



筑波大学
University of Tsukuba

TEAM

**INDUSTRY-UNIVERSITY
COLLABORATION**
at the UNIVERSITY of TSUKUBA

In view of the importance of international university-industry-government collaborative activities, the University of Tsukuba reorganized and improved its existing Headquarters for International Industry-University Collaboration and relaunched it as a new body in April 2014. The Headquarters for International Industry-University Collaboration aims to realize the following goals.

1. Based on the recognition that university-industry-government collaboration activities contribute to society through the university's research results, our focus is on the promotion of actual technology transfer that will lead to socioeconomic transformation (innovation creation).
2. With regard to intellectual property management, we will enhance evaluation and oversight, and focus on promoting the international development of intellectual property.
3. In terms of technology transfer to existing companies, the organization of Joint Research and other activities is a powerful instrument, and we will promote the expansion of these activities with business.
4. When there are no suitable existing companies to transfer technology, University Start-ups can be a powerful tool for technology transfer, so we will promote support for the development of University Start-ups.
5. As a university located in Tsukuba Science City, we will promote further collaboration with governmental research institutes, corporate research institutes, and universities, and accelerate collaboration with Ibaraki Prefecture, Tsukuba City, and other local communities.
6. We will strive to accumulate know-how on intellectual property, technology transfer, Start-up support, etc. within the university, develop human resources, and promote the transfer of know-how to other universities and partners.

Going forward, Headquarters for International Industry-University collaboration will continue to enhance our structure and to further increase our activities in industry-government-university collaboration so that the University of Tsukuba can contribute to the development of industry and society through the results of research.

KANAHO, Yasunori

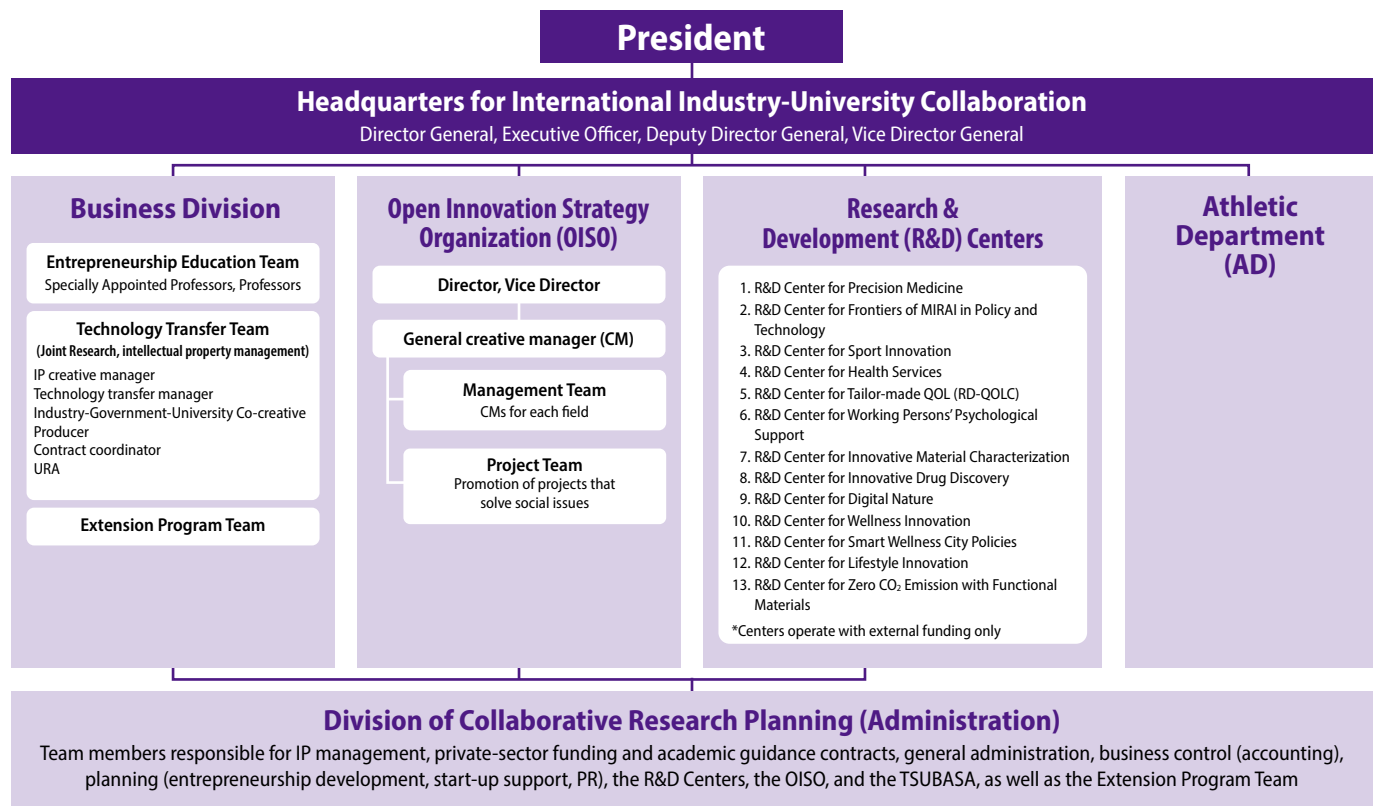
Director General of Headquarters for International Industry-University Collaboration and Vice President and Executive Director for Collaborative Research, University of Tsukuba

