakuri* is intended to nurture human sensibilities and inform our development of equipment. For example, because at each stage a *karakuri* mechanism must work properly for the next action to occur, such mechanisms make it easy to detect problems without relying on sensors.

At Toyota, we replace pallets containing production parts via non-powered operation, using this mechanism in combination with automated conveyance carts to achieve an unmanned process.

Collaboratively Employing the Latest Technologies and the TPS

Toyota's efforts to create a "green factory" are being promoted by collaboratively employing the latest technologies and the TPS.

The first technology is automated conveyance. At Toyota, transporting, itself, is considered wasteful. The starting point is trying to not transport at all. But, as that can often not be done, if something needs to be transported from point A to point B, we revise facility layouts to shorten the distance between the two locations while reducing the bulk of cargo and number of items per load. We then develop an automated conveyance system covering only the remaining distance and carrying lightest possible loads.

In Woven City, a similar concept is utilized, in which above ground and underground roads are developed separately, with the latter used only by fully automated logistics vehicles for the purpose of goods distribution.

The second technology is automated inspection using AI. There are many examples in the world of automated inspection of defective products using machine learning to reduce the need for human labor. However, our goal is to use the vast amount of data we are collecting from this process to make essential improvements that will prevent defects from occurring in the first place.

The third technology has to do with digital transformation (DX) and IoT. With regard to IoT, a technology that connects nearly everything to the internet, we have experienced setbacks despite our best efforts to become a forerunner in the rush toward IoT. Although we raised the equipment utilization rate on production lines to 98% by pursuing continuous improvement and applying the TPS, there remains the problem of how to address the last 2%. It is a real problem that can only be solved by the power of people.

Toyota believes that people should not be turned into machine-keepers. To get that final 2%, we aim to simplify equipment and create equipment that does not break down.

By combining this unique, human-centered, Toyota thinking with DX and IoT, we hope to create the next generation of advanced production lines.

In 2019, we launched a vehicle production line that collaboratively employs the latest technologies and the TPS in Mexico (see the diagram below).

Taking Full Advantage of the Power of *Monozukuri* (manufacturing) Unparalleled by Global Peers

In the face of a forthcoming wave of new challenges, such as calls for carbon neutrality and the need for DX, we at Toyota stand with our fellow manufacturers around the world. Working hand in hand with them, we will take on these challenges and become the best automaker in town in each region in which we operate.

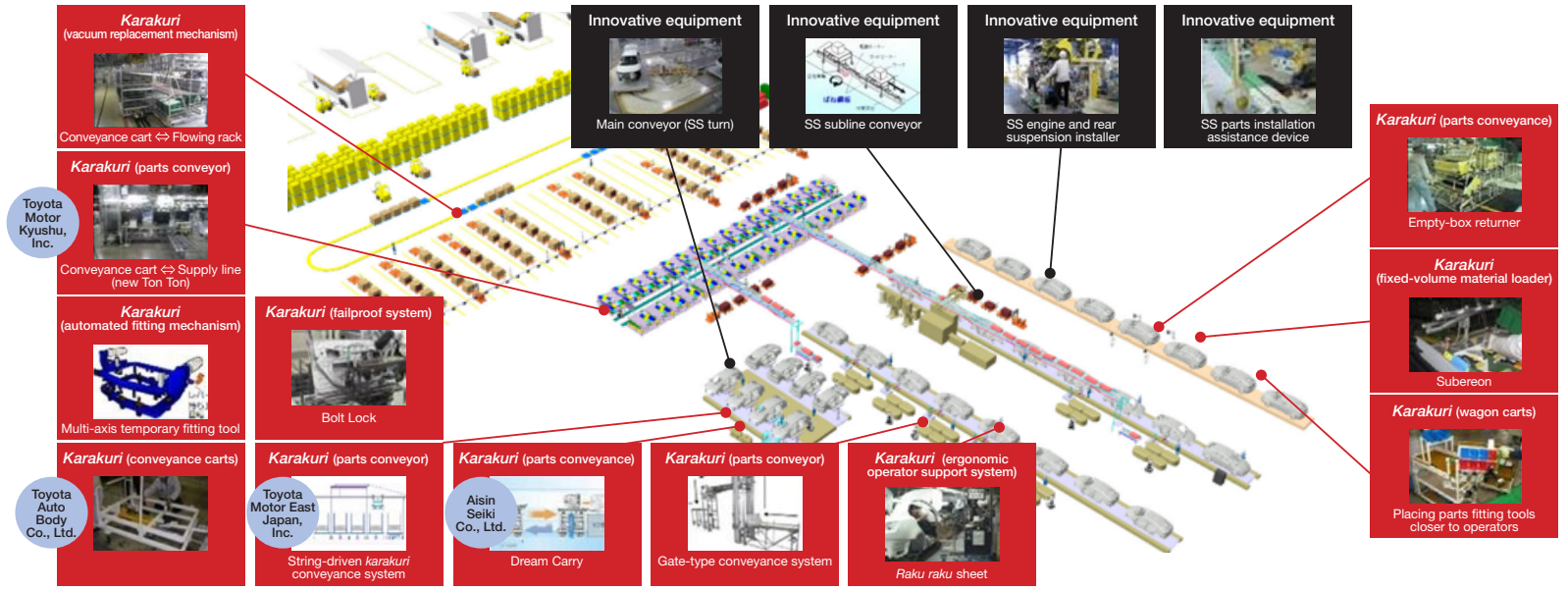
Toyota's Honsha Plant TPS Basic Line

***Karakuri* mechanisms must properly work at each stage for the next action to occur**

Example: Oil seal press-fitting machine that operates on *karakuri* principles

Making it easy to detect problems without relying on sensors

Collaboratively Employing the Latest Technologies and the TPS



Software and Connected Initiatives

How Toyota Is Taking on Car-making Going Forward

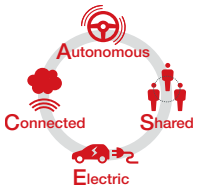
Amid this once-in-a-century era defined by major CASE* transformation, automobile manufacturing requires technological development in such new fields as electrification, automated driving, and connectivity. Among these fields, software is becoming an important factor in determining product appeal.

Today's cars are equipped with more than 50 electronic control units, or ECUs, and use as many as 1,000 chips. Furthermore, society has entered the age of the internet of things, and things being connected has become the norm. Cars are also equipped with communication devices, further advancing their electronification, and the volume of software (lines of code) is thus growing ever larger.

Facing this major transformation in the auto industry, Toyota is paying particular attention to the transition of cell phones. As the shoulder phone evolved into the feature phone and then into the smartphone, the commoditized product of the phone became linked with information, creating new value through new experiences and quickly spreading around the world. This transition is supported by software and connected technologies.

Due to the CASE revolution, cars are becoming more deeply connected to communities and people's lives through information, becoming a more integral part of social systems. At the same time, cars will become more linked to information, and through the movement of people, goods, and things, Toyota aims to provide new value through new experiences and by bringing excitement to customers.

* CASE: Connected, Autonomous, Shared, Electric. The technological revolution in these new fields is expected to speed up and continue changing cars, and, by extension, mobility and the structure of society. As a mobility company that can provide a wide array of services related to mobility and meet diverse needs, Toyota is working to realize the mobility society of the future.



Focusing on the Real World and Internalization

When it comes to the manufacturing of cars, Toyota has a basic stance that has been handed down internally over the years: we stick to our principles and internalize important elements by attempting to first achieve them on our own. We also continuously introduce improvements on the front lines to enhance our competitive advantage.

Since its founding, Toyota has been producing various production equipment in-house as necessary. In the 1990s, we pursued the in-house design of ECUs and established an electronics plant, a chip plant, and a battery plant. These efforts eventually led to the commercialization of the Prius, the world's first mass-produced hybrid electric vehicle (HEV).

Toyota has always maintained a strong awareness of the real world regardless of the era at hand, pursued our principles, and promoted internalization. That is why in the area of software and connected technologies, we established the Toyota Research Institute (TRI), Woven Planet Holdings, and Toyota Connected, and it is why we are working on the development of the e-Palette, the construction of Woven City as a town for pilot testing, and the development of the Arene platform and other technologies.

Progress on Connected Cars and Connected Technologies

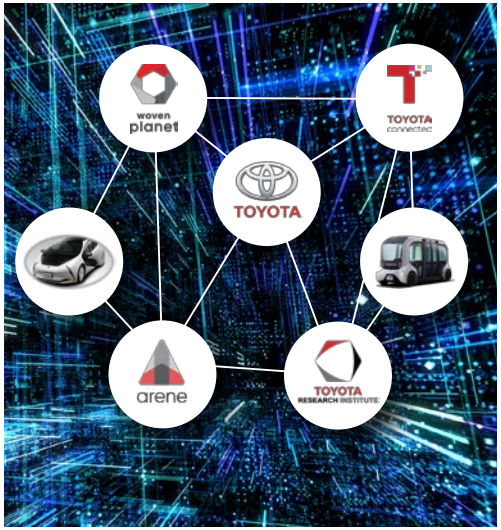
To date, Toyota has sold 10 million Lexus and Toyota vehicles that are connected cars, mainly in Japan, the United States, Europe, and China.

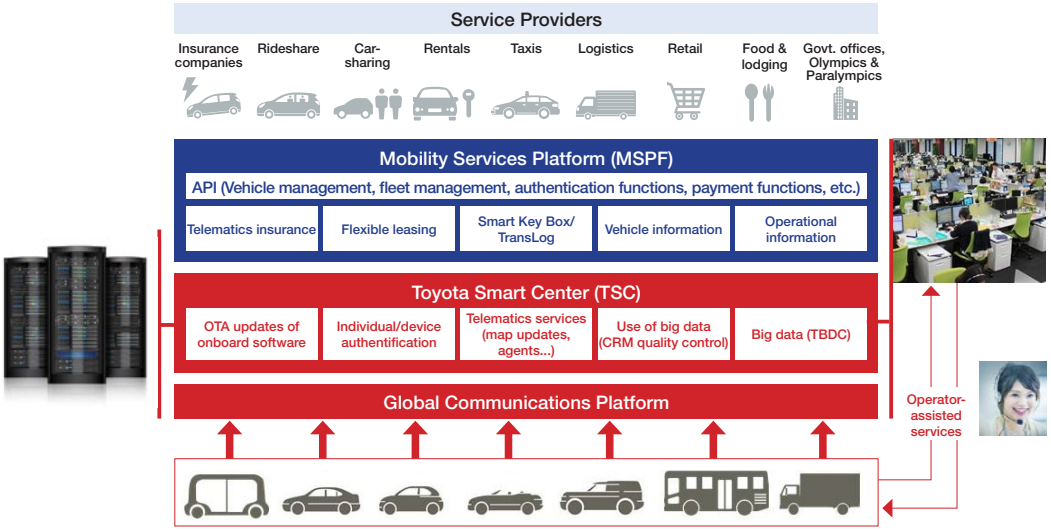
Toyota's vision of the connected car is not simply one of connecting the car to the internet. Rather, it is about providing customers with emotional experiences through the movement of people, goods, and activities—a vision centered on people that we call "human connected."

To achieve this, we are operating a call center as a point of contact with customers; the Toyota Smart Center, which provides a variety of services; and the Toyota Big Data Center, which utilizes vehicle information gathered from cars. In addition, we have established the Mobility Service Platform (MSPF) to provide mobility services and are promoting collaboration with service providers.

Connected cars and connected technologies will be applied to a variety of areas, and that which is to be connected will expand to include people, cars, communities, and society (business-to-society, or BtoS). Toyota will handle the information gathered from customers and vehicles with care, utilizing it for the happiness of customers and the development of society while creating new value from experiences centered on mobility.

With the e-Palette battery electric vehicle (BEV) used in the Olympic Village for the Olympic and Paralympic Games Tokyo 2020, our goal was to create mobility that integrates cars and information and that coordinates with the community. During the Games, 49,000 athletes, staff, and volunteers used e-Palette. We also developed a fleet management system for e-Palettes based on the principles of the Toyota Production System (TPS) to ensure effective, efficient, and accurate operation. The system monitors the vehicles remotely and operates them in a just-in-time fashion according to the conditions of the surrounding environment and the number of passengers. All of





this was realized via the MSPF that Toyota has been building and refining.

In the future, these technologies will be applied to the Sienna Autono-MaaS minivan being developed in the United States for use as a robotaxi, and the MSPF will be used not only for automated vehicles, but also for regular commercial vehicles and logistics.

Innovation through a New Mobility Software Platform

In this way, software has the power to promptly turn ideas into products. The aim of Arene, the vehicle software development platform that Toyota and Woven Planet are focused on, is to continue fundamentally changing the development of software for vehicles.

The most notable characteristics of Arene are that it absorbs the differences in vehicle hardware specifications (abstraction) and employs hardware abstraction layers (HAL) that enable hardware to be controlled with universal methods. This, in turn, enables the independent development of hardware and software as well as the reuse of software. Arene leverages the strengths of hardware cultivated by Toyota to achieve the development of safe, high-quality, and advanced software.

Because increasingly complicated software development is becoming a bottleneck for cars, too, there is a need for a revolutionary vehicle OS that can solve these issues. The vehicle OS will achieve TPS in software development as well, and we must continue to realize combinations of good hardware and software.

For example, when developing automated driving software, the on-board software needed for automated driving actually makes up only 10%; the other 90% comprises various tools, such as data processing by the machine learning system, mounting, code review, software updates, log analyses, and simulations. Basically, most of the software we develop is used off-board (outside vehicles) or through the cloud.

Arene is used to develop frameworks for vehicle development and development environments based on those frameworks as well as to build ecosystems for mobility development. Using industry-leading software technologies, we will continue providing privacy-conscious, secure, and safe cars.

Furthermore, application development on Arene is also easy. Partner companies will be able to program applications more efficiently using the Arene's application programming interface (API, a mechanism that can share software functions) and software development kit (SDK), which includes simulation environments.

In this way, development on Arene swiftly realizes commercialization and enables users to share the fun of providing new ideas that appeal to customers while meeting the expectations of worldwide partners and developers as well as the Toyota brand's high-quality standards.

The portion of a car's value attributable to software is growing. By internalizing the parts central to Toyota's future, we will strategically ensure the strengths of our hardware and software through internal production, compartmentalize development undertaken with partners, and accelerate the speed of mass production.

For these initiatives, we are building a software development structure on a 3,000-person scale for Toyota, Woven Planet, and Toyota Connected and on a 18,000-person scale for the entire Group. We are also strengthening the teams responsible for the internal production and development of software.

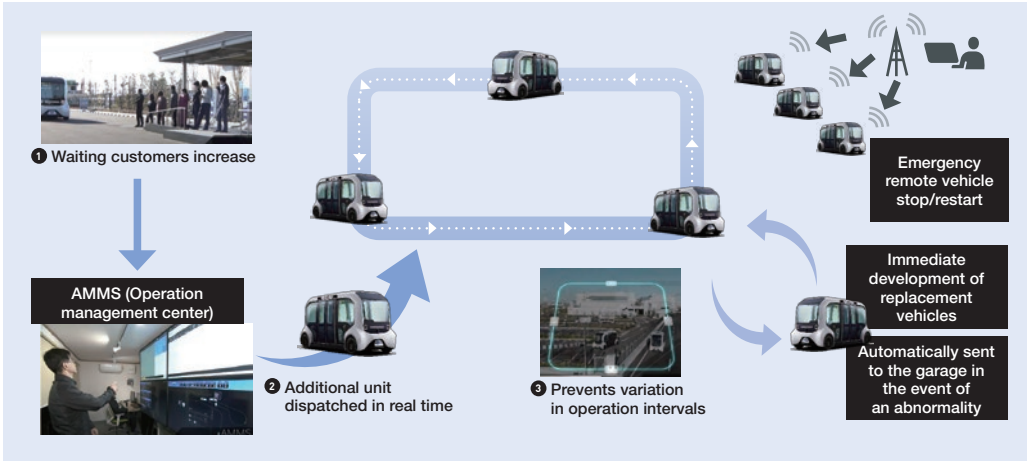
Geofencing Technology Expands the Possibilities of HEVs and PHEVs

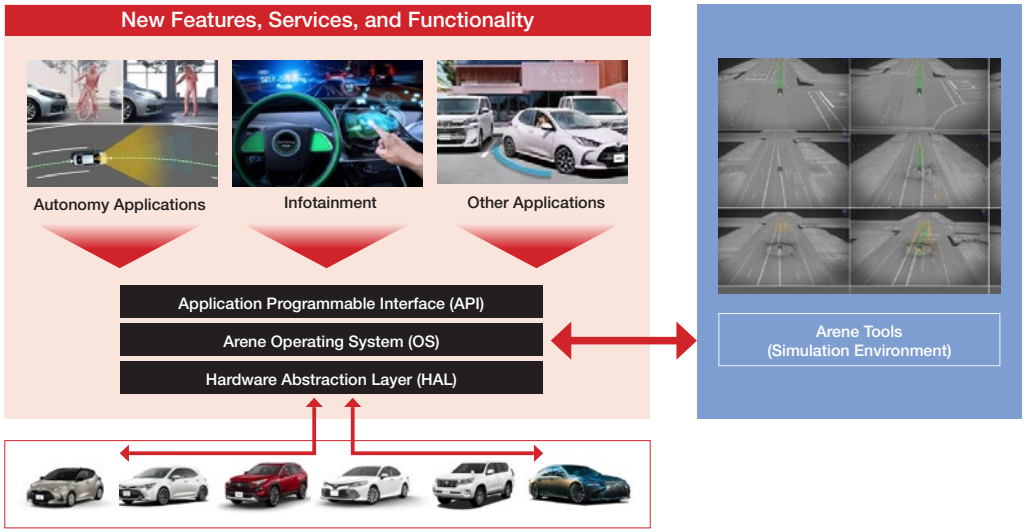
Through connected technologies, we can contribute to carbon neutrality by gaining a better understanding of the characteristics of each region in the form of data and combining this knowledge with realized technologies.

According to market data, in Japan, the engine is turned off for half of all driving time in hybrid electric vehicles, or HEVs, while for plug-in hybrid electric vehicles, or PHEVs, the engine is turned off for as much as 80 percent. HEVs and PHEVs can evolve into environment-friendly vehicles to an even higher degree by upgrading the switching control of engines and electric motors. In other words, there is room to expand the possibilities of both HEVs and PHEVs.

Fleet Management System Based on the Toyota Production System (TPS)

Aiming for the ultimate in "just-in-time mobility," e-Palettes are dispatched "when needed, where needed, and in the amount needed."





One mechanism that will enable this is geofencing technology. A portmanteau of geography and fence, geofencing refers to the combination of navigation and cloud technologies to enable the automatic switching of engine and motor functions in real time to reflect driving locations and driving times based on geographic data. For example, in zero-emission regulation regions that limit vehicle operation to only BEVs during certain time periods, geofencing automatically controls the functions of HEVs and PHEVs to ensure compliance with regulations.

Furthermore, geofencing enables anticipatory eco-driving that switches over to BEV driving as appropriate by predicting the driving burden based on the driving environment up to the destination. Utilizing connected technologies makes it possible to further promote energy saving in cars the smart control of HEVs and PHEVs.

The new NX features a mechanism that switches to HEV control. We expect that in the near future it will be able to use geofencing technology with over-the-air (OTA) update of its software.

In October 2021, in advance of introducing geofencing technology under development with an eye toward practical application, we introduced anticipatory eco-driving (anticipatory EV/HEV mode switching control) in the Japanese market. It realizes highly efficient driving by automatically switching between EV and HEV modes depending on the charge left in the battery and the road conditions and characteristics.

Continuing to Evolve through Software Updates

OTA refers to using wireless connections to continuously update to the latest software (control software and high-precision mapping software). This means that after a car's purchase, new functions continue to be added and performance enhanced while the latest driving assistance technology is installed, thereby continuing the vehicle's evolution into a safer and more secure car.

For the Lexus LS and Mirai launched in Japan in April 2021, we have included cars that feature the latest Advanced Drive function of the newest sophisticated driving assistance technologies developed by Toyota Teammate/Lexus Teammate, and they are eligible for related software updates on an ongoing basis.

The GR Yaris "Morizo Selection" is a new initiative based on GR Yaris that combines the ROOKIE Racing privateer team run by Morizo (President Akio Toyoda's racing driver name) and Toyota's KINTO car subscription.

We will continue to evolve each car to best match each customer by reflecting updates (which are based on feedback and data gained in races participated in by Morizo and ROOKIE Racing) and personalization (which is based on customer driving data) in the software in GR Garage shops. Furthermore, we offer better driving methods and support the enhancement of driving skills. Basically, we realize cars that evolve to suit people by updating the latest software in line with each customer.

Note: These updates are not OTA. They are done through a wired connection at stores.

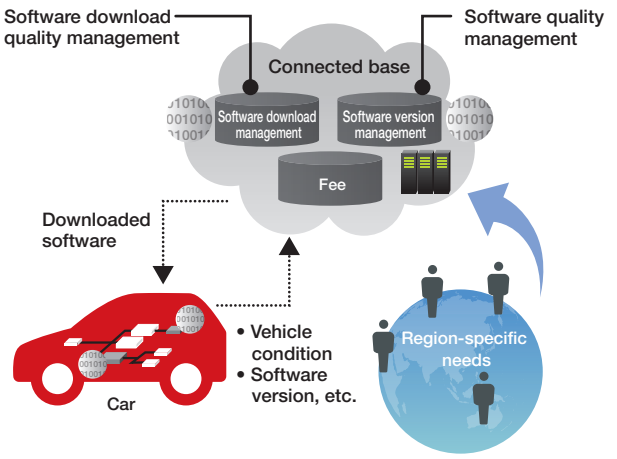
The Auto Industry Going Forward and the Possibility of Cars

Cars have a wide range of applications from passenger cars to MaaS and commercial vehicles, and we will continue to expand the regions where we operate going forward. Needs are increasingly diversifying, and cars can be used in a myriad of ways to meet them. Our efforts thus encompass people's problems and social issues, smiles and joy, and needed technological development.

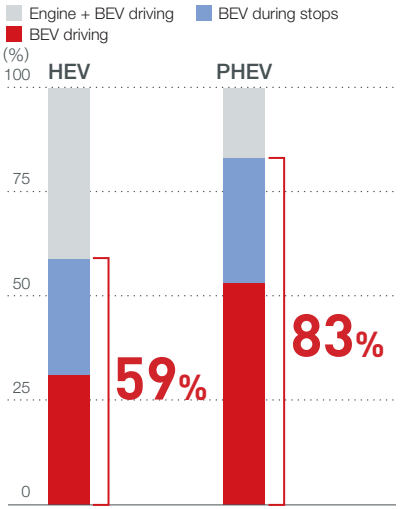
The auto industry must move people while also achieving coexistence with local communities. For the future and for children, the Toyota Group is working on producing happiness for all through freedom of movement for all and the provision of exciting experiences.

We will continue to enhance the excitement that can be experienced by being able to move by combining real cars and the power of software. If we combine innovation with technology, the value of cars will rise higher. We will also contribute to the further development of society by going beyond the borders of cars and contributing to community building and the creation of society-wide platforms.

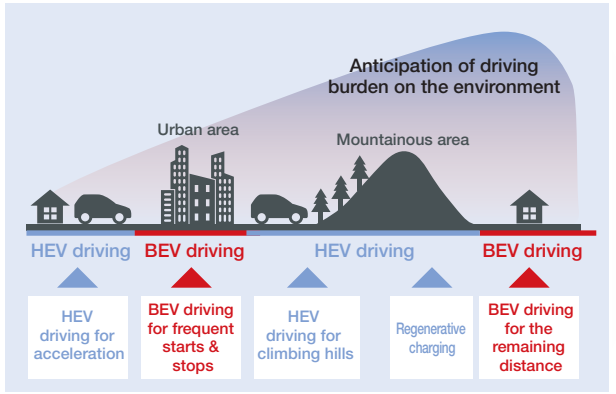
Rate of Engine Being Off During Driving



Rate of Engine Being Off During Driving

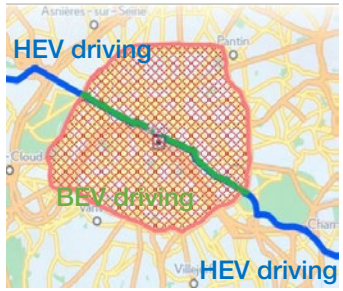


Energy Conservation



Switch to electric-vehicle mode based on driving environment (Anticipatory eco-driving)

Harmony between Society and Cars



Support for driving in cities that have zero-emission regulations (Geofencing technology)

Commercial Sector Initiatives

Contributing to Carbon Neutrality through Electrification and Enhanced Logistics Efficiency

Accelerating Commercial Vehicle CASE Initiatives

Since the establishment of Commercial Japan Partnership Technologies (CJPT) in April 2021, Toyota has been working to disseminate CASE technologies in the commercial sector and thereby contribute to the realization of carbon neutrality.

CASE technologies can only contribute to society once they become widespread. Commercial vehicles can play important roles in CASE technology dissemination, as they travel long distances for extended periods of time to support the economy and society and can be easily linked with infrastructure development. By combining the commercial vehicle foundations of the companies participating in CJPT with Toyota's CASE technologies, the companies aim to accelerate the societal implementation and adoption of CASE technologies and services and thereby help address social issues and contribute to the realization of carbon neutrality.

Initiatives with Our Partners

Distribution by truck accounts for about 90 percent of overland logistics in Japan, and the transportation sector (including buses and taxis) involves 2.7 million people. Commercial vehicles account for about 40 percent of the total distance traveled by automobiles and about half of all CO_2 emissions from automobiles in Japan. Furthermore, the more than 60,000 logistics companies operating in Japan currently face numerous management issues, such as high-frequency distribution, harsh work environments, labor shortages, and rising burdens on workers. The power of CASE, centered on connected technologies and services, is a promising approach to effecting improvements that will help resolve these issues.

Solving these kinds of social issues is not something that one company can accomplish alone. It is necessary to seek a wide range of like-minded partners, apply their different strengths, and work together for the sake of those supporting transportation and for society.

Expanding into the Commercial Minivehicle Business

Minivehicles account for about 31 million of the approximately 78 million vehicles owned in Japan. Furthermore, 85 percent of Japan's roads are so narrow that only minivehicles can easily use them. In this sense, minivehicles are collectively a kind of "people's car," made to suit the roads of Japan. They are a practical and sustainable lifeline for people across the country and have continued to evolve alongside changing lifestyles. Commercial minivehicles, which account for 58 percent of all commercial vehicles in Japan, are able to effectively cover areas that their small size makes accessible, supporting logistics operations mainly in the last mile.

Expanding the CJP project to include minivehicles will enable efficient, integrated logistics, linking the main arteries of logistics (handled by trucks) with the capillaries of logistics (the domain of commercial minivehicles) while leveraging connected technologies and abundant data. This new collaboration is also aimed at promoting the broader use of affordable advanced safety technologies and electrification by leveraging Suzuki and Daihatsu's strengths in high-quality, low-cost manufacturing and Toyota's CASE technologies.

