MUSASHI

Legacy of the Past, Vision of the Future

On Publishing the 80-year History Legacy of the Past, Vision of the Future

In April 2018, Musashi Seimitsu Industry marked its 80th year in business. We are publishing the 80-year history, Legacy of the Past, Vision of the Future, as part of the events to mark this milestone, and I would like to share in the joy of this achievement with all the employees of the Musashi Group.
I would also like to express my deep appreciation to all of our predecessors, our customers, our business partners, and our shareholders who have built Musashi Seimitsu Industry's business foundation over this long history.

Musashi Seimitsu Industry started out 80 years ago as Otsuka Kikai Seisakusho (Otsuka Machinery Plant) in the Togoshi neighborhood of Shinagawa-ku, Tokyo, in April 1938. We have now grown into a corporate group spanning 14 countries with more than 16,000 employees. Looking back over our history, we first began as a plant producing aircraft components. After WWII, we shifted to the sewing machine industry and then to the automotive industry. The history of Musashi Seimitsu Industry is marked by decisive moves and determination in the face of challenges brought about by a series of turbulent changes in the wider society.

And today, we find ourselves in the midst of a new period of great change, the so-called Fourth Industrial Revolution. In the automotive industry, technological advances have enabled the rise of electric vehicles and self-driving cars, and we have seen car-sharing services take off as well as connected cars, which dramatically increase driver convenience with Internet connectivity. Changes that will redefine the value of cars are now underway.

Without ongoing innovation, growth cannot be expected in the coming years. But with the great changes come great opportunity. And most of all, taking on bold challenges without fear of failure leads to great achievements, as evidenced throughout the history of Musashi Seimitsu Industry. Now is the time for us to go back to our roots, and with the spirit of "Simple and Sturdy" and "Consistent Sincerity," carry on the legacy of Musashi Seimitsu Industry and carry out our vision of the future.

I would like to again express my gratitude to everyone who has been a part of our last 80 years and ask for your continued support and guidance in the years ahead. Please enjoy this 80-year history of Musashi Seimitsu Industry.

President & CEO
Hiroshi Otsuka

Origin of the Title “Legacy of the Past, Vision of the Future”

Behind President Hiroshi Otsuka’s desk is a large framed calligraphy work of the phrase “Legacy of the Past, Vision of the Future.”

“Legacy of the Past, Vision of the Future” means carrying on the work of one’s predecessors and creating the future while continuing to develop. It is an expression coined by the Chinese philosopher Zhu Xi, the founder of the neo-Confucian school of thought.

The calligraphy work was a gift from Yang Xiaoyang when he was a corporate officer at MAP-CH (current adviser to MAP-CH and MIZ). He thought about what would be an appropriate gift to give upon Mr. Osuka’s appointment to President and decided on this phrase, which spoke to Musashi Seimitsu’s future, and asked a calligrapher to make the calligraphy.

When President Otsuka saw the calligraphy at the Head Office in April 2007, he nodded in agreement and gladly accepted the gift as a symbol of his mission. Mr. Yang took this as a sign that President Otsuka understood the meaning of the phrase. This is because there was also a deeper meaning to his gift of this phrase.

It was something that happened in July 1995. At the time, Mr. Yang was working at Kyushu Musashi Seimitsu and accompanied President Kimitoshi, Musashi Seimitsu’s second president, to Chengdu, China. There they visited the Wuhou Memorial Temple dedicated to Zhuge Liang in their free time. They briefly paid their respects at the grave of Zhuge Liang in the Chinese custom and continued along the route. After walking some 200 meters, President Kimitoshi suddenly stopped.

He said to Mr. Yang, “I must go and pray properly at his grave.”

So they returned to Zhuge Liang’s grave and prayed in the formal custom. On the way back from the temple, President Kimitoshi said, “Even great rulers like Liu Bei and Zhuge Liang could not maintain their legacy for a third generation. It’s not easy to successfully sustain corporate management for a long time either.”

This left a deep impression on Mr. Yang, who then gave the calligraphy of “Legacy of the Past, Vision of the Future,” which encapsulated this feeling, to Musashi Seimitsu’s fourth president, Hiroshi Otsuka.

Standing in front of a statue of Zhuge Liang

At Wuhou Memorial Temple

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80 Years of Musashi Seimitsu Industry in Pictures

Timeline

Otsuka Seisakusho (Musashino City)

Employees in front of Otsuka Seisakusho at time of its founding

April 1938
Establish Otsuka Kikai Seisakusho (Otsuka Machinery Plant) in Togoshi, Shinagawa-ku, Tokyo
April 1939
Relocate plant to Musashino Town, Kitatama District, Tokyo, and change company name to Otsuka Seisakusho

October 1946
Relocate head office to Osaki-cho, Toyohashi City, Aichi Prefecture
Change name to Musashi Sangyo.

Newly erected company sign ("Musashi Sangyo Co., Ltd.")

Osaki Plant in 1963

September 1956
Begin sales to Honda Motor Co., Ltd.

Honda Motor Hamamatsu Plant

1957
Obtain Mitsui jig borers from Toyokawa Naval Arsenal

Acquisition of jig borers improves precision of manufactured products

September 1963
Change company name to Musashi Seimitsu Industry Co., Ltd.
January 1965
Ueta Plant begins operations
June 1965
Complete Suzuka Plant

Ueta Plant (1967)

Suzuka Plant

Horai Plant

October 1969
Complete Horai Plant
February 1970
Successfully develop industrial robots
1971
Successfully forge bevel gears

Foundation 1938–1945 ➡p. 10

End of the aviation industry

Employees gathered for dissolution meeting at Kaminoyama

January 1944
Change company name to Otsuka Koku Kogyo (Otsuka Aviation Industry).
February 1945
Evacuate to Shinjo City, Yamagata Prefecture
September 1945
Dissolve Otsuka Aviation Industry.

Reconstruction 1946–1955 ➡p. 14

Decline of the sewing machine industry

1955
Account for 65% of the thread take-up cam market in Japan

April 1947
Begin manufacturing sewing machine parts
January 1949
Begin manufacturing thread take-up cams
1951
Begin sales of sewing machine parts

Thread take-up cam

Thread take-up cams and side view of sewing machine

Turning Point 1956–1960 ➡p. 20

Trade liberalization (cost competition)

1958
President Soichiro Honda of Honda Motor Co., Ltd. visits Musashi Sangyo

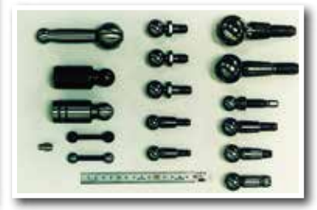
Soichiro Honda (left) and Yoshiharu Otsuka enjoying a conversation

Honda Dream E-Type

Growth 1961–1975 ➡p. 28

Oil crises

April 1967
Begin manufacturing ball joints and engine parts for the Honda N series
1968
Successfully develop compact, lightweight oil-free ball joints



Initially developed oil-free ball joints

Utsunomiya Plant

August 1973
Complete Utsunomiya Plant
December 1974
Establish Kyushu Musashi Seimitsu Co., Ltd.

Kyushu Musashi Seimitsu Co., Ltd.


Noto Plant


MAP-UK


MAP-IN # 1

August 1982
Complete Akemi Plant


Completion ceremony for Akemi Plant #1


MAP-TH # 2


MSB


MAP-CA

December 1987
Establish Musashi Auto Parts (MAP) in Pathumthani, Thailand


Group photo at opening ceremony for Musashi Auto Parts Co., Ltd. (April 28, 1989)

March 1991
Complete Noto Plant
July 1993
Establish Musashi Auto Parts UK (MAP-UK) in South Wales, UK
March 1996
Establish Musashi Auto Parts Indonesia (MAP-IN) in Bekasi, Indonesia
April 1996
Construct #2 plant at MAP-TH in Prachinburi, Thailand
May 1997
Capital participation in Musashi do Brasil (MSB) in Pernambuco, Brazil
June 1997
Establish Musashi Auto Parts Canada (MAP-CA) in Ontario, Canada

December 2006
Construct new #2 plant at MAP-IN in Karawang, Indonesia


MAP-IN #2

November 2010
Establish Musashi Auto Parts Vietnam (MAP-VN) in Hung Yen Province, Vietnam
December 2011
Establish Musashi India (MID) as a sales and purchasing office in Haryana, India
March 2012
Establish Musashi Auto Parts Mexico (MAP-MX) in San Luis Potosi, Mexico


MAP-VN


MAP-MX

April 2012
Establish the Musashi global brand slogan "Power to Value"

MUSASHI
Power to Value

October 2017
Conclude comprehensive exchange agreement with Toyohashi University of Technology
December 2017
Hold opening ceremony for the Machinery & Tools Business Unit


Machinery & Tools Business Unit

Expansion 1976–1989 ➡ p. 42

Global Expansion 1990–2005 ➡ p. 56

Innovation 2006–2017 ➡ p. 72

To the Future 2018– ➡ p. 106

Bursting of Japan's economic bubble | **Global financial crisis** | **Various disasters** | **Fourth Industrial Revolution (EVs, self-driving cars, car sharing, connectivity)**

July 1978
Conclude agreement with Ford Motor to export ball joints
August 1980
Establish Musashi Auto Parts Michigan Inc. (MAP-MI) in Michigan, USA


Visit to Ford Motor Company (May 28, 1986)

Musashi USA Inc.
(currently Musashi Auto Parts Michigan Inc.)


MAP-MI


MSC


MHM


MDA

October 1999
Establish Musashi South Carolina (MSC) in South Carolina, USA
February 2000
Establish Musashi Hungary Manufacturing (MHM) in Ercsi, Hungary
January 2001
Establish Musashi North America Inc. (MNA) in Michigan, USA
January 2001
Establish Musashi Europe (MEU) on the outskirts of Munich, Germany
March 2002
Establish Musashi da Amazonia (MDA) in Amazonas, Brazil
July 2002
Establish Musashi Auto Parts India (MAPID) in Haryana, India
January 2003
Establish Musashi Auto Parts (Zhongshan) (MAP-CH) in Guangdong, China
December 2003
Establish Musashi Asia (MAS) in Bangkok, Thailand
December 2005
Establish Akemi Plant #2 in Toyohashi City, Aichi Prefecture, Japan


MAP-ID


MAP-CH


Akemi Plant #2

ユニークで行こう!!
Be Uni Que!

June 2013
Construct new #2 plant at MAP-ID in Karnataka, India
June 2014
Establish Musashi Auto Parts (Nantong) (MAP-NT) in Jiangsu, China
October 2014
Establish Musashi Seimitsu Investment (Zhongshan) (MIZ) as a regional headquarters in Guangdong, China
June 2016
Acquire all shares of Hay Holding GmbH in Germany
June 2018
Integrate Hay Group with MEU


MAP-ID #2


MAP-NT

November 2007
Establish the Musashi Global Vision 2020
September 2008
Construct new Musashi Global Center on the Head Office grounds
October 2008
Enter into an agreement with the motorcycle racing team HARC-PRO. to be a main sponsor


Musashi Global Center


Next-generation riders

MEU

Part 1 Foundation

With the eruption of the Russo–Japanese War in 1904, Japan was thrust into chaotic and turbulent times. World War I started in 1914, and with it Japan marched into China.

The Great Kanto Earthquake, which struck in 1923, resulted in more than 100,000 people killed or declared missing and left the Tokyo metropolitan region paralyzed. In 1941, Japan's attack on Pearl Harbor launched the United States and Japan into World War II. Japan ultimately lost the war and had to rebuild from burned fields and rubble.

Yoshiharu Otsuka, the founder of Musashi, was born in 1905, the year after the start of the Russo–Japanese War. He skillfully navigated the tumultuous changes of the times with his signature drive and foresight to establish Otsuka Kikai Seisakusho (Otsuka Machinery Plant) in April 1938.

(Photo courtesy of: Mainichi Newspapers/Aflo)

■ 1938 / Establish Otsuka Kikai Seisakusho ■ 1944 / Change company name to Otsuka Aviation Industry.
■ 1945 / Company dissolution

Origins of Musashi

Prologue Early life of founder Yoshiharu Otsuka

Founder Yoshiharu Otsuka was born on February 23, 1905, during the Russo–Japanese War. He was born the sixth son of a farming family from Takashi Village, Atsumi District, Aichi Prefecture (present-day Osaki-cho).

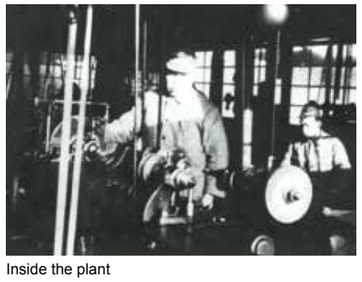
In 1919 at the age of 14, he went to Tokyo to apprentice at Osaki Kikai Seisakusho. He experienced many challenges, including having to return home after falling seriously ill, but he overcame them to become a full-fledged plant worker.

The company he worked for later went bankrupt due to the impacts of the Great Kanto Earthquake and economic recession, but he was hired by Kato Works Co., Ltd. as an experienced and skilled worker. While he was working, he also attended night school at Eishin Gakuin, where he acquired more advanced skills and knowledge. As Japan entered the Showa Era (1926–1989), Yoshiharu predicted the age of flight. He resigned from Kato Works Co., Ltd. and joined Nakajima Aircraft Company. He distinguished himself on the job and was promoted to general manager of the worksite with a staff of 150.

Nakajima Aircraft Company was growing rapidly as the drumbeat of war approached, but Yoshiharu suddenly submitted his resignation. The times were reaching a turning point. After considering how he should adapt to the coming changes, he decided to use his skills and experience to start his own company.

Sketch of Otsuka Kikai Seisakusho from 1938

The original site of Otsuka Seisakusho in Togoshi, Shinagawa-ku, Tokyo, in 2018



Inside the plant

Founding of Otsuka Kikai Seisakusho

In April 1938, Otsuka Kikai Seisakusho was established in Togoshi, Shinagawa-ku, Tokyo Prefecture. Otsuka Kikai Seisakusho had capital of 45,000 yen and five employees: four new graduates hired in Toyohashi City and one local hire.

He had three milling machines, one lathe of 1.8 meters, and two drill presses as well as smaller tools and instruments. His first work order was from Ishiwatari Seisakusho, which had been rebuilt by President Ishiwatari of the former Osaki Seisakusho. The job was machining the housing of aircraft propeller bearings.

The workspace became too small as work orders increased, and the next year in April 1939, he built a new plant and relocated his company along Itsukaichi Kaido road in Sekimae, Musashino City, 1.5 kilometers from the Musashino plant of Nakajima Aircraft Company. He changed the name of his company to Otsuka Seisakusho and increased his employees to 15 or so. Nakajima Aircraft Company had just built a large plant around this time able to mass-produce engines and aircraft components, and Yoshiharu believed that large orders for work would follow.

When the plant was completed, Yoshiharu visited the materials and parts division of Nakajima Aircraft Company. Nakajima had been having problems with the shaft for the aircraft carburetor that regulated air intake and asked Yoshiharu if he wanted to compete with its long-standing supplier on parts quality.

Musashi investigated the cause of the problem and innovated the machining process, resulting in it successfully capturing the work order. This opportunity opened the door to receiving an order for heat exchangers.

This order greatly increased Otsuka Seisakusho's work volume, and the finishing shop was expanded by about 132 square meters in 1940. The company added two plant shops in 1942 and three plant shops the following year. Otsuka Seisakusho's total footprint now reached more than 1,100 square meters. Musashi was also committed to quality management and inspected deliverables from an early stage. Every preventive measure was taken so that defective returns would not arise.

Employees at time of establishment (Otsuka Seisakusho)

At the same time, with the understanding that enhancing employee awareness and motivation for work were important, Musashi established a youth school for young employees. Youths who had been hired en masse were given the opportunity to get a general education and learn societal basics. Musashi also focused on employee welfare and benefits, for example, by building a dining hall, a dormitory for unmarried employees, and a large sports field as well as taking employees on company trips.

Company dissolution at the end of World War II

The Japanese aircraft industry achieved great development from the need to enhance Japan's military might. As demand from Nakajima Aircraft Company grew, so did the bottom line at Musashi. In January 1944, the company was renamed and reorganized as Otsuka Aviation Industry and increased its capital to 250,000 yen.

The war, however, was not going in Japan's favor. Aerial bombing of Nakajima Aircraft Company's Musashino plant started on November 24 of that year. Musashi hastily decided to relocate its plant to the Tohoku region. On February 23, 1945, the company evacuated to Shinjo in Yamagata Prefecture. In June, it also built a plant in the Kaminoyama Onsen area some 80 kilometers away from Shinjo.

On August 15, Yoshiharu heard about the end of the war while on a train headed for Kaminoyama Station. He immediately gathered all of the employees at the Kaminoyama plant, held a meeting to dissolve the company, and gave them severance pay and travel money.

Sketch of Otsuka Aviation Industry from 1944
The company emblem at the time is in the upper right

The former location of Otsuka Aviation Industry as it looks in 2018 (3-3 Yahata, Musashino City)

Column ❶ Memories of the Founder

Founding member (Interview with Tatsuo Ishiguro [deceased], February 18, 2016)

When the company was founded, the plant had a coal-burning stove. Yoshiharu Otsuka was in charge of running the lathe, and Tatsuo Ishiguro was in charge of running the milling machine and the drill press. The second president Kimitoshi Otsuka used to get a ride to elementary school on Tatsuo Ishiguro's bicycle. He would wait for him to arrive on his bicycle and then jump on the back, begging him to pedal fast.

Tatsuo Ishiguro practiced judo at the Kodokan Judo Institute and was a fifth-degree black belt. Yoshiharu also often practiced judo in a tatami-mat room in Togoshi. Yoshiharu was said to be the stronger of the two at the time. Yoshiharu, Mr. Fujimura (a founding member), and Tatsuo. Ishiguro would go buy imagawayaki (grilled buns filled with sweet bean paste) and eat them.

At an event celebrating Musashi's 70th anniversary, Tatsuo Ishiguro showed us the location where the company was founded in the Togoshi neighborhood of Shinagawa-ku, Tokyo. The neighborhood had changed a great deal and it was difficult to identify the plant's location, but thanks to Tatsuo Ishiguro, who had been there at the time, we were able to get a vivid image of what it was like at the company's founding.

Part 2 Reconstruction

With the end of World War II on August 15, 1945, Japan started the process of rebuilding its economy and country from the burned-out ruins and rubble.

During the 10 years after the end of WWII called the post-war reconstruction period, Japan carried out economic democratization policies to dismantle the zaibatsu conglomerates, implement agricultural land reforms, and democratize labor. In addition, the Japanese government promoted exports and focused on products like textiles and steel to alleviate the trade deficit stemming from food and other imports and to obtain foreign currency.

The sewing machine industry grew quickly after the war due to the shortage of clothing. In addition to production for domestic consumption, overseas exports gradually increased on the strength of the low-priced, high-quality products. Musashi decided to use its expertise in machining technology to enter the sewing machine industry.

(Photo courtesy of: Mainichi Newspapers/Aflo)

■ 1946 / Change name to Musashi Sangyo Co., Ltd. ■ 1947 / Begin manufacturing sewing machine parts

Entered the Sewing Machine Industry

New company sign erected at Osaki-cho in Toyohashi City, Aichi Prefecture

Returning home to Toyohashi and rebuilding the company

After dissolving the company, founder Yoshiharu Otsuka went back to his hometown of Toyohashi City. He purchased a plot of reclaimed farming land of approximately 12,000 square meters with the intention of creating a large farm. The land was, however, not suitable for cultivation and the reclamation work was exceedingly difficult. Worried over the future, he decided to reconstruct his company after employees who had lost their jobs entreated him to take up machine work again.

In October 1946, he restarted his company, renaming it Musashi Sangyo from the association with the Musashino area where the company had formerly been located.

At first there was no real work. He put out a sign offering to build and repair farm equipment, and took on work repairing fishing boat engines and farming equipment from nearby areas. His shop was more like a local blacksmith than a family-run plant shop.

At the time, Musashi did not have any employees with sales experience, and Yoshiharu went out himself looking for work anywhere he could find it. While he was going around the country to drum up sales, he heard about the burgeoning sewing machine industry.

Post-war Japan was suffering from a severe shortage of clothing in addition to food, and sewing machines to make clothes were also in short supply. The Japanese government was promoting the sewing machine industry as one avenue of economic transformation from defense to peacetime industries and as a way to acquire foreign currency.

At the end of 1946, in addition to Brother and Teikoku Mishin (Janome), which had been around since before WWII, more than 50 other companies jumped into the sewing machine manufacturing industry. These included Japan Steel Works' Utsunomiya Plant (Pine), Nakajima Hikoki K.K.'s Hamamatsu Plant (Rhythm), and Tokyo Juki Industrial Co., Ltd. (Juki).

Job advertisement for high school students

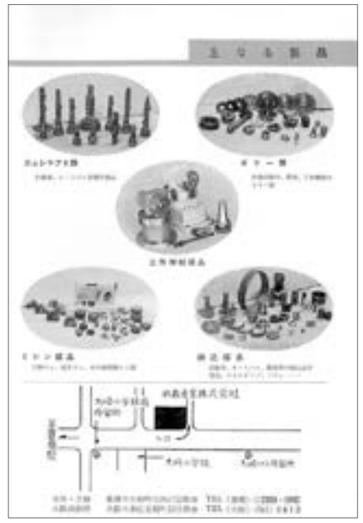
Job advertisement for junior high school students

Identifying the needs of local sewing machine companies and getting orders

After the war, the Hamamatsu Plant of Nakajima Hikoki K.K. began producing sewing machines as the Fuji Sangyo Hamamatsu Plant (later becoming Fuji Seimitsu Industry). Yoshiharu found out that a friend of his from the former Nakajima Hikoki K.K. was working there as an engineering manager and went to see him.

At the time, the Hamamatsu Plant of Fuji Sangyo was going to Osaka to buy sewing machine parts such as thread take-up cams, needle bar brackets, and feed dogs. There were no suppliers nearby they could subcontract the parts manufacturing to, and Yoshiharu was told that they would give him the work if he could do it.

Musashi was then contracted to manufacture needle bar thread brackets, feed dogs, motion push, arm shaft bushings, and large screws. It had one company it sold parts to and a monthly production volume of just 3,000 parts, but this was its first step into the sewing machine industry.



Product information with a map of Musashi Sangyo's location

The company name was changed to Musashi Seimitsu Industry in December of this year (currently Osaki-cho, Toyohashi City)

Column 2 Post-war Electricity Situation and Attempt at In-house Power Generation

Many industries were active after the war as part of the reconstruction effort, but the electricity supply could not keep up and blackouts were frequent. Electricity was rationed and scheduled blackouts occurred two days a week. On top of those, rolling blackouts of about 30 minutes happened each day.

Musashi was getting more orders and built a windmill in an attempt to generate its own power. With a height of 12 meters, the windmill had angled blades made of plywood sheets with a diameter of 12 meters, but they broke off during strong winds. Next, it tried using a motor to rotate a main shaft that then moved the machines, but the noise was too loud and caused a disturbance in the neighborhood, so that plan was also abandoned.

■ 1949 / Begin manufacturing thread take-up cams

Japan's Top Supplier of Thread Take-up Cams

Thread take-up cam

Thread take-up cams and side view in sewing machine

Development of a quiet thread take-up cam

Overseas exports of sewing machines started in 1947. By 1948, the production volume of sewing machines topped the highest production volume before World War II.

As sewing machine manufacturers and parts manufacturers worked to increase their production volumes, quality-related problems were a major challenge in the sewing machine industry. At the time, sewing machines that made high-pitched noise during operation were considered to be of inferior quality. The high-pitched noise was closely related to the thread take-up cam, which is part of the mechanism that moves the thread up and down in a smooth movement. All the manufacturers were trying unsuccessfully to manufacture quiet thread take-up cams. Musashi thought that whoever solved this problem would rule the sewing machine industry.

Amid this situation, Fuji Sangyo asked Musashi to develop a thread take-up cam. With its lack of experience in the industry, this was like a one-in-a-million chance for Musashi.

It went to work right away, analyzing products from other companies and researching equipment and machining techniques. From this, it found problems in the supplied materials and in the grooving method that was used. Subsequently, it went about procuring materials itself and designing and manufacturing custom equipment to implement a new machining method it had devised.

Musashi then manufactured its original thread take-up cams. It had to build its own production line from scratch to be able the mass-produce them. The ingenuity and innovation deployed throughout this project resulted in higher-level technology. This also represented the beginning of a Musashi tradition that is still alive today.

About a year after developing the thread take-up cam, Musashi was finally able to deliver the finished product. Musashi's thread take-up cams earned positive reviews, and other manufacturers started asking about and ordering them as well.

Inside the plant

Company brand built on reputation for quality

Yoshiharu went out to visit manufacturers to increase sales of his thread take-up cams. He realized that Musashi was not yet a well-known name in Japan, so he created a product catalog and placed ads for Musashi's thread take-up cams. Using the catch copy "Better stitching with little noise" and "Inexpensive at five yen each," the ads boosted sales efficiency.

Sewing machine manufacturers were split between large companies that manufactured many parts in-house and smaller companies that specialized in assembly. Many parts manufacturers were involved in the assembly business.

Yoshiharu targeted sales activities not only at the big companies but also at companies like these assemblers. He followed a grueling schedule that had him leave on Monday each week and return the following Monday.

As he went around Japan listening to feedback from customers firsthand, he sensed a high level of demand for Musashi parts in the market and changed the brand name of his thread take-up cams from Rhythm Parts to Musashi Parts. He consolidated production of many types of parts to focus mainly on thread take-up cams and worked to expand sales channels as a thread take-up cam manufacturer.

His dogged efforts to sell products around the country increased Musashi's name recognition in the sewing machine industry as well as sales of thread take-up cams. Musashi's sales in 1950 came to 2.83 million yen but rose sharply to 25.52 million yen by 1955. Musashi accounted for 65 percent of the thread take-up cam market share in Japan and was now the top thread take-up cam manufacturer in the nation.

Ad for thread take-up cams (from Rhythm Parts to Musashi Parts)

Part 3 Turning Point

Japan experienced special procurement demand from the Korean War (1950–53), and the mid-1950's economic boom starting in late 1954 signaled the beginning of Japan's period of high economic growth.

In 1960, the Cabinet of Prime Minister Hayato Ikeda announced an income-doubling plan, and consumers sparked a boom in sales of the three status symbols of home appliances: black-and-white televisions, refrigerators and washing machines.

Per-capita national income was rising sharply, and demand was growing for motorcycles and cars as well. Honda Motor Co., Ltd. was the leader in the motorcycle industry. Honda launched the Cub F-Type motorcycle in 1952, which became a huge hit with mass appeal as a motorized bicycle easy to ride for both men and women. As part of its global sales strategy, Honda established the Honda Motor Hamamatsu Plant (currently named Transmission Plant) in the city of Hamamatsu in 1954. Musashi started sales to Honda in 1956.

■ 1956 / Begin sales to Honda Motor Co., Ltd.

Began Sales to Honda

Developing business with Musashi technology

Home sewing machines quickly achieved market penetration with mass-production soon after WWII, and began to be exported to countries around the world. Subsequently, however, the production volume of home sewing machines gradually began to fall due to market saturation in Japan and rising production costs that weakened international competitiveness.

Always looking ahead to what the future held, Yoshiharu was concerned about the prospects for the sewing machine industry and started searching for a new business where he could leverage the technology Musashi had built up in thread take-up cam and feed cam manufacturing.

He first turned his attention to the automotive industry. Fuji Seimitsu Industries (later becoming Prince Motor Company), which Musashi's sewing machine division did business with, started manufacturing automobiles. Thus, around 1953 Musashi also started conducting research on automotive parts. Musashi spent about two years conducting research and making prototypes, but gave up after not succeeding in getting any customers.

Plant in 1960 1: Machine shop entrance

Plant in 1960 2: Operating drill presses

Plant in 1960 3: Machine work

Plant in 1960 4: In front of the office

Plant in 1960 5: Materials warehouse

Plant in 1960 6: Tempering work

New opportunity for business development

Just around that time, Honda was achieving rapid growth in the motorcycle market. Honda R&D Co., Ltd. (Honda) was established in 1948 and released the Dream E-Type motorcycle with a four-stroke engine in 1951, followed by the release of the Cub F-Type motorcycle with auxiliary bicycle engine, which achieved mass popularity. Honda increased its sales to account for around 70 percent of industry production in 1952.

Honda was under pressure to meet demand with mass-production and went looking for companies that could manufacture motorcycle parts.

Yoshiharu knew that an old colleague from his days at Nakajima Hikoki K.K. was now the plant manager at Honda's Hamamatsu site, and he set out to meet him after a 20-year gap. The plant manager trusted Yoshiharu, recalling his integrity and technical skill from their time together at Nakajima Hikoki K.K., and agreed without hesitation to buy parts from Musashi. This is how Musashi started doing business with Honda.

Honda the Dream E-Type motorcycle

Obtaining orders from Honda's Hamamatsu Plant

In September 1956, Musashi received an order for camshafts and shift drums for the Benly motorcycle from Honda's Hamamatsu Plant. This was its first foray into camshaft manufacturing, which today is Musashi's main business activity.

Soon after this, Honda's Hamamatsu Plant requested a plant inspection. At the time, Musashi was a small plant with capital of two million yen and 55 employees, but Honda expressed interest in Musashi's manufacturing operations and sent a team to take a plant tour.

The Honda employees, dressed in white work clothes, closely watched Musashi's operations and inspected the inner workings of its jigs and the structure of custom-built equipment, and started a lively exchange of questions and answers ensued. Apart from their company affiliation, the engineers became engrossed in their mutual pursuit of manufacturing and how to do it better.

Honda Motor Hamamatsu Plant

■ 1958 / President Soichiro Honda of Honda Motor Co., Ltd. visits Musashi Sangyo ■ 1959 / White company uniforms adopted
■ 1960 / Company dining hall completed

Meeting with Soichiro Honda

Soichiro Honda visiting by helicopter

Soichiro Honda and Otsuka Yoshiharu

By 1958, Soichiro Honda had heard of Musashi's reputation and came to visit its plant, showing up in a bright red sports car. Honda in 1958 was planning to release the Super Cub C100, a motorcycle that would go on to set the world record for the largest production and sales volume of any motorcycle. Soichiro Honda was inspecting Musashi as a parts supplier for this motorcycle. He showed interest in Musashi's thread take-up cam structure, but wanted to know if the less-than-ideal rotation could be improved. After Musashi told him that it lacked the funds for development, it received financing of 10 million yen with no strings attached.

Mr. Honda was also a young man of 15 when he went to Tokyo to hone his skills. This was the first time he and Yosihharu met, but their conversation flowed easily. Yoshiharu was attracted to Mr. Honda's way of thinking and his charisma. After their meeting, he decided to ultimately withdraw from the sewing machine industry one day.

Mr. Honda was a very busy but he would visit Musashi, sometimes by helicopter, and deepened his friendship with Yoshiharu. They became golf buddies.

Soichiro Honda (left) and Yoshiharu Otsuka enjoying a conversation

Modernizing the plant with assistance from Honda

After Mr. Honda visited Musashi, sales to Honda quickly grew.

In April 1958, Yoshiharu heard that Honda was building a new plant to mass-produce 50-cc motorcycles in Shirako City, Saitama Prefecture, and he visited the Saitama Plant through an introduction from the materials division at Honda's headquarters. By coincidence, Hiroshi Takeshima, who had been the manager of the Hamamatsu Plant, was the manager of the Saitama Plant, and he asked Yoshiharu to make some prototypes. He wanted Musashi to make drive gear, camshaft, and gear shifter prototypes in one week. When Yosihharu explained that he did not have the equipment to make gear shifters, however, he was immediately given 30 million yen in financing. Using financing from the Japan Development Bank in addition to these borrowed funds, Musashi installed automatic lathes from Miyano and turrets from Hitachi to be able to conduct mass-production. Musashi now had the latest equipment, which lifted it out of the ranks of a plant shop and put it on the path to becoming a parts manufacturer.

In 1960, when the Super Cub hit production of one million, Musashi was operating without days off. Trucks loaded with products departing to make deliveries by the deadline.

Musashi, which was building up a track record in parts deliveries and was added to Honda's timetable delivery program, became accepted as a new face in the Honda Group.

Miyano automatic lathe

Column 3 Waging War on Price

As sales to Honda were expanding, providing products of value was a constant expectation. In addition to quality, manufacturing products at lower prices was demanded.

After receiving 30 million yen in financing in 1958 and setting up a system for mass-production, Musashi was told that Honda was going to manufacture drive gears at its Suzuka Plant. It was able to manufacture them for five yen cheaper. Musashi lost the cost competition. Indeed, Musashi had its materials supplied and outsourced several of the processes, so its costs had risen.

This made Musashi realize that integrated production from materials procurement to the finished product gave it an advantage. A promising future could not be had with just machining alone. Musashi thought that bringing all the processes in-house would open up a winning lead in the cost competition and decided to enter the forging field.

■ 1961 / Establish an in-house training center

Expanding Orders in the New Business

Creating a production system for the expanded production

Musashi began selling parts to Honda in 1956 and the parts volume quickly grew, allowing Musashi to finally build a two-track business with a sewing machine division and a motorcycle division. Around 1960, Musashi had production of thread take-up cams, feed cams, and other sewing machine parts of 70,000 units a day. Motorcycle division had production of 100 F150 models a day and 3,300 C100 models a day.

With Honda's rapid growth, Musashi learned that it was going to be presented with an ordering plan along the lines of 100,000 parts per month starting in May 1961. Seeing this as its big opportunity for future growth, Musashi quickly brought in a wide range of equipment, including gear cutters, turret lathes, barrel finishing machines, custom turning machines, and polishing machines, so that it could produce 100,000 parts per month.

To sustain this mass-production system, Musashi hired 70 new employees in fiscal 1961, increasing its number of employees to 230. It also established the new positions of deputy manager, group leader, and leader to strengthen its organization.

Of the new employees, 42 of them had only graduated from junior high school, with most of them coming from Akita Prefecture. Musashi established a youth school in Toyohashi City for them. President Yoshiharu Otsuka invited Nagamitsu Nakazawa, who had helped him during the war, to teach general education for two hours every Saturday and Sunday, covering subjects like Japanese, social studies, drafting, and English.

Nagamitsu Nakazawa

Establishing an in-house job training center

In April 1961, Musashi established an in-house job training center that was separate from the youth school, aiming to create a system able to supply high-quality products even with mass-production. There were 37 participants for the first term. The training period was one year for regular employees. For the high school division, if employees completed three years of training they were treated the same as vocational high school graduates. Mr. Nakazawa was appointed director of the center, and licensed teachers came to teach the employees.

The job training center was a novel idea at the time, receiving attention and even news coverage on national public broadcaster NHK when it was established.

Later on more high school graduates came to work at Musashi, and company relocation made the training facilities no longer available for use. The job training center was closed in 1965.

Certificate of completion of job training (for Yokichi Shibata in 1963) and practice questions for a social studies exam
"State the objectives of the Ford system"
"What type of business is a corporation?"
"What is the price index?" etc.

Commemorative photo with new employees (1974)

In-house job training center

Residents of the juvenile dormitory

Column 4 Intensified Cost Competition with Trade Liberalization

For several years after World War II, Japan restricted imports from other countries in order to protect domestic industry. Japan increased its international competitiveness with protectionist policies, but was pressured to liberalize trade when it joined the United Nations in 1956. After an import liberalization plan was finalized in 1960, foreign products such as motorcycles were imported and the price competition began.

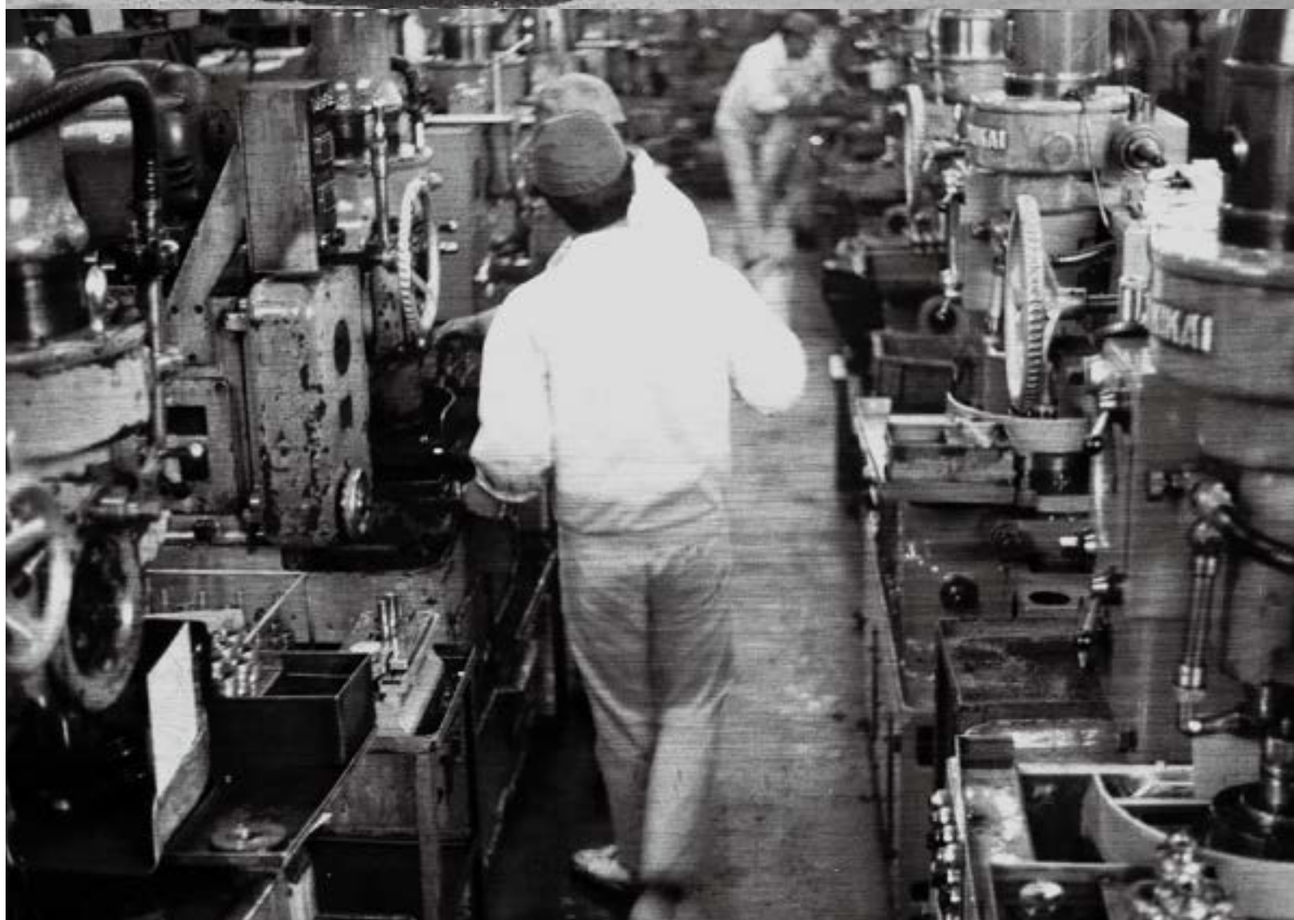
In 1964, Japan transitioned to an Article eight nations in the International Monetary Fund (IMF) and could no longer restrict currency exchange. With trade liberalization, Honda and all other manufacturers needed to procure parts as cheaply as possible. Parts manufacturers including Musashi also needed to run operations that produced high-quality products at low prices to weather the impacts of liberalized trade.

Part 4 Growth

By the mid-1960s, Japan was achieving export-driven economic growth. Japan's international competitiveness increased in heavy chemical industrial fields where capital investments were made, and exports of steel and electric products increased sharply.

A strong trend emerged in Japan of owning "the three C's": a car, a color television, and an air conditioner. These durable goods achieved penetration in average homes. Around this time, the industrial structure was also growing more complex. In manufacturing settings, the use of assembly robots and automation was rapidly rising.

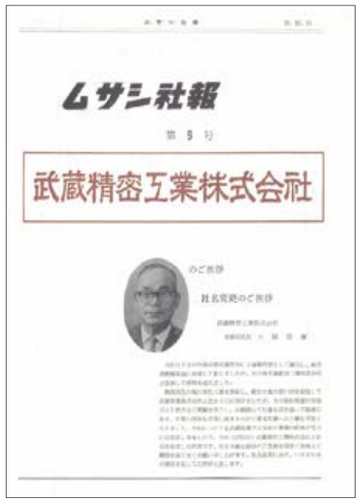
Musashi too brought in a Komatsu May Press for forging in 1963, and a Dynapac machine for hot forging in 1965. These were some of the steps Musashi took to create an integrated production system with the goal of making low-priced, high-quality products.



■ 1961 / Implement the first rationalization program ■ 1965 / Ueta Plant begins operations
■ 1965 / Complete Suzuka Plant

Production System Upgrades in Japan

Ueta Plant (1967)



Musashi announces its name change in the company newsletter (published in March 1963)

Suzuka Plant

Company name changed to Musashi Seimitsu Industry Co., Ltd.

Musashi had prepared for Honda's plan to produce 100,000 Super Cub motorcycles a month, but the plan had to be curtailed. Enforcement of the Road Traffic Law, which went into force in December 1960, was predicted to put a damper on motorcycle purchases, and heavy snowfall had cut into motorcycle production.

