

# QUALITY

Mazda enriches the lives of its customers by providing products and services that reflect steady and uncompromising work.

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### CSR Targets for FY March 2019

(Self-assessment key ○ : Accomplished, △ : Nearly accomplished, × : Not accomplished)

Items	FY March 2018 targets	FY March 2018 results	Self-assessment	FY March 2019 targets	ISO 26000 core subjects
Quality	Establish a quality assurance system that covers production sites in Japan and overseas, ports and dealerships, to globally enable delivery of products of equal quality.	Introduced a vehicle evaluation (MQIC) system, in which quality comparison and improvement can be made using the same standards on a global basis. Completed the introduction of the system at all the production sites (9 sites), thereby making an improvement in quality at factory shipment. The system is being integrated into the logistics processes, which encompass overseas ports in Europe, North America, etc.	○	Establish a quality assurance system that covers production sites in Japan and overseas, ports and dealerships, to globally enable delivery of products of equal quality.	6.7 Consumer issues

# COMMITMENT TO QUALITY

## Spirit of Quality Policy

Under its Corporate Vision, Mazda further advances the efforts it has made and promotes united collaboration among all areas, continuing to enhance Mazda's unique value.

## Approach to Quality Improvement

To deliver customers safety, trust and excitement through automotive lifestyles, Mazda makes Group-wide efforts based on the three principles below:

1. Establishing quality for new products
2. Achieving quality that exceeds customer expectations
3. Cultivating human resources capable of considering and acting toward the happiness of customers

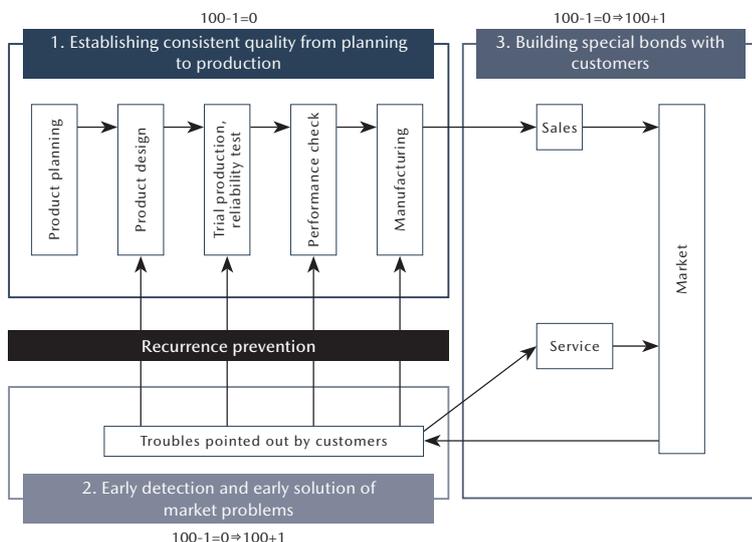
### Vision for Quality Assurance

Vehicle production based on the "100-1=0" belief

1. Establishing consistent quality from planning to production:  
 "100-1=0" expresses Mazda's strong desire to provide good quality to all customers, under the belief that for an individual customer, his/her vehicle is not one out of 100 vehicles but the only one. Mazda pursues a kind of vehicle production that respects each vehicle as a certain customer's "one-and-only," and aims to achieve "zero defects." Standing firmly on the basic principles and mechanisms of manufacturing, all related departments make consistent efforts to establish quality in all processes, from planning to production.

Initiative for the process to change "100-1=0" to "100+1"

2. Early detection and early solution of market problems  
 If an unpredictable problem arises in the market, it may result in loss of trust from customers ("100-1=0"). To avoid this, Mazda promotes quality assurance activities for the early detection and early solution of any trouble pointed out by customers.
3. Building special bonds with customers  
 Mazda aims to build special bonds of ever-lasting trust with its customers by keeping contact with customers in good faith and with a sense of commitment to them ("100-1" ⇒ "100+1").



a

a Mazda Quality Policy

Mazda Quality Policy

To enrich the lives of our customers by providing products and services that reflect steady and uncompromising work.



