7

Safety

Material Issues

- Reducing traffic fatalities
- Applying automation and information technologies to everyday life

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Basic Approach

Toward a Collision-Free Mobile Society

As exemplified by the words of the Company's founder Soichiro Honda that "as long as we are handling a mode of transportation, we are entrusted with human lives," Honda is, on the basis of the concept of "Safety for Everyone," aiming at a collision-free mobile society, where not only drivers and riders, but indeed everyone sharing the road, can safely and confidently enjoy the freedom of mobility.

Honda has a long history of safety dating back to the 1960s when it started traffic safety promotion initiatives, the first of their kind for motorcycle/automobile manufacturers. Honda has since been proactively undertaking safety awareness activities in many countries and regions while extending the scope from drivers and riders to all people involved in the traffic society, from children to senior citizens. Honda has also developed and released a number of new technologies before anyone else in the world, setting higher targets exceeding regulatory requirements and in a spirit that "if it does not exist, we will make it."

Now, the advancement of the Internet and other technologies has enabled people to gather information from across the world, meet many people and obtain things without having to move around. However, Honda believes that feeling a new world with one's five senses based on curiosity is one of people's invaluable joys. As such, the Company will continue to value "real" experiences and expand the freedom of mobility and its potential across the world.

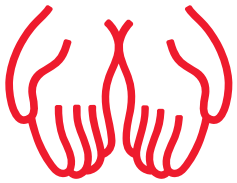
A collision-free mobile society envisioned by Honda is a society where all people can follow their curiosity and go anywhere freely with a total sense of security. In April 2021, Honda announced that it "will strive for zero traffic collision fatalities involving Honda motorcycles and automobiles globally by 2050." Not only to fulfill one of its social responsibilities but also to fabricate a joyous future, Honda will work toward a collision-free mobile society and continue to proactively evolve its traffic safety initiatives based on the actual accident situations unique to each region.

Global Safety Slogan

Safety for Everyone

Honda dreams of a collision-free mobile society where our customers, and everyone sharing the road, can safely and confidently enjoy the freedom of mobility.

As Honda respects individuality, it regards society as "a group of individuals," not as "a bundle of people." Not only does Honda's slogan "Safety for Everyone" embrace its approach of pursuing safety matching to each individual but also follows its belief that ensuring the safety of each member of society will consequently make the entire society safer and mark a step forward to a collision-free mobile society.



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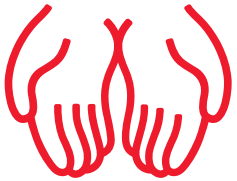


*1 Including roads, telecommunication infrastructure, automobiles, motorcycles and pedestrians

*2 Can be achieved by an approach that involves the development of technologies for systems and services related to roads and the traffic society, maintenance and improvement of roads themselves and formulation of relevant traffic rules.

Basic Approach

Direction of Activities

Honda is working on traffic safety with a focus on the three elements: human ability (awareness-building activities), performance of mobility (technological development) and traffic ecosystem (collaboration, and development of systems/services).

Human Ability

Honda believes that efforts are needed to support the enhancement of human ability, ranging from driving skills to psychological and mental aspects, such as cognition, judgment and compassion toward others, for all people involved in the traffic society. Honda will translate these efforts into awareness-building activities matched to individual awareness, experience levels and physical capabilities.

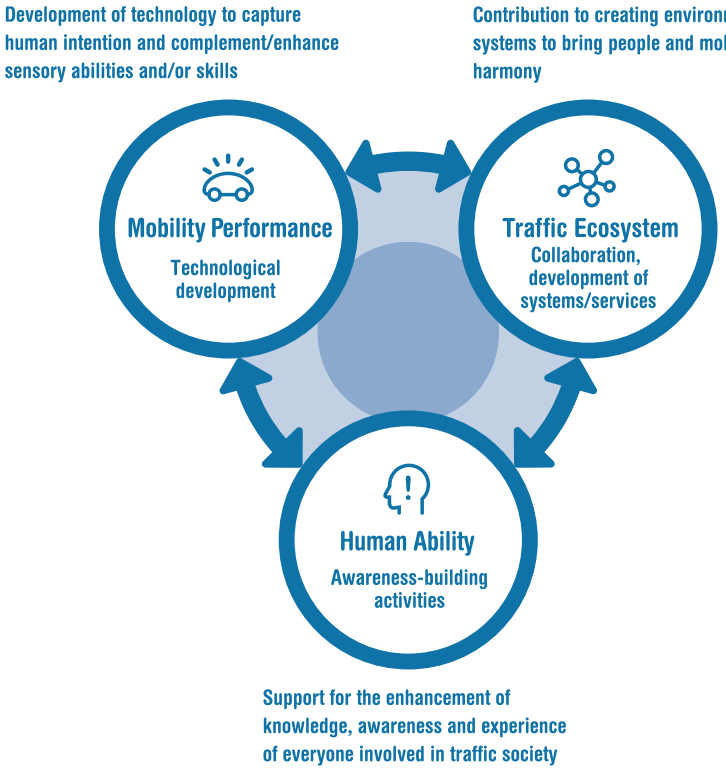
Performance of Mobility

Honda believes that a mix of capabilities is needed to appropriately complement or augment human ability. These include a capability to protect the human body, a capability to avoid collisions to the extent possible and a capability to capture the intention of a person and convey it to the vehicle and other people. Honda intends to gain an even deeper understanding of the human body and consciousness and evolve its efforts to develop more people-oriented technologies.