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Organizational structure

Structure of the Headquarters for International Industry-University Collaboration



Initiatives of the Headquarters for International Industry-University Collaboration

- Special Joint Research projects, Joint Research, Commissioned Research, Academic guidance
- Intellectual property management
- Support for social implementation and entrepreneurship
 - Social implementation support programs
 - Entrepreneurship education
 - University of Tsukuba Start-Ups Business Acceleration Support Action
 - Open Innovation Strategy Organization
- University Start-ups
- R&D Center
- Domestic collaboration (Industry-University Collaboration platform)
- International Expansion
- Extension Program



Special Joint Research projects, Joint Research, Sponsored Research, Academic Consulting

Special Joint Research projects

These consist of joint research projects conducted “under one roof” by industry and the University of Tsukuba, with the aim of implementing the results of research into wider society. The main feature of this program is that corporate representative are invited to the University of Tsukuba as professors, associate professors, and so on. The invited faculty members can participate in human resource development by agreement with their companies. The term of the program is between two and five years and is extendable.

Expenses to be borne by the companies, etc.



Direct costs: Expenses that are directly required for the implementation of the research.

Indirect costs: Equivalent to 20% of the direct costs.

*Amount equivalent to 30% from October 2022

Research materials: Costs required for a researcher from a company, etc., to conduct research at the University while still employed by their company

Joint Research

These are joint research projects conducted in collaboration between a university and a company, etc., on an equal footing. The University receives research funding and researchers from the company, etc., and the University and the company, etc., share the responsibility for the research.

Expenses to be borne by the companies, etc.



Direct costs: Expenses that are directly required for the implementation of the research.

Indirect costs: Equivalent to 20% of the direct costs.

*Amount equivalent to 30% from October 2022

Research materials: Costs required for a researcher from a company, etc., to conduct research at the University while still employed by their company

Research

This is research that is commissioned by a company, etc., for which the university receives research funds or equipment, and conducts research on a specific subject as part of the university's duties. The results of the research will be reported to the company, etc., that commissioned the research.

Expenses to be borne by the companies, etc.



Direct costs: Expenses that are directly required for the implementation of the research.

Indirect costs: Equivalent to 30% of the direct costs

Academic

This is the provision of instruction and advice etc. by faculty members regarding particular issues commissioned by corporations and conducted as university work in accordance with their specialist knowledge in education, research and technology.