## Mazda Quality Management System (M-QMS)

To make faithful and unceasing efforts and constantly ensure quality in products, sales and after-sales services that can always satisfy the expectations and trust of customers, Mazda has established the Mazda Quality Management System (M-QMS) based on ISO 9001\*1, and has applied it to the series of processes from product design and development to production, sales and after-sales services. In January 2018 Mazda acquired ISO 9001:2015 certification, which was revised in September 2016. At overseas production sites, Mazda also promotes the establishment of systems that encourage local employees of new sites to make self-reliant efforts to improve quality, and encourages them to acquire ISO 9001, thereby promoting the quality improvement of Mazda vehicles, which are produced and sold worldwide.

### 1. Establishing Quality for New Products

To satisfy the diverse needs of customers and offer greater trust, joy and excitement, Mazda is engaged in establishing a consistent quality level to be assured at all stages from planning/ development to the delivery of products to customers.

### Establishing Stable Quality

Not only to improve the performance and reliability of products but also to improve the quality of new technologies including the initiatives to address environment issues, Mazda is committed to “process assurance.” Process assurance is the approach of ensuring a consistent quality level at all stages from engineering (planning, product development) to manufacturing (purchasing, vehicle production, logistics, after-sales services). Based on the correct understanding of customer needs and expectations, the elements necessary to ensure each function/performance are identified. The Company has established a system to maintain and manage them in every stage from engineering to manufacturing.

Furthermore, to allow customers feel driving pleasure through its products, Mazda identifies the functions and performance that embody “driving pleasure” for each stage from before getting in the car to after starting driving, so as to enhance consistency in establishing quality.

### Global Quality Assurance

To ensure equal quality on a global scale, Mazda has adopted the “global common” concept, under which overseas production sites establish equal quality by employing the same indicators, the same operations, and the same structures as those of the Mazda Head Office. With the aim of achieving and maintaining equal quality into the future, the roles and responsibilities of the Mazda Head Office and overseas production sites have been clarified for management. Mazda continuously organizes collective training for persons in charge of quality control of purchased parts or quality evaluation of finished vehicles to help deepen understanding of their roles and to encourage communication and opinion exchange through formulating a human resources development plan and other activities.

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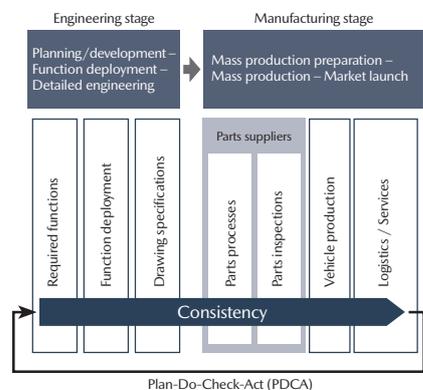
### b Acquisition of ISO 9000 series

- 1994: Acquired ISO 9002\*1 (first Japanese automaker)  
Apply to: Vehicles produced at Hiroshima Plant and Hofu Plant
- 1996: Acquired ISO 9001  
Apply to: Engineering, product development, manufacturing and after-sales service
- 2001: Expanded the ISO 9001 application range  
Apply to: Accessories, KD, product planning, design, specially equipped vehicles (TESMA), etc.
- 2001: AAT\*2 acquired ISO 9001
- 2007: CMA\*3 and CFME\*4 acquired TS16949 (ISO 9001 sector certificate)
- 2015: MMVO\*5 and MPMT\*6 acquired ISO 9001
- 2016: MSMR\*7 acquired ISO 9001:2015
- 2018: Hiroshima Plant, Hofu Plant, MMVO and AAT acquired ISO 9001:2015

\*1 International standard for product and after-sales service quality assurance  
 \*2 AutoAlliance (Thailand) Co., Ltd.  
 \*3 Changan Mazda Automobile Co., Ltd.  
 \*4 Changan Ford Mazda Engine Co., Ltd.  
 \*5 Mazda de Mexico Vehicle Operation  
 \*6 Mazda Powertrain Manufacturing (Thailand) Co., Ltd.  
 \*7 MAZDA SOLLERS Manufacturing Rus