Traffic Ecosystem

The traffic environment changes constantly due to traffic congestion, bad weather and various other factors. Honda believes that preventing accidents or mitigating their damage in such a traffic environment require dynamically understanding its holistic picture ("traffic ecosystem"). It encompasses the interrelation among diverse elements*1 constituting the environment and letting these elements connect organically*2. Honda will proactively work toward this goal through an open approach, including cooperation with various countries and regions and collaboration with other companies, and contribute to the healthy functioning of the traffic society.

Three elements of safety



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Basic Approach

Initiative to Eliminate Traffic Accidents through Accident Surveys

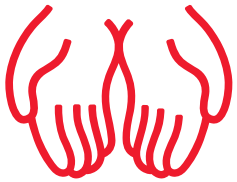
Collecting and Analyzing Traffic Accident Information in Thailand

In order for Honda to work toward traffic safety through the three elements, it is imperative to gain an in-depth understanding of the actual situations of traffic accidents. Honda is accordingly carrying out detailed analysis of how traffic accidents are occurring.

In Thailand, for example, motorcycle riders in particular account for a high percentage of traffic fatalities compared with other parts of Asia. As such, safety measures are an urgent challenge in the country. As a joint project with Yamaha Motor Co., Ltd., Honda conducted a survey on the causes of accidents involving motorcycles. (The survey and analysis work were consigned to the Thailand Accident Research Center.)

Based on the survey results, Honda will proactively continue its already ongoing activities to raise awareness for preventing driving/riding under the influence, speeding or riding without a helmet and to provide education on driving/riding safety and utilize these activities in reducing motorcycle accidents.

Besides undertaking independent activities, Honda will work with the member companies of the Thai Automotive Industry Association to engage the Thai government and related organizations to revise its motorcycle and automobile license systems and enhance driving/riding school facilities toward the ultimate goal of increasing opportunities of driving/riding safety education, including practical training, throughout the Thai society.



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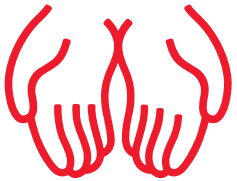

Safety Initiatives

Human Ability

Honda's Approach

In 1970, Honda established the Traffic Safety Promotion Operations (formerly Driving Safety Promotion Center) in Japan and subsequently a department dedicated to promoting activities overseas within the operations in 1972. Since then, Honda has been reinforcing its efforts overseas by establishing Traffic Education Centers* in various countries and cooperating with local dealers. As of 2020, Honda is carrying out traffic safety promotion activities in 42 countries and regions throughout the world including Japan.

Honda's activities are based on the ideas "To pass on safety education from person to person" by conveying the importance of driving safety directly to customers at dealers and "To provide a participatory hands-on education program" under the guidance of expert instructors.

In Japan, Honda has provided traffic safety education and training for drivers and riders to more than 6.61 million customers to date in cooperation with Honda Traffic Education Centers, motorcycle and automobile dealers, local corporations and schools.

Overseas, the Company has established Traffic Education Centers in various countries to play a key role in its efforts and encourage collaboration with dealers, while its subsidiaries lead a broad range of activities. Emerging countries in particular contain areas where regulations, traffic rules and road infrastructure are not yet ideal despite the fact that motorization is rapidly progressing. As such, an increase in the number of fatal traffic accidents has become a social issue. Therefore, Honda is undertaking activities matched to the traffic situation of each country while collaborating with local governments and relevant organizations.