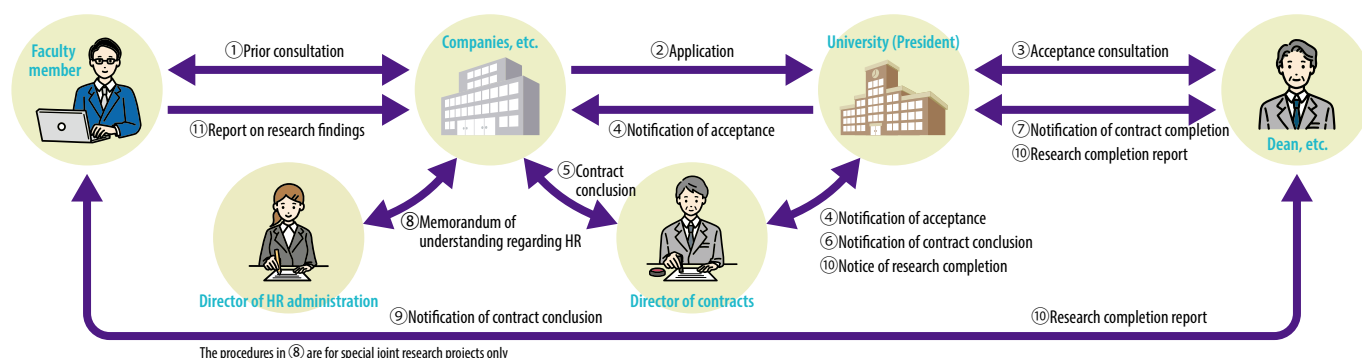
Expenses to be borne by the companies, etc.



Direct costs: Expenses directly required to implement the guidance

Indirect costs: Equivalent to 10% of the direct costs

Implementation flow

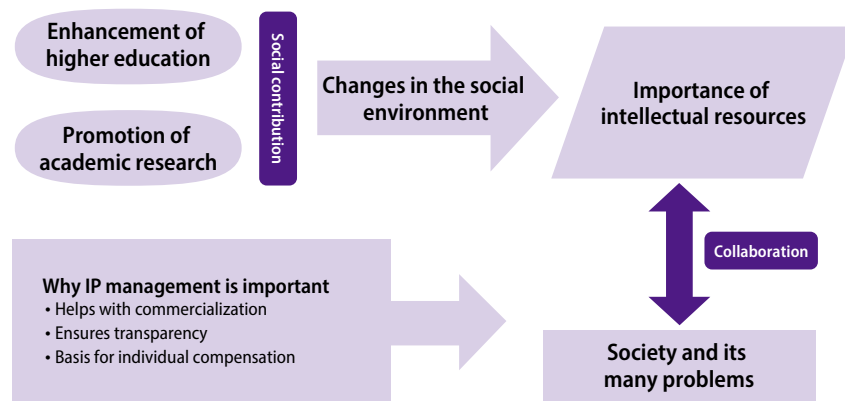


Intellectual property management

Intellectual property policy

University of Tsukuba have traditionally contributed to society through the implementation of higher education and academic research, but as the problems facing society and humanity have become increasingly serious in recent years, expectations for the intellectual property rights of the university have increased. In order to meet this social need, it is important for the university to give consideration to commercialization through the exercise of intellectual property rights in addition to publishing their research findings in academic papers as they have done in the past. At the same time, establishing ways to manage the university's intellectual property rights will make the relationship between the university and companies more transparent and understandable to those on the outside and clarify the basis for individual compensation.

The University's View of Social Contributions and the Role of Intellectual Property



Licensing policy

The University's basic approach to the licensing of intellectual property (licensing policy) is given below.

(1) Emphasizes the realization of the social implementation of technology through licensing

The acquisition of remuneration is a side effect, and the true purpose of licensing is the social implementation of the university's research results.

(2) Gives consideration to the development of university start-ups and local businesses

In addition to encouraging university-originated entrepreneurship, the University places importance on cooperation with local companies, and will give consideration to various licensing conditions from the primary perspective of fostering university start-ups and local companies.

(3) Pays attention to the social reputation of the licensee

It is important that the social implementation of research results is done in a socially appropriate way. Licensing should be conducted in a manner in which the results ensure the maintenance of public order, morality, and legal compliance.

(4) Respects the independence of education and research

Education and research are the core business of the university, and the licensing of intellectual property rights should be in accordance with this premise.