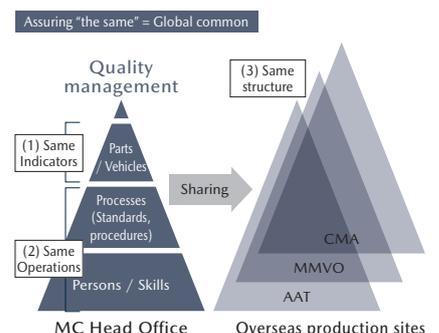
c

### c Consistent Process Assurance based on Major Characteristics



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### d Initiative for Global Quality Assurance

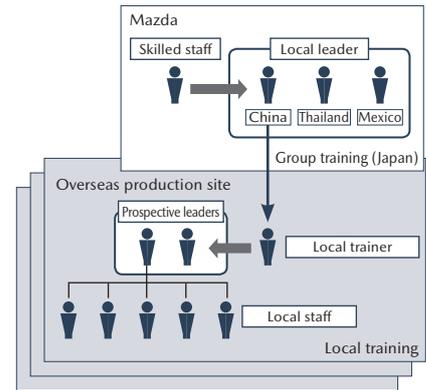


\*1 International standard for quality maintenance and assurance

<Initiatives for Developing Human Resources>

To develop human resources who play the key roles in the "global common" concept, the Mazda Head Office provides back-office support for overseas production sites to encourage their autonomous efforts. Mazda gathers leaders of overseas production sites for collective training in Japan, to monitor the growth of the site leaders and raise their sense of responsibility, as well as to promote quality improvement through encouraging mutual learning between sites.

e Initiatives for Global Human Resources Development



TOPICS Collective Training for Quality Improvement on a Global Scale

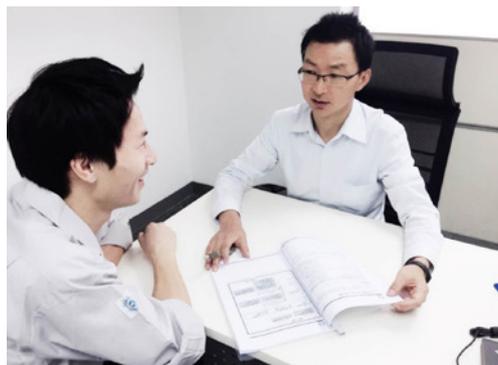
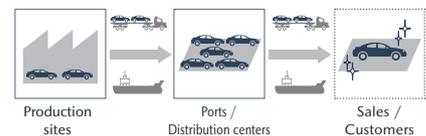
A training program was held at the Mazda Head Office in August 2017 for leaders in charge of quality management and vehicle assessment at overseas sites. The training program, participated by a total of 14 leaders from the four countries of Thailand, Mexico, China, and the United States, was aimed at helping participants understand the ideal to be pursued and the roles of the leaders of each department and learn how to formulate human resources development plans while exchanging opinions among themselves. Mazda will continue to offer similar training programs for an expanded range of trainees.



Enhancing Quality Assurance after Shipment

To ensure that the high quality at factory shipment is maintained until delivery to customers around the world, Mazda has introduced the same quality evaluation indicators for production plants, distribution centers in Japan, overseas ports, dealerships in Japan and overseas distributors and dealers, with the aim of delivering products maintaining high quality to customers around the world under a consistent evaluation system.

f Consistent evaluation system



EMPLOYEE'S VOICE

Conducting quality assurance activities in unity with suppliers

I am in charge of quality assurance of China-produced parts for shipment to Japan. In line with the dramatic development of the Chinese auto industry in recent years, the types and number of parts shipped from China have been increasing, and the number of suppliers doing business with Mazda for the first time has been increasing. As a result of our efforts to hold careful dialogue with new suppliers, they have come to understand the vision and approach of Mazda's quality management, enabling us to promote quality assurance activities in unity with the suppliers. We will continue to work together with our suppliers, taking advantage of our location and language ability, so as to be able to continue shipment of high-quality parts from China.

Liu Dengjie

Supplier Quality Department China Engineering Support Center, Mazda Motor (China) Co., Ltd.

## 2. Achieving Quality that Exceeds Customer Expectations

To satisfy customer needs, Mazda makes constant efforts to gather market/quality-related information both in Japan and overseas, while sincerely listening to customer voices, and to take speedy actions to improve the quality of present and future products.