*CJPT expelled Hino Motors, Ltd. in August 2022 in light of certification testing misconduct.

Activities in Electrification and Improving Logistics Efficiency

Our efforts to achieve carbon neutrality center on two pillars: electrification and improving logistics efficiency.

Amid pressure to enhance cost competitiveness, maintaining a competitive edge in the area of commercial vehicle electrification is increasingly challenging. Competitiveness increasingly hinges on connected technologies and uses of batteries and other technologies. Accordingly, manufacturers must step up the unique added value that they offer.

Improving transport efficiency will contribute greatly to realizing carbon neutrality. The companies of the partnership will link their connected technology platforms to build a more comprehensive platform for commercial vehicles and leverage the Toyota Production System (TPS), one of Toyota's strengths, to realize just-in-time (JIT) logistics and increase transport efficiency, thereby helping to reduce CO_2 emissions. Using connected technologies to link logistics from the major arteries to the fine capillaries, from producers to consumers, using truck logistics and local minivehicle-based distribution, JIT logistics have the potential to lower running costs for logistics vendors and sustainably improve logistics.

Energy Management System in Fukushima and Tokyo

In collaboration with its partners, CJPT will begin the construction and social implementation of an energy management system in Fukushima Prefecture and Tokyo in January 2023 to promote the widespread use of electrified vehicles.

The introduction of commercial electric vehicles imposes an increasing burden on society as a whole, not only in terms of vehicle purchase, but also in terms of downtime for cargo and vehicles due to recharging and hydrogen filling and an increase in peak electricity demand at business sites due to the concentration of recharging at certain times.

A total of 580 commercial electrified vehicles will be used in this social implementation project, including heavy- and light-duty fuel cell electric trucks, light-duty battery electric vehicle (BEV) trucks, and mini-commercial van BEVs, to comprehensively cover transportation from trunk lines to the last mile. In addition, the use of an energy management system (EMS) that is integrated with commercial vehicle operation management will help reduce the overall burden on society and CO_2 emissions.

At the project in Fukushima, we are working to create an implementation model focusing on hydrogen use in cities with populations of around 300,000 which is typical of Japan, with the aim of applying the model to similar-sized cities nationwide.

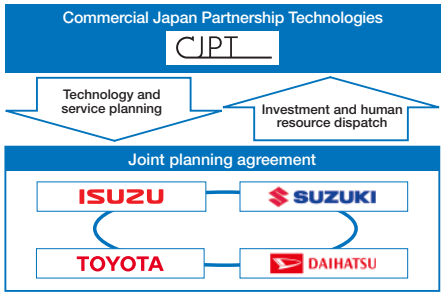
Logistics Improvement Begun with AEON in Kyushu

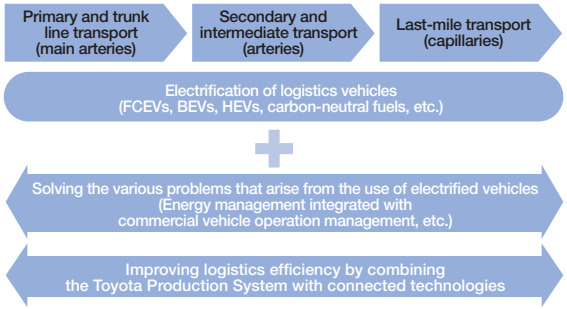
CJPT is working with AEON KYUSHU Co., Ltd. and AEON GLOBAL SCM Co., Ltd. on a logistics improvement project for the AEON Group in the Kyushu area that will solve problems faced by the logistics industry, such as soaring logistics costs and driver shortages.

By combining the logistics expertise built up by AEON KYUSHU and AEON GLOBAL SCM with the connected technologies of the companies participating in CJPT, the project aims to

1. Establish new operations to improve efficiency by linking each process in the supply chain
2. Improve efficiency by minimizing logistics downtime through the use of big data and real-time processing on connected technology infrastructure
3. Promote collaboration with a wide range of partners to achieve these initiatives

Going forward, through the CJP project, the participating companies will deepen their collaboration while openly considering cooperation with other like-minded partners, working to help fulfill the automotive industry's mission of helping improve people's lives and leave a better Japan and a better planet for the next generation.





Woven City: Aiming to Create a City Where People Live Happily

"Within Reach If You Just Keep Climbing": Akio's Message on Woven City

TOYOTA woven city

The Woven City project, first announced in January 2020. A safety prayer ceremony was held on October 10, 2022, officially kicking off construction. Woven City will demonstrate cutting edge technologies in such areas as automated driving, mobility as a service (MaaS), personal mobility, robotics, smart homes, and artificial intelligence (AI) in a real living environment. Using Woven City as a test course for mobility, we aim to create new systems and services that will contribute to "well-being for all."

Building on Our History of Manufacturing

Woven City will be constructed on the site of Toyota Motor East Japan's former Higashi-Fuji Plant, which was a pillar of production for Toyota for 53 years, starting in 1967. At its peak, the plant had about 2,000 employees, and a total of around 7,000 individuals worked there over its history, producing such vehicles as the Toyota Century, Toyota's flagship chauffeur car infused with Toyota craftsmanship, and the JPN Taxi, a car that requires many times the durability of an ordinary passenger car.

The concept for Woven City can be traced back to the Great East Japan Earthquake in 2011. President Akio Toyoda sought to create jobs for the region's people, who were hit hardest by the disaster, by creating a third base of operations in the Tohoku region. Guided by his strong leadership, Toyota established Toyota Motor East Japan, Inc. in 2012. However, this also led to the difficult decision to close the Higashi-Fuji Plant. Looking for a way to carry on the Higashi-Fuji Plant's legacy of manufacturing to help create future mobility for the next 50 years, he arrived at the idea of transforming the site into a test course that is woven into the fabric of daily life.

Aiming to Expand Mobility

At Woven City, we aim to make people happy by expanding what mobility can do for human beings and building systems that will create novel value. In addition to the mobility of people, goods, and information, we emphasize that mobility also has an emotional component and represents feelings, such as being moved. Through mobility that connects human hearts, Woven City will help us invent the technologies and services that will become the future fabric of life, constantly evolving alongside the inventors who live there and our partners.

A Test Course for Toyota as a Mobility Company

Woven City will be a kind of test course, enabling us to rapidly implement development and demonstration cycles for diverse forms of mobility in both the virtual and the real world. For example, to achieve safe mobility, Woven City will comprise three types of roads, woven together like warp and weft: paths for people, roads shared by people and personal mobility devices, and roads for autonomous vehicles. We will use these roads to advance the integrated three-part development of automated driving at the levels of people, vehicles, and the traffic environment. Guided by the three concepts of "human-centered," "a living laboratory," and the "ever-evolving city," Woven City will demonstrate technologies from logistics to energy, food, and agriculture as it grows into a test course conducive to the timely generation of new inventions that address social issues.

One such initiative is the hydrogen refueling station to be built by ENEOS adjacent to Woven City. The station will produce CO_2-free hydrogen for supply to both fuel cell electric vehicles (FCEVs) and to Woven City. Using Woven City as a living laboratory, we will demonstrate a supply chain across the production, transportation, and use of hydrogen, taking new steps toward achieving carbon neutrality.

Carrying on a Commitment to "Human-centered" Operations

The name "Woven City" comes from Toyota's origins in automatic looms. Toyota Group founder Sakichi Toyoda was driven to invent an automatic loom out of a desire to make his mother's work easier. We have guarded and nurtured this spirit of service to others ever since. Woven City will take up this commitment from the Higashi-Fuji Plant, growing and evolving as the foundation for a new era at Toyota.

Message from the CSO

Yumi Otsuka Chief Sustainability Officer

Toyota Is Transforming in Pursuit of "Producing Happiness for All"

Transforming to Help Realize a Sustainable World

With a corporate mission of "producing happiness for all," Toyota is advancing novel initiatives toward the realization of a sustainable world. These initiatives will help Toyota survive the once-in-a-century upheaval taking place in the automotive industry as it transforms into a mobility company. Specifically, we are working to establish a more agile development approach to enhancing overall vehicle performance. To this end, we are further honing our basic sources of competitiveness, such as the Toyota Production System (TPS) for making ever-better cars and cost reductions, and our motorsports-bred cars. In addition, to create a new mobility company business model, we are advancing the development of software and connected technologies, including the Mobility Services Platform and the Arene vehicle software development platform.

Aiming to expand mobility, we are also advancing preparations for Woven City, a living laboratory for testing new technologies and services.

Human Resource Development is Key

The social issues we face today are increasingly complex and serious. As such, the challenges we must take on are broad ranging, from building a mobility society of the future in such areas as carbon neutrality and mobility for all, to creating of environments that ensure respect for human rights throughout the supply chain and leverage diverse talent, regardless of gender, disability, or age. To advance these initiatives with speed and agility amid drastic change and growing uncertainty, developing people with the aspiration and passion to build a better future as well as the skills to make that aspiration a reality will be key. President Toyoda has said that developing human resources with the spirit of working for the sake of others, a spirit that has been handed down since the Group's founding, is essential to be committed to the Sustainability Development Goals. This idea is a pillar of our efforts to promote sustainability in society and within Toyota.

Promoting Diversity and Passing on Philosophy, Skills, and Behavior

Conveying philosophy, skills, and behavior is essential to human resource development. President Toyoda and top management convey their philosophy through the Toyota Times, Akio Toyoda's *Juku* (roundtable with employees) and dialogue using other communication tools. Furthermore, we have reaffirmed the position of the TPS as a source of our competitiveness. This has enabled us to advance *Kaizen* (continuous improvement) at both production sites and other workplaces through the application of the TPS, and the TPS has become a central touchpoint for digital transformation (DX) efforts. To transform into a mobility company, we are also working to secure software talent and promote diversity and inclusion. As a result of these initiatives, all of our employees are gaining a greater awareness of social issues and beginning to proactively take action that extends beyond our conventional fields of activity.

Forging Partnerships through Action

At the same time, to help realize a sustainable world, we need like-minded partners who share our aspirations. Toyota is strengthening its relationships with suppliers and other existing stakeholders while also working to foster new partnerships across diverse fields, such as energy and connected technologies. For example, we are advancing the technological development of hydrogen engine vehicles, which are still in the early development stages, by entering them in endurance races. Through such partnerships, we have successfully gained a wider range of partners with whom to work hand in hand toward carbon neutrality. Seeing this has taught me first-hand the lesson that action has power to move people.

As CSO, I will continue working to strengthen engagement with both internal and external stakeholders while advancing initiatives aimed at helping realize a sustainable world based on the strengths and values that make us Toyota.

Roundtable Discussion with the Outside Directors

What Does Toyota Need for the Future?

This roundtable discussion with the Outside Directors took place on September 15, 2022.

How have your perspectives on Toyota changed since you took office as Outside Directors?

Sugawara We are now in our fifth year as Outside Directors. Compared with when we took office in 2018, the Board of Directors' discussions have significantly more substance. I think this is because the Board has secured more time for strategic discussions by raising the bar for items that need to be decided by the Board, fully delegating routine items to the executives, and, when such matters do go to the Board, processing them as paperwork to avoid taking up meeting time. Because of the COVID-19 pandemic, we don't all meet in person as often as we used to, but the increased substance of our discussions more than makes up the difference.

On the other hand, there is still considerable room to improve the effectiveness of the Board of Directors. Also, while President Toyoda is leading Toyota's electrification strategy going forward, I think that there are aspects that the Board of Directors should take the lead in discussing with regard to Company-wide areas to reinforce.

Craven I knew little about Toyota, really, when I joined as an Outside Director. In fact, I was most surprised when Akio offered me the position. So, I had a lot to learn, and, as Mr. Sugawara explained, I have seen several positive changes, which I've observed with great pleasure.

The Board of Directors' discussions are very open, and there is a good division of roles and balance between the executives and the Outside Directors. As one example of this openness, I've been very pleased with receiving the notes from the regional CEOs weekly meeting with the executive vice presidents, president and *banto*. I think that it has really shown more of the inside workings of the Company to the Outside Directors. In the notes from one of those meetings, the president stated very clearly that he needs to know the facts, and he can only operate on the facts. Indeed, ensuring that the facts are received and then passed on accurately and wholly is important to enable the president and executive vice presidents to make the best decisions possible. This kind of concrete initiative has, I think, improved the balance between the executives and Outside Directors.

Kudo When I came onboard with Toyota, I found that the culture was much stronger than I had imagined. Toyota has developed and honed itself over decades, valuing Toyoda Principles and the wisdom and techniques of the Toyota Production System (TPS), and its strong culture is backed by shared, cherished values. I think that the focus on easing burdens and producing happiness for all resonates with all of us Outside Directors.

At the same time, however, a strong culture can be a hindrance to change. 2018, when we took office as Outside Directors, was right around the time many changes at Toyota were beginning, and I sensed significant discord internally. Toyota has a long history, and it was performing strongly, so management had to take great pains to convey to employees the meaning of transforming into a mobility company. By overcoming that hurdle, management and employees were able to align their efforts to act with determination and urgency to deepen Toyota's operational excellence, building on the TPS while transforming Toyota into a new mobility company brimming with creativity without changing its culture. As these efforts advanced, I sought to fulfill my role as Outside Director by bridging the gap between the Company and outside stakeholders in order to contribute to Toyota's medium- to long-term corporate value enhancement.

Do you feel that the perception of Toyota among the public differs from the reality inside the Company?

Craven I'm not sure that I see a big gap between the opinion of Toyota among the public at large and that from within.

For example, I fully support the president's view of having a far wider set of options moving forward, beyond just battery electric vehicles (BEVs). Recently, Toyota has been criticized by certain environmental organizations and investors, and I think Toyota needs to respond to such opinions more proactively. I'm a great believer in communication. You don't always get your message across the first, or even the second time. You have to keep at it. Without strong communication, Toyota's reputation could slip. This would be unfortunate, because it's not fair. Toyota must communicate effectively to stakeholders on such topics as ESG and carbon neutrality. More senior executives have to take up that mantle to help put those messages out.

In saying all this about what Toyota should improve, I don't mean to sound negative. I'm so proud to be part of this great company. But, we can get the message out there in a better, more consistent manner, and get out in front of issues, rather than waiting for criticism. It will take time, but we can do it.

Kudo I have three points to add.

First, while Toyota in some ways represents Japan in world, I think that it is not at all sitting on its laurels, but always working to protect stakeholders and acting with an appropriate sense of urgency. I don't see this changing going forward.

Next, as Sir Craven mentioned, some are saying that Toyota is not fully committed to carbon neutrality and delaying the shift toward BEVs to protect its existing businesses. Toyota, however, is working very seriously to provide equality of mobility globally, including in countries that do not have access to green energy. As an Outside Director, I try to dispassionately examine Toyota's initiatives, alongside those of its competitors, and offer my opinion accordingly.

Finally, I often hear questions about whether participants in Board of Directors meetings feel free to speak their minds, and whether the opinions of Outside Directors are really listened to. As Sir Craven and Mr. Sugawara mentioned, Toyota's executives offer information openly, and meetings are conducted with care in a way that makes it easy to speak up. The Board of Directors is indeed a forum for discussion among both the internal and outside participants. The participation expected of us requires that we learn about the topics at hand. I think that there is sometimes a perception that Outside Directors, especially when they are women, are just for show, but I take my

role very seriously and prepare rigorously to participate in discussions.

Sugawara I think the public perception of Toyota has two parts. On the one hand, considering that Toyota has recorded record profits even during the COVID-19 pandemic, it is seen as having been well prepared for crises, even as it goes through a major transformation itself. On the other hand, there is some doubt about how adaptable Toyota really is to major changes, including new business models and environmental issues.

Working with Toyota, I feel that the Company is probably among the best in the world at dealing with any clear-cut crisis immediately confronting it. As Ms. Kudo said, Toyota has strong shared values and internal unity, so I think it is almost uniquely well suited to overcoming any clear and pressing challenges it may confront, like the pandemic.

On the flipside, however, when it comes to future uncertainty, such as whether Toyota's current business model will still be competitive in 10 or 20 years, I think that few executives or employees are approaching issues with same sense of urgency as President Toyoda. As the Company successfully overcomes more immediate crises, I think there is a danger of slipping into complacency based on that short-term success.

I think that right now the duty of Outside Directors is to persistently sound the alarm on major issues that Toyota will eventually confront but that are not yet fully apparent—issues connected to economic security, the environment, and transitioning to a new business model—and to pose to management a variety of "what if" scenarios. We are always probing and prodding during discussions at the Board of Directors, making sure that management can appropriately defend its strategy by questioning whether the current trajectory is the right one, or if it is, pointing out any lack of concrete detail or need to commit to specific numbers. These discussions help to gradually reveal the dangers Toyota faces, which enables the Company to overcome them. I think that sharing this approach more broadly can make Toyota more adaptable to change going forward.

Craven We are very fortunate to have such a capable leader as Akio Toyoda. He's brilliant, but at times, for the rest of the company, he's too fast. I think we have to communicate and give examples of what he requires for the future of Toyota, and I don't think that we're all that good at doing that. Taking the initiative in that way is not something that most managers do naturally, so the many changes we have been seeing in HR systems have been very positive.

I think more has to be done, but the opportunities are amazing. There can be so much positive energy locked down within Toyota. We have to release that for the good of the Company through effective communication.

What qualities and abilities do you think are needed in Toyota's leadership?

Craven The president needs to make very clear the importance of managers and the time they give to managing and developing their teams. They have to be true team leaders.

The TPS is fantastic, but I think it can be so rigorous that it may inhibit individual thought, which is not conducive to coming up with new ideas for the future. I would like it to be made very clear, from management, that individual team members should not just do what they're told, but really think outside the box.

Kudo I think that Toyota's leaders need to be highly innovative, flexible, and creative, with the dedication and selflessness to see things through as well as the breadth of perspective to act with all stakeholders, including society at large, in mind. They must also be able to clearly communicate the Company's stance and trajectory, bringing people on board and drawing out their abilities to lead them forward. They need to not just focus on short-term profit but act with a commitment to making ever-better cars and medium- to long-term value creation. Given the circumstances facing Toyota today, I think that only leaders who can innovate and change based on a sense of urgency will be able to enhance corporate value over the medium and long term.

Toyota's businesses depend on more than 370,000 employees, as well as suppliers, dealers, and many other partners. As Toyota transforms into a mobility company, I'm sure the range of these essential partners will only grow. Uniting a company this large requires someone who will work not just for themselves to achieve strong results during their tenure but for the good of industry as a whole, and even society at large. They must express Toyota's aspirations and demonstrate them through their own actions to build momentum by getting others excited to work alongside them.

Rather than settling for the status quo, I think that Toyota needs leaders who can envision and ambitiously pursue future, as-yet-unknown change, with the communication abilities, strength of character, and selflessness to guide the entire Company and even society forward.

Sugawara The leader of Toyota has two missions.

Because of Toyota's enormous size, its every move is scrutinized, and the Company's actions exert a tremendous influence on the industrial sector. In some ways, Toyota leads the industrial sector, and its actions and statements can have ramifications in government, politics, and even international relations. As Ms. Kudo said, Toyota's leader cannot think only of Toyota; it's a major role that requires an individual's full dedication, with a mission that encompasses the broader world.

Internally, the other key mission for the leader of Toyota is managing such a mammoth organization through this time of transformation. Only someone who can demonstrate their own determination to carry out this mission to our young professionals, who represent the future of Toyota, and foster in them the same kind of determination can be considered fit to lead the company.

By developing many people with these qualities and placing them in central management, regardless of age, Toyota as a whole will be able to carry out these two missions, no matter who becomes president. I think if Toyota develops a culture that fosters young and mid-level employees who are always aware of Toyota's responsibility to the wider world while striving to improve and go further internally, it will have no shortage of individuals well suited to top management. This, in turn, will be good for the future of the Company and of Japan.

Craven I feel such a unity between the three of us on this matter.

I see Toyota as a box full of positive energy. We've just got to open the box and let it fly, and it's the younger people that will be able to do that most easily.

Sugawara I agree. We have a lot of work to do.

Craven Yes. It's very exciting.

Dialogue with Institutional Investors on Corporate Governance

Held April 21, 2022

On April 21, 2022, Toyota Outside Director Ikuro Sugawara, Operating Officer and Executive Vice President Masanori Kuwata, and Operating Officer Yumi Otsuka held a dialogue about corporate governance with institutional investors. The following is a summary of their discussion.

Toyota's Communications

Question 1 It seems like Toyota's external communications have begun to change since the briefing on battery electric vehicle (BEV) strategy last December. Have you been making enhancing communications a significant management issue?

Sugawara I came to Toyota as an Outside Director in 2018. Listening to Board of Directors discussions and various briefings, I noticed that Toyota's people had a strong tendency to speak in jargon and concepts specific to Toyota, even in external communications. For example, if you ask about specific initiatives, you find that Toyota is doing a wide range of things to address environmental problems and the Sustainable Development Goals, but when these efforts are explained in jargon, they don't get across to outsiders. Effective communication requires not just putting information out, but making sure it gets across. So, I began by asking for changes in the way we communicate within Toyota, and there has been great progress over these past four years. In the last year, especially, as we have more actively discussed governance, I think Toyota has made leaps forward.

At the BEV strategy briefing or at Japan Automobile Manufacturers Association press conferences, President Toyoda speaks directly to stakeholders and answers questions in detail. At the Company-wide level, however, there is still some way to go toward more effective communication. The Board of Directors and we Outside Directors will continue discussions in this area while encouraging executives to make improvements.

Kuwata Multiple and diverse forms of communication are key. While the one-way publishing of information through Toyota Times is necessary, I think that we should also consider opportunities for interaction with stakeholders, such as this dialogue.

The Effectiveness of the Board of Directors

Question 2 The degree of independence and diversity (particularly the percentage of women) of the Board of Directors seems low by international standards. What are your thoughts on this as an Outside Director?

Sugawara Yes, as you say, the percentage of female Directors is lower than that at many companies overseas.

During my time as director-general of the Economic and Industrial Policy Bureau at the Ministry of Economy, Trade and Industry, I worked to advance corporate governance reforms in Japan. From my perspective, focusing our efforts on real, substantive discussion is more important than expending our energy on adjusting the Board's form. That is not to say, however, that the Board should remain as it is forever, but that the Board must approach changes in social expectations flexibly, from a longer-term perspective. I do see expanding the role of independent Outside Directors and advancing diversity as important issues.

Otsuka Diversity comes in many forms, too. Dr. James Kuffner, as an internal Director, brings a background in the IT industry and a non-Japanese perspective. Working with him, we are gaining new insights and learning about specific differences in ways of ways of looking at information and managing organizations. The scope and methods of our hiring have also been changing considerably, with growing numbers of women and mid-career hires joining Toyota. We are also revising our hiring methods and ratios, aiming to reinforce the hiring of software talent going forward. I think that these efforts will bear fruit over the longer term, leading to increased diversity in decision making.

Question 3 What are your thoughts on the independence of the current Outside Directors?

Kuwata Toyota's transactions with Sumitomo Mitsui Banking Corporation, where Outside Director Teiko Kudo has spent most of her career, are of a scale that does not hamper her independence. All three Outside Directors—Mr. Sugawara, Ms. Kudo, and Sir Craven—offer input at the Board of Directors meetings and in regular communications with executives, which has led to enormous changes over the past year or two.

Sugawara I feel that Ms. Kudo is effective in her position in terms of speaking up as an independent board member should, regardless of her background. Sir Craven, meanwhile, comes from a different background from the rest of us, and he brings unique opinions to discussions of such matters as human resource development and communications. In that way, they very much fulfill the role of independent Outside Director.

Question 4 Toyota has only three Outside Directors. Does that make monitoring the CEO difficult?

Sugawara At Toyota, the Outside Audit & Supervisory Board Members also take part in Board of Directors meetings. Final decisions are rendered by the nine Members of the Board of Directors, but they incorporate the views of the three Outside Audit & Supervisory Board Members, who bring diverse backgrounds. Also, the Outside Directors and Outside Audit & Supervisory Board Members often hold study meetings, where the six of us discuss medium- and long-term issues. In particular, we spent a considerable amount of time discussing issues related to carbon neutrality in the run-up to the BEV strategy briefing. Working alongside the Outside Audit & Supervisory Board Members, we are monitoring business execution and expressing the views of outside stakeholders on medium- and long-term issues.

Strategic Shareholdings and Other Concerns

Question 5 How do you regard the problems posed by strategic shareholdings in terms of asset efficiency and governance?

Sugawara When I came to Toyota, the number of companies whose shares Toyota strategically held was about double what it is now, and I was concerned about just those issues. We discussed the purpose of these cross-shareholdings, and have since reduced them by about half. We have to be considerate of the issuers, so these reductions take time, but we are making progress.

Please understand that we see the problem just as you do, and we are in the process of making revisions.

Question 6 In light of the news about falsified vehicle inspections at Toyota dealerships last year, what do you think Toyota should do to avoid the kind of organizational problems that often show up in big companies?

Sugawara In my work at the Ministry of Economy, Trade and Industry, I witnessed the trajectories of many companies. When a company is on the brink, the deciding factor is whether or not it still has sufficient younger talent to support it. Leveraging that talent is the way to survive. In that sense, I think that Toyota's greatest investment to avoid the ills of large companies is the investment it makes in its younger human resources.

Kuwata As Toyota transforms from an automaker to a mobility company, the partners it works with will also change considerably. We are very aware that our values will have to evolve if we are to move forward. We will need to value individuality more and discard conventional ideas of the background that top-class talent should have. Efforts to promote the advancement of women and personnel system reforms will be gradual, but I hope to work to create opportunities for diverse talent to thrive.

Corporate Governance

Fundamental Approach

Toyota regards sustainable growth and the stable, long-term enhancement of corporate value as essential management priorities. Building good relationships with all stakeholders, including shareholders, customers, business partners, local communities, and employees, and consistently providing products that satisfy customers' needs are key to addressing these priorities. To this end, Toyota constantly seeks to enhance corporate governance.

Corporate Governance Report
Securities Report

Business Execution and Supervision

Toyota's Corporate Governance

Contributing to society through *monozukuri* (manufacturing) is the basis of Toyota's corporate value. To enhance its corporate value in the medium- to long-term, it is appropriate for Toyota to be a company with an Audit & Supervisory Board, where internal executives who have been long engaged in and have deep knowledge of manufacturing and outside executives who are capable of providing advice for the creation of new value from a broad perspective can participate in well-balanced decision making at the Board of Directors' meetings.

With respect to its framework for executing operations, Toyota has been focused on ever-better car making since the 2008 global financial crisis, aiming to provide a full lineup of good quality, affordably priced products in the right place at the right time while offering products and services suited to customers in each country and region. To this end, following the introduction of "region-based management" in 2011, the "business unit system" in 2013, and the "in-house company system" in 2016, in 2017, Toyota further clarified that Members of the Board of Directors are responsible for decision making and management oversight and that operating officers are responsible for operational execution in order to further accelerate the implementation of decisions.

