

# Car Sharing

A NEW phenomenon is now taking hold in Japan that is not only eco-friendly but also economical: Car Sharing. Of course, sharing a car ride with other passengers is already a common practice in the West, especially for city workers. Commuting by car is comparatively rare in the urban centers of Tokyo and Osaka, but car sharing is catching on with inter-city and rural commuters in other parts of Japan. This is having a positive impact on both the environment and economy.

Car sharing differs from normal rental in that it allows registered users to book short-term driving times with scheduling software, or through the internet, in collaboration with others. Once the car sharing station acknowledges the booking, users can access the car with a security card, key or other system. Sharing drops the overall cost for each participant, offering a low-cost alternative to car ownership. This also means each vehicle, paid for by monthly subscriptions, has less down time compared to car rentals. Other benefits include reduced carbon dioxide emissions, less traffic jams and a minimal financial burden for users.

In Ishinomaki City, Miyagi, where 60,000 vehicles were wrecked by the tsunami following the Great East Japan Earthquake, a degree of revitalization of the region is making progress through car sharing. This article seeks to provide an insight into the current state of car sharing in Japan and its positive knock-on effect on Japanese society.



## CAR SHARING IN DISASTER AREAS

The Great East Japan Earthquake took place on March 11, 2011. In the coastal city of Ishinomaki in Miyagi prefecture, approximately 60,000 cars were swept away by the tsunami, causing many people to lose their main form of transport. Mr. Takehiko Yoshizawa, originally from Hyogo prefecture which was struck by the Kobe earthquake, has implemented a Disaster Area Car Sharing project in Ishinomaki City to support the victims of this natural disaster.

The project makes an appeal for cars, including used cars, to enterprises and individuals from all over Japan. These cars are sent to the victims of the disaster so they can be used on the basis of car sharing. In order to avoid users having to pay for car maintenance fees, the requirement is that the supplied cars must have a vehicle inspection certificate with a remaining validity of one year



or more. Also, although each car requires approximately ¥150,000 per year in insurance and registration fees, these expenses are covered from a car fund set up from contributions made by people from all over Japan.

Mr. Yoshizawa started helping as a volunteer in the disaster area a week after the earthquake took place. He had heard about the car sharing project that was implemented in the affected areas of the Kobe earthquake from friends who had been working as volunteers in those areas for seven and a half years. "If people could share cars around the temporary residences and the affected areas, then I was sure that the lives of the victims would become much easier." This was the thought behind the establishment of the Disaster Area Car Sharing Association in July of the same year. Up until now, there have been 72 cars donated, the use of which has expanded to approximately 50 temporary residential areas and 230 people before they have even registered as members.

"This has clearly made it easier for people to move from one place to another. We can now go wherever we want to go, and meet whoever we want to meet. This has given

us a more positive outlook on life," said one user with a smile on his face. Through this Disaster Area Car Sharing project, some people have even started offering personal volunteer transport services for the transportation of elderly people living on their own, back and forth from the hospital. Some have said that this car sharing project has given people an opportunity to help others, making them feel happy about their contribution to society. Additionally, some of the elderly people who benefit from these transport services are making contributions toward the maintenance costs of the cars. This car sharing project seems to have created a tangible chain of thoughtfulness and consideration.

The Disaster Area Car Sharing Association encourages donors to bring the donated cars themselves. This stems from the association's wish for donors to visit the temporary residences, so they can meet the car users and have an opportunity to interact and communicate with them. In some cases, this has resulted in the users remaining in contact with the car donors, with some users even sending their donors some specialty goods

from Ishinomaki. Some car donors have given their impressions such as, "It makes us really happy that our car, which is full of lovely memories such as going out for drives with my wife, or on family camping vacations, is helping others in this way."

Although at the beginning, this project was primarily supported by people from all over Japan, recently this has changed into a form of mutual support from people in the local communities. "In the fall of 2012, students from Sendai Akamon Automobile Technical College came as volunteers, while in the spring of this year, volunteers from 18 maintenance workshops in Ishinomaki City came to maintain the cars. It is also planned for the students of Ishinomaki Senshu University to come in the fall of this year to help us as well. We are deeply grateful for the support we are receiving from people from so



far away. However, in order to have sustainable mutual support, it is important for us to start shifting toward an environment where local communities can help each other out," said Mr. Yoshizawa.

