



Promoting industry-academia collaboration at the organizational level

Open Innovation Institute

Having been selected by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) for its program to support creation of a framework conducive to open innovation, TMDU established the Open Innovation Institute on December 1, 2018. TMDU has traditionally viewed industry-academia collaboration as part of its mission and several large-scale projects are already underway. The institute is developing a system for fostering innovation through a continuous stream of such projects. TMDU President Yasuyuki Yoshizawa, Open Innovation Institute Director Mamoru Watanabe and Open Innovation Institute Acting Directors Akinori Kimura and Kaori Iida discussed their plans and expectations.

Roundtable Discussion:

Prospects for Open Innovation Institute



Kaori Iida
Acting Director,
Open Innovation Institute
Professor, Director of Research
Center for Industry Alliances

Mamoru Watanabe
Director,
Open Innovation Institute
Executive Director / Executive
Vice President of Innovative
Research and Collaboration

Yasuyuki Yoshizawa
President, TMDU

Akinori Kimura
Acting Director,
Open Innovation Institute
Executive Senior Vice President
of Research, Accreditation and
Evaluation



New base for collaboration capitalizing on track record of industry-academia collaboration

Yoshizawa: The open innovation that we envision is not just about collaboration in the short term in order to create a new product. It also encompasses a more fundamental and new approach, including the creation of new academic areas of research. What we anticipate is a virtuous cycle that allows us to break down the barriers between academia and companies to engage together in

basic research; establish joint projects to commercialize once we have reached a certain stage; and, finally, re-invest some of the commercial profits back into basic research. The organization designed to realize these goals is the Open Innovation Institute. I believe this initiative will accelerate the pace of cooperation between academia and industry while also transforming how researchers understand their role in society.

Watanabe: I would like to comment on MEXT's open innovation program

for which TMDU was selected. The program was conceived to help achieve the Japanese government's goal of tripling the funds invested by industry in academic and other research by 2025—in the process boosting this figure above the OECD average—as part of the National Revitalization Strategy 2016. It recognizes the need to set up a system for promoting co-creation that involves full-scale collaboration between industry, academia and the public sector, based on open innovation within and across borders. Spe-





cifically, the program requires universities to recruit people from the private sector who have the requisite management and R&D experience to help build the system. Nineteen universities across Japan applied to be part of the program, of which eight were selected. The fact that TMDU was chosen to take part in the program as a specialist tertiary institution is a positive reflection on the reputation we have gained for stimulating innovation in medical fields.

Yoshizawa: Since my appointment as TMDU president, we have been working to develop a broad framework for industry-academia collaboration, not at the level of individuals, but at the organizational and systemic level. This initiative aims to accelerate the process.

Watanabe: One of the reasons why TMDU was selected for the MEXT program was our excellent track record in realizing large-scale collaboration with companies such as Sony, Hitachi and Yamaha.

Matching IP seeds with industry needs to create new projects

Watanabe: One of the aims of the Open Innovation Institute is to unify all

the intellectual property of TMDU so we can make use of it based on thorough analysis. Making this happen will be the Creative Management Team, a core unit of the institute.

Iida: We need experts from industry with experience in project management and corporate development in order to promote large-scale industry-academia collaboration at the organizational level. We have recruited experienced people from diverse industries to work as the Institute's Creative Manager and its Creative Associates—talented professionals who have executive-level experience at a pharmaceutical company and who have experience in corporate planning at a major electronics manufacturer. Such expertise, rare at TMDU in the past, will be indispensable to achieving university goals in the future.

The primary task of such experts is to identify IP seeds at TMDU, create wide-ranging opportunities collaboration research opportunities with industry, and help the university find ways to scale up projects into comprehensive research agendas that contribute to industry and society beyond the university.

Kimura: I am mainly responsible for managing the research side of identifying IP seeds. TMDU is blessed with many excellent researchers who generate a lot of great ideas. The issue, however, is that individual researchers often do not have the resources to act on those ideas.

The Institute is interviewing TMDU researchers in every field so that we can ensure that all promising research is incorporated into the framework of industry-academia collaboration. Having already interviewed about half of our researchers, we know that many of them are engaged in research of exceptional importance.

Yoshizawa: Universities are in a position to provide essential support to conventional joint research projects by individual researchers and private companies to ensure medically and socially comprehensive outcomes. For example, through closer collaboration at the organization level the Institute can help individual researchers speed up the pace of research; further, it can help private companies incorporate a more comprehensive medical ethos and broader social aims into their business

strategies.

Iida: Companies are eager to gain access to the frontlines of medicine at our university. Under our system of collaboration based on open innovation, we are granting companies access to those frontlines, including medicine and surgery, which will uncover new cutting-edge medical problems and create new themes for joint research that focus on medical needs and related issues.

Kimura: My view is that we need to manage research from the early stages where patents and other types of IP are being created. Managing the research process can yield greater results.

TMDU's remuneration system for researchers determines salary and bonuses based on the previous year's performance. Yet it is difficult to create significant results after only one year of IP-generating research. That is why we plan to start evaluating research not only based on the results, but also by assessing the research process over several years.

Another aim is to upgrade conditions for research from various perspectives, such as through the allocation of specialized research facilities based on the

nature of the research and the equipment required.

Expected to expand into non-medical fields

Watanabe: As part of the driving force in the open innovation of TMDU, we have specifically designated five areas of medicine, regenerative medicine, genomic medicine, medical equipment, and non-medicine. We think the area of non-medicine is one with significant potential. We are looking forward to building relationships with small and medium-size companies interested in entering the medical field.

Iida: Until now, the main reason for university-industry collaboration was to sponsor research conference presentations and papers. Going forward, the Institute's Creative Manager will facilitate marketing of TMDU's research and IP assets on the basis of future projects.

Kimura: Awareness among researchers is also likely to change as a result. Research that is driven by short-term profits seldom works well. Research is more likely to be of ultimate benefit to society if the aim is to create something useful, even if it is unclear what the

project might produce within a short span.

Iida: The Open Innovation Institute will have all the information on industry-academia collaboration. We want companies to make full use of the wide variety of research, skill, knowledge, experience and network that TMDU has to offer. We intend to create a framework so that we can collaborate with companies on an "all TMDU" basis. To move toward this goal, the Open Innovation Institute also facilitates interdisciplinary collaboration among researchers throughout TMDU.

Watanabe: The strength of TMDU is that industry-academia collaboration can be directly linked to the university's management. Indeed, the Open Innovation Institute reports directly to the President. So we are in an excellent position to offer support that propels outstanding research to an even higher level of excellence.

Yoshizawa: Going forward, I hope to see industry-academia collaboration lead to startups supported by the Open Innovation Institute. The idea is to systematize this process. Thank you for all that you are doing to make this happen.