Furthermore, in 2018, Toyota brought forward the timing of executive changes from April to January, in order to further accelerate management oversight and ensure full coordination with the workplace. In addition, Toyota transformed the company structure into one that enables decision making that is both close to the needs of customers and close to where the action takes place, by taking measures such as reviewing the corporate strategy function and restructuring the Japan Sales Business Group into an organization based on regions rather than sales channels.

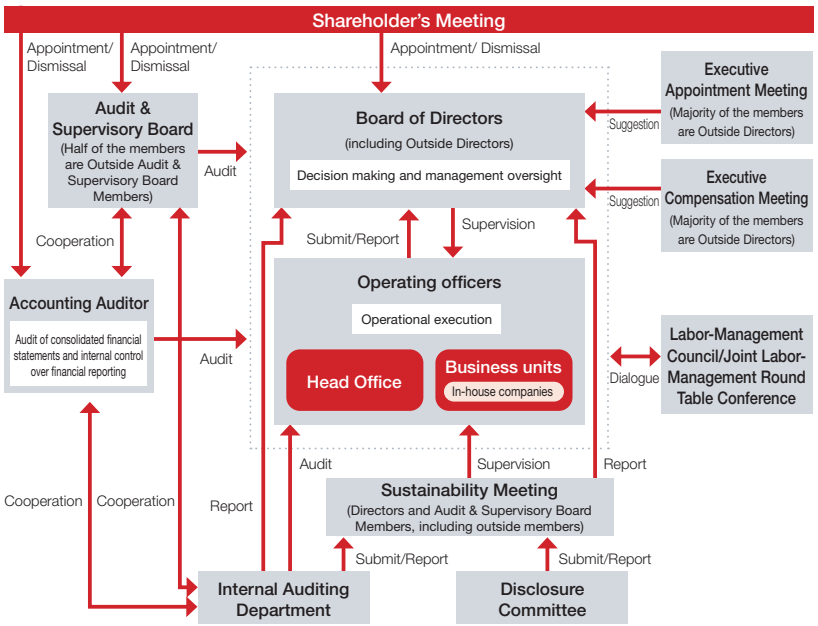
In 2019, to further advance its "acceleration of management" and the development of a diverse and talented workforce, Toyota made executive and organizational changes as follows: 1. Executives are composed of only senior managing officers and people of higher rank. 2. A new classification called "senior professional/senior management" (kanbushoku in Japanese) grouped and replaced the following titles or ranks: managing officers, executive general managers, (sub-executive managerial level) senior grade 1 and senior grade 2 managers, and grand masters. With an eye to appointing the right people to the right positions, senior professionals/senior management hold a wide range of posts, from chief officer, deputy chief officer, plant general manager, and senior general manager to group manager, regardless of age or length of employment, in order to deal with management issues as they arise and to thereby strengthen their development as members of a diverse and talented workforce through *Genchi Genbutsu* (on-site learning and problem-solving).

In April 2020, Toyota consolidated the posts of executive vice president and operating officer into the post of operating officer and, in July 2020, clarified the responsibilities of operating officers. We redefined the role of operating officer to be members who, together with the president, have cross-functional oversight of the entire company. Furthermore, in-house company presidents, regional CEOs and chief officers, as on-site leaders of business implementation elements, were given authority and consolidated into the rank of senior professionals/senior management. The roles of operating officers and senior professionals/senior management were determined where and as needed, and persons appointed as operating officers and senior professionals/senior management changed in accordance with the challenges faced and the path that should be taken, as the company exercises greater flexibility than ever in appointing the right people to the right positions.

However, because of the rapidly changing business environment, Toyota now recognizes that there is an increasing need for such executives to fulfill management roles (related to people, goods, and money) together with President Toyoda. Therefore, in April 2022, Toyota again reorganized the roles of operating officers and reestablished the position of executive vice president, defining it as an operating officer who is focused on business from a management perspective.

Toyota, based on its basic policy of appointing the right people to the right positions, has been swiftly and continuously innovating. We will further press forward with the tide of such innovations, aiming for a corporate structure capable of carrying out management from a viewpoint that is optimal for a global company.

Toyota's Corporate Governance



Changes in Governance Structure

	-2010	2011-2015	2016-2020	2021-
Number of Directors (total)	27	2011-2016: between 11 and 16 (temporarily increased due to the introduction of Outside Directors)	2017: 9	
Outside Directors		2013: 3		
Executives: Executive Vice Presidents		2011-2020: between 4 and 7		April 2022
Executives: Senior Managing/ Managing Officers	64	2011-2018: between 42 and 49		Position newly established with revised roles (3 persons)
Executives: Operating Officers			(Excluding the president and executive vice presidents)	August 2022: 7
Executives: Advisors/Senior Advisors		2011-2017: between 55 and 68	2018: 9 due to organizational changes, July 2020: 0	
Audit & Supervisory Board Members (total)	7	2014: 6		
Outside Audit & Supervisory Board Members	4	2014: 3		
Meetings: Executive Appointment			2017: Outside Members accounting for half	2019: Outside Members Compensation accounting for a majority
Meetings: Compensation				
Sustainability	2007-2014: CSR Committee	2014: Corporate Governance Meeting	2018: Sustainability Meeting	

Current

April 2011	• Reduced the number of Members of the Board of Directors from 27 to 11 members (currently 9 members) • Reduced decision making layers (discontinued the positions of executives responsible for the operations concerned and introduced a two-tiered arrangement of executive vice president and chief officer) • Made flexible assignment of senior managing officers or managing officers to chief officer posts (abolished the position of senior managing director) • Established the role of executive general manager • Stationing of, in principle, regional chief officers in their respective regions
April 2013	• Established business units • Reorganized regional groups • Appointed Outside Board Members
April 2015	• Changed the roles of officers • Enhanced diversity (appointing non-Japanese executives and female executives)
April 2016	• Established in-house companies, shifted from functional to product-based focus
April 2017	• Further clarified the responsibilities of Members of the Board of Directors as decision making and management oversight and of operating officers as operational execution • Reduced the number of Members of the Board of Directors (including Outside Directors) to 9 (June)
October 2017	• Changed the system of advisors and senior advisor system
January 2018	• Increased the appointment of people with high-level expertise from both within and outside of the Company (the Toyota Group, people with technical backgrounds, etc.) • Executive vice presidents, in addition to supporting the president, personally lead in the field as in-house company presidents and organizational group chief officers • Newly established a fellow system to secure people with high level of specialist expertise and expand the breadth of executive human resource development
January 2019	• Created a new classification: "senior professional/senior management," encompassing Managing Officers, Executive General Managers, (sub-executive managerial level) Senior Grade 1 and Senior Grade 2 Managers, and Grand Masters
January 2020	• Discontinued use of the Field General Manager rank, shifting to Senior General Manager and Fellow
April 2020	• Integrated the roles of Executive Vice President and Operating Officer into Operating Officer
July 2020	• Further clarified the roles of Operating Officers
April 2022	• Reorganized the roles of operating officers and established the position of executive vice president to create a position for focusing on management perspectives with the president

Members of Board of Directors and Audit & Supervisory Board

Board of Directors and Related Structures

With respect to the Members of the Board of Directors, Toyota comprehensively considers and appoints the right person for the right position to ensure appropriate and prompt decision making. Toyota believes that it is critical to appoint individuals who contribute to decision making aimed at sustainable growth into the future in accordance with the Toyoda Principles, which set forth our founding philosophy. Moreover, these individuals should be able to play a significant role in transforming Toyota into a mobility company by responding to social change, such as the emergence of CASE*1 technologies, building external partnerships, and contributing to the solution of social issues, including the SDGs. The Board of Directors should consist of members who have the abundant knowledge, deep insight, and the highly professional expertise needed by Toyota, and members are appointed with consideration for diversity. The Executive Appointment Meeting, of which the majority are Outside Directors, makes recommendations to the Board of Directors regarding individual Director candidates.

Furthermore, three Outside Members of the Board of Directors have been appointed in order to adequately reflect the opinions of those from outside the Company in management's decision-making process, All of the Outside Directors are registered as independent officers with the relevant financial instrument exchanges.

Toyota considers the appointment of Outside Members of the Board of Directors as independent officers in accordance with the requirements for Outside Members of the Board of Directors set out in the Companies Act and independence standards established by the relevant financial instrument exchanges.

Outside Members of the Board of Directors provide advice in Toyota's management decision-making process from a standpoint independent of management based on their broad experience and insight. To make full use of the insight of the Outside Members of the Board of Directors and the Audit & Supervisory Board, Toyota takes the following measures:

1. Review of the criteria for the submission of proposals to the Board of Directors as needed to reduce the number of proposals submitted, so that sufficient time can be secured to discuss each proposal.
2. Provision of explanations of all proposals in advance to help understand the background of the proposals.
3. Removal of the time limit for discussions at Board of Directors' meetings to ensure sufficient discussion can be held.
4. Setting of periodic opportunities, besides the Board of Directors meetings, for two-way communication between Outside Members of the Board of Directors and the Audit & Supervisory Board as well as the operational execution side on important management issues and medium- to long-term issues.

In recent years, to facilitate active discussion at Board of Directors' meetings, Toyota has reduced the number of participants (Directors and Audit & Supervisory Board Members) in Board of Directors' meetings (from 34 in 2010 to 15 in 2020). As a result, opportunities for each participant to speak at Board of Directors' meetings have increased, and Outside Members of the Board of Directors and the Audit & Supervisory Board speak on almost all proposals.

*1 CASE: Connected, Autonomous/Automated, Shared, Electric

Analysis and Evaluation of the Effectiveness of the Board of Directors

In order to improve the effectiveness of the Board of Directors, Toyota has been conducting an analysis and evaluation of the Board of Directors every year. The most recent evaluation was performed as below.

1. Analysis and evaluation

Following a survey assessing the composition, operation, and efficacy of the supervisory function of the Board of Directors, the Outside Members of the Board of Directors and the Audit & Supervisory Board Members were interviewed based on the survey results. Views and proposals regarding the background and causes of issues identified by the survey as well as regarding the improvement of such issues, were compiled and reported to the Board of Directors, then discussed at the Board of Directors.

- Method of evaluation: Self-evaluation through surveys and interviews
- Subject of evaluation: Members of the Board of Directors and Audit & Supervisory Board Members
- Implementation period: February 2022 to March 2022
- Matters to be evaluated:
  1. The composition and operation of the Board of Directors
  2. Management and business strategy
  3. Corporate ethics and risk management
  4. Communication with stakeholders, such as shareholders

2. Summary of the findings

It was confirmed that the operation of the Board of Directors and the quality and content of its discussions were improving year by year, and that effectiveness was ensured through such measures as providing sufficient explanations of agenda items in advance and having periodic exchanges of views with external officers on matters such as medium- to long-term management challenges.

The evaluation showed a general trend toward improvement, particularly in the areas of agenda preparation, time allocation, delegation of authority to executives, and the content and volume of materials, and showed that effectiveness was secured. However, further issues were identified with respect to securing opportunities for discussing important topics and providing information to Outside Members of the Board of Directors and Outside Audit & Supervisory Board Members.

In order to further improve the effectiveness of the Board of Directors, Toyota will secure more opportunities for the Board of Directors to discuss important management strategy topics and promote the appropriate selection of topics to be proposed. At the same time, to provide more information to Outside Members of the Board of Directors and Outside Audit & Supervisory Board Members and thereby facilitate more effective and vigorous discussions, Toyota will work to make further improvements through such measures as enhancing opportunities for dialogue and exchange with management.

Personnel Structure of the Board of Directors (As of May 16, 2022)

Name	Sex	Age	Length of service	Attribution	Current position/responsibility at Toyota			Attendance at Board of Directors' meetings (No. of meetings attended)*2
					Meeting		Responsibility	
					Executive appointment	Compensation		
Takeshi Uchiyamada	Male	75	24		Chairperson	Chairperson	Chairman of the Board of Directors	100% 14/14
Shigeru Hayakawa	Male	68	7				Chief Privacy Officer	100% 14/14
Akio Toyoda	Male	66	22				Chief Executive Officer	100% 14/14
James Kuffner	Male	51	2				Chief Digital Officer	100% 14/14
Kenta Kon	Male	53	1				Chief Financial Officer	100% 11/11
Masahiko Maeda	Male	53	—				Chief Technology Officer	—
Ikuro Sugawara	Male	65	4	Outside independent	Member	Member		100% 14/14
Sir Philip Craven	Male	71	4	Outside independent	Member	Member		100% 14/14
Teiko Kudo	Female	57	4	Outside independent	Member	Member		100% 14/14

*2 Status of attendance at Board of Director's meetings in the fiscal year ended March 2022

Audit & Supervisory Board System

Toyota has adopted an Audit & Supervisory Board system. Six Audit & Supervisory Board Members (including three Outside Audit & Supervisory Board Members) play a key role in Toyota's corporate governance by undertaking audits in line with the audit policies and plans determined by the Audit & Supervisory Board. In order to appropriately audit Toyota as it transforms into a mobility company with the aim of sustainable global growth, the Audit & Supervisory Board is composed of Full-time Audit & Supervisory Board Members, who possess deep knowledge of internal Company matters, and Outside Audit & Supervisory Board Members, who have a high level of expertise and knowledge. Toyota maintains an independent system that allows each Audit & Supervisory Board Member to exert audit authority independently

In appointing Audit & Supervisory Board Members, Toyota believes it is necessary to elect individuals who have broad experience and insight in their respective fields of expertise and can advise management from a fair and neutral perspective as well as audit the execution of business. Toyota's Executive Appointment Meeting discusses recommendations to the Audit & Supervisory Board regarding the appointment or dismissal of Audit & Supervisory Board Members.

Toyota has appointed three Outside Audit & Supervisory Board Members, all of whom are registered as independent officers with the relevant financial instrument exchanges. When appointing Outside Audit & Supervisory Board Members, Toyota considers the requirements set out in the Companies Act as well as the independence standards established by the relevant financial instrument exchanges. In recent years, the Audit & Supervisory Board and the internal audit function have been strengthening their ties by increasing the opportunities to share their audit results, with the aim of improving the effectiveness of their audits.

Training for Members of the Board of Directors and Audit & Supervisory Board Members

Toyota's Outside Members of the Board of Directors and Outside Audit & Supervisory Board Members must understand and practice the spirit of making ever-better cars and *Genchi Genbutsu* (onsite, hands-on experience) and contribute to decision making aimed at sustainable future growth. As such, Toyota provides a variety of opportunities to provide them with the necessary information. Also, as explained above, we offer outside members opportunities other than the Board of Directors Meetings to deepen their understanding, such as advance explanations on proposals submitted to the meetings and two-way communication with executives on important management issues and medium- to long-term issues.

Executive Compensation

The amount of executive compensation, how its calculation method is determined, and the calculation method are described as follows.

Decision Policy and Process

Toyota believes that it is critical to appoint individuals who contribute to decision making aimed at sustainable growth into the future in accordance with the Toyoda Principles, which set forth our founding philosophy. Moreover, these individuals should be able to play a significant role in transforming Toyota into a mobility company by responding to social change, such as the emergence of CASE technologies, and contributing to the solution of social issues, including the SDGs. Toyota's executive compensation system is an important means to promote various initiatives and is determined based on the following policy.

- The system should encourage Members of the Board of Directors to work to improve the medium- to long-term corporate value of Toyota
- The system should support compensation levels that will allow Toyota to secure and retain talented personnel
- The system should motivate Members of the Board of Directors to promote management from the same viewpoint as our shareholders with a stronger sense of responsibility as corporate managers

The Board of Directors decides by resolution the policy for determining remuneration for and other payments to each Member of the Board of Directors. Remuneration is effectively linked to corporate performance while reflecting individual job responsibilities and performance.

Remuneration standards in each Member's home country are also taken into account when determining remuneration amounts and methods.

Remuneration for Outside Members of the Board of Directors and Audit & Supervisory Board Members consists only of fixed payments. As a result, this remuneration is not readily impacted by business performance, helping to ensure independence from management.

The amounts of remuneration and other payments to each Member of the Board of Directors and the remuneration system are decided by the Board of Directors and the Executive Compensation Meeting, a majority of the members of which are Outside Members of the Board of Directors, to ensure the independence of the decisions.

The Board of Directors resolves the policy for determining remuneration for and other payments to each Member of the Board of Directors and the executive remuneration system as well as the total amount of remuneration for a given fiscal year. The Board of Directors also resolves to delegate the determination of the amount of remuneration for each Member of the Board of Directors to the Executive Compensation Meeting. The Executive Compensation Meeting reviews the executive remuneration system on which it advises the Board of Directors and determines the amount of remuneration for each Member of the Board of Directors, taking into account such factors as corporate performance as well as individual job responsibilities and performance, in accordance with the policy for determining remuneration for and other payments to each member of the Board of Directors established by the Board of Directors. The Board of Directors considers that such decisions made by the Executive Compensation Meeting are in line with the policy on determining remuneration and other payments for each member of the Board of Directors.

Remuneration for Audit & Supervisory Board Members is determined by the Audit & Supervisory Board within the scope determined by resolution of the shareholders' meeting. To decide the compensation for the fiscal year under review, the Executive Compensation Meeting was held in May 2021, March 2022, and April 2022. Also, preparatory meetings attended solely by Outside Directors were held five times in July, September, and October 2021 and February and March 2022 as a forum for discussions in preparation for the Executive Compensation Meeting. The compensation for the Members of the Board of Directors was decided with the agreement of all members of the Executive Compensation Meeting.

Major Matters Discussed at the Executive Compensation Meeting

- Compensation levels according to position and responsibilities
- Benchmarks and results evaluation for FY2022
- Individual performance evaluation
- The remuneration for each individual

Method of Determining Performance-based Remuneration (Bonuses, Share-based Compensation)

1. Directors with Japanese citizenship (excluding Outside Directors)

Toyota sets the total amount of remuneration received by each director in a year ("Annual Total Remuneration") based on consolidated operating income, fluctuation in Toyota's market capitalization,* and individual performance evaluations. The balance after deducting monthly remuneration, which is fixed remuneration, from Annual Total Remuneration constitutes performance-linked remuneration.

Toyota sets Annual Total Remuneration based on position and duties by referencing the executive remuneration levels of a benchmark group of companies located in Japan. Table 1 Table 2

*Calculated by multiplying the closing price of Toyota's common stock on the Tokyo Stock Exchange by the number of shares issued after deducting treasury stock

Method of Setting the Annual Total Remuneration

Annual Total Remuneration is set according to a formula based on the benchmark results of executive compensation. Annual Total Remuneration for each position is set based on consolidated operating income and fluctuation in Toyota's market capitalization and then adjusted based on individual performance evaluations. Individual performance evaluations take into consideration the individual's efforts made in accordance with the Toyoda Principles, which set forth our founding philosophy, and other aspects, such as the trust of others and promotion of human resource development. Based on the evaluations, the amount of Annual Total Remuneration for each director is determined within the range of 50% above or below the Annual Total Remuneration for each position.

2. Directors with foreign citizenship (excluding Outside Directors)

Fixed remuneration and performance-based remuneration are set based on remuneration levels and structures that allow Toyota to secure and retain talented personnel, taking into account each member's job responsibilities and the remuneration standard of his/her home country. Performance-based remuneration is set based on consolidated operating income, fluctuation in Toyota's market capitalization, and individual performance evaluations, taking into account each member's job responsibilities and the remuneration standard of his/her home country. The approach to setting each item is the same as that for directors with Japanese citizenship (excluding Outside Directors). Differences in tax rates in Japan and their home countries may be considered and compensated for.

Share-based Compensation System

The Board of Directors decides share-based compensation using the maximum values for share-based compensation set at the 115th and 118th Ordinary General Shareholders' Meetings held on June 13, 2019 and June 15, 2022 (a maximum of 4.0 billion yen per year, with the total number of common shares of Toyota to be allotted to the Members of the Board of Directors, excluding Outside Directors, capped at 4 million). For more details, please refer to p. 86 of the Securities Report (for the fiscal year ended March 2022). Table 3 Table 4

Table 1 Explanation of Indicators

Consolidated operating income	Indicator for evaluating Toyota's efforts based on business performance
Fluctuation in Toyota's market capitalization	Corporate value indicator for shareholders and investors to evaluate Toyota's efforts
Individual performance evaluation	Qualitative evaluation of each Director's performance

Table 2 Method and Reference Value for Evaluating Indicators and Evaluation Result

	Evaluation weight	Evaluation method	Reference value	Evaluation result for the fiscal year
Consolidated operating income	70%	Evaluate the degree of attainment of consolidated operating income in the fiscal year, using required income (set in 2011) for Toyota's sustainable growth as a reference value	1 trillion yen	210%
Fluctuation in Toyota's market capitalization	30%	Comparatively evaluate the fluctuation in Toyota's market capitalization for the relevant fiscal year (average from January through March), using the market capitalization of Toyota and TOPIX for the previous fiscal year (average from January through March) as reference values	Toyota's market capitalization: 22.3 trillion yen TOPIX: 1,903.60	

Table 3 Remuneration by Executive Category, Remuneration by Type, and Number of Applicable Executives

Executive category	No. of applicable executives	Remuneration by type [million yen]			Total remuneration (million yen)
		Fixed remuneration	Performance-linked remuneration		
		Monthly remuneration	Bonuses	Share-based compensation	
Directors (of which Outside Directors)	10 (3)	822 (148)	196	772 (368,000 shares)	1,790 (148)
Audit & Supervisory Board Members (of which, Outside Audit & Supervisory Board Members)	6 (3)	261 (54)	—	—	261 (54)

(Notes) 1. Cash compensation consists of monthly remuneration and bonuses.
2. Performance-based remuneration is set based on the resolution of the Board of Directors' Meeting on May 11, 2022. Share-based compensation is the number of shares presented in the table multiplied by the closing price on the day prior to the date of resolution for the allocation.

Table 4 Names and Details of Those Who Receive Total Consolidated Remuneration of One Hundred Million Japanese Yen or More

Name (executive category)	Company category	Total consolidated remuneration by type (million yen)				
		Fixed remuneration	Performance-linked remuneration		Retirement benefits	Total consolidated remuneration (million yen)
		Monthly remuneration	Bonuses	Share-based compensation		
Takeshi Uchiyamada (Director)	Reporting company	118	79	76 (37,000 shares)	—	273
Shigeru Hayakawa (Director)	Reporting company	74	1	81 (39,000 shares)	—	156
Akio Toyoda (Director)	Reporting company	204	0	481 (230,000 shares)	—	685
Koji Kobayashi (Director)	Reporting company	78	0	100 (48,000 shares)	—	178
James Kuffner (Director)	Reporting company	152	100	—	—	906
	Consolidated subsidiary Woven Planet Holdings, Inc.	642	13	—	—	

(Notes) The fixed remuneration paid to Director James Kuffner by Woven Planet Holdings, Inc., a consolidated subsidiary, includes the amounts of fixed remuneration paid every three months and every 12 months.

Message from the CFO: Changes in Profit Structure

ToyotaTimes  FY2022 Financial Results

The Fruits of Many Years of Working to Make Ever-better Cars

At Toyota's financial results press conference in May 2022, CFO Kenta Kon spoke about changes in Toyota's profit structure. The following is based on his presentation.

Figure 1 shows two graphs comparing operating income for the fiscal year ended March 2009, the year of the global financial crisis, and the fiscal year ended March 2021, the year that the COVID-19 pandemic hit, with that of previous fiscal years.

In both cases, vehicle sales volume decreased by 15% year on year. But at the time of the global financial crisis, profits decreased significantly, pushing Toyota into the red, while in the fiscal year ended March 2021, we were able to secure a profit.

Figure 1 Comparison of Before and After the Global Financial Crisis and COVID-19 Outbreak*1

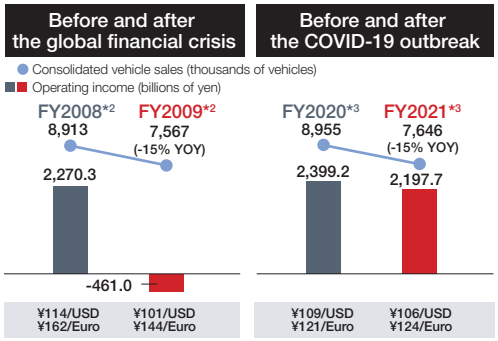


Figure 2 Changes in Break-even Vehicle Sales Volume*1
(FY2009 = 100%) Operating income basis

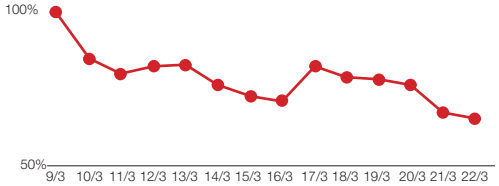


Figure 2 shows the break-even vehicle sales volume from the fiscal year ended March, 2009, onward.

If we assign our break-even volume at the time of the global financial crisis a value of 100, we have lowered our break-even volume to, most recently, around 60 to 70, demonstrating that we have made significant progress in improving our condition over the past 13 years. This was not something that could be done overnight.

Immediately after the global financial crisis, we had to put the brakes on all R&D expenditures and capital investments. We could do nothing to invest in the future. But, even as we fought to overcome the numerous crises known in Japan as the "Six Hardships," including recall issues, we continuously worked to improve profitability.

Improved profitability was not something that Toyota was able to achieve on its own. Rather, it was the result of a desperate and concerted effort with all of our stakeholders. To them, we say thank you.

During that period, as one of Toyota's strengths is having a full lineup of products globally, we transitioned to an in-house company system that would allow us to better provide high-quality and reasonably priced vehicles at the right place and time.

Along with the in-house company system, we introduced the Toyota New Global Architecture (TNGA) shared vehicle platform to improve the basic performance and product appeal of our vehicles and enhance the reflection of regional characteristics in products, aiming not to be the best in the world, but the best in town.

In the past, we often introduced completely new vehicle models on a one-off basis as the market grew. Now, however, we are continuously evolving our long-time, best-selling cars, such as the Yaris and Corolla, to keep them current so that they can go on being long-time, best sellers. We believe that these initiatives have resulted in increased profitability.

Figure 3 FY2016 to FY2022: The Six Years Following the Adoption of the In-house Company System*1

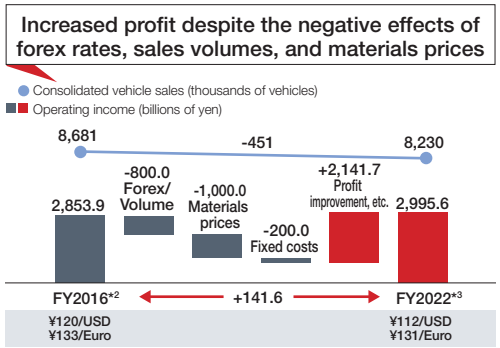


Figure 3 illustrates the changes in our profit structure over the six years since we transitioned to the in-house company system.