Countries and regions where traffic safety education and driving training are conducted

* Honda facilities where internal and external instructors on traffic safety are trained and driving safety education is provided to corporations, schools and individual customers

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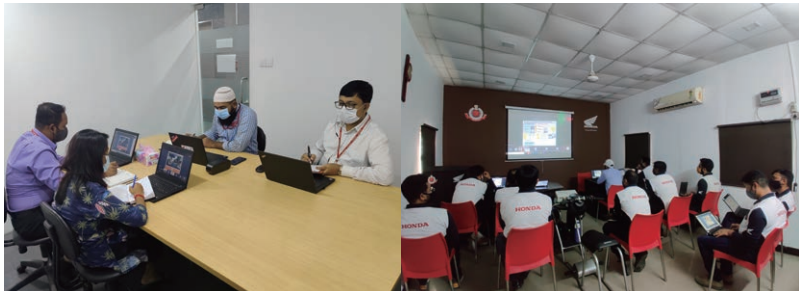
Safety Initiatives

FY2021 Activities

Working to Expand KYT Education in Asian Countries

With the steep progress in motorization, Asian countries are facing significant motorcycle fatalities. In response to the increasing inquiries from these countries about human resources development and training materials in this area, Honda cooperated with the Regional Operations (Asia & Oceania) and held an online session to explain the introduction of hazard prediction training (*kiken yosoku* training – KYT) programs. The session was attended by 112 safety managers and instructors from overseas business sites. The participants were able to deepen their knowledge about KYT education through participating in exercises.



Online session for promoting KYT education

Supporting the Nurturing of Instructors Online

COVID-19 has greatly restricted travel to and from Japan, causing a drastic loss of opportunities for instructor development compared with previous years. To counter the situation, Honda has created training videos and held online training for the development of new instructors at Honda Turkiye A.S. and Honda Taiwan Co., Ltd.

Online training for new instructors

Collaboration with Traffic Education Centers

In Japan, Honda provides participatory hands-on education matched to the needs of companies, organizations and individuals.

Specifically, Honda's seven Traffic Education Centers across Japan offer training to traffic safety instructors. They also provide participatory hands-on education mainly to companies, organizations, schools and individual customers to improve their riding/driving skills and facilitate their safety driving awareness and understanding. In 2020, Honda provided education to some 40,000 persons (as of December 31).

TOPICS

Opening a New Traffic Education Center in Indonesia

P.T. Astra Honda Motor, a Honda subsidiary in Indonesia engaging in production and sales of motorcycles, opened the Astra Honda Motor Safety Riding and Training Center in August 2020.

This new facility provides correct knowledge and skills for riding safety and facilitates an understanding of the characteristics of vehicle in various traffic condition. It has also adopted a new concept that seeks to add fun to riding motorcycles safely.

New Traffic Education Center opened in Indonesia

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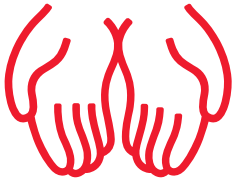

Safety Initiatives

Collaboration with Local Communities

In Japan, Honda offers educational programs and teaches instruction techniques to traffic safety instructors and employees of partner companies responsible for conveying traffic safety in each local community.

As additional efforts in 2020, Honda engaged in promotion activities matched to new lifestyles resulting from COVID-19. With a view toward the possibility of online educational activities, the Company pushed ahead with the digitization of its educational programs. Moreover, in order to ensure that these educational programs are used effectively, Honda created a DVD that contains a visual guide on their use and teaching content, which had previously been taught in person.

Led by Honda Partnership Instructors of partner companies, Honda also makes efforts to promote traffic safety, such as conducting traffic safety lessons, within those companies as well as in surrounding areas.

Screen image of a worksheet used in a conventional program

Creating new videos showing Honda staff giving a program demonstration

Collaboration with Relevant Organizations

In Japan, Honda proactively fosters collaboration with local governments and relevant organizations to achieve zero traffic collision fatalities.

As an example, Honda's Safety Map was created based on three sources of information. These are information on areas prone to emergency braking, collected through "Internavi," Honda's original car navigation system; accident black spot information possessed by the police; and road hazard information posted by local residents. Anyone can freely access the map to obtain the necessary information. Companies, the police and other road management organizations are also using the map to improve road environments.

Honda has also cooperated in running the 50th National Police Motorcycle Safe Riding Competition of Japan's National Police Agency. Also, through participation in activities of the Japan Automobile Manufacturers Association and other industrial organizations, Honda has been providing a broad range of cooperation. Examples of such activities include proposing traffic safety measures to the governments looking ahead. holding riding/driving safety seminars for high school students, adults and senior citizens, hosting awareness-building events and developing instructors.

50th National Police Motorcycle Safe Riding Competition

TOPICS

Enhancing Programs for Small Children

In Japan, as an effort to enhance programs targeting small children, Honda has added the "Parking Lot" version to "Learn about Traffic Safety with 'Dekiru-nyan' Cat," its traffic safety educational program for five- to six-year-olds. This program was designed based on the discussions with traffic safety instructors. As examples of traffic accidents that can happen in places closer to home, the new "Parking Lot" version is designed to show potential hazards in parking spaces of commercial facilities and homes. It encourages children to think about and understand safe behavior to avoid such accidents. As in the previous programs, it uses animation and takes the form of a dialogue between children and a traffic safety instructor.