To make up for this downturn, Musashi went around to companies such as Kubota Tekko K.K., which manufactures farming and other equipment, and machine tool manufacturers such as Enshu Limited, Daikin Manufacturing Co., Ltd. (currently Exedy Corporation), and Shinko Electric Co., Ltd. and successfully won orders for parts. At the same time, Musashi increased production of its sewing machine parts, whose production had been temporarily lowered, and overcame the potential crisis.

In February 1961, Musashi carried out the first rationalization program for a year to address the cost competition that had been intensifying with each passing year. It succeeded in reducing man-hours by 26.5–37 percent by setting up production lines for gear shifters, camshafts, and drive gears with daily production of 2,000 units each, and establishing a concentrated polishing system.

In the second rationalization program, carried out from January 1963 to October 1965, Musashi reorganized its company structure. It separated work into occupations and created the broad divisions of Business Operations, Manufacturing, Engineering, and General Affairs. It also established the three new sections of the Planning Department, tasked with drafting comprehensive plans and tracking management conditions, and the Production Technology Section and Development Section within the Product Research Division. Musashi systematically carried out human resource transfers to facilitate raising employee morale, assigning the right people to the right positions, and developing individual abilities.

While conducting these internal reforms, Musashi also changed its name to Musashi Seimitsu Industry in September 1963 to explicitly convey its identity as a manufacturer of precision parts (*seimitsu* refers to "precision"). In 1966, the Head Office was moved from Osaki to Ueta in Toyohashi City, Aichi Prefecture.

Building new plants in other regions to meet customer needs

Ahead of the head office relocation to Ueta-cho in January 1966, the Manufacturing Division was moved with the completion of the phase-one plant construction at the end of 1964. Operations got underway the following January, but the plant was almost immediately expanded and more land was needed.

Musashi then decided to expand its plant footprint to other regions. First it constructed the Suzuka Plant. This was at the request of Honda's Suzuka Plant, which had been impacted by the destructive Isewan Typhoon of 1959. In June 1965, Musashi constructed a two-story building that served as offices and a warehouse close to Honda and began parts production in July.

In October 1969, it purchased land of approximately 21,000 square meters that included the site of an elementary school and adjacent private land after deciding on the spot to accept incentives to locate a plant in Horai-cho (present-day Shinshiro City) in Aichi Prefecture. Musashi had received work orders from Kubota Tekko, but the Ueta Plant had no extra capacity, so Musashi went looking for new plant land.

At this same time, Musashi received an order from Kubota Tekko for reaper-binder steering transmission assemblies and obtained land for a plant in Utsunomiya City, Tochigi Prefecture. Just around this time, however, production of farm equipment was falling from the Japanese government's policy to reduce the amount of land used for rice cultivation, and the plant did not start operations until August 1973. The plant was expanded to some 1,300 square meters in December 1975, but business performance did not improve, and it has been used to assemble lower control arms for Honda's Sayama Automobile Plant at the Saitama Plant since July 1981.

Horai Plant

Utsunomiya Plant

Design plans for Musashi Seimitsu Industry appeared in the Musashi newsletter (published in March 1964)

■ 1967 / Begin manufacturing ball joints and engine parts for the Honda N series
■ 1970 / Inaugural edition of the Musashi News company newsletter

Entering the Four-wheeled Vehicle Market

Honda and Musashi's resolve to enter the four-wheeled vehicle market

When the ban on passenger car production enacted by the General Headquarters of the Allied Powers (GHQ) was lifted in October 1950, Nissan Motor Corporation and Toyota Motor Co., Ltd. (currently Toyota Motor Corporation), which had been operating before WWII, began car production. In 1955, annual production of passenger vehicles in Japan topped 20,000, with Toyota and Nissan, in particular expanding their market share.

The market share of manufacturers had somewhat solidified by the mid-1960s when Honda made the bold move of entering the four-wheeled vehicle market. This was a new venture for Honda, which had become a global motorcycle manufacturer and won five classes of Grand Prix motorcycle racing in 1966. Many people responded coolly to the move, saying Honda was nothing more than a motorcycle manufacturer, but Soichiro Honda saw the future in four-wheeled vehicles and Musashi decided to join Honda in taking on the same challenge. When President Yoshiharu visited Mr. Honda, he said that Honda did not have a partner manufacturer that could handle suspensions, and Musashi threw its hat in the ring.

Plants operate at full capacity thanks to the popularity of the Honda N360

In March 1967, Honda released the N360, a four-wheeled light automobile. While other companies were selling light automobiles with 20 horsepower for around 400,000 yen, Honda launched the N360 with 31 horsepower, high torque, high power output, and a maximum speed of 115 kilometer per hour for about 100,000 yen less at 313,000 yen. It was an immediate hit. The N360 replaced other popular models, and Honda jumped to top place among automakers of four-wheeled light automobiles.

Thanks to its record of manufacturing camshafts for motorcycles, Musashi was given the task of manufacturing camshafts for the N360. Once the N360 became a big hit, Musashi's existing equipment could no longer keep up with production. In August 1972, custom fabricating equipment from Honda's Suzuka Plant was moved to Musashi. Startup after the equipment relocation went smoothly, but Musashi continued having difficulty keeping up with demand. After almost two months of operating night and day, the N360 had become a major success both for Honda and for Musashi.

Column 5 Post-WWII Auto Industry Development

After World War II when the ban on automobile production was lifted, several automakers in addition to Nissan and Toyota undertook automobile development. Initially, cars in the small 1,000-cc class such as the Toyota Crown and Nissan Cedric were sold for around one million yen, but this was beyond the reach of the ordinary consumer, who earned less than 10,000 yen a month.

In October 1955, Suzuki Motor Co., Ltd. (currently Suzuki Motor Corporation) developed Suzuki Suzulight, 360-cc four-passenger automobile. In March 1958, Fuji Heavy Industries, Ltd. (currently Subaru Corporation) released the four-adult-passenger Subaru 360, which became a major hit. Following this, Toyo Kogyo Co., Ltd. (currently Mazda Motor Corporation) released the Mazda Carol 360, Mitsubishi Motors Corporation released the Minica, and Daihatsu Motor Co., Ltd. released the Fellow. All were new forays into the light four-wheeled automobile market. These cars had prices that the average consumer could afford, and automobile ownership spread around Japan.

The Honda S500 (1964)


Cover photo for the first edition of *Musashi News* (published January 31, 1970)

The Honda N360 (1969)

The Honda Civic (1972)

■ 1963 / Install Komatsu May Press ■ 1967 / Successfully put Mitsubishi Dynapac into operation
■ 1974 / Build new plant specializing in hot forging

Beginning of Integrated Production

Komatsu May Press

Challenge to produce parts as cheaply as possible

A latecomer to the four-wheeled auto market, Honda gradually increased its share by using a low-priced strategy of selling cars for 100,000 yen less than its competitors. Honda therefore needed to get parts at the cheapest price possible, and Musashi went about conducting research on how to make parts for less. While focusing on development of ball joints, which form part of a car's suspension, Musashi started efforts to move into the forging field. Musashi was also collecting information from outside sources, and it became interested in Komatsu Industries Corporation's May Press. If it could forge parts, the machining process could be reduced to one-third the work it usually took. Musashi decided to install the press to make drive gears more cheaply.

In August 1963 when Musashi installed Komatsu's May Press, it set out right away making prototypes of shifting gears. The machine's pressure, however, was too high, and Musashi could not get the quality it needed. The prototypes were never put into practical use. Nonetheless, development staff did not give up. They continued making prototypes for a little over a year, never stopping their research even though their pride was wounded. Then in December 1964, they succeeded in using a cold forge process to mass-produce kick pinions and kick ratchets that were superior to the existing parts created through milling. The time to make the parts was also dramatically shortened to seven to eight seconds per part.

This achievement not only reduced costs and time on the production line, it was also the initial innovation that set Musashi on the path of metal forming.

Completion of an innovative forging machine focused on cost

The Dynapac machine installed in December 1965 also took about two years to be put into operation. The machine was developed by Mitsubishi Heavy Industries Limited as a high-speed, energy-intensive hot forging machine, and the machine installed at Musashi was the first one delivered to a customer.

The Dynapac had a big problem, however. The acceleration rate at which the hammer mechanism swung down was 1,000 times greater than the gravitational acceleration of the earth, and this impact affected the operation of the machine itself, the hydraulic devices, and the molds. Engineers from Mitsubishi Heavy Industries visited Musashi almost every day and worked with Musashi departments to attempt improvements, but it was not easy to find a solution to the unprecedented problem. Still, the team did not give up and continued tackling the problem with fierce determination. Later, an engineer from Mitsubishi Heavy Industries who was part of this team talked about how the "Musashi mindset" had impressed him.

Then in November 1967, the team succeeded in putting the Dynapac into practical operation—their hard work finally paying off in a big way. Typically,

Mitsubishi Dynapac

round steel bar is cut and milled to create a shape in a five-step process. With the Dynapac, steel is placed in the mold and deformed, creating the shape in just one step. The innovative forging machine was now complete.

Realization of in-house production from molds to assembly

With the installation of the Dynapac, Musashi started forging bevel gears. Then Musashi began operating two Dynapac machines due to increased orders from Kubota Tekko and higher production volume.

In November 1974, Musashi constructed a new plant just for hot forging. Musashi set up a new 1,600-ton press and two press lines, with a high-frequency heating furnace coupled with a heat soak normalizing furnace on an automated line. The manual task of inserting steel was automated with an automatic feed machine for hot forging material. Musashi also started producing the molds for in-house use instead of outsourcing this process as it had in the past, installing mold production equipment such as an electric discharge machine.

As a result, a sequence of processes of making molds, forging, machining, heat treating, finishing, and assembly could all be done internally. Musashi finally completed its foundation for integrated production.

This manufacturing line, completed by hand, became a model for subsequent integrated production lines at Kyushu Musashi Seimitsu and plants outside Japan.

■ 1970 / Increase capital from 100 million to 150 million yen ■ 1973 / Ceremony commemorating 35th anniversary

Joining the Ranks of Medium-sized Enterprises, Celebrating 35 years in Business

Musashi News
(10th edition, published January 1, 1971)

Growth to a medium-sized enterprise and an oath

Having increased its sales mainly through its auto parts business, Musashi increased its capital from 100 million to 150 million in October 1970. Musashi had sales of 3.14 billion yen for the same fiscal year and around 540 employees, joining the ranks of medium-sized enterprises. The in-house newsletter Musashi News (Ninth edition, published December 10, 1970) also ran an article with the headline “Musashi Finally a Medium-Sized Enterprise.”

In the 10th edition of Musashi News (published January 1, 1971), the following was written to describe the Musashi Spirit.

1. Customer first 2. Integrity 3. Resourcefulness
4. Hard work 5. Cooperation for the common goal
6. Remember our rights and responsibilities

In addition, the spirit of foundation of “Simple and Sturdy” and “Consistent Sincerity” was first published in this edition.

President Yoshiharu Otsuka said, “Both in history books and over my long life, I have seen many companies rise and fall. But few companies made up of a group of people drawn together with a spirit of consistent sincerity and a simple and study character fall. We must not forget this truth.”

He reaffirmed the perpetual need to carry on the Musashi Spirit developed through employees’ commitment and passion for manufacturing and ties to each other forged since Musashi’s founding.

Looking back over 35 years, expressing appreciation to employees

In November 1973, Musashi marked its 35th year in business and held a 35th anniversary ceremony at a hall to commemorate the occasion. It had 574 employees that year, hailing from Hokkaido in the north to Kagoshima’s Tanegashima in the south and everywhere in between. Associations were even set up for employees from the same prefecture.

Before the ceremony, a slide show of Musashi’s 35-year history was shown. The mood in the hall became electric as the audience watched the realistic depiction of operating the plant during wartime, the atmosphere and the difficulties it faced, including models of Zero fighter planes and air raid sirens.

At the podium, President Yoshiharu Otsuka reflected on the company’s 35 years of history, remarking, “Today is a milestone for us, and I ask for even more of your efforts to build on our valuable traditions, investigate new technologies, and pool our knowledge and expertise to achieve future growth and development.”

A total of 29 employees who had worked at Musashi for 20 years or longer received commendations for their service, and the event program featured performances by various groups and divisions including the prefecture-based employee associations introducing the diverse cultures of their hometowns, the unmarried employees’ dormitory, the martial arts club, and each division.

The “Musashi Ballad Dance” performed by the Musashi Bijoren at the 35th anniversary ceremony

The hall was filled with applause and laughter.

Ceremony commemorating Musashi’s 35th anniversary

Employees receiving service commendations for 20 or more years of service

Column 6 Successful Development of Oil-free Ball Joints

With its commitment to manufacturing craftsmanship, Musashi established a technology research center in 1968 and appointed in-house production division to be responsible for technology development. The main development target was ball joints to aim for developing Musashi-brand auto parts.

Ball joints connect the tires to the car body and transmit the driver’s intentions to the tires. Ball joints serve the same function as connecting joints in the hands and feet of the human body. At the time, ball joints and the housing that supports them were made of metal and needed to be regularly lubricated with grease (oil) to reduce friction on their surfaces.

In 1968, Musashi inserted a resin sheet in between the ball joint and the housing. By minimizing friction resistance, Musashi successfully developed oil-free ball joints.

The oil-free ball joints developed by Musashi displayed excellent low friction, wear resistance, and shock resistance properties. The ball joints did not show deterioration even after traveling for 500,000 kilometers. Highly durable, the ball joints were an innovative product that had half the number of component parts as existing products. With this development, Musashi set up a patent department to avoid patent-related problems.

In 1980, Musashi completed development of the low-friction G874 grease together with Nippon Oil Corporation. By enhancing ball joint function and life as well as reducing sliding resistance, this grease successfully reduced torque by more than 20 percent. Musashi received patents not only in Japan but also in the United States and earned a strong reputation internationally. Several competitors applied for usage licenses.

Technology research center
(currently the Head Office Manufacturing Office)

Initially developed oil-free ball joints

■ 1970 / Trial enlist in Self-Defense Forces for new employees ■ 1971 / Start of Attack 11
■ 1972 / First attempt at National Trade Skills Test

Establishing the Foundation of High-quality Musashi

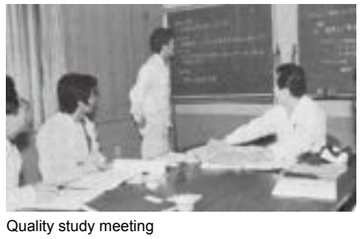

昭和46年度目標

"アタック11"

生産価値を月1億1千万円あげよう

売上げを11%よやそう
生産性を11%向上しよう
経費を11%節約しよう
工数を月110万円にへらそう

Article about Attack 11 published in *Musashi News* (11th edition, published February. 1, 1971)


Quality study meeting

Reforming awareness through rank-based trainings

As Musashi's number of employees grew and employee ages spanned a wider range, it started conducting trainings by company rank. The trainings were designed to reform the awareness of employees at different ranks, from new employees to managers.

Starting in 1970, new employee training included trial enlistment in the Self-Defense Forces and Zen meditation at Shoju-ji Temple in Suse-cho, Toyohashi City. Training taking place at the Ishinomaki Youth House, Miyagi Prefecture focused on the ABC's of quality management. Section managers and deputy section managers were given a two-night, three-day training at the Toei Youth House in Toei Town, Kita-Shitara-gun, Aichi Prefecture. Starting in 1974, Shimoda Training and All-Night Walks (walking 40 kilometers from the company to Irago) were held to deepen teamwork and facilitating interpersonal relations. At seven in the morning before operations began, managers would recite the six principles of the Musashi Spirit. After the group recitation, they would receive instructions and then take roll for their group on the plant floor before operations began.

It was also around this time when production targets for single fiscal years began to be set. The Attack 11 targets for fiscal 1971 included a monthly production value of 110 million yen, an 11 percent increase in sales, an 11 percent increase in productivity, an 11 percent reduction in expenses, and a 1.1-million-yen reduction in process rejects.

In 1971, Musashi began the QC Study Group. The study group focused on topics such as what the ideal form of manufacturing should be, what quality should be attained, how to look at things, and methods of perception. Study meetings were held every other Saturday, and instructors from Honda were invited to give lectures. About three months would be spent on one topic so that what was studied could be put into practice on the job and the results discussed and digested.


Training for new employees (1971)

Creation of the QC Circle and attempts to pass trade skills tests

In February 1972, Honda organized a seminar to reform awareness. It was titled the First Honda Quality Management Top Seminar, and top management from 50-some partner plants were invited to attend. Three people from Musashi under the President participated in the seminar. The main topic was Total Quality Control (TQC), which comprehensively involves affiliated companies in quality management in all processes from the product planning and design stage to manufacturing, sales, and after-sales service.

This initiative was aimed not only at reforming the awareness of the people who did business directly with Honda, but of all employees including management executives to have the awareness of creating better products faster and for less cost. In June, Honda held the Tokai Branch 239th QC Circle Competition, which reaffirmed the importance of reforming awareness for the participants from Musashi.

In August of the same year, Musashi sent 20 employees to take National Trade Skills Tests offered by the government to certify the level of skill mastery. This was the first time Musashi sent employees to take the tests, and eight received certification. The trade skills test and certification program was established in 1956, but Musashi did not have anyone take the tests until 1972. As part of the efforts to reform employee awareness and promote TQC, however, Musashi recognized the importance of the program and began participating in it.


Test taker attaching a cutting tool (MEL machinery plant)


Tested work in the trade skills test
(1) Cylindrical grinding
(2) Lathe work
(3) Drill press
(4) Jig finishing


First Honda Quality Management Top Seminar

■ 1974 / Establish Kyushu Musashi Seimitsu Co., Ltd.

Creation of Kyushu Musashi as the Mother Plant for Motorcycle Parts

Plant completion ceremony (1)

Plant completion ceremony (2)

Plant completion ceremony (3)

Big opportunity in the motorcycle business Decision to move into Kyushu

In January 1976, Honda established its Kumamoto Plant for motorcycle production in Ozu-machi, Kumamoto Prefecture. This was Honda's largest site in Japan, which today mass-produces motorcycles (as of 2018), ATVs, and parts for general-purpose products for both domestic consumption and overseas export. Musashi saw Honda's move into Kyushu as a big opportunity and decided to take the risk of moving into the town of Nishiki, Kuma-gun, Kumamoto Prefecture. On December 5, 1974, approximately one year before Honda established its Kumamoto Plant, Musashi established Kyushu Musashi Seimitsu Company (Kyushu Musashi) in a joint venture with Honda. Kimitoshi Otsuka was appointed as its representative director.

A groundbreaking ceremony was held in June 1975, and a completion ceremony was held the following year on April 26, when some 150 machines were put into operation. The initial plan called for monthly production of 150,000 gear wheels, but the following year saw full production of 500,000 parts a month with two shifts of operations. Kyushu Musashi was designed for integrated forging, machining, heat treating, and assembly processes. This plant served as a model when Musashi went overseas and represented a big step for Musashi's global development.

Surviving the HY war to become the mother plant for Musashi motorcycle parts

For Kyushu Musashi, however, steady upward growth was not always the case. Order volumes were not fixed, and the work was not necessarily commensurate with the sales price. The company operated in the red for a while. The Kyushu Expressway and the Hitoyoshi interchange were also not yet open at the time, and it took three hours to travel one way to Honda's Kumamoto Plant. Musashi Kyushu also experienced delays in getting the shop tools and parts it needed.

Then in 1978, Musashi established a policy to overcome challenging circumstances and achieve profit targets through teamwork. The following five targets were set to achieve the production targets:

1. Establish a control system; 2. Increase productivity by 15 percent; 3. Zero complaint campaign; 4. 3S safety activities (3S is an acronym for the Japanese words seiri [sort], seiton [set in order], and seiso [clean]); 5. Create environments conducive to work through circle activities

In 1980, Kyushu Musashi's fifth year in business, steps were taken including sending 20 employees to work at Honda's Sayama Automobile Plant for six months, but the company was still not able to get out of the red. Amid this situation, the key to rebuilding Kyushu Musashi, which was on the verge of bankruptcy, was a commitment to integrated production. Musashi aimed to create a fully integrated fabrication system at Kyushu Musashi and then use it to expand sales channels. Musashi used its network to get orders from Honda's Suzuka Plant and Hamamatsu Plant, and Kyushu Musashi gradually improved its financial standing.

In 1983, the so-called "HY war" broke out between Honda and Yamaha as they vied for share in the motorcycle market, and Honda launched 45 new models over a single year. This resulted in Kyushu Musashi getting orders for high-mix, small-lot production. Kyushu Musashi received the order for all of Honda's transmission gears and operated around the clock to produce them, but poor work efficiency put a dent in profitability.

Then in 1986, Kyushu Musashi was forced to sharply reduce its production due to the effects of the yen appreciation following the Plaza Accord reached in September 1985, and it temporarily sent employees to work at Musashi facilities in Toyohashi. Nevertheless, it received orders for auto parts in 1987, and after starting this fabrication, its output again rose sharply. Kyushu Musashi had ridden out a long period of financial deficits and the impacts from the HY war. In 1996, Musashi bought all of Honda's outstanding shares of Kyushu Musashi to make it a wholly owned subsidiary. This is how Kyushu Musashi came to be the mother plant for motorcycle parts in the Musashi Group and demonstrate leadership in technological guidance and employee education for its global plants.

Column 7 Spreading Kyushu Musashi's Production Fundamentals around the World

My first impression of Kyushu Musashi was that it could not keep up with production and had a less-than-adequate production system. It would outsource some aspects of production and get some things supplied from Musashi's Head Office, which took time and cost in the procurement stage. Then I was determined to create an integrated fabrication system. I wanted to make Kyushu Musashi's production system a model for the world. In terms of technology, I also received support from Honda R&D Co., Ltd. and aimed to make a production system consisting of state-of-the-art technology.

Meanwhile, I also undertook sales activities to expand our sales channels for motorcycle parts beyond just Honda's Kumamoto Plant. We were fortunate to expand sales to Honda's Suzuka Plant. We also gained the trust of Honda R&D in the course of working together, and each time Honda released a new motorcycle model, Kyushu Musashi was asked to provide estimates for key components such as the transmission gear shaft. We built a relationship where Kyushu Musashi received all the transmission-related parts orders.

(from a conversation with Toru Shimizu)

Part 5 Expansion

With the 1970s came the sharp rise in marriages and births by the baby-boomer generation (born between 1947–49). This secondary baby boom hit between the years of 1971 and 1974. Large housing complexes were built in the Tokyo metropolitan area, around which big box supermarkets were then built. Sit-down restaurant chains and fast food chains also sprang up around this time.

Highways were built ahead of the Tokyo Olympics in 1964, and the era of car ownership had arrived, with families going out in their car on the weekend and holidays.

The first oil crisis that hit in 1973 caused economic recession in Japan. The only winner during this period was the automobile industry. Supported by technology innovations to mitigate rising oil prices and improve fuel economy as well as brisk exports, this leading industry of Japan experienced major growth.

■ 1977 / Launch of logistics project team ■ 1982 / Complete Akemi Plant ■ 1983 / 45th anniversary

Logistics Reforms and Forging and Motorcycle Business Expansion

Results achieved by the logistics project team

In January 1977, three years after the establishment of Kyushu Musashi, Musashi created a logistics project team. With its growing number of production sites, Musashi wanted to make the flow of transportation, loading and unloading, storage, packaging, and information in logistics more efficient from the main plant to other plants and customers. Logistics accounted for a large proportion of plants' total production activities. Reducing the volume of logistics and facilitating smoother production operations would enable making higher quality products at lower cost.

Musashi's logistics project team conducted education and other activities, such as receiving suggestions for improvements from employees working in plants. The number of suggestions for improvements gradually increased as did their quality. Employee awareness of logistics also rose.

These attempts to improve logistics efficiency played a significant role in Musashi's business as the number of plants in Japan and around the world increased.

Beginning of operations at the Akemi Plant and Noto Plant

In 1981, Musashi decided to build a forging plant at the Akemi industrial base in Toyohashi City. Musashi had initially planned to add a hot forging press at its main plant, but the Fire Service Act required that the entire building be redesigned and rebuilt. So Musashi went looking for another place to locate this plant and settled on the Akemi industrial base. The Akemi Plant was completed in August of the following year and began operations. The plant adopted a saw-tooth roof style that allowed natural light and ventilation in.

In October 1983, Musashi unveiled a second plant timed with events celebrating its 45th anniversary and also held a large sports festival. In June 1989, a third plant was completed on the ground that had been used for a sports field and a parking lot, and now three plants were in operation at the Akemi Plant.

In January 1990, the Economic Promotion Office of Ishikawa Prefecture invited Musashi to build a plant there, and Musashi decided to build the Noto Plant in Shika-machi, Hakui-gun, Ishikawa Prefecture. Musashi was the first auto-related company to move into Ishikawa Prefecture, and did so with the objective of establishing a production base for motorcycle camshafts. The Noto region was home to many advanced technological institutions including the Industrial Research Institute of Kanazawa, Kanazawa University, and Kanazawa Institute of Technology. Key factors behind the decision include the region's large pool of talented human resources and the relatively inexpensive land prices. A ceremony to commemorate the beginning of operations was held in May and provisional operations began. Operations at the plant officially began in March 1991, and an unveiling ceremony for the completed Noto Plant was also held in March.

Photo commemorating the 45th anniversary of Musashi

Giving remarks at the 45th anniversary reception

Unveiling ceremony for the completed Akemi Plant #1

Noto Plant

■ 1978 / Conclude agreement with Ford Motor Company to export ball joints
■ 1979 / Launch energy- and resource-saving project

First Overseas Development, Start of Sales to Ford Motor

Musashi goes overseas after the oil crisis

The first oil crisis precipitated by the Fourth Arab–Israeli War that erupted in 1973 caused the price of crude oil to spike and ensuing turmoil in economies around the world.

Japan's auto industry saw its market shrink, with falling sales for new cars due to the recession and higher oil prices. Appreciation of the yen also lowered Japan's international competitiveness, and many companies went bankrupt.Some automakers also made plans to purchase parts from overseas. Parts manufacturers were facing a crisis that imperiled their existence, with demands to keep down their parts prices so that automakers could reduce their costs.

Musashi saw this as an opportunity. Future development was not promising looking at only the domestic market. With its production technology and quality, Musashi thought it could open doors in overseas markets.

Musashi technology wins the trust of a big customer

Making a request through its Japanese branch, Ford Motor Company asked to see Musashi's ball joints in November 1976. Then, salespeople from Musashi took their oil-free ball joints to visit Ford in the United States.

The negotiations with Ford's purchasing department, however, were proceeding with difficulty. The engineers gave the ball joints a favorable evaluation, but an order from the purchasing department always entailed mass-production. Therefore, they could not decide promptly.

A representative from Musashi was given full authority from management to conduct negotiations, and he took prototypes to Ford several times and made product presentations. He succeeded in winning the trust of engineers at Ford based on high quality of Musashi's products and his impassioned presentations. The engineers then went to management and set up a meeting with Musashi and Ford representatives from corporate, design, and purchasing.

Ford had up to then bought ball joints from leading U.S. auto parts manufacturer TRW, but after conducting a review, Ford chose Musashi's parts. In July 1978, Musashi officially concluded an agreement with Ford to export ball joints.

Mr. Velte from Ford Motor Company visiting Musashi (April 7, 1978)

Welcome reception for Mr. Velte from Ford Motor (April 7, 1978)

A visit from Ford Motor Company (May 28, 1986)

Column 8 Secret to Successfully Partnering with One of the Big Three U.S. Automakers

Ball joints are a key safety component of a car on par with the brakes. In other words, for a manufacturer to buy these key parts—on which the manufacturer's existence depends—from an unknown parts manufacturer was unthinkable. Then, how did Musashi manage to get a contract to sell these parts to Ford, one of the Big Three U.S. automakers?

One factor was Musashi's negotiating style, which was not typically Japanese. Japanese parts manufacturers often negotiated for contracts using Japanese trading companies as their agent. If the trading company was not able to answer a technical question posed by the overseas manufacturer, it would have to take that question back to the manufacturer in Japan, creating a time lag. Musashi, on the other hand, vested all authority in Akira Nemoto, who was able to answer questions on the spot and gain Ford's trust.

Ford was also reassured by the fact that Musashi had created a dedicated patent department for its ball joints.

■ 1980 / Establish Musashi USA Inc. ■ 1982 / Receive the Ford Q1 Preferred Quality Award ■ 1984 / Establish TAP

First Step as a Global Company

Musashi USA Inc.

Ford Q1 Preferred Quality Award plaque

Building a world-class manufacturing base

In 1980, Musashi established the sales company Musashi USA Inc. in a suburb of Detroit, Michigan (later MAP-MI) and inked deals to sell ball joints to Ford Motor Company.

Meanwhile, Ford sent engineers to Musashi in Japan several times for inspections, where they reviewed Musashi's production processes and conducted tests. Ford's engineers conducted tests that Musashi had never seen before, for example, adding iron powder to ball joint grease to test durability.

In the process of receiving Ford's inspections, Musashi was able to obtain Ford's quality management know-how, namely its failure mode and effects analysis (FMEA) system and process charts, that it had developed over its 100-year history. Engaging with and absorbing world-standard production and quality management technology deepened Musashi's confidence in its technology and quality.

In December 1982, Musashi received the Ford Q1 Preferred Quality Award.This certification is only awarded to companies that satisfy Ford's demanding quality standards. Musashi was the first Japanese company to receive this award for a key safety component. The achievement even received news coverage in the *Wall Street Journal* to draw attention.

A trade mission from Battle Creek, Michigan visits Musashi (April 3, 1984)

Starting local production in the United States

In November 1987, Technical Auto Parts (TAP) was established as the local production plant for Musashi USA Inc. in Battle Creek, Michigan, with production getting underway the following year. Ford had suggested switching to local production as a way to lower costs.

Musashi's main customer, Honda, did not have automobile plants in the United States. Therefore, Ford was the only customer initially. The plant produced ball joints with a staff of six employees. About 200 ball joints were produced daily, and the plant remained unprofitable for about three years.But Musashi did not shut down production in the United States after getting its foot in the door. Instead, it waited for its chance.

TAP continued to operate in the red, and then in August 1988 succeeded in getting business from Honda of America Manufacturing (HAM), which was Honda's local company based in Ohio. Two years later, TAP received the HAM Award for Excellence in Quality. It was ranked in the top 10 of some 220 parts suppliers.

Taking advantage of this occasion, Musashi went about sending Japanese employees overseas, aiming to internationalize as well as develop human resources that could play international roles.

Plant commencement ceremony

MUSASHI U.S.A. INC.(currently Musashi Auto Parts Michigan)

Realization of an Integrated Production System Overseas

MAP opening ceremony

Visitors on a plant tour

Group photo at the opening ceremony for Musashi Auto Parts Co., Ltd. (April 28, 1989)

Attempt to enter Southeast Asia's motorcycle market

In December 1987, Musashi established Musashi Auto Parts Co., Ltd. (MAP), a local joint venture with A.P. Honda Co., Ltd. and Sumi-Thai International Limited, in the Navanakorn Industrial Estate in Pathumthani, Thailand. This was approximately three years after Musashi launched the plant in the United States.

Honda's Super Cub motorcycle was a huge hit in Thailand at the time, resembling the sales explosion in Japan in the early 1960s. Thailand's motorcycle market was estimated to have annual sales of around 300,000, and demand for motorcycles was anticipated both in Thailand and in other countries in Southeast Asia.

Based on its experience in setting up and running the plant in the United States, Musashi thought that having local production would give it a competitive edge. It also decided that having a place for its employees to develop an international mindset would be a major advantage as it sought to globalize its operations in the future. Appointing a young employee president was also a strategic move for Musashi's future.

Column 9 Japanese Companies Moving into Southeast Asia in the Mid-1980s

Up until the 1980s, Southeast Asia experienced political turmoil with the Vietnam War and coups d'état, accompanied by lingering economic stagnation. Countries wanted to get foreign currency and attempted to get plants built to export products, but with little success.

Things started to change with the Plaza Accord in 1985. The resulting stronger yen in Japan made it difficult for manufacturers to maintain their domestic production. As many Japanese companies considered where to relocate their production facilities, Southeast Asia emerged as a contender. The countries of Southeast Asia attracted foreign companies with preferential tax treatment and other incentives. Investment from Japan and elsewhere shot up.

Taxable income in Japan including corporate and business taxes was as high as 60 percent at the time. But in Thailand, for example, you could set up a new business in a special zone and get the first eight years tax free, and then pay a 15-percent tax rate for the next five years. Many Japanese companies moved their production plants to Thailand.Subsequently, from Thailand listed first, Southeast Asia experienced a period of high economic growth.

The six Guidance for Conduct principles that form the Musashi Philosophy support successful entry into Thailand

An opening ceremony for MAP was held on April 28, 1989. Three months later, Honda built a new plant in Thailand.

The environment was different than in Japan and setting up a local company in Thailand posed many difficulties, including securing the land, raising the financing, receiving local capital, and installing the machines and equipment. At times there were labor disputes, and lockouts and collective bargaining sometimes threatened to disrupt production plans. Facing the many challenges that arise in a foreign country, the six Guidance for Conduct principles of the Musashi Philosophy, written by President Yoshiharu, served as an important guidepost.

While working to create harmonious relations with the local employees and diligently tackling his work, trust was mutually deepened, and operations gradually became smoother. Initially plant operations covered machining, heat treating, and assembling motorcycle transmission gears with the goal of creating an integrated production system.

That year, Musashi assigned five Thai trainees from MAP to the Ueta Plant.In October 1991, eight Thai employees went to Kyushu Musashi to develop human resources in preparation for the new forging line.

Then in February 1992, the latest machinery was installed in the Thai plant, forging facilities were readied, and the plant began operations. This gave the Thai plant an integrated fabrication system that could forge, fabricate, heat treat, finish, and assemble gear wheels.

In April 1996, Musashi built a second plant at the 304 Industrial Park in Prachinburi, Thailand. The two plants were about two hours apart by car. The plant began selling parts to Honda, Suzuki, FCC, and Toyota among others.

Plant #2

Wise Advice President Yoshiharu Otsuka Gave to First MAP-TH President Ikuo Makino

In a hand-written letter to President Makino by President left by Yoshiharu Otsuka, he lists his precepts for top management. He wrote out his wise advice with the goal of having Musashi blend with the local culture without losing its own culture and achieving high-level creativity.

■ 1988 / TPM kick-off ceremony ■ 1988 / 50th anniversary ceremony ■ 1989 / Supplier Award from Honda

Original Musashi Quality Management System Supporting Globalization

Parts manufacturers asked to make corporate improvements

In November 1988, Honda announced a worldwide recall of Civic production vehicles due to a defective wiper motor. This incident caused Honda to implement extensive quality management measures at its parts manufacturers and call for corporate quality improvements. Honda sent out experts in production management, quality management, manufacturing, maintenance, and technology to Musashi as well to provide guidance on operational improvements.

Musashi had already been implementing total quality control (TQC) activities from the planning and manufacturing stages to after-sales service since 1972 and welcomed the opportunity to make quality improvements. It conducted the “150 campaign” in 1975 and the “ABC campaign” in 1980 to improve its corporate quality and achieve zero complaints. Banners and signs with slogans on them were hung in plants, cafeterias, and hallways in an effort to raise employee awareness. In 1983, it conducted a second ABC campaign with the objective of becoming an internationally accepted device manufacturer.

An original Musashi quality management system based on TPM activities

With its vision of becoming a global company, however, Musashi believed that it needed to reform its awareness to take into consideration automobile users and consumers. Musashi needed to leave behind the mindset of a subcontractor and get away from its plant-shop practices.

Then in 1988, Musashi invited a management consultant to provide guidance on corporate quality improvements, of which implementing Total Productive Maintenance (TPM) activities formed a large part.

Even a small part, when assembled in a mass-produced product, could damage the product’s value and cause immeasurable losses. To avoid these losses, first and foremost was preventing defective products from leaving the plant. Ultimately, the TPM activities needed to establish mechanisms that prevented defective products from being produced in the first place.

Up to now, Musashi had sometimes needed to use workers to perform maintenance activities, as it did not have enough maintenance technicians to handle everything amid its growing equipment scale and shift to automation. TPM activities consisted of having workers understand the basics of the function, structure, and system as well as handling and maintenance practices of equipment parts, conducting general inspections, and ultimately had the goal of workers being able to conduct independent management.

Cleaning of equipment was consistently encouraged, and by putting TPM into practice, the workers learned what parts were prone to damage and breaking. Musashi envisioned the work and work conditions for processes where oil or chips could fly around, and then created a system to maintain machinery precision and quality assurance.

President Yoshiharu Otsuka favorably evaluated the quality improvement activities and sought to elevate them further to create improvements at the level of people’s attributes. He did not want employees who only based their conduct on a manual. Instead, he wanted to embed the strong communication among employees and divisions that Musashi had cultivated in quality management. He also stressed the importance of creating an original quality management system befitting Musashi.

New employee training (1987)

President Kawamoto of Honda visits Musashi to discuss quality management (April 2, 1991)

■ 1986 / Launch CAD/CAM system ■ 1987 / Tochigi Technical Center ground-breaking ceremony

Structural Reforms for the New Era

Full support for Honda in the extraordinary car-buying boom

Around 1986, the so-called bubble economy caused the price of stocks, real estate, and other assets in Japan to soar. The automobile industry also benefited from the spread of financial technology and higher consumption. An unprecedented motorsport fad sprang up around F1 racing, and foreign makes and luxury Japanese cars were flying off dealer lots.

Honda released new models and frequently redesigned existing models to meet the growing demand, paving the way for a major increase in production. Parts plants in the Honda Group were working at maximum capacity day in and day out to meet sharp increases in parts production orders.

Honda then asked Musashi to install production lines to meet its production system needs. Musashi turned away work from other manufacturers that it had been selling parts to in order to meet Honda's needs. It then also received new orders for balance shafts and gears, and this production expanded Musashi's business scale.

When Honda started operations at a second plant in Ohio, it became the top Japanese manufacturer in terms of production volume in North America including Canada. In Japan too, Honda achieved record production of almost five million vehicles in 1988 excluding light automobiles. The next year, Honda produced 6.5 million engines, giving it the largest production scale in the world. Musashi gave Honda its full support, making large investments to support this record-breaking level of production.

First introduction of the CAD/CAM system to aid production work (1986)

Even greater growth capitalizing on unprecedented demand

Record-breaking levels of production continued, leading Musashi to announce an emergency production declaration in August 1989. It was the second such declaration since one issued to address a kerosene leak at the Horai Plant. The bubble economy caused not just luxury cars but also affordable, mid-range cars to have explosive sales, and production could not keep up with demand. Even if Musashi could make arrangements to get more equipment, there was nowhere to put it. At times buildings had to be hastily erected. Emergency declarations were issued in both September and October. The production circumstances were daunting, with a full-model change of the Accord requiring acquisition of new technology and use of unfamiliar production processes. In addition, the labor shortage was growing more severe due to the large increases in production and the booming economy.

Hiring more employees was not feasible, and Musashi instead looked to automate its production lines. It set up fabrication equipment and the land and buildings to be able to mass-produce new parts such as precision-forged gear wheels, balance shafts, and anchor bolts using new manufacturing methods. The invested amount grew to almost 10 billion yen.

Musashi was globalizing and had been adding production bases in Japan and overseas, including in Kyushu and Thailand, for the past several years. It was taking a chance on the large investment. Musashi was going all in to ride the wave of the times, but this also caused its expenses to balloon with rising costs for new business development and making molds. It sometimes ended up over budget. The plants were also not relaxed environments, and the strong interpersonal relationships that had been a proud hallmark of Musashi since its founding were also showing signs of strain.

Musashi began initiatives aimed at the next stage of reforms.

Hot-selling cars in 1989 From top, the Honda Integra, Accord, Vigor, and Inspire

Exhibit of Honda cars (in front of the Head Office dining hall)

Part 6 Global Expansion

The bubble economy that had started in 1986 finally burst in 1991. Worried about inflation, the Bank of Japan raised the official discount rate, which sparked drops in stock prices and real estate values. The Japanese government tried to resuscitate the economy largely by spending on public works projects, but this ended up creating deficit financing, and the 1990s came to be called the "lost decade."

Meanwhile, many private companies worked to rebuild their management and operations after the bubble burst by laying off employees, entering overseas markets, and shifting production overseas. The yen grew particularly strong against the dollar starting around 1993, and Musashi sought to further expand its overseas footprint. It set up operations in the UK, Indonesia, Brazil, Canada, and elsewhere in quick succession.

■ 1990 / Kimitoshi Otsuka assumes the office of President ■ 1991 / Introduce "Refresh" vacation system
■ 1993 / 55th anniversary

Breaking through the Status Quo to Open a Door to the Future

Calligraphy by President Kimitoshi Otsuka (he changed his given name from Yoshikazu to Kimitoshi in 1993)

President Kimitoshi Otsuka

Cover of the *55-Year History of Musashi Seimitsu*

Frontmatter of the *55-Year History of Musashi Seimitsu*

Show Your Flag
—Remarks by Kimitoshi Otsuka—

We have the expression "Show your flag" in Japanese, which means make your stance or opinion clear. This expression is something I say all the time.

"Your flag" means your flag's colors, in other words your allegiance, so that everyone can clearly see who is a friend and who is a foe.

In these difficult times, we must clearly define our issues and work as one team toward our goals or we will not survive. This expression means make your own position clear, and at the same time, as a professional, do not do anything half way.