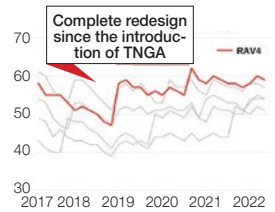
A look at the factors behind the increases and decreases in operating income reveals that our profit has increased despite major negative factors, such as poor foreign exchange rates, low sales volumes, and increases in materials prices. In terms of sales, the more than 2 trillion yen improvement in profit is due to sales price revisions and a reduction in selling expenses. We believe that this is the result of our customers highly evaluating our products. Also, post-sale vehicle quality helped customers maintain high vehicle value, leading to improved profitability not only in the automotive business but also in the financial services business.

In terms of cost reduction, we believe that significant improvements have been achieved by the effect of switching to new products that are based on the TNGA platform and through the power of our production worksites, including those of suppliers, which can respond to the launch of various new products and environmental changes as well as produce high-quality products.
We used to increase profit through favorable foreign exchange rates and volume growth. Over the past six years, however, this has steadily been changing.

*1 This analysis has not been adjusted to account for differences between U.S. GAAP and IFRS.
*2 U.S. GAAP
*3 IFRS

Figure 4 Market Share of New Car Sales: From 2015 to 2021

Used Car Appraisal: The U.S. Small SUV Market



Note: Data from ALG (a U.S. company). Percentages are the expected wholesale used car price 36 months in the future, divided by the new car retail price.

Comparing new car sales in 2015 and 2021, we have increased our market share in 11 of 15 major countries, including China, the United States, and Japan.

The graph on the right side of Figure 4 shows U.S. used car prices three years post purchase by model. Toyota's RAV4 has received higher appraisals than vehicles from other manufacturers in the same segment, and it is evident that those appraisals have gotten even higher since we switched to the TNGA-based RAV4. Being able to command a high price in the used car market protects the value of customer assets, and we believe this builds trust in our brand.

Changes in Profit Structure

Although our performance in the fiscal year represents our situation in only that single fiscal year, it is the result of long-term, ongoing efforts, including the in-house company system, "best in town" activities in each region, the TNGA, product lineup strategies, ever-better car making from a starting point in motorsports, and the human resource development that supports these activities, as well as various in-house system reforms. We would once again like to thank everyone involved for their support.

Capital Strategy

Three Pillars

The three pillars of Toyota's financial strategy are stability, growth, and efficiency. By maintaining adequate stability while pursuing growth and efficiency over the medium and long terms, we aim to build a robust financial foundation to support sustainable growth.

1. Stability: Securing Liquidity

Having experienced financial crises and the Great East Japan Earthquake, in order to ensure business continuity in any business environment, we maintain a sufficient level of liquidity to cover half a year of both fixed costs in the automotive business and refinancing requirements in the financial services business.

Ample liquidity is essential to maintaining a full line-up in each region and retaining the ability to respond to all options and opportunities. As such, it is a vital part of the foundation supporting the creation of corporate value.

2. Growth: Aggressive Forward-looking Investment

As the auto industry approaches a once-in-a-century turning point, Toyota is focusing on technological innovation aimed at transforming into a mobility company. Every year, we spend more than 1 trillion yen on R&D. By enhancing efficiency in existing areas, we are strategically increasing the portion of R&D spending allotted to cutting-edge fields.

3. Efficiency: Enhancing Capital Efficiency

Using cost reduction and the thorough application of the Toyota Production System (TPS), we are reinforcing the profit structure and securing funds to invest in advanced and cutting-edge technologies.

In capital expenditures other than R&D expenses, as well, we are carefully assigning priority to individual projects and tracking their progress while advancing measures to improve productivity, such as streamlining development in existing fields, making equipment more compact, shortening processes, and facilitating faster response to changes in production quantities.

Furthermore, in addition to sustainably increasing ROE by repurchasing shares, we are strengthening investment management by regularly evaluating the rationality of our strategic shareholdings in terms of the needs of our business strategies and economic utility. In these ways, we are striving to enhance capital efficiency.

Shareholder Returns

Toyota deems the benefit of its shareholders an important element of its management policy and continues to work to improve its corporate structure and enhance its corporate value in order to realize sustainable growth. Toyota strives to ensure the stable and continuous payment of dividends, seeking to maintain and improve upon the consolidated payout ratio of 30%. Toyota flexibly repurchases its common stock while comprehensively considering such factors as its investment in growth, level of its dividends, its cash reserves and the price level of its common stock to promote its capital efficiency.

For the year ended March 2022, Toyota paid an interim dividend of 24 yen* per share and a year-end dividend of 28 per share, for an annual dividend of 52 yen per share, up 4 yen per share from the previous fiscal year.

Toyota repurchased 435.6 billion yen of its common stock to return profits for the fiscal year ended March 2022 to shareholders. Of this, 185.6 billion yen in repurchases were flexibly executed in consideration of such factors as the price level of its common stock.

With a view to surviving tough competition and transitioning to a mobility company, Toyota will utilize its internal funds mainly for its investment in growth for the next generation, such as environmental technologies to achieve carbon neutrality and safety technologies for the safety and security of its customers, as well as for the benefit of stakeholders, such as employees, business partners, and local communities.

* Post-stock split basis (values for after the five-for-one stock split of shares of our common stock conducted on October 1, 2021)

Strategic Shareholdings

1. Policies on Strategic Shareholdings

Toyota's policy is to not maintain strategic shareholdings except for in cases where such holdings are deemed to be meaningful. Cases where such holdings are deemed to be meaningful are defined as cases where it is determined that, in the business of manufacturing of automobiles, in which it is essential to maintain a variety of cooperative relationships throughout the entire process of development, procurement, production, distribution, and sales, such holdings contribute to the improvement of corporate value from a medium- to long-term perspective based on a comprehensive consideration of business strategy; the establishment, maintenance, and strengthening of relationships with business partners; and contribution to and cooperation in the development of society.

2. Assessment of the Propriety of Strategic Shareholdings

When necessary, Toyota engages in constructive dialogue with the issuers of shares that it holds to encourage them to improve corporate value and achieve sustainable growth. These dialogues provide opportunities to share and address business challenges. Every year, at the Board of Directors, Toyota reviews whether its individual shareholdings are meaningful in light of changes in the business environment, specifically examines whether the benefits and risks from such holdings are commensurate with the cost of capital, etc., and assesses the propriety of Toyota's strategic shareholdings.

If Toyota determines that a shareholding is no longer meaningful or the meaning of a shareholding has been diluted due to changes in the business environment or other reasons, Toyota will proceed with the sale of such shares once it has adequately explained its reasons for doing so to the issuer.

Consequently, the number of companies whose shares Toyota strategically holds has been reduced to 148 (including 53 listed companies) as of March 31, 2022 from 200 (including 80 listed companies) as of March 31, 2015.

Woven Planet Bonds

In the year ended March 2021, Toyota issued Woven Planet Bonds to raise funds for projects that contribute to the achievement of the United Nations Sustainable Development Goals (SDGs). The issuances comprised 100.0 billion yen in yen-denominated straight bonds for individual investors, as well as 130.0 billion yen in yen-denominated sustainability bonds and 275.0 billion yen in foreign currency-denominated sustainability bonds for institutional investors. Furthermore, Toyota issued an additional 60.0 billion yen in sustainability bonds in June 2022.

	2018/3	2019/3	2020/3	2021/3	2022/3
Dividends per share*1 (yen)	44	44	44	48	52
Total amount of payment (billions of yen)	642.6	626.8	610.8	671.0	718.2
Payout ratio*2	26.1	33.8	30.2	29.8	25.3
Share repurchases (billions of yen)	549.9	549.9	199.9	249.9	435.6
Total shareholder return*3 (billions of yen)	1,200.0	1,186.7	810.8	921.0	1,153.8
Total return ratio*4	48.1	63.0	39.8	41.0	40.4

*1 The above figures show dividends per common share on a post-stock split basis (values for after the five-for-one stock split of shares of our common stock conducted on October 1, 2021).
*2 Payout ratio: This is the ratio of (i) the amount of dividend per common share to (ii) net income attributable to Toyota Motor Corporation per common share.
*3 Includes dividends paid for First Series Model AA Class Shares until 2019/3; these dividends are not included from 2020/3 onward due to the application of IFRS.
*4 Total return ratio: Total shareholder returns divided by net income attributable to Toyota Motor Corporation.

The Environment (Climate Change-related Financial Disclosures Based on the TCFD Recommendations)

*TCFD (Task Force on Climate-related Financial Disclosures)

Toyota endorsed and signed on to the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) in April 2019 and appropriately discloses information concerning climate change-related risks and opportunities and its analysis thereof.

Governance

a) The Board's Oversight of Climate-related Risks and Opportunities

Toyota addresses climate-related issues at the Board of Directors' meetings to ensure effective strategy formulation and implementation in line with latest societal trends. The Board deliberates and oversees related strategy, major action plans, and business plans, and important climate-related matters are included in the Board's agenda.

The Board of Directors monitors progress toward qualitative and quantitative targets for addressing climate issues. As part of monitoring, the Board considers climate-related issues, including risks/opportunities related to products, such as fuel efficiency/emission regulations, and risks/opportunities related to low-carbon technology development, as well as the financial impact thereof. These governance mechanisms are used in formulating long-term strategy, including the Toyota Environmental Challenge 2050, and in formulating and revising medium- to long-term targets and action plans.

Examples of decisions made by the Board of Directors in 2021 include the following.

The Board decided to invest in Toyota Green Energy, which was established jointly by Toyota, Chubu Electric Power Co., Inc., and Toyota Tsusho Corporation. Toyota Green Energy is a new company that will obtain and manage renewable energy sources in Japan with the aim of supplying electric power to the Toyota Group in the future.

b) Management's Role in Assessing and Managing Climate-related Risks and Opportunities

The Board of Directors is Toyota's ultimate decision-making and oversight body for addressing climate-related issues. The committees below are the major bodies for assessing and managing climate-related risks and opportunities.

Bodies That Address Climate Change Issues

	Sustainability Meeting	Environmental Product Design Assessment Committee	Production Environment Committee
Frequency of reporting on climate related issues to the Board of Directors	Every six months	When an important event arises	When an important event arises
Roles	• Deliberates and reports on the formulation of measures to solve climate-related and other sustainability issues	• Manages the assessment of product-related risks and opportunities, formulation and implementation of strategy and plans, monitoring, etc.	• Manages the assessment of plant- and production-related risks and opportunities, decisions on countermeasures, monitoring, etc.

Strategy

a) Climate-related Risks and Opportunities the Organization Has Identified over the Short, Medium, and Long Term

Toyota strives to identify the various risks and opportunities that will arise from environmental issues, takes action while continuously confirming the validity of strategies, such as the Toyota Environmental Challenge 2050, and works to enhance its competitiveness.

In particular, climate change requires measures in a variety of areas, including the adoption of new technology and responding to tighter government regulations. As climate change progresses, higher temperatures, rising sea levels, and increases in the severity of such natural disasters as storms and flooding are expected. Such developments may have various impacts on Toyota's business fields. These impacts may pose risks to Toyota's business. However, we believe that responding appropriately to the impacts of climate change can lead to enhanced competitiveness and the acquisition of new business opportunities. In accordance with this understanding, we have categorized the risks relating to climate change and identified particularly significant risks in line with risk management processes based on the degree of impact and stakeholder interest.

Significant Risks and Opportunities and Toyota's Measures

	Risks	Opportunities	Toyota's measures	Scenario analysis: Stated policies future storyline	Scenario analysis: 1.5 °C or less/ 2 °C future storyline
Tightening of regulations for fuel efficiency and ZEVs (acceleration of electrification)	• Fines for failure to meet fuel efficiency regulations • Decrease in total vehicle sales due to delays in complying with ZEV regulations • Impairment of internal combustion engine manufacturing facilities	• Increase in sales of electrified vehicles • Increase in profits from external sales of electrification systems	• Maintaining top-level fuel efficiency (currently the highest in Europe) • Increase in investment in batteries and shift of resources • Start of sales of electrification systems • Expansion osf electrified vehicle lineup • Reduction of CO_2 emissions from vehicles currently in use	Impacts will be in line with current conditions →	Impacts will increase ↗
Expansion of carbon pricing	• Increase in production and purchasing costs due to the introduction of carbon taxes, etc.	• Decrease in energy costs due to the introduction of energy-saving technology	• Comprehensive reduction of energy use and promotion of renewable energy and hydrogen use • Promotion of emission reductions in collaboration with suppliers	Impacts will be in line with current conditions →	Impacts will increase ↗
Increase in frequency and severity of natural disasters	• Production suspension due to damage to production sites and supply chain disruptions caused by natural disasters	• Increase in demand for electrified vehicles due to increased need for supply of power from automobiles during emergency situations	• Continuous adaptive improvements to business continuity plans (BCPs) in light of disaster experiences • Reinforcement of information gathering in collaboration with suppliers to avoid purchasing delays	Impacts will increase ↗	Impacts will be in line with current conditions →

b) Impact of Climate-related Risks and Opportunities on the Organization's Businesses, Strategy, and Financial Planning

Recognizing that climate-related issues may have a substantive impact on its businesses, strategy, and financial planning, Toyota reviews its strategy based on the risks and opportunities associated with climate-related issues whenever necessary. The table on page 41 describes the specific impacts on our businesses, strategy, and financial planning.

Toyota identifies risks, determines their degree of significance, and sets priorities in accordance with the Toyota Global Risk Management Standard (TGRS). Details regarding the TGRS are provided on page 42 under "Risk Management."

Impact on Strategy

	Products and services	Supply chains/value chains	Investments in R&D	Adaptation activities and mitigation Activities
Recognition	• Social trends toward decarbonization • Reflected in fuel efficiency and other regulations in many countries • Greatly affecting product development and production	• The business of manufacture and sale of automobiles emits large amounts of CO_2 and other greenhouse gases from its product production and the entire value chain.	• Toyota's acceleration of R&D to respond to tightened regulations and changes in consumer needs caused by climate change has led to: • Promotion of the R&D of electrified vehicles • Increased R&D expenditures	• Automobile manufacturing, Toyota's main business, entails a large amount of emissions of CO_2 and other greenhouse gases from each process. • Influences of social trends toward decarbonization • Payment of carbon taxes • Emissions trading through carbon pricing • Costs of use of renewable energy and hydrogen
Specific influence	The following strategies were influenced: • Long-term strategy (2050 Target): Toyota Environmental Challenge 2050 announced in 2015 • Medium-term strategy (2030 Target): 2030 Milestone announced in 2017 • Short-term strategy (2025 Target): 7th Toyota Environmental Action Plan announced in 2020			
	• In each of the above strategies, the numerical target for CO_2 emissions reduction was set as part of the New Vehicle Zero CO_2 Emissions Challenge.	• In each of the above strategies, the numerical target for CO_2 emissions reduction in the entire value chain was set as part of the Life Cycle Zero CO_2 Emissions Challenge. • In 2021, the decision to aim for sales of 3.5 million battery electric vehicles (BEVs) in 2030 was announced. • The medium-term strategy takes into account the following: • Manufacturing and disposal of batteries for the manufacture of electrified vehicles • Collaboration with suppliers • Risks and opportunities related to recycling	• In each of the above strategies, the sales target for electrified vehicles was set as part of the New Vehicle Zero CO_2 Emissions Challenge. • In 2021, the decision to aim for sales of 3.5 million BEVs in 2030 was announced. • R&D expenditures are required to achieve this target.	• In each of the above strategies, the numerical target for CO_2 emissions reduction related to plant operations was set as part of the Plant Zero CO_2 Emissions Challenge. • In 2021, the decision to aim for carbon neutrality at plants by 2035 was announced.

c) Resilience of the Organization's Strategy, Taking into Consideration Different Climate-related Scenarios, including a 2°C or Lower Scenario

STEP 1

Set Future Storylines Assuming Climate Change Effects

Climate change and the policies of various countries may expose the automobile industry and mobility society as a whole to substantial changes. These changes will present both risks and opportunities for Toyota. Based on risk and opportunity analysis, using such scenarios*1 as those of the International Energy Agency (IEA), we envisioned three future storylines of society and the external environment in around 2030: the stated policies future storyline, 2°C future storyline, and 1.5°C or less future storyline.

*1 Set with reference to such scenarios as the IPCC's Representative Concentration Pathways (RCP) 4.5 equivalent, IEA's Stated Policies Scenario (STEPS), Sustainable Development Scenario (SDS), and Net Zero Emissions by 2050 Scenario (NZE)

STEP 2

Consider the Impacts on Toyota

In a society of the below 2°C future storyline or the 1.5°C or less future storyline, in which climate change measures make steady progress, the percentage of vehicles that are electrified (especially ZEVs*2) will increase. In the society of the 1.5°C or less future storyline in particular, the percentage of ZEVs among new vehicle sales will likely increase greatly while the use of carbon-neutral fuels*3 will also expand. With regard to effects on production and purchasing, since the introduction of carbon taxes and increased tax rates may lead to higher costs, expanding the use of energy-saving technology, renewable energy, and hydrogen will mitigate risks.

On the other hand, if adequate climate change measures are not implemented throughout society, as described in the stated policies future storyline, production suspensions due to the increased frequency and severity of natural disasters, such as flooding, as well as production decreases and suspensions due to supply chain disruptions are likely to increase.

*2 ZEV: Zero emission vehicles. Vehicles that have the potential to emit no CO_2 or NOx during driving, such as BEVs and FCEVs
*3 Carbon-neutral fuels: Next-generation biofuels and synthetic fuels

STEP 3

Toyota's Strategies

In April 2021, Toyota proclaimed that it would address global-scale challenges to achieve carbon neutrality by 2050. As an initiative to this end, we have been working on environmental technology development for electrified vehicles, such as hybrid electric vehicles (HEVs), plug-in hybrid vehicles (PHEVs), battery EVs (BEVs), and fuel cell vehicles (FCEVs). We believe environmental technologies can contribute to reduction of CO_2 emissions only when they are widely disseminated.

Toyota currently conducts sales in over 170 countries and regions, among which economic conditions, energy and industrial policies, and customer needs vary significantly. Therefore, it is important to have a strategy that offers a variety of electrified vehicle options to optimally meet the diverse needs of each country and region.

Based on this electrified vehicle strategy, Toyota has sold a cumulative total of over 20 million electrified vehicles worldwide. As one of the first companies to respond to climate change risks, Toyota has achieved a CO_2 emissions reduction of over 160 million tons through these vehicles (as of March, 2022).

Going forward, with regard to BEVs, we will successively introduce models based on a dedicated platform in 2022 and seek to supply practical vehicles through battery development and production strategies. In December 2021, we announced our aim of developing 30 types of BEVs and achieving a full lineup in the passenger and commercial segments globally by 2030, with the target of 3.5 million annual global vehicle sales by 2030. To achieve this, we will advance the sale of electrified vehicles optimized to fit regional conditions and customer preferences.

In addition to BEVs, we are promoting electrification from all directions. We will flexibly and strategically adapt total vehicle sales and other conditions in response to changes in the market while leveraging the strengths that we have gained through experience. This will encourage customers in each region to choose us and accelerate the increased use of electrified vehicles.

Even if battery demand increases in accordance with shifts in customer needs, as in the 2°C or 1.5°C or less future storyline, we will flexibly work toward carbon neutrality by such means as enhancing collaboration with existing and new partners and swiftly establishing production structures at suppliers that have capital ties with Toyota.

In addition to increasing the number of electrified vehicles, Toyota is working on CO_2-reducing off-cycle technology*4 (items not necessarily reflected in driving mode fuel efficiency). Carbon-neutral fuel technologies, such as hydrogen fuel and hydrogen engine vehicles, will also contribute to reducing the CO_2 emissions of vehicles, including vehicles currently in use. We are therefore working to expand options for such technologies.

*4 Off-cycle technology: Technologies such as high efficiency lighting, waste heat recovery, active aerodynamic improvement, and solar radiation/temperature management that improve actual fuel consumption. The United States has a system of offering credits in proportion to the amount of improvement achieved.

Achieving Carbon Neutrality

To achieve carbon neutrality in the automotive industry, it is vital that energy policies (renewable energy, charging infrastructure, etc.) and industrial

policies (purchasing subsidies, supplier support, battery recycling systems, etc.) are advanced in a unified manner. Initiatives must be implemented in coordination with various stakeholders, such as national governments and industry organizations.

In its global business activities, Toyota will coordinate with national governments to establish infrastructure for promoting electrification while implementing electrified vehicle strategies that contribute to reducing CO_2 emissions throughout the entire vehicle life cycle.

Initiatives in the Production Field

In the production field, we have announced that we aim to achieve carbon neutrality at global plants by 2035, and we are implementing preparations to face such risks as carbon taxes. We are promoting the reduction of CO_2 emissions through comprehensive energy-saving conservation and the introduction of renewable energy and hydrogen at plants. We have already achieved 100 percent renewable electricity use at all plants in Europe.

Reinforcing Strategic Resilience

Toyota will prepare measures to respond to natural disasters, such as formulating (BCPs, strengthening supply chains by enhancing information gathering, and improving communication.

Working together with not only the automobile industry but all industries, Toyota will implement initiatives that are both practical and sustainable, continuously striving to ensure compatibility with the society of the 1.5°C or less future storyline.

To demonstrate progress and validate Toyota's strategies, we will appropriately disclose information regarding various ESG assessment indicators and enhance dialogue with stakeholders, including institutional investors. We believe that this will enable stable fund procurement and sustained corporate value enhancement.

Media Briefing on Batteries and Carbon Neutrality (September 7, 2021)
Media Briefing on Battery EV Strategies (December 14, 2021)

Risk Management

a) The Organization's Processes for Identifying and Assessing Climate-related Risks

Toyota has a Company-wide risk management system that covers all risks related to its corporate activities and conduct, including climate change. This system is called the Toyota Global Risk Management Standard (TGRS). All risks, including climate change, are identified and assessed based on the TGRS.

Risk assessment is carried out based on the two perspectives of magnitude of impact and vulnerabilities to clarify the substantive financial or strategic impact on the Company's business.

The magnitude of impact is assessed comprehensively based on the four elements of finance, reputation, violation of laws and regulations, and business continuity. Financial impact is assessed on a five-point scale using the ratio to sales as an indicator. Reputation, violation of laws and regulations, and business continuation are also assessed on a five-point scale.

Vulnerabilities are assessed based on the two elements of countermeasures and clarity of responsible organizations.

These assessments are comprehensively examined to reach a comprehensive assessment of the level of seriousness of risks on a four-point scale.

b) The Organization's Processes for Managing Climate-related Risks

Once risks by region, function (manufacturing, sales, etc.), and product are identified by each division and assessed from the perspectives of magnitude of impact and vulnerability according to the TGRS, each region and each group mutually cooperates and supports one another to implement a prompt response. The group chief officers and in-house company presidents supervise the activities of the in-house companies and, at the subordinate level, the general managers supervise the activities of divisions and implement and monitor countermeasures.

Furthermore, climate-related risks and opportunities are identified and assessed by the Environmental Product Design Assessment Committee and Production Environment Committee and then deliberated by the relevant divisions and officers. The Environmental Product Design Assessment Committee monitors the status of efforts to deal with such issues as fuel economy regulations and procurement, while the Production Environment Committee does the same for such issues as direct operations, including CO_2 emission regulations on plants and water risk.

Meetings of these two committees are held when an important event arises with the participation of executive- or general manager-level members of relevant divisions, such as technology, environment, finance, purchasing, and sales. These committees assess risks multiple times a year. Important risks and opportunities that require prompt response are reported as needed to the Board of Directors Meeting, where response measures are determined.

c) How Processes for Identifying, Assessing, and Managing Climate-related Risks are Integrated into the Organization's Overall Risk Management

As described above, the processes using the TGRS constitute a Company-wide risk management system that covers all risks and opportunities related to corporate activities and conduct, including climate change.

At the meetings of the Environmental Product Design Assessment Committee and Production Environment Committee, which bring together members from relevant divisions, climate-related risks and opportunities are identified and assessed, and countermeasures are examined.

Metrics and Targets

a) Metrics Used by the Organization to Assess Climate-related Risks and Opportunities in Line with Its Strategy and Risk Management Process

Toyota recognizes that setting multiple metrics to comprehensively manage climate-related risks and opportunities is an important measure for adaptation to and mitigation of climate change. As such, Toyota's metrics include not only the amount of CO_2 emissions but also other elements deeply related to climate change, such as energy, water, resource recycling, and biodiversity.

These metrics are systematically incorporated into the following targets as the "six challenges."

- The Toyota Environmental Challenge 2050, a long-term target for 2050
- The 2030 Milestone, a medium-term target for 2030
- The Seventh Toyota Environmental Action Plan, a short-term target for 2025

Toyota aims to achieve carbon neutrality by 2050 based on the following three "zero challenges."

- The Life Cycle Zero CO_2 Emissions Challenge, covering Scope 1, 2, and 3 along with voluntary initiatives
- The New Vehicle Zero CO_2 Emissions Challenge, focused on TtW* of Category 11 of Scope 3.
- The Plant Zero CO_2 Emissions Challenge, covering Scopes 1 and 2 at production bases and some non-consolidated affiliates (Scope 3)

Furthermore, Toyota announced in 2021 that it will aim to achieve carbon neutrality at plants by 2035. Internally, certain carbon prices are used as indicators to examine capital investment and other activities.

* TtW: Tank to wheel. CO_2 emissions during driving (CO_2 emissions during the production of the fuel and electricity are not included; TtW emissions are zero for BEVs and FCEVs

b) Scope 1, Scope 2, and, if Appropriate, Scope 3 Greenhouse Gas (GHG) Emissions, and the Related Risks

Scope 1, 2, and 3 emissions from 2019 to 2021 were as shown in the following table. In addition, through the sale of electrified vehicles, as of March 2022, Toyota had achieved a cumulative CO_2 emission reduction effect of approximately 162 million t-CO_2.

CO_2 Emissions

Scope 1 (Direct Emissions), Scope 2 (Energy-related Indirect Emissions) and Scope 3 (Other Indirect Emissions); Global (million t-CO_2)

	2019	2020	2021
Scope 1 (Direct Emissions)	2.94	2.45	2.56
Scope 2 (Energy-related Indirect Emissions)	3.90	3.42	3.69
Scope 3*1	364.34	324.97	373.36
Total	371.18	330.84*2	379.60

Scope: Toyota Motor Corporation and consolidated subsidiaries
*1 The scope for the use of sold products category is Toyota Motor Corporation and Daihatsu Motor Co., Ltd.; data for the consolidated Group will be disclosed when available
*2 The number of vehicles manufactured was lower in 2020 due to the COVID-19 pandemic.