### Speedy and Comprehensive Quality Improvement

Mazda makes Group-wide efforts to ensure stable and speedy quality improvement by comprehensive gathering and management of the voices of customers from around the world.

All relevant divisions at the Head Office, such as those in the customer services, product development, and manufacturing areas, share all items of quality information gathered from customers, dealerships in Japan and distributors overseas, and the management team monitors the daily progress, so as to expedite stable quality improvement.

### Responding to Customer's Complaints and Expectations

To faithfully respond to customers' expectations and complaints, regarding such matters as what additional functions Mazda vehicles should have and in what ways Mazda vehicles are less user-friendly, Mazda proactively gathers voices of expectations and complaints annually from over 220,000 customers worldwide by employing the results of surveys by outside survey institutions and conducting its own market research. Based on the principle of early detection and early solution, all related divisions, including product development, production, quality assurance and customer services, make united efforts to improve or solve quality problems in response to the gathered customer voices.

Mazda takes advantage of various opportunities, such as motor shows and fan events, to have its engineers engage in direct talks with customers on new functions and safety performance of Mazda vehicles so as to communicate their passion about Mazda vehicles that cannot be fully expressed in written materials, hoping to help improve the car ownership experience of customers. The customer voices obtained through such communication are also reflected in the development of new model vehicles, with the aim of delivering to customers products that exceed their expectations.

#### <Examples of Surveys/Analyses>

- Gathering customer voices through Mazda-unique market survey
- Market surveys conducted by third parties
- Questionnaire surveys Mazda has developed
- Analysis of customer voices on social media
- Centralized management of global quality information
- Enhancing information to support dealerships to ensure repair completion at one time

### Corporate Activities with Highest Priority on Customer Safety and Comfort

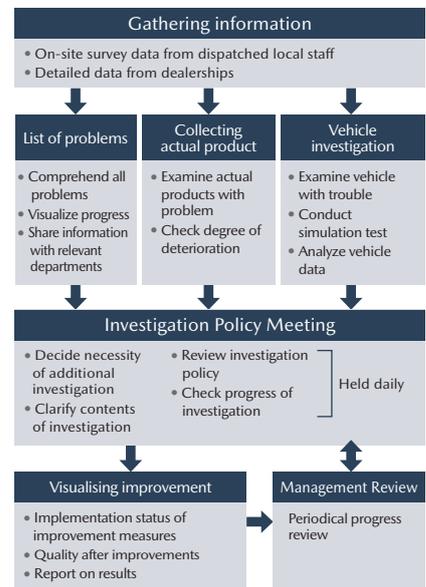
Mazda prioritizes safety and comfort of vehicles above all. Under a strict quality assurance system, Mazda conducts inspections on conformity with laws and regulations of each country and on functions to be used by customers, with a view to manufacturing vehicles that customers feel safe using.

This quality assurance system is maintained and managed by the development, production and quality divisions auditing each other from independent standpoints.

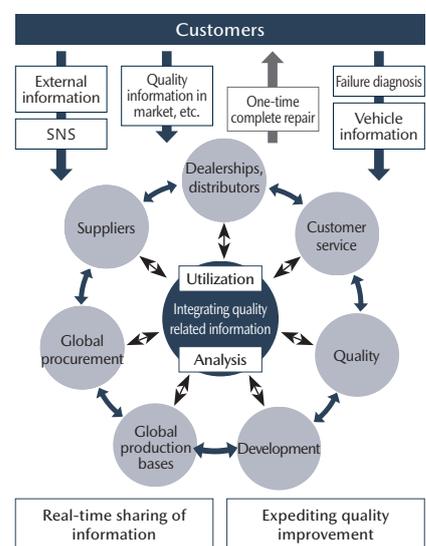
#### Recall Procedures (Overview)\*1

- Registration with authorities in each jurisdiction, according to the laws and regulations of each country and region
- Disclosure to customers via direct mail, telephone, and other methods, and explanations at dealerships
- Disclosure of information on recalls on the Mazda Official Website

#### g Expediting Quality Improvement



#### h Real-time information gathering



\*1 Recall procedures may vary among countries/regions.