Going back to the origins of Musashi

In June 1990, Kimitoshi Otsuka assumed the position of Representative Director. He was 59 years old. Since joining Musashi in 1957, Kimitoshi had played a leading role in many key turning points at Musashi, working at Kyushu Musashi, in the United States, at the Thai plants, and at the Noto Plant. He made large contributions to Musashi's growth and development. The assumption of the office of president by Kimitoshi, who had an international mindset, could also be called a turning point for Musashi as it braced for the bubble's economic peak and inevitable pop.

When Kimitoshi Otsuka became President, Musashi had achieved significant growth together with Honda and had made large-scale investments in Japan and overseas, notably by building the Noto Plant and expanding overseas production facilities. However, President Kimitoshi felt a serious sense of crisis. As Musashi struggled to keep up with the rapidly expanding auto market, he felt the company was losing sight of its spirit of challenge and commitment to manufacturing craftsmanship that represented the origins of Musashi. Employees and organizational engagement are what allow a company to achieve growth and meet the changing needs of the times. Deciding that the key to unlocking prospects for the future starts with staring down and defeating the group that wants to maintain the status quo no matter what, Musashi launched a set of reforms.

Re-energizing people and the organization with "Clean and Action"

On Musashi's 55th anniversary in 1993, President Kimitoshi talked about this resolve, saying that the starting point of manufacturing was the ability to make quality goods as cheaply as possible, and that people and the organization as the driving forces needed to be engaged to achieve this goal.

The slogan "Clean and Action" was set for employees. "Clean" referred to making clear what you were going to do about the issues you were facing, and "action" referred to taking sensible, committed action based on the Musashi spirit. The Japanese business practice of the HoRenSo system, of reporting (*hokoku*), contacting (*renraku*), and consulting (*sodan*), was broadly implemented as the specific conduct guideline. The working environment was also designed to generate original ideas and technology as well as draw out people's potential. Musashi aimed to develop middle managers to have an awareness of problems and take the initiative to resolve them.

He also left decisions on installing new equipment up to the worksite. The internal company reform that President Kimitoshi was seeking was to have employees think for themselves and communicate what they were thinking. In other words, to nurture the Musashi spirit.

Musashi Festa celebrating the 55th anniversary (1993)

President Kimitoshi inspecting a plant

Musashi Festa celebrating the 55th anniversary (1993)

Ceremony commemorating Musashi's 55th anniversary and the 25th anniversary of labor union formation (1993)

Column ⑩ If There is a Problem on the Production Floor, Suggest a Solution Then and There and Deal with It

Takayoshi Nagashima, who knew a lot about the production floor, was appointed Senior Managing Director, and he worked to resolve areas that were out of alignment with the goal in step-wise fashion. Mr. Nagashima was an engineer who had worked his way up from Honda's plants. When Mr. Nagashima arrived at work, the first thing he did was go to the General Affairs Department and ask if any problems had arisen the day before. Then he would head over to Accounting Department, where he would check on ongoing issues and their progress.

Then he would ask Production Management whether there were any problems with customers, and then go to the plant floor and talk to employees. Finally, he would meet with President Kimitoshi and talk to him for about 30 minutes.

Like President Kimitoshi, Mr. Nagashima believed that if there was a problem on the plant floor, a solution should be devised to deal with it on the spot.

■ 1992 / Newly establish Sales Division 2
■ 1995 / New corporate logo on the Head Office building (passion, wisdom, harmony)

Musashi's Four-pole System Enabling World Market Entry

Article on the "Three Strategies" published in *Musashi News* (Vol. 298, issued April 15, 1994)

Three strategies to accelerate global expansion

President Kimitoshi Otsuka focused on sales, development, and globalization of Musashi.

In April 1994, President Kimitoshi announced the following three strategic points as Musashi started its 68th sales term.

1. Upgrade R&D
2. Sales to other companies led by Sales Division 2
3. Expand and upgrade global bases

He thought that independent, ongoing R&D was key to further leveraging Musashi's strengths in research and development. Up to this point, Musashi had created an integrated production system encompassing forging, machining, heat treating, finishing, and assembly for engine and suspension components, processes that manufacturers had previously split among several companies. This system achieved high quality at low cost as well as stability and speed in product supply capacity. Musashi also created a development system that allowed it to present customers with solutions to their needs in addition to just following the design blueprints from the manufacturer. In short, further upgrading Musashi R&D was anticipated to lead to a major advantage unmatched by other companies.

Automobiles are made of approximately 20,000 parts, and about 70 percent of those parts are outsourced. Expanding sales channels to other automakers and parts manufacturers that Musashi did not yet do business with would also create greater management stability. Sales Division 2 therefore led efforts focused on obtaining sales from other companies.

When the yen rose sharply against the dollar starting around 1993, declining competitiveness with foreign-manufactured parts was a concern. Fear of the United States constraining the flow of Japanese parts to the U.S. grew in the Structural Impediments Initiative talks for autos and auto parts that was part of the U.S.–Japan Framework for a New Economic Partnership, which had started around this time. Musashi therefore sought to expand and upgrade its bases not only in Japan but around the world.

Research and development work

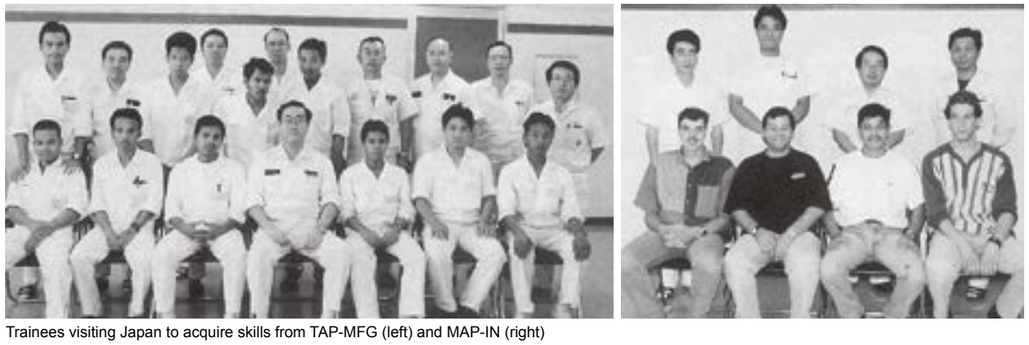
Musashi advantages created by the four-pole structure

As the world economy became increasingly global and marked by change, mitigating risks posed by a strong yen and environmental risks such as conflicts and natural disasters was a requirement for stable company operations. For parts manufacturer Musashi, staying only in Japan would lower its competitiveness in achieving and maintaining high quality at low cost.

Musashi therefore sought to expand its markets primarily from the bases where it could leverage its advantages as it globally developed its business.

First, Musashi made Kyushu Musashi a wholly owned subsidiary in 1996 and consolidated management. That same year, Musashi built a second plant in Thailand and expanded its sales channels to manufacturers other than Honda. In the United States, Technical Auto Parts (TAP), which had started local production in 1984, was beginning to operate on solid footing. TAP-Manufacturing Ltd. (TAP-MFG), established in the UK in 1993, provided Honda with suspension and steering parts.

Musashi established a four-pole system to expand its global business based around Japan, the USA, the UK, and Thailand, where it had built up operations and business performance.



Trainees visiting Japan to acquire skills from TAP-MFG (left) and MAP-IN (right)

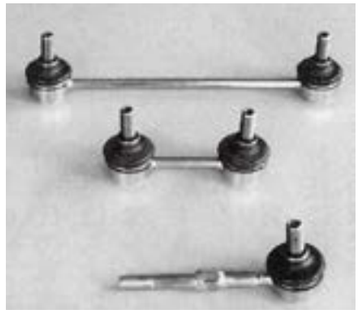
Entering Europe, Establishing the Musashi Brand

Expanding sales to European automakers

In July 1993, TAP Manufacturing Ltd. (TAP-MFG), a wholly owned subsidiary of Musashi in the UK, was established to serve as one of the four poles of global development. This was Musashi's first foray into the European region. Initially, it delivered suspension and steering parts to Honda of the UK and the Rover Group.

Around the same time, it also received orders from NedCar (currently VDL Nedcar), a joint venture created by the Netherlands' government, Mitsubishi Motors Corporation, and AB Volvo. In 1997, TAP-MFG began delivering mass-produced parts to NedCar. Then the Carisma (Mitsubishi) and the S40 (Volvo) started using Musashi's front and rear stabilizer link assemblies. Successfully acquiring a third major customer base in addition to Honda of the UK and the Rover Group held major significance for the Musashi Group's European strategy.

With this customer acquisition, Musashi increased its sales to automakers such as Audi AG and leading primary manufacturers.



Stabilizer link assembly

NedCar's stabilizer link assembly line

Acquiring ISO 9002 certification and joining the ranks of international companies

For Musashi, which had the goal of expanding business in Europe as well as North America and Latin America, TAP-MFG obtaining ISO 9002 certification (quality management) in December 1994 was indispensable to becoming an international company. The goal of obtaining this certification of world-class quality assurance system was to do more business with manufacturers both inside and outside Japan.

Once TAP-MFG was operating stably and Musashi started selling parts to top-class manufacturers in Europe, Musashi changed TAP-MFG's name to Musashi Europe Ltd. (MAP-EU) in September 1999. Soon after Musashi participated for the first time in the Materialica 99 parts trade fair held in Munich, Germany. Musashi was the subject of intense interest from leading German manufacturers as well as many parts manufacturers. The trade fair subsequently benefited Musashi's sales activities, with detailed estimates and business talks arising from it. Then in July 2001, MAP-EU was renamed Musashi Auto Parts UK Ltd. (MAP-UK).

The Musashi brand had gradually built up name recognition in the European market and was selling parts to more than 10 companies. Non-Honda sales accounted for 80 percent of all of MAP-UK's sales.

Materialica 99 booth (1999)

MAP-UK

Column 11 Unexpected Overseas Troubles

When developing business overseas, companies must pay attention to laws, practices, and other norms of the countries they are in.

A serious crisis occurred when TAP Manufacturing Ltd. (TAP-MFG) was launched. Soon after beginning to sell parts to NedCar, the production line was not moving as it was supposed to and product production and supply stopped. This almost forced NedCar to stop its manufacturing line and Musashi risk paying a penalty.

Musashi needed to act fast and was forced to operate its equipment late into the night. You can quickly call in workers on production lines in Japan, but the case was different in the UK. There, local employees went home when night came. So Hiroshi Taira, an employee who came from Japan to support the launch of TAP-MFG, other Japanese employees stationed at TAP-MFG, and Hiroshi Otsuka, who was on assignment to the UK, ran the machines late into the night. Everyone came together, and they were finally able to overcome the crisis. They very narrowly managed to deliver the products to NedCar. The experience made Musashi realize how important it was to remember that unexpected troubles could arise overseas.

■ 1996 / Establish MAP-IN in Indonesia ■ 1997 / Capital participation in Motogear ■ 1998 / MGN changes its name to MSB

Entering Indonesia and South America and the World Motorcycle Market

Grand opening ceremony for the MAP-IN

Plant exterior


Visitors on a plant tour

Surviving the Asian financial crisis with Group unity

Musashi had established its four-pole structure based around Japan, the USA, the UK, and Thailand, and then established P.T. Musashi Auto Parts Indonesia (MAP-IN) in Indonesia in March 1996. Its large market with some 200 million people and its geographical proximity to all of Southeast Asia were major factors behind the decision. The company was expected to showcase Musashi's integrated production system containing its most advanced know-how and expertise. In May of that year, 35 trainees from Indonesia came to Japan. They split into two groups assigned to the Head Office and Kyushu Musashi and acquired manufacturing technology expertise for motorcycle transmission gearbox assemblies.

Musashi had taken all possible preparations for the start of operations, but in July 1997 after the Thai baht collapsed, the value of currencies across Asia fell precipitously. This came to be known as the Asian financial crisis, with Thailand, Indonesia, and South Korea subsequently accepting help from the International Monetary Fund (IMF).

By May 1998, the Indonesian economy was effectively broken, and riots broke out across the nation. Stores and banks were looted, protesters set fires, and many Japanese employees stationed at Japanese companies returned to Japan. Plant operations were not possible, and about six months later MAP-IN was on the verge of bankruptcy. Sales were made in Indonesian rupiah and payments were made in U.S. dollars, which was a major cause of the company's deficits. So MAP-IN received work from Kyushu Musashi and the UK to make and deliver prototypes. Then it started to deliver products to Honda of America.

Even while experiencing these negative aspects of globalization, the experiences of bases working together to overcome crises went on to become a major asset for the Musashi Group.

Column 12 Dealing with the Indonesian Crisis

Amid the Asian financial crisis, MAP-IN did not have work and local employees were waiting at home to be called in. Without something happening, the company might have gone bankrupt. I thought that just waiting around would do us no good. With the mindset that we had the equipment, workers, and everything else we needed, I set out looking for work. I asked Kyushu Musashi and the UK for work and got it. After that, I pursued sales at Honda of America's plant too.

But I was turned down in the U.S. because we didn't have a track record in the country. So I got work from MAP-MI by sending parts made at MAP-IN to Japan for finishing. Then the products were delivered to Honda of America. This is how we paid off a massive amount of debt in the hundreds of millions of yen in 2001 and have continued to have stable operations since. Musashi's legacy of capitalizing on the slightest opportunity and putting our heads together to find a way forward breathed life back into MAP-IN.

(from a conversation with Toshimitsu Sugai)

Realizing integrated production on the opposite side of the world

In 1997, Musashi invested capital in Brazil-based Motogear. The company was located in Pernambuco State in the most eastern part of Brazil along the Atlantic Ocean. The area is also known as a tourist destination with year-round summer weather and comfortable living. This was Musashi's first venture into South America.

Motogear had a long history going back to its founding in 1935. It had made gear wheels for motorcycles since its beginnings and had started sales to Honda. It later became a gear plant for Honda, and Musashi decided to invest capital in it. Then in May 1997, it became the Musashi subsidiary Motogear Norte Industria de Engrenagens Ltda. (MGN) and changed its name to the current Musashi do Brasil Ltda. (MSB). At the time, this was the only integrated fabrication facility for sprockets and disk brakes encompassing sheet metal presses, sheet metal fabrication equipment, and plating equipment in the Musashi Group.

Once MSB's operations were fully underway, Musashi moved into northern Brazil, in the middle of the Amazon rainforest, in March 2002. Musashi de Amazonia Ltda. (MDA) was established in Manaus in the state of Amazonas.

Musashi's global strategy started with a four-pole structure, and in just one year it extended its operations to the opposite side of the world from Japan—to South America and then to the Amazon. The Musashi spirit has been established in South America while maintaining harmony with the local culture.


MSB receiving the highest award for excellence at its first Honda Brazil Manufacturers Circle (CHBF) conference


MSB

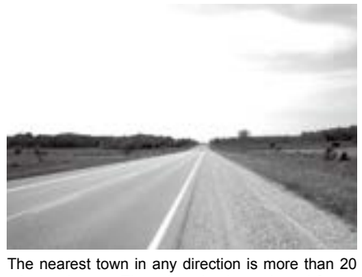
■ 1997 / Establish MAP-CA in Canada ■ 1999 / Establish MSC in the USA

Further Expansion of Local Production Structure with New Bases in Canada and the USA

MAP-CA

Donation from President Kimitoshi Otsuka to the community where Musashi had set up business


Plant workers eating lunch together


The nearest town in any direction is more than 20 minutes by car. There is only sky and road for as far as the eye can see

Fostering a sense of unity and autonomy with close community ties

Along with entering Brazil, Musashi also decided to enter Canada. The project moved ahead based on President Kimitoshi's global strategy of building plants where there were needs for them.

A ground-breaking ceremony was held for Musashi Auto Parts Canada Inc. (MAP-CA) in the small town of Arthur, with a population of 2,000, in Ontario Province in July 1997. The plant began operations in February of the following year. This was the seventh global base for the Musashi Group.

MAP-CA had 40 employees and started out manufacturing ball joint comps for the Honda Civic. By August, it also started manufacturing parts for Acura models.

One hallmark of MAP-CA is its close community ties forged since its founding, growing together with the community while being an overseas base.

Musashi was the largest company in the town of Arthur. Many employees knew each other and worked together in a friendly, home-like atmosphere. Anything good or bad that happened was soon known all around town, and the Japanese employees stationed there made special efforts at communication.

With long-time local residents and immigrants alike having the mindset of working together, over time a spirit of self-reliance, of nurturing Musashi's growth themselves, took hold at MAP-CA.

The company also stands out for the large number of original technologies and improvements it has made.

Ground-breaking ceremony in Arthur, Canada

Developing the Musashi brand in the ATV market

By the 1990s, many Japanese automakers had shifted to local production in the United States one after another as a way to deal with trade frictions.

Anticipating strong demand in the U.S. ATV market, Musashi established the new wholly owned company Musashi South Carolina Inc. (MSC) in South Carolina, USA, in April 1999. Together with MAP-MI, MSC aimed to increase the presence of the Musashi brand in the ever-expanding U.S. market.

An opening ceremony for MSC was held in June 2001 with many local dignitaries in attendance, including the governor and U.S. senators for South Carolina and officials from Honda. Initially, MSC assembled ATV transmissions for Honda and fabricated ATV ring and pinion gears for Ford.

In January 2001, around the time MSC was established, Musashi North America Inc. (MNA) was established in a suburb of Detroit, Michigan. MNA served as the sales office for the three North American bases including MSC and provided strategic sales support. As a result, by 2007 or so MSC also started selling parts to Suzuki Motor Corporation and U.S. parts manufacturer Dana Incorporated.


Opening ceremony for MSC (June 8, 2001)


Local residents were also invited to the ceremony


MSC

■ 2000 / Establish MHM in Hungary ■ 2001 / Establish MEU in Germany ■ 2002 / Establish MAP-ID in India

Strengthening the European Business Foundation and Developing the Indian Market

MHM at the time of its founding

Building a structure to support the European strategy


Signing ceremony in Ercsi City for a new plant there (November 8, 2000)

To complement the UK, one of the four poles, and expand throughout the European market, Musashi established Musashi Hungary Manufacturing Ltd. (MHM) in Hungary in February 2000.

It purchased 75,000 square meters of land in Ercsi, 35 kilometers south of the capital Budapest. Construction on the plant started that November. This new plant laid down a system able to cover demand for all of the European region with the goal of expanding new business opportunities in the parts market.

In addition, in 2001 Musashi established Musashi Europe GmbH (MEU) in a suburb of Munich, Germany, as its sales office for Europe and began sales activities to advance its comprehensive business strategy in the European market. This was aligned with Honda's strategy to expand business in overseas markets, with Musashi aiming to achieve consolidated sales of 100 billion yen in fiscal 2004.

MEU's sales activities to promote operations at MHM focused on capturing orders for outsourced parts from Volkswagen AG, Audi AG, Ford Motor Company, and Fiat Automobiles S.p.A., and orders for units and assemblies.

As a result, in April 2004 Musashi began producing aluminum arms for Audi AG that it had developed independently. It also started producing camshafts for DaimlerChrysler AG and Fiat Automobiles S.p.A.

Moving into India's fast-growing motorcycle and scooter market

In July 2002, Musashi established Musashi Auto Parts India Pvt. Ltd. (MAP-ID), its 12th base outside Japan, in Bawal, Haryana, India. Honda also asked Musashi to enter the fast-growing Indian motorcycle market to meet demand, which Musashi ultimately decided to do. This was its fourth production base in motorcycle markets after Thailand, Indonesia, and Brazil.

Musashi initially hired 22 local supervisors. The supervisors collected some 2,500 applications from all over India and hired 220 regular employees. After the employees were hired, they were sent to local Honda company Honda Motorcycle and Scooter India Pvt. Ltd. (HSMI) as trainees until the plant was completed in September 2003. At the end of November that year, the plant started operations with four groups working in three shifts.

In 2008, the company had expanded its sales channels from only Honda to include Hero Honda Motors Ltd. (HHML), a local Honda joint venture, and Suzuki Motorcycle India Pvt. Ltd. (SMIPL), which was Suzuki's local motorcycle company. As a result, annual production volume grew from an initial 460,000 parts to over 1 million. Looking back, starting with MAP-MI in Detroit in 1980, Musashi made a series of bold moves to expand globally. In the 2000s, Musashi continued global development based around the four-pole structure, moving into Brazil, Hungary, and India.


Ceremony marking the first shipment at MAP-ID (November 18, 2002)


Ceremony marking the first shipment at MAP-ID (November 18, 2002)

Column 13 Saying Goodbye to Yoshiharu Otsuka, Who Had Aggressively Led Musashi's Globalization

Founder Yoshiharu Otsuka had promoted Musashi's transformation to a global company. After experiencing the oil crisis of 1973, he could not see a future for Musashi if it only stayed in the domestic market. A word from Yoshiharu on how Musashi's operations should be global was the start of what Musashi has become today. This enterprising spirit did not diminish even amid periods of turbulence such as Japan's economic bubble bursting and the 2008 global financial crisis. Musashi made global inroads through all of it.

After his retirement, Yoshiharu often went around to the plants and thanked the young employees for their efforts. Since founding Musashi in 1938, he had never stopped believing that youthful energy is what makes a company grow, and that Musashi had opened the doors to its future while working and learning together with young employees.

Yoshiharu Otsuka passed away on June 8, 2001. He was 96 years old at the time of his death.


Memorial service for Yoshiharu Otsuka

■ 2004 / Listed on the Second Section of the Tokyo Stock Exchange
■ 2005 / Listed on the First Section of the Tokyo Stock Exchange ■ 2005 / Complete Akemi Plant #2

Forging Technology Relay Base, Spreading Musashi's Core Technology around the World

Akemi Plant #2



Inside the plant

Consolidating all forging technology at Akemi Plant #2

Entering the 2000s, only companies that were able to deliver high-quality, low-cost products made with specific advanced technology anywhere in the world when customers needed them could survive in the automotive industry. The same applied to parts manufacturers.

So in December 2005, Musashi began operations at Akemi Plant #2 as a strategic base from which to communicate to the world its proprietary know-how and expertise built up in its core technological capabilities and manufacturing. The plant brought together the latest technology to achieve advances in mold technology development, integrated production from making molds to mass-production, and reduced environmental load. Musashi consolidated the forging operations of Ueta Plant and Akemi Plant #1 at Akemi Plant #2 to enhance competitiveness by creating an integrated production system. It was decided that Akemi Plant #2 would handle all processes from forging technology development to mold design and fabrication, producing prototypes, and mass-production.

Akemi Plant #2 also aimed to be a plant friendly to both the environment and people as part of Musashi's activities to conserve the global environment. For example, the plant uses natural lighting and more efficient ventilation to improve waste heat generation. The large windows in the dining hall are designed to reduce carbon dioxide emissions and create an open atmosphere to eat in. The plant has received recognition for its people- and eco-friendly design.

ISO certification for maintaining a high level of quality assurance

With increasing globalization, Musashi expanded its global bases and modernized plants. Meanwhile, it did not let up in its efforts to maintain a high level of quality assurance. A leading example of this is acquisition of ISO/TS certification. In 1995, TAP-MFG in the UK was the first Musashi plant to receive ISO 9002 (model for quality assurance in production, installation, and servicing) certification, and this played a big role in expanding sales in Europe and North America. The following year, the Head Office and Akemi Plant #1 and #2 received ISO 9001 (model for quality assurance in design, development, production, installation, and servicing) certification. Starting from this, all plants in the Musashi Group have acquired certification to meet customer needs.

Listed on the First Section of the Tokyo Stock Exchange as a global company

In 2000, President Kimitoshi Otsuka, who had long supported Musashi's growth and development, retired. Yujiro Kobayashi was appointed Representative Director.

Since being appointed President in 1990, Kimitoshi had strengthened Musashi's corporate quality and aggressively developed overseas business, presiding over 10 years of increased profit. Consolidated sales in the Musashi Group in the financial closing for fiscal 2000, the year he retired, reached 100 billion yen.

Musashi had focused on overseas development, and in 2001, participated in the Frankfurt Motor Show in Germany for the first time. In October 2001, Musashi exhibited at the 35th Tokyo Motor Show and conducted other high-profile activities to gain recognition for Musashi in global auto-related industries.

As a result of implementing a multi-dimensional overseas strategy, Musashi was listed on the Second Section of the Tokyo Stock Exchange (TSE) in 2004 and on the First Section in 2005.


Frankfurt Motor Show


Tokyo Motor Show 2001

Column 14 Saying Goodbye to Kimitoshi Otsuka, Who Laid the Groundwork for Getting Listed on the First Section of the TSE

President Kimitoshi Otsuka was the second president of Musashi and the successor to the founder.

He made great contributions to Musashi's development with a balanced approach to company management that combined aggressive expansion overseas and strengthening cost competitiveness with far-reaching elimination of waste and improvements to corporate financial standing. He liked an expression that can be translated as "Joy and sorrow are today and tomorrow," meaning don't let yourself get carried away by either the good times or the bad. As a result of working tenaciously to achieve his goals, he was able to get the rewards that he believed would come.

After his retirement, he deepened his association with his hometown of Toyohashi City. He became a permanent member of the Toyohashi Chamber of Commerce and Industry and served as the chairperson of the Toyohashi City Citizen Love City Charter Council. He poured his energies into citizen activities with the goal of community development. Regrettably, however, he passed away in January 14, 2004 at the age of 72.

Part 7 Innovation

When its bubble economy collapsed in 1991, Japan saw its position of leadership also wane while the United States rose in prominence. New business generated by the information technology revolution, higher work efficiency from the use of information processing technology, and production method innovations worked to create strong economic conditions. Personal consumption in the United States grew sharply, and through higher exports to the United States, Japan was also able to see signs of economic recovery.

In 2008, however, the U.S. subprime mortgage crisis triggered the global financial crisis. America fell into a deep recession, which then spread around the world. Having promoted globalized operations, Musashi suffered a major blow, but it returned to its origins and resolutely faced the situation.

■ 2006 / Hiroshi Otsuka assumes the position of President
■ 2006 / Begin support for the Automotive Club of Toyohashi University of Technology

New Leader at the Helm of a Global Musashi


Change of president ceremony Ⅰ


Change of president ceremony Ⅱ


Change of president ceremony Ⅲ

Intensified global competition in a fight for survival

When President Yujiro Kobayashi resigned in May 2006, Hiroshi Otsuka was appointed President. Musashi's operations had grown more international, with sales outside Japan increasing to 63 percent of all sales, and great expectations were placed on Hiroshi Otsuka, who had extensive experience working in the UK and other parts of Europe, to lead Musashi to become even more globalized.

The economic downturn not only affected the Japanese economy, but also sparked competition in a fight for survival in the global motorcycle and automobile markets. He was taking the helm at a treacherous time that could alter Musashi's future.

For example, in the North American automobile market, the Big Three found themselves on the brink of bankruptcy along with the world's leading parts manufacturers. In the Asian motorcycle and scooter market, sales saw a sharp downturn, especially in Indonesia, due to the escalating price of crude oil.

Manufacturers in China, South Korea, India, and Taiwan had improved their capabilities and were forcing other manufacturers into intense competition not only on quality but also on price.

That year, the Musashi Group had 7 bases in Japan and 14 bases in 10 countries outside Japan including sales offices. It had grown into a global company with 8,000 employees and sales of more than 120 billion yen.

Creating a pillar for future development

After becoming President, Hiroshi Otsuka undertook a macro analysis from a bird's-eye view of what actions should be taken in view of the situation at each Musashi base around the world.

Meanwhile, he focused on a re-examination of Musashi's development on a temporal axis. Around 70 years after Musashi's founding, he launched a group to study the history of predecessors like Yoshiharu Otsuka and investigate on what basis Musashi had continued to achieve its growth. After about two years of research, the new Musashi Philosophy was established in 2007 looking to Musashi's future. In his 2008 New Year's address, "Legacy of the Past, Vision of the Future," President Hiroshi Otsuka exhorted Musashi members around the world to base their conduct on the Musashi Philosophy.

President Yujiro Kobayashi and President Hiroshi Otsuka at the change of president ceremony (April 22, 2006)


Change of president ceremony Ⅳ


Change of president ceremony Ⅴ

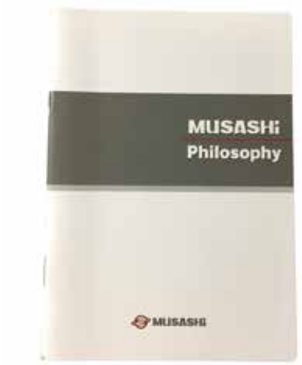

Change of president ceremony Ⅵ

Column 15 President Hiroshi Otsuka and "Legacy of the Past, Vision of the Future"

The spirit over Musashi's 80 years of history that has been passed down to fourth Musashi President Hiroshi Otsuka from founder Yoshiharu Otsuka is distilled in the phrase "Legacy of the Past, Vision of the Future. "During historical times of change, Musashi used resourcefulness and ingenuity to gradually build its own integrated production system, which would be used as a foundation to achieve progress in the new world and future without hesitation. In his 2008 New Year's address, President Hiroshi Otsuka remarked, "I intend to carry on the corporate culture fostered by our predecessors and ambitiously push forward with unique Musashi ideas and actions."

■ 2007 / Establish the Musashi Philosophy ■ 2008 / Hold the "Be Unique Festa" to commemorate the 70th anniversary

Hold the "Be Unique Festa" to Commemorate the 70th Anniversary



Musashi Philosophy booklet

Reaffirming the Musashi DNA that has been passed down to today

The Musashi Philosophy was established in August 2007. At the beginning of the next year, President Hiroshi Otsuka said the following at a ceremony marking the New Year.

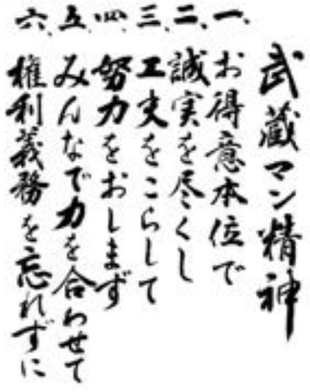
"I have looked back again over our history and affirmed Musashi's DNA underlying our growth and development. I did this because I felt it necessary to affirm and share the corporate philosophy that forms the basis for Musashi members from around the world with diverse values to unite and take action as one. The wisdom of our predecessors who overcame adverse times is distilled in our 70 years of history. This wisdom is expressed in straightforward manner in our spirit of foundation of Shitsujitsu-Goken (Simple and Sturdy) and Shisei-Ikkan (Consistent Sincerity) as well as in the Musashi Spirit."

"Musashi founder Yoshiharu Otsuka said, 'We have seen many companies rise and fall in history and I witnessed this in my own long life. We must not forget the fact that a group of people who were united in the spirit of Simple and Sturdy and had the trait of Consistent Sincerity rarely died out.'"

"Indeed, our cumulative actions based on a spirit of self-reliance, a commitment to manufacturing and quality, the foresight to accurately assess the future, and putting customers first have created the foundation for the Musashi Group today. I have now clearly stated anew how Musashi will contribute to society in Our Corporate Mission, which together with Our Spirit of Foundation and the Musashi Spirit forms the Musashi Philosophy."

"The Musashi Philosophy can be shared and embraced across countries, languages, cultures, and customs. As long as we practice it simply and honestly, we can continue to achieve growth and development. What is important is not understanding its words but putting it into practice. I hope that each of you, the Musashi members working around the world, practice the Musashi Philosophy and embody Our Corporate Mission to achieve progress."

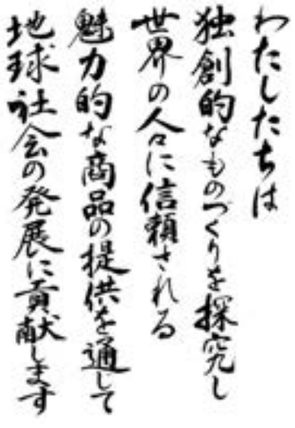
The Musashi Spirit


武蔵マン精神
一、お得意本位で
二、誠実を尽くし
三、工夫をこらして
四、努力をおしまず
五、みんなで力を合わせて
六、権利義務を忘れずに

Our Spirit of Foundation


質実剛健
至誠一貫

Our Corporate Mission


わたしたちは
独創的なものづくりを探究し
世界の人々に信頼される
魅力的な商品の提供を通して
地球社会の発展に貢献します

Turning what sounds interesting into reality

In November 2007, the Musashi Global Vision 2020 was established as the detailed ideal of what Musashi wants to be in 2020.

"Be Unique!" is a tagline that expresses the attitude of the ongoing pursuit of Musashi-style originality (uniqueness). The tagline expressed in the global vision logo is used on outdoor advertisements and various Musashi communication tools.

Large billboards have been placed on the roof and wall of a building in front of Toyohashi Station with the global vision logo to impart the feeling of excitement when people attempt to achieve the same dream. Musashi has broadly created an image as a manufacturing company that enjoys originality.

Outdoor billboard in front of Toyohashi Station

Musashi Global Vision 2020

Be Unique!

Turning what sounds interesting into reality by creating and providing Musashi-brand products trusted around the world.

—Keywords—

- Differentiation
- Integration
- Growth

ユニークで行こう!!
Be Unique!

Column 16 Three-hundred-kilometer Relay Road Race by the Track and Field Club

On April 5, 2008, the eponymous Be Unique Festa was held to commemorate Musashi's 70th anniversary.

Two days before the festivities, 10 people in the Track and Field Club gathered at Togoshi Park in Tokyo, where Musashi was founded, and ran 300 kilometers in a relay to the Toyohashi festival grounds wearing a sash emblazoned with "Simple and Sturdy" and "Consistent Sincerity. "Many participants experienced the founding spirit through events like this that epitomize the concept of "Be Unique!"


Relay race anchor just before reaching the finish line

■ 2008 / Establish the Musashi Global Center ■ 2009 / Close the Noto Plant

Global Financial Crisis and Musashi Decisions

Survival imperiled by sharp downturn in production

On September 15, 2008, the bankruptcy of Lehman Brothers sent shock waves around the world. The dollar weakened against the yen and caused exports to the U.S. market to fall dramatically, dealing a major blow to Japanese companies and foremost its automakers. Musashi was no exception.

In the financial closing a half year earlier in March, Musashi had proudly posted record-high sales and profit. Musashi had to cut production substantially with the pronounced downturn in the North American and European markets. Major production adjustments were also unavoidable in the fast-growing Asian and South American motorcycle and scooter markets.

Even in Japan, most automakers had suspended production, and Musashi's production lines also stopped. By November, there was no work for employees to do except clean. Sales in Japan, which had been 40 billion yen, dropped to about one-third of that, and financing became tight by the end of 2008.Payments for redemption of convertible bonds were coming due in March 2009, and Musashi's very survival was in peril.

President Hiroshi Otsuka was forced to make a difficult decision. He had to lay off employees. In January 2009, Musashi offered to accept about 100 employees in a voluntary early retirement program. Forty employees Musashi had planned to rehire (after they had reached the age of compulsory retirement) were told that their employment extension was being terminated.

Impacted by the financial crisis, plants did not operate some days

Employee wages were also cut approximately in half as the number of work days fell with suspended plant operations. Therefore, Musashi decided to offer support for employees to maintain their livelihood. It implemented as many support programs as possible, for example giving out interest-free loans to employees who needed help with their personal finances and allowing employees to work other jobs on their days off.

At the time, many companies were canceling the unofficial job offers they had made to students who were waiting to start their new jobs in the spring, a trend that was widely covered in newspapers and on TV. Musashi also was no exception. Company officers had a big discussion about whether it was good to hire the new graduates that had been unofficially offered jobs when Musashi was not able to sufficiently pay its current employees. Performance in the previous fiscal year was strong, and Musashi had offered jobs to more students than it did in a typical year.

The discussion became heated, but President Hiroshi Otsuka cut it off by saying the following.

"We can't cast off the young people who are our future. Even in the situation we are in, we need to look to the future and hire them. We will keep hiring young people to pass down the craftsmanship that we have taken such pride in."

He took this decision believing that Musashi would survive and had a bright future ahead of it.

Closure of three plants Overcoming fear and making next leap forward

The world was rocked by the economic slowdown with no end in sight, and Musashi was forced to make a major decision. In January 2009, it decided to implement a round of layoffs and close three plants. It closed MSC, MAP-UK, and the Noto Plant in Ishikawa Prefecture. Although closing the three plants was a major source of worry at Musashi Group companies, President Hiroshi Otsuka went back to the origins of the Musashi Philosophy and said the following.

"Markets may be shrinking but they will not disappear. The auto industry is still a growth industry, and we anticipate growth in emerging markets such as China and India. In motorcycle and scooter markets as well, new demand is appearing in Asian emerging countries and in the African market. Let us see this turning point as an opportunity and aim to make the next leap forward."

Musashi had achieved great things using the crises of World War II, the oil shock, and the collapse of Japan's bubble economy as springboards, and it was not going to stop now. Always taking a forward-looking approach with the attitude of Simple and Sturdy and Consistent Sincerity was part of Musashi's DNA. President Hiroshi Otsuka was telling employees that if they based their actions on the Musashi Philosophy, the path forward would surely appear.


Noto Plant

■ 2009 / Establish new project to reduce overall expenses ■ 2010 / Publish the Musashi Philosophy in booklet form

Corporate Culture Reforms by Practicing the Musashi Philosophy

Creating the future with a resolute Musashi Launch of the M3 Project

Musashi set out to improve its corporate culture to be able to compete in the difficult business environment.

In February 2009, it launched a project to reduce overall expenses, dubbed the M3 Project. The M3 Project was a companywide, cross-division project with 21 members including 3 full-time team members. The members led reforms aimed at making Musashi lean and muscular. Losses were eliminated in all areas including plant floors and the Quality, Technology, Development, Production Management, Purchasing, Sales, Finance, and General Affairs divisions.

For example, some of the improvements taken in plants were to upgrade old machinery to increase efficiency and to have the plant employees take apart the facilities and conduct maintenance on them themselves. Improvement targets were tackled one by one.

Each department undertook similar efforts to thoroughly eliminate overburdening (muri), waste (muda), and inconsistency (mura), resulting in savings of more than 300 million yen. In his 2008 New Year's address, President Hiroshi Otsuka remarked, "What is important is not understanding its words but putting it into practice." In short, the results of putting the Musashi Philosophy into practice were taking shape before people's eyes.

Signs of economic recovery Achieving a lean and muscular corporate culture

In February 2009, production output fell to 30 percent of its peak. But in March, Honda showed Musashi its production plan for the next several months, and signs of economic recovery began to appear. By June, Musashi needed to hire workers to keep up with production.

While the recovery lagged behind somewhat in Japan, North America, and Europe, the motorcycle and scooter market in India and Indonesia and the automobile market in China were on the path to recovery. By September 2009, overall production output for the Musashi Group had recovered to about 70 percent of the pre-crisis level.

Viewing the financial crisis as a change opportunity and taking measures to reduce overall expenses enabled Musashi to quickly achieve a recovery in its profits. With this achievement, the M3 Project had fulfilled its task of strengthening Musashi's corporate culture and was disbanded at the end of September. While marking progress in fits and starts, Musashi transformed into a lean and muscular corporate culture and then was able to stand up again and take on new endeavors. In November 2010, Musashi established a new base in Vietnam and began to expand its production capacity in India and China.

M3 Project team members

M3 Project members engaged in serious discussion

■ 2006 / Establish Karawang plant as the second MAP-IN base ■ 2010 / Establish MAP-VN

Strengthening the Business Foundation in High-performing Asia, a New Base in Vietnam

Karawang Plant

Asian markets lead world in achieving growth

Musashi trained its focus early on the Southeast Asian market, setting up Musashi Auto Parts Co., Ltd. (MAP-TH) in Pathumthani, Thailand, in 1987 and Musashi Asia Co., Ltd. (MAS) to oversee sales in the Asian region in Thailand's capital of Bangkok in 2003. It continued to expand its operations in Southeast Asia as a strategic key region.

Following Thailand, the Cikarang plant (#1) of P.T. Musashi Auto Parts Indonesia (MAP-IN) was established in March 1996 in Indonesia to produce motorcycle and scooter parts, with the Karawang Plant established in Karawang in December 2006 as the second plant in anticipation of automobile market growth in Indonesia and other markets in Southeast Asia. It began producing auto transmission gears and planetary assemblies for HM and camshafts for Daihatsu among other parts.

Lehman Brothers filed for bankruptcy in September 2008 and Musashi's performance fell temporarily, but efforts to strengthen its corporate culture helped Musashi recover its business performance one year later. The robust growth in Southeast Asia's automobile market led Musashi to basically double its plant footprint in 2013.

New base in Musashi's ASEAN strategy entering Vietnam

Musashi had found success in Thailand and Indonesia, and it went looking for the next Southeast Asian market to expand into. It decided on the Vietnamese market, aiming to enter the fast-growing Association of Southeast Asian Nations' (ASEAN) motorcycle and scooter market.

In preliminary market research it conducted in 2009, 10 ASEAN-member nations (Indonesia, Cambodia, Singapore, Thailand, the Philippines, Brunei, Vietnam, Malaysia, Myanmar, Laos) accounted for 9.3 percent of the world's population of 6.8 billion. One in eight people owned a motorcycle or scooter, while only one in 46 owned a car. With its large labor force, the world was looking to the ASEAN for potential new production locations, and rising standards of living in the nations were projected to spark higher demand for motorcycles, scooters, and cars. Among these nations, Vietnam's motorcycle and scooter market had maintained a steady growth track and Honda had expanded its production in Vietnam, including exports to neighboring countries.