Progress toward Emissions Reduction Targets Validated and Approved by the Science Based Targets initiative (SBTi)*3

1) Emissions Reduction Targets

SBTi validated Toyota's emissions reduction target for Scopes 1 and 2 as in line with its 1.5°C criteria in September 2022. In conjunction with this validation, SBTi also approved Toyota's emission intensity targets for Scope 3 Category 11 as in line with its well below 2°C criteria.

*3 SBTi: An initiative established by CDP, the United Nations Global Compact, World Resources Institute (WRI), and the World Wide Fund for Nature (WWF)

2) Scope 1 & 2 Emissions Reductions (million t-CO_2)

	2019	2020	2021
(a) Toyota Motor Corporation and consolidated subsidiaries	6.84	5.87	6.24
(b) Toyota vehicle production plants of unconsolidated subsidiaries (production processes)	0.54	0.81	0.77
Total (a) + (b)	7.38	6.69	7.01

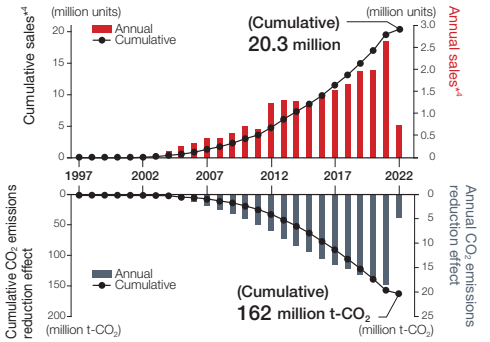
Organizational Boundary: The sum of the above (a) + (b)
Reduction Target: 68% reduction by 2035, compared to 2019 levels
Progress: Refer to total CO_2 emissions of (a) and (b) in each year shown above

3) Scope 3 Category 11 Emissions Reductions

The data will be disclosed as soon as they are available.

SCIENCE BASED TARGETS

Cumulative CO_2 Emissions Reduction Effect from Electrified Vehicles



*4 Vehicle sales figures are the total of HEV, PHEV, BEV, and FCEV sales

c) Targets Used by the Organization to Manage Climate-related Risks and Opportunities and Performance Against Targets

Structure of Environmental Strategies

Toyota is continuously monitoring social trends and customer opinions. Toyota considers which issues it should focus on, quickly anticipates future issues, and addresses environmental issues by applying new ideas and technologies. However, global environmental issues, such as climate change, water shortages, resource depletion, and biodiversity loss continue to spread and grow more serious every day.

We formulated the Toyota Environmental Challenge 2050 in 2015 and the 2030 Milestone in 2018 so that each one of us can understand better these issues and continue to tackle challenges from a long-term perspective, looking toward the world 20 and 30 years in the future. In 2020, we set the 2025 Target as the most recent target of the Toyota Environmental Action Plan, a five-year plan for achieving the above targets. Through a process of back casting from Toyota's medium- and long-term vision, we determine specific activities that we implement in collaboration with our global consolidated subsidiaries and business partners with the aim of realizing a sustainable world.

Toyota Environmental Challenge 2050	2030 Milestone	2021 Initiatives (Results)
Completely eliminate all CO_2 emissions throughout the entire vehicle life cycle	• Reduce CO_2 emissions by 25 percent or more*5 throughout the entire vehicle life cycle compared to 2013 levels	• Reduced CO_2 emissions by 13 percent throughout the entire vehicle life cycle compared to 2013 levels • In 2021, four new models were assessed, and 45 of the total 61 models available for sale (74 percent coverage) in 2021 in Japan were assessed using the Eco Vehicle Assessment System (Eco-VAS)
Reduce global*6 average CO_2 emissions (TtW) from new vehicles by 90 percent compared to Toyota's 2010 levels by 2050	• Reduce global*6 average CO_2 emissions (TtW, g/km) from new vehicles by 35 percent or more*7 compared to 2010 levels	• Reduced global*6 average CO_2 emissions from new vehicles by 24 percent compared to 2010 levels by improving environmental performance and expanding vehicle lineups • Achieved cumulative global sales of 20.3 million electrified vehicles
Achieve zero CO_2 emissions at global plants by 2050	• Reduce CO_2 emissions from global plants by 35 percent compared to 2013 levels	• Introduced innovative technologies, including a new type of paint atomizer (airless paint atomizer) that uses static electricity and promoted energy-saving through daily *kaizen* • Reduced CO_2 emissions by 21 percent compared to 2013 levels • Achieved a 13 percent introduction rate for renewable electricity • Continuously conducted various verification tests to support the utilization of hydrogen • Stationary fuel cell (FC) generators diverting on-board FCs, use of hydrogen burners for sealer drying furnaces in the battery assembly process, production of water electrolysis-based hydrogen by solar power, and use of FC forklifts

*5 By promoting activities for the milestones of New Vehicle Zero CO_2 Emissions Challenge and Plant Zero CO_2 Emissions Challenge, and with support from stakeholders such as suppliers, energy providers, infrastructure developers, governments and customers
*6 Countries and regions: Japan, the United States, Europe, China, Canada, Brazil, Saudi Arabia, India, Australia, Taiwan, Thailand, and Indonesia
*7 The figures are estimates and subject to change due to market conditions

Environmental Management System: Organizational Boundary and Management Steps

We have built an environmental management system that covers 493 companies considered consolidated subsidiaries on an accounting basis and nine unconsolidated vehicle production companies (as of 2021). Under this system, we carry out the following three steps.

We will maintain and improve this system in the future so that we can further promote environmental initiatives.

Environmental Management Steps

1. Organize internal structures (governance system)
2. Ensure thorough risk management and compliance (including voluntary actions)
3. Maximize environmental performance

ISO 14001/ISO 50001

As of 2021, all plants of Toyota Motor Corporation and consolidated subsidiaries (122 companies) have obtained ISO 14001 certification, and eight of these companies have also obtained ISO 50001 certification.

Awards Received

Selected for Two CDP A Lists

In December 2021, Toyota was selected for inclusion in the climate change A List and water security A List—the highest rankings in these categories—by CDP.*8

*8 CDP: An international NGO that encourages and assesses corporate disclosures on environmental actions based on calls from global institutional investors with high levels of interest in environmental issues

CDP A LIST 2020 CLIMATE
CDP A LIST 2020 WATER

Vehicle Safety

Fundamental Approach

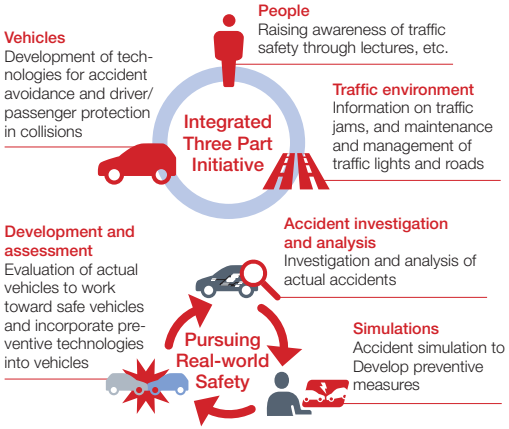
For Toyota to achieve its ultimate goal of eliminating traffic accident causalities, the development of safe vehicles is, of course, important, but it is also essential to educate people, including drivers and pedestrians, and to ensure safe traffic infrastructure, including traffic signals and roads.

To achieve a safe mobility society, Toyota believes it will be important to implement an integrated three-part initiative involving people, vehicles, and the traffic environment, as well as to pursue real-world safety by learning from actual accidents and incorporating that knowledge into vehicle development.

Toyota has defined its Integrated Safety Management Concept as the basic philosophy behind its technologies for eliminating traffic casualties and is moving forward with development.

Integrated Safety Management Concept

Toyota provides optimized driver support for reasonable safety at every stage of driving, from parking to normal operation, the moment before a collision, during a collision, and post-collision emergency response. We also aim to enhance safety by reinforcing links between vehicle safety systems, rather than thinking about each system as a separate component. These are the approaches behind our Integrated Safety Management Concept.



Active Safety

The Toyota Safety Sense system packages multiple active safety functions that help reduce serious traffic accidents causing death or injury. The major functions Pre-Collision Safety (PCS), which assists in avoiding and mitigating damage from collisions with cars ahead or pedestrians; Lane Departure Alert (LDA), which contributes to preventing accidents caused by leaving the lane of travel; and Automatic High Beam (AHB), which helps ensure optimal forward visibility during nighttime driving.

Since its market launch in 2015, Toyota Safety Sense has been installed in more than 32.5 million vehicles globally (as of July 2022). Toyota Safety Sense is now available on nearly all passenger car models (as standard or option) in the Japanese, U.S., and European markets. It has also been introduced in a total of 120 countries and regions, including such key markets as China, other select Asian countries, the Middle East, and Australia.

Passive Safety

Passive safety combines vehicle bodies that absorbs the energy of collisions with devices that provide support to protect drivers, passengers, and pedestrians and thereby minimize collision damage.

In 1995, in the pursuit of world-leading safety, Toyota created its own stringent internal target related to passive safety performance called “Global Outstanding Assessment (GOA)” and developed a collision-safety body structure and passenger protection devices. Since then, Toyota has continued to evolve GOA, striving to improve the real-world safety performance of its vehicles in a wide variety of accidents.

To analyze vehicle-related injuries, Toyota collaborated with Toyota Central R&D Labs., Inc. to develop the Total Human Model for Safety (THUMS), a virtual human body model. THUMS is being used in the research and development of a variety of safety technologies, including seat belts, airbags, and other safety devices, as well as vehicle structures that mitigate injuries in accidents involving pedestrians. Toyota made the THUMS software available on its website free of charge in January 2021 in the hope that as many users as possible will benefit from it.

Emergency Response

Every minute counts in the response to an accident or medical emergency. In the event of an accident or medical emergency, Toyota’s HELPNET® emergency reporting system service contacts a dedicated operator that then contacts police, fire, or ambulance services to ensure the rapid dispatch of emergency vehicles. HELPNET® automatically contacts an operator when the airbags deploy and supports D-Call Net®, a service that makes quick deployment decisions for air ambulances. This service is provided by sending vehicle data to the HELPNET center from an on-board data communication module (DCM).

Automated Driving Technologies

Toyota has been engaged in the research and development of automated driving technologies since the 1990s. The Mobility Teammate Concept is an automated driving concept unique to Toyota that seeks to enhance communication between drivers and their cars, enabling them to assist one another in coordinated driving as companions. Rather than cars taking over driving from people and replacing them, drivers and cars act as partners to protect one another so that drivers can enjoy the experience of driving while deferring to automated driving at times, achieving truly safe, secure and unrestricted mobility.

The Lexus LS and Mirai models launched in April 2021 are equipped with Toyota/Lexus Teammate state-of-the-art driving assist technology, with some grades including Advanced Drive, a system that assists driving on an expressways or other motor-vehicle-only roadways. The Advanced Drive on-board system will appropriately detects the vehicle’s surroundings, make decisions, and assist driving under the driver’s supervision according to actual traffic conditions. It can keep the vehicle in its lane, maintain the distance from other vehicles, navigate a lane split, change lanes, and overtake other vehicles until leaving the roadway for the destination. The system achieves high levels of safety and peace of mind, reducing driver fatigue and providing a pleasant journey to the driver’s destination.

Deep learning-focused AI technologies support driving by predicting and responding to a wide variety of situations that could occur when driving . In addition, Advanced Drive uses software updates. The system continues to add features and improve performance to enhance the driving experience and provide the latest safety technologies even after the vehicle has been delivered to the customer.

Cars have many uses, and needs continue to diversify. Accordingly, Toyota is advancing R&D into automated driving technologies not only for personally owned vehicles (POVs), but also in the field of mobility as a service (MaaS). Toyota is one of the first companies to launch advanced automated driving technology for vehicles sold to corporate customers. Data collected from these vehicles will then be collected, analyzed, and fed back into development to further evolve automated driving technologies for POVs.

Raising Traffic Safety Awareness

Toyota carries out awareness-raising initiatives for drivers and pedestrians to help prevent traffic accidents.

One such initiative for drivers is the Toyota Driver Communication safe driving technique seminar held periodically at Toyota Safety Education Center Mobilitas, on the grounds of Fuji Speedway. For pedestrians, in cooperation with Toyota dealers across Japan, Toyota has been donating traffic safety teaching materials to kindergartens and nursery schools nationwide since 1969.

Quality and Information Security

Quality

Fundamental Approach

The origins of Toyota's "Customer First" and "Quality First" principles lie in the Five Main Principles of Toyoda, which embody the thinking of Sakichi Toyoda, and the spirit of audit and improvement espoused by Kiichiro Toyoda. Since its foundation, Toyota has built a corporate culture that focuses particular attention on quality that will produce customer smiles and on *Kaizen* (continuous improvement) achieved through *Genchi Genbutsu* (onsite, hands-on experience). Each employee in every area maintains a constant and strong awareness of issues and a sense of ownership, making ongoing efforts to implement *Kaizen* and collaborate closely with personnel in other fields in order to enhance customer safety, peace of mind, and satisfaction.

Toyota sees quality as the combination of product quality, sales and service quality, and, as the foundation supporting these, the quality of the work performed by each employee.

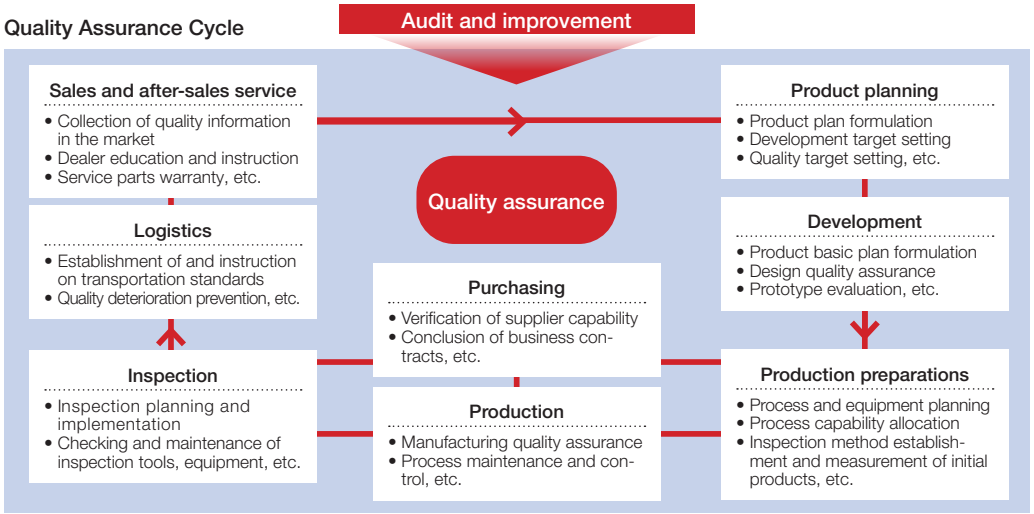
We believe that products and services that gain the confidence of customers can be created only when all employees across every process—from development, purchasing, production, and sales to after-sales service—build quality into their work, coordinate with one another across processes, and implement the quality assurance cycle.

Fostering Awareness and Corporate Culture

To foster a corporate culture in which each member is committed to building in high quality, Toyota works to develop human resources and improve work quality by holding quality awareness promotion events for all employees every year and by providing qualification-specific education in quality assurance. Furthermore, February 24, the anniversary of the day that President Akio Toyoda attended the U.S. Congressional hearings held to investigate the series of recall issues that occurred in 2010, has been designated "Toyota Restart Day." We have created mechanisms and are taking measures to raise awareness in order to keep the lessons learned from the series of recall issues fresh.

In 2014, Toyota established its Customer Quality Learning Center as a crucial education facility for conveying the experiences and lessons learned from the series of recall issues to future generations of employees. Recent quality issues are added to update the Center's program every year to maintain focus on lessons we have learned. We have also set up customer quality learning centers unique to individual plants and global sites as part of efforts to ensure employees in each region and at each plant thoroughly understand the importance of quality.

Quality Assurance Cycle



Information Security

Fundamental Approach

Cyber attacks are growing more sophisticated and complex. Their corporate targets include confidential information, information systems, plant and vehicle control system networks, such as those for onboard devices, as well as supply chains. Toyota strives to protect information assets against the threat and risks of cyber attacks and ensure customer safety and peace of mind. We implement measures to prevent information leakage based on the Information Security Policy.

Information Security Policy

Information Security Initiatives

To prevent leaks of confidential information and protect product information assets from cyber attacks, Toyota implements inspections and audits based on the All Toyota Security Guidelines (ATSG).

ATSG ensures information security through a multi-faceted approach encompassing organizational management, human resource management, technical security, physical security, and incident/accident response. To adapt to recent environmental changes, ATSG is revised periodically.

By annually inspecting the information security initiatives being implemented at consolidated subsidiaries and other Group companies in line with ATSG, Toyota works to ensure the continuous maintenance and improvement of their information security. A specialized team continuously carries out on-site audits of each company to check responses to ATSG and the status of implementation of physical security measures at each company.

Furthermore, in terms of automobile-related initiatives, Toyota is a member of the Automotive Information Sharing & Analysis Center (Auto-ISAC) in Japan and the United States, a framework for sharing knowledge related to information security, and actively utilizes it to learn promptly about cases that occur within the industry and put them to use in development.

Defending against Information Leaks and External Attacks

To defend against information leaks and external attacks, a specialized team performs information gathering and monitoring functions. When problems arise, a response team, including members of management, is formed to resolve the situation appropriately and promptly.

The specialized team conducts training at least once a year based on assumptions of increasingly complex and sophisticated threats and prepares procedure scenarios for rapid recovery to ensure readiness in case of a large-scale issue.

In addition, we receive third-party evaluations based on NIST SP800-82/53, ISO 27001/27002, IEC 62443 and other standards regarding the status of security measures pertaining to management and technical aspects of security systems. We implement measures to address problems identified through these evaluations as needed, working to raise the level of security.

Intellectual Property and Privacy

Intellectual Property

Fundamental Approach

By ambitiously engaging in forward-looking research and development, Toyota strives to enhance product appeal and technological prowess, which have served as the sources of Toyota's competitiveness. At the core of Toyota's products created through this research and development lies intellectual property, including inventions, know-how, and brands. This intellectual property constitutes an important management resource. By protecting and utilizing our intellectual property in an appropriate manner, we strive to contribute to society.

Intellectual Property Activities

To realize the mobility society of the future, Toyota is carrying out intellectual property activities in line with management priorities. For example, we are focusing resources on such areas as carbon neutrality, including the development of electrified vehicles and batteries, and on software and connected initiatives, including connected and automated driving technologies. We are also reinforcing efforts to obtain and utilize intellectual property licenses in such areas to strengthen our future competitiveness.

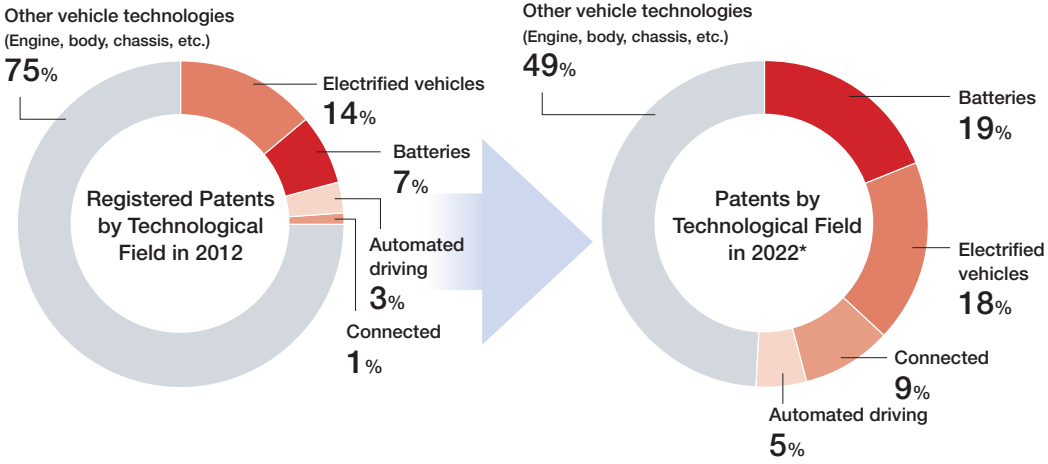
Organizational Structure

With intellectual property functions at its R&D centers in Japan, the United States, Europe, and China, Toyota supports technological development globally through the organic and systematic coordination of R&D and intellectual property activities. We work in collaboration with approximately 110 highly capable law firms around the world to collect intellectual property information and appropriately handle any intellectual property disputes that may arise in specific countries or regions.

To enhance the close coordination of management, R&D, and intellectual property, Toyota maintains the Intellectual Property Management Committee. The members of the Committee discuss and make decisions on matters related to obtaining and utilizing important intellectual property conducive to management as well as policy for responding to management risks related to intellectual property.

Intellectual Property Activity Achievements

Toyota holds approximately 69,000 patents in key countries around the world (as of March 2022) and files approximately 14,000 patent applications a year domestically and internationally. In 2021, Toyota was the holder of the most patents among car manufacturers in Japan and the United States. Moreover, Toyota is consistently at the top of a ranking released by an external institution of companies filing patent applications concerning decarbonization-related technologies with the Japan Patent Office.



*Total patents registered or under application in Japan and overseas

Privacy

Based on its "Customer First" policy, Toyota complies with the relevant laws and regulations of the countries and regions in which it operates and respects privacy as a member of international society. By appropriately managing and correctly utilizing information, Toyota strives to make ever-better cars and contribute to enriching the lives of communities. Specifically, based on our Privacy Code of Conduct and the Toyota Privacy Notice, we have set up and operate a privacy governance framework centered on the appropriate management and protection of personal information and other data related to privacy. While maintaining compliance with the Act on the Protection of Personal Information and other laws and regulations, Toyota strives to utilize information to solve social issues and provide better products and services.

Toyota Privacy Notice
Privacy

Privacy Code of Conduct (Excerpt)

<What Toyota employees should strive for>

We will comply with laws and regulations when handling personal information. We will respect privacy. In addition, in order to provide products and services that delight our customers through the appropriate handling of information, we will establish a sustainable and superior information management system and aim to be a company that sets a global standard.

Rules for the Handling of Personal Information

Customer first	Listen to customers carefully and sincerely.
Quality first	Respect customer privacy in the development and operation of products and services. (Privacy by design)
Product and Experience	When using customer-related information, create services and products that suit each individual customer to achieve customer happiness.
Compliance	Information management based on complying with laws and regulations.
Stakeholder	Cooperation with our stakeholders to respect our customers' privacy and comply with laws and regulations.

Human resource development

Achieve a high standard of privacy governance.

Value Chain Collaboration

Fundamental Approach

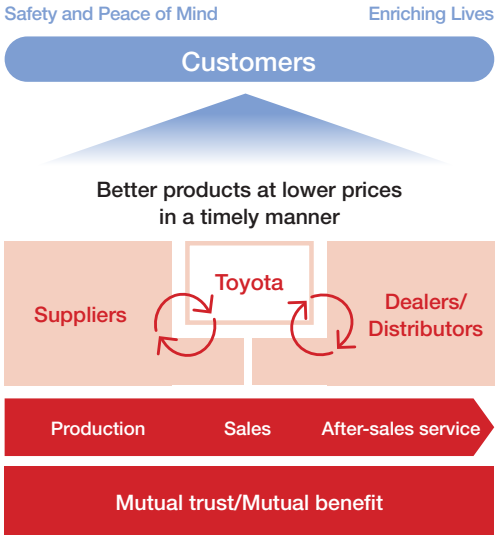
We are promoting activities based on our Customer First policy through collaboration with our business partners, including suppliers and dealers.

Toyota promotes open and fair business practices and steadily implements initiatives to promote sustainability. At the same time, we work closely with suppliers and dealers to improve quality and provide safety and peace of mind to our customers as we strive to achieve a high level of customer satisfaction.

Supply Chains

Since its establishment, Toyota has worked closely with suppliers in its manufacturing operations. As part of these efforts, Toyota has globally implemented its Basic Purchasing Policies in accordance with the spirit of mutual benefit based on mutual trust between suppliers and Toyota. We strive to maintain close relationships with existing and new suppliers as we work together to promote our Customer First policy.

When conducting business transactions, we conclude contracts that clearly stipulate legal compliance, respect for human rights, and considerations for local and global environments. Internally, we work to raise the awareness of all our employees, including buyers, through seminars and training.



Organizational Structure

The Purchasing Group, supervised by the chief officer and deputy chief officer for purchasing, takes the lead in promoting value chain collaboration activities in close cooperation with relevant departments, including those responsible for the environment, human resources, and compliance, as well as the Sustainability Management Department. The direction and challenges of sustainability initiatives are reported to and discussed by the Sustainability Subcommittee. Key issues are then reported to the Sustainability Meeting for consideration and decision making to ensure proper supervision.

Toyota Supplier Sustainability Guidelines

Toyota established the Toyota Supplier Sustainability Guidelines in 2009 to share the importance of sustainability initiatives with suppliers and request that they carry out business activities in line with the Guidelines.

In 2021, sections related to the environment and human rights were revised and expanded to reflect the increasing importance of environmental and human rights issues. As of July 2022, more than 90 percent of Toyota's domestic suppliers have endorsed the principles of the Guidelines. Furthermore, the Guidelines stipulate that tier 1 suppliers must expand the implementation of the Guidelines to tier 2 suppliers and beyond to ensure that these principles are disseminated and implemented throughout the supply chain.

The Guidelines are also shared globally, as regional purchasing divisions apply them to overseas suppliers.

Toyota Supplier Sustainability Guidelines

Toyota's Basic Purchasing Policies

1. Fair Competition Based on an Open-door Policy
Toyota is open and fair to any and all suppliers, regardless of nationality, size, or whether they have done business with us before. We evaluate suppliers by quality, technological capabilities, and reliability in delivering the required quantities on time, and their efforts in addressing social responsibilities, such as environmental issues.

2. Mutual Benefit Based on Mutual Trust
We develop mutual benefit in long-term relationships. To foster trust, we engage in close communication with suppliers.

3. Localization with Good Corporate Citizenship
We actively procure from local suppliers, including parts, materials, tools, equipment and other materials. In this way, we aim to contribute to the local society and be a good corporate citizen.

Compliance with and Implementation of the Guidelines

Checks Using Self-inspection Sheets

To ensure understanding and implementation of the Guidelines, all domestic Toyota suppliers are requested to periodically check the status of their implementation using a self-inspection sheet.

In October 2020, around 350 tier 1 suppliers, which account for over 90 percent of our purchase volume in Japan, submitted the results of their self-inspections, indicating their status of implementation. Self-inspections based on the latest version of the Guidelines, following November 2021 revisions, are scheduled for the near future.

Responses When Problems Are Identified

When a problem is identified, we communicate with the supplier concerned and ask them to make improvements. Our stance is always that the business relationship may be reconsidered if no improvements are made. In addition, to prevent reoccurrences at other suppliers, we send notices explaining the issue to suppliers and ask them to ensure thorough prevention.