Mitsubishi Motors gave the association a free loan this summer, and so they have now started using

6 electric vehicles. It seems that the idea of using environmentally-friendly electric vehicles for the Disaster Area Car Sharing project originated from the people living in the temporary residences.

With regard to their future objectives, Mr. Yoshizawa added, "It made me happy to see that through

## THE STATE OF CAR SHARING IN JAPAN

THE car sharing system was introduced to Japan in 1998 as a technology development experiment, focusing on the spread of electric vehicles (EVs). The first experiment in Japan using gasoline cars took place in 2001, but it soon stumbled due to lack of clear project goals and negative public attitudes. The initiative came to an end without a major effect on the automobile market.

In 2002, the first commercialized car sharing system was introduced in Yokohama, followed by a few other regions that applied their rules beyond the strict use of EVs. As Mr. Ichimaru Shinpei from the Foundation for Promoting Personal Mobility and Ecological Transportation explains, "the rise in oil prices and the Lehman shock in 2008 led to an increase in the number of companies offering car-sharing schemes. In addition, an increased tendency to economize on costs and rising awareness about environmental issues led to a rapid increase in the number of members signing up for the system."

According to a recent survey conducted by the foundation, the current number of members subscribed to car sharing in Japan stands at 289,497 (18 times the number in 2010), and the vehicles involved number 8831 (7 times the number in 2010). Where the distribution ratio of car sharing in a country is calculated as the number of registered members over the total population, Switzerland comes out top at 1.3%. Japan's distribution rate has improved over the past few years and has now reached the same level as Canada, Germany, and the United States at 0.23%. Further growth is expected with the development of new urban areas and smart cities that



this project, users were able to look forward to the future and think about their dreams. Electric vehicles are not only friendly to the environment, but they are also a power source in the case of an emergency. September is disaster prevention month, and we are planning to run simulations to ensure we can smoothly use electric vehicles as power sources in the case of an emergency. The biggest challenge in ensuring that electric vehicles can be used easily and comfortably is the provision of widespread charging stations. However, I would also like us to think, together with all the users of the electric vehicles, about making concrete requests from a variety of perspectives to Ishinomaki City, ensuring that they are all linked to infrastructure development. Moreover, we have also set ourselves a new, initial target of creating one temporary residential area from



where we can charge the electric vehicles using natural energy. It would be great if through car sharing, we could contribute to the construction of a new city, taking into account aspects such as disaster prevention, infrastructure development, and environment creation.

The Disaster Area Car Sharing project goes far beyond the mere supply of a form of transport. It does not only bring happiness and hope to people, but it also holds the amazing power to reinvigorate the city of Ishinomaki. **1**

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are more amenable to EVs and with an increase of the number of luxury cars available to the system.

There is proof that car sharing reduces the burden on the environment. According to a 2012 survey, the annual distance travelled per household was 4048km, which decreased to 2563km after participants entered the car-sharing program: a drop of 37%. In addition, the preference for smaller cars and consequent reduction in fuel consumption per kilometer led to a 45% annual decrease in CO2 emissions per household at an average of 0.34 tons.

Aside from residential areas, the largest effect was seen in Tokyo with

a total annual CO<sub>2</sub> emissions down to 53%. This is the largest decrease for any urban area in Japan. The reduction in car ownership has also seen a decline in the need for parking spaces, allowing for the preservation and reinstatement of green areas. If car sharing can move to the greater use of EVs, the contribution to the environment would be enhanced further still.

Since EVs are expensive in comparison to regular cars, they represent a heavy burden in terms of cost to the individual buyer. It is in this sense that car sharing can make the greatest contribution by making the shared-ownership of EVs a realizable goal for many. By increasing

the numbers of electric vehicles in operation, it is possible for society at large to make a substantial cut in carbon-dioxide emissions and reduce the consequent environmental burden caused by gasoline driven vehicles. Apart from pricing, the greater widespread adoption of EVs is also dependent upon the greater proliferation of recharging facilities in outlying areas. **1**



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