The ASEAN–China Free Trade Area (ACFTA) lowered tariffs on parts and materials, and Vietnam was expected to serve as a regional parts supply base within the ACFTA. Another major advantage was an economic partnership agreement (EPA) that lowered tariffs on materials and parts procured from Japan.

In November 2010, Musashi established Musashi Auto Parts Vietnam Co., Ltd. (MAP-VN) in Thang Long Industrial Park II in Hung Yen Province, Vietnam. Located within an hour's commute of central Hanoi, which made it easier to hire employees, the site grounds had an area of 50,000 square meters with a building floor area of 7,000 square meters.

MAP-VN Opening ceremony

The new plant at MAP-VN was completed in August 2011. Facilities were transferred from Kyushu Musashi (KMS) and MAP-TH in Thailand. Honda Vietnam's camshaft line was also transferred to MAP-VN. MAP-VN started manufacturing motorcycle parts, namely camshafts and transmissions for the Cub and scooters, with product deliveries starting in December.

A large opening ceremony with some 120 guests was held for MAP-VN in February 2012. With assistance from the Head Office and Kyushu Musashi, MAP-VN launched production of the world's first grinding-less camshafts in 2013 and started cost reduction activities in the Motorcycle Division.

A parts former was installed in 2014, which marked the start of making materials in-house and exports. The plant redesigned its layout to reduce costs and created a system able to not only provide price- and quality-competitive parts to Vietnam but also to overseas markets. By proactively overcoming several challenges it faced, MAP-VN succeeded in turning a profit early on.

MAP-VN President Yoshinori Mizuguchi giving remarks

Plant tour

■ 2011 / Flood at MAP-TH #1

Severe Floods Ravage Thailand

All photos were taken during the floods

First base in Thailand
Navanakorn Plant takes a hit

Musashi established Musashi Auto Parts Co., Ltd. (MAP-TH) in December 1987 as its second base outside of Japan in Pathumthani, Thailand, about 60 kilometers north of the capital of Bangkok. Ever since then, the plant had served as a stalwart source of support and one of the four poles of Musashi's globalization. When it was initially built, the plant manufactured parts for Honda, Suzuki, and Kawasaki motorcycles and scooters, but it gradually started manufacturing parts for automobiles as well. In February 1996, a second Thai plant in Prachinburi, located 120 kilometers east of Bangkok, started operations.

A disaster unexpectedly struck, however, on July 31, 2011. Flash floods in Thailand's mountainous region caused flooding that slowly made its way south. At their maximum height, the floodwaters reached three meters. Three months after the flooding started, the waters reached Plant #1 in the Navanakorn Industrial Estate in Pathumthani. Many plants were flooded.

Flooded plant
Musashi's underlying strength is tested

On October 17, the industrial estate issued its first evacuation warning and all employees evacuated the premises. The next day, the water level rose to 30 centimeters, but the sandbags piled around the plant entrance prevented the floodwaters from entering the plant.

Nevertheless, the water level rose higher with each passing day. The plant requested the second plant in Prachinburi to send a pump so that it could pump the water outside if the inside of the plant got flooded. During this time, the plant tried everything it could think of to keep the water at bay, including using a forklift to hold up the sandbags at the plant entrance. Still, the water was rising at a rate of three centimeters an hour, and eventually the wall surrounding the plant could no longer withstand the pressure of the rising water and collapsed. There was nothing that the 40 employees who had worked desperately to protect the company could do. As the employees escaped to the second floor, a massive volume of water rushed into the plant in an instant. The water level rose to 220 centimeters.

Machinery worth 100 million yen had been delivered to the plant just one week before. In addition, large presses, some 500 pieces of equipment, and trucks that could not be moved were submerged by the incoming floodwaters.

Since Thailand is a largely flat country, it takes a long time for floodwaters to recede. It was about one month before the water was completely gone from the plant. Restoration work began on December 6, but plant operations would not resume until much later, in the following May.

Plant #1 delivered products to 18 manufacturers including Honda, Suzuki, and Toyota and had sales in the range of 8 to 10 billion yen at the time. Losing credibility with its customers was a possibility depending on how it handled production after resuming operations. This was the start of a battle that would determine Musashi's true value. At the time, however, no one had the capacity to realize it.

■ 2012 / MAP-TH appoints special team aiming to quickly resume operations

Getting Out of a Tight Spot Using the Musashi Philosophy

All photos were taken during the recovery work

Tackling challenges no one had ever faced before

There were a variety of challenges waiting as MAP-TH attempted to fill its parts orders during the approximately six months until it could resume operations. The plant and the production equipment needed to be restored, product quality and production volumes needed to be secured, and estimates of the optimal time and expenses to do these things needed to be submitted and then implemented without fail. All of these things needed to be done without incurring delays. The flood disaster was not a justifiable reason for delivery delays.

Musashi's history was a history of winning customer trust by always meeting customer demands. For example, when there was an electricity shortage in the aftermath of WWII, Musashi attempted to generate its own electricity by erecting a windmill and running a generator. In 1958 when Musashi received a large order for shifting gears from Honda, it got a large loan it needed to install the latest equipment. It met the demands by demonstrating immediate decisiveness. It had done what it needed to do using creativity, its capacity to take action, and the founding spirit of Simple and Sturdy and Consistent Sincerity.

It could not lose the trust of its customers here in Thailand either. But then a request came from Toyota, which for MAP-TH at the time was an important customer.

Companywide effort to conduct substitute production

Plant #1 that had flooded delivered gears for Toyota pickup trucks. Around 2,000 trucks were produced daily, and MAP-TH supplied about the same number of gears. Toyota assembled the parts separately in Thailand and Argentina. If they ran out of inventory, their plant production lines would stop. The gears supplied to Toyota, however, entailed complex manufacturing technology. Production could not be started right away, causing delivery delays.

When MAP-TH went to Siam Toyota Manufacturing in Thailand, the president told them, "The supply chain must not be broken. If you need people or machinery, Toyota will give you its full support."

MAP-TH manufactured eight types of precision parts for Toyota. To replace this production, MAP-TH decided to have four of those parts made at the Head Office in Japan, and the rest made at Plant #2 in Prachinburi.

Then a series of problems arose. First, Plant #2 did not have the parts it needed to create the manufacturing line for Toyota. It also did not know how to arrange the air transport from Japan to Thailand of the equipment and materials it needed to build the substitute production facilities. To get around these problems, MAP-TH got support from Toyota. It supplied equipment that it was not using as well as sent about 20 staff members to MAP-TH to handle things like production technology, maintenance, and electricity. MAP-TH initially chartered an airplane for the air transportation of the equipment and materials, and then found at airline that could manage the rest to successfully complete the needed air transportation. Gear production got underway as soon as the production facilities were ready.

Meanwhile, substitute production in Japan was divided between the Ueta Plant and the Akemi #1 and #2 plants. An emergency team of 40 to 50 people was assembled by calling in employees from General Affairs Division, Accounting Division, Production Division, Quality Division, and Production Technology Division. Production lines that normally take three months to launch were set up in three days, and production followed the hard schedule of 24-hour operations at full capacity for one month.

The parts produced initially did not meet the quality that was needed, with only 10 to 20 parts satisfying quality standards even though 500 were needed. The biggest problem was not having taken enough time to fully develop the process capacity. A Toyota manager had some strong words for Musashi that indicated a lack of trust, saying, "This is no way to make a quality product."

Musashi felt a strong sense of crisis and took the extraordinary move of calling in section managers from related departments to thoroughly investigate the causes of the line defects. The processes that lacked clear definition were made clear, as were the roles and responsibilities of each department.

Meeting customer expectations by collectively demonstrating abilities

The outcome of this gradually became apparent in the numbers. The number of high-quality parts produced per day, which initially had numbered in the dozens, increased to 100 and then 200. On December 17, 2011, 30 highly skilled employees from Thailand were flown in to provide support after the restoration work at the Thai plant had somewhat abated. Musashi went about this parts work with focused purpose, and the number of high-quality parts produced per day increased to more than 2,000. "Meeting customer expectations." The goal came about naturally as the employees worked together. Deep bonds were forged among the employees working in the plant. They embodied the spirit of Simple and Sturdy and Consistent Sincerity in their work.

When production was running smoothly, the persons in charge from Musashi visited Toyota's Head Office. They were shown to a room where the Toyota officer who had been in charge of the negotiations with Musashi was waiting. He expressed his appreciation and gratitude to the representatives from Musashi, saying, "I was truly impressed by the strength of Musashi."

The Toyota line in 2008

■ 2011 / Establish MID ■ 2013 / Establish MAP-ID Plant #2, Bangalore Plant

Business Expansion in India, Establishment of the Bangalore Plant

Becoming the No. 1 supplier in India Strategic sales and purchasing base

In the Indian market, which continued to show fast-paced growth along with Southeast Asia, Musashi established MAP-ID in Haryana in 2002. MAP-ID mainly produced motorcycle and scooter parts and expanded its sales channels from Honda's local motorcycle production and sales company HMSI to include HHML and SMIPL among others.

Anticipating further sales expansion in the massive market surpassing 1.2 billion people, Musashi established Musashi India Pvt. Ltd. (MID) in Gurugram, Haryana, in December 2011. With MID, Musashi aimed to strengthen its sales capabilities to capture new business from existing customers as well as develop Indian suppliers and expand its purchasing function.

It aimed to expand MAP-ID's sales by ramping up sales activities with the existing customers Hero (India), SMIPL (Suzuki), and Multi (Suzuki) and conducting activities to get orders from customers like Hyundai, Fiat, Nissan, and Toyota.

In the purchasing field, the Indian market was still largely an unknown quantity, with some 5,000 companies alone making motorcycle and automobile parts. MID aimed to enhance the Musashi Group's competitiveness by incorporating inexpensive parts and equipment of the appropriate quality from these Indian suppliers into Musashi's manufacturing lines to maintain low-cost, high-quality manufacturing.

Chronic traffic congestion in India

View from a high-rise apartment, with smog obscuring visibility

Advanced plant to draw out India's potential

In June 2013, Musashi established the Bangalore Plant as MAP-ID's second base in Karnataka.

That same month, Honda put a third HMSI plant into operation with production capacity of 1.8 million in its initial year. And in 2014, HCIL, its local automobile production and sales company, planned to put a second plant with production capacity of 120,000 in its initial year into operation. MAP-ID's first base in Haryana would not be able to handle the expanded production capacity of the plants along with the plans for the new plant to start operations.

India's motorcycle and scooter market was showing ongoing expansion as illustrated by Honda's new plants, and the Bangalore Plant was targeting the top share in India's motorcycle market. To achieve this, it set about enhancing its manufacturing efficiency by raising the overall efficiency of its facilities as well as process efficiency and increasing the rate of automation. Other measures to achieve costs that were competitive with Chinese manufacturers included lowering its cost price using local procurement. The building was designed with specifications and a layout that factored in future expansion. Use of natural light and ventilation were also maximized to create an environmentally friendly, advanced plant.

Prayers at Bangalore Plant

Bangalore Plant opening

Exterior view of Bangalore Plant

■ 2012 / Establish MAP-MX ■ 2014 / Establish MAP-NT ■ 2014 / Establish MIZ

Rebuilding a Globally Optimized Production Structure, New Bases in Mexico and China


Lots of cacti in Mexico


Inside the plant

Reorganization of the North American structure with entry into Mexico

While the domestic automobile market was shrinking in Japan, the motorcycle and automobile markets in emerging economies were continuing to expand. Based on this, Musashi set the Group management policy of becoming a truly global company in its 11th medium-term management plan established in 2011. Then it established Musashi Auto Parts Mexico, S.A. de C.V. (MAP-MX) in March 2012 in the Mexican state of San Luis Potosi to strengthen its global operations to maximize its collective abilities, a priority initiative, and rebuild a globally optimized production system. MAP-MX started operations in January 2014.

Supplying finished parts from Mexico was intended to deliver transportation efficiencies to the European and U.S. markets, which before had been supplied with finished parts mostly from Japan. Mexico offered good access to the Americas and Europe and was promoting manufacturing exports with free trade agreements (FTAs) concluded with 46 countries worldwide. Automotive parts also received preferential tax rates. Mexico was also known for having a low cost and industrious labor force and good labor–management relations, which created excellent conditions for business.

As part of Musashi's efforts to rebuild a globally optimized production system, it reorganized its production structure in North America. MAP-CA focused on camshafts, while MAP-MI mainly produced differential gears. Each of them became a supply base for the northern part of North America, and MAP-MX mainly produced ball joints and became a supply base for the Americas and Europe.


MAP-MX

Move to compete in a growth market

Among the world's automobile markets, China was very attractive. The number of owned automobiles had already surpassed Japan by 2011 to become the world's second-largest market after the United States. Meanwhile, the number of owned automobiles per 1,000 people was ranked just 118th in the world. Even so, Chinese automobile production was projected to grow quickly from 18 million in 2013 (actual) to 30 million in 2020. China was therefore a big market for Musashi.

Honda is also planning to sharply increase its production in China to keep up with rapidly expanding market demand. Taking external sales into consideration, Musashi established the new company Musashi Auto Parts (Nantong) Co., Ltd. (MAP-NT) in Nantong, Jiangsu Province, in June 2014, following after MAP-CH established in January 2003. Materials and parts manufacturers were concentrated in the area around Nantong, making it the ideal location to develop the automotive parts business.

Musashi also established Musashi Seimitsu Investment (Zhongshan) Co., Ltd. (MIZ) in Guangdong Province in October 2014 as the managing company for the China business. MIZ aimed to increase operational efficiencies at MAP-CH and MAP-NT and facilitate relationships with manufacturers.


MAP-NT


Inside the plant

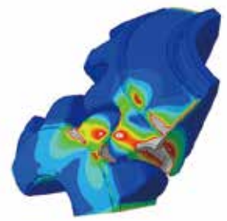

Tree-planting ceremony (Dec. 2015 at MAP-NT)

Group photo during a visit by President Otsuka (Dec. 2015 at MAP-NT)

■ 2011 / Gain orders for differential assemblies and camshafts for the Honda N-Box

Development of Differential Assemblies, a Global Strategic Product

Differential assembly (two pinion)



CAE analysis (differential gear)

CAE analysis (differential assembly)

The differential (properly known as the differential gear) makes driving smoother by absorbing and regulating the speed difference that arises between the inside and outside tires when a car turns. Differentials are also called diff gears or diffs. Differentials separately convey two different speeds to the tires based on the same engine power to create a smoother driving experience. In general, one unit of differential gear is installed for one set of driving wheels. Musashi has earned a strong reputation for its high value-added differentials and peripheral parts that overall are more compact and lightweight, offering the same strength with 10 percent lighter weight.

Ongoing development looking to the EV era

The spirit of foundation of Simple and Sturdy and Consistent Sincerity were the keys to overcoming the Thai floods, along with the corporate mission of continuing to explore and develop original Monozukuri (manufacturing) and provide attractive products, could also be seen in the field of development at this time.

In 2012, the differentials that Musashi's R&D Division had continued to design and develop since 1999 were adopted in the Honda N-Box.

The R&D Division was established in the 1980s with the two missions of developing high-performance products that would still be in demand in the EV era and developing technologies to make products lighter and for less cost. Differentials were one development target.

Until this time, Musashi had manufactured bevel gears, which are umbrella-shaped gear wheels that function to accelerate, decelerate and change the direction of the axle's rotation. Although Musashi conducted integrated parts production, these differentials were custom parts based on customer drawings, so sales came to no more than one billion yen. In addition, Musashi purchased the electrodes for the bevel gear molds from an outside source, which thus created risk in terms of stable quality and procurement and also affected sales channel expansion.

Amid these circumstances, Musashi set about fabricating electrodes in-house and developing original bevel gears and differentials.

In 1999, when in-house electrode fabrication was imminent, Musashi began development of original bevel gears with higher added value. While making bevel gear prototypes, by 2001 Musashi had installed facilities to evaluate them, and had set up a system to connect the processes from the customer's proposal through to prototype evaluation. The initial prototypes demonstrated less than half of the target strength, but through trial and error, Musashi completed development of MS45 and MS48 bevel gears that were one size smaller than Gleason differential gears but exhibited equivalent strength. Musashi then started mass-producing its original bevel gears. Starting in 2005 when its original bevel gears went into mass-production, Musashi worked on development of differential assemblies (diff assy), but customers were resistant to using them, because the differentials did not offer a cost advantage nor a substantial performance guarantee. Musashi could only perform inspections on the bevel gears, which did not create a sufficient quality assurance system.

When the Global Center opened in 2008, it installed a three-axle dynamometer for testing purposes and ramped up diff assy development. Around this time, key Musashi customers were switching from automatic (AT) to continuously variable transmissions (CVT) and new transmission development was in full swing. As part of this, Musashi received two requests to develop new diff assys.

To create a cost advantage, Musashi started development of MS diff assys that gave the back of the gear a fully spherical shape and used MS bevel gears. Here Musashi needed some time before it could make headway. It was not able to develop parts that satisfied its customers. While Musashi did receive some positive feedback for getting the assembly to be 10 percent lighter than competitor assemblies, many problems including with rigidity and baking performance also arose and Musashi lost orders. Facing a number of complex issues that appeared to have no solution, the development staff hit a wall.

Embodying "Be Unique!" with original Musashi products

But Musashi did not give up on its development dream. Instead, Musashi displayed the spirit of challenge and unity that could rightly be called Musashi traditions. R&D staff teamed up with the Quality, Production Technology, and Machinery divisions to tackle the problems.

Specifically, they conducted the PDCA cycle on a daily basis from the product review to the testing stages. They innovated the equipment mix and fabrication methods to improve quality, resulting in achieving the required precision down to the micron level (1/1,000th of a millimeter). They worked to manufacture an in-house inspection machine and create a traceability (lot tracing) system and built up expertise in quality assurance.

A number of original standard values were set for such aspects as side clearance, crimping load, and press fitting load to control finished product quality, and extensive testing was conducted on thousands of mass-produced parts. Many challenges arose in the fabrication process, and they were solved one by one through a cycle of trial and error.

Finally, they were able to clear the customer's evaluation standards and have their diff assys used in Honda's N-Box, leading to mass-production of the part. Since 2013, the differential assemblies have also been used in the Brio model made exclusively for the Indian market and other models including the Fit and the Stepwgn. Most models of its key customers use Musashi's differential assemblies. The part has also earned positive reviews from global OEMs and transmission manufacturers to become a hit product with sales of 30 billion yen.

This success is a leading example of the slogan "Be Unique!" that President Hiroshi Otsuka unveiled in his 2008 New Year's address. Musashi takes original ideas and gives them actual shape until they become reality. This gives employees a sense of personal satisfaction and joy and leads to success for the company. And Musashi gives its full support to this. Development of differentials is one of the first successes of this process.

Diff race line

Diff race line

Diff assy line

Differential gear exhibit at the Automotive Engineering Exposition (2012)

■ 2016 / Acquire 100 percent of Hay Holding GmbH shares ■ 2016 / Redesign the Hay Group's logo

Acquisition of the Hay Group

Hay Group head office

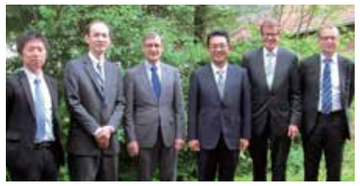
Joining a corporate group able to compete with the world's mega-suppliers

Musashi has implemented a global strategy following the oil crisis of 1973, entering the United States after getting business from Ford Motor in 1978. Musashi then entered other markets outside Japan including Thailand, the UK, Indonesia, and Brazil. When Hiroshi Otsuka became President in 2006, Musashi had grown into a global company with 14 bases in 10 countries, sales of 120 billion yen, and 8,000 employees.

There was one market, however, that Musashi had not entered deeply but needed to. It was Europe.

Musashi had conducted sales activities in the European market for more than 20 years, but Europe represented only 3.4 percent of its sales in 2016. Europe is home some of the world's leading carmarkers such as Volkswagen, Daimler, and BMW, but Musashi was having more difficulty growing in Europe than in other regions.

President Hiroshi Otsuka had spent nine years stationed in Europe, helping to launch Musashi bases in South Wales, UK in 1993 and in Munich, Germany in 2001. He was very familiar with the difficulties Musashi faced in entering the market. Europe had its own legacy technologies and opaque business group relationships. These represented major barriers in the European market that Musashi would have to break down from inside. Musashi decided that the only way to do this was through M&A.



From left, Takayuki Kano assigned to Germany, Managing Executive Officer Takayuki Miyata, Hay Group CEO Ralph Onken, President and CEO Hiroshi Otsuka, Hay Group Chairman Bernd Gottschalk, and Hay Group CFO Norbert Loers

President Hiroshi Otsuka's speech to Hay employees at the Bockenau Plant was held at a town hall in Bockenau, Germany, where some 600 labor union members and employees welcomed Musashi's ownership

Strengthening the business foundation in Europe

Musashi had been contemplating a corporate acquisition since around 2007. In 2015, a possible contender emerged. It was Hay, a German company that was founded in 1925. Hay had Hatebur high-speed forging equipment, which Musashi did not possess, and was skilled at using it. Hay had been acquired by a U.S. investment fund in 2012 and had grown into a global company with bases in Germany, Spain, and Hungary. It had also created a forging company in China in 2015. Another attractive feature was its strong connections to leading European OEMs including Volkswagen. For Musashi, Hay was just what it had been looking for: a company that could make the same forged materials, could increase the added value of Musashi products, and could strengthen Musashi's customer base in Europe.

In June 2016, Musashi acquired 100 percent of the shares of Hay Holding GmbH, the holding company of the Hay Group. With this, Hay's nine plants in four countries, and their 2,650 employees, became part of the Musashi Group.

Column 17 Hatebur Forging

Hay has high-speed, horizontal forging machines made by Hatebur. The large, high-yield machines are capable of producing large volumes of forged parts at high speed. Hatebur forging uses forging technology able to perform cutting, upsetting, and forming in an integrated manner. Musashi was pursuing integrated fabrication of all processes, so this was an attractive production technique.

Hay Group's prestigious equipment and technology Ⅰ
High-speed forging (Hatebur forging)

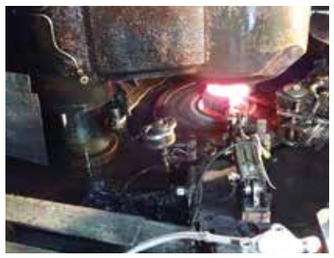
Hay's former logo

New Hay Group logo

The new logo shares the Musashi symbol of the three rings and the corporate colors to visually promote the Hay Group as part of Musashi

Hay Group's prestigious equipment and technology Ⅱ

Large forger: Hay Group owns large high-speed, horizontal forging presses of 3,000 to 5,000 tons that are able to perform various cold, warm, and hot forging



Hay Group's prestigious equipment and technology Ⅲ

Roll forging: Combining the Hatebur forging equipment with roll forging increases yield and competitiveness

■ 2017 / Musashi exhibits at the Frankfurt Motor Show (IAA Cars 2017) together with Hay

Hay's History and 100 Day Plan Implementation

Bockenau Plant at the time of its founding

Founder Johann Hay

Global recession hits Hay, a forming and machining leader

Hay was founded in 1925 and was therefore older than Musashi. Johann Hay had begun the company in a small town 100 kilometers west of Frankfurt, Germany. Hay mainly developed its business in forming and machining and grew to have two plants. Hay's plant footprint eventually became too small. In 2007 as Hay was considering expanding its plants and bringing in new equipment, it heard about a forging plant that was up for sale. Leading Swedish bearing manufacturer SKF was selling off its forging plant. The plant had eight Hatebur horizontal high-speed forging machines, which Hay was interested in.

Hay moved quickly to acquire the plant and established the company Hay Speed, but the global financial crisis struck the following year in 2008. Hay was having trouble getting the financing it needed, and in 2009 went under bank control. It was subsequently sold to a U.S. investment fund and then became part of the Musashi Group in 2016.

The global financial crisis swallowed up many outstanding companies and led them to bankruptcy. Hay was a textbook example of one of these companies. Its financial woes were not due to the decline of its technological capabilities and competitiveness. Musashi now had the major challenge of integrating Hay, and the technological capabilities and spirit of manufacturing it had fostered, smoothly into the Musashi Group and leveraging its advantages.

Implementation of the 100 Day Plan to integrate Hay

"Strike while the iron is hot."

After acquiring Hay, Musashi quickly moved to implement the 100 Day Plan. How should it make the two companies one? What synergies could be expected? The plan aimed to create discussions about future prospects and other topics with both sides on equal footing and maximize the effects of the merger. The discussions deepened understanding of each company's approach to work as well as language and cultural differences. Engineers also held discussions, and a plan was drafted to incorporate Hay's forging technology into Musashi products.

Implementing the 100 Day Plan also made the differences in the two companies' cultures apparent. While Musashi had a culture of having employees propose their ideas spontaneously and express their opinion without hesitation, Hay used a top-down approach in its operations. The workplace environment, such as the approach to work and the way of thinking about work, was different between the two.

To absorb and assimilate the differences in corporate culture, Musashi held study sessions at Hay to establish the Musashi Philosophy. In 2017, Musashi set about having Hay management understand the Musashi Philosophy and attempted to broadly instill the philosophy inside Hay.

100 Day Plan workshop

On a practical level, Hay's production lines were improved with investments in automation. Hay's engineers were invited to Musashi to gain a deeper understanding of its product development and technology.

After acquiring Hay, Musashi built connections to the product manufacturing expected in Europe and aimed to achieve the business expansion that it longed for in the European market.

In July 2018, two years after the acquisition, Musashi changed a series of trademarks for Hay Holding GmbH and its subsidiaries in the Hay Group, which received investment from Musashi's European subsidiary Musashi Holdings Europe GmbH, to unify the trademarks. This was intended to increase the presence of the Musashi brand in the global marketplace and strengthen integration at Hay Group companies.

At Metallumform (currently Musashi Hann. Muenden)

Engineer exchange

Hay plant observation

At Musashi Luechow after brand integration

■ 2012 / Musashi's afforestation activities completed at Aichi Kenmin no Mori ("Aichi Citizens' Park," Shinjo City) and begin at Takashi Ryokuchi Park (Toyohashi City)

Contributions to Sustainability

Traffic safety activities tied to the local community (KMS)

Off-site lessons and Saturday courses (MSI)

Summer festival (MSI)

Health support program (MAP-IN)

Facilities to provide drinking water for local residents (MAP-ID)

Social contribution activities aligned with community needs

A major role of the Musashi Group in its mission to create value together with society is creating functional improvements such as better fuel economy and safety to contribute to wider motorcycle and automobile safety and security as well as global sustainability. Musashi believes it has a responsibility as a company to conduct activities to create a better world together with employees, customers, business partners, local communities and others who represent its stakeholders around the world.

As a global company, Musashi believes that it is its responsibility to conduct ongoing activities aimed at environmental conservation and making social contributions to resolve issues faced by communities and society.

One such activity is promoting traffic safety. KMS (Kumamoto, Japan) works with a local traffic safety association and elementary schools to give advice on the streets during the spring and fall designated traffic safety weeks. The activity aims to raise awareness for traffic safety by ensuring that elementary students get to and from school safely and reminding drivers of the need for safe driving. MSI (Toyohashi) has held the Parent and Child Traffic Safety School for local elementary school children and employee families since 2014. With cooperation from the local police department, the program includes reenactments of various traffic accidents to raise awareness for safety.

Overseas bases also conduct activities to raise awareness for traffic safety, including a traffic safety campaign at MSB in Brazil and a traffic safety campaign at MAP-CH during the Lunar New Year in China when people return en masse to their hometowns.

Next-generation education and local community support contribute to regional development while building friendly relations between Musashi and the local communities and enhancing understanding for Musashi. MSI goes to neighboring elementary and junior high schools to give lessons and provides plant tours corresponding to school needs. It also sends instructors to teach Saturday courses (promoted by the Ministry of Education, Culture, Sports, Science and Technology) held at public halls in Toyohashi City.

The Musashi Summer Festival has been held on MSI's head office grounds since 1993 and has become an annual pastime. The festival includes stands selling food and drinks, kids' activities, mochinage (throwing rice cakes to an assembled crowd), and fireworks. Each year more than 1,500 people from the community come to the fun and interactive event, which has earned a strong community reputation.

Outside Japan, Musashi Group companies provide various types of support according to the needs of the communities in which they are based. MAP-IN in Indonesia provides health checkups and health seminars to residents living near its plant, especially those who are economically disadvantaged. MAP-ID in India has installed drinking water facilities for local residents as part of efforts to improve sanitary conditions. MAP-VN in Vietnam provides support to local communities in various ways, including offering funding to a school so that the school can offer scholarships to students from low-income families, and giving financial support to people in need and disabled veterans.

Other support includes opening the plant for a half day to the families of employees at MAP-TH in Thailand, participation in a charity run and community donations at MAP-MX in Mexico, and donating funds for a park with a fountain at MAP-CA in Canada.

Contributions to global environmental conservation

As a corporate citizen of the global society, Musashi makes efforts to conserve the global environment through its business activities and environmental conservation activities.

In its business activities, Musashi has established a system led by the Central Environment Committee to reduce its environmental impacts from both its products and production activities for the purpose of developing environmental management companywide. For example, production activities at each base are founded on principles conforming to ISO 14001 to advance global environmental management. Musashi also seeks to share and implement technology related to reducing environmental impacts and conserving energy.

In its environmental conservation activities, Musashi aims to raise environmental awareness among employees and their families and contribute to environmental conservation by holding a range of events together with local communities.

The Musashi Environment Creation project is one such activity. As part of this project, Musashi conducts cleanups to aid conservation of the Shiokawa Higata tideflats in Mikawa Bay, which straddles Toyohashi and Tahara in Aichi Prefecture. The cleanups allow participants to observe the plants and creatures that live in the tideflats and learn about the biodiversity of the area while being out in nature. The cleanups are held in early summer when crabs and other wildlife indigenous to the area are active. About 140 employees and their families participated in the cleanup held in 2017. The smiles and delight of children participating in the cleanup were featured in news stories published in the Higashiaichi Shimbun newspaper and the official website of Toyohashi City and received many positive responses.

Other activities in the project include maintaining green spaces in parks and cities, forest conservation, seashore conservation and sea turtle observation, river conversation (cleanups of the Umeda River), wetland conservation of the Imo Bog, and greening activities around Musashi plants.

In 2018, Musashi received a letter of appreciation from Toyohashi City for its environmental conservation activities.

Donation to a community park with a fountain (MAP-CA)

Musashi Environment Creation (MSI)

Participating employees and their families (MSI)

Receiving a letter of appreciation from Toyohashi City

■ 2016 / Changed name to Musashi Harvest Co., Ltd.

Musashi Harvest Supports the Musashi Group

New start providing employee benefits for the Musashi Group

Musashi Harvest Co., Ltd. is the company that provides employee benefits for the Musashi Group. Its establishment goes back to August 1968. It began by becoming independent from Musashi's Transportation Division as the Musashi Packaging and Transportation Company. It started out with capital of 2.5 million yen and a fleet of six vehicles. Besides the transportation business, initially its main business activities were providing services such as property insurance agency services. Noboru Yanuki was appointed its first President.

Meanwhile, Musashi Development Co., Ltd. was established in October 1972 for the purpose of providing some Musashi Group benefits such as plant dining hall services, dormitory management services, and land and building intermediary services. It had capital of 10 million yen, and President Yoshiharu Otsuka was named its Representative Director. Provision of food service for employees began in January 1976 at Musashi worksites. In 1981, it constructed a 48-unit condominium building in Nakano-cho, Toyohashi City, in a business alliance with Ohkuraya Architecture Design Co., Ltd. It began condominium sales the next year and sold all the units. Then in October 1987, Harvest Life Co., Ltd. was established to provide travel agency services, ceremony-related services, condominium and dormitory services, leisure facility operations and management services, and real estate-related services, among others. It had capital of 10 million. Masaaki Otsuka was appointed its first Representative Director. The next year in March 1988, Musashi Harvest Life received the rights to operate sales kiosks from Musashi Development and began these operations at Musashi in April. In 1989, it began a café business with the Green Garden (Ueta) and Marine Blue (Akemi) cafés.

In 1996, Musashi Packaging and Transportation merged with Musashi Development and Harvest Life and began food service, sales kiosk, and travel agency services. By 2015, it had withdrawn from the transportation business and begun dormitory operations and contracted landscaping and cleaning services.

It began contracted receptacle cleaning and a temporary labor staffing business in 2015. That same year, the company name was changed to Musashi Harvest Co., Ltd. to align with the changes in its business operations. The company focused exclusively on food service and sales kiosk operations, dormitory management, cleaning and landscaping activities, and insurance and travel services for Musashi.

Ceremony unveiling the new company name in 2016


Kitchen at the Ueta dining hall (Food Service Division)


Sales kiosk at the Ueta dining hall (Store Division)


Safety and health training


Food service members at the Ueta dining hall


Salespersons at Musashi Harvest


Stand at the 2017 Musashi summer festival

Running in the Honokuni Toyohashi Half Marathon

Filming the One Musashi dance

50 years of supporting the Musashi Group

The predecessor of Musashi Harvest was the Takeyukai (Musashi Friendship Association).

The Takeyukai was formed in 1967 as the division providing benefits to all Musashi employees for the purpose of planning and implementing recreational and cultural activities. Japan was in the middle of a period of rapid economic growth at the time, and companies had started focusing on providing employee benefits.

The Takeyukai set up committees for general affairs, the economy, recreation, sports, and culture. One business contracted operations of store kiosks and group purchasing. This division was later taken over by Musashi Development.

After 50 years since its founding, Musashi Harvest has returned home. Together with Musashi, Musashi Harvest intends to support the Musashi Group by offering reassuring, safe, and pleasant services with a smile for employees and their families.

Sponsor Agreement with the Motorcycle Racing Team HARC-PRO.

HARC-PRO. signing ceremony

2010 Suzuka 8 Hours Endurance World Championship

2013–2014 Suzuka 8 Hours Endurance World Championship

Instilling Motorsport Culture in Musashi

Musashi has actively participated in motorsports to enhance its technological capabilities and as a way to participate in society.

After providing gears for Honda's plant team racing machines in 2007, the following year on June 1, Musashi concluded a plant team sponsor agreement for FY 2008 with Honda Racing Corporation (HRC). The racing motorcycles used Kyushu Musashi Seimitsu transmissions, and Musashi's logo was prominently displayed on the racing machines, the team track, equipment in the team pit, and on a large poster made by HRC for the Suzuka 8 Hours Endurance World Championship.

In October 2008, Musashi became the main sponsor of the HARC-PRO. racing team, which used Honda racing machines. HARC-PRO. was established in 1984 and has participated in the All Japan Road Race Championship since 1989 as a consistently top-ranked team. Before concluding the agreement, HARC-PRO. had won the All Japan Road Race Championship nine times, the ST600 class four times in a row, and had been on the Suzuka 8 Hours Endurance Race winner's podium on multiple occasions.

In December 2008, the MuSASHi RT HARC-PRO. team was unveiled to the press at a hotel in Tokyo.The following year, it was announced that the team would enter the Suzuka 8 Hours Endurance Race and the All Japan Road Race Championship. Musashi's motorsports website was also launched at the same time. As the main sponsor of HARC-PRO., the Musashi brand has become more widely known to the general public.

First Win at the Suzuka 8 Hours Endurance Race

The 32nd edition of the Suzuka 8 Hours Endurance Race began in July 2009. The MuSASHi RT HARC-PRO. team advanced from the qualifying round as expected, posting its best team time and ranked in second place. But the team met with heavy rain and experienced accidents including falls to finish in 43rd place at its first Suzuka 8 Hours Endurance Race.

The team started out in fourth place in its second attempt at the 33rd edition of the race in July 2010. With numerous crashes and falls on the track, whose surface temperature exceeded 60 degrees Celsius, starting rider Takumi Takahashi moved the team up to second place and then second rider Ryuichi Kiyonari moved into first place on the 28th lap. While he fell to second place at times in the pit, he was the lead rider to beat for the rest of the race. The MuSASHi RT HARC-PRO. team finally had a long-awaited victory at the Suzuka 8 Hours Endurance Race. The team went on to win the race again in 2013 and 2014. The MuSASHi RT HARC-PRO. team had become an undeniable force at the Suzuka 8 Hours Endurance Race.

Entering the Suzuka 8 Hours Endurance World Championship and Developing the Next Generation of Riders

2015–2016 Suzuka 8 Hours Endurance World Championship

2017–2018 Suzuka 8 Hours Endurance World Championship

Group-wide Support for the Suzuka 8 Hours Endurance World Championship

Two years after the team's win in 2010, the Musashi employee fan club was in the stands cheering for the team to win at the 2012 Suzuka 8 Hours Endurance Race. Five hours after the final race had started, MuSASHi RT HARC-PRO. made its move after battling for the top position. But as rider Kiyonari came out of the pit and back on the track, he fell coming out of the first Degner Curve. His racing machine was in flames. The cheers from the Musashi employee fan club turned to screams. Everyone's hearts raced as they watched the big screen, where rider Kiyonari, in his charred racing suit, could be seen pushing his burned motorcycle back to the pit.

The team was told to return to the pit over the wireless radio. A total of 20 crew members had the spare parts ready and were waiting to get to work. President Hiroshi Otsuka rushed over to watch as the team repaired the racing machine in an hour. Seeing the racing machine miraculously return to the course, the pit crew, the Musashi employee fan club, and general spectators broke out in a big round of applause and cheers.

There were 180 people in the Musashi employee fan club at the time. In 2008, Musashi started partnering with fan bus tour organized by the Honda Satsuki Association to send supporters to the race venue. The companywide event had become a summer tradition at Musashi. In 2014, a record-high 253 people participated as spectators, and this is when the fans starting waving a big flag during the race. In 2015, the supporters watching from the stands numbered 270 including the fan club from Toyohashi City. Motorsports had gradually become a part of Musashi's culture.

Developing the Next Generation of Riders

Beyond providing gears and transmissions and sponsorship agreements, Musashi started the Musashi Scholarship in 2014 as a way to contribute to the world of sports in a broader sense. The scholarship program is mainly led by HARC-PRO. for the purpose of developing elite riders with the power to bring more excitement to the world of motorsports with their amazing performances. With world-class instructors providing one-on-one support, the scholarship program is already producing impressive results.

One scholarship recipient won a series title in 2016. For example, Teppei Nagoe was part of the first round of the scholarship program and won the 2016 All Japan Road Race Championship in the ST600 class and was ranked third. The program has produced several other promising young riders including Yuki Kunii and Ryusei Yamanaka, who have competed in the Asia Talent Cup (ATC).

Part 8 To the Future

A number of near-future projects to realize dreams are moving forward, such as flying cars and space elevators. A number of near-future projects to realize dreams are moving forward, such as flying cars and space elevators. Mixed reality (MR) technology holds great promise to increase production floor efficiency in the automotive industry.

Musashi is also making moves for the future. A production system incorporating AI is fast approaching realization. Musashi has also started projects offering support for agriculture and childrearing, which are areas of concern in Japan's super-aging society. Initiatives also begin to address social issues by employing technology and going beyond the framework of existing businesses.

Initiatives for the Future

In April 2018, Musashi celebrated its 80th anniversary and marked a new start aimed at the future. It is ramping up a number of future-focused initiatives kicking off with the anniversary party.

The company entrance and dining hall have been remodeled to better communicate how Musashi's is great both inside and outside the company. The Musashi Innovation Lab opened in front of Toyohashi Station. Musashi is creating an environment aiming to generate community-based innovation. It is also going after new business creation, looking to create business from ideas generated in the AI Project and at Musashi Innovator's Gate 2017.

The Machinery Division has begun expanding business led by the machinery-purpose Akemi Plant, and has begun operations at the Shin-Minami Plant at Ueta, which produces key components for electrified vehicles. The new Musashi Europe was established in July, and brand integration is speeding up in the European region. Musashi has decided to build new plants in India and China, where further market growth is expected.


80th One Musashi Festa

⇒ Executive Committee member comments (p. 119–121)

Honda NSX models added as company vehicles



Remodeled office and dining hall at Ueta Plant

Musashi Innovation Lab opens

To the Future 2018–

Comprehensive cooperation with Toyohashi University of Technology


Shin-Minami Plant, Ueta Plant begins operations

Division website launched to strengthen outside sales

New Machinery Division plant (Akemi)

Honda President Takahiro Hachigo visits Musashi

⇒ Special discussion with young Musashi employees (p. 123)

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Initiatives to create new business

⇒ New project sites (pp. 110–117)



MAP-ID Plant #3 (Bawal)
MAP-NT plant expansion

A Look at New Projects Ⅰ

AI Project (Sota Murata, Keisuke Fujita, Fumihisa Kamiya, Satoshi Miura, Arman Muhammad Chowdhury)

Innovate Production Floors with Monozukuri × AI!

We are finally seeing internet-driven economic and social development as well as globalization take shape, and the artificial intelligence (AI) function of deep learning is receiving a lot of attention as the next broadly impactful technology. Deep learning is technology that allows computers to independently learn from data characteristics. It is expected to be a means of achieving decisions by machine that would normally require human perception and judgment.

Musashi started an AI project in January 2017. Led by the President, the project assembled employees with shared interest in AI. People took part in project discussions without regard to age, company position, or department, which concluded with a decision on the area to pursue. It was to integrate AI into the inspection process.

The AI Project started with an eye to Musashi's future

Initially, a dozen or so people from departments such as facilities and IT worked on the project in addition to their regular jobs, but in June 2017 researchers with knowledge of deep learning fundamentals began leading work on the project.