In 2020, for example, we asked suppliers to provide better assistance to foreign technical internship trainees who were unable to return to their home countries during the COVID-19 pandemic.

Tier 1 suppliers are requested to work with tier 2 suppliers in the same way.

Preventing Bribery

In response to the global expansion of its business and societal demands, Toyota has adopted the Anti-bribery Guidelines to ensure the thorough prevention of bribery and corruption. Toyota is strengthening its preventive measures by promoting awareness of the guidelines among its suppliers.

Anti-bribery Guidelines

Supplier Hotline

The supplier hotline has been set up to allow suppliers to report any violations of laws, regulations, rules, or the above guidelines while assuring anonymity.

p54 "Speak Up" Hotline

Awareness-raising Activities

Toyota is working to educate and raise awareness among all employees, including buyers. We request that suppliers work to promote sustainability through their own, voluntary initiatives while also working closely with them on cooperative sustainability promotion.

Major Initiatives Led by Toyota

Target Audience		Details	
Toyota	All purchasing division staff	Training on sustainability for those newly assigned to purchasing divisions	• Training related to sustainability
		Regular seminars	• Regular seminars related to human rights, the environment, and other sustainability topics
	Employees dispatched overseas from purchasing divisions	Predeparture training	• Labor relations training provided by the human resources division

Suppliers	Suppliers in Japan	Seminars	Recent seminar topics
			• Foreign technical internship trainees (2020)
			  • In a 2019 survey, a number of suppliers responded that they had employed foreign technical internship trainees from Vietnam. These suppliers were given a seminar detailing Toyota's stance and initiatives intended to ensure that trainees are not charged exorbitant fees
			• Briefing on achieving carbon neutrality (2021 and 2022)
			  • Dissemination of specific emission calculation methods and tools to help achieve CO_2 reduction targets
			  • Presentation of items that reduce CO_2 emissions
			  • Implementation of a matching service to link companies providing emission reduction solutions with suppliers that are having trouble reducing their emissions
			• Requiring suppliers in tier 1 to encourage suppliers in tier 2 and beyond to participate in the initiatives above in order to disseminate this information throughout the supply chain

Voluntary Supplier Activities*1

	Details
Corporate Executive Round-table Conference	• We hold the Corporate Executive Round-table Conference to encourage corporate executives to take the initiative in carrying out sustainability activities. • 2021 results Executives from Toyota attended the conference, taking part in discussions on carbon neutrality. The participants shared information, identified issues, and planned measures to address said issues.
Kyohokai Environmental Research Group and Eihokai SDGs Study Group	• Suppliers engage in dialogue with each other to mutually enhance awareness, improve understanding, and advance initiatives
Volunteer Activities	• Activities carried out by Toyota's supplier associations Kyohokai and Eihokai

*1 Kyohokai and Eihokai carry out a variety of volunteer activities.

Dealers

Dealers are the front line where Toyota's Customer First policy is directly observed. Toyota and its dealers share the value of its products and services and constantly work as one to enhance customer satisfaction based on a strong relationship of trust through close two-way communication as partners.

Toyota follows a "Customer First, Dealer Second, Manufacturer Third" approach. We work alongside dealers to meet customer expectations and raise the level of customer satisfaction. We believe that, through these efforts, we will realize growth for both dealers and Toyota.

Support for the Compliance Activities of TNDAC*2 and Dealers

	Details

TNDAC initiatives	• Dealers implement activities related to priority topics every month in accordance with the Legal Compliance Manual*
	  • Details: Overview and checklists related to the following laws
	  — Laws related to dealers' duties, including sales talks and responses to customers (Act on the Protection of Personal Information, Act against Unjustifiable Premiums and Misleading Representations, Copyright Act, Consumer Contract Act, Insurance Business Act, Installment Sales Act, Act on Specified Commercial Transactions, Garage Act, civil law, and criminal law)
	  — Laws related to safety and the environment (Road Transport Vehicle Act, End-of-life Vehicle Recycling Law)
	  — Laws related to labor and employment (Labor Standards Law, Industrial Health and Safety Act, Act on Securing, etc., of Equal Opportunity and Treatment between Men and Women, laws and ordinances related to harassment)
	  — Laws related to transactions (Antimonopoly Law, Subcontracting Law)
	*Tools to support voluntary legal compliance activities by dealers
	• TNDAC Helpline
	  • Repeated notices to dealers and employees to prevent and quickly detect any legal or regulatory violations

Support from Toyota	• Implemented the following initiatives in response to designated vehicle maintenance violations and improper handling of personal information by dealers. (From FY2022 onward)
	  • Compliance seminars for dealer representatives and other personnel
	  • Supporting improvement activities at dealers by disseminating Toyota Production System (TPS) know-how and holding training sessions
	  • Supporting dealers' initiatives through the distribution of a Privacy Governance Guidebook reflecting amendments of the Act on the Protection of Personal Information promulgated in April 2022
	• Disseminating Toyota Motor Corporation's Human Rights Policy to dealers
	  • The policy has a particular focus on appropriate management of foreign technical internship trainees and creating harassment-free workplaces

*2 The Toyota National Dealers' Advisory Council (TNDAC) is an organization comprising Toyota dealers in Japan

Human Rights

Fundamental Approach

Toyota refers to and respects the United Nations Guiding Principles on Business and Human Rights (UNGP) and promotes actions related to human rights based on the UNGP. Seeking the happiness of others than ourselves is a part of Toyota's founding principles and was a driving force that led to the invention of the automatic loom, which can be considered the beginning of Toyota. This spirit and pursuit is still within us today. Under the mission of "producing happiness for all," within every country and every region in which we operate, we aim to be the best company in town, one that is both loved and trusted by the people. The automobile industry depends on the support of numerous people, including local communities, business partners (such as suppliers and dealers), and customers. We will continue to protect the human rights of our employees, customers, and all people involved in our business activities and to improve such protections in order to benefit these stakeholders and society.

Human Rights Policy

Human Rights Due Diligence*1

To address human rights-related issues throughout the supply chain, Toyota applies the Toyota Supplier Sustainability Guidelines, which specifically state its expectation that its suppliers respect human rights. Working together with suppliers on risk monitoring, countermeasure development, tracking, and remediation, Toyota provides guidance and support to potentially affected stakeholders.

Furthermore, we work with NGOs and other external stakeholders to both understand societal expectations and assess our prioritized activities from a third-party perspective. By doing so, we hope to increase transparency and ensure that corporate activities are fair and appropriate.

Toyota's Action Taken for Forced Labor of Migrant Workers (Statement on the Modern Slavery Acts)

Based on the United Kingdom's Modern Slavery Act 2015 and similar legislation of other countries,*2 Toyota issues statements under the title "Toyota's action taken for Forced Labor of Migrant Workers (Statement on the Modern Slavery Acts)," covering its domestic facilities and aimed at promoting efforts at both domestic and overseas production facilities.

In this statement, we disclose Toyota's commitment to the relevant laws and describe measures we have implemented to prevent any instance of modern slavery, including human trafficking, in either our direct operations or supply chain.

Toyota's action taken for Forced Labor of Migrant Workers (Statement on Modern Slavery Acts)

Addressing Human Rights Issues Related to Foreign Workers: Participating in the Japan Platform for Migrant Workers towards a Responsible and Inclusive Society

In 2020, Toyota took part in the establishment of the Japan Platform for Migrant Workers towards a Responsible and Inclusive Society (JP MIRAI),*3 a multi-stakeholder framework for resolving issues faced by migrant workers in Japan. In May 2022, JP MIRAI launched a grievance mechanism on a trial basis for migrant workers with the aim of understanding and resolving issues in a timely manner. This mechanism has the support and cooperation of Toyota.

*1 The process of identifying, preventing, and mitigating negative human rights impacts
*2 Australia's Modern Slavery Act 2018, etc.
*3 JP MIRAI comprises over 400 members, consisting of a variety of stakeholders, such as private companies, local governments, NPOs, academics, and lawyers

Japan Platform for Migrant Workers towards Responsible and Inclusive Society

Responsible Mineral Sourcing

Toyota has formulated its Policies and Approaches to Responsible Mineral Sourcing based on the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-affected and High-risk Areas and strives to prevent such human rights violations as child labor and forced or coerced labor.

Policies and Approaches to Responsible Mineral Sourcing

Investigation and Disclosure of the Use of Conflict Minerals (Compliance with the U.S. Dodd-Frank Act)

Since 2013, Toyota has been conducting reasonable country-of-origin inquiries throughout its supply chain based on the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-affected and High-risk Areas. We request that the suppliers make corrections if there are any errors or omissions in their responses in order to improve the effectiveness of our efforts.

In cooperation with the Responsible Minerals Initiative (RMI), Toyota Motor North America (U.S.) takes part in the activities of the Conflict-free Sourcing Working Group and the working group of the Automotive Industry Action Group (AIAG) on conflict minerals originating from the Democratic Republic of Congo.

Conflict Minerals Report

Responsible Sourcing of Cobalt

Cobalt, used in batteries and other products necessary for automobile electrification, is an important mineral resource for Toyota.

Toyota recognizes that there are concerns associated with the mining of cobalt regarding child labor and other human rights violations and abuses. Toyota has been advancing activities to clarify the supply chain for batteries, in which cobalt is the primary component, using the Cobalt Reporting Template, or CRT, provided by RMI. As of March 2020, we had identified several smelters in our supply chain.

Toyota will continue conducting background surveys of smelters and implementing appropriate measures to mitigate any risks identified.

Meanwhile, by participating in the activities of the RMI Cobalt Working Group, Toyota Motor North America (U.S.) is encouraging smelters and refiners to acquire related certifications.

Education related to Human Rights

To promote correct understanding of human-rights issues and non-discrimination and encourage action toward open and honest communication, we implement the following human rights training for executives, employees, and business partners.

Human Rights in General

Training for	Details
Executives (Toyota Motor Corporation)	• Explanation of international human rights guidelines and associated expectations, the responsibilities required of companies, and recent key human rights issues
All employees (Toyota Motor Corporation)	• Learn about corporate responsibilities and their scope based on international norms using positive and negative examples, thereby helping protect human rights in daily operations
Top management and HR employees to be transferred to overseas affiliates (including main suppliers)	• Examples of positive labor-management communications, past labor disputes, and labor-management negotiations as well as the latest trends in human rights, international norms, and regulations
Purchasing function employees to be transferred to overseas affiliates (Toyota Motor Corporation)	• Training on building healthy labor-management relationships at local suppliers, including human rights issues, to support ordinary purchasing duties at overseas postings

Anti-harassment

Training for	Details
Employees, including executives, supervisors, management, overseas transferees, and new hires (Toyota Motor Corporation)	• Awareness of harassment prevention in various situations **FY2022 Results** • All senior professionals/senior management and all professionals/management: Approx. 8,000 employees, 3,000 hours • All assistant managers and all those in lower ranks: Approx. 20,000 employees, 6,500 hours • All shop floor employees: Approx. 42,000 employees, 14,000 hours
Supervisors (Toyota Motor Corporation)	• On-line training by psychiatry and psychology specialists **FY2022 Results** • Supervisors: Approx. 12,000 employees

Diversity and Inclusion

Fundamental Approach

Toyota is working to transform from an automotive company into a mobility company by promoting continuous innovation in existing areas and taking on new frontiers. To this end, we aim to ensure that employees with diverse skills and values can demonstrate their abilities to the fullest.

Toyota does not tolerate any form of discrimination, including that based on gender, age, nationality, race, ethnicity, creed, religion, sexual orientation, gender identity, disability, marital status, or the presence of children. We respect diverse lifestyles and workstyles and provide opportunities for all employees to thrive according to their ambitions and abilities. We also strive to create open, harassment-free workplaces.

Women's Participation in the Workplace

Although we have consistently striven to promote the professional participation and advancement of women globally, we recognize that gender diversity remains an issue, particularly at Toyota Motor Corporation in Japan, and we are implementing initiatives that include the following.

- 2002: Launch of initiatives centered on expanding and establishing measures to support women who are trying to balance work and childcare
- From 2012: Focusing on initiatives for creating work environments that motivate and inspire women and on supporting their participation (especially the development of female managers).
- From 2021: Unconscious bias training for all internal management and supervisors
- From 2022: Reinforcing diversity training (basic courses and management courses)

Initiatives to Empower Persons with Disabilities

We provide various work opportunities in a variety of workplaces to persons with disabilities based on the concept of a harmonious society in which all persons, with or without disabilities, work and live together.

For example, to help enable such individuals to utilize their abilities, we have set up a consultation hotline that ensures privacy and introduced a special holiday system that can be used by employees to receive medical care. To ensure that people with disabilities are given fair opportunities, we dispatch sign language interpreters, provide a variety of support tools, and make workplace improvements as needed.
(Toyota Motor Corporation's rate of employment of people with disabilities, including those serving at a special-purpose subsidiary, is 2.50% as of June 2022.)

Special-purpose Subsidiary Toyota Loops

Toyota Loops Corporation began operation with employees with disabilities in April 2009. As of June 2022, Toyota Loops employed 357 persons with disabilities. Toyota Loops primarily handles office support work outsourced from Toyota, such as internal printing, the collection and delivery of internal mail, and document digitization.

In addition, some Toyota Loops employees participate in the development of assisted mobility vehicles, a form of work and contribution uniquely available to people with disabilities. For example, during vehicle development, wheelchair users have participated in evaluating the ease of getting in and out of vehicles and provided opinions on aspects of the development of automated driving vehicles.

LGBTQ+-related Initiatives

To ensure respect for individuals' sexual orientation and gender identity, Toyota strives to promote the development of a corporate culture of proper understanding, recognition, and acceptance.

At Toyota Motor Corporation, the prohibition on discrimination or harassment targeting LGBTQ+ people has been incorporated into the employee behavioral guidelines, and we no longer require new graduates to fill in their gender on job applications. We have also been advancing facility-related measures, such as establishing an internal consultation hotline and gender-neutral restrooms. Starting from July 2020, we have introduced revised internal systems to allow employees in same-sex or common-law marriages to use the same internal benefit systems (holidays, employee benefits, etc.) as those in marriages legally recognized in Japan.

In terms of corporate culture, we require all employees and officers to receive training covering basic knowledge about LGBTQ+ issues.

Promotion of Female Employee Participation: Our Challenge and Course of Action (Toyota Motor Corporation)

Our Challenge	The ratio of women in managerial positions is low	
Target	Increase the number of women in managerial positions in 2014 fourfold by 2025 and fivefold by 2030	
Our Course of Action	Hiring	Maintain certain hiring rates for female graduates (40% or above for administrative positions and 10% or above for engineering positions) and the active hiring of women throughout the year
	System Development	Create a system for reporting on the progress of female talent development in each department and in-house company to the Members of the Board of Directors
	Employee Development	Develop and implement plans for individual employee development and utilize a mentoring system
	Networking	Host a global women's conference and symposiums for managerial class and female promotion candidates

Social Recognition

The PRIDE Index

In November 2022, Toyota Motor Corporation was awarded Gold and Best Practice on the PRIDE Index 2022. The PRIDE Index was established by "work with Pride," a Japanese volunteer organization that supports and develops diversity management initiatives for sexual minorities.

Top 50 Companies for Diversity 2022

In May 2022, Toyota Motor North America ranked 4th in the general division of the Top 50 Companies for Diversity 2022 ranking published by U.S.-based DiversityInc.

Promotion of Female Employee Participation: Initiatives at Major Global Operations

Toyota Motor Europe NV/SA (TME) (Belgium)



- Held company-wide events during the week of International Women's Day (video message from top management, workshops, etc.)
- Networking to promote gender diversity
- Working couple support: Telecommuting system, part-time working regimes, support in finding employment for spouses of employees temporary transferred to TME
- Women's career development: Mentorship system, sponsorship system
- Active hiring of promising candidates to career positions
- Unconscious bias awareness training for all managers
- Setting of targets for employment and management positions

Toyota Motor (China) Investment Co., Ltd. (TMCI) (China)

- Nursing break of up to one hour each day for lactating female employees

Toyota Motor North America (TMNA) (United States)

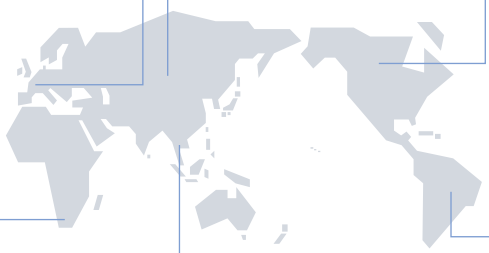


- Annual North American Women's Conference, to which all executive level women and many high-potential women in middle management positions, as well as male directors and executives, are invited to attend to network and encourage women's participation and advancement in the workplace
- Unconscious bias awareness training for all managers

- D&I KPIs for executives and managers are scored using a diversity scorecard to encourage initiativess
- Diversity Advisory Board, which is responsible for monitoring and reporting on the progress of diversity, including career development for women
- Childcare facilities at multiple operation sites to allow flexible workstyles for employees with small children
- Events sponsored by the Business Partnering Group, which provides networking and educational opportunities to employees as an organization representing the interests of minority groups

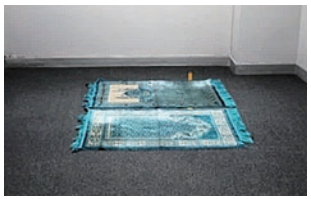
Toyota South Africa Motors (Pty) Ltd. (TSAM) (South Africa)

- Leadership workshops for management to ensure acceptance of women and promote their participation and advancement in the workplace
- Setting of employment targets



Toyota Daihatsu Engineering & Manufacturing Co., Ltd. (TDEM) (Thailand)

- Nursing rooms



- Female prayer room
- Reserved parking area for pregnant employees

Toyota do Brasil Ltda. (TDB) (Brazil) + Toyota Argentina S.A. (TASA) (Argentina)

- Designation of Women's Day, which promotes open conversation about the challenges women face in balancing their professional and personal lives

- Healthy pregnancy program for pregnant employees: Guidance and advice related to health as well as orientation on breastfeeding and baby care
- Unconscious bias awareness training for all managers
- Setting of employment targets
- Dialogue about employee emplacement between human resources division and management to promote internal diversity
- Mentor system to support female leaders
- Soft-landing Program to support employees returning to work after childbirth
- Support for nursing care costs for employees who return to work early
- Providing all employees with children with essential school supplies

- Telecommuting system

KPIs Related to the Promotion of Women's Participation in the Workplace

We are continuing initiatives that promote women's participation and advancement in the workplace so that the percentage of positions held by women will consistently increase, from initial hiring to executive positions.

Percentage of Women Hired at our Entities in Each Country/Region (FY2022)

	Percentage of women [%]				Average period of employment (years)	
	People hired	Full-time employees	Managerial positions	Director positions	Men	Women
Global*	20.3	14.0	12.0	19.2	13	11
Japan	27.8	12.9	3.0	13.3	19	14
North America	30.4	23.2	25.4	21.5	9	8
Europe	18.8	11.1	9.0	0	13	11
China	4.6	11.8	23.7	0	11	15
Asia-Pacific	18.7	6.4	17.9	3.4	13	11
Latin America	21.3	6.4	5.4	7.1	9	7
Africa	27.4	20.7	40.3	12.5	–	–

* Data for Japan and 46 overseas companies

Human Resource Development

Employees

Fundamental Approach

Toward achieving transformation into a mobility company, Toyota is committed to both "realizing advanced *monozukuri* (manufacturing) with higher quality and efficiency based on the Toyota Production System (TPS)" and "taking on challenges in new areas." To this end, Toyota encourages its employees to reexamine their workstyles and hone their individual abilities, thereby enhancing the workplace structures.

Toyota also seeks employees equipped with both the ability to act and empathy,* and recruits, trains, and evaluates employees based on these abilities. In this process, Toyota identifies the roles and abilities of each individual, ensuring the placement of the right person in the right position regardless of their nationality, gender, year of joining Toyota, form of recruitment, academic background, job type, or other such factors, with the aim of enhancing the competitiveness of the Company and its organizations.

* Empathy in this context is defined as the capacity to make efforts for others, such as customers and teammates, and the capacity to learn respectfully from others and keep improving

Recruitment

To recruit ideal candidates, Toyota has revised its conventional recruitment practices as follows:

1 Recruitment criteria

- To accelerate the introduction of workstyles based on teamwork and alliances in preparation for the launch of mobility services, recruit more people who are attractive for other employees to work with.
- Place greater emphasis in recruitment on empathy and the passion to realize dreams at Toyota.

2 Enhancing mid-career recruitment

- To introduce external knowledge and promote the reexamination of work processes and workstyles, increase mid-career recruits from 10% to 39% (FY2022 result). The medium-term target is to increase mid-career recruits to 50% (administrative and engineering positions).
- Introduce referrals (introduction by Toyota employees) and other new means of recruitment.

3 Hiring new graduates with diverse backgrounds

- To ensure diversity in our employees, hire persons with empathy who passionately want to work at Toyota, regardless of their school or academic background.
- Promote the recruitment of diverse people from universities from which no graduates have previously been hired by Toyota, technical colleges, vocational schools, and high schools.

4 Course-specific recruitment of new graduates

- To accelerate the development of professional human resources, hire students who have a concrete vision of what they want to do at Toyota and determine the course they will be assigned to at the time of recruitment, thereby ensuring the recruitment of diverse human resources suited to the characteristics of specific workplaces, such as with IT-related personnel.

Evaluation of and Feedback to Employees

The work roles of Toyota employees and the main focus of their work are to be fulfilled and defined in accordance with policies. Evaluation and feedback are based on close communication between subordinates and superiors.

Specifically, employees' roles and main focus are determined at the beginning of each fiscal year and employees consult with their supervisors periodically. Through these consultations, supervisors assess the employees' self-evaluations and provide feedback. Repeating this cycle leads to employees' capacity development. In addition, we carry out 360-degree feedback for the purpose of employee growth. By giving employees feedback on their strengths and weaknesses from people working with them, we help them reflect on their own actions and make improvements.

In 2019, our personnel system was revised to better reward hard workers regardless of age or qualifications. Furthermore, in 2020, we introduced a system for centrally managing employee information, including employee evaluations, the results of consultations with their supervisors, and questionnaire results regarding workplace management. This system has made it possible to refer to each employee's previous evaluations, personnel information, and stated intent, thereby enhancing the development and allocation of employees with consistency through job assignment based on a better understanding of employee aptitude and intent. Results for each half year are reflected in bonuses and performance abilities demonstrated over the past year are reflected in salary raises for the following year.

Global Employee Development

To develop employees capable of implementing the Toyota Philosophy globally, Toyota is providing training through global executive development, along with human resource development undertaken by Toyota Motor Corporation in Japan and human resource development undertaken by affiliates in other regions.

Global Executive Human Resource Development

The Global 21 Program aims to provide skilled employees around the world with knowledge suitable for global Toyota executives and enable them to exercise their strengths to the fullest in their respective areas of responsibility.

The program comprises the following three pillars.

1 Indication of management philosophy and expectations of executives

Disseminating the Toyota Philosophy and incorporating it into global personnel system and training.

2 Human resource management

Applying appropriate personnel evaluation standards and processes in each region based on Toyota's common values

3 Assignment deployment and training programs

Carrying out global assignments and executive training.

Shifting Resources to Transform into a Mobility Company

To transform into a mobility company, Toyota must promptly shift resources from existing car manufacturing and sales businesses to new areas, such as CASE and the value chain.

To that end, we are proactively advancing recruitment, reskilling, and redeployment with an eye to enhancing the potential of employees and carefully examining the roles and abilities of each individual in order to ensure the placement of the right person in the right position. By doing so, we aim to enhance the competitiveness of the Company and its organizations.

In addition, Toyota is leveraging its strength in promoting innovation rallying all employees and management to transform into a mobility company. To enhance the effectiveness of this comprehensive effort, we are striving to enhance communication, including holding labor-management talks throughout the year, and fostering a culture in which diverse human resources actively participate.

Hone fundamental skills, flexibility, and agility to enhance the workforce's potential

Recruitment | **Redeployment** | **Reskilling**

Fostering a culture that promotes the active participation of diverse human resources with the right person in the right position

Toyota believes that a diverse workforce is what drives innovation. One initiative in securing diverse human resources is the push to acquire new software talent for CASE businesses.

We are building a software development structure of around 3,000 people at Toyota, Woven Planet, and Toyota Connected, and around 18,000 people across the entire Group, to advance software development globally.

To meet these targets, we are stepping up the hiring of software talent. Specifically, we are expanding the rate of mid-career hiring and aim to increase the proportion of software professionals among all mid-career hires from 22% in FY2019 to 50% in FY2023.

In addition, we are working to create an in-house development environment encompassing the dispatch of personnel to different industries and parts of the supply chain. As of 2021, we had dispatched more than 400 people to Woven Planet and other software development entities. We plan to increase the number of participants in reskilling education to 9,000 by 2025.

Health and Safety and Social Contribution Activities

Safety and Health

Fundamental Approach

Toyota aims to provide safe workplaces in which all people working for Toyota can stay physically and mentally healthy and continue to play an active role.

Health and safety policies and KPIs are formulated by the company safety and health supervising manager, and efforts are made at all workplaces in all regions to improve in line with these policies.

Health Initiatives

Based on the principle of putting health first, Toyota's health initiatives are focused on prevention, including the promotion of lifestyle disease prevention, mental health, and improvements to create more fulfilling, employee-friendly work environments. Through health and productivity management, we aim for employees and the Company to grow together, increasing productivity via the active participation of diverse human resources.

Response to Infectious Diseases

Toyota is taking measures to prevent the spread of infectious diseases under the principle of placing the highest priority on the safety and security of our employees and their families, customers, suppliers, and other stakeholders. Such measures include providing Company facilities for use as COVID-19 vaccination centers and dispatching doctors, medical staff, and facility operation staff to such centers to support local communities.

Safety Initiatives

Based on a policy of promoting health through mutual awareness-raising and the establishment and enhancement of a safety-focused work culture, Toyota implements activities based on the three pillars of safe people, safe work, and safe places/environments. Toyota promotes safety and health activities rooted in each worksite, aiming to ultimately reach and maintain zero accidents at all worksites.