Traffic safety class

WEB

Article on the characteristics of the program

> https://www.honda.co.jp/safetyinfo/sj/21_02/index.html (Japanese only)

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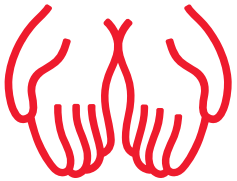

Safety Initiatives

Development of Educational Equipment

In Japan, Honda leverages its driving safety and KYT know-how accumulated over the years and provides educational equipment and software programs, including simulators, which are used at various driving safety education opportunities.

Honda has developed various equipment useful in driving safety education, including the Driving Simulator updated to match the latest needs of society; Riding Simulator for motorcycle KYT difficult to conduct on the road; Bicycle Simulator to learn safe bicycle riding; and Movie KYT that enables a large group of persons to experience hazard prediction.

Driving Simulator Type DB, Model S
(Released in April 2021)

Activities in the Welfare Field

In Japan, Honda offers training opportunities and venues for persons with disabilities who want to drive again. In this capacity, the Company provides its know-how to hospital and driving school personnel in charge of evaluating the driving competence of these persons. It also offers support for the creation of a local collaboration environment in which driving school instructors and occupational therapists exchange information and opinions.

As a means to evaluate the driving ability of those who want to return to driving, we provide Training Support Program for Driving Rehabilitation*1 using simulators and vehicles.

Additionally, in collaboration with NPOs and welfare-related companies, Honda uses its Safety Training Program for Operating Nursing Vehicles*2 to encourage welfare facility drivers providing pickup and drop-off services to gain driving skills that give due consideration to their passengers.

*1 A program offered at Honda Traffic Education Centers as a means to evaluate the driving competence of people with higher cerebral dysfunction wishing to resume driving. It is used to check their current ability to drive an actual vehicle and train them to overcome the identified issues.

*2 A program offered at Honda Traffic Education Centers for welfare facility drivers providing pickup and drop-off services. It provides advice on preventing accidents during these services as well as training to facilitate an understanding of the importance of giving due consideration to their passengers.

TOPICS

50 Years of Traffic Safety Promotion Operations

October 2020 marked the 50th year of the establishment of the Traffic Safety Promotion Operations (formerly Driving Safety Promotion Center). The operations began in 1970, in the period when the concept of "traffic safety" was not yet universal. It was also the period during which the expression "traffic war" was created as the growing motorization in Japan resulted in a steep rise in the traffic volume, causing a serious social issue of increasing traffic accidents. The social responsibility of a mobility company naturally entails the provision of safe motorcycles and automobiles. Going a step beyond, Honda strongly recognizes the need to spread safe driving practices. As such, the Company has been promoting its concept of safety both in terms of "hardware" and "software," while basing all ideas and thoughts on the perspective of road users.

The unprecedented pandemic that broke out in 2020 has forced Honda to continue exploring new ways of providing traffic safety education. Society is shifting to a new, "non-contact" lifestyle while automobiles, bicycles and the like are gaining popularity as personal mobility. Amid such an environment, Honda will strive to ensure further evolution of its forward-looking traffic safety education based on its ongoing, basic activities "To pass on safety education from person to person" and "To provide a participatory hands-on education program."

50 Years of the Traffic Safety Promotion Operations
(Issued on November 1, 2020)

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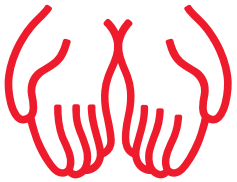


Safety Initiatives

Performance of Mobility

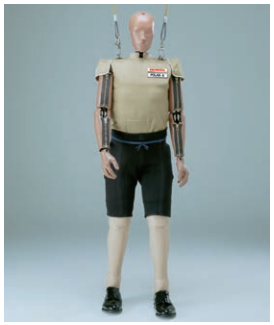
Honda's Approach

Honda believes that damage of accidents can be effectively reduced by fully understanding the real accident situations in a real-world traffic environment comprising multiple types of road users, including motorcycles and automobiles, and by conducting detailed analysis on accident mechanisms. The Company has engaged in technological development accordingly.

To date, Honda has developed the world's first pedestrian dummy*1, an anthropomorphic model used to reproduce the human body's kinematics during vehicle-to-pedestrian collision. Its aim was to identify the portions of the vehicle body most often resulting in injuries and to reduce pedestrian head injuries during the collision with a vehicle. The Company has also established the world's first indoor omni-directional crash test facility to conduct research into more realistic crash configurations. As for pedestrian dummies, in order to enhance safety for the traffic society as a whole, their use is not only limited to the development of Honda's products. They are also leased to other companies and research institutions across the world, widely contributing to studies on pedestrian protection.