Murata: Visual inspections in the manufacturing industry have always relied on people to perform them, and the needs for automation had grown. So we partnered with Abeja, a venture company with experience in the image analysis and deep learning technology we needed, aiming to automate the inspection process. We set our sights on the bevel gear inspection process and conducted desk tests from June to October for performing automated inspection of finished products. Once we were able to see some results, we leveraged Musashi's capabilities to create our own inspection equipment in cooperation with facility engineers and others.

The AI Project started in January 2018 with the three full-time project members Sota Murata, Fumihisa Kamiya, and Keisuke Fujita.

Murata: Fujita and Kamiya collected and prepared the data we needed for deep learning, processed it, and then applied AI with the goal of achieving precision that could be used in operations. Then in April 2018, Satoshi Miura joined the project to write the code to connect the equipment and operate it smoothly. I started out as a facilities engineer, and my role is to integrate the software and the hardware built by those three and keep the project as a whole moving forward.

At work

Fujita: Currently, I'm working on creating AI able to perform visual inspections of bevel gears at Musashi. The standard for visual inspections is ensuring that there are no scratches or dents. Up to now, this depended on a worker's visual perception, but there were no clear standards. We aimed to create AI that had the same visual perception as a worker and could perform under the challenging conditions presented by gears, such as accounting for the difference in distance between the tip and base of the gear teeth and visual variations caused by lighting.

Kamiya: Specifically, this involved creating an optimal environment for automated inspections inside Musashi and then obtaining the image data. We repeated the process of having AI study the data and confirming its level of precision. We needed to increase the level of precision to where it could be put into practical use. We collected 86,000 images to use as data over three to four months after the project started up in January. We checked every single image and labeled the location of the flaw according to its type. There was a lot of manual work at the beginning. It's much easier now that this has been automated. Creating the equipment ourselves is a Musashi strength, because we can automate different parts like this where we see fit.

Miura: I put the deep learning that Fujita and Kamiya are involved in—the so-called brains—into the production equipment and connected it with the line. The line consists of robots, conveyor belts, and lots of other parts. I always have to keep an image of the entire system in my mind to figure out how the different parts should go together. And we were making the system from scratch, so there was nothing to work from. I was really lost at first. But it helped that we were working inside Musashi, because I was able to collaborate with the facilities staff over things big and small, and this kept the project moving along without losing time.

Murata: Around March development shifted into high gear. Specifically, we were aiming to create an inspection cycle achieving the same level of precision as visual inspection by a person in two seconds per automotive gear without stopping the production line. At present, we've managed to reach the standard value for precision on paper but not yet our target value on the production floor. There are a lot of different AI algorithms, and the many ways you put them together is key. Our challenge in the near term is trying out these different algorithms and ways to combine them one by one while getting closer to the target value.

Announcing their results at the Six 2018 AI conference

Musashi displays strengths at the Artificial Intelligence Exhibition and Conference

The second Artificial Intelligence Exhibition and Conference was held at the Tokyo Big Sight convention center over three days starting April 4, 2018. Musashi gave presentations and demonstrations at its booth.

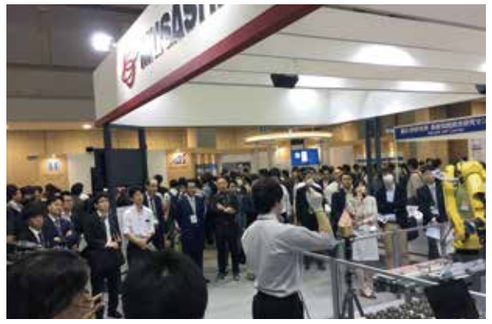
Murata: It was only the second edition of the AI exhibition, and many of the participating companies were startups. A lot of companies just used panels to introduce their systems, but Musashi conducted demonstrations with real equipment. We also gave a technical presentation on the theme of "Automating Inspections Using AI Eyes," which received positive feedback for being easy to understand.

Fujita: We heard from people who worked for auto parts manufacturers of course, but also from people who worked in different fields and were intrigued by the possibilities, such as pharmaceuticals and food product manufacturers. This made me see again how integrated production was a Musashi strength, which was something that I had just taken for granted before. Even if other participating startups could explain their ideas using words and system diagrams, it's not easy to actually make a system and show it to people.

Murata: While we're working in the cutting-edge field of AI, it's a Musashi tradition to sprint ahead when the time comes. When I'm stuck on something, I recall the lessons of our predecessors, who said things like "There is no tomorrow without technological innovation," and "Build up daily innovations." They give me the courage to take a step forward.

AI is still an undeveloped area, and many companies and researchers are competing to make technological innovations. In the automotive industry especially, the precision demanded by customers is very high and you have to make your products one hundred percent safe. I'm confident that we will find success if we tackle this project with Musashi's long-held spirit of manufacturing, a sense of speed, and companywide effort.

Musashi's booth


Musashi's booth filled with visitors

The future of the AI Project, and the future of Musashi

The Japanese economy is facing problems today, including the aging of its workforce and the resulting labor shortage, so creating higher efficiency with AI is a promising solution. The areas where AI is expected to play a role are tasks that rely on human senses.

By having AI perform these tasks, people can be put to work in other new areas. This holds the power to lower costs and speed up new innovation.

Murata: We've been automating our production lines at Musashi, but inspections have not yet been sufficiently automated. The in-house inspection process accounts for approximately 20 percent of all processes. If AI could replace this inspection process at all of our bases around the world, this would make our operations much more efficient and could stably and sustainably reduce inspection mistakes. It is also possible to use the AI technology we have developed in other businesses and fields.

Fujita: At manufacturing sites, there is potential for using time series for vibration, noise, and other data in addition to images. In the future if the AI Project becomes an independent business, it could grow quite large by entering fields like medicine and developing technologies in areas where AI replaces human perception.

Kamiya: Currently, Musashi is a company based on selling manufactured goods, but there is something that people always said when I was working in development. They said that key products Musashi makes may no longer be needed when the markets shift to EVs, for example. So we have to take action now with an eye to the future. While I work to make a business out of applying AI, my bigger goal is to create new value that takes the place of goods.

Miura: I have the feeling that what we're working on now will be obsolete technology 20 years from now. Instead of letting our AI technology get out of date, I want to develop it into legacy technology in the industry, where people may still turn to Musashi's AI systems even if they are a little old.

Murata: The goal of AI is to have it work for people after all, and not to take work away from people. For example, if there's a labor shortage, AI can be used to supplement the labor force. Having people focus on the work that needs to be done by people will benefit the economy and society. A major goal of our AI Project is to present new values.

Sota Murata
(joined Musashi in 2006)
[Previous department: Machinery Section, Machinery Group, Machinery Division]
Carrying on Musashi's tradition of next-generation innovation and adding to our successes

Keisuke Fujita
(joined Musashi in 2016)
[Previous department: Technology Development Group, R&D Division]
Becoming an engineer who creates value even when AI is everywhere in the world

Fumihisa Kamiya
(joined Musashi in 2016)
[Previous department: Technology Development Group, R&D Division]
Creating a home where laughter abounds. Plus ultra!!

Satoshi Miura
(joined Musashi in 2017)
[Previous department: Machinery Section, Machinery Group, Machinery Division]
Enter FISM!

Arman Muhammad Chowdhury
(joined Musashi in 2018)
[Assigned in July 2018]
Bringing smiles to people through innovation

A Look at New Projects Ⅱ

Musashi Innovator's Gate 2017 AgriTrio (Hiroyuki Ishikawa, Yuta Kobayashi)

Know-How Service to Alleviate the Labor Shortage in the Agricultural Industry

Japan's falling birth rate is having a major impact on its agricultural industry. A raft of problems need to be overcome to preserve Japan's food system, including a declining number of people engaged in farming, no successors at many farms, and the lack of international competitiveness.

AgriTrio is developing a new business to address these problems based on providing much needed labor power.

The business uses the strengths of the manufacturing industry to create manuals for work processes and help lower the barriers between farmers and job seekers. Using the know-how it has built up, Musashi aims to connect people and contribute to Japan's agricultural industry.

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Saving farmers, turning aspirations into business

The three employees who signed up to join the new business project first aimed to created a welfare-related business.

Ishikawa: When we were thinking about creating a business offering social welfare services, we looked at how to break away from non-profit-type activities and differentiate ourselves from welfare service businesses that were already established. Was there a business that was truly needed? We couldn't find an answer. Then we thought about Toyohashi City, where Musashi started out, and what kind of city it is. We decided that it was founded on cars and farming.

Kobayashi: Some employees came from farming families, and they expect to take over the family farm at some point. But their families have opposed this on the grounds that farming is physically tough. When you look at farming today, many farmers are getting older and there are fewer people taking over farms. So we did a study to find out what situation Toyohashi's farmers were in.

Ishikawa: Many of the people who are still working are in their 70s and 80s. Even though they have back pain, they can't take time off during the busy season. Even if they would like to hire people for paid temporary work, they can't find the people. And if they use a temporary employment agency, they only send people out. These people then have to be taught everything starting from step one. This is inefficient and sometimes problems can arise too. Considering the situation, we thought we could create a business by providing a solution for these issues.

Kobayashi: And we simply wanted to help save farmers. This is how our Know-How service was created.

Ishikawa: We wanted to match farmers who need farm hands during the busy harvest time with students and homemakers who want to work in their spare time. We would do this by mobilizing Musashi's expertise to create manuals explaining simple farm tasks. People can read through the manuals before doing the work, which makes it easier when they go to the farm for the first time. This is the kind of system we wanted to make. Lowering the barriers for farmers and workers would increase farm continuity.

How did you divide your roles in the team as you launched the business to connect farmers and people?

Ishikawa: I was the coordinator. I put together the information we collected, and I went out to farms and met with people involved in farming to collect information. I also met with representatives from the Chamber of Commerce and Industry and the municipal assembly as well as National Diet members to explain the objectives of Know-How and our future business plan and ask for their understanding and cooperation.

Kobayashi: I worked closely with farmers to create the manuals, in part by actually doing the work. I used photos and video to show how to do the work so even beginners would understand. The manuals use plain language to explain the instructions from the farmers, and then I had users actually use the manuals and do the work, revising the manuals as needed. This went on for many days.

Ishikawa: I also do advertising and PR activities. I plan and hold farm work experience events that allow people to have fun while also learning about the Know-How service. Basically, by helping deepen communication between people, we also get to hear their true feelings, and this allows us to put more detail into the manuals. If people enjoy their experience, they may put it on social media or spread the word about Know-How in other ways. The key is how much you can engage people in what you're doing.

Holding an event

Out at a farm

earn revenue from matching fees and platform usage fees. We need to build a lot of detail into the system, such as wage settings, attracting workers, and creating operational manuals. In the future, I would like to use Musashi's AI technology and machinery and robots to make Japanese farms more efficient.

Kobayashi: Musashi fabricated and repaired agricultural machinery at one time. Then we entered the motorcycle and automobile markets and created a lot of employment in our local area. The farmers that I visited also felt a closeness with Musashi and treated us with goodwill. I would like to make Know-How a business that revitalizes farming and brings happiness certainly to our hometown of Toyohashi but also to Japan and then can grow into a global network.

Ishikawa: I would like to tackle challenges that Japan faces and expand the business so that one day it can make contributions to resolving social issues on a global scale.

Aiming for the world with the spirit of "Be Unique!"

Individually, what are your future plans and ambitions?

Ishikawa: Going forward, the challenge for me is creating a service that will make both the farmers and the workers happy, and creating a system that will

Hiroyuki Ishikawa (joined Musashi in 2001)
[Previous department: Cost Management Group, Accounting Division]
Now I am working on regional revitalization in the agricultural field, but I would like keep launching new businesses outside of agriculture too and develop innovators globally

Yuta Kobayashi (joined Musashi in 2007)
[Previous department: Prototype Section, Prototype Group, Machinery Division]
I would like to be able to do things with people who are interested in the things I want to do then

A Look at New Projects Ⅲ

Musashi Innovator's Gate 2017 wkwk Co., Ltd.
(Yoichi Yanase, Atsushi Tsuzuki, Sachiyo Tamaya)

Turning Nuclear Family Child-rearing into a Company!

This new business project at Musashi aims to create completely new business not tethered to Musashi's existing business and develop people who spark innovation. Yoichi Yanase, Atsushi Tsuzuki, Sachiyo Tamaya took their project's positive evaluations and set their sights on Tokyo. Their mission was to go to Tokyo and turn their business ideas into something real. In a place far from Musashi, they built their plan from scratch and started the business.

What would they discover as they explored this new territory, how would they connect that to a business, and what profit would this create? For these three sent off to Tokyo, it was a big challenge.

All they had were their ideas generated in the project and their determination. As of September 2018, they are still fighting to create a business from their own ideas.

In a brand-new situation, business clues were found nearby

As they talked in the company wkwk, they included the keyword child-rearing in their business plan. They have been working exclusively on this project in Tokyo since April 2018.

Yanase: If we were to start a business in Tokyo... As a result of conducting market research on businesses like sports gyms and services for senior citizens, we thought that starting a business related to child-rearing would be good. I also have children, and I would often have conflicts with my wife over something about raising them.

Looking into this area, we learned that many couples who are blessed with children nevertheless experience friction over problems related to raising them.

Tsuzuki: Something the three of us talked about a lot was how to improve family relationships. With nuclear families increasingly the norm in Japan, people don't necessarily have someone they can turn to even when various problems arise from caring for parents or children. So we decided to offer a service that helped shift family relationships in a positive direction.


Meeting

Tamaya: We named our company wkwk Co., Ltd. with the goal of offering services that brought excitement to families' everyday lives, especially those of young couples raising children. We named our service Babying and started activities looking to commercialize it.

Yoichi Yanase (joined Musashi in 2011)
[Previous department: Technology Development Group, R&D Division]
I want to make Musashi a company that continuously delivers new value to people worldwide

Sachiyo Tamaya (joined Musashi in 2017)
[Previous department: Technology Evaluation Group, R&D Division]
I want to have fun both at work and raising my kids and keep taking on challenges as a mom and an employee!

Atsushi Tsuzuki (joined Musashi in 2012)
[Previous department: Sustainability Promotion Department]
I want to continue doing work that touches people's hearts and makes them feel fulfilled!

What makes Babying different from existing child care services? What are the features of Babying?

Yanase: Unlike babysitters, what we handle is problems of the heart. We focused on the mismatch in communication that forms between a couple when they first have a child. When a couple marries and has a baby, it creates new relationships and responsibilities among the three parties. For example, a new father may try to help out by washing the dishes or changing the baby's diaper and expect to get praise. But what the mother wants is someone to talk to about her day and share in all the things that she's experiencing. This mismatch in communication causes stress at home and widens the gulf between the couple.

Tsuzuki: So we keep searching for the answer to what is at the heart of the mismatch. We conducted interviews and did research to obtain a number of sample responses.

Tamaya: At first we didn't even know who to ask questions to or what to ask. We tried talking to people in parks in Tokyo, but they were guarded and we were told that we needed to get permission from the park attendants first. Nevertheless, we gradually built up scenarios that were useful to our project. When we heard that men taking child-caring leave were given frosty receptions at work and had a difficult time, we decided that we wanted to do something to help them.

Our goal is to surpass Musashi's market capitalization!

To resolve communication rifts between couples raising children, we needed to have a wide range of knowledge and expertise as we worked on developing a service using IT-driven tools to improve couples' communication.

Tamaya: Now we are holding sessions where we talk with couples and are learning about psychology to be sensitive to participants' feelings and experiences. We may need to provide emotional support at a critical time.

Yanase: Living as a nuclear family without parents or relatives nearby to rely on is a common trait among married couples in the Tokyo area. We focused on this as well. Babying steps in for parents and relatives to support these couples to resolve their worries and problems. Today there are many communication tools people use to interact with the outside world, but we want to make a tool needed on a more personal and intimate level. We're told by Musashi to surpass its market capitalization, and that's exactly what we want to do.


Informal meeting

Tamaya: I want to grow our company to surpass Musashi's market capitalization and have Musashi recognized as the family services company.

Tsuzuki: For better or worse, Musashi is a company that entrusts its people to do things. When I set out for Tokyo, my boss told me to "Go and do something interesting." My workplace at Musashi has a cheerful and family-like atmosphere, and it feels really worthwhile to be able to work on this new business within this company culture.

I have more opportunities now to meet with engineers doing research on cutting-edge IT and have learned how an AI engine can create various services from infinite options. The question is how to use this in the services we offer. Just thinking about it is exciting.

80th One Musashi Festa

—Strengthening ties, taking pride, looking to the future—

[Date] April 7, 2018　　[Venue] Holiday Hall, Loisir Hotel

3:30 p.m.
Venue open

- Exhibit corner



5:00 p.m.
Opening

- Light mapping show
- Remarks by the President
- Toast
- Meal



President Hiroshi Otsuka

Director Takayuki Miyata


6:10 p.m.
Entertainment

- One Musashi Dance
- Announce commemorative merchandise
- Raffle


One Musashi Dance
Choreography : Lucky Ikeda




Stationery sommelier
Misato Kan


7:45 p.m.
Ending

- Musashi song
- Closing remarks



Senior Executive Officer
Kenji Morisaki

Let's keep Musashi loved by everyone!

Allow me to express my deep appreciation to the more than 1,000 Musashi employees from Japan and overseas, our retired members, and everyone's families for coming our 80th anniversary celebration.

It is thanks to your cooperation that this event has been such a success and worthy of the concept "Legacy of the Past, Vision of the Future." Thank you very much. We will continue striving to be a company loved by many.

Kenji Morisaki
Committee Supervision
80th Anniversary Executive

One Musashi is the best!

I would like to express my heartfelt appreciation to all of our members from overseas and to the members of the Executive Committee for holding this 80th anniversary event.

I am so happy that we have been able to share this amazing time together with our Musashi friends and colleagues and experience firsthand what makes Musashi what it is. "One Musashi" is the best!

Naoya Nishimura
Committee Chair
80th Anniversary Executive

Embody Musashi! For the next 10 years!

This event was made possible by the many people who lent their support from the preparation stage to the actual day so that Musashi's 80th anniversary would truly be something to remember. There were times during this process when people clashed over their opinions, and there were difficulties in getting a large group to make one thing together, but bringing in a diverse range of viewpoints and ideas allowed us to create an amazing event that we did not even imagine when we started this project.

I think we have widened our circle of friends and become stronger through this event. I'm glad that I've been able to make great memories with these friends and that the 80th anniversary was such an impressive event.

Being able to share in making something together is a wonderful thing, but it's not easy. While this is true, it is possible because of Musashi, and I think what we created also embodies Musashi. I hope to pass this on to the next committee members.

Hiroyuki Mori
Committee Deputy Chair
80th Anniversary Executive


80th One Musashi Festa

—Strengthening ties, taking pride, looking to the future—

Staging: Kinya Kawano

We wanted to surprise and delight the audience by bringing together an exciting mix of light and sound in the projection mapping and giving President Otsuka an impressive stage entrance. Even though we had a hard time figuring out how to express our vision of our respect for Musashi's 80 years of history and the One Musashi vision for the future, I think we were able to capture the attention of the large audience on the main stage and create something unforgettable. I am convinced that this success was the result of the circle of friendship that we built transcending the borders of our workplaces.

I would like to continue communicating the Musashi Philosophy that lives in Musashi's history and in the achievements of our predecessors to the next generation.

Exhibits: Takuya Fujiwara

I especially focused on the entrance gate because it can influence the overall impression of the event. I tried to create a cool and impressive entrance. The "Musashigram" frames included Musashi products colorfully arranged on them to encourage posts on Instagram.

We worked really hard on the design plan to make something that would capture guests' interest regardless of their age, gender, or ethnicity. I felt really happy when I saw so many people having fun and taking photos using the frames on the day of the event. Displaying all of the previous newsletter covers was a big job that took until the early hours of the morning, but it was a good experience thanks to the help I got from my colleagues.

History of forging booklet: Shinichi Murata

We are showing Musashi's future potential by talking about its past. This is what I wanted people to feel. I believed that my mission was to create a booklet about Musashi's history of forging. This is the "Dynapac Story." I went around to interview several of my senior peers and then pieced together their stories. This was a precious experience for me and felt cathartic. While showing appreciation to our predecessors, I made it a rule not to use names in creating the story. What the story conveys is our evolution—the spirit of a blacksmith shop that always takes on difficult challenges. The meaning of the title is supposed to become clear after you finish reading the story. It contains a message to young people that brims with courage.

Merchandise: Yusuke Shinjo

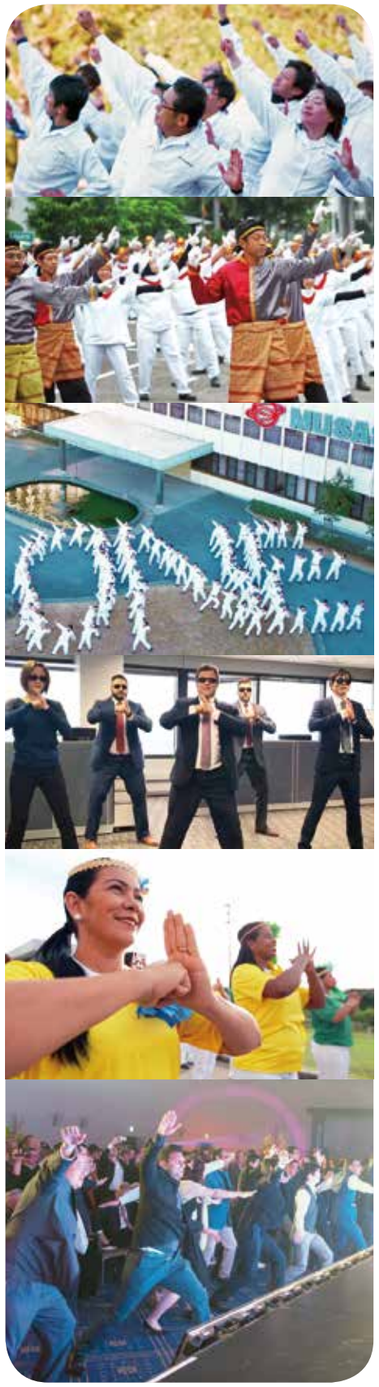
We started making a novelty stationery item using a Musashi product with the intention to create commemorative merchandise that would be eye-catching and create interest for Musashi products among large numbers of ordinary people. It is incredibly hard to create merchandise that will be liked by a diverse range of targets. We had to have a strong concept and maintain our focus. We got help from the stationery sommelier Misato Kan to brainstorm ideas about what kind of stationery item to make and decided on a bookmark with a miniature bevel gear attached, which people can take with them and use anywhere. While attaching a bevel gear to a bookmark with a chain may not seem that complicated, it took a lot of work to make. We were able to bring it to everyone thanks to the help we received from many of our colleagues.

Dance: Junichi Kawabe

I wanted to show off a dance performance that was stylish and energetic and a fitting tribute for Musashi's 80th anniversary.

The real work started several months before the event. I won't deny that it got a little hectic, but getting everyone to feel "One Musashi" with Musashi co-workers from around the world through the dance was the most rewarding part.

With this dance, I want to convey to the younger generation who will lead Musashi in the future that we must stay forever true to the Musashi origins of Simple and Sturdy and Consistent Sincerity, and that they should use it even 10 and 20 years from now as Musashi evolves in the course of their work, in other words, practice "Legacy of the Past, Vision of the Future."



Dance: Takashi Tanaka

The "One Musashi Dance" was one of the standout events at the 80th anniversary celebration, so of course we wanted to finish the dance without falling behind, but our biggest goal was making Musashi one through dance! I poured my heart and soul into creating a video to achieve this with a focus on making it about the entire Musashi Group. Working with the bases and retaking scenes made the video production schedule challenging, but under the direction of Lucky Ikeda, we were able to successfully finish shooting and create a video just as we had planned that united all of our colleagues around the world.

Looking ahead to our 100th anniversary, I want people to keep working with an even greater focus on One Musashi.

Project office: Kaori Sakae

If I can't have fun, I can't create something that's fun, so my first goal was to have fun. It was difficult at times in the planning stage to bring everyone's ideas together, but I think we were able to create something better because we had differences of opinions we had to work out.

On the day of the party, it was truly satisfying and rewarding to see everyone having such a good time. Most of all, working together with many people from other divisions and bases and creating strong relationships in the Executive Committee were for me the greatest rewards. I hope that we remember that we are united together with our colleagues around the world through the Musashi Philosophy.

Project office: Takako Suzuki

I always kept in mind the idea of getting all the bases involved and everyone having a good time. I tried to respond quickly when I would get email from a member who was overseas or who I could not meet directly, and I went out to talk about the meaning of the One Musashi Dance so that people would understand it. Within this process, overseas bases sent in dance movies surprisingly fast and with impressively high quality. In Japan, so many people took part that the dance studio was practically overflowing. It was moving to see people getting into the dance and having so much fun.

I hope that we make One Musashi again for the 100th anniversary and I get to participate in an event that exceeds what we can imagine now.

80th Anniversary Special Present

On September 10 and 11, 2018, Takahiro Hachigo, President, CEO, and Representative Director of Honda Motor Co., Ltd., visited Musashi over two days to celebrate its 80th anniversary. In addition to visiting the Ueta Plant, Akemi Plant #2, and Horai Plant, he also held a discussion with young Musashi employees.

Plant Tour

Forging plant, Akemi Plant #2

AI bevel gear inspection equipment, Akemi Plant #2

AGV automated transport, manufacturing engineering plant, Ueta Plant

Introducing an improvement story, 4R camshaft, Horai Plant

He saw Musashi's 80 years of manufacturing capabilities and how Musashi is actively pursuing AI and IoT and innovating its technology looking to the future. He saw firsthand the manufacturing capabilities and know-how that Musashi has built up that will create its future competitiveness.

The employees introduced the products they produce and how those products are built into cars so that he could get a direct sense of the daily efforts they put in so as to create the world's best manufacturing.

Card sent by President Hachigo

Words for Musashi from President Hachigo

Reaching your 80th anniversary in business is the result of all the hard work you have put in and a truly impressive achievement. Please accept my heartfelt congratulations.

The automotive industry is coming to a once-in-a-century turning point. I am impressed and reassured by the spirit of challenge and dedication you bring to Musashi, to further evolve the manufacturing Musashi has done since its founding, to proactively incorporate new technologies like AI and IoT, and to achieve the world's best manufacturing at Musashi. As a member of Team Honda, I hope that you will continue to work together with us.

Special discussion

Hearing about the experiences of Honda's top management

When President Hachigo visited Musashi, he held a special discussion with nine young and enthusiastic Musashi employees.

Hiroshi Otsuka
Musashi President

Shino Sonohara
R&D Division

Noriaki Sugita
L&S Division

Hikaru Okada
Machinery Division

Tatsuya Terada
PT Division

Tado Zen
Sales Division

Kazunori Ochiai
R&D Division

Nobuyoshi Yamaguchi
Quality Assurance Division

Naoya Akaishi
PT Division

Ayano Sugaya
Manufacturing Division 1

Takahiro Hachigo
Honda President

[Excerpts from the informal discussion]

Sonohara: What was the most difficult thing you've experienced in your career? And how did you overcome it?

President Hachigo: **Teamwork!** Right after I started working at Honda, I was assigned to brake design. Brakes are made by combining a range of technologies, so I couldn't make them on my own but needed help from various people. When I became President, I learned from this experience and used the expression "Team Honda" to call on people to work together.

Ochiai: The HondaJet is getting a lot of attention now, but I heard that development took a very long time. How did you maintain motivation when progress was stalled? What was the atmosphere like inside the company?

President Hachigo: We were working on other R&D besides the jet at the same time then, but everything was not looking rosy. With the jet, I think the strong resolve of the people involved who wanted to realize the project one day was a source of motivation. And then they received support and encouragement from Honda fans and other Honda employees who were inspired by their resolve, and I think this really lifted them up and was a big factor behind their success.

Terada: Why did you create this opportunity to talk with us now?

President Hachigo: I wanted to hear what you think of Honda. Even if I get one person to understand what I mean when we talk in person, that person will tell the people around them and this will spread my concept of Team Honda.

Yamaguchi: Could you tell us what your vision is for the future 10 and 20 years from now?

President Hachigo: What we absolutely have to do is address environmental considerations and work to achieve zero traffic accidents. In addition to these goals, I want to bring fun to people's lives and mobility. What form will the things that bring customers joy take? I hope to get ideas and suggestions from the younger generation. Please take action of your own volition and not because someone told you to.

Okada: My impression of Honda is that what is normal for Honda is not normal for the world. As the world around us changes, how much will you be able to pass down the thinking of Soichiro Honda?

President Hachigo: The thinking of our founder is immensely important. Honda's basic philosophy should be fully communicated to the younger generation. But there are also things that need to evolve with the times. I want the younger generation to carry on the philosophy of our founder and then think about how to create new value corresponding to the times. While what is normal for Honda is not normal for the world, this must match the times. I want what is not normal to be in the good sense of the phrase.

Akaishi: How do you think cars will evolve in the future? And how do you want to make them evolve?

President Hachigo: I want to make new things based on the concept of the freedom and joy of mobility. With the freedom of mobility, I also want to keep the joy of mobility even with fully self-driving cars. For motorcycles especially, people ride them not for a specific purpose but so they can enjoy the weather and be out in nature. I think we have to give people experiences that they can't get in everyday life, and I think about new types of mobility that can do this.

Ali: You have experience in the fields of design and management. What should I do to become a generalist in the future?

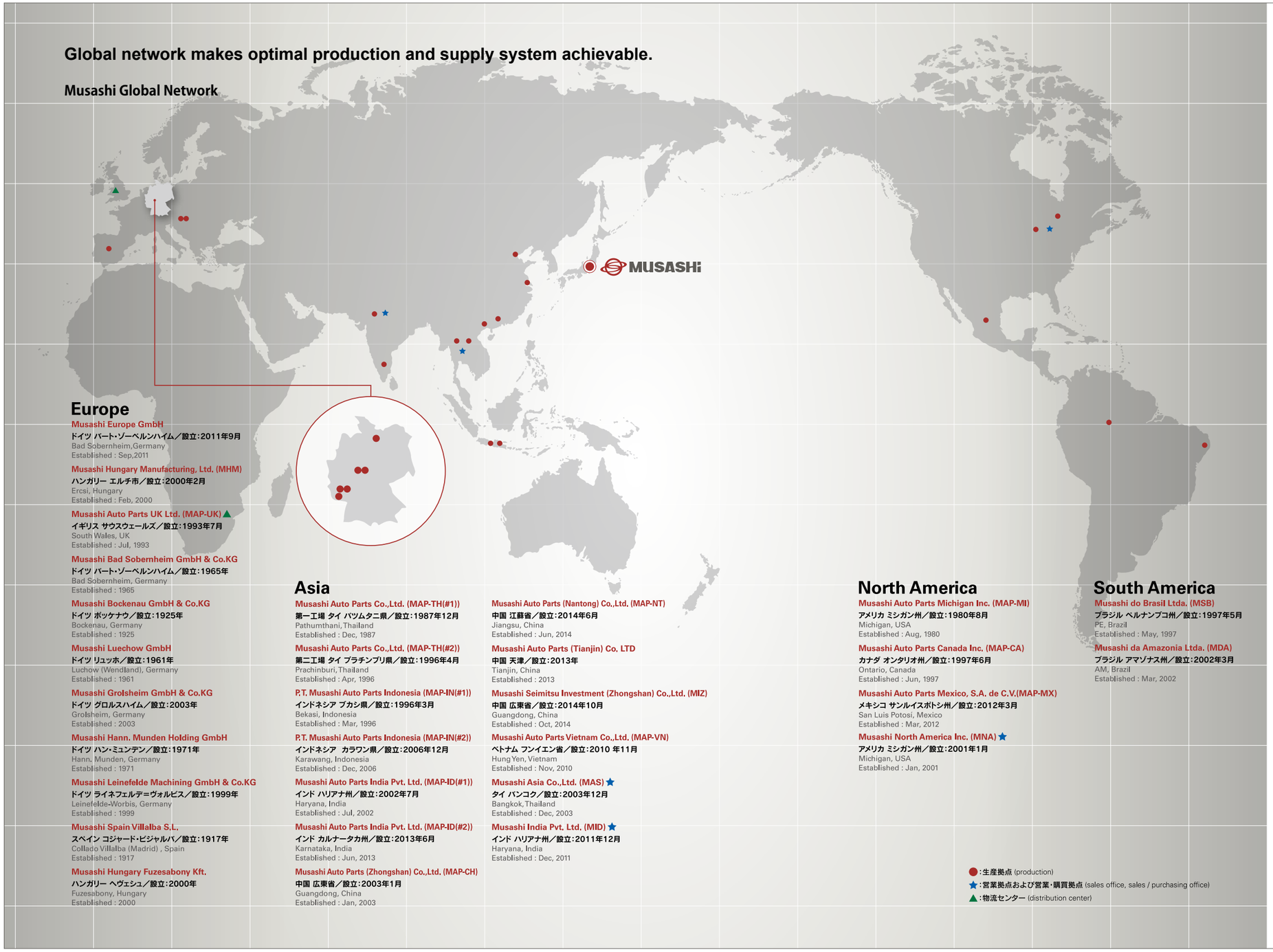
President Hachigo: As I worked on projects, I always thought about how to get the people I was working with to share the same goal and thinking as me. First, you have to be personable and someone who others want to be around. Then you have to have a lot of colleagues who are willing to help you when you run into problems and communicate a lot with people.

President Hiroshi Otsuka: When you were appointed president, it seems like you used the phrase "Team Honda" to shorten the distance between youself and others. Ultimately it comes down to interpersonal relations. The closer people feel, the more they want to live up to your trust in them and support what you're doing. I look forward to seeing Team Honda create stronger bonds, become a greater force, and grow even bigger.

Part 9 Musashi Spreading Around the World

Global network makes optimal production and supply system achievable.

Musashi Global Network



Europe

Musashi Europe GmbH
ドイツ バート・ゾーベルンハイム／設立：2011年9月
Bad Sobernheim,Germany
Established : Sep,2011

Musashi Hungary Manufacturing, Ltd. (MHM)
ハンガリー エルチ市／設立：2000年2月
Ercsi, Hungary
Established : Feb, 2000

Musashi Auto Parts UK Ltd. (MAP-UK) ▲
イギリス サウスウェールズ／設立：1993年7月
South Wales, UK
Established : Jul, 1993

Musashi Bad Sobernheim GmbH & Co.KG
ドイツ バート・ゾーベルンハイム／設立：1965年
Bad Sobernheim, Germany
Established : 1965

Musashi Bockenau GmbH & Co.KG
ドイツ ボッケナウ／設立：1925年
Bockenau, Germany
Established : 1925

Musashi Luechow GmbH
ドイツ リュッホ／設立：1961年
Luchow (Wendland), Germany
Established : 1961

Musashi Grolsheim GmbH & Co.KG
ドイツ グロルスハイム／設立：2003年
Grolsheim, Germany
Established : 2003

Musashi Hann. Munden Holding GmbH
ドイツ ハン・ミュンデン／設立：1971年
Hann. Munden, Germany
Established : 1971

Musashi Leinefelde Machining GmbH & Co.KG
ドイツ ライネフェルデ＝ヴォルビス／設立：1999年
Leinefelde-Worbis, Germany
Established : 1999

Musashi Spain Villalba S.L.
スペイン コジャード・ビジャルバ／設立：1917年
Collado Villalba (Madrid) , Spain
Established : 1917

Musashi Hungary Fuzesabony Kft.
ハンガリー ヘヴェシュ／設立：2000年
Fuzesabony, Hungary
Established : 2000

Asia

Musashi Auto Parts Co.,Ltd. (MAP-TH(#1))
第一工場 タイ パツムタニ県／設立：1987年12月
Pathumthani, Thailand
Established : Dec, 1987

Musashi Auto Parts Co.,Ltd. (MAP-TH(#2))
第二工場 タイ プラチンブリ県／設立：1996年4月
Prachinburi, Thailand
Established : Apr, 1996

P.T. Musashi Auto Parts Indonesia (MAP-IN(#1))
インドネシア ブカシ県／設立：1996年3月
Bekasi, Indonesia
Established : Mar, 1996

P.T. Musashi Auto Parts Indonesia (MAP-IN(#2))
インドネシア カラワン県／設立：2006年12月
Karawang, Indonesia
Established : Dec, 2006

Musashi Auto Parts India Pvt. Ltd. (MAP-ID(#1))
インド ハリアナ州／設立：2002年7月
Haryana, India
Established : Jul, 2002

Musashi Auto Parts India Pvt. Ltd. (MAP-ID(#2))
インド カルナータカ州／設立：2013年6月
Karnataka, India
Established : Jun, 2013

Musashi Auto Parts (Zhongshan) Co.,Ltd. (MAP-CH)
中国 広東省／設立：2003年1月
Guangdong, China
Established : Jan, 2003

Musashi Auto Parts (Nantong) Co.,Ltd. (MAP-NT)
中国 江蘇省／設立：2014年6月
Jiangsu, China
Established : Jun, 2014

Musashi Auto Parts (Tianjin) Co. LTD
中国 天津／設立：2013年
Tianjin, China
Established : 2013

Musashi Seimitsu Investment (Zhongshan) Co.,Ltd. (MIZ)
中国 広東省／設立：2014年10月
Guangdong, China
Established : Oct, 2014

Musashi Auto Parts Vietnam Co.,Ltd. (MAP-VN)
ベトナム フンイエン省／設立：2010 年11月
Hung Yen, Vietnam
Established : Nov, 2010

Musashi Asia Co.,Ltd. (MAS) ★
タイ バンコク／設立：2003年12月
Bangkok, Thailand
Established : Dec, 2003

Musashi India Pvt. Ltd. (MID) ★
インド ハリアナ州／設立：2011年12月
Haryana, India
Established : Dec, 2011

North America

Musashi Auto Parts Michigan Inc. (MAP-MI)
アメリカ ミシガン州／設立：1980年8月
Michigan, USA
Established : Aug, 1980

Musashi Auto Parts Canada Inc. (MAP-CA)
カナダ オンタリオ州／設立：1997年6月
Ontario, Canada
Established : Jun, 1997

Musashi Auto Parts Mexico, S.A. de C.V.(MAP-MX)
メキシコ サンルイスポトシ州／設立：2012年3月
San Luis Potosi, Mexico
Established : Mar, 2012

Musashi North America Inc. (MNA) ★
アメリカ ミシガン州／設立：2001年1月
Michigan, USA
Established : Jan, 2001

South America

Musashi do Brasil Ltda. (MSB)
ブラジル ペルナンブコ州／設立：1997年5月
PE, Brazil
Established : May, 1997

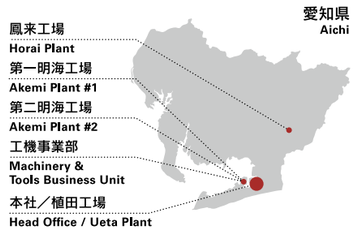
Musashi da Amazonia Ltda. (MDA)
ブラジル アマゾナス州／設立：2002年3月
AM, Brazil
Established : Mar, 2002

●：生産拠点 (production)
★：営業拠点および営業・購買拠点 (sales office, sales / purchasing office)
▲：物流センター (distribution center)

MUSASHI
Power to Value

Seven domestic production sites are pursuing high-efficient production as the mother plants of overseas facilities.

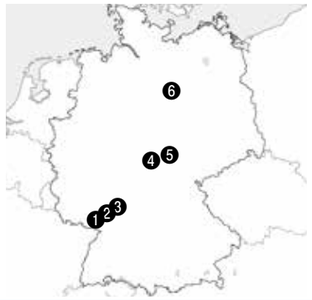
Musashi Seimitsu Industry Co., Ltd. Head Office / Ueta Plant

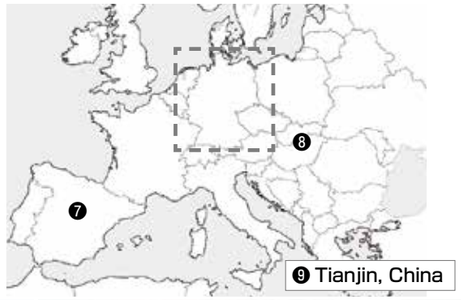


Musashi Europe GmbH（MEU） 1

Developing the Musashi Brand in the Historic EU Market

[Location]	Bad Sobernheim, Germany
[History]	1925 Established by Johann Hay (Currently Musashi Bockenau GmbH) 2016 Acquired by Musashi 2018 Trade name changed and integrated with the Musashi brand
[CEO]	Ulrich Mehlmann
[Employees]	2,329 (Mar. 2018)
[Sales]	573.426 mil. EUR (Mar. 2018)





❾ Tianjin, China

❶ Musashi Europe Gmbh

Musashi Bad Sobernheim GmbH & Co. KG

❷ Musashi Bockenau GmbH & Co. KG

[Attractive points of Musashi Europe GmbH]

We have a long history of more than 90 years and are deeply connected to the local community. We have a diverse culture with a home-like atmosphere.

[Challenge of Musashi Europe GmbH]

Our company name was integrated with the Musashi brand in July 2018 and the trade names of the former Hay were changed accordingly. Now under the vision of “Wir formen die Zukunft” (We form the future), we are implementing the Culture Renewal Program to establish the Musashi Philosophy, manufacturing spirit, and culture aiming to become one team with Musashi Group companies.