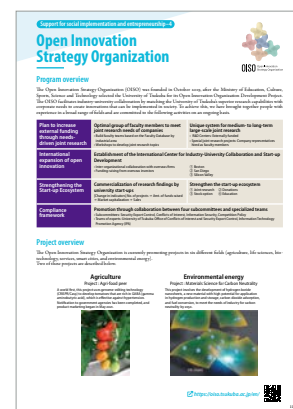
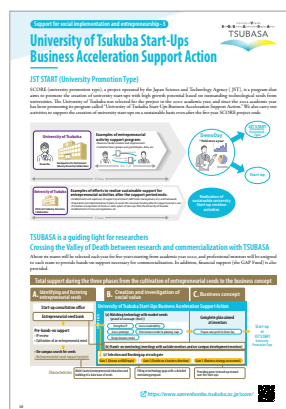
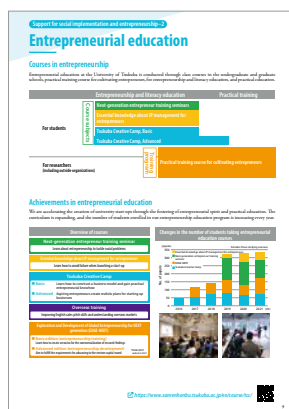
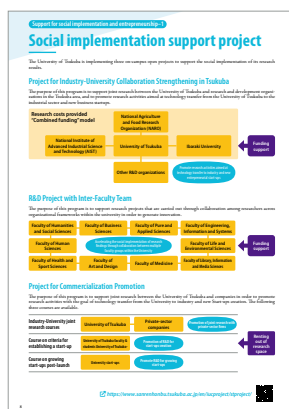
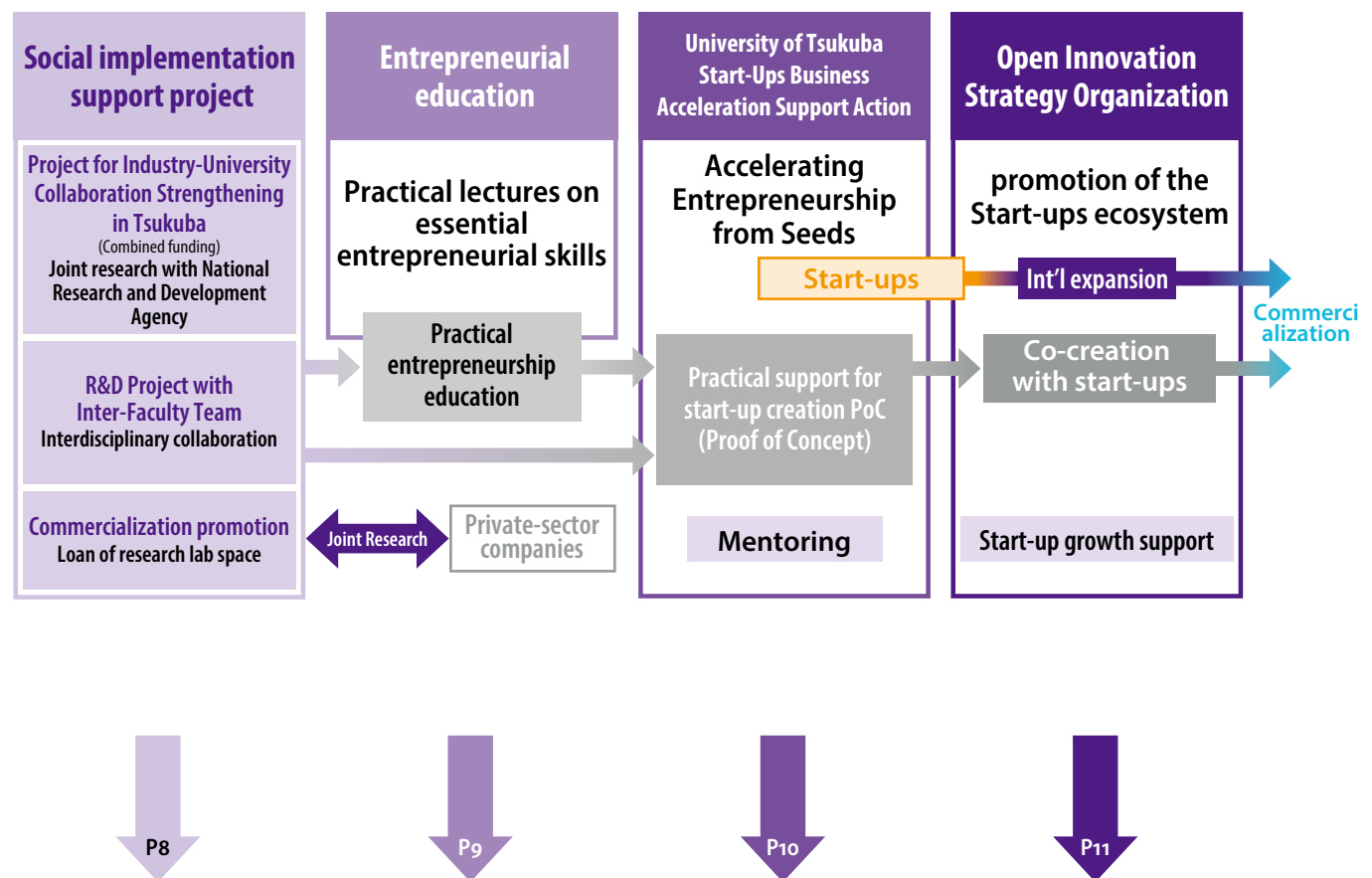
(5) The intellectual creation cycle