In addition to the above, Honda has become the first company in the world to provide a number of new technologies. These include the driver-side SRS airbag, Advanced Compatibility Engineering (ACE) body structure*2, Collision Mitigation Braking System (CMBS) and "Honda Sensing/AcuraWatch" advanced safety and driver-assistance system. In April 2021, Honda installed a new CMBS, which is capable of detecting motorcycles, for the first time among Honda's automobiles in the Vezel released in Japan.

Going forward, Honda will work to evolve the current Honda Sensing/AcuraWatch in all directions and equip the resulting system in all automobile models sold in developed countries by 2030. Moreover, being a manufacturer of both motorcycles and automobiles, Honda will proactively promote research on Honda-specific Safety for Everyone technologies, with a view to realizing technologies that enable automobiles to protect motorcycles.



POLAR III, the third-generation pedestrian dummy

Omni-directional crash test facility

*1 Anthropomorphic models used to reproduce the human body's kinematics during vehicle-to-pedestrian collision with the aim of identifying parts of the vehicle body most often resulting in injuries and reducing pedestrian head injuries during the collision with a vehicle. The current third-generation dummies have a more "realistic" neck, back and thighs in addition to the head, thus offering more accurate pedestrian kinematics after a collision and allow realistic collision analysis.

*2 A safety body structure that efficiently distributes and absorbs frontal crash energy through the engine room. It offers significantly greater occupant protection and reduces damage to the other impacted vehicles.

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Safety Initiatives

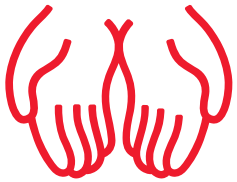
FY2021 Activities

The "Honda Sensing/AcuraWatch" advanced safety and driver-assistance system continues to be used in an increasing number of models. In Japan, Honda has installed this system in more models in the mini-vehicle and compact vehicle categories, such as the N-BOX and Fit.

In FY2021, more than 95% of new vehicles (total of regular passenger cars and mini-vehicles) sold in Japan equipped with the system. Similarly, the combined percentage of Honda Sensing/AcuraWatch fitted in new vehicles was also around 95% in the United States.

Meanwhile, traffic accidents caused by false start has become a social issue in recent years in Japan. As a measure against such accidents, Honda has started domestic sales of a retrofit kit to prevent false start, which can be added to vehicles already sold without preventive safety functions. In July 2020, Honda released a kit for the N-BOX (sold from 2011 to 2017, excluding models fitted with the City-Brake Active System known as CTBA) and the Fit (sold from 2007 to 2013, excluding manual transmission models).

In many countries and regions, including India, which is the world's largest market for motorcycles, Honda will increase the number of models equipped with an advanced brake system, such as the Combined Brake System (CBS) that ensures coordinated, more efficient operation of the independent front and rear brakes. Honda is also equipping more models with LED headlights. Boasting a long life and high resistance to impact, these lights are less prone to burning out and can serve to reduce riding motorcycles without headlights. In addition to the increased visibility for riders themselves, encouraging the use of headlights during daytime will make them more visible from surrounding automobiles and pedestrians. Honda believes that this improved mutual visibility will help prevent collisions.



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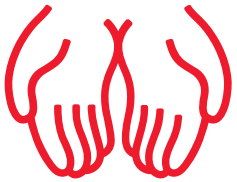

*1 Adopted the definitions (J3016) of the Society of Automotive Engineers International (SAE International), a U.S.-based global association of automotive engineers.
*2 To perform tasks of recognizing, predicting, making judgments and operating that are necessary to drive a vehicle
*3 The system is required to immediately warn the driver to take over if it deviates from its allowed use conditions.
*4 Conditions under which automated driving is allowed, including location (e.g., only on highways), weather (e.g., only on fine days) and speed. These conditions vary depending on the performance of an automated driving system.
*5 Defined in the Public-Private ITS Initiative/Roadmaps 2020 (approved in July 2020 by the IT Strategic Headquarters led by the Prime Minister of Japan).

Safety Initiatives

TOPICS

Started Sales of the New Legend Equipped with "Traffic Jam Pilot," a Level 3 Automated Driving System

In March 2021, Honda started sales of the new Legend equipped with the Honda Sensing Elite in Japan. For the "Traffic Jam Pilot (traffic congestion driving function)" included in the system, Honda has received the required type designation for Level 3 (conditional) automated driving from Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT).

In the revised Road Transport Vehicle Act that went into effect in April 2020, an automated driving system is officially defined as a system providing, under certain driving conditions, functions to "recognize, predict, make judgments and operate," which are necessary capabilities to drive an automobile, using sensors and computers. The system must also have a drive recording device. A vehicle equipped with the system is required to attach a sticker to its rear to show it is an automated driving car to other road users.

The Japanese government defines and categorizes automated driving into five levels*1. At Levels 1 and 2, the driver is primarily responsible for driving tasks*2, with the system just providing driver assistance. Level 3 is conditional driving automation, in which the system monitors surrounding traffic situations and is allowed to conduct driving tasks in place of the driver*3 under certain conditions*4, such as during traffic congestion on a highway. The "Traffic Jam Pilot" is an automated driving system corresponding to Level 3 of the MLIT's driving automation levels*5.