❸ Musashi Grolsheim GmbH & Co. KG

❹ Musashi Hann. Muenden Forging GmbH
Musashi Hann. Muenden Machining GmbH

❼ Musashi Spain Villalba S.L.

❺ Musashi Leinefelde Forging GmbH & Co. KG
Musashi Leinefelde Machining GmbH & Co. KG

❽ Musashi Hungary Füzesabony Kft.

❻ Musashi Luechow GmbH

❾ Musashi Auto Parts Tianjin Co., Ltd.

Sharing the Musashi philosophy in workshops and technical communication

Participation in the Frankfurt Motor Show

Members of the Munich office of the former MEU

Gruppenbild Firmenlauf 2019

Musashi Europe Headquarters with the Musashi Group logo

Musashi Hungary Manufacturing, Ltd. (MHM) 2

Aiming to Expand Business through Synergies with Musashi Europe

[Establishment]	Feb. 2000
[Location]	Ercsi, Hungary
[Site area]	74,000 m²
[Employees]	194 (Mar. 2018)
[Sales]	38.082 mil. EUR (Mar. 2018)
[History]	2007 Plant expansion 2013 BSS Perform. Bronze prize 2014 BSS Perform. Gold prize
[History]	2015 BSS Perform. Gold prize 2016 BSS Perform. Silver prize
[President]	2001–2007 G. Giorgetta 2007–2009 Nobuyoshi Sakakibara 2009–2012 Koji Horibe 2012–2016 Akira Mataga 2016–2018 Yusuke Fukuda 2018– Andras Nagy

Main production products

Differential Assembly

Wheel Hub

Camshaft Assembly

Suspension Arm Assembly

[Attractive points of MHM]

We are located in Ercsi city, 35 kilometers southwest of Hungary's capital Budapest, which is called the "Pearl of the Danube." Established in 2002, we supply Musashi-brand products such as ball joints to global-leading European automakers including Audi, Daimler, Jaguar Land Rover, BMW, and Fiat.

[Challenge of MHM]

Our 2020 strategy vision is to stabilize business, achieve growth, and start a winning cycle. To make this strategy a success, we are first aiming to expand business by developing unique technologies and creating synergies with Musashi Europe. Second, we will build first-class quality supported by effective management systems and financial stability. Third, we will make improvements to become "Musashi people" who take the initiative.

Family Day

Support for summer camp for sick children

One Musashi Dance

Musashi Auto Parts Co.,Ltd. (MAP-TH) 3

First Asian Group Company Outside of Japan and a Driver of Growth

Navanakorn

Prachinburi

[Establishment]	Dec. 1987
[Location]	Pathumthani, Thailand
[Site area]	43,520 m^2 (Navanakorn) 120,000 m^2 (Prachinburi)
[Employees]	1,502 (Mar. 2018)
[Sales]	5,672.148 mil. THB (Mar. 2018)
[History]	1987 Established 1996 Establish second plant in Prachinburi 2007 Receive order for bevel gears and ball joints from Nissan 2008 Receive Cost Award from Honda Thailand 2009 Receive order for differential gears from Suzuki

[History]	2011 Navanakorn plant is flooded 2014 Receive order for bevel gears for Ford Motor from Dana 2015 Receive order for engine parts from Isuzu Thailand
[President]	1997–1998 Ikuo Makino 1999–2002 Fumio Morikawa 2003–2004 Hideyo Saito 2005–2008 Seiichi Ishiduka 2009–2010 Tetsuyo Maruyama 2010–2012 Takashi Souda 2012–2013 Naohiro Matsumoto 2013–2016 Ikuo Makino 2016–2017 Ryuji Izumi 2017– Kazuyuki Masuo

Main production products

4W


Engine Gears


Planetary Gears


Bevel Gears


Camshaft


Ball Joint

2W


T/M Assy


Primary Driven


Primary Drive


Camshaft


Other Gears

PE


Crankshaft


Camshaft


Bevels

[Attractive points of MAP-TH]

We have a 30-year history and technical strengths evidenced by sales to the highest number of OEMs in the Musashi Group as well as the generous and broad-minded culture of the Thai employees, who have welcomed know-how from MSI and KMS. Up to now, we have communicated various improvement activities to other Group companies and consistently expanded sales by independently exploring new markets. We are committed as a team to achieving new development and technological innovation founded on our culture of the “Land of Smiles.” The way that employees address issues with a smile could be said to be our most attractive quality.

[Challenge of MAP-TH]

We show impressive team spirit and the ability to act with speed and coordinated effort when faced with difficulties. We take action based on the Musashi Philosophy principle of seeing matters through to completion instead of whether they can or cannot be done. We perpetually seek to amplify and strengthen our collective ability to manufacture attractive products. We will further expand and evolve the Musashi brand, which is appreciated by people around the world, and elevate the Musashi Group to the global No. 1 in the industry.

HONDA Quality Award 2017

30th anniversary ceremony

P.T. Musashi Auto Parts Indonesia (MAP-IN) 4

Contributing to Indonesia's Development with Outstanding Competitiveness


Cikarang


Karawang

[Establishment]	Mar. 1996
[Location]	Bekasi, Indonesia
[Site area]	55,000 m^2 (Cikarang) 60,000 m^2 (Karawang)
[Employees]	1,121 (Mar. 2018)
[Sales]	2,697,126 mil. IDR (Mar. 2018)
[History]	2003 Establish second plant 2004 Establish third plant

[History]	2006 Establish Karawang plant 2015 Expand Karawang plant
[President]	1996–1999 Kunihiro Kawabata 1999–2003 Mitsutoshi Sugai 2003–2006 Yasuhiro Abe 2006–2010 Norikazu Okada 2010–2017 Hideaki Asakura 2017– Koji Takahashi

Main production products (Production volumn 2W : 5,786,264 Unit 4W : 3,581,851 Unit)


Transmission Gear, Others


Gear Comp, Planetary


Differential Comp


Camshaft


Transmission Part, Scooter


Transmission Assembly


Outer Clutch, Comp


Balancer Gear


Primary Gear


Starter Gear


Kick Starter Assembly


Camshaft Assembly

[Attractive points of MAP-IN]

We greet customers with a cheerful "Selamat pagi!" as a vibrant plant filled with youthful energy that continues to provide corporate value to all stakeholders and contribute to the development of Indonesia. We are working with employee participation to improve our QCD competitiveness on a daily basis.

[Challenge of MAP-IN]

Our vision is to contribute to the spread of mobility that makes people happy through the sustained development of our business and enriching the lives of people in Indonesia. To achieve this vision, our goals are:

1. Own construction of a high-efficiency production line making full use of automation technology
2. Construction of a high value-added production group making full use of tools and in-house die manufacturing technology
3. Construction of an operations system utilizing IoT and AI technology
4. Continuous human resource development to realize the above

To become the No. 1 PT supplier, we are challenging ourselves to evolve every day.

MMC World Competition


2017 ANAK IKAN Team


2016 BANDREX Team

2014 TIMUN MAS Team

Family day

Musashi Auto Parts India Pvt. Ltd. (MAP-ID) 5

Aiming to Become the No. 1 in One of the Leading Growth Markets in the World


Bawal


Bangalore

[Establishment]	Jul. 2002
[Location]	Haryana, India
[Site area]	59,724 m^2 (Bawal) 115,217 m^2 (Bangalore)
[Employees]	1,645 (Mar. 2018)
[Sales]	11,859.621 mil. INR (Mar. 2018)
[History]	2004 Start business with Hero Honda Motor 2005 Start business with Suzuki Motorcycle India 2008 Complete forging plant 2011 Construct plant for four-wheeled parts

[History]	2012 Groundbreaking ceremony for 2nd Bangalore plant 2013 First shipment to HMSI 2013 Start business with Exedy Clutch India 2016 Receive Quality Award from Maruti Suzuki 2017 First shipment to TVS
[President]	2002–2007 Katsushi Yamanami 2007–2010 Mitsuhito Tagawa 2010–2013 Hideyo Saito 2013–2015 Koji Horibe 2015– Masaru Maeda

Main production products


2W & 4W Cam Shafts


2W SC Transmission Shaft


2W Transmission Assembly


4W Ball Joints


4W Differential Comp


4W Transmission Gear

[Attractive points of MAP-ID]

Founded in July 2002, we are now steadily expanding our business with a two-plant system, the first plant in northern India (Bawal) and the second plant in the south (Bangalore).

Manufactured parts range from engine and transmission parts for scooters and motorcycles to four-wheeled engine, transmission, and suspension components.

We will promote local procurement of materials, tools, dies, and production facilities, and will continue to strengthen our competitiveness through interactions with other Asian bases, developing kaizen improvement activities horizontally, and benchmarking activities.

[Challenge of MAP-ID]

The Indian market, the world's largest motorcycle market and the world's fourth largest four-wheeled market, is also the most promising market for future growth.

With the aim of continuing business growth in India, we are strengthening the development of new customers and businesses with the goal of having the No. 1 growth in the Musashi Group. MAP-ID will also develop local management talent to support business growth, upgrade system infrastructure, and realize speedy growth!

India round of the Asia Road Racing Championship

15th anniversary ceremony

One Musashi Dance

Musashi Auto Parts (Zhongshan) Co., Ltd. (MAP-CH) 6

Demonstrate Strong Cost Competitiveness with Proactive Kaizen Activities

[Establishment]	Jan. 2003
[Location]	Guangdong, China
[Site area]	65,341 m^2
[Employees]	1,048 (Mar. 2018)
[Sales]	968.513 mil. RMB (Mar. 2018)
[History]	2003 Start mass production of ball joints

[History]	2007 Complete new plant 2008 Start mass-production of gears 2012 Complete 2nd expansion 2015 Receive award from GHAC
[President]	2003–2003 Tatsuyoshi Tsuji 2003–2007 Kunihiro Kawabata 2007–2009 Hiroki Ito 2009– Toshihisa Otsuka

Main production products (Production volume 121 thousand)

Differential Assembly (2 Pinion)

Planetary Assembly (for compact cars)

Suspension Ball Joints

Steering Ball Joints (Tie-Rod End)

Transmission Gear (for Automatic)

[Attractive points of MAP-CH]

Established as the first plant in China in 2003, we have grown to more than 1,000 employees. At the time of our founding, labor costs were still cheap and all equipment was operated manually, but in the last 10 years the average salary has grown nearly five-fold and automation has been aggressively pursued to achieve business expansion amid the world's most severe cost competition.

Currently, Musashi's China business has greatly expanded with the establishment of Nantong Plant and integration with Musashi Auto Parts Tianjin. We will continue to serve as the core company in Zhongshan and further evolve to capture business with new customers. In this difficult period, the Chinese members of Musashi will work hard but also not forget to smile.

[Challenge of MAP-CH]

Our first target is to build a foundation to become the No. 1 in the Chinese market. Next we aim to achieve management based on greater visualization while establishing the best QCD structure in the world, the stable launch of new models, enhanced operational efficiency, and a strengthened management system.

Employee contribution activity

15th anniversary ceremony

Musashi Auto Parts (Nantong) Co., Ltd. (MAP-NT) 7

Commitment to Business Expansion Based on the Musashi Philosophy

[Establishment]	Jun. 2014
[Location]	Jiangsu, China
[Site area]	60,000m^2
[Employees]	288 (Mar. 2018)
[Sales]	226.271 mil. RMB (Mar. 2018)
[History]	2014 Established

[History]	2015 Start construction of the plant 2015 Start mass production 2018 Start 2nd plant expansion
[President]	2014–2015 Toshihisa Otsuka 2015–2017 Seiki Kajiwara 2017– Toshihisa Otsuka (Site manager: Tatsuya Kobayashi)

Main production products (3,364 thousand units)

HD DIFF

ZF DIFF

ZF DIFF

[Attractive points of MAP-NT]

We were established in June 2014 as the second Musashi Group plant in China in Nantong City, Jiangsu Province. Currently, we exclusively fabricate differential cases.

We process more than 300,000 cases per month on 24 lines and are the largest case fabrication plant in the Musashi Group. We are now preparing for a second phase of construction to begin shipments of gear parts in December 2018.

Nantong City is a sister city of Toyohashi City, Aichi Prefecture, where the Musashi Head Office is located. The mayors of both Toyohashi and Nantong have visited our plant, which attracts a high level of interest in Nantong City.

We are still a young plant at about three and a half years old, with about two years of operations. Employees play leading roles based on the Musashi Philosophy and work together with a smile to launch new business and maintain stable production.

[Challenge of MAP-NT]

Our challenge is to successfully mass-produce products by transferring equipment from Zhongshan to Nantong and introducing a new line. In addition, we aim to be a company where transferred employees from Zhongshan and new recruits work together in a vibrant atmosphere and feel a sense of reward. We have also established a good relationship with the government and business partners.

From now, we will focus on the three pillars of (1) developing the No. 1 personnel in the world, (2) achieving the No. 1 in market share, site operations, and quality, and (3) maintaining and expanding existing operations and developing new business.

Toyohashi Junior High School students

Ceremony marking the completion of construction

Musashi Auto Parts Vietnam Co.,Ltd. (MAP-VN) 8

Youthful Energy Is Key

[Establishment]	Nov. 2010
[Location]	Hung Yen, Vietnam
[Site area]	50,000m²
[Employees]	375 (Mar. 2018)
[Sales]	1,091,329 mil. VND (Mar. 2018)
[History]	2011 Start delivery of camshaft comps 2012 Start delivery of scooter transmissions

[History]	2012 Start delivery of transmissions for the Honda Super Cub 2014 Install parts-former and start in-house production of materials 2015 Start activities for automation 2016 Install of CAM-PI line
[President]	2011–2015 Yoshinori Mizuguchi 2015–2016 Kazuyuki Masuo 2016– Masaaki Morinaga

Main production products （1,500,000 unit〈2W〉）

AT Mission (for scooter)

Transmission assembly

Camshaft

[Attractive points of MAP-VN]

In November 2010, the MAP-VN manufacturing plant for two-wheeled parts (manual and automatic transmission gears and camshaft comps) was established in Hung Yen, Vietnam, and is now in its seventh year of operations. We employ 500 young, diligent and highly motivated employees, who have an average age of 28 years old.

We are working to further innovate the benchmarking conducted by other subsidiaries to realize company culture reforms aimed at becoming the No. 1 factory in the Musashi Group.

[Challenge of MAP-VN]

With the slogan of “Push forward” (Don’t be afraid to move forward toward your goals and targets), we are working to strengthen “5S” awareness among our young employees and achieve company culture reforms. We have earned the trust of customers by satisfying their PPM (GQI) requests by improving stability in quality.

In addition, we were able to strengthen our profit structure by learning about M-QCD and QCD for new models.

Company soccer tournament

Women’s Day

Birthday party

One Musashi Dance

In-house MMC

Family day

Musashi Auto Parts Michigan Inc. (MAP-MI) 9

Accelerating Musashi's Differential Strategy with Robust Development and a Stable Production System

[Establishment]	Aug. 1980
[Location]	Michigan, USA
[Site area]	53.1 ac
[Employees]	576 (Mar. 2018)
[Sales]	189.604 mil. USD (Mar. 2018)
[History]	1984 Complete of Battle Creek plant 1989 Receive Top Supplier Award from Honda 1997 Start transmission gear business for Honda 2003 Receive Delivery Award from GM 2007 Start bevel gear business for Honda

[History]	2016	Receive Delivery Award from Honda
	2017	Receive Quality Award from Honda
[President]	1980–1986	Yoshiharu Otsuka
	1987–1990	Morio Takahashi
	1991–2000	Tsutomu Iwase
	2001–2003	Ikuo Makino
	2004–2005	Haruhisa Otsuka
	2006–2010	Ikuo Makino
	2010–2013	Takayuki Miyata
	2013–2014	Toshihiro Obata
	2014–2015	Osamu Kato
	2015–2018	William H. Hewitt
	2018–	Tim Osterhouse

Main production products

Balance Shaft Comp

Differential Assembly

Differential Gear

[Attractive points of MAP-MI]

We are Musashi's first overseas factory and manufacture and sell automobile parts. In 1980, we began sales of ball joints to Ford Motor as Musashi USA Inc., located near Detroit. In 1984, we established Technical Auto Parts (TAP), a local production plant in Battle Creek, Michigan.

Our products include automobile transmission gears, balance shafts, and differential assemblies. Currently we are one of the largest differential assembly manufacturers in the USA.

[Challenge of MAP-MI]

We are aiming to capture more than 20 percent of the differential assembly market in North America and launched the Differential Development Department in 2016 to develop new customers.

In addition, as the largest differential production base in the Musashi Group, we place high value on automation advancements, production efficiency, and enhancing die design and production, and consistently strive to be a driving force in the Group.

Receiving an award

One Musashi Dance

Quality Circle

Musashi Auto Parts Canada Inc. (MAP-CA) 10

Establish a High-efficiency Production System by Introducing Advanced Technology

[Establishment]	Jun. 1997
[Location]	Ontario, Canada
[Site area]	37.59 ac
[Employees]	434 (Mar. 2018)
[Sales]	179.716 mil. CAD (Mar. 2018)

[History]	2005	Start Plant2 (camshaft) operations
	2010	Localize full ball joint process
	2015	Open Waterloo Tech Center
[President]	1997–2003	Haruhisa Otsuka
	2004–2005	Tatsuyoshi Tsuji
	2006–	Haruhisa Otsuka

Main production products

Aluminum Arm

Camshaft

Clutch piston

Steering B/J

[Attractive points of MAP-CA]

In 1997, we were established in the village of Arthur, population 2,000. Arthur is located in southern Ontario Province (same latitude as Asahikawa City, Hokkaido). The weather is cold in the winter and mild in the summer. Toronto, the largest city in Canada, is 130 kilometers away.

Our main operations are L&S and camshafts, and we have one of the largest production scales in the Musashi Group. L&S is an automated integrated production line that we developed in-house. Camshafts are produced on a fully automated production line at the highest efficiency. Canadian immigration policy welcomes immigrants, and people from many different countries work at MAP-CA.

[Challenge of MAP-CA]

We have been implementing a company management system since our founding and globally support the global SAP system.

In addition, we began design development in 2003 and the Tech Center was established in 2015. We are aiming to build an integrated sales, development, and production system encompassing sales, purchasing, design, analysis, testing, prototyping, line design, and equipment manufacturing to rapidly expand business.

Company moral boosting Ⅰ

Cleaning, tree planting, and BBQ on Earth Day

Company moral boosting Ⅱ

Musashi Auto Parts Mexico, S.A. de C.V. (MAP-MX) 11

Supply World's First Planetary Gars for 10-speed AT

[Establishment]	Mar. 2012
[Location]	San Luis Potosi, Mexico
[Site area]	66,320m²
[Employees]	278 (Mar. 2018)
[Sales]	75.191 mil. USD (Mar. 2018)
[History]	2014 Ball joints

[History]	2014 Planetary gears 2015 Differential gears 2017 10-speed ATs
[President]	2012–2014 Jun Tatenuma 2014–2016 Motoaki Sugiura 2016–2018 Masayuki Matsui 2018– Mario Santiesteban Lopez

Main production products （Production volume 3,904,799）

Steering Ball Joint（Rack End）

Steering Ball Joint（Tie Rod End）

Suspension Ball Joint

Planetary Assembly

Differential Assembly

Planetary Assembly（10speed-AT）

[Attractive points of MAP-MX]

We are located in the state of San Luis Potosi, Mexico (approximately 1,850 meters above sea level in the center of Mexico). We were established as a company in March 2012 and started mass production of ball joint parts in January 2014. Since then, we have started production of planetary and differential gears and launched production of 10-speed AT planetary gears for FF vehicles, a world first, in February 2017.

[Challenge of MAP-MX]

With the Musashi Group's first skiving machine, we have high-precision drilling technology, an integrated traceability system from machining to assembly, and a clean room to realize high-precision and high-quality production.

Employee contribution activity

Mother's Day

Event with the children of employees

Plant tour

Activity with the local community

Trash cleanup activity

Handing out goods at a medical institution

Charity run

Musashi do Brasil Ltda. (MSB) 12

To Become the Best Regional Auto Parts Manufacturer through Developing New Business

[Establishment]	May. 1997
[Location]	Pernambuco, Brazil
[Site area]	60,099 m²
[Employees]	675 (Mar. 2018)
[Sales]	127.949 mil. BRL (Mar. 2018)
[History]	1997 Capital participation by Musashi, made a subsidiary 2001 Start production of four-wheeled vehicle parts

[History]	2017	Receive Supplier Quality Award from GMB
	2017	Start production and sales of diff comps for GM/Fiat
[President]	1997–2005	Toru Shimizu
	2005–2006	Ikuo Makino
	2006–2009	Kiyotaka Fukui
	2009–2014	Osamu Kato
	2014–2018	Yasunori Amano
	2018–	Elton Baggio Vieira

Main production products

Engine Gear

Differential Assembly

Brake Disk

Brake Disk

Balancer Weight

[Attractive points of MSB]

We are the first Musashi plant in South America and produce two-wheeled and four-wheeled parts for the Brazilian market. Our manufacturing processes encompass die design and fabrication, forging, machining, and heat treatment.

[Challenge of MSB]

One challenge we undertook was introducing a production line for diff assemblies to meet needs for both current and new customers. We fully restructured our organization to survive one of the worst economic crises in Brazil's history.

Our future challenges include riding the wave of economic recovery in Brazil, increasing our product competitiveness, and becoming a factory focused on auto parts. We also aim to maximize profit for stakeholders by realizing the highest quality and best cost regionally.

Activity for local community

Sports event

Employee event

Creating a welcoming atmosphere for employees

Building a harmonious workplace environment

Musashi da Amazonia Ltda. (MDA) 13

Supply High-quality Motorcycle Parts Nationwide in Brazil

[Establishment]	Mar. 2002
[Location]	Amazonas, Brazil
[Site area]	65,871 m²
[Employees]	377 (Mar. 2018)
[Sales]	130.250 mil. BRL (Mar. 2018)
[History]	2003 Start mass production 2006 First expansion (1.4 mil. units) 2008 Second expansion (1.5 mil. units)

[History]	2012 Third expansion (2 mil. units) 2015 Honda Q&DNO
[President]	2002–2003 Toru Shimizu 2004–2006 Shinobu Ito 2007–2010 Kenji Nishimoto 2010–2014 Tetsuyo Maruyama 2014–2015 Koji Tanaka 2015– Yoshinori Mizuguchi

Main production products (Production volume 759.056 parts)

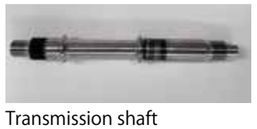
Shiftdrum

Connecting Rod

Crankshaft

Transmission Assembly

Camshaft comp



Transmission shaft

[Attractive points of MDA]

We have a lot of energy and potential, and produce transmissions using an integrated production system amid the rich natural landscape of Manaus.

[Challenge of MDA]

To adapt to Brazil's tough economic environment, we aim to constantly reform our corporate culture with high aspirations and capture new business to become the No. 1 Q&D group.

In-house training

Environment Week 2018

TPM

Function parts/Motor working

Measuring Olympic

Sports festival

KMS 14

“Mother” Fctory for the Gbal Motorcycle Business

[Establishment]	Dec. 1974
[Location]	Kuma-gun, Kumamoto, Japan
[Site area]	123,003 m²
[Employees]	558 (Mar. 2018)
[Sales]	11,695 mil. JPY (Mar. 2018)
[History]	1975 Ground-breaking ceremony for 1st plant 1981 Ground-breaking ceremony for 2nd plant 1983 Open branch office inToyohashi 1988 Ground-breaking ceremony for 3rd (forging) plant 1990 15th anniversary ceremony 1993 Complete Staff Welfare Hall
[History]	2000 25th anniversary ceremony 2004 30th anniversary ceremony 2005 Complete of machinery plant 2008 Complete of finishing plant
[President]	1974–1996 Kimitoshi Otsuka 1996–1997 Hitoshi Tada 1997–2000 Takeshi Ogura 2000–2002 Seiki Obara 2002–2006 Sumio Chijimatsu 2006–2013 Akiteru Kasai 2013–2016 Naohiro Matsumoto 2016–2017 Koji Horibe 2018– Tetsunobu Kawai

Main production products

Transmission Assembly（DCT）

Transmission Assembly Ⅰ

Transmission Assembly Ⅱ

[Attractive points of KMS]

Since our establishment, we have been operating as a base for small two-wheeled products and related business.

Amid the changing domestic business environment, we currently produce transmissions assembled in motorcycles and automobiles as a base for the two-wheeled FUN series (large size).

We are committed to producing products that people around the world can enjoy driving.

[Challenge of KMS]

We will continue to lead Musashi’s global motorcycle production bases from Kyushu Musashi while at the same time shifting from the COM series to the more advanced FUN series.

Our goal is to achieve the No. 1 global share in large motorcycle transmission supply.

Autumn festival

Kinyukai association activities

Parent-child traffic safety class

Kinyukai activities

AMI Quality Circle

Musashi Auto Parts UK Ltd. (MAP-UK) 15

A Driving Force of Continuous Growth in the EU Business

[Establishment]	Jul. 1993
[Location]	South Wales, UK
[Employees]	5 (Mar. 2018)
[Sales]	5,837 USD (Mar. 2018)
[President]	1993–2001 Hiroshi Otsuka 2001– Graham Hill

Musashi India Pvt. Ltd. (MID) 16

Identifying Customer Needs in the Giant Indian Market

[Establishment]	Dec. 2011
[Location]	Haryana, India
[Employees]	9 (Mar. 2018)
[Sales]	57.013 mil. INR (Mar. 2018)
[History]	2013 Export first machine to MAP-TH 2015 Export cutting tools to MAP-TH 2017 Start parts delivery to TVS 2017 Receive order for machine equipment from MAP-MX and MAP-VN 2017 Receive order for new cutting tools from MAP-IN
[President]	2011–2015 Tadaharu Imoto 2015–2017 Kosuke Himejima 2017– Arvinder Gill

Musashi North America Inc. (MNA) 17

Increasing Our Presence in the North American Automobile Market and Expanding Business

[Establishment]	Jan. 2001
[Location]	Michigan, USA
[Employees]	5 (Mar. 2018)
[Sales]	1.192 mil. USD (Mar. 2018)
[President]	2001–2002 Tsutomu Iwase 2002–2010 Takeshi Isaku 2011–2014 Takashi Banno 2014– Haruhisa Otsuka

Musashi Asia Co.,Ltd. (MAS) 18

Aggressive Pursuit of Business Maximization in Asia

[Establishment]	Dec. 2003
[Location]	Bangkok, Thailand
[Employees]	12 (Mar. 2018)
[Sales]	71.698 mil. THB (Mar. 2018)
[History]	2003 Start sales and marketing activities in Asia 2015 Start administrative work in Asia (purchasing/technical support/quality assurance) 2018 Start consolidated management in Asia
[President]	2003–2010 Tetsuyo Maruyama 2010–2012 Takashi Souda 2012–2015 Hiroki Ito 2015–2016 Koji Horibe 2016– Kazuyuki Masuo

Musashi Seimitsu Investment (Zhongshan) Co., Ltd. (MIZ) 19

Building the Foundation to Be the No. 1 in the Chinese Market

[Establishment]	Oct. 2014
[Location]	Guangdong, China
[Employees]	38 (Mar. 2018)
[Sales]	19.438 mil. RMB (Mar. 2018)
[President]	2014– Toshihisa Otsuka

Musashi Group Data

■ List of Directors & Officers

Director and Senior Advisor | Chairman and Representative Director | Executive Vice President and Representative Director | President and CEO | Senior Managing Director | Director

Honorary Chairman and Director | President and Representative Director | Senior Managing Director and Representative Director | Executive Vice President and Director | Managing Director | Auditor

Director and Advisory Officer | Senior Managing Executive Officer | Senior Executive Officer

President and Executive Officer | Managing Executive Officer | Executive Officer

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Yoshiharu Otsuka	President and CEO																	President and Representative Director							
Noboru Yanuki	Managing Director																	Senior Managing Director				Dir. & Adv. Off.			
Kimitoshi Otsuka (Yoshikazu)	Director			Managing Director														Senior Managing Director				Exec. VP & Rep. Dir.			
Motoki Mogi	Director												Auditor												
Masaaki Otsuka	Director																	Managing Director				Sr. Managing Dir.			Senior Managing Dir. & Rep. Dir.
Fujiro Ikeura	Director																								
Nobu Suzuki	Director											Auditor													
Takehiro Otsuka	Auditor																								
Nagamitsu Nakazawa		Auditor																							
Minoru Iwase									Director												Managing Director				
Morio Takahashi										Director											Managing Director				
Akira Nemoto											Director										Managing Director				
Ryoichi Sakakibara															Director						Managing Director				
Hitoshi Tada															Director										
Yoshitaka Kobayashi															Auditor								Director		
Toshiyuki Ikuro																	Director						Auditor		
Tadashi Nakabayashi																			Director						
Shozo Suzuki																			Auditor						
Hideo Suzuki																					Director				
Tatsuo Ishiguro																					Auditor				
Haruo Tasaki																							Managing Director		
Yutaka Urano																							Director		
Mitsuyasu Fukumura																							Auditor		
Masao Terada																								Director	
Toru Shimizu																									
Akira Nishi																									
Keikichi Nagashima																									
Yasunori Hamaguchi																									
Katsutaro Sumita																									
Hiroshi Yamamoto																									
Takashi Kamezaki																									
Norinaga Morishita																									
Seiko Suzuki																									
Hisakazu Nakatsuka																									
Noriyoshi Suzuki																									
Takeshi Ogura																									
Noriyuki Tojo																									
Takeshi Takeda																									
Makoto Hosaka																									
Seiki Obara																									
Yoshijiro Kobayashi																									
Ikuo Makino																									
Mitsuru Araya																									
Hayao Fujii																									

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Yoshiharu Otsuka	Chairman & Rep. Dir.			Honorary Chairman	Senior Advisor																								
Noboru Yanuki																													
Kimitoshi Otsuka (Yoshikazu)	President and Representative Director												Chairman & Rep. Dir.																
Motoki Mogi																													
Masaaki Otsuka	Exec. VP & Rep. Dir.			Director																									
Fujiro Ikeura																													
Nobu Suzuki																													
Takehiro Otsuka																													
Nagamitsu Nakazawa																													
Minoru Iwase		Sr. Managing Dir.		Exec. VP & Dir.																									
Morio Takahashi		Sr. Managing Dir.																											
Akira Nemoto																													
Ryoichi Sakakibara				Auditor																									
Hitoshi Tada								Auditor																					
Yoshitaka Kobayashi					Managing Director																								
Toshiyuki Ikuro					Auditor																								
Tadashi Nakabayashi																													
Shozo Suzuki																													
Hideo Suzuki	Managing Director																												
Tatsuo Ishiguro																													
Haruo Tasaki																													
Yutaka Urano				Managing Dir.																									
Mitsuyasu Fukumura																													
Masao Terada																													
Toru Shimizu		Director																											
Akira Nishi		Auditor																											
Keikichi Nagashima		Senior Managing Director		Exec. VP & Dir.					Exec. VP & Rep. Dir.																				
Yasunori Hamaguchi				Director																									
Katsutaro Sumita				Director		Senior Managing Director																							
Hiroshi Yamamoto					Director																								
Takashi Kamezaki						Director																							
Norinaga Morishita							Auditor																						
Seiko Suzuki							Auditor																						
Hisakazu Nakatsuka								Director		Managing Dir.		Sr. Managing Dir.																	
Noriyoshi Suzuki								Director					Auditor																
Takeshi Ogura								Director																					
Noriyuki Tojo									Director			Managing Dir.																	
Takeshi Takeda										Managing Dir.		Sr. Managing Dir.																	
Makoto Hosaka										Managing Dir.		Sr. Managing Dir.																	
Seiki Obara												Director																	
Yoshijiro Kobayashi										Exec. VP & Rep. Dir.		President and Representative Director																	
Ikuo Makino												Director		Managing Director															
Mitsuru Araya													Auditor																
Hayao Fujii													Managing Dir.		Senior Managing Director														

■ List of Directors & Officers

Director and Senior Advisor | Chairman and Representative Director | Executive Vice President and Representative Director | President and CEO | Senior Managing Director | Director

Honorary Chairman and Director | President and Representative Director | Senior Managing Director and Representative Director | Executive Vice President and Director | Managing Director | Auditor

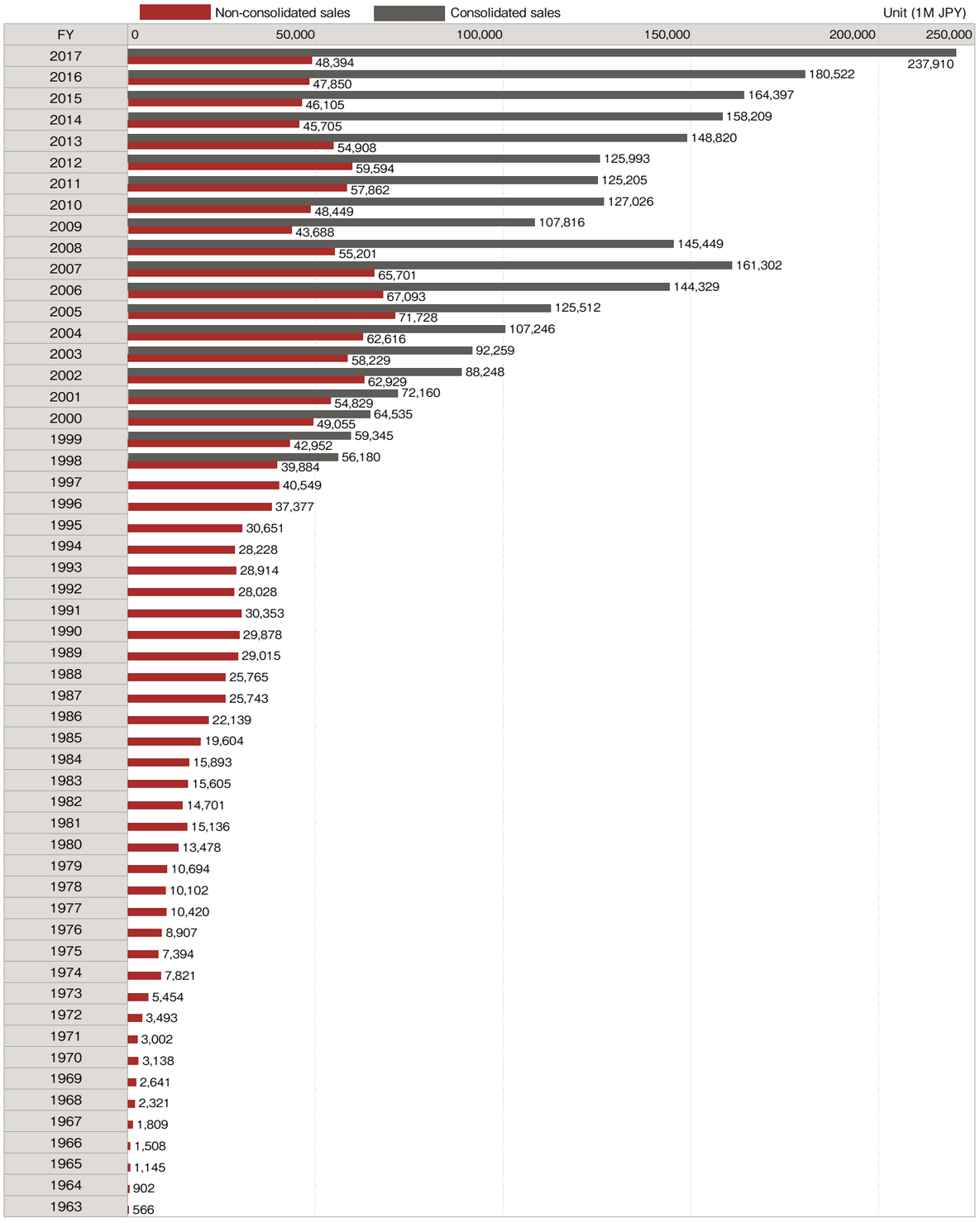
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Hiroshi Otsuka							Director			Managing Director	Senior Managing Director	President and Representative Director									President and Executive Officer			
Sumio Chijimatsu								Director			Sr. Managing Dir.													
Takashi Ozone								Director																
Yoshifumi Kuwahara								Director		Managing Director														
Kunihiro Kawabata								Director																
Takeshi Imura								Auditor																
Seiichi Ishizuka										Director														
Shunichi Matsuzaki										Director														
Haruhisa Otsuka										Director														
																					Managing Exec. Off.			Senior Managing Exec. Off.
Fumio Morikawa										Auditor														
Kobun Nonaka										Auditor														
Mitsuru Nishino										Auditor														
Shigeru Takeuchi											Auditor	Managing Dir.												
															Managing Exec. Off.									
Tsutomu Yuasa											Auditor													
Akiteru Kasai												Director												
Tsuyoshi Makita												Director												
Hideyo Saito													Director	Managing Director										
													Exec. Off.											
Yoshitaka Naganuma													Auditor											
																Executive Officer								
Yukihiro Nishina														Director										
Koji Horibe													Executive Officer											
																	Director				Director			
													Executive Officer								Sr. Exec. Off.			Managing Exec. Off.
Sadao Akiba														Director										
														Exec. Off.										
Mitsutoshi Sugai														Auditor										
Mitsuji Yoshihara														Auditor										
Toru Ogawa															Exec. VP & Rep. Off.									
Yoshimitsu Takishima															Auditor									
Sadahiro Kawaguchi															Executive Officer									
Akira Fujishiro															Exec. Off.									
Naohiro Matsumoto																Director								
																					Managing Exec. Off.			
Yukio Takada																Managing Executive Officer								
Tetsuyo Maruyama																Executive Officer								
Mitsuhito Tagawa																Exec. Off.								
Takeshi Isaku																		Director						
																					Executive Officer		Senior Executive Officer	
Nobuyoshi Sakakibara																					Auditor		Director*	
Nakamasa Iwase																								

Director and Advisory Officer | Senior Managing Executive Officer | Senior Executive Officer

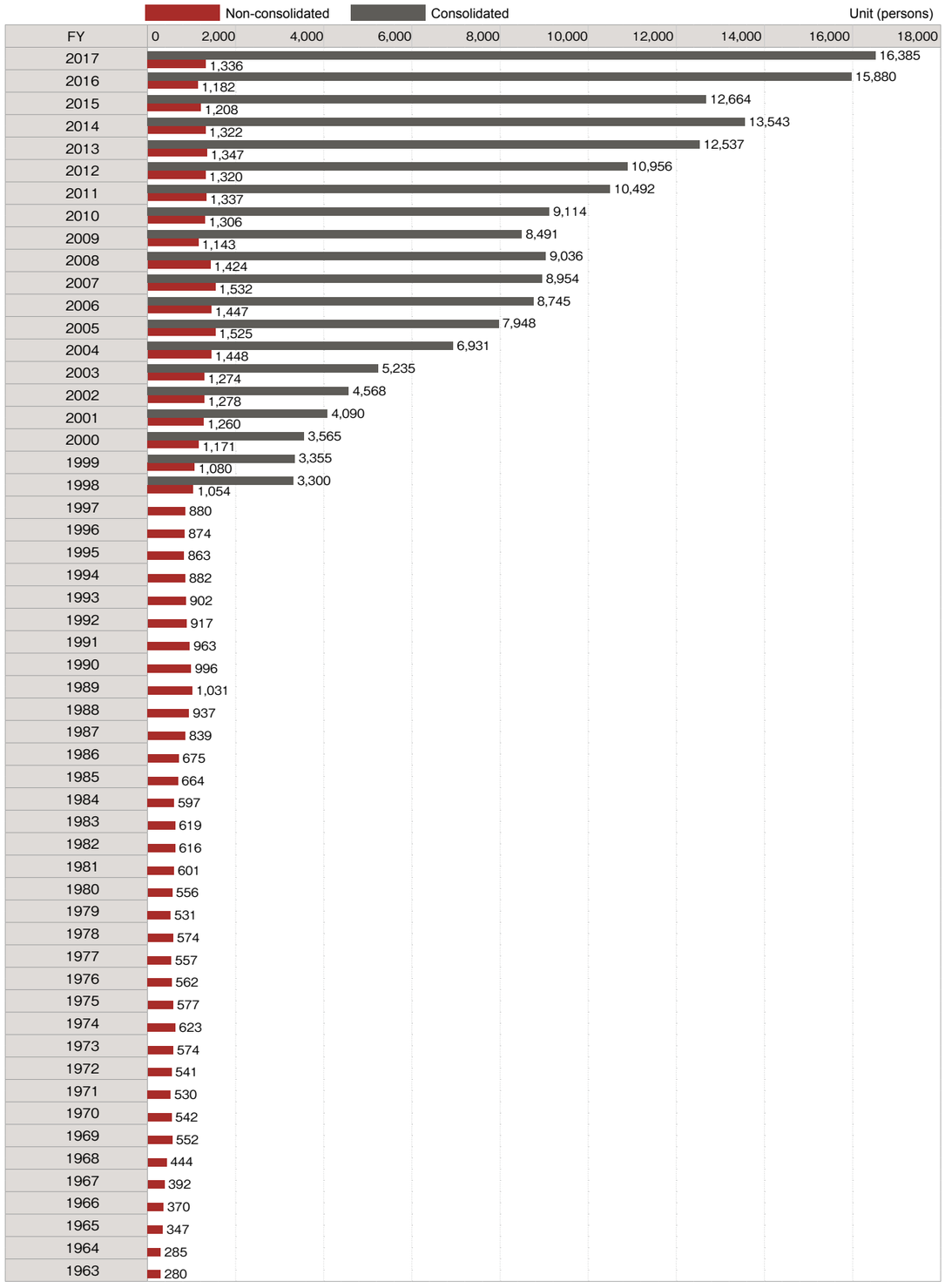
President and Executive Officer | Managing Executive Officer | Executive Officer | *Audit and Supervisory Committee member

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Goro Kamino																		Director						
Hideki Sorimachi																		Auditor						
Takayuki Miyata																					Director			
																			Executive Officer		Managing Exec. Off.			Sr. Managing Exec. Off.
Shigetaro Okano																			Executive Officer					
Takehiko Tsuji																			Executive Officer					
Tetsunobu Kawai																			Executive Officer					
Takashi Soda																			Executive Officer					Sr. Exec. Off.
Tetsuro Hamada																			Director					
																					Managing Exec. Off.			
Takeshi Fujii																			Auditor		Director*			
Keisuke Tomimatsu																			Auditor		Director*		Director	
Asako Yamagami																					Director*			
Graham Hill																					Executive Officer			
Isao Kamiya																						Director		
																					Exec. Off.	Sr. Exec. Off.		
Tracey Sivill																							Director	
																					Exec. Off.	Sr. Exec. Off.		Managing Exec. Off.
Toru Uchida																						Director		
																					Sr. Exec. Off.			
Hari N. Nair																							Director	
Yoshinori Morita																							Director*	
Nobuo Takemasa																							Sr. Exec. Off.	Managing Exec. Off.
Tetsuro Toyama																						Executive Officer		
Kenji Morisaki																						Executive Officer		Sr. Exec. Off.
Masa Utagawa																						Exec. Off.		
Satoshi Tada																							Exec. Off.	
Ulrich Mehlmann																							Sr. Exec. Off.	
Yoshie Munakata																								Director
Toshihisa Otsuka																								Exec. Off.
Hideaki Asakura																								Exec. Off.
Yasunori Amano																								Exec. Off.
Tatsuya Yanagisawa																								Exec. Off.

