I would like to begin this message on the publication of the Keihin Technical Review Volume 6 by extending my greetings to you.

As you all know, the perspective on the future of automobiles has drastically changed over the past one to two years, such as the future shift to EV (electric vehicles) in Germany, Great Britain, France, China, India, and elsewhere; the attention given to car sharing and self-driving cars in North America; and even flying cars. In our business operations, non-fossil fuel engines, i.e., electrified engines, have become essential, and in addition to the elements of driving, turning, and stopping as being part of the expected value of a car itself, the elements of consumer satisfaction, in other words being environmentally friendly, safe, convenient and fun, have also become significant factors for added value.

When I look at these perspectives as a resident currently living in the United States, the time we spend driving on highways is still going to be very long, except for in some big cities where self-driving cars might be effective and technically easier to incorporate. Also, car-sharing and ride-sharing have become widespread in big cities due to the high property values and heavy traffic. For example, Zipcar has expanded its car-sharing business operations to 500 cities across the United States and serves 1% or more of the entire population as registered members. In Indiana where I live, there is an EV car-sharing system and it is very easy to use. As for ride-sharing service, Uber and Lyft are popular. I, myself, use Uber time to time and it is very reasonable and convenient. You make a reservation using your smartphone, and you know ahead of time in how many minutes it is coming to pick you up, how much time it will take to get to the destination, which route will be taken, etc., and the payment is already made with your credit card which is registered ahead of time, so once you get to the destination, you just get out of the car. Simple, easy and convenient. If Uber and self-driving cars progress further, individuals will not need to own their own cars anymore but instead, un-manned vehicles will come to pick you up and take you to your destination safely; I think these times are just around the corner.

On the other hand, the United States’ dependency on crude oil from overseas has significantly declined with the advent of domestically produced shale gas. When I was transferred to Keihin North America, Inc., regular gasoline was $4 per gallon. Now, as of August 2017, the gas price has become stable at around $2 per gallon. In general, sales of light trucks decline when the price of gasoline goes over $4, and sales increase when it is below $4. Currently, sales of pickup trucks are greater than passenger cars. Downsized turbo engines are getting attention in the EU and Japan, but in reality, V8 and V6 engines are still very popular in North America.

While keeping an eye on these big changes, Keihin is also facing the requirement to work on gasoline engine advancement as well as electrification technology development efficiently. In that sense, I hope we will be able to polish our Model Based Design (MBD) and Model Based Control (MBC) technology, which is the main theme of this Keihin Technical Review, and increase the efficiency and accuracy of mass production development to expand our development capacity as well as figure out what kind of approach we are going to take towards the needs of an overall motorized society with easy, nimble, and safe transportation, where more and more young engineers can participate with open minds and discover new horizons as they work on development in new areas.