In controlling a vehicle, the system uses 3-D high-precision maps and information from the Global Navigation Satellite System (GNSS) to identify the position of the actual vehicle and road conditions, while many external sensors offer a 360-degree view of the surrounding area and an internal monitoring camera checks on the driver. Based on such a variety of information, the main electronic control unit (ECU) appropriately exercises the functions to recognize, predict and make judgments and assists the high-quality and smooth conduct of driving tasks through highly controlled acceleration, braking and steering.

In developing the system, Honda attached utmost importance to safety and reliability and conducted about 10 million simulations assuming varying real-world situations. At the same time, the Company repeated feasibility tests on highways using test vehicles, covering a total distance of 1.3 million kilometers. The system also incorporates a redundancy design to ensure safety and reliability should a failure occur in any of the devices.

"Traffic Jam Pilot" (notional image of operation)

Layout of sensors of the Honda Sensing Elite

Sticker showing the vehicle is an automated driving car

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Safety Initiatives

TOPICS

Equipping the Industry's First Camera-Mounted Rear Seat Reminder System in the Odyssey Sold in the United States

In the United States, Honda started offering the industry's first* camera-mounted Rear Seat Reminder system with the Odyssey that underwent minor updates in August 2020.

The Rear Seat Reminder system alerts the driver getting out of the vehicle to check the rear seats for children, pets or bags. It sets off an audio alert when the engine is switched off and shows a message to check the rear seats on the LCD monitor in the instrument panel.

In some Odyssey models, the Rear Seat Reminder system is integrated with a camera system and displays a real-time view of the rear seating area on the Display Audio screen in the instrument panel in addition to an audio alert and a text message reminder.

In the United States, dozens of children die of heat stroke in a vehicle every year. Honda is aiming to install its Rear Seat Reminder system in the majority of Honda vehicles sold in the U.S. by 2022.

Odyssey

Rear Seat Reminder system and Rear Seat Camera system

* Survey by Honda

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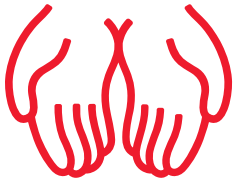

*1 Google Crisis Response is a registered trademark of Google LLC.
*2 D-Call Net® is a registered trademark of the NPO Helicopter Emergency Medical Service Network (HEM-Net).

Safety Initiatives

Traffic Ecosystem

Honda's Approach

In 1998, Honda started to offer "Internavi," a car navigation system equipped with communication functions, in Japan. Through the system, Honda has been providing drivers with information on traffic congestion, weather and disasters by using driving data gathered from Honda vehicles. In this way, Honda has helped them drive more safely and comfortably.

In 2003, Honda became the first automaker in the world to commercialize a Congestion Prediction function that can predict congestion while foreseeing changes in traffic patterns. Following the 2011 Great East Japan Earthquake, Honda made available information on passable roads for use by people traveling in disaster-affected areas on the map provided on a special disaster information website of Google Crisis Response*1. In doing so, Honda centrally aggregated its collected driving track data into actual traffic records to extract information on passable roads. Honda provided similar information after the 2016 Kumamoto earthquakes on Google Maps and Yahoo! Maps.

In 2013, Honda launched a Safety Map service that integrates and analyzes various information, such as emergency braking information collected through the Internavi system, information on traffic accidents provided by the police and local governments and traffic information provided by local residents. A map of accident-prone areas is shown on Honda's website for drivers to check in advance.

In addition, Honda is participating in D-Call Net®*2 in Japan, a system commonly referred to as an Advanced Automatic Collision Notification (AACN), which uses connected car technology. The system automatically analyzes the vehicle data upon a collision using an algorithm based on the database of some 2.8 million accident cases in Japan and estimates the probability of death or serious injury. It then reports the accident automatically from the vehicle to fire departments and cooperating hospitals. The aim is to save more lives in traffic accidents by making prompt air and ground ambulance dispatch decisions possible.

Going ahead, in order to realize zero traffic collision fatalities involving Honda motorcycles and automobiles globally by 2050, Honda will utilize communication technologies to create a better collaborative relationship among all road users, including motorcycles, automobiles, pedestrians and bicycles, and help realize a safer traffic ecosystem.

FY2021 Activities

The utilization of communication technologies is one such initiative to contribute to the sound development of a traffic ecosystem. In Japan, since installing a Honda Connect on-board communication module in the Fit released in February 2020, Honda also fitted the module in the Honda e released in August 2020.

The on-board communication module will be gradually equipped in new automobiles, connecting the vehicle directly to a support center in case of an emergency such as a traffic accident. This will in turn make it possible for the support center operator to send vehicle and location information simultaneously to the police, fire station and insurance company, enabling prompt and proper responses.