Sales



No. of Employees



■ Main Products Produced


Differential Assembly


Differential Assembly（Oil Seal）


Differential Gear


Transmission Gear


Planetary Assembly（CVT）


Planetary Assembly（AT）


Camshaft


Balance Shaft Comp


Gear Box Cover Assembly


Dual Clutch Transmission Assembly


Transmission Assembly（for Cub）


Automatic Mission（for Scooters）


Suspension Arm Assembly


Suspension Ball Joint


Steering Ball Joint（Tie Rod End）


Steering Ball Joint（Rack End）

■ Commendations from Customers

Expansion

■ 1978

February　Received letter of appreciation from Honda Motor Co., Ltd. for quality

■ 1979

February　Received letter of appreciation from Honda Motor Co., Ltd. for quality

■ 1982

January　Received letter of appreciation from Honda Motor Co., Ltd. for product loyalty

December　Received the Ford Q1 Preferred Quality Award

December　Received Excellence Award from Kawasaki Heavy Industries, Ltd.

■ 1983

January　Received letter of appreciation from Honda Motor Co., Ltd. for quality and product loyalty

■ 1984

January　Received letter of appreciation from Honda Motor Co., Ltd. for product loyalty

■ 1985

January　Received letter of appreciation from Honda Motor Co., Ltd. for product loyalty

■ 1986

—　Received letter of appreciation from Honda Motor Co., Ltd. for quality improvements, product loyalty, Car of the Year award-winning Accord development, and production

■ 1987

January　Received letter of appreciation from Honda Motor Co., Ltd. for quality and product loyalty

April　Received letter of appreciation from Honda Motor Co., Ltd. for delivery

■ 1988

January　Received letter of appreciation from Honda Motor Co., Ltd. for quality, service parts, and product loyalty

■ 1989

January　Received Supplier Quality Excellence Award (Quality, Delivery categories) from Honda Motor Co., Ltd.

Global expansion

■ 1990

April　TAP (later MAP-MI) received Quality Excellence Award from Honda of America Manufacturing Inc.

■ 1991

February　Technical Auto Parts Inc. (TAP) received the Ford Q1 Preferred Quality Award

■ 1992

December　Received letter of appreciation from Honda Motor Co., Ltd. for service parts delivery cooperation

■ 1993

January　Received Supplier Quality Excellence Award (Quality category) from Honda Motor Co., Ltd.

■ 1994

January　Received Supplier Quality Excellence Award (Quality category) from Honda Motor Co., Ltd.

December　Received Supplier Quality Excellence Award (General Parts category) from Honda Motor Co., Ltd.

December　Received Affiliate Company Effort Award from Honda Motor Co., Ltd.

■ 1995

January　Received Best Supplier Award and Supplier Quality Excellence Award (Quality, Cost, Development categories) from Honda Motor Co., Ltd.

June　TAP-MFG (later MAP-UK) received Supplier Quality Excellence Award (Delivery category) from Honda of the UK Manufacturing Ltd.

December　Received Excellent Company Award from Honda Motor Co., Ltd.

December　Received Parts Cost Improvement Appreciation Award from Honda Motor Co., Ltd.

■ 1996

January　Received Supplier Quality Excellence Award (Cost, Development, VE categories) from Honda Motor Co., Ltd.

May　TAP Manufacturing Ltd. (TAP-MFG.) received Best Supplier Award and Supplier Quality Excellence Award (Delivery, Quality categories) from Honda of The U.K. Manufacturing Ltd.

December　Received Affiliate Company Excellence Award from Honda Motor Co., Ltd.

■ 1997

January　Received Supplier Quality Excellence Award (Development, VE categories) from Honda Motor Co., Ltd.

December　Received Excellent Company Award from Honda Motor Co., Ltd.

■ 1998

March　Received Best Supplier Excellence Award (Global, Quality categories) from Honda Motor Co., Ltd.

December　Received Excellent Company Award and Public Listing Commemorative Award from Honda Motor Co., Ltd.

■ 2000

April　Received Appreciation Award from Honda Motor Co., Ltd. (Motorcycle Business)

May　Musashi Auto Parts Canada Inc. (MAP-CA) received Excellence in Quality Award from Honda of Canada Manufacturing

June　Received Company Excellence Award and Consolidated Company Effort Award from Honda Motor Co., Ltd.

■ 2001

June　Musashi Auto Parts UK Ltd. (MAP-UK) received Delivery Effort Award from Honda of the U.K. Manufacturing Ltd.

■ 2004

February　Received Supplier Quality Excellence Award (Cost category) from Honda Motor Co., Ltd.

Innovation

■ 2007

January　Received Special Cooperation Award from Kawasaki Heavy Industries, Ltd.

April　Musashi do Brazil Ltda. (MSB) received Supplier Merit Award (Powertrain category) from General Motors Company

■ 2008

June　Received Excellent Company Award from Honda Motor Co., Ltd.

June　Musashi Auto Parts Co., Ltd. (MAP-TH) received Best Cost Award from Honda Automobile (Thailand) Co., Ltd.

—　Received Appreciation Award (Cost category) from F.C.C. Co., Ltd.

—　Kyushu Musashi Seimitsu (KMS) received Quality Improvement Award from Fuji Heavy Industries Ltd.

—　Musashi Auto Parts Michigan Inc. (MAP-MI) received D Award from Honda of America Manufacturing, Inc.

—　MAP-MI received Service Parts QD Award from American Honda Motor Co., Inc.

—　MAP-MI received D Award from AW North Carolina, Inc.

—　MAP-CA received Quality Award from F&P Canada Mfg. Inc.

—　MAP-CA received Best Supplier Award from Hyundai Motor Manufacturing Alabama, LLC

—　MSB received Company Excellence Award from Moto Honda Da Amazonia Ltda.

—　MAP-TH received Cost Award from Thai Honda Manufacturing Co., Ltd.

—　MAP-TH received Good QCD Award from Koyo Steering (Thailand) Co., Ltd.

—　MAP-TH received Excellence Award (Q and D categories) from Siam Aisin Co., Ltd.

— MAP-TH received Performance Improvement Award from Toyota Motor Asia Pacific Engineering & Manufacturing Co., Ltd.
— MAP-TH received Safety Activity Award (Silver Certificate) from Toyota Co-operation Club
— P.T. Musashi Auto Parts Indonesia (MAP-IN) received Excellence in Quality Award from P.T. Honda Precision Parts Manufacturing
— MAP-IN received QD Excellence Award from P.T. Astra Daihatsu Motor
— Musashi Auto Parts (Zhongshan) Co., Ltd. (MAP-CH) received Excellent Supplier Award from GAC Honda Automobile Co., Ltd.
— MAP-CH received letters of appreciation for quality achievement and zero irregular deliveries from Honda Automobile (China) Co., Ltd.

■ 2009

January Received Supplier Quality Excellence Award (Cost, Parts categories) from Honda Motor Co., Ltd.
March MAP-TH received Cost New Model Award and Delivery Award from Thai Honda Manufacturing Co., Ltd.
— MAP-MI received Service Parts Excellence Award from American Honda Motor Co., Inc.
— MAP-CA received Service Parts Excellence Award from American Honda Motor Co., Inc.
— MAP-TH received Safety Activity Award (Silver Certificate) from Toyota Co-operation Club
— MAP-IN received Quality Excellence Performance Award from P.T. Kawasaki Motor Indonesia
— MAP-CH received Supplier Quality Improvement Award from Dongfeng Honda Engine Co., Ltd.

■ 2010

March MAP-TH received Quality Excellence Performance Award from Siam Toyota Manufacturing Co., Ltd.
— MAP-MI received Service Parts Award from American Honda Motor Co., Inc.
— MAP-MI received Quality Excellence Award from AW North Carolina, Inc.
— MAP-CA received Service Parts Award from American Honda Motor Co., Inc.
— MAP-CH received Excellence in Delivery Award from Honda Auto Parts Manufacturing Co., Ltd.
— MAP-IN received Best Cost Performance Award from P.T. Astra Daihatsu Motor

■ 2011

February Received Supplier Quality Excellence Award (Cost, Parts categories) from Honda Motor Co., Ltd.
— Musashi Da Amazonia Ltda. (MDA) received QCD Excellence Award from Moto Honda Da Amazonia Ltda.
— MAP-CH received Excellence in Quality Award from Honda Automobile (China) Co., Ltd.
— MAP-CH received letter of appreciation for excellent cost reduction from Honda Auto Parts Manufacturing Co., Ltd.
— MAP-CH received Delivery Guarantee Award from Guangzhou Showa Autoparts Co., Ltd.
— MAP-TH received QD Award from Aisin Seiki Co., Ltd.
— MAP-TH received C Award from Thai Suzuki Motor Co., Ltd.
— MAP-IN received Best Cost Performance Award from P.T. Honda Precision Parts Manufacturing
— MAP-IN received VA/VE Award from P.T. Suzuki Indomobil Motor
— MAP-IN received Good Cost Performance Award from P.T. Astra Daihatsu Motor
— Musashi Hungary Manufacturing Ltd. (MHM) received Q Award from Jaguar Land Rover Automotive PLC
— MHM received A Grade Supplier Award in the Logistics category from Audi AG

■ 2012

June MAP-MI received Delivery Excellence Award from AW North Carolina, Inc.
— MAP-CA received Service Parts Excellence Award from American Honda Motor Co., Inc.
— MDA received QCD Excellence Award from Moto Honda Da Amazonia Ltda.
— MAP-ID received Cost Award from Honda Motorcycle and Scooter India Pvt. Ltd.

— MAP-ID received Delivery Quality Excellence Award from Suzuki Motorcycle India Pvt. Ltd.
— MAP-IN received Best Cost Supplier for New Model Award from P.T. Astra Honda Motor
— MAP-CH received Supply+ Excellence Award (Best 10 in Delivery Excellence) from GAC Honda Automobile Co., Ltd.
— MAP-CH received Delivery Excellence Award from Honda Auto Parts Manufacturing Co., Ltd.
— Received the Ford Q1 Preferred Quality Award

■ 2013

February Received Supplier Quality Excellence Award (Parts category) from Honda Motor Co., Ltd.
— MAP-CA received Service Parts Excellence Award from American Honda Motor Co., Inc.
— MAP-MI received Service Parts Excellence Award from American Honda Motor Co., Inc.
— MAP-IN received Excellent Quality Performance Award from P.T. Kawasaki Motor Indonesia
— MAP-IN received Delivery Excellence Award from P.T. FCC Indonesia
— MAP-ID received Special Support Award from Suzuki Motorcycle India Pvt. Ltd.
— MAP-CH received Excellence in Quality Award from Honda Auto Parts Manufacturing Co., Ltd.

■ 2014

May Received Supplier Commendation Contribution Award from Daihatsu Motor Co., Ltd.
— MAP-IN received Best New Model Development Award (Development, Technology categories) from P.T. Astra Honda Motor
— MAP-IN received Superior Quality and Delivery Award (QD categories) from P.T. Astra Daihatsu Motor
— MAP-IN received Suzuki Best Partner Award (QCD category) and The Best Vendor Performance Award (Parts category) from P.T. Suzuki Indomobil Motor
— MAP-IN received The Best of All Category (overall best in QCD categories) and The Best Quality Performance (Q category) from P.T. Kawasaki Motor Indonesia
— MAP-IN received Best Partner Award (QCD categories) from P.T. FCC Indonesia
— MAP-ID received from Special Support Award from Suzuki Motorcycle India Pvt. Ltd.

■ 2015

February Received Supplier Quality Excellence Award (Environment category) from Honda Motor Co., Ltd.
May KMS received Excellent Safety Activities Award from Daihatsu Motor Co., Ltd.
— MAP-CA received Service Parts Excellence Award from American Honda Motor Co., Inc.
— MAP-CA received Supplier Excellence in Value Award from Honda of America Manufacturing, Inc.
— MSB received Supplier Quality Excellence Award from General Motors do Brazil
— MSB received Supplier Award from AAM South America
— MDA received Excellence Quality and Delivery from Moto Honda Da Amazonia Ltda.
— MAP-IN received Best Delivery Award (D category) from P.T. Honda Prospect Motor
— MAP-IN received Best Partner Award (QCD categories) from P.T. Suzuki Indomobil Motor
— MAP-IN received Excellent Quality Performance Award (Q category) from P.T. Kawasaki Motor Indonesia
— MAP-IN received CSR Award (CSR category) from P.T. Astra Daihatsu Motor
— MAP-IN received Best Innovation Team Award (Development and Technology categories) from P.T. Astra Honda Motor
— MAP-ID received Best Delivery Award from Honda Siel Power Products, Ltd.
— MAP-CH received Best Supplier Award (D category) from Honda Auto Parts Manufacturing Co., Ltd.

■ 2016

March Received Supplier Quality Excellence Award (Cost Award) from Honda Motor Co., Ltd.
May KMS received Excellent Safety Activities Award from Daihatsu Motor Co., Ltd.

July MAP-ID received Quality Improvement Award from Maruti Suzuki India, Ltd.
— MAP-CA received Excellence in Value Award from Honda of America Manufacturing, Inc.
— MSB received Supplier Quality Excellence Award from General Motors do Brazil
— MSB received Supplier Award (Environment Award) from Moto Honda Da Amazonia Ltda.
— MAP-MI received Excellence in Value Award from Honda of America Manufacturing, Inc.
— MAP-CH received Excellent Supplier Award (QCD Overall category) from GAC Honda Automobile Co., Ltd.
— MAP-CH received Excellence in Delivery Award (D category) from Honda Auto Parts Manufacturing Co., Ltd.
— MAP-CH received Excellence in Quality Award (Q category) from Dongfeng Auto Parts Co., Ltd.
— MAP-TH received Delivery Commendation from Thai Honda Manufacturing Co., Ltd.
— MAP-TH received Cost Commendation from Thai Suzuki Motor Co., Ltd.

■ 2017

January Received Quality Excellence Award from Kawasaki Heavy Industries, Ltd.
— MAP-IN received Superior Quality & Delivery Award from P.T. Astra Daihatsu Motor
— MAP-IN received Best Performance Award (QCD Overall category) from P.T. Suzuki Indomobil Motor
— MAP-IN received Best Production Support Award from P.T. Kawasaki Motor Indonesia
— MAP-CH received Excellence in Quality Award from Dongfeng Auto Parts Co., Ltd.
— MAP-CH received Quality Excellence Award from JTEKT Corporation
— MAP-TH received Quality Improvement Award from Mitsubishi Motors (Thailand) Co., Ltd.
— MAP-CA received American Honda Service Parts Award from American Honda Motor Co., Inc.

■ New Orders

Global Expansion

■ 2004

April In Europe, received order from Daimler Chrysler Group for camshafts used in 1.3–1.5-liter class models
April In North America, received order from Daimler Chrysler Group for camshafts used in 2-liter class worldwide car models
April In North America, received order from Hyundai Motor Company for camshafts
April Received order from Honda for planetary assys that are part of the world's first 4WD SH-AWD system equipped in the Legend (Acura RL for North America)

■ 2005

October MSC received order from Ford for truck bevel gears

Innovation

■ 2007

April MAP-TH received order from Nissan Motor Co., Ltd. for pickup truck bevel gears and ball joints
April MAP-IN received order from Astra Daihatsu Motor for automobile camshafts used in 1-liter-class engines
April MAP-ID received order from Hero Honda Motors Ltd. for one-way clutches
April MHM received order from Audi for automobile suspension parts (ball joints) for the A4
April MAP-UK received order from Ford Group for automobile camshafts used in V8 engines

■ 2008

April MAP-TH received order from Nissan Motor Co., Ltd. for steering ball joints for compact cars
April MAP-ID received order from Hero Honda Motors Ltd. for transmission shafts and gears used in 100-cc motorcycles
April MHM received order from BMW for steering ball joints for mid-sized automobiles
April MHM received order from Audi for automobile suspension parts for the A4
April MAP-MI received order from Honda for bevel gears (strategic Musashi product) used in the 2008 model Accord locally produced in North America
April MAP-CA received order from Hyundai Motor Company for L4 (inline 4-cylinder engine) camshafts

■ 2009

October MAP-TH received order from Suzuki for automobile differential gears (strategic Musashi product)
October Received order from Ford for differential gears used in a new type of powertrain
October Received order from Hyundai Motor Company for L4 (inline 4-cylinder engine) assembly camshafts (Musashi developed product) for the North American market
October Received order from Honda for automatic transmission gears (ATG) and lightweight differential assemblies for automobiles
October Received order from Honda for transmission assemblies used in new-model large DCT motorcycles
October Received order from Honda for related parts (gears, shafts, etc.) used in new-model CV-Matic motorcycles

■ 2010

April MAP-TH received order from Nissan Motor Co., Ltd. for steering ball joints used in global strategic automobile models
April MAP-TH received order from Ford for differential gears used in pickup trucks
April MAP-ID received order from Hero Honda Motors Ltd. for 100-cc motorcycle gears
April MHM received order from Jaguar for camshafts used in V6 DOHC engines
October Received order from BMW for transmission gear assemblies used in large motorcycles (R Series)

■ 2012

April Received order from Honda for differential assemblies and camshafts used in a new-model car (N-Box)

April KMS received order from Honda for transmission assemblies (DCT), balancer gears, and camshafts used in new-model 700-cc-class motorcycles (Integra and NC700X)
April MAP-IN received order from Suzuki for engine parts used in 1,400-cc-class automobiles
April MAP-TH received order from Mitsubishi Motors for camshafts used in global compact cars
April Received order from JATCO Ltd. for gear parts used in compact car CVT for the Asian market
April MSB received order from GM for transmission gear parts used in 1–1.8-liter-class automobiles
October Received order from Honda for planetary assemblies for new-model CVT used in the Accord for North America
October MAP-ID received order from Honda Cars India Ltd. for manual transmission parts, suspension parts, and engine parts used in the Brio for India
October MAP-IN received order from P.T. Astra Honda Motor for camshafts, shafts, and gear parts used in 110-cc scooters
October MAP-ID received order from Honda Motorcycle and Scooter India Pvt. Ltd. for transmission gear assemblies used in 110-cc motorcycles
October MAP-ID received order from Hero MotoCorp for transmission gear assemblies used in 100-cc motorcycles
October MAP-MI received order from ZF for differential assemblies used in new-model transmissions
October MAP-CA received order from General Motors for camshafts used in leading global brand automobiles
October MAP-IN received order from P.T. Aisin Indonesia Automotive for transmission parts used in Toyota global strategic car models

■ 2013

April MAP-ID received order from Honda Cars India for engine and suspension parts used in the diesel Brio Amaze for India
April MAP-IN received order from Honda Precision Parts Manufacturing for differential assemblies used in the CR-V
April MAP-VN received order from Honda Vietnam for transmission parts used in 125-cc motorcycles
October Received order from Honda for transmission, engine, and suspension parts used in the new-model Fit
October Received order from Honda for transmission, engine, and suspension parts used in the Accord Hybrid
October MAP-CH received order from JATCO Ltd. for gear parts used in compact car CVT for the Asian market
October MAP-TH received order from Triumph Motorcycles for transmission gear assemblies used in mid-sized motorcycles

■ 2014

April MAP-ID received order from Honda Cars India for manual transmission, engine, and suspension parts for the City
April MAP-MI received order from Chrysler for differential assemblies used in the Jeep Cherokee, Chrysler 200, and other leading models
April MAP-CA received order from Ford for camshafts used in the new-model engine for the F150
April MAP-TH received order from Dana Inc. for bevel gears for Ford including exports to Thailand, South Africa, and Argentina
April MAP-IN received order from Astra Daihatsu Motor Co., Ltd. for transmission parts used in compact cars
April MAP-TH received order from Thai Honda Manufacturing for transmission assemblies and camshafts used in 650-cc motorcycles

■ 2015

April MAP-TH received order from Isuzu Motors Co., (Thailand) Ltd. for engine parts
April MHM received order from Getrag Corporate Group for differential assemblies for dual clutch transmissions
April MSB received order from Fiat Automobiles S.p.A. for differential assemblies used in leading compact car models
April MSB received order from Dana for bevel gears used in the Toyota Hilux
April MSB received order from American Axle and Manufacturing, Inc. for bevel gears
April MAP-IN received order from P.T. Astra Honda Motor for automatic transmission camshafts used in the 110-cc-class BeAT FI
October MAP-MI received order from Ford for differential assemblies used in small and mid-sized automobiles
October MSB received order from American Axle and Manufacturing for four-wheel-drive system parts

October KMS received order from Fuji Heavy Industries for camshafts used in ATVs

■ 2016

August Received order from Honda for planetary assemblies used in the NSX
August Received order from Honda for differential assemblies used in Clarity Fuel Cells
August Received order from Fuji Heavy Industries for bevel gears used in mid-sized automobiles
August MAP-MI received order from Ford for bevel gears used in mid-sized automobiles
August MAP-MI received order from ZF for differential assemblies used in mid-sized and large automobiles
November MAP-IN received order from Astra Daihatsu Motor for camshafts used in compact cars
November MAP-TH received order from Dana for bevel gears used in mid-sized automobiles
November Received order from F.C.C. Co., Ltd. for primary driven gears and ring starters used in Harley Davidson motorcycles

■ 2017

May Received order from Aisin AW Co., Ltd. for transmission parts used in automatic transmissions for the FF
May MAP-CH received order from BYD Auto for ball joints used in automobiles
May MAP-IN received order from P.T. Astra Honda Motor for transmission assemblies and camshafts used in the new-model 250-cc-class CBR250RR sport model
November MAP-TH received order from Triumph for transmission assemblies used in Bonneville motorcycles
November MAP-ID received order from TVS Motor Company for primary gears used in Star City motorcycles
November MAP-VN received order from Piaggio Vietnam for camshafts used in Liberty and Vespa scooters
November MAP-MI received order from Ford for differential assemblies used in small- and mid-sized hybrid vehicles

■ 2018

February Received order from Honda for differential assemblies and planetary assemblies used in 10-speed automatic transmissions for the world's first FF
February Received order from Aisin AW for transmission parts used in two-motor hybrid transmissions for the FF

■ History

Musashi Initiatives	Industry & World Events
Foundation	
■1938	■1938
April Yoshiharu Otsuka establishes Otsuka Kikai Seisakusho (Otsuka Machinery Plant) in Togoshi, Shinagawa-ku, Tokyo	April National Mobilization Act promulgated (1st)
■1939	■1939
April Plant is relocated to Musashino-cho, Kitatama-gun, Tokyo, and trade name is changed to Otsuka Seisakusho	September Outbreak of World War II (1st)
■1941	■1940
— Begin construction to expand plant with saw-tooth roof	September Tripartite Pact (27th)
— Complete dormitory for unmarried employees	■1941
■1944	December Outbreak of the Pacific War (8th)
January Incorporate and change trade name to Otsuka Aviation Industry	December Automobile Control Association established
April Designated as a munitions company	■1942
	May Hino Heavy Industry Co., Ltd. established
	■1943
	October Munitions Companies Act approved (31st)
	■1944
	November Bombing of Tokyo (24th)
■1945	■1945
February Evacuate to Shinjo City, Yamagata Prefecture	August End of the Pacific War (15th)
June Evacuate to Kaminoyama City, Yamagata Prefecture	— Nakajima Hikoki K.K. renamed Fuji Sangyo K.K.
September Dissolve Otsuka Aviation Industry	
Reconstruction	
■1946	■1946
August Receive application of Enterprise Reorganization Act	October Honda Technical Research Institute established
October Relocate head office to Osaki-cho, Toyohashi City, Aichi Prefecture, and change trade name to Musashi Sangyo Co.,Ltd.	November The Constitution of Japan promulgated (3rd)
■1947	■1947
April Begin manufacturing sewing machine parts	April Labor Standards Act promulgated
	November Honda begins production of A-Type auxiliary bicycle engine
■1948	■1948
December Musashi system of waiting for new factors	April Automotive Industrial Association established
December Change to direct power system	September Honda Motor Co., Ltd. established
— Windmill construction fails	November International Military Tribunal for the Far East (12th)
■1949	■1949
January Begin manufacturing thread take-up cams	April Japanese yen fixed to the US dollar (25th)
	August Honda begins production of the Dream motorcycle
	November Hideki Yukawa awarded Nobel Prize in Physics
	■1950
	April Toyota Motor Sales Co., Ltd. established
	June Outbreak of the Korean War (25th)
	July Automobile tax instituted
■1951	■1951
— Begin commercial sales of sewing machine parts	September United States–Japan Security Treaty signed
	December Hatsudoki Seizo Co., Ltd. renamed Daihatsu Motor Co., Ltd.
■1952	■1952
— Begin sales to Nippon Sewing Machine Manufacturing Co.	March Honda mass-produces the Cub F-Type auxiliary bicycle engine
	May Bloody May Day (1st)
■1953	■1953
— Receive damage from Typhoon No. 13 (Typhoon Olive)	February NHK begins television broadcasting (1st)
— Work on prototypes for Prince Motors, Ltd.	June Honda releases the Benly motorcycle

Musashi Initiatives	Industry & World Events
	November The Honda Juno scooter announced
	■1954
	February Marilyn Monroe visits Japan (1st)
	April First All Japan Motor Show held (20th)
■1955	■1955
— Capture 65 percent of the thread take-up cam market in Japan	September Japan becomes GATT signatory (10th)
	November First All Japan Motorcycle Endurance Road Race held
Turning Point	
■1956	■1956
September Begin sales to Honda Motor Co., Ltd.	February Act on Securing Compensation for Automobile Accidents enacted
	December Japan becomes a member of the United Nations (18th)
■1957	■1957
— First use of Work Standards Chart	August Toyota begins exports of passenger cars to the United States (25th)
— Obtain Mitsui jig borers from Toyokawa Naval Arsenal	November Nuclear power plant constructed in Japan
■1958	■1958
March Fire at Osaki Plant	March Kanmon Tunnel opens between Honshu and Kyushu (9th)
April Purchase Miyano automatic lathe with financing from the Japan Development Bank	March Fuji Heavy Industries announces the Subaru 360 light automobile
October Complete first steel-frame plant	May Honda announces the Super Cub motorcycle
— President Soichiro Honda of Honda Motor Co., Ltd. visits Musashi	December Tokyo Tower completed (23rd)
■1959	■1959
April Deliveries to Honda Motor Co., Ltd. switch from end of month to a timetable	April Crown Prince Akihito marries Michiko (10th)
April Adopt white company uniforms	June Honda enters the Isle of Man TT Race
■1960	September Isewan Typhoon (26th)
— Complete company dining hall	■1960
	May First Imported Automobile Show held (14th)
	July Honda R&D Co., Ltd. established
	October Imports of motorized three-wheeled vehicles liberalized
	December Road Traffic Enforcement Act is abolished, Road Traffic Act is enacted
	— This year, Japan becomes world's top producer of motorcycles (1.47 million)
Growth	
■1961	■1961
February First rationalization plan implemented	January U.S. President John F. Kennedy assumes office (20th)
April In-house job training center opens	April Truck, bus, and motorcycle trade liberalized
April Shift system introduced	August Berlin Wall constructed (23rd)
	October Honda machine wins World GP Race
■1962	■1962
— First Sports Day held	August Kenichi Horie completes solo voyage across the Pacific Ocean (12th)
July Begin sales to Sakai Plant of Kubota Tekko K.K	September Suzuka Circuit completed
■1963	■1963
January Second rationalization plan implemented	May First Grand Prix automobile race held in Japan (3rd)
April Division system adopted	
June Improvement suggestion system introduced	

Musashi Initiatives		Industry & World Events	
August	Enter cold forging segment		
September	Change trade name to Musashi Seimitsu Industry Co., Ltd.		
■1964		■1964	
April	Pension scheme introduced	March	Honda debuts in Formula One race in the German Grand Prix
December	Successfully use cold forging to mass-produce kickstart pinion gears and kickstart ratchet gears	October	Tokaido Shinkansen (bullet train) line opens (1st)
		October	Tokyo 1964 Olympic Games begin (10th)
■1965		■1965	
January	Ueta Plant (Ueta-cho, Toyohashi City, Aichi Prefecture) begins operations	July	Meishin Expressway fully opens
		October	Honda wins its first Formula One race in Mexican Grand Prix
April	Selected as a company for investment from the Small and Medium Business Investment & Consultation Co., Ltd.	—	“Izanagi boom” economic expansion
June	Complete Suzuka Plant (Hirata-cho, Suzuka City, Mie Prefecture [currently Oike, Suzuka City])		
■1966		■1966	
January	Relocate head office to Ueta-cho, Toyohashi City, Aichi Prefecture	June	Beatles visit Japan (29th)
		August	Nissan and Prince merge (1st)
July	Third rationalization plan implemented	September	Honda wins five classes of world Grand Prix motorcycle racing
July	President Soichiro Honda of Honda Motor Co., Ltd. visits Musashi		
■1967		■1967	
April	Begin manufacturing ball joints and engine parts for the Honda N series. End sewing machine parts manufacturing	March	Honda releases the N360 light automobile
		April	Japan Automobile Manufacturers Association, Inc. (JAMA) established (3rd)
May	Labor union formed	July	Commission of the European Communities established (1st)
September	Visit from Takamatsu-no-Miya (Prince Takamatsu) for inspection tour	November	Toyota and Daihatsu create business alliance
September	Materials Center completed		
October	Takeyukai (Musashi Friendship Association) formed		
November	Successfully put Mitsubishi Dynapac into operation, a world first		
■1968		■1968	
July	Musashi Packaging Transportation Co., Ltd. established	July	Motor vehicle purchase tax instituted (1st)
September	Begin sales to Kawasaki Heavy Industries, Ltd.	October	Yasunari Kawabata receives Nobel Prize in Literature
—	Begin sales to Utsunomiya Plant of Kubota Tekko K.K.	December	Air Pollution Control Act promulgated (1st)
December	Technology research center completed	December	300 million yen robbery (10th)
—	Successfully develop compact, lightweight maintenance-free ball joints		
■1969		■1969	
May	Kosei Kaikan hall completed	May	Honda releases the 1300 sedan
June	Utsunomiya Sales Office established	July	Apollo 11 lands on the surface of the moon (20th)
July	Kubota reaper-binder steering		
October	Horai Plant (Horai-cho, Minami-Shitara District, Aichi Prefecture [currently Nagashino, Shinshiro City]) completed		
—	Begin production of assemblies		
—	Selected as an export contributing company		
■1970		■1970	
January	Inaugural edition of the *Musashi News* company newsletter	March	Expo ’70 begins in Osaka (14th)
February	Successfully develop industrial robots	June	Mitsubishi Motors Corporation established
April	New employees trial enlist in Self-Defense Forces	July	Photochemical smog becomes a problem in Japan
June	Successfully precision forge drive pinion sprocket wheels	December	Clean Air Act (“Muskie Act”) approved in the United States (31st)
October	Musashi SDC Association established		
November	Introduce employee stock ownership system		

Musashi Initiatives		Industry & World Events	
■1971		■1971	
April	Start of Attack 11	February	Honda announces low-emission CVCC engine
May	Continuous temperature measurement device completed	February	Mitsubishi Motors and Chrysler form business alliance
August	Tokyo Sales Office established	April	Capital liberalization implemented in the automotive industry (1st)
September	Musashi Engineering Co., Ltd. becomes independent company	June	Okinawa Reversion Agreement signed (17th)
November	IBM computers installed	July	Isuzu and GM form business alliance
—	Successfully forge bevel gears	August	Japanese yen adopts floating exchange rate system (28th)
—	Successfully develop compact hemodialysis appartus		
■1972		■1972	
August	First National Trade Skills Test attempt	January	Japanese soldier Shoichi Yokoi is discovered on Guam (24th)
October	Musashi Development Co., Ltd. established	February	Sapporo 1972 Winter Olympics begin (3rd)
December	Head Office South Plant constructed	October	Confederation of Japan Automobile Workers’ Unions (JAW) established (3rd)
		October	Pandas arrive at Ueno Zoo (28th)
		October	Honda announces CVCC engine
■1973		■1973	
August	Utsunomiya Plant (Utsunomiya City, Tochigi Prefecture) completed	April	Low-emission automobile preferential tax measure instituted
November	35th anniversary ceremony held	October	First oil crisis (23rd)
■1974		■1974	
January	Automatic feed machine for hot forging material fabricated	January	Honda and Ford conclude sales alliance (9th)
June	Dedicated DTM machine completed	October	Eisaku Sato receives Nobel Peace Prize (8th)
November	Hot forging plant constructed	—	Japan becomes world’s top exporter of automobiles
December	Special high-voltage substation constructed		
December	Kyushu Musashi Seimitsu Co., Ltd. established in Nishiki-machi, Kuma District, Kumamoto Prefecture		
■1975		■1975	
January	Large, 1,600-ton hot forging press installed	March	Toyota Corolla becomes top mass-produced car in the world
March	Donate patrol cars to Toyohashi Police Department	April	End of the Vietnam War (30th)
April	Start of “150 campaign”	July	Expo ’75 begins in Okinawa (19th)
November	Kerosene leak accident at Horai Plant	August	Light vehicle category expanded to 550 cc and below
Expansion			
■1976		■1976	
September	Large tool microscope and universal metallurgical microscope installed	February	Lockheed Scandal erupts (4th)
		November	Ceremony celebrating 50 years of the Emperor’s reign (10th)
■1977		■1977	
January	Logistics project team formed	September	Sadaharu Oh sets new world record for most home runs with his 756th home run (3rd)
February	Camshafts transferred to Kyushu Musashi Seimitsu Co., Ltd.		
■1978		■1978	
July	Conclude agreement with Ford Motor to export ball joints	March	Japanese automobile import tariff set to zero
		May	Tokyo International Airport opens (20th)
		August	Treaty of Peace and Friendship between Japan and China signed (12th)
■1979		■1979	
—	Develop multipurpose compressor with Scotch yoke mechanism	January	Common first-stage exam for university admissions conducted for the first time (13th)
February	Cutting plant constructed	June	G7 Summit held in Tokyo (28th)
June	MKP Project launched	December	Honda and BL sign technology alliance
December	Energy- and resource-saving project launched	—	Honda builds plant in Ohio, USA

Musashi Initiatives		Industry & World Events	
■1980		■1980	
April	“ABC campaign” launched	January	Honda announces passenger automobile production in the USA
July	Head Office general administration office completed	March	Online alliance of city banks begins (10th)
August	Musashi USA Inc. (currently Musashi Auto Parts Michigan Inc. [MAP-MI]) established in Michigan, USA	September	Honda announces the Tact family scooter
September	Jointly develop low-friction grease together with Nippon Oil Corporation	September	Outbreak of Iran–Iraq War
■1981		—	Japan becomes top automobile producer in the world
July	Lower control arm assembly transferred to Utsunomiya Plant through outsourcing	■1981	
—	3D measurement machine, shape measurement machine, and roundness measurement machine installed	March	Kobe Portopia opens (20th)
November	Final general wastewater treatment system begins operation	April	Exhaust emission regulations applied to imported automobiles
■1982		■1982	
—	New robotic crankshaft production lines established	July	Toyota Motor Co., Ltd. and Toyota Motor Sales Co., Ltd. merge to become Toyota Motor Corporation
July	First walk rally held	November	Joetsu Shinkansen (bullet train) line opens (15th)
August	Akemi Plant (currently Akemi Plant #1, Akemi-cho, Toyohashi City, Aichi Prefecture) completed	December	Use of prepaid telephone cards begins (23rd)
■1983		■1983	
February	Measurement Olympics held	February	Toyota and GM sign agreement for production joint venture
April	Honda vehicle employee introduction program begins	April	Tokyo Disneyland opens (14th)
October	45th anniversary ceremony held	July	Mandatory automobile inspection extended to three years for new cars in Japan
■1984		■1984	
April	Exhibit at first Tokai Electronics Show	May	Satellite broadcasting begins
December	Construct Battle Creek Plant for Musashi USA Inc.	November	New banknotes issued (1st)
■1985		■1985	
March	Received Prize for Science and Technology	March	Tsukuba Expo ’85 begins (17th)
August	Exhibit products at Toyohashi Harbor Festival	April	NTT and Japan Tobacco Inc. founded (1st)
October	Musashi USA Inc. begins parts assembly work	December	Toyota constructs plant in Kentucky, USA
November	Yoshiharu Otsuka receives the Order of the Sacred Treasure, Fifth Class		
■1986		■1986	
February	CAD/CAM system launched	April	Chernobyl nuclear accident in the Soviet Union (26th)
March	President and CEO Tadashi Kume of Honda Motor Co., Ltd. visits Musashi	July	Tohoku Expressway fully opens (30th)
April	Bust of President Yoshiharu Otsuka erected at Head Office in commemoration of receiving the Order of the Sacred Treasure, Fifth Class (gift from the Conferment Celebration Committee)	September	Use of seatbelts in automobiles becomes mandatory in Japan
April	Unveiling ceremony for the bust of President Yoshiharu Otsuka		
December	Musashi Lease Co., Ltd., Musashi Trading Co., Ltd., and Musashi Maintenance Service Co., Ltd. established		
■1987		■1987	
February	Exhibit products at U.S. SAE Show	April	Japanese National Railways broken up and privatized (1st)
March	Musashi Festival ’87 held	October	Susumu Tonegawa awarded Nobel Prize in Physiology or Medicine (12th)
April	Ceremony to mark the start of MDL-001 operation, a Musashi-manufactured robot controller	October	Stock market crash (“Black Monday”)
September	Tochigi Technical Center ground-breaking ceremony held		
October	Harvest Life Co., Ltd. established		
November	Musashi USA Inc.’s trade name changed to Technical Auto Parts Inc. (TAP)		

Musashi Initiatives		Industry & World Events	
December	Musashi Auto Parts Co., Ltd. (MAP) established in Pathumthani, Thailand		
■1988		■1988	
August	TPM kick-off ceremony held	March	Seikan Tunnel opens (13th)
—	50th anniversary event held	April	Great Seto Bridge opens (10th)
		June	Recruit scandal erupts (18th)
■1989		■1989	
April	Receive five trainees from Musashi Auto Parts Co., Ltd. (MAP)	January	Death of Emperor Showa (7th)
April	Opening ceremony for Musashi Auto Parts Co., Ltd. (MAP) held	January	Change of Japanese era name to Heisei (8th)
November	Yoshiharu Otsuka named honorary citizen of Nishiki-machi, Kumamoto Prefecture	April	Consumption tax instituted (1st)
		July	Honda constructs new plant in Thailand
		November	Berlin Wall falls (9th)
Global Expansion			
■1990		■1990	
April	Begin medium-term three-year PM-2 Campaign	March	Four Mitsubishi Group companies and Daimler–Benz form alliance
April	Start TPM independent maintenance support for indirect divisions	March	President Mikhail Gorbachev assumes office in Soviet Union (12th)
May	Noto Oshima Plant (temporary plant in Shika-machi, Hakui District, Ishikawa Prefecture) begins operations	August	Iraqi army invades Kuwait (2nd)
May	15th anniversary ceremony for Kyushu Musashi Seimitsu Co., Ltd. held	October	East and West Germany reunify to form the Federal Republic of Germany
May	Received The Japan Society for Technology of Plasticity Prize (Mitsui Precision Technology Prize)		
June	Noto Plant ground-breaking ceremony held		
June	Chairman Yoshiharu Otsuka and President Yoshikazu Otsuka (later Kimitoshi) assume positions		
■1991		■1991	
March	Noto Plant completed (Shika-machi, Hakui District, Ishikawa Prefecture)	February	Gulf War ends (26th)
April	Introduce “Refresh” vacation system	May	Yokozuna sumo wrestler Chiyonofuji retires (14th)
April	President and CEO Nobuhiko Kawamoto of Honda Motor visits Musashi	June	Publicly release prototype of the Honda CUV-ES electric scooter
June	Participate in economy car event		
November	President and CEO Yoshikazu Otsuka changes name to Kimitoshi Otsuka		
■1992		■1992	
January	New Sales Division 2 established	March	JR East begins service of new-model Nozomi train cars with maximum speed of 250 kilometers per hour on the Tokaido Shinkansen (bullet train) line (14th)
February	Ceremony held at Musashi Auto Parts Co., Ltd. (MAP) to mark the start of forging with a Nittan Massey 750-t press, billet heater, non-oxidizing normalizing furnace, and Komatsu 110-t press (in-house integrated production system established)	May	National civil service personnel start having two days off each week (2nd)
		May	Honda opens Honda motorcycle engineering school in Shanghai
April	Drive pinions and differential pinions transferred to Kyushu Musashi Seimitsu Co., Ltd.	July	Tsubasa Yamagata Shinkansen (bullet train) line opens, connecting Tokyo and Yamagata in 2.5 hours (1st)
April	Exhibit at Toyohashi High Tech Fair	September	Mamoru Mori becomes first Japanese astronaut to ride the Space Shuttle on the Endeavor (12th)
April	Hold 530 clean-up event	—	Japan’s bubble economy collapses
May	Participate in first Toyohashi Goodwill Festival ’92		
December	Ceremony held at Musashi Auto Parts Co., Ltd. (MAP) to mark the start of forging with a second Nittan Massey 750-t press (integrated production system for motorcycle gears set up)		
December	Begin shipments to Spain-based Ederan Co., Ltd. from Technical Auto Parts Inc. (TAP)		

Musashi Initiatives		Industry & World Events	
■1993		■1993	
May	55th anniversary ceremony held	January	European Union (EU) established (1st)
June	Donate 1 million yen to Toyohashi City in commemoration of 55th anniversary	January	Czechoslovakia is dissolved and split into two independent countries, the Czech Republic and Slovakia (1st)
July	TAP Manufacturing Ltd. (TAP-MFG, currently Musashi Auto Parts UK Ltd. [MAP-UK]) established in South Wales, UK	February	Nissan Motor announces suspension of automobile production at its Zama Plant until the spring of 1995 (23rd)
August	Step 1 of KM Plan completed (3-year plan to transfer automobile gears from Kyushu Musashi Seimitsu to Ueta Plant)	April	Fukuoka Dome opens, the first stadium in Japan with a retractable roof (2nd)
September	Hold general meeting to establish Musashi Club (retirees' association)	May	J League (Japanese professional soccer league) starts (15th)
December	Pass H-TPM inspection	July	G7 Summit held in Tokyo (7th)
December	Cold-forging equipment is relocated from Ueta Plant to Akemi Plant	July	Honda Collection Hall opens
■1994		■1994	
March	Framework raising ceremony for TAP Manufacturing Ltd. (TAP-MFG.) held	March	Honda announces limited release of 200 CUV-ES electric scooters
June	Ceremony to mark the start of forging with a Komatsu 1,600-t press at the Ueta forging plant	May	Aryton Senna (Brazil), a popular Formula One race driver, dies in crash (1st)
June	Rack-end comp line transferred from the Ueta Nishi plant to Akemi Plant	June	Product Liability (PL) Act, with the objective of providing relief for consumer losses from product defects, is approved (22nd)
August	Step two of KM Plan completed (three-year plan to transfer automobile gears from Kyushu Musashi Seimitsu to Ueta Plant)	July	Chiaki Mukai, the first Japanese female astronaut, successfully flies the Space Shuttle (9th)
December	Technical Auto Parts Inc. (TAP) acquires ISO 9002 certification	September	Kansai International Airport, located in Senshu in Osaka Bay, Osaka, opens (4th)
		October	Kenzaburo Oe awarded the Nobel Prize in Literature (13th)
		—	Major recession in Japan deepens
■1995		■1995	
January	Step three of KM Plan completed (three-year plan to transfer automobile gears from Kyushu Musashi Seimitsu to Ueta Plant)	January	World Trade Organization (WTO) established (1st)
		January	7.3-magnitude Great Hanshin-Awaji Earthquake strikes in Kobe, killing 6,433 people (17th)
April	Family Appreciation Program introduced	February	Honda releases the Raccoon hybrid bicycle
July	TAP Manufacturing Ltd. (TAP-MFG) acquires ISO 9002 certification	March	Tokyo subway sarin attack (20th)
August	New corporate logo on the Head Office building (Passion, Wisdom, Harmony)	August	Windows 95, the latest operating system software from U.S.-based Microsoft, is released simultaneously in 25 countries (24th)
		—	Recession-based job scarcity, higher unemployment rate
		—	Internet rapidly achieves penetration
■1996		■1996	
March	P.T. Musashi Auto Parts Indonesia (MAP-IN) established in Bekasi, Indonesia	February	Shogi player Yoshiharu Habu becomes first person to ever hold seven professional shogi titles at the same time (14th)
April	New #2 Plant constructed at Musashi Auto Parts Co., Ltd. (MAP-TH) in Prachinburi, Thailand	April	Bank of Tokyo-Mitsubishi, one of the largest banks in the world, begins operations (1st)
May	Musashi obtains ISO 9001 certification	April	U.S.-based Ford acquires controlling stake in Mazda (12th)
October	Technical Auto Parts Inc. (TAP) acquires ISO 9001 certification	May	Japan and South Korea selected as joint hosts of the 2002 FIFA World Cup (31st)
December	P.T. Musashi Auto Parts Indonesia (MAP-IN) holds opening ceremony	June	Enterohemorrhagic Escherichia coli (E. coli) O157 infection spreads throughout Japan
—	TAP Manufacturing Ltd. (TAP-MFG) begins sales to Netherlands-based Netherlands Car B.V.		

