

## **The University of Tsukuba and Toyota Jointly Open the R&D Center for Strategic Frontiers in Social Planning**

### **Advances toward Society 5.0 through the Development of Infrastructure for Future Communities and the Formation of Industrial Centers through Long-term Collaborative Action**

The National University Corporation University of Tsukuba and Toyota Motor Corporation announce that the R&D Center for Strategic Frontiers in Social Planning (Director: Isamu Takahara, Specially Appointed Professor, University of Tsukuba, and Project General Manager of Toyota Motor Corp.) had opened at the University of Tsukuba this April for research and development into social infrastructure for communities of the future. The center is planned to operate for five years, and will employ an open laboratory system for genuine collaboration between industry, academia, and government.

Research at the center will include verification into solutions for regional socioeconomic issues, development of future industries, and formation of industrial centers, as well as policy recommendations. Through social measurements made with effective application of the Internet of Things (IoT) and coordination with the University of Tsukuba's Center for Artificial Intelligence Research, the center will contribute to the sustainable cycle of growth in communities. Specifically, the center will conduct studies into the causes and solutions of issues that require improvement from a social engineering and mathematical engineering approach, and will support human resources training and intelligence development.

There are several socioeconomic issues that threaten the existence of regions outside the Tokyo metropolis. These include the decline in industrial competitiveness as a result of the rapidly aging population and increasing depopulation of rural areas, a shrinking workforce in agricultural, forestry and marine enterprises, and an aging infrastructure. In particular, there are issues that are difficult within the industry structure, such as agricultural support, child care support, disaster prevention/mitigation and other elements of social infrastructure of future communities. These are key issues where Japan must address with urgency through coordinated effort between industry, academia and government as part of the drive to realize the establishment of Society 5.0<sup>1</sup> as raised in the Fifth Science and Technology Basic Plan<sup>2</sup>.

The University of Tsukuba is located in Ibaraki Prefecture, an area with a concentration of public research institutes within a rich natural setting, ranking second in Japan for agricultural output. Model zones will be created for each research theme, and new social services for communities of the future will be created through technological innovation in motor vehicles such as automated driving, robotics, and fuel cells, as well as through data analysis and practical application using advanced technologies such as satellites and mobile terminals. The center also is expected to publish policy recommendations for regional revitalization through intersectoral coordination between universities, businesses, local governments and citizens, as well as to promote the implementation of practical research in society. The representative professors participating in the center are listed below. The participation of various corporate groups has also been planned for the future.

- (1) Akiko Yoshise, Chairperson, Graduate School of Systems and Information Engineering: Department of Policy and Planning Sciences
- (2) Tetsuya Sakurai, Director, Center for Artificial Intelligence Research
- (3) Akira Nakagawa, Provost, Faculty of Health and Sports Sciences
- (4) Yoshiyuki Sankai, Director, Center for Cybernetics<sup>3</sup> Research
- (5) Masashi Yanagisawa, Director, International Institute for Integrative Sleep Medicine
- (6) Masao Yanaga, Provost, Faculty of Business Sciences
- (7) Fumihiko Uchida, Deputy Director General, Headquarters for International Industry-University Collaboration

Also, the team leader overseeing the 2017 promotion theme (theme for 2017: creating a social foundation for the regional future through social measurement) for the Council on Competitiveness-Nippon<sup>4</sup> is Professor Yoshiaki Osawa, from the Institute of Policy and Planning Sciences.

<sup>1</sup> [Society 5.0](#)

Society 5.0 is a term used in the “Fifth Science and Technology Basic Plan” which was reviewed at the Japanese government's Council for Science, Technology and Innovation and was implemented by the Cabinet in January 2016.

Society 5.0 is defined as a "super-smart society" where cyber space and physical space (real society) are highly integrated. Society 5.0 follows on from the hunter-gatherer society, agricultural society, industrial society, and information society. Although it is focused on mankind, Society 5.0 refers to a new society where science and technology innovation takes the lead, with the aim of balancing economic development and resolving social issues.

<sup>2</sup> [Fifth Science and Technology Basic Plan](#)

The "Science and Technology Basic Plan" is a five-year comprehensive plan for the promotion of science and technology, which the Japanese government formulates based on the Science and Technology Basic Law, which looks into the next decade. The Fifth Basic Plan (FY2017–FY2021) is the first plan for the Cabinet Office to establish a Council for Science, Technology and Innovation (CSTI), and strongly promotes "science and technology innovation policy."

The Science and Technology Basic Plan is positioned as a blueprint for a wide range of concerned parties such as the government, academia, industry, and citizens to carry out together, and aims to guide Japan to be "the country most suitable for innovation."

<sup>3</sup> Cybernetics

An interdisciplinary academic field which aims to create technologies, industries, and societies that help to support, and expand on human body functions.

It includes various academic fields such as the development and spread of medical and nursing care robots, engineering, medical science, information science, and social science etc.

<sup>4</sup>Council on Competitiveness-Nippon (COCN)

In order to enhance the industrial competitiveness which is the basis of the sustainable development of the country, various policies such as science and technology policy, industrial policy and the roles of the public and private sectors are compiled as policy recommendations by joint study under industry, academia and government cooperation, and the related organizations. A group of 38 interested companies from the industrial world are working to encourage and realize the project. One of the themes promoted for FY2018 is, “creating a social foundation for the regional future through social measurement”.

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