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Safety Initiatives

TOPICS

Feasibility Testing of Ropot, a Traffic Safety Advice Robot, Aiming to Reduce Traffic Accidents Involving Children

Honda R&D Co., Ltd., a research and development subsidiary of Honda, is undertaking the research and development of a traffic safety advice robot named Ropot.

Ropot is a tiny, palm-sized robot under development based on the concept of helping parents with teaching traffic safety to their children. Perched on a shoulder strap of their schoolbag, the Ropot device for children works with a smartphone app for parents and encourages children to check safety along the school route, assisting them in developing safety check habits.

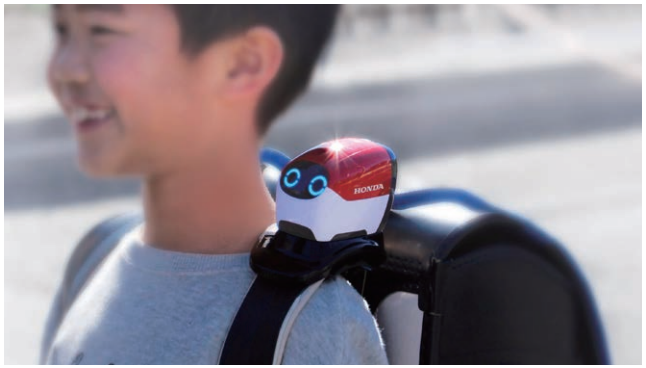
In November 2020, Honda conducted feasibility testing of the robot, with the cooperation of 25 elementary school children (24 families) in Wako City, Saitama Prefecture, to actually use it on their way to and from school.

Ropot uses its Global Positioning System (GPS) to detect the location of the child and gives a vibration warning at the safety check points such as crossings specified by a parent in advance, urging the child to check safety before crossing the street. Ropot also has a vehicle detection sensor and vibrates to warn the child to watch out for a vehicle approaching from behind.

After coming home, the child can go through the route he or she has actually taken with an adult and check the history of stopping at the specified points by using the app on parents' smartphones. This function to later check the school route and safety behavior with an adult is expected to be an effective means to ingrain traffic safety awareness more firmly among children.

The development of Ropot has been driven by the fact that seven-year-olds are more frequent pedestrian victims of traffic accidents in Japan. This is probably because they enter elementary school at this age and start navigating through traffic on their own at more occasions when going to and from school or other after-school activities. With the aim of reducing such accidents, Honda is also undertaking research and development in other ways than improving the safety performance of vehicles and motorcycles.

Ropot is still in the research and development stage, and no plan has yet been made as to its commercialization.



Ropot device perched on a shoulder strap of a child's schoolbag

Go through the school route and check the history of stopping at the specified points by using the app on parents' smartphones.

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Safety Initiatives

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Conducting Feasibility Testing on a Technology to Detect Road Damage in Ohio

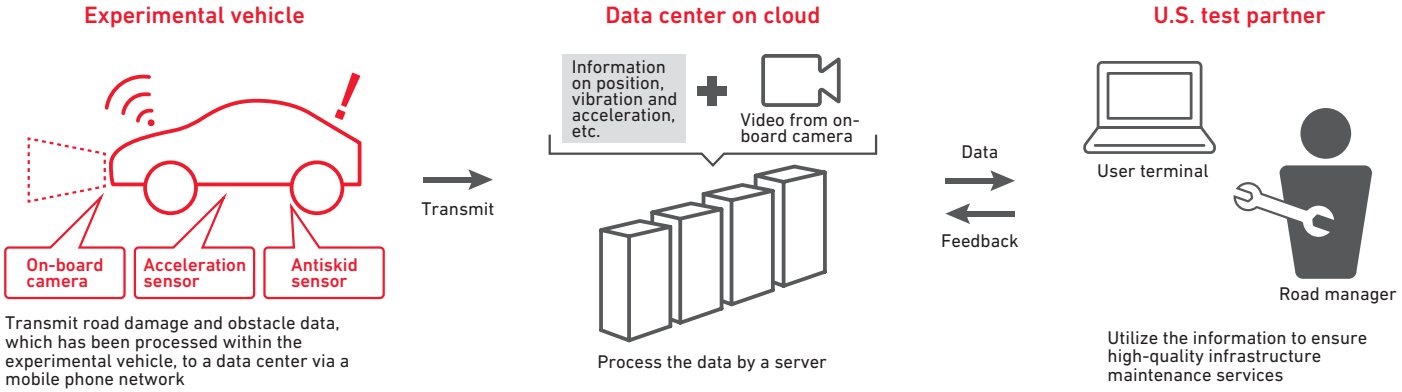
Honda has conducted feasibility testing* on the use of connected car technology to detect road damage in the U.S. state of Ohio with the ultimate goal of building a platform for data utilization.