Work-related Injuries (Frequency of Lost Workday Cases*1)

	2017	2018	2019	2020	2021
Global*2	0.34	0.23	0.25	0.24	0.23
Japan	0.07	0.08	0.04	0.10	0.03
North America	1.49	0.93	1.01	0.89	0.93
Europe	0.69	0.35	0.42	0.27	0.13
China	0.20	0.19	0.07	0.11	0.08
Asia-Pacific	0.04	0.02	0.05	0.02	0.07
Other	0.18	0.12	0.23	0.23	0.31
All industries (Japan)	1.66	1.83	1.80	1.95	2.09
Manufacturing industry (Japan)	1.02	1.20	1.20	1.21	1.31

Sources for domestic data: Statistical tables from the Ministry of Health, Labour and Welfare
*1 Frequency of lost workday cases: Number of deaths and injuries per 1,000,000 hours worked, calculated as (Deaths and injuries / Hours worked) × 1,000,000
*2 Toyota Motor Corporation and 52 overseas locations

Three pillars of safety

1 Safe people

Promote the development of human resources who are capable of predicting risks, comply with rules, and think and act proactively

- Leaders who take the initiative to always demonstrate a safety-first attitude are the foundation of people-based efforts. Safety education programs are aimed at developing safety-oriented human resources based on the experiences of our predecessors while reflecting changes in operations, encouraging us to review our daily awareness and behavior.

2 Safe work (risk management)

Reduce and manage high-risk operations toward the achievement of zero serious accidents

- Key to workplace safety are the 4Ss *seiri* (sorting), *seiton* (straightening), *seiso* (cleaning), and *seiketsu* (hygiene) approach and the standardization of operations based on an assessment of safety risks that takes operability into consideration.

3 Safe places/environments

Aim to build positive and people-friendly processes, identify issues, and take quick decisions and action

- Work environments are managed in accordance with statutory and regulatory environmental measurements
- Equipment-related measures are implemented in order of priority, as work environments are significantly affected by the production equipment used, season, and other such factors.

Social Contribution

Toyota proactively undertakes social contribution activities that support sustainable social prosperity, joining forces with stakeholders and effectively drawing on its resources to develop personnel who will lead the next generation and help solve social issues. We approach issues in specific areas with a sense of ownership and take action on a *Genchi Genbutsu* (onsite, hands-on experience) basis. We work together with partners who share our aspirations for the future to address issues that are difficult to solve by ourselves.

We have identified the areas that we will focus on: "contribution to a harmonious society," "human capital development"*3 and "community co-creation," as well as "Mobility for All," which is Toyota's aim in its main business. In these areas, we take concrete action based on the kind of future we want and thereby contribute to the realization of the Sustainable Development Goals.

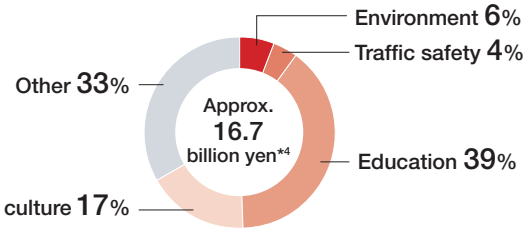
*3 Human asset development: Working to develop the diverse and essential potential possessed by each individual

Example of initiatives

- Social contribution programs (in the areas of harmonious society, human capital development, and community co-creation)
- Promotion of employee volunteer activities
- Support of activities undertaken by NPOs, NGOs, etc. (donations and sponsorship)
- Activities to promote the understanding of automobile culture and Toyota corporate culture

Social contribution activity website

Expenditure for Social Contribution Activities (FY2022)



*4 Toyota Motor Corporation and major subsidiaries (60 companies). The sum of the components does not equal 100%, because major subsidiaries' results have been converted to yen based on the average exchange rate for FY2022 and rounded to the nearest whole number.

Risk Management and Compliance

Risk Management

Fundamental Approach

Amid a period of tremendous change in the conditions and priorities of the automotive industry, including the push toward carbon neutrality and CASE, Toyota is constantly taking on new challenges and has been working to reinforce its risk management structure to handle the corresponding increase in uncertainty. Toyota has appointed a Chief Risk Officer (CRO) and Deputy Chief Risk Officer (DCRO) charged with global risk management. The CRO and DCRO are working to prevent and mitigate the impact of risks that could arise in Toyota's global business activities.

Beneath the CRO and DCRO are Regional CROs appointed to handle risk management in specific regions. At head office departments (such as Accounting and Purchasing), risk management by function is assigned to chief officers and risk managers of individual divisions, while at in-house companies, risk management by product is assigned to the company presidents and risk managers of individual divisions. This structure enables coordination and cooperation between the regional head offices and sections.

Business Continuity Management

In preparation for large-scale disasters, such as earthquakes and floods, Toyota formulates Business Continuity Plans (BCPs) for the rapid restoration of business operations using limited resources. Toyota works to constantly improve the practical effectiveness of its BCPs through the implementation of a PDCA cycle, including training. These activities constitute our Business Continuity Management (BCM), promoted through coordination among employees and their families, Toyota Group companies and suppliers, and Toyota.

Through this process of BCP formulation and review, we aim to develop risk-resilient organizations, workplaces, and individuals.

Building a Disaster-resilient Supply Chain

Toyota provides disaster recovery support in the following order of priority: (1) Humanitarian aid; (2) Early recovery of the affected area; (3) Restoration of Toyota's operations and production. Since the Great East Japan Earthquake, we have worked with suppliers in each country and region to build a disaster-resilient supply chain by sharing supply chain information and implementing disaster-readiness measures to ensure prompt initial response and early recovery.

Compliance

Fundamental Approach

The Guiding Principles at Toyota state that Toyota shall "honor the language and spirit of the law of every country and region, and undertake open and fair business activities to be a strong corporate citizen of the world." Toyota believes that by adhering to this principle in its actions, it can fulfill its corporate social responsibility and ensure compliance.

The Toyota Code of Conduct outlines the basic frame of mind that all Toyota personnel should adopt. It sets forth concrete guidelines to assist them in upholding the Guiding Principles at Toyota and doing their part to ensure that Toyota carries out its corporate social responsibility. A booklet containing the Toyota Code of Conduct is distributed to all employees, including seconded and dispatched employees, as part of efforts to ensure compliance. To promote compliance awareness from top management down to each individual employee, Toyota implements a variety of compliance education initiatives.

Toyota Code of Conduct

Bribery and Corruption Prevention Measures

Toyota adopted the Anti-bribery Guidelines for internal divisions and business partners in 2012 to promote the eradication of bribery and corruption. In line with the Guidelines, we strive to prevent bribery and corruption.

Anti-bribery Guidelines

Taxation

Since its founding, Toyota has aspired to enrich peoples' lives through car making and to enrich local economies by creating employment and paying taxes as a corporate presence firmly rooted in local communities.

Toyota seeks to achieve sustainable financial performance through the Toyota Production System (TPS) and cost reduction and is committed to its responsibility to making appropriate tax payments as the most basic form of social contribution in the communities in which it operates.

Tax Policy

"Speak Up" Hotline

Toyota's "Speak Up" Hotline enables quick and appropriate responses to workplace- and work-related concerns, complaints, or questions that employees and other relevant parties may have. We promote awareness of the hotline using the Company intranet and various other media. Consultations can be submitted through a law firm, the Company website, email, telephone, or other means. For topics related to employees or workplaces, the hotline is also open to third parties, including employees' family members and business partners, in addition to employees. The hotline can also be used anonymously.

The content of a consultation is investigated with care to ensure that hotline users who wish to remain anonymous cannot be identified. If the results of the investigation indicate an issue, a response is implemented immediately.
(Hotline consultations handled in FY2022: 727)

Checks to Enhance Compliance

Every year, we implement checks, including at global subsidiaries, to enhance compliance. Fields to be checked are selected by assessing risk levels and importance to Toyota. In FY2022, checks were carried out to examine compliance with the Antimonopoly Law, bribery/corruption prevention, compliance with the Act on the Protection of Personal Information, and other topics. Issues or matters requiring improvement identified through checks are incorporated into the next fiscal year's action plans to ensure ongoing improvement and engagement.

Certification Testing Misconduct at Hino Motors

On March 4, 2022, consolidated subsidiary Hino Motors, Ltd. confirmed and publicly gave public notice of past misconduct related to its applications for certification concerning the emissions and fuel economy performance of its vehicle engines for the Japanese market. A special investigation committee consisting of independent outside experts commissioned by Hino investigated the matter and found that the misconduct was longstanding. In September 2022, the Ministry of Land, Infrastructure, Transport and Tourism issued a correction order and revoked the type approval for engine models found to be noncompliant with emission performance standards. In October 2022, Hino submitted a Recurrence Prevention Report to the Ministry and published a plan for reforms to ensure that such misconduct does not occur again.

We believe that the source of the problem was deep-rooted shortcomings in Hino's corporate culture. Management did not fully understand or appreciate the front-line situation and misplaced management priorities by neglecting the development of compliance awareness and establishment of a sound culture while pursuing the expansion of revenue and sales. In this context, Hino lost sight of its approach to vehicle manufacturing. Going forward, Hino will implement the planned reforms throughout the company and continuously improve and strengthen its efforts through periodic reviews in conjunction with outside experts.

We believe that these measures will not produce immediate results, so Hino must make persistent and continuous efforts over time to be reborn as a company worthy of the trust of its stakeholders. Toyota will continue supporting Hino so that the measures announced will be effective. Specifically, Toyota will support Hino in areas and operations where it can, including work related to engine certification for light-duty trucks, as the company has requested. Furthermore, Toyota will share its accumulated know-how with Hino in such areas as responding to suppliers affected by the issue.

The Toyota Group regards legal compliance as the foundation of management. We will spare no effort to regain the trust of customers and to prevent recurrences.

Board of Directors and Audit & Supervisory Board Members (As of November 2022)

Takeshi Uchiyamada

Male
August 17, 1946
Chairman of the Board of Directors

Position and areas of responsibility
Chairman of the Board of Directors
Chairman of the Executive Appointment Meeting
Chairman of the Executive Compensation Meeting

Brief career summary

Apr. 1969 Joined Toyota Motor Corporation
Jan. 1996 Chief Engineer of Vehicle Development Center 2 of Toyota Motor Corporation
Jun. 1998 Member of the Board of Directors of Toyota Motor Corporation
Jun. 2001 Managing Director of Toyota Motor Corporation
Jun. 2003 Senior Managing Director of Toyota Motor Corporation
Jun. 2005 Executive Vice President of Toyota Motor Corporation
Jun. 2012 Vice Chairman of Toyota Motor Corporation
Jun. 2013 Chairman of Toyota Motor Corporation (to present)

Akio Toyoda

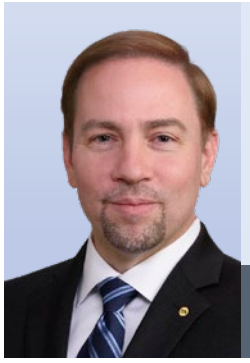
Male
May 3, 1956
President, Member of the Board of Directors

Position and areas of responsibility
Chief Executive Officer

Brief career summary

Apr. 1984 Joined Toyota Motor Corporation
May. 2000 Project General Manager of GAZOO Business Division and Domestic Marketing Division's Operational Improvement Support Office of Toyota Motor Corporation
Jun. 2000 Member of the Board of Directors of Toyota Motor Corporation
Jun. 2002 Managing Director of Toyota Motor Corporation
Jun. 2003 Senior Managing Director of Toyota Motor Corporation
Jun. 2005 Executive Vice President of Toyota Motor Corporation
Jun. 2009 President of Toyota Motor Corporation (to present)

(Note) Akio Toyoda, who is President and Member of the Board of Directors, concurrently serves as an Operating Officer (President).



James Kuffner

Male
January 18, 1971
Member of the Board of Directors

Position and areas of responsibility
Chief Digital Officer

Brief career summary

Aug. 1999 Japan Society for the Promotion of Science (JSPS) Postdoctoral Research Fellow
Jan. 2002 Research Scientist of Carnegie Mellon University
Jan. 2005 Assistant Professor of Carnegie Mellon University
Jan. 2008 Associate Professor of Carnegie Mellon University
Sep. 2009 Research Scientist of Google Inc.
Jul. 2013 Engineering Director of Google Inc.
Jan. 2016 Retired as Engineering Director of Google Inc.
Jan. 2016 Chief Technology Officer of Toyota Research Institute, Inc.
Mar. 2018 Retired as Adjunct Associate Professor of Carnegie Mellon University
Mar. 2018 Chief Executive Officer of Toyota Research Institute - Advanced Development, Inc.
Mar. 2018 Executive Advisor to Toyota Research Institute
Jan. 2020 Senior Fellow of Toyota Motor Corporation
Jun. 2020 Member of the Board of Directors and Operating Officer of Toyota Motor Corporation (to present)
Jan. 2021 Toyota Research Institute—Advanced Development, Inc. changed its corporate name to Woven Core, Inc. and was reorganized into the Woven Planet Group.
Jan. 2021 Chief Executive Officer and Representative Director of Woven Planet Holdings, Inc. (to present)

Shigeru Hayakawa

Male
September 15, 1953
Vice Chairman of the Board of Directors

Position and areas of responsibility
Chief Privacy Officer

Brief career summary

Apr. 1977 Joined Toyota Motor Sales Co., Ltd.
Jun. 2005 Division General Manager of Public Affairs Division of Toyota Motor Corporation
Jun. 2007 Managing Officer of Toyota Motor Corporation
Sep. 2007 President of Toyota Motor North America, Inc.
Jun. 2009 Retired as President of Toyota Motor North America, Inc.
Apr. 2012 Senior Managing Officer of Toyota Motor Corporation
Jun. 2015 Member of the Board of Directors and Senior Managing Officer of Toyota Motor Corporation
Apr. 2017 Vice Chairman of Toyota Motor Corporation (to present)

Kenta Kon

Male
August 2, 1968
Member of the Board of Directors

Position and areas of responsibility
Chief Financial Officer
Member of the Executive Appointment Meeting
Member of the Executive Compensation Meeting

Brief career summary

Apr. 1991 Joined Toyota Motor Corporation
Jan. 2017 Division General Manager of Accounting Division of Toyota Motor Corporation
Jun. 2018 Managing Officer of Toyota Motor Corporation
Jul. 2019 Operating Officer of Toyota Motor Corporation
Jun. 2021 Member of the Board of Directors and Operating Officer of Toyota Motor Corporation
Apr. 2022 Member of the Board of Directors, Operating Officer, and Executive Vice President of Toyota Motor Corporation (to present)

Masahiko Maeda

Male
February 10, 1969
Member of the Board of Directors

Position and areas of responsibility
Chief Technology Officer

Brief career summary

Apr. 1994 Joined Toyota Motor Corporation
Jul. 2016 Chief Engineer of CV Company CVZ ZB of Toyota Motor Corporation
Jan. 2018 Managing Officer of Toyota Motor Corporation
Jan. 2019 Operating Officer of Toyota Motor Corporation
Apr. 2022 Operating Officer and Executive Vice President of Toyota Motor Corporation
Jun. 2022 Member of the Board of Directors, Operating Officer, and Executive Vice President of Toyota Motor Corporation (to present)

Ikuro Sugawara

Male
March 6, 1957
Member of the Board of Directors

Position and areas of responsibility

Member of the Executive Appointment Meeting
Member of the Executive Compensation Meeting

Outside Independent

Brief career summary

Apr.	1981	Joined Ministry of International Trade and Industry
Jul.	2010	Director-General of the Industrial Science and Technology Policy and Environment Bureau, Ministry of Economy, Trade and Industry
Sep.	2012	Director-General of the Manufacturing Industries Bureau, Ministry of Economy, Trade and Industry
Jun.	2013	Director-General of the Economic and Industrial Policy Bureau, Ministry of Economy, Trade and Industry
Jul.	2015	Vice-Minister of Ministry of Economy, Trade and Industry
Jul.	2017	Retired from Ministry of Economy, Trade and Industry
Aug.	2017	Special Advisor to the Cabinet
Jun.	2018	Retired as Special Advisor to the Cabinet
Jun.	2018	Member of the Board of Directors of Toyota Motor Corporation (to present)

Teiko Kudo

Female
May 22, 1964
Member of the Board of Directors

Position and areas of responsibility

Member of the Executive Appointment Meeting
Member of the Executive Compensation Meeting

Outside Independent

Brief career summary

Apr.	1987	Joined Sumitomo Bank, Limited
Apr.	2014	Executive Officer of Sumitomo Mitsui Banking Corporation
Apr.	2017	Managing Executive Officer of Sumitomo Mitsui Banking Corporation
Jun.	2018	Member of the Board of Directors of Toyota Motor Corporation (to present)
Apr.	2020	Senior Managing Executive Officer of Sumitomo Mitsui Banking Corporation
Apr.	2020	Senior Managing Executive Officer of Sumitomo Mitsui Financial Group, Inc.
Mar.	2021	Director and Senior Managing Executive Officer of Sumitomo Mitsui Banking Corporation (to present)
Apr.	2021	Senior Managing Corporate Executive Officer of Sumitomo Mitsui Financial Group, Inc.
Jun.	2021	Director and Senior Managing Executive Officer of Sumitomo Mitsui Financial Group, Inc. (to present)

Sir Philip Craven

Male
July 4, 1950
Member of the Board of Directors

Position and areas of responsibility

Member of the Executive Appointment Meeting
Member of the Executive Compensation Meeting

Outside Independent

Brief career summary

Jul.	1989	Founding President of the International Wheelchair Basketball Federation
Dec.	2001	President of the International Paralympic Committee
Jul.	2002	Retired as President of the International Wheelchair Basketball Federation
Sep.	2017	Retired as President of the International Paralympic Committee
Jun.	2018	Member of the Board of Directors of Toyota Motor Corporation (to present)

Haruhiko Kato

Male
July 21, 1952
Full-time Audit & Supervisory Board Member

Brief career summary

Apr. 1975 Joined Ministry of Finance
Jul. 2007 Director-General of the Tax Bureau, Ministry of Finance
Jul. 2009 Commissioner of the National Tax Agency
Jul. 2010 Retired as Commissioner of the National Tax Agency
Jan. 2011 Senior Managing Director of Japan Securities Depository Center, Inc.
Jun. 2011 President and Chief Executive Officer of Japan Securities Depository Center, Inc.
Jun. 2013 Member of the Board of Directors of Toyota Motor Corporation
Jul. 2015 Director, Representative Executive Officer and President of Japan Securities Depository Center, Inc.
Jun. 2018 Retired as member of the Board of Directors of Toyota Motor Corporation
Mar. 2019 Retired as Representative Executive Officer, President and CEO of Japan Securities Depository Center, Inc.
Jun. 2019 Audit & Supervisory Board Member of Toyota Motor Corporation (to present)
Jun. 2019 Retired as Director of Japan Securities Depository Center, Inc.

Katsuyuki Ogura

Male
January 25, 1963
Full-time Audit & Supervisory Board Member

Brief career summary

Apr. 1985 Joined Toyota Motor Corporation
Jan. 2018 General Manager of Audit & Supervisory Board Office of Toyota Motor Corporation
Jun. 2019 Audit & Supervisory Board Member of Toyota Motor Corporation (to present)

Hiroshi Ozu

Male
July 21, 1949
Audit & Supervisory Board Member

Outside Independent

Brief career summary

Jul. 2012 Prosecutor-General
Jul. 2014 Retired as Prosecutor-General
Sep. 2014 Registered as Attorney
Jun. 2015 Audit & Supervisory Board Member of Toyota Motor Corporation (to present)

Masahide Yasuda

Male
April 1, 1949
Full-time Audit & Supervisory Board Member

Brief career summary

Oct. 1972 Joined Toyota Motor Corporation
Jun. 2007 President of Toyota Motor Corporation Australia Ltd.
May 2014 Chairman of Toyota Motor Corporation Australia Ltd.
Dec. 2017 Retired as Chairman of Toyota Motor Corporation Australia Ltd.
Jun. 2018 Audit & Supervisory Board Member of Toyota Motor Corporation (to present)

Yoko Wake

Female
November 18, 1947
Audit & Supervisory Board Member

Outside Independent

Brief career summary

Apr. 1993 Professor of Faculty of Business and Commerce of Keio University
Jun. 2011 Audit & Supervisory Board Member of Toyota Motor Corporation (to present)
Apr. 2013 Professor Emeritus of Keio University (to present)

George Olcott

Male
May 7, 1955
Audit & Supervisory Board Member

Outside Independent

Brief career summary

Jul. 1986 Joined S.G. Warburg & Co., Ltd.
Feb. 1999 President of UBS Asset Management (Japan)
Jun. 2000 Managing Director of Equity Capital Market of UBS Warburg Tokyo
Jul. 2001 Retired as Managing Director of Equity Capital Market of UBS Warburg Tokyo
Sep. 2001 Doctoral Program, Judge Business School, University of Cambridge
Mar. 2005 FME Teaching Fellow of Judge Business School, University of Cambridge
Mar. 2008 Senior Fellow of Judge Business School, University of Cambridge
Aug. 2013 Retired as Senior Fellow of Judge Business School, University of Cambridge
Jun. 2022 Audit & Supervisory Board Member of Toyota Motor Corporation (to present)

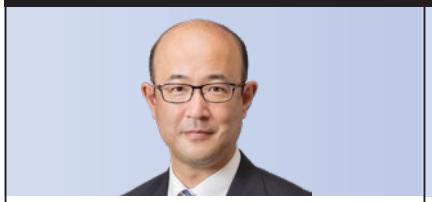
Operating Officers and Organizational Structure

(As of November 2022)

Akio Toyoda

President, Chief Executive Officer

Operating Officers



Kenta Kon

Executive Vice President
Chief Financial Officer

Masahiko Maeda

Executive Vice President
Chief Technology Officer

Masanori Kuwata

Executive Vice President
Chief Risk Officer
Chief Compliance Officer
Chief Human Resources Officer

Koji Kobayashi

Banto

Keiji Yamamoto

Chief Information & Security Officer
Chief Product Integration Officer

Yoichi Miyazaki

Chief Competitive Officer

Jun Nagata

Chief Communication Officer

Yumi Otsuka

Chief Sustainability Officer

Koji Sato

Chief Branding Officer

James Kuffner

Chief Digital Officer

Audit & Supervisory Board Office / Internal Audit Dept.

Head Office

CEO Office / Sustainability Management Dept.
Toyota System Supply / Digital Transformation Promotion Dept.

- Toyota ZEV Factory
- Frontier Research Center
- TPS Group
- Business Development Group
- External & Public Affairs Group
- General Administration & Human Resources Group
- Information Systems Group
- Accounting Group
- Sales Financial Business Group
- Purchasing Group
- Customer First Promotion Group
- Production Group

Business Unit

Region

- North America Region
- Europe Region
- Japan Sales Business Group
- China Region
- Asia Region
- East Asia, Oceania & Middle East Region
- Latin America & Caribbean Region
- Africa Support Div.
  Business Planning Div. / Sales & Operation Planning Div.
  KD Business Planning Div. / Sales & Marketing Support Div.

Product

- Advanced R&D and Engineering Company
- Carbon Neutral Advanced Engineering Development Center
- Vehicle Development Center
- Toyota Compact Car Company
- Mid-size Vehicle Company
- CV Company
- Lexus International Co.
- Powertrain Company
- Production Engineering Development Center
- Connected Company
- GAZOO Racing Company
- Emerging-market Compact Car Company

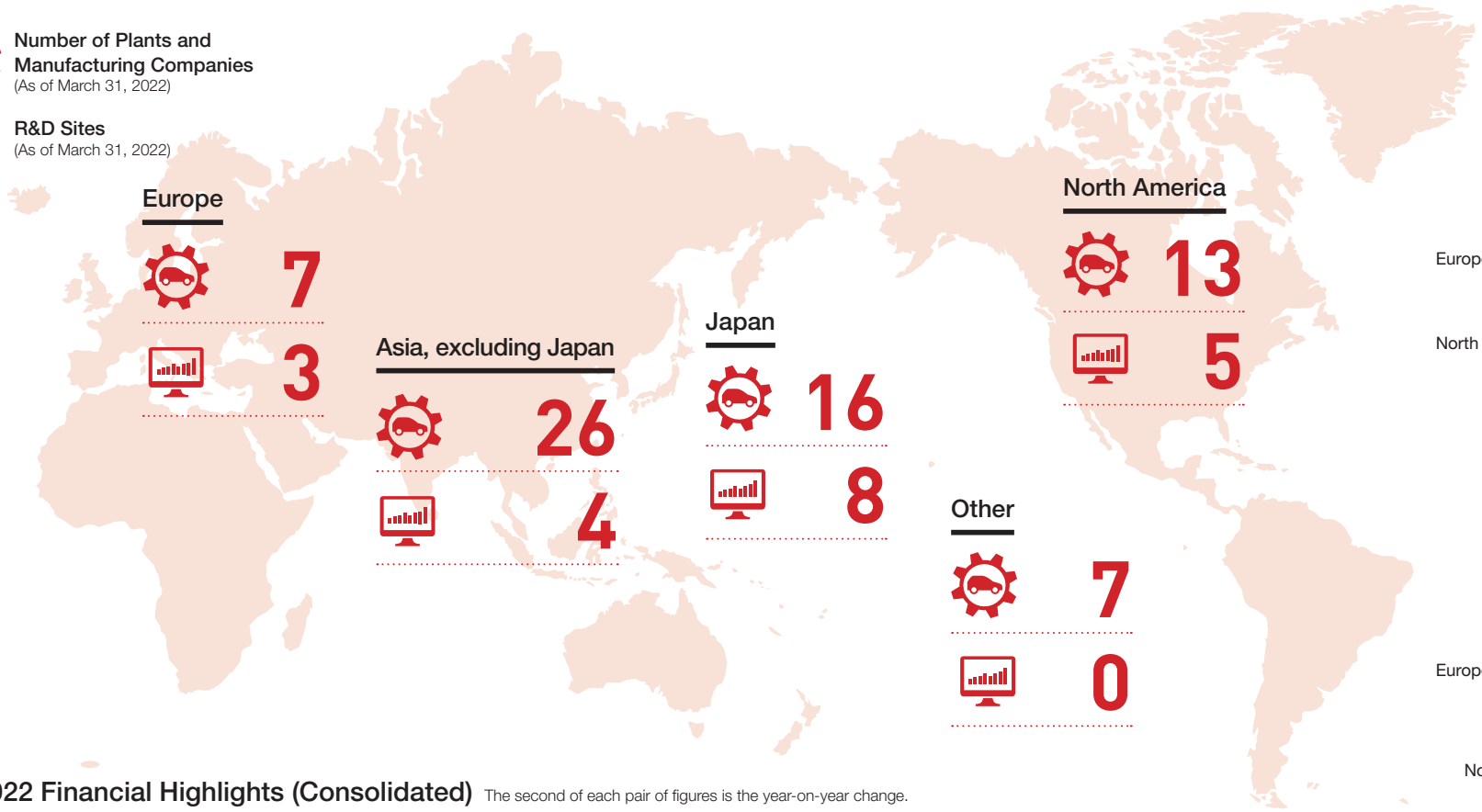
Fellow

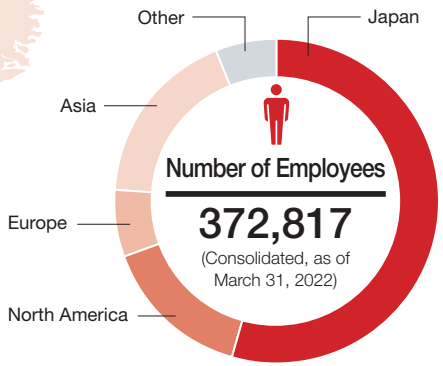
- Mitsuru Kawai
  Executive Fellow
- Shigeki Terashi
  Executive Fellow
- Shigeki Tomoyama
  Executive Fellow
- Gill A. Pratt
  Chief Scientist and Executive Fellow for Research

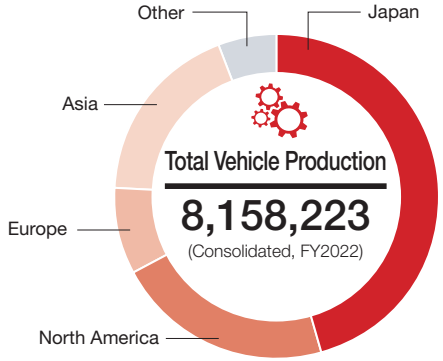
Global Perspective/Data by Region

Number of Plants and Manufacturing Companies
(As of March 31, 2022)

R&D Sites
(As of March 31, 2022)







FY2022 Financial Highlights (Consolidated)

The second of each pair of figures is the year-on-year change.