### 3. Cultivating Human Resources Capable of Thinking and Acting for the Happiness of Customers

To encourage every employee to think about what they should do to please customers and to act accordingly, Mazda places emphasis on cultivating a customer-oriented corporate culture/mind. Specifically, the entire Mazda Group is committed to promoting quality awareness-raising activities, quality control education, and QC (Quality Control) circle activities.

**<Major Activities>**

**Quality Awareness-Raising Activities**

Quality meetings with the consequent aim of enhancing brand value are held on a regular basis. The meetings encourage all employees to obtain new findings through discussions and to improve their quality awareness and quality of action. At the meetings in FY March 2018, practices by employees who seriously addressed the issues that are directly connected with customer's peace of mind and safety, such as improving the quality of customer service at shops, customer troubleshooting by call center, and prevention of occurrence and recurrence of quality problems, were shared. Each employee reviewed the relationship between his/her work and customers, as well as its meaning and value, discussed how they should change their awareness and behavior to achieve their ideal state, and shared the results with the aim of reflecting them in their work.

**Quality Control Education**

For the purpose of developing human resources capable of proactively finding/solving problems from a customer viewpoint and working for continuous improvement, quality control education is provided for employees. Quality education courses are offered by internal instructors for each job type or management level.

**Mazda QC (Quality Control) Circle Activities**

Mazda promotes QC circle activities to encourage members of each workplace to find and solve problems by themselves. QC circle activities, which have been implemented for over 50 years as key activities for the company, have evolved into global activities, being conducted not only inside Mazda but also at its suppliers and dealerships. The All Mazda QC Circle Competition held every year at the Mazda Head Office is now participated by QC circles of overseas sites, such as those in China, Thailand, and Mexico. The QC circle, which received an award as an excellent circle at this Competition, won the Gold Prize, the highest award, in the All Japan QC Circle Grand Competition for the second consecutive year, demonstrating its high reputation outside the Company.

**Test-Ride for Employees**

To enable Mazda employees to explain Mazda's products and communicate the concept of Mazda's *monotsukuri*, or product development and manufacturing, with their own words to Mazda's stakeholders, Mazda offers a training program for employees, designed to help them deepen their understanding of the Mazda brand through actually experiencing the products. Through mainly test-rides, participants of this program are expected to deepen their understanding of not only the characteristics of each product, but also the spirit and philosophy common in all Mazda products. This program is implemented at operation sites in Japan, such as the Head Office (Hiroshima) and Hofu, as well as at overseas sites, such as the site in Mexico.

i Discussion at workplace



j Group-wide Quality Education Courses

Course	Objective (for FY March 2018)
1 Quality program for freshmen	To understand the basic concepts (customer-oriented attitude, continuous improvement efforts) that are crucial in doing their assigned jobs
2 Problem-solving story course	To understand the concept, processes and basic techniques of problem solving
3 Quality management elementary course	To apply the concepts, processes, and basic techniques of problem-solving to daily operations, thereby obtaining problem-solving abilities.
4 Quality management intermediate course	To become capable of applying and practically implementing specialized quality management techniques
5 Quality Improvement Seminar for Assistant Managers	To understand and implement the approach to realizing the ideal.

k All Japan QC Circle Grand Competition Gold Prize-winning circle



### 4. Results of Quality Improvement Initiatives

Mazda's initiatives to improve quality have been highly praised worldwide.

**FY March 2018 Results (April 2017 – March 2018)**

Country	Name of the Study	Vehicle Type and Rankings	Name of Company
US	2017 Initial Quality Study (IQS) <sup>*1</sup>	MX-5 (Roadster): 2nd	J.D. Power
US	Reliability/Road Test by Consumer Report	"Recommend" acquired for 4 models Mazda3 (Axela), Mazda6 (Atenza), CX-3, CX-5	Consumer Reports
Japan	2017 Automotive Performance Execution And Layout (APEAL) <sup>*2</sup>	CX-5: 1st, Demio (Mazda2): 1st	J.D. Power
China	2017 Initial Quality Study (IQS) <sup>*3</sup>	Changan-Mazda: Mass Market Brand 3rd, Mazda Atenza: 3rd	J.D. Power
China	2017 Automotive Performance Execution And Layout (APEAL) <sup>*4</sup>	FAW-Mazda: Mass Market Brand 1st, Mazda Atenza: 2nd	J.D. Power
Thailand	2017 Initial Quality Study (IQS) <sup>*5</sup>	CX-3: 2nd, Mazda3 (Axela): 3rd	J.D. Power

\* Details of the studies for other countries by J.D. and J.D. Power Asia Pacific are available at the J.D. Power global website (<http://www.jdpower.com/>).

