









Press Release

May 23, 2019

Keihanna Research Complex Public Foundation of Kansai Research Institute Advanced Telecommunications Research Institute International TORAY CONSTRUCTION Co., Ltd. The Elegant Monkeys Ltd.

ATR, TORAY CONSTRUCTION, and the Israeli Start-up TEM Collaborate on a Joint Experiment to Measure the Effect of Stress Reduction by TOREFARM[®] — Further Utilization of Open Innovation Platform of the Keihanna Science City —

Advanced Telecommunications Research Institute International (ATR) has been working on generating various joint projects on a global scale as part of the Keihanna Research Complex (Keihanna RC) project, by utilizing the "Keihanna Open Global Service Platform for Accelerated Co-Innovation (KOSAINN)", an open innovation platform constructed by the Keihanna RC. ATR, Toray Construction Co., Ltd., (Toray Construction), and the Elegant Monkeys Ltd., (TEM), an Israeli start-up agreed to conduct a joint experiment to measure the effect of stress reduction through farming at a sand culture greenhouse called TOREFARM[®]. This project, one of the Keihanna RC's global open innovation projects, aims to promote TOREFARM[®] by quantifying the efficiency of stress reduction at the greenhouse which has been empirically recognized. Based on the results of the pre-experiment conducted in 2018 by 7 companies from Israel and Silicon Valley in the US, ATR, Toray Construction, and TEM will conduct a more large-scaled and detailed experiments with local residents in the Keihanna Science City by using TEM's AI technology that enables objective measurement of human emotional load level from their vital signs.

In the Keihanna RC, ATR will enhance the creation of an innovation ecosystem by expanding the KOSAINN to tackle business challenges and help commercialize new ideas rapidly through collaborations with various players in the Keihanna RC's partnership network that spreads out in Japan and overseas.



Preparation for Joint Experiment by ATR $\$ Toray Construction, and TEM at the TOREFARM® located on the property of ATR on May 21.

Keihanna Research Complex project

Keihanna Research Complex project, called the Keihanna RC, is promoted by the Ministry of Education, Culture, Sports, Science and Technology and the Japan Science and Technology Agency (JST). Keihanna RC focuses on developing technologies based on i-Brain and ICT; supporting persons with a creativity to elaborate business plans from scratch; and establishing a framework to nurture new business, aiming at a mechanism producing continuous scientific and technological innovations in the regions where universities, research institutes and companies are strategically integrated. So far, 45 organizations in the Keihanna Science City participate in this project and cooperate with other large enterprises, SMEs, start-ups, and local residents in the pursuit of world-class innovations and creation of a global innovation ecosystem.

URL: <u>https://keihanna-rc.jp/</u>

TOREFARM[®]

TOREFARM[®] is a greenhouse specialized for sand culture, which was developed by Toray Construction. Thanks to sand media and watering optimized by an IoT system, high-quality vegetables can be produced there. TOREFARM[®] that enables light and safe agriculture work, therefore organizations to provide a work opportunity to physically challenged, a project to revitalize apartment complex and others take in TOREFARM[®]. Also, it can be a good workplace for elders while contributing to extend healthy life-span as the government promotes

Public Foundation of Kansai Research Institute (KRI)

Location: Keihanna Plaza, Laboratory Bldg. 3F, 1-7 Hikaridai Seika-cho, Sorakugun, Kyoto, Japan (Kansai Science City)

President: Yasuo Kashihara (Vice-Chairman of Kansa Economic Federation)

Overview: KRI is a public corporation established for the purpose of promoting construction of the science city; and communication among residents, researchers, and companies there. KRI also plays a core part in the Keihanna RC project.

URL: <u>https://www.kri.or.jp/</u>

Advanced Telecommunications Research Institute International (ATR)

Location: 2-2-2 Hikaridai Seika-cho, Sorakugun, Kyoto, Japan (Kansai Science City)

President: Tohru Asami

Overview: Aiming to promote innovations and contribute to regional revitalization, ATR pursues worldleading, ingenious research achievements in computational neuroscience, life-supporting robots, wireless communications, and life science as well as their business developments, in collaboration between industry, academia and government. In the Keihanna RC project, ATR promotes global business-to-business matchings and supports start-ups as one of the core organizations in charge of business development support and creation of an innovation hub.

URL: <u>https://www.atr.jp/index_e.html</u>

Toray Construction Co., Ltd.

Location: Nakanoshima Mitsui Bldg., Nakanoshima 3-chome, Kita-ku, Osaka 530-8222, Japan President: Motoyuki Tomiyama

Overview: Planning, design, construction and supervision of building and civil engineering works; construction and development of condominiums and housing estates; sale and purchase, leasing, intermediary and refurbishment services for real estate; and consulting services for real estate and construction. In addition, Toray Construction pursue a new business by means of TOREFARM[®], a greenhouse specialized for sand culture, which is to spread a new concept for agriculture and to develop the business as it helps issues in aging society with fewer children.

URL: <u>http://www.toray-tcc.co.jp</u>

The Elegant Monkeys Ltd.

Location: Weizmann St 14, Tel Aviv-Yafo, 6423914, Israel President: Maayan Yazdi (Co-Founder & CEO)

Overview: The Elegant Monkeys Ltd. (TEM) is an Israeli startup company, specializing in AI, Deep Learning, Digital Health and IoT. TEM is a core technology company with a mission to build artificial intelligence algorithms and cloud technologies for the purpose of digitizing human emotions and mental states by processing physiological data. TEM created KENKO Technology's AI emotions analytics engine which translates physiological sensors data into an objective emotional load measurement.

URL: https://www.elegantmonkeys.com/

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