Musashi Initiatives		Industry & World Events	
		September	New motorcycle license classifications of large and regular motorcycle licenses established
		September	Hideo Nomo, a pitcher for the Major League Baseball team the Dodgers, pitches a no-hitter (17th)
■1997		■1997	
May	Capital participation in Motogear Norte Industria de Engrenagens Ltda. (currently Musashi do Brazil Ltda. [MSB]) in Pernambuco, Brazil	January	Japan Motorcycle Association established
		April	Japanese consumption tax raised from three percent to five percent (1st)
June	Musashi Auto Parts Canada Inc. (MAP-CA) established in Ontario, Canada	June	Act on Securing, Etc. of Equal Opportunity and Treatment between Men and Women in Employment and related laws are approved (11th)
July	Ceremony held to mark first lighting of the forging machine at Musashi Auto Parts Canada Inc. (MAP-CA)	July	UK returns Hong Kong to China, which resumes rule over Hong Kong for the first time in 155 years (1st)
		August	Honda opens Twin Ring Motegi
		October	Nagano Shinkansen (bullet train) line opens for service between Tokyo Station and Nagano Station (1st)
		November	Sanyo Securities requests application of Corporate Reorganization Act (3rd)
		November	Hokkaido Takushoku Bank declares bankruptcy, operations are absorbed by Hokuyo Bank (17th)
		November	Yamaichi Securities announces voluntary cessation of operations (24th)
		December	Toyota Motor releases the Prius hybrid car
		December	Tokyo Bay Aqua-Line expressway connecting Kawasaki City, Kanagawa Prefecture and Kisarazu City, Chiba Prefecture opens (18th)
■1998		■1998	
February	Musashi Auto Parts Canada Inc. (MAP-CA) begins operations	February	Start of seven-digit postal codes in Japan (2nd)
		February	The 18th Winter Olympics are held in Nagoya (until the 22nd)
August	Musashi obtains ISO 14001 certification	April	The Akashi Kaikyo Bridge opens (total span of 3,911 m) (5th)
December	Stock registered on over-the-counter stock market at the Japan Securities Dealers Association	May	Daimler-Benz and Chrysler agree to merge (7th)
■1999		■1999	
March	Technical Auto Parts Inc. (TAP) obtains ISO 14001 certification	January	The euro, the single currency for the eurozone, is launched (1st)
May	Musashi obtains QS 9000 certification	February	U.S.-based Goodyear Tire and Rubber and Sumitomo Rubber Industries agree on global alliance (3rd)
September	TAP Manufacturing Ltd. (TAP-MFG) changes trade name to Musashi Auto Parts Europe Ltd. (MAP-EU)	March	Nissan Motor and France-based Renault sign capital alliance
September	Musashi Auto Parts Europe Ltd. (MAP-EU) exhibits at Materialica 99 for the first time in Munich, Germany	May	The Shimanami Kaido highway opens over the Seto Inland Sea between Onomichi City, Hiroshima Prefecture and Imabari City, Ehime Prefecture (1st)
October	Musashi South Carolina Inc. (MSC) established in South Carolina, USA	August	The Law Regarding the National Flag and National Anthem is passed (9th)
—	Successfully develop original 3D bevel gears	August	Dai-ichi Kangyo Bank, Fuji Bank, and the Industrial Bank of Japan announce establishment of a financial holding company and business merger (20th)
		October	Tokai Bank and Asahi Bank merge with total assets of approximately 99 trillion yen(7th)
		December	Portugal returns rule over Macau to China

Musashi Initiatives		Industry & World Events	
■2000		■2000	
February	Musashi Hungary Manufacturing Ltd. (MHM) established in Ercsi, Hungary	July	2,000 yen banknote issued (19th)
April	Musashi South Carolina Inc. (MSC) begins plant construction	August	Subscribers to NTT DoCoMo's i-mode mobile Internet service top 10 million (6th)
June	President and CEO Yoshijiro Kobayashi assumes position	September	Torrential rains hit the Tokai region. Approximately 580,000 people evacuate Nagoya and surrounding areas (11th)
November	Construction of plant at Musashi Hungary Manufacturing Ltd. (MHM) begins	October	Telecommunications company KDDI is launched through merger of DDI Corp. (affiliated with Kyocera), KDD Corp., and IDO Corp. (affiliated with Toyota Motor) (1st)
November	P.T. Musashi Auto Parts Indonesia (MAP-IN) obtains ISO 9002 certification	October	The Japan Net Bank, the first Internet-only bank in Japan, begins operations (12th)
November	Musashi Auto Parts Europe Ltd. (MAP-EU) obtains QS 9000 and ISO 14001 certifications	December	Broadcasting satellite (BS) digital broadcasting begins (1st)
		December	Toei Oedo subway line opens in Tokyo (12th)
■2001		■2001	
January	Musashi North America Inc. (MNA) established as a sales based in Michigan, USA	January	Japanese government adopts system of Cabinet Office and 12 ministries (6th)
January	Musashi Europe GmbH (MEU) established on the outskirts of Munich, Germany	February	Miyazaki-based Seagaia resort, a third sector corporation, declares bankruptcy (19th)
February	Begin sales to U.S.-based Visteon	March	Toto soccer lottery begins sales (3rd)
April	Technical Auto Parts Inc. (TAP) trade name changed to Musashi Auto Parts Michigan Inc. (MAP-MI)	April	Act on Access to Information Held by Administrative Organs goes into force (1st)
June	Musashi South Carolina Inc. (MSC) holds opening ceremony	September	Terrorists hijack airplanes and fly them into the World Trade Center in New York City and the Pentagon, the headquarters of the U.S. Department of Defense, in synchronized terrorist attacks (11th)
June	Founder and Senior Advisor Yoshiharu Otsuka passes away at the age of 96		
June	Kimitoshi Otsuka resigns as Chairman and Representative Director, appointed Senior Advisor	September	First case of variant Creutzfeldt-Jakob disease (mad cow disease) confirmed in Japan (21st)
July	Musashi Auto Parts Europe GmbH (MAP-EU) trade name changed to Musashi Auto Parts UK Ltd. (MAP-UK)	October	Professor Ryoji Noyori of Nagoya University awarded the Nobel Prize in Chemistry (10th)
September	Exhibit for the first time at the International Motor Show in Frankfurt, Germany	—	Ichiro Suzuki makes a splash in U.S. Major League Baseball, taking the titles for most hits, most bases stolen, AL Rookie of the Year Award, Rawlings Gold Glove Award, and AL Most Valuable Player Award
October	Exhibit for the first time at the 35th edition of the Tokyo Motor Show in 2001 at Makuhari Messe in Chiba, Japan		
		December	Honda releases the Civic Hybrid
■2002		■2002	
March	Musashi da Amazonia Ltda. (MDA) established in Amazonas, Brazil	January	12 EU countries begin circulation of euro coins and banknotes (1st)
July	Musashi Auto Parts India Pvt. Ltd. (MAP-ID) established in Haryana, India	February	Suzuki and Kawasaki begin reciprocal OEM supply for motorcycles
—	New manufacturing plan established for low-cost camshafts with abrasion resistance (super low-friction camshafts)	April	Mizuho Bank is launched (Dai-ichi Kangyo Bank, Fuji Bank, the Industrial Bank of Japan) (1st)
		April	Private schools switch to five-day schedule (1st)
—	Business headquarters system introduced	May	FIFA World Cup jointly hosted by Japan and South Korea begins (until June 30) (31st)
		July	Japanese Act on Recycling, etc. of End-of-Life Vehicles goes into force
		December	Tohoku Shinkansen (bullet train) line opens between Morioka and Hachinohe (1st)
		December	Yomiuri Giants player Hideki Matsui is signed by the New York Yankees in the U.S. Major League (19th)

Musashi Initiatives		Industry & World Events	
■2003		■2003	
January	Musashi Auto Parts Zhongshan Co., Ltd. (MAP-CH, currently Musashi Auto Parts (Zhongshan) Co., Ltd.) established in Guangdong, China	March	Director Hayao Miyazaki wins U.S. Academy Award for Best Animated Feature for *Spirited Away* (28th)
January	*Musashi News* suspends publication between January and May of 2003	May	Japanese Act on the Protection of Personal Information is passed (23rd)
March	Utsunomiya Plant (Utsunomiya City, Tochigi Prefecture) closed (consolidated into ball joint business headquarters)	August	The Japanese Basic Resident Registration Network System (Juki Net) begins operation
October	Hold first overseas go-to-market (GTM) in North America	October	Last wild Japanese crested ibis dies (10th)
October	Plant for Musashi Auto Parts India Pvt. Ltd. (MAP-ID) completed, and blessing ceremony held	November	Two Japanese diplomats killed in Iraq (24th)
November	Musashi Auto Parts India Pvt. Ltd. (MAP-ID) holds ceremony marking first shipment from plant	December	Terrestrial digital broadcasting begins (1st)
December	Musashi Asia Co., Ltd. (MAS) established as a sales base in Bangkok, Thailand		
■2004		■2004	
January	Senior Advisor Kimitoshi Otsuka passes away at the age of 72	January	Bird flu outbreak at a poultry farm in Yamaguchi Prefecture then spreads throughout Japan (12th)
March	Listed on the Second Section of the Tokyo Stock Exchange and the Second Section of the Nagoya Stock Exchange	May	Five Japanese citizens abducted by North Korea return to Japan (22nd)
March	*Musashi News* suspends publication between March 2004 and October 2005	June	A revision to the Road Traffic Act passes (including revision regulating two riders on motorcycles on highways)
April	Begin production of suspension arms for Volkswagen and Audi (MHM)	September	The Japan Professional Baseball Players Association goes on strike for the first time ever during team consolidation discussions (18th)
		October	Ichiro Suzuki sets new single-season record for hits in U.S. Major League Baseball (1st)
		November	New banknotes released (the 1,000-yen note features Hideyo Noguchi, and the 5,000-yen note features Ichiyo Higuchi) (1st)
		November	Rakuten is decided as the owner of a new baseball team in the Japanese Pacific League (2nd)
		December	One of the largest tsunamis ever recorded strikes Sumatra Island in the Indian Ocean, killing more than 250,000 people (26th)
■2005		■2005	
January	Musashi obtains ISO/TS 16949 certification	February	The Kyoto Protocol, which commits countries to reducing their carbon dioxide and other greenhouse gas emissions, enters into force (16th)
March	Assignment changed from Second Section to First Section of the Tokyo Stock Exchange and First Section of the Nagoya Stock Exchange	February	Chubu Centrair International Airport opens near Nagoya (17th)
December	Akemi Plant #2 completed (Akemi-cho, Toyohashi City, Aichi Prefecture), and the Akemi Plant's name is also changed to Akemi Plant #1	March	Expo 2005 Aichi opens (until September 24) (25th)
		April	Act on the Protection of Personal Information goes into full force (1st)
		June	Ichiro Suzuki (Mariners) gets 1,000th career hit in the Major Leagues (14th)
		October	Four Japanese highway-related public corporations are split into six companies and privatized (1st)
		October	Postal Service Privatization Act is passed (14th)

Musashi Initiatives		Industry & World Events	
	Innovation		
■2006		■2006	
April	Press conference for change of President and CEO held	January	MUFJ Bank, Ltd. is created through the merger of the Bank of Tokyo-Mitsubishi, Ltd. and UFJ Bank Ltd. (1st)
May	Yoshijiro Kobayashi resigns and President and Representative Director, and Hiroshi Otsuka appointed President and Representative Director	March	Softbank acquires Japanese Vodafone unit for 1.75 trillion yen (17th)
May	Introduce governance system with directors	April	General Motors (GM) sells its last stake in Isuzu Motors as part of its rebuilding (11th)
—	Begin support for automotive club (TUT Formula) at Toyohashi University of Technology	May	Toyota Motor posts sales of 21.396 trillion yen for the fiscal year ended March 2006 to surpass Ford Motor (10th)
December	New second plant constructed for P.T. Musashi Auto Parts Indonesia (MAP-IN) in Karawang, Indonesia	■2007	
■2007		January	Japanese Ministry of Defense established (9th)
March	Noto Plant in Hakui District, Ishikawa Prefecture damaged in Noto Peninsula earthquake	February	Public Offices Election Act is passed. Policy statements (manifesto) allowed in national elections can now be distributed in local elections as well (21st)
April	Executive officer system introduced	March	Daimaru and Matsuzakaya department stores announce business integration (becoming J Front Retailing in September) (14th)
August	Musashi Philosophy (Our Spirit of Foundation, Our Corporate Mission, Guidance for Conduct) established	May	Toyota Motor posts operating profit of 2.2386 trillion yen for the fiscal year ended March 2007, its highest ever profit (9th)
October	Musashi Auto Parts Zhongshan Co., Ltd. (MAP-CH) trade name changed to Musashi Auto Parts (Zhongshan) Co., Ltd. (MAP-CH)	May	The National Referendum Act is passed. On the condition of a constitutional amendment, the act allows voting at age 18. It goes into force in 2010 (14th)
November	20th anniversary event held for Musashi Auto Parts Co., Ltd. (MAP-TH)	August	Mitsukoshi and Isetan department stores announce business integration to become the largest department store group with sales of 1.6 trillion yen (23rd)
November	Musashi Global Vision 2020 established	October	Japan Post is privatized. The post office business, post offices, Japan Post Bank, and Kampo insurance are placed under Japan Post Holdings (1st)
		December	Toyota becomes the largest automaker in the world for the first time based on its forecast of actual sales in 2007 (25th)
■2008		■2008	
March	Begin placing large ads on concourse for the JR Toyohashi Station Shinkansen (bullet train) line	January	Ryo Ishikawa announces his intention to become a professional golfer (10th)
April	The “Be Unique Festa” 70th anniversary celebration held	March	Mao Asada wins the women’s gold medal at the World Figure Skating Championships (20th)
April	Musashi corporate logo (corporate emblem) changes, Musashi corporate colors established	May	Sichuan earthquake strikes in China with a magnitude of 7.9–8.0, 69,142 deaths, and 17,551 declared missing (as of January 10) (12th)
April	Ground-breaking ceremony held for Musashi Global Center	June	Tokyo SkyTree is decided as the name of the new tower in Tokyo (10th)
May	Sichuan earthquake strikes in China (12th), relief funds donated to *Chunichi Shimbun* newspaper	June	Yoshiharu Habu wins a shogi (Japanese chess) tournament to become a lifetime *eisei* title holder (17th)
June	70th anniversary event held, welfare vehicles (Elysion) donated to Toyohashi City	July	Toyota Motor surpasses U.S.-based General Motors (GM) in number of cars sold globally in the first half of 2008 to become the world’s top automaker two years in a row in 1H (23rd)
June	Conclude plant team sponsor agreement for FY 2008 with Honda Racing Corporation (HRC)		
June	Place billboard on wall of Daiwa Parking building (Shirakawa-cho, Toyohashi City, Aichi Prefecture) at the West entrance of JR Toyohashi Station		

Musashi Initiatives		Industry & World Events	
June	Place billboard on wall of Hoei Building (Hirokoji, Toyohashi City, Aichi Prefecture) at the East entrance of JR Toyohashi Station	September	Lehman Brothers declares bankruptcy (15th)
September	Construct new Musashi Global Center on the Head Office grounds (Ueta-cho, Toyohashi City, Aichi Prefecture)	October	Matsushita Electric Industrial Co., Ltd. changes its name to Panasonic Corporation (1st)
September	Musashi portal site MUGNET begins operations		
October	Conclude agreement to be main sponsor of the motorcycle racing team HARC-PRO.		
■2009		■2009	
January	Set four-day companywide plan to encourage taking of paid vacation days	January	The Emperor of Japan celebrates 20 years of reign (7th)
February	Establish Musashi Kairai Plan (MKP)	March	Japan is again the champion at the second World Baseball Classic (WBC) (23rd)
February	Establish new project (M3 Project) to reduce overall expenses	April	Leading U.S. automaker Chrysler declares bankruptcy (30th)
February	Hold 6-day company-wide shutdown	May	Toyota Motor announces operating loss of 461 billion yen for the fiscal year ended March 2009 (8th)
March	Hold 6-day shutdown in the Production Division	May	New jury system starts in Japan (21st)
March	Noto Plant (Shika-machi, Hakui District, Ishikawa Prefecture) closes. Japanese motorcycle parts business consolidated at Kyushu Musashi Seimitsu	June	Leading U.S. automaker General Motors (GM) declares bankruptcy (1st)
March	Voluntary early retirement program offered (100 employees)	September	Mariners’ Ichiro Suzuki achieves record 9 consecutive seasons of 200 hits in the Major Leagues (13th)
—	Establish original manufacturing method for assembled camshafts for automobiles (achieving lighter weight, increased strength, and lower cost)		
—	Lighten weight of automobile differential assemblies by 10–15 percent over existing products		
—	Establish new manufacturing method for motorcycle camshafts (reducing the machining process after forging by approximately 30percent)		
April	Musashi Kairai Dojo school opens on the Musashi Head Office campus (Ueta-cho, Toyohashi City, Aichi Prefecture)		
April	Hold four-day company-wide shutdown		
May	Hold three-day company-wide shutdown		
May	Conclude agreement with Aichi Prefecture for the Company Forest Creation Project		
June	Hold 1-day company-wide shutdown		
June	Telephone number for the Head Office (Ueta-cho, Toyohashi City, Aichi Prefecture) is changed		
June	Begin Musashi Woodland Project in the Aichi Kenmin no Mori (Kadoya, Shinshiro City, Aichi Prefecture)		
June	Motorcycle parts development function of Kyushu Musashi Seimitsu consolidated at Musashi Seimitsu Industry		
July	M-TPM kickoff conference held		
August	Begin releasing the Musashi Environmental Report (currently the Sustainability Report) on the company website		
September	The M3 Project to reduce overall expenses is constructively dissolved		
October	The Corporate Reform Promotion Office is established		
—	Musashi Auto Parts UK Ltd. (MAP-UK) in South Wales, UK is closed. The European automotive parts business is consolidated mainly at Musashi Hungary Manufacturing Ltd. (MHM)		
■2010		■2010	
April	Musashi Philosophy published in booklet form	January	Toyota’s Prius (hybrid) becomes top-selling car in Japan in 2009 (8th)
May	Exhibit for the first time at the Automotive Engineering Exposition (Pacifico Yokohama, Kanagawa Prefecture)	May	Apple iPad tablet released in Japan (28th)

Musashi Initiatives		Industry & World Events	
July	MuSASHi RT HARC-PRO. wins Suzuka 8 Hours Endurance World Championship	July	Panasonic announces acquisition of all shares of Sanyo through a public tender offer (29th)
August	Sign sponsorship agreement with the pro basketball team the Hamamatsu Higashimikawa Phoenix (currently the San-en NeoPhoenix)	December	Tohoku Shinkansen (bullet train) line extended to Shin-Aomori Station (4th)
November	Musashi Auto Parts Vietnam (MAP-VN) established in Hung Yen, Vietnam	December	Nissan and Mitsubishi Motors create joint venture for light automobiles (14th)
December	Musashi South Carolina Inc. (MSC) is dissolved. The automotive business is consolidated at MAP-MI (Michigan) and MAP-CA (Canada). The ATV business is transferred to MSI (Japan) and MAP-TH (Thailand)	December	Maglev high-speed train route between Tokyo Station and Nagoya Station decided (15th)
■2011		■2011	
April	Hold 2-day company-wide shutdown (affected by customers suspending operations from the Great East Japan Earthquake)	March	Hayabusa train cars debut on Tohoku Shinkansen (bullet train) line (5th)
May	Hold 3-day company-wide shutdown (affected by customers suspending operations from the Great East Japan Earthquake)	March	M9 Great East Japan Earthquake strikes off of Tohoku, with 27,490 people declared dead or missing (as of March 26, 2012) (11th)
June	Hold 1-day company-wide shutdown (affected by customers suspending operations from the Great East Japan Earthquake)	March	Tsunami disables the emergency reactor cooling system at the TEPCO-operated Fukushima Daiichi Nuclear Power Plant, resulting in the first declaration of a nuclear emergency and evacuation order (11th)
June	Group leader system introduced for the purpose of cultivating a management mindset and skills and improving business division efficiencies	March	Kyushu Shinkansen (bullet train) line fully opens (between Hakata and Kagoshima) (12th)
October	Musashi Auto Parts Co., Ltd. (MAP-TH) in Pathumthani, Thailand damaged in floods and temporarily suspends operations	April	Panasonic makes Sanyo and Panasonic Electric Works wholly owned subsidiaries (1st)
December	Musashi Auto Parts Co., Ltd. (MAP-TH) sends 31 employees to assist substitute production from the damage from the Thai floods	July	Japanese women's soccer team ("Nadeshiko Japan") wins FIFA Women's World Cup in Germany (18th)
December	Musashi Auto Parts India Pvt. Ltd. (MAP-ID) established as a sales and purchasing base in Haryana, India	July	Complete transition to terrestrial digital broadcasting (excluding Iwate, Fukushima, Miyagi) (24th)
December	MAP-TH (Pathumthani, Thailand) completes draining water on its grounds after the floods	November	Japan declares it will participation in the Trans-Pacific Partnership (TPP) negotiations (11th)
■2012		■2012	
February	Establish special appointee (director level) to strengthen coordination aiming to quickly resume operations after the flood damage at MAP-TH (Pathumthani, Thailand)	May	Tokyo SkyTree opens (22nd)
February	Opening ceremony held for Musashi Auto Parts Vietnam Co., Ltd. (MAP-VN)	October	U.S. MV-22 Osprey tiltrotor military aircraft deployed to Okinawa (1st)
March	Musashi Auto Parts Mexico S.A. de C.V. (MAP-MX) established in San Luis Potosi, Mexico	December	"Wild daro" named "buzzword of the year" (3rd)
April	Record special loss of 2,505 million yen (2,230 million yen in damage from the Thai floods, 275 million yen in fixed and other expenses from adjusting operating days at MAP-MI due to the Great East Japan Earthquake) in the fiscal year ended March 2012		
April	Musashi global slogan "Power to Value" established		
April	Group leader system revised, LM system introduced		
September	Musashi Forest Creation activities completed at the Aichi Kenmin no Mori (Shinshiro City), and begin at Takashi Ryokuchi Park (Toyohashi City)		
October	The first Improvement Olympics held		

Musashi Initiatives		Industry & World Events	
November	Musashi Auto Parts India Pvt. Ltd. (MAP-ID) enters NHC All India Competition		
■2013		■2013	
March	Received the first Environmental Management Excellence Award from the Toyohashi Chamber of Commerce and Industry	January	Highest price ever of 150 million yen paid for a tuna at the first auction of the year at Tokyo's Tsukiji Fish Market (5th)
June	Construct new #2 plant of Musashi Auto Parts India Pvt. Ltd. (MAP-ID) in Karnataka, India	January	48th Yokozuna sumo wrestler Taiho dies (19th)
July	MuSASHi RT HARC-PRO. wins the Suzuka 8 Hours Endurance Race (2nd time)	March	JR and private railways begin shared use of 10 types of IC cards for public transportation (23rd)
December	Musashi Auto Parts (Zhongshan) Co., Ltd. (MAP-CH) holds 10th anniversary ceremony	May	Shigeo Nagashima and Hideki Matsui receive National Honor Award (5th)
December	Appear in the final round of the Honda Green Contest as a company presenting an excellent case of success	August	Ichiro Suzuki gets 4,000 career professional hits (21st)
December	Complete receipt of insurance payout totaling 2,301 million baht (approx. 6,316 million yen) from the Thai floods	October	JR Kyushu begins Seven Stars deluxe sleeper car service (15th)
		December	"Jejeje" (Oh my!), "Ima desho" (Now, right?), "Omotenashi" (hospitality), and "Bai-gaeshi" (double payback) selected as "buzzwords of the year" (2nd)
■2014		■2014	
June	Musashi Auto Parts (Nantong) Co., Ltd. (MAP-NT) established in Jiangsu, China	February	Sochi Winter Olympics held, Yuzuru Hanyu wins gold medal in men's figure skating (7th)
July	MuSASHi RT HARC-PRO. wins the Suzuka 8 Hours Endurance Race (3rd time)	March	Abeno Harukas (Osaka), the tallest building in Japan, opens (7th)
August	Acquire A environmental ranking from the Development Bank of Japan Inc.	April	Consumption tax raised from five percent to eight percent (1st)
October	Musashi Seimitsu Investment (Zhongshan) Co., Ltd. (MIZ) established as a holding company in Guangdong, China	June	Trial broadcasting for 4K TVs begins (2nd)
		June	Residential electric power business liberalized (11th)
		September	Mount Ontake erupts, 63 people declared dead or missing (27th)
		December	Toyota announces world's first retail fuel cell vehicle (15th)
■2015		■2015	
February	Musashi Auto Parts (Nantong) Co., Ltd. (MAP-NT) holds ground-breaking ceremony	January	20th anniversary of Great Hanshin-Awaji Earthquake, which killed 6,434 people (17th)
March	Building No. 1 of the Musashi Dokuso dormitory completed (Oshimizu-cho, Toyohashi City, Aichi Prefecture)	March	Hokuriku Shinkansen (bullet train) line opens between Nagano Station and Kanazawa Station (14th)
June	Takahiro Hachigo, Senior Managing Officer of Honda Motor Co., Ltd., visits Musashi (after unofficial appointment to president)	May	Toyota Motor net profit tops 2 trillion yen for the fiscal year ended March 2015 (8th)
June	Shift to company structure with Audit and Supervisory Committee	May	Toyota Motor and Mazda form business alliance (13th)
June	Hold first Global Leaders Conference	June	Amended Public Offices Election Act is passed, voting age is lowered from 20 to 18 (17th)
September	Hold first BCP table-top exercises	October	Broad agreement reached for the Trans-Pacific Partnership (TPP) (5th)
October	Musashi Packaging and Transportation Co., Ltd. changes trade name to Musashi Harvest Co., Ltd.	October	Japan begins distribution of "My Number" citizen identification numbers (23rd)
October	Acquire A environmental ranking from the Development Bank of Japan Inc.		
■2016		■2016	
February	Hold kickoff meeting for the MAP-SAP system introduction project	February	Japan's total population declines for the first time (26th)
March	Musashi Holdings Europe GmbH established as a special-purpose company in Germany	March	Hokkaido Shinkansen (bullet train) line opens between Shin-Aomori Station and Shin-Hakodate-Hokuto Station (26th)
March	Building No. 2 of the Musashi Dokuso dormitory completed (Oshimizu-cho, Toyohashi City, Aichi Prefecture)		

Musashi Initiatives		Industry & World Events	
April	Donate relief funds to Kumamoto Prefecture for the Kumamoto earthquakes in Kyushu	March	Taiwan-based Hon Hai Precision Industry agrees to acquire Sharp (30th)
June	Acquire Hay Holding GmbH (Head office: Germany)	April	Retail electric power business fully liberalized (1st)
July	Musashi Auto Parts (Nantong) Co., Ltd. (MAP-NT) holds ceremonies to mark plant completion and beginning of production	April	Series of earthquakes as strong as M7.3 strike Kumamoto Prefecture (14th)
August	SAP introduced at Head Office	May	G7 Summit at Ise-Shima held (26th)
September	Hay Group logo redesigned	June	Amended Public Offices Election Act goes into force, lowering the voting age from 20 to 18 (19th)
October	Begin “5S” checks during inspection visits by president	October	U.S. musician Bob Dylan awarded Nobel Prize in Literature (13th)
October	Musashi and Hay jointly exhibit at International Suppliers Fair (IZB)	October	Nissan acquires controlling stake in Mitsubishi Motors (20th)
December	Musashi Group’s basic policy on sustainability established	October	Annual number of foreign visitors to Japan tops 20 million for the first time (30th)
December	Honda Clarity Fuel Cell fuel cell vehicles (FCV) added as company vehicles	November	Element 113 given name Nihonium (30th)
		December	Integrated Resort (casino) Promotion Act is passed (15th)
■2017		■2017	
January	Acquire A environmental ranking from the Development Bank of Japan Inc.	January	Donald J. Trump takes office as the 45th president of the United States (20th)
May	Inaugural edition of joint company newsletter by 4 Musashi Group bases in China (MIZ, MAP-CH, MAP-NT, Tianjin Hay)	March	Westinghouse, the U.S. nuclear energy subsidiary of Toshiba, declares bankruptcy (29th)
June	Public notice of Musashi Innovator’s Gate 2017, a project to create new businesses through employee-led plans	May	Professional shogi (Japanese chess) player and grandmaster Amahiko Sato is defeated by AI program Ponanza (20th)
June	Musashi Woodland activities completed, and Musashi Environment Creation activities begin at Shiokawa Higata (tideflats) between Toyohashi City and Tahara City in Aichi Prefecture	June	Sota Fuji, a junior high school student and 4-dan ranked shogi (Japanese chess) player, wins record-setting 29th straight victory (26th)
July	Musashi Auto Parts India Pvt. Ltd. (MAP-ID) holds 15th anniversary ceremony	August	Toyota Motor and Mazda form capital alliance (4th)
August	Yoshiyuki Matsumoto, Senior Managing Director of Honda Motor, visits Musashi	October	Kazuo Ishiguro awarded the Nobel Prize in Literature (5th)
September	Musashi and Hay jointly exhibit at the Frankfurt Motor Show (IAA Cars 2017)	November	Broad agreement for the Trans-Pacific Partnership (TPP) without the United States announced (11th)
October	Conclude comprehensive cooperation agreement with Toyohashi University of Technology	December	Yoshiharu Habu becomes the first-ever shogi player to hold seven lifetime *eisei* titles (5th)
December	Opening ceremony for the Machinery & Tools Business Unit (2-79 Akemi-cho, Toyohashi City, Aichi Prefecture) held		
■2018		■2018	
January	AI Project established	April	Bank of Tokyo-Mitsubishi UFJ changes name to MUFJ Bank (1st)
March	Honda NSX models added as company vehicles	July	Kumagaya City, Saitama Prefecture, sets record for highest recorded temperature in Japan at 41.1 degrees Celsius (23rd)
March	88 employees enter the Honokuni Toyohashi Half Marathon to celebrate Musashi’s 80th anniversary	August	60th anniversary of the Honda Super Cub (1st)
April	One Musashi Festa held to celebrate Musashi’s 80th anniversary	August	100th edition of the Japanese High School Baseball Championship tournament held (5th)
April	Complete the One Musashi Dance	September	M6.7 Hokkaido Eastern Iburi earthquake strikes (6th)
April	Introduce regional management structure (regional CEO system)	September	Naomi Osaka becomes the first Japanese tennis player to win the U.S. Open (8th)
April	Introduce small teams system (group manager system)	September	Singer Namie Amuro announces retirement (16th)
April	AI Project exhibits at the second Artificial Intelligence Exhibition and Conference in Japan		
June	Outside directors form majority of the Board of Directors for the first time		

Musashi Initiatives		Industry & World Events
July	Hay Group changes trade name, integrates with the Musashi brand	
September	AI Project exhibits at GTC Japan 2018, organized by NVIDIA	
September	President Takahiro Hachigo of Honda Motor visits Musashi	
October	Acquire Asadakatan Chutetsusho Co., Ltd. (Head office: Fukuchiyama City, Kyoto Prefecture)	

Where Musashi Was Founded

Location of founding: Togoshi, Shinagawa-ku, Tokyo

Date of visit: July 20, 2018

Three of us (Shimizu, Matsumiya, Nakanishi) from the company history project team visited the Togoshi neighborhood of Tokyo, where Musashi was founded. The neighborhood has been rezoned and looks nothing like its former self. The original site of Musashi was behind an apartment building, but we were not able to see anything when we tried to get a look behind the building. (We determined the location through research beforehand.)

But just coming to the site where Musashi was originally founded and knowing that this was where our predecessors once worked was a deeply moving experience.

■ 4-11 Togoshi, Shinagawa-ku, Tokyo

Today, near the original site of Musashi

Located behind the apartment building

Initial plant location in Toyohashi City: Osaki

Date of visit: August 22, 2018

We visited the former plant site in Osaki-cho, which was the initial Musashi plant built in Toyohashi City, located about a five-minute drive from the current Ueta Plant.

The former site is located along the road that goes to the Akemi district of Toyohashi City, which today is lined with warehouses. It is not a very wide area, but when we thought about how founder Yoshiharu Otsuka and his employees restarted the plant in this place after WWII, the landscape took on a different meaning. We hope that the Musashi employees who are going to the Akemi district take a detour out this way when they have the time.

■ 51 Kita-Deguchi, Osaki-cho, Toyohashi City, Aichi Prefecture

Near the plant in Osaki

Former site of the plant

"Location connected to Musashi (company name): Musashino"

Date of visit: July 20, 2018

On the same day we visited Togoshi, we also visited Musashino, which is where Musashi takes its name from. Unlike the Togoshi neighborhood, there was little information about the former site of the plant here, and all we had to work from was the recorded address. We contacted the Musashino City Hall beforehand to find out the current location of the former address (special thanks to the officials at Musashino City Hall for their assistance). We learned the approximate location of the address along the street, but we were still unsure if the location was correct. Fortunately, we met a longtime resident of the area who was able to tell us the exact location of the former Otsuka Seisakusho and Otsuka Aviation Industry. We were also able to find the former location of OSG Grinding Co., Ltd. (currently OSG Corporation), which was located next to Musashi.

■ 3-3 Yahata-cho, Musashino, Tokyo

Near the plant in Musashino

Former site of the plant

Hitoshi Iguchi, a friendly and helpful local resident we met in Musashino

We members of the company history project were wandering around the vicinity of the former Musashi plant in Musashino trying to find its exact location. We stopped to talk to a local resident. We were told that local person of note Mr. Iguchi may know where the Musashi plant was located and went to visit him.

Hitoshi Iguchi, 83 years old. When we asked him about Otsuka Seisakusho, he remembered where it was and told us that the plant was located "just over there." We were in awe that he could show us the exact location. He then went on to tell us stories from back when Otsuka Seisakusho was operating there and what it was like during the war.

Mr. Iguchi, thank you very much for your help and kindness.

Mr. Iguchi's home

Hitoshi Iguchi (left)

Postscript

This company history is being published as part of the events celebrating Musashi's 80th anniversary.

The project to publish this book started with a team of eight likeminded employees in October 2017. There are very few opportunities to work on something like publishing a company history, and we were honored to have this opportunity to edit the material but at the same time felt the pressure of setting down 80 years of Musashi history for future posterity.

The theme of this company history is "Legacy of the Past, Vision of the Future." We wanted to create a company history worthy of this theme that everyone would read. We tried to include as many period photos as possible with brief descriptions to communicate Musashi's history. We also tried to do some new things not typically found in company histories, such as a special section featuring an interview with young employees and specialized visuals to introduce global Musashi locations. We felt this embodied the Musashi DNA of "Be Unique!"

The first company history of Musashi was published for the 55th anniversary. This is the second edition of the company history. Sifting through a massive about of documents to verify facts took a lot of time and effort in the first company history, and this time was no different. In the middle of this work, we visited Musashino City to ascertain the exact location where Musashi was founded, and we met someone who remembered the plant and got to listen to his precious stories from that time. This was one of the most memorable experiences we had in putting together the company history.

We also interviewed Musashi colleagues from around the world as part of the editing process, and they helped us confirm materials and create related documentation. This company history has been made possible with their generous support, and creating this book has been a valuable experience that exemplifies the power of One Musashi. We would like to take this opportunity to thank everyone for their cooperation and support. To all the future members of the Musashi Group and the next members of the Company History Compilation Project, we hope that you continue to carry on this power.

The members of the 80th Anniversary Company History Compilation Project

The 80th Company History Compilation Project

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Legacy of the Past, Vision of the Future

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