In order to relieve traffic congestion and increase traffic safety, Ohio has set up a Smart Mobility Corridor along a section of U.S. Route 33. Accordingly, it has installed an optical fiber network, sensors to collect traffic information and devices to communicate with vehicles.

In the feasibility test, an experimental vehicle equipped with a camera and sensors for AI analysis, a communication device and an on-board analysis-use computer ran on the route. It explored challenges involved in detecting road damage and obstacles, collecting the obtained information at a data center using a mobile phone network and distributing the information via dedicated short range communication (DSRC) and 4G LTE.

In the future, the project aims to let road managers to utilize the collected data in their operations, such as alerting other road users or quickly arranging road repairs, and to build an even safer road infrastructure.

Flow of feasibility testing



* This feasibility testing has been carried out as part of a project consigned by Japan's Ministry of Internal Affairs and Communications (MIC) to survey the feasibility of advanced systems utilizing probe information in the United States. Under a public-private partnership of the government and companies of Japan, the project supports repairs of aging roads in the United States. In this project, the operation of experimental vehicles is consigned to a specific purpose company established by Pacific Consultants Co., Ltd., Oriental Consultants Global Co., Ltd. and SoftBank Corp., while the server operation is consigned to ZENRIN DataCom Co., Ltd.

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Safety Initiatives

Third-Party Evaluations

Honda's Approach

Many of Honda's models have achieved high safety assessments from NCAP*1 in various regions.

Results of key third-party evaluations (tests conducted in FY2021)

Country / Region	Third-party evaluation		Model
Japan	JNCAP	5 ★	Fit
Europe	Euro NCAP	5 ★	Jazz
China	C-NCAP	5 ★	Breeze / ENVIX
	C-IASI*2	GGG	Breeze
U.S.A.	NCAP	5 ★	Acura TLX
	IIHS*3	TSP+	Acura RDX / Acura TLX / Accord / Insight / Odyssey / Acura MDX
		TSP	Civic sedan / Civic hatchback / CR-V
		5 ★	Performance not evaluated in FY2021
Australia	ANCAP	5 ★	Performance not evaluated in FY2021
Southeast Asia	ASEAN NCAP	5 ★	Performance not evaluated in FY2021
Latin America	Latin NCAP		

*1 This refers to New Car Assessment Program. This is a program that tests and evaluates the safety performance of cars, which is performed by public organizations in various regions. Testing and evaluation methods are different for each region. Ratings range from 0★ to 5★ (5★+ is the highest rating in some regions).

*2 This refers to China Insurance Automotive Safety Index. It tests and assesses the safety performance of vehicles, in which the four grades of G (excellent), A (good), M (general) and P (poor) are used. The purpose of the assessment is to improve the safety of vehicles and reduce the insurance premium.

*3 The organization conducts the car assessment that tests and evaluates the safety performance of various cars. IIHS only awards TSP and TSP+ to vehicles that achieved excellent test results. TSP refers to Top Safety Pick.

*4 This refers to Japan New Car Assessment Program, which is conducted jointly by the Ministry of Land, Infrastructure, Transport and Tourism and the National Agency for Automotive Safety & Victim's Aid (NASVA).

*5 In 2020, JNCAP shifted to a program in which the existing Collision Safety Performance Assessment and Preventive Safety Performance Assessment were combined into a single Comprehensive Assessment, selecting the Five Star Award based on the sum of scores of the two assessments.

TOPICS

Fit Receiving the Five Star Award from JNCAP*4

The Fit received the Five Star Award in JNCAP's Automobile Safety Performance 2020, which evaluates and publicizes the safety performance of automobiles. The vehicle received high marks in both the Collision Safety Performance Assessment and Preventive Safety Performance Assessment as well as being equipped with an automatic collision notification system. It became the first Honda vehicle to receive the award under JNCAP's new testing program*5 in 2020.

Fit

Accord and City Receiving Awards from ASEAN NCAP

For the ASEAN NCAP Grand Prix Awards 2020 held in February 2021, the Accord, which was released in the ASEAN region in November 2019, received the highest rating overall in the Best Safety Performance Award. The model achieved the highest scores in the Adult Occupant Protection (AOP) and Child Occupant Protection (COP) categories, and combining the score of the Safety Assist category, the highest scores overall.

The City, which was fully revamped and released in the ASEAN region in November 2019, also received a five-star ASEAN NCAP rating and won an award for achieving five stars for three consecutive generations, following the previous models released in 2012 and 2014, respectively.

ASEAN NCAP conducts a safety assessment of new cars sold in the ASEAN member countries in the three categories of AOP, COP and Safety Assist and then selects the highest-rating car based on the total score of each category.

Accord

City