Total Vehicle Sales
8,230 thousand
+584 thousand

Sales Revenues
¥31,379.5 billion
+¥4,164.9 billion

Operating Income
¥2,995.6 billion
+¥797.9 billion

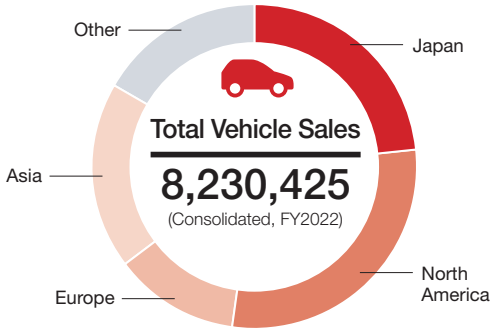
Net Income Attributable to Toyota Motor Corporation
¥2,850.1 billion
+¥604.8 billion

Total Liquid Assets
¥10,517.3 billion
-¥1,062.0 billion

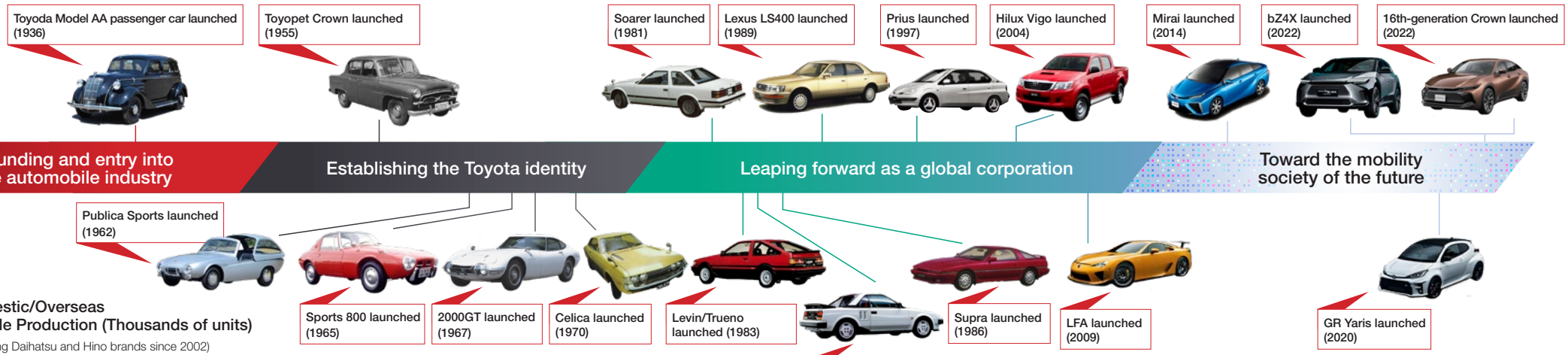
Total Shareholder Return (Max)
¥1,153.8 billion
+¥232.8 billion

R&D Expenses
¥1,124.2 billion
+¥33.8 billion

Capital Expenditures
¥1,343.0 billion
+¥49.8 billion

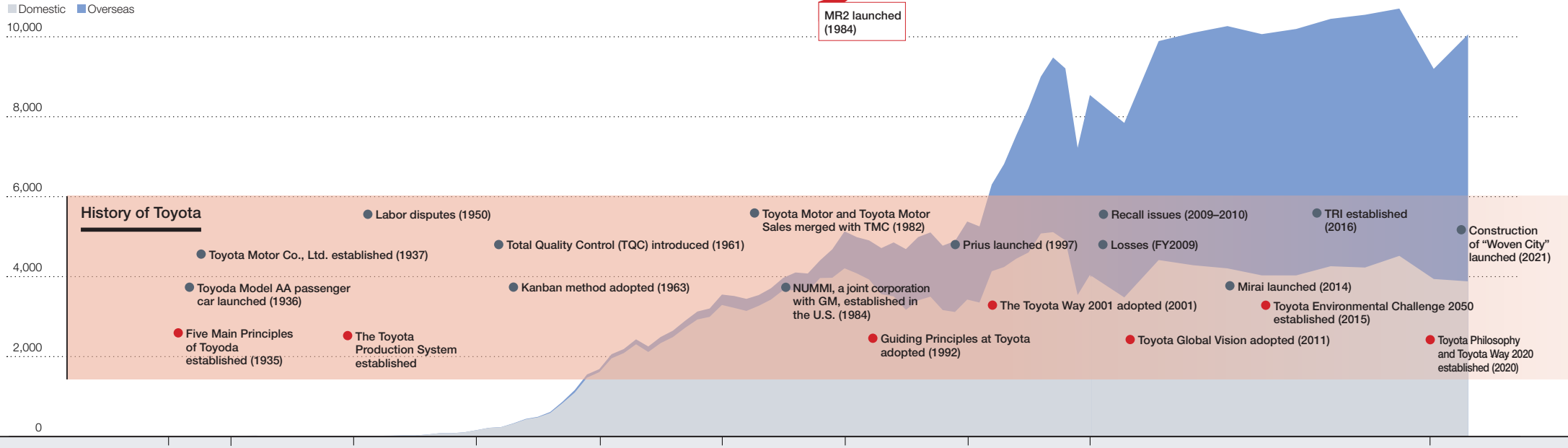


History



Domestic/Overseas Vehicle Production (Thousands of units)

(Including Daihatsu and Hino brands since 2002)



History of Toyota

- Labor disputes (1950)
- Toyota Motor Co., Ltd. established (1937)
- Toyoda Model AA passenger car launched (1936)
- Five Main Principles of Toyoda established (1935)
- The Toyota Production System established
- Total Quality Control (TQC) introduced (1961)
- Kanban method adopted (1963)
- Toyota Motor and Toyota Motor Sales merged with TMC (1982)
- NUMMI, a joint corporation with GM, established in the U.S. (1984)
- Guiding Principles at Toyota adopted (1992)
- Prius launched (1997)
- The Toyota Way 2001 adopted (2001)
- Recall issues (2009–2010)
- Losses (FY2009)
- Toyota Global Vision adopted (2011)
- TRI established (2016)
- Mirai launched (2014)
- Toyota Environmental Challenge 2050 established (2015)
- Construction of "Woven City" launched (2021)
- Toyota Philosophy and Toyota Way 2020 established (2020)

Major World Events

1935 1940 1950 1960 1970 1980 1990 2000 2010 2020

- World War II (1939-1945)
- Rapid economic growth period in Japan (1960s-1970s)
- Oil crisis (1973 & 1979)
- Tighter control on exhaust emissions (1970s)
- U.S.-Japan trade friction (1980s)
- Berlin Wall comes down (1989)
- Rio Earth Summit (1992)
- Trade friction surrounding cars (1990s)
- Kyoto Protocol adopted (1997)
- The 2008 financial crisis (2008)
- The Great East Japan Earthquake, Thailand floods (2011)
- UN SDGs adopted (2015)
- Paris Agreement adopted (2015)
- The COVID-19 pandemic emerged (2019)
- Russia-Ukraine crisis (2022)

75 Years of Toyota

Financial Summary (Consolidated)

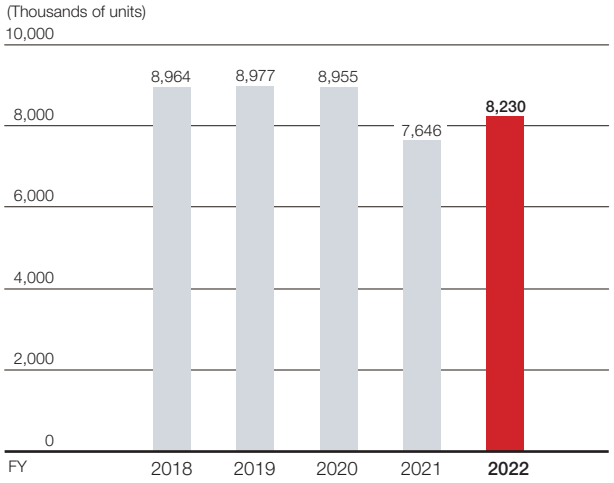
Fiscal years ended March 31			U.S. GAAP								IFRS		
U.S. GAAP	IFRS		2013	2014	2015	2016	2017	2018	2019	2020	2020	2021	2022
Consolidated Vehicle Sales		(thousands of units)	8,871	9,116	8,972	8,681	8,971	8,964	8,977	8,958	8,955	7,646	8,230
Foreign Exchange Rates (Average)	Yen to U.S. Dollar Rate		83	100	110	120	108	111	111	109	109	106	112
	Yen to Euro Rate		107	134	139	133	119	130	128	121	121	124	131
Net Revenues	Sales Revenues	(billions of yen)	22,064.1	25,691.9	27,234.5	28,403.1	27,597.1	29,379.5	30,225.6	29,929.9	29,866.5	27,214.5	31,379.5
Operating Income (Loss)	Operating Income (Loss)	(billions of yen)	1,320.8	2,292.1	2,750.5	2,853.9	1,994.3	2,399.8	2,467.5	2,442.8	2,399.2	2,197.7	2,995.6
Income (Loss) before Income Taxes	Income (Loss) before Income Taxes	(billions of yen)	1,403.6	2,441.0	2,892.8	2,983.3	2,193.8	2,620.4	2,285.4	2,554.6	2,792.9	2,932.3	3,990.5
Net Income (Loss)*1	Net Income (Loss) Attributable to Toyota Motor Corporation	(billions of yen)	962.1	1,823.1	2,173.3	2,312.6	1,831.1	2,493.9	1,882.8	2,076.1	2,036.1	2,245.2	2,850.1
Common Shares	Cash Dividends	(billions of yen)	285.0	522.9	631.3	645.5	627.5	642.6	626.8	610.8	610.8	671.0	718.2
	Cash Dividends per Share*2	(yen)	18	33	40	42	42	44	44	44	44	48	52
	Payout Ratio	(%)	29.6	28.7	29.0	28.3	34.6	26.1	33.8	29.9	30.2	29.8	25.3
Value of Shares Repurchased [shareholder return] *3		(billions of yen)	—	180.0	293.3	639.3	449.9	549.9	549.9	199.9	199.9	249.9	435.6
R&D Expenses		(billions of yen)	807.4	910.5	1,004.5	1,055.6	1,037.5	1,064.2	1,048.8	1,110.3	1,110.3	1,090.4	1,124.2
Depreciation Expenses*4		(billions of yen)	727.3	775.9	806.2	885.1	893.2	964.4	984.8	812.8	803.3*6	876.9	1,007.2
Capital Expenditures*4		(billions of yen)	852.7	1,000.7	1,177.4	1,292.5	1,211.8	1,302.7	1,465.8	1,393.0	1,372.3	1,293.2	1,343.0
Total Liquid Assets*5		(billions of yen)	5,883.1	7,661.9	8,508.2	9,229.9	9,199.5	9,372.1	9,454.4	8,685.1	8,602.6	11,579.4	10,517.3
Total Assets		(billions of yen)	35,483.3	41,437.4	47,729.8	47,427.5	48,750.1	50,308.2	51,936.9	52,680.4	53,972.3	62,267.1	67,688.7
Toyota Motor Corporation Shareholders' Equity	Toyota Motor Corporation Shareholders' Equity	(billions of yen)	12,148.0	14,469.1	16,788.1	16,746.9	17,514.8	18,735.9	19,348.1	20,060.6	20,618.8	23,404.5	26,245.9
Return on Equity	Return on Equity (ROE)	(%)	8.5	13.7	13.9	13.8	10.6	13.7	9.8	10.4	10.0	10.2	11.5
Return on Assets	Return on Assets (ROA)	(%)	2.9	4.7	4.9	4.9	3.8	5.0	3.7	4.0	3.8	3.9	4.4

*1 Shows "Net income (loss) attributable to Toyota Motor Corporation"
*2 The above figures show dividends per common share on a post-stock split basis (values for after the five-for-one stock split of shares of our common stock conducted on October 1, 2021).
*3 Value of common shares repurchased (shareholder return on net income for the period, excluding shares constituting less than one unit that were purchased upon request and repurchases made to avoid the dilution of shares)
*4 Figures for depreciation expenses and capital expenditures do not include vehicles under operating leases and right of use assets
*5 Represents cash and cash equivalents, time deposits, and investments in public and corporate bonds and trust funds, excluding those deriving from the financial services business
*6 Depreciation methods were revised at the beginning of the fiscal year ended March 31, 2020

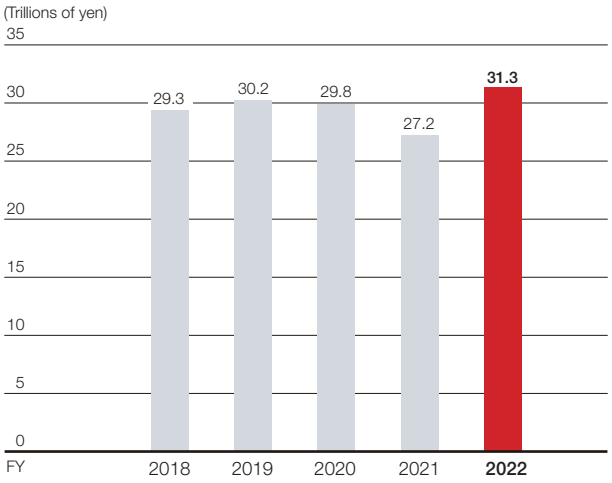
SEC Filing

2018-2019 (U.S. GAAP) /2020-2022 (IFRS)

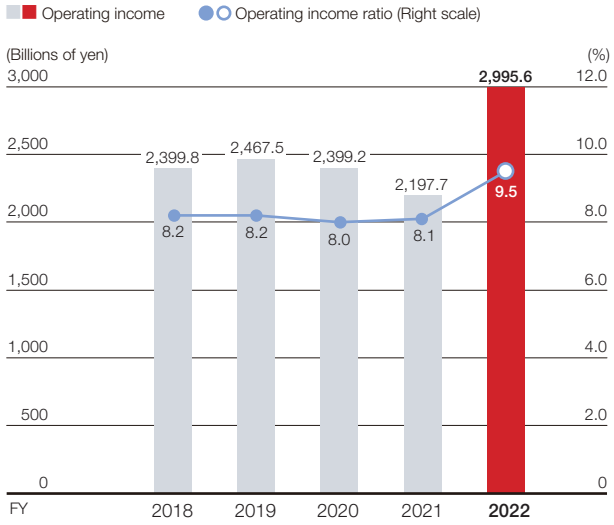
Consolidated Vehicle Sales



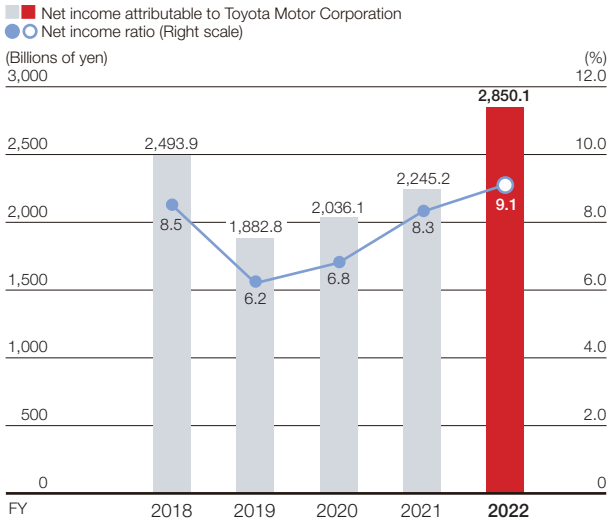
Sales Revenues



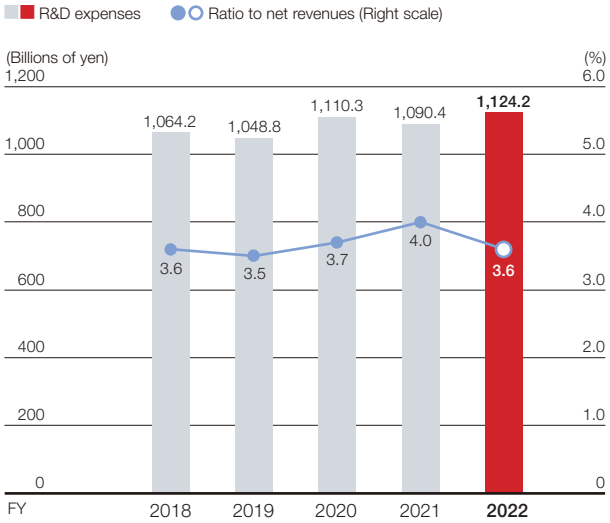
Operating Income



Net Income Attributable to Toyota Motor Corporation

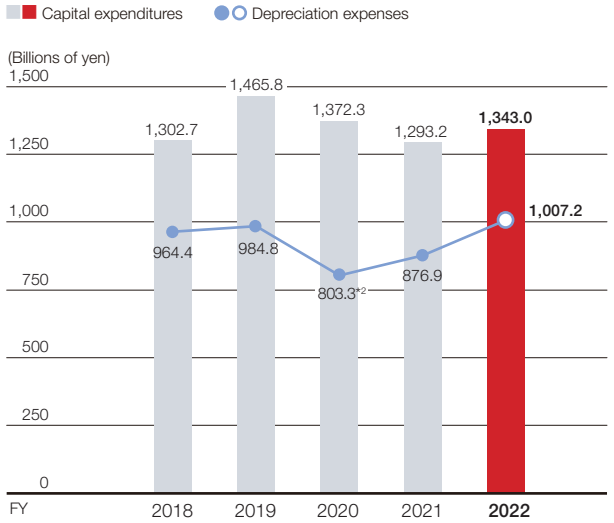


R&D Expenses*1



*1 Expenses incurred in connection with R&D activities during the reporting period

Capital Expenditures



*2 Depreciation methods were revised

Corporate Information and Stock Information (As of March 31, 2022)

Corporate Data

Company Name	Toyota Motor Corporation
Established	August 28, 1937
Common Stock	¥635,402 million
Fiscal Year-End	March 31
Accounting Auditor	PricewaterhouseCoopers Aarata LLC
Number of Affiliates	**Consolidated subsidiaries:** 559 **Affiliates accounted for by the equity method:** 169
Number of Employees	372,817 (Parent company: 70,710)
Corporate Website	**Corporate information:** https://global.toyota/en/ **IR information:** https://global.toyota/en/ir/ **Toyota Times:** https://toyotatimes.jp/en/

Stock Data

Number of Shares Authorized	50,000,000,000 shares
Number of Shares Issued	Common shares: 16,314,987,460 shares
Number of Shareholders	813,254
Stock Listings	**Japan:** Tokyo, Nagoya **Overseas:** New York, London
Securities Code Japan:	7203
American Depositary Receipts (ADRs)	**Ratio:** 1 ADR=10 common shares **Symbol:** TM
Transfer Agent in Japan	Mitsubishi UFJ Trust and Banking Corporation 1-1, Nikko-cho, Fuchu City, Tokyo 183-0044, Japan Japan toll-free: (0120) 232-711
Depository and Transfer Agent for ADRs	The Bank of New York Mellon 240 Greenwich Street, New York, NY 10286, U.S.A.

Contact Points

City Head Office: 1, Toyota-cho, Toyota City, Aichi Prefecture 471-8571, Japan
Tel: (0565) 28-2121

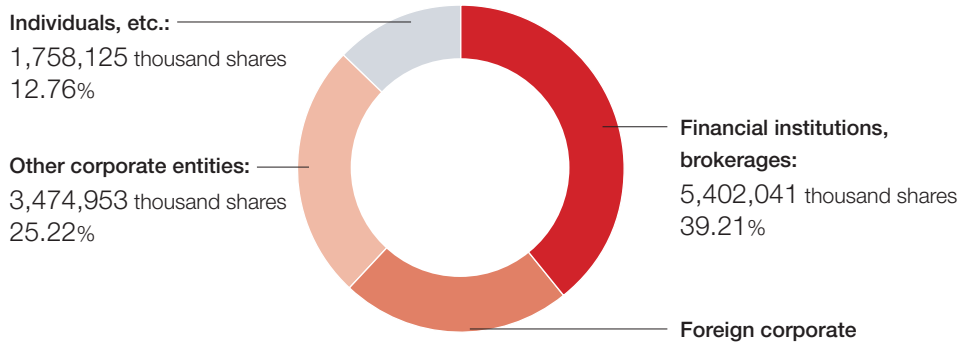
Tokyo Head Office: 1-4-18, Koraku, Bunkyo-ku, Tokyo 112-8701, Japan
Tel: (03) 3817-7111

Major Shareholders (Top 10)

Name	Common shares (1,000 shares)	Percentage of Shareholding (%)
The Master Trust Bank of Japan, Ltd.	1,911,350	13.87
Toyota Industries Corporation	1,192,331	8.65
Custody Bank of Japan, Ltd.	962,378	6.98
Nippon Life Insurance Company	634,823	4.61
JP Morgan Chase Bank, N.A. (Standing Proxy: Settlement & Clearing Services Division, Mizuho Bank, Ltd.)	512,551	3.72
DENSO Corporation	449,576	3.26
State Street Bank and Trust Company (Standing Proxy: Settlement & Clearing Services Division, Mizuho Bank, Ltd.)	338,970	2.46
The Bank of New York Mellon as Depositary Bank for Depositary Receipt Holders (Standing Proxy: Sumitomo Mitsui Banking Corporation)	295,945	2.15
Mitsui Sumitomo Insurance Company, Limited	284,072	2.06
Tokio Marine & Nichido Fire Insurance Co., Ltd.	255,324	1.85

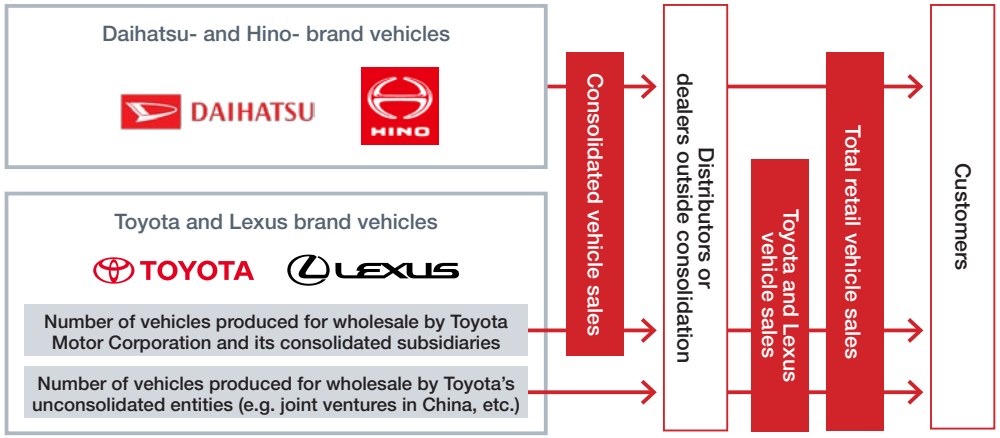
(Note) Percentage of shareholding is calculated after deducting treasury stock (2,536,686 thousand shares) from the total number of shares issued.

Ownership Breakdown



(Note) The above percentages indicate the ratios of shareholdings to the total number of shares issued after deducting treasury stock (2,536,686 thousand shares)

Definitions of Consolidated and Retail Vehicle Sales



*There are a limited number of exceptional cases in which sales are made other than in accordance with the flowchart above.

Cautionary Statement with Respect to Forward-looking Statements, and Other Information

This report contains forward-looking statements that reflect Toyota's plans and expectations. These forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors that may cause Toyota's actual results, performance, achievements or financial position to be materially different from any future results, performance, achievements, or financial position expressed or implied by these forward-looking statements.

These factors include, but are not limited to:

(i) Changes in economic conditions, market demand, and the competitive environment affecting the automotive markets in Japan, North America, Europe, Asia and other markets in which Toyota operates

(ii) Fluctuations in currency exchange rates (particularly with respect to the value of the Japanese yen, the U.S. dollar, the euro, the Australian dollar, the Russian ruble, the Canadian dollar and the British pound), stock prices and interest rate fluctuations

(iii) Changes in funding environment in financial markets and increased competition in the financial services industry

(iv) Toyota's ability to market and distribute effectively

(v) Toyota's ability to realize production efficiencies and to implement capital expenditures at the levels and times planned by management

(vi) Changes in the laws, regulations, and government policies in the markets in which Toyota operates that affect Toyota's automotive operations, particularly laws, regulations, and government policies relating to vehicle safety including remedial measures such as recalls, trade, environmental protection, vehicle emissions, and vehicle fuel economy, as well as changes in laws, regulations, and government policies that affect Toyota's other operations, including the outcome of current and future litigation and other legal proceedings, government proceedings and investigations

(vii) Political and economic instability in the markets in which Toyota operates

(viii) Toyota's ability to timely develop and achieve market acceptance of new products that meet customer demand

(ix) Any damage to Toyota's brand image

(x) Toyota's reliance on various suppliers for the provision of supplies

(xi) Increases in prices of raw materials

(xii) Toyota's reliance on various digital and information technologies, as well as information security

(xiii) Fuel shortages or interruptions in electricity, transportation systems, labor strikes, work stoppages or other interruptions to, or difficulties in, the employment of labor in the major markets where Toyota purchases materials, components, and supplies for the production of its products or where its products are produced, distributed or sold

(xiv) The impact of natural calamities, epidemics, political and economic instability, fuel shortages or interruptions in social infrastructure, wars, terrorism, and labor strikes, including their negative effect on Toyota's vehicle production and sales

(xv) The impact of climate change and the transition towards a low-carbon economy

A discussion of these and other factors which may affect Toyota's actual results, performance, achievements, or financial position is contained in Toyota's annual report on Form 20-F, which is on file with the United States Securities and Exchange Commission.

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