Aichi Prefecture to be Proving Ground for Cutting-Edge Vehicles

Several Aichi cities will soon embark on a Japanese Ministry of Economy, Trade and Industry (METI)-funded project aimed at greening Japan’s roads. Designed to develop infrastructure and encourage the use of electric vehicles (EV) and plug-in hybrid vehicles (PHV), the EV • PHV Town project will be carried out in Nagoya City, Okazaki City, Toyota City and Anjo City, and will involve private firms, vehicle manufacturers, citizens and government in a large-scale undertaking aimed at stimulating the market for environmentally friendly automobiles and expanding and fine-tuning the infrastructure that will be necessary to support a green car society.

Aichi prefecture’s EV • PHV Town project is a major component of a national effort to expand and promote the use of environmentally friendly cars and reduce carbon emissions. Japan aims for half of the cars on its roads to utilize next-generation electric or plug-in hybrid technology by 2020.

Through the project, Aichi prefecture is looking to strengthen its role as a global hub for the development and production of innovative automobile technology. Aichi—Japan’s “car kingdom”—is a natural fit for the project. Aichi-based Toyota Motor Corporation will release a plug-in vehicle based on its popular Prius hybrid in winter 2009. In July 2009, Mitsubishi Motors released the i MiEV, an electric vehicle that the company developed at its Okazaki City-based technology center. Aichi has led the country in automotive manufacturing output for 31 years in a row and is atop the list of vehicle ownership with nearly five-million cars on its roads to utilize next-generation electric or plug-in hybrid technology by 2020.

A Centrair employee takes the i-REAL for a spin

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Centrair Gets i-REAL

Central Japan International Airport (Centrair), has teamed up with Toyota Motor Corporation to incorporate the automotive manufacturer’s personal mobility technology into the daily operations of the airport. Since June 27, Toyota’s i-REAL has been utilized in passenger service and security situations at Centrair.

The single-passenger i-REAL, just one example of Toyota’s heightened interest in developing EV technology, envelopes the driver and changes position depending on speed. While at low speeds users stand upright, at higher speeds the profile lowers, allowing for greater stability. The personal mobility vehicle utilizes a lithium ion battery and an in-wheel motor and emits no carbon dioxide. Much of the i-REAL, including its interior trim, seat cushions and panels, is made from plant-derived materials.

Centrair will utilize four i-REALs in total—three for security applications and one to provide information to travelers as a mobile information booth. The security-focused Kei will operate at brisk walking speeds during most tasks, increasing to almost 10 mph in the event of emergencies. The Kei is also equipped with an Automatic External Defibrillator, making it ideal for life-or-death situations.

The i-REAL Ann will upend the paradigm of airport information being distributed from stationary booths. Equipped with a computer, the Ann will enable Centrair’s staff to provide on-the-spot guidance about ground transportation and airport amenities to travelers. The i-REAL Ann is also ideal for escorting passengers through the airport.

Putting the i-REAL into use in Central Japan’s largest airport is a win-win arrangement for Centrair and Aichi-based Toyota. The personal mobility device creates a more comfortable and modern environment for airport staff and passengers, and for Toyota, the partnership is key to drawing feedback from users as it fine-tunes its single-passenger vehicles for more wide-ranging applications.

Personal mobility devices are expected to be an important component in Toyota’s product offerings in the future. Demonstrations of the automaker’s i-unit, a forerunner to the i-REAL, drew a warm response at the 2005 World Expo in Aichi.