<sup>\*1</sup> The J.D. Power 2017 US Initial Quality Study (IQS) is based on responses from more than 70,000 purchasers and lessees of new cars. The study was fielded between February and May 2017.  
<sup>\*2</sup> The J.D. Power 2017 Japan Automotive Performance Execution And Layout (APEAL) is based on responses from around 23,000 purchasers of new cars. The study was fielded between May and June 2017.  
<sup>\*3</sup> The J.D. Power 2017 China Initial Quality Study (IQS) is based on responses from around 24,000 purchasers of new cars. The study was fielded between March and July 2017.  
<sup>\*4</sup> The J.D. Power 2017 China Automotive Performance Execution And Layout (APEAL) is based on responses from around 24,000 purchasers of new cars. The study was fielded between March and July 2017.  
<sup>\*5</sup> The J.D. Power Asia Pacific 2017 Thailand Initial Quality Study (IQS) is based on responses from around 5,000 purchasers of new cars. The study was fielded between May and September 2017.

## Report to MLIT on the Measurement of Fuel Economy and Emissions in Final Inspections

In response to a request from Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT), the Mazda Group conducted an investigation into its sample testing of fuel economy and emissions during final vehicle inspections. Although the investigation found no improper alteration or falsification of test data, there were instances in which data was handled inappropriately.

Specifically, test results were judged valid despite vehicle speed having deviated more than the permitted amount from the speed trace pattern prescribed by the JC08 test cycle (a condition known as a speed trace error). Mazda reported the findings of the investigation to MLIT and made the results public at a press conference held on August 9, 2018.

There were two causes for the above issue. First, the system was not set up to automatically invalidate the test results when a speed trace error occurred. Second, test procedures left the determination of speed trace errors up to each individual inspector.

To make the inspection system more robust and prevent similar occurrences in the future, Mazda will update the system to automatically treat test results as invalid in the event of a speed trace error. Until those updates can be implemented, the Company has put in place a regime in which multiple employees double-check inspection data. It should be noted that all test data was re-examined and the results show that the inappropriate handling of test data had no effect on specification fuel economy or emission figures. Mazda is taking this matter very seriously and will make every effort to regain the trust of its customers.

Reference) News Release dated on August 9, 2018

<http://www2.mazda.com/en/publicity/release/2018/201808/180809a.pdf>

### Report to MLIT on the Measurement of Fuel Economy and Emissions in Final Inspections

HIROSHIMA, Japan – Mazda Motor Corporation has submitted a report to Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT) on the results of an investigation into its sample testing of fuel economy and emissions during final vehicle inspections. The investigation was conducted in response to a request from MLIT (No. 674) issued to automakers on July 9 after the discovery of fraudulent testing practices at other companies.

#### Key findings of the report

The investigation covered JC08 and WLTC testing modes and confirmed the following.

- (1) No improper alteration or falsification of test data in either mode.
- (2) Test data containing speed trace errors\* was handled inappropriately in 72 cases out of 1,472 vehicles tested under the JC08 mode. All test data has been re-examined and the results show there was no effect on specification fuel economy and emission figures. No such cases were found in WLTC mode testing.

There are two causes for (2) above. First, the system was not set up to automatically invalidate results when a speed trace error occurred. Second, test procedures left the determination of speed trace errors up to each individual inspector.

#### Measures to prevent reoccurrence

We have decided to take the following steps.

- Update the system to automatically treat test results as invalid in the event of a speed trace error.
- Have multiple employees check inspection data, including speed trace errors.

We would like to offer our sincere apologies for the concern this matter has caused to our customers and to all our stakeholders. We are treating the matter very seriously and will make every effort to prevent similar occurrences in the future.

\* A situation in which vehicle speed deviates more than the permitted amount from the speed trace pattern prescribed by the test mode