NEWS RELEASE
September 2, 2021

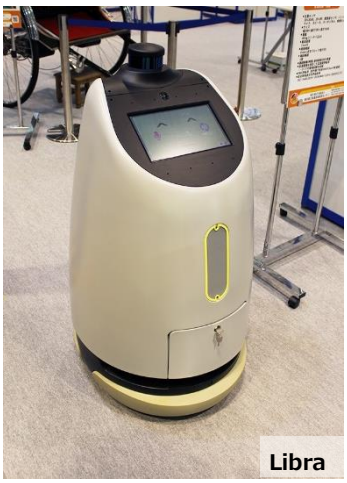
Tokyo Metropolitan Industrial Research Institute: Supporting Innovation of Robots of the Future

From August 3 to August 8, Tokyo Metropolitan Industrial Research Institute (TIRI) showcased many of its robots created in collaboration with small and medium-sized businesses (SMEs) at the Tokyo Tokyo ALL JAPAN COLLECTION event held at Tokyo Sports Square. A total of 16 robots — mainly targeted for the service and medical sectors — were available onsite. Staff demonstrated robot exhibits and members of the general public could interact with some of them.

About TIRI

The Tokyo Metropolitan Industrial Research Institute (TIRI) was established by the Tokyo Metropolitan Government (TMG) in 2006 and has since supported SMEs in creating and developing new technologies to help support the lives of Metropolitan residents. This is done through offering technical advice, researching new technology, testing products and providing education for businesses and the general public.

From 2015 to 2020, TIRI implemented the Robot Industry Revitalization Project, which has helped SMEs develop a total of 37 service robots. The ultimate goal is to expand a variety of robot technologies that can be implemented in broader societal settings. Many of the robots address pressing societal issues such as labor shortages in the service and medical industries while working towards sustainable development goals (SDGs). Some already have been, and in future more are expected to be, implemented by businesses and general users across Japan.


Libra

The TIRI Exhibit at Tokyo Tokyo ALL JAPAN Collection

Out of the 37 robots developed under the Robot Industry Revitalization Project, 16 were on display at the Tokyo Tokyo ALL JAPAN Collection event under the theme “Service Robots to Support Your Daily Life: Exhibition and Demonstration of Guide, Industrial, Inspection, and Nursing Care Robots.” This was done in the hope of accelerating societal implementation of service robots, as well as promoting the technological capabilities of Japan’s SMEs to the world.

One of the robots on display was the new model of Libra, a self-propelled robot that leads users in the booth and uses multilingual conversational functions to interact with its users. A camera and four microphones make it possible to catch the user’s voice even in crowded places. In addition, three lasor sensors allow it to move to its destination while avoiding people.

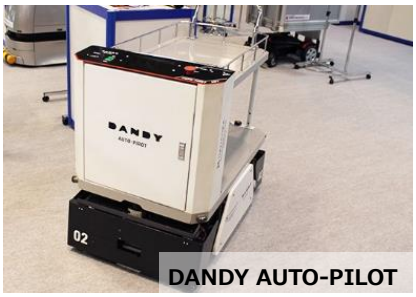
Guidance robots based on this Libra are already in use in many places. In a demonstration experiment conducted at the Sumida Hokusai Museum in 2017, the robot provided explanations of artworks to visitors while guiding them through the exhibition rooms, and got good reviews. Also in the demonstration at the Tokyo Sea Life Park, it guided in three languages (Japanese, English, and Chinese) while displaying a map of the park and images of fish to the delight of the children and other visitors.

In future they are to be applied to museums and other pupblic facilities as well as hotels and shopping malls.

Another is Fukusuke, a medication assistance robot that supports management of medication for elderly people living alone. The amount of medicine wasted due to patients forgetting or losing their doses is estimated at 50 billion yen a year. The robot not only reduces this risk, but also keeps extended family in the loop via a smartphone app.


Fukusuke

The DANDY AUTO-PILOT is an automatic guided vehicle that can transport tools, mechanical parts and other items on an already-planned out route. It can smoothly scale slopes and rough roads. A demonstration experiment has already been conducted in a hanger at Tokyo Haneda Airport, and it is expected to lead to more efficient maintenance work, as the robot can transport tools smoothly even in areas where strict checks are required for the delivery of tools and the entry and exit of people.



DANDY AUTO-PILOT

Other robots include the NR-7 E-Robot, a robot that cleans air conditioners quickly and effectively, the CO2 Gas Supply Type Power Assist Suit, which supports the mid-back area during heavy-labor work, the Wind Turbine Blade Inspection Robot that helps with inspection and maintenance of wind turbine blades, and more.

For more information on the 16 robots displayed at Tokyo Tokyo ALL JAPAN Collection, visit https://tiri-robot.jp/news/20210720.html

Message from TIRI Research and Development Department

Though we have several important goals in robotics development, our main wish is to develop robots that can be used everywhere in the world. We are developing the know-how and have cultivated it further through the Robot Industry Revitalization Project. One of the most difficult challenges — but also one of the most important considerations— is creating robots that are safe and easy to use. Because many of the end users will be members of the general public, robots should be easy to interact with and adjust according to the user's needs, require little or no maintenance, and be safe for anyone of any age to use. This also means they should not break easily. We hope that people all over the world will have the opportunity to use and appreciate the technology developed here in Tokyo.

TIRI Headquarters

Address: 2-4-10, Aomi, Koto-ku, Tokyo 135-0064
Tel: (+81)3-5530-2111
Official website: https://www.iri-tokyo.jp/site/english/

Source: Bureau of Industrial and Labor Affairs, Tokyo Metropolitan Government

Setting its sights on Tokyo 2020 and beyond and aiming to encourage the tourism industry, the Tokyo Metropolitan Government has been showcasing Tokyo's attractiveness both in Japan and abroad and also promoting development of tourism resources and enhancement of the welcoming system.
https://www.sangyo-rodo.metro.tokyo.lg.jp/eng/

Contact:

・**Tokyo Tourism Representatives in Canada**
E-mail: tokyo@jcinteractive.ca
・**Tokyo Metropolitan Government / Tokyo Convention & Visitors Bureau**
E-mail: tourist@tcvb.or.jp