We seek to maintain balance in the cycle of creation (creating inventions), protection (filing patents and obtaining rights), and utilization (licensing).

Overview of support for social implementation and entrepreneurship

Integrated support for social implementation and entrepreneurship

The University of Tsukuba supports the social implementation of research results and entrepreneurship through its “Social Implementation Support Project,” on-campus open competition program, “Entrepreneurial Education” for internal and external researchers, the University of Tsukuba Start-Ups Business Acceleration Support Action (JST START (University Promotion Type)), an internal program to promote the creation of university start-ups, and the “Open Innovation Strategy Organization,” a management system designed to promote large-scale joint research by industry and academia.

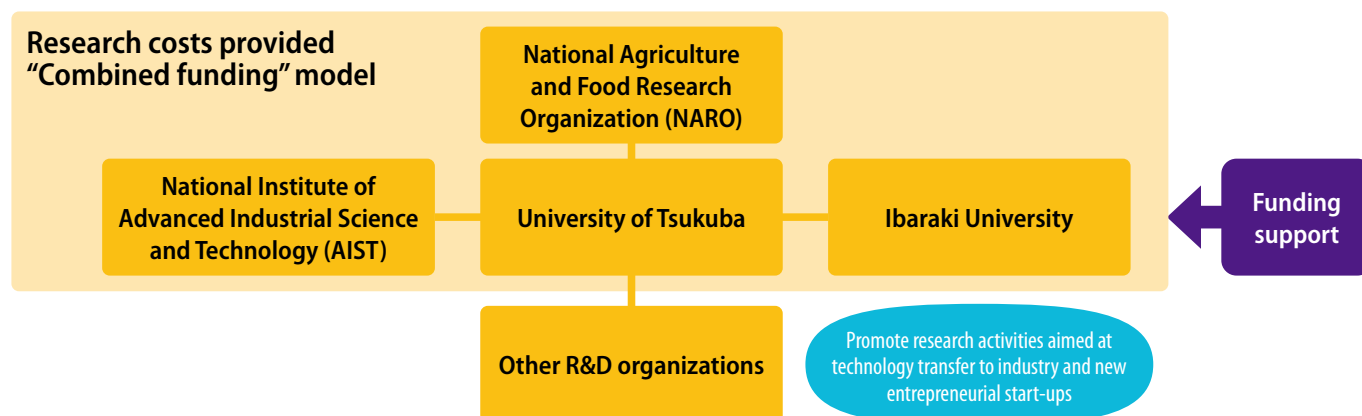


Social implementation support project

The University of Tsukuba is implementing three on-campus open projects to support the social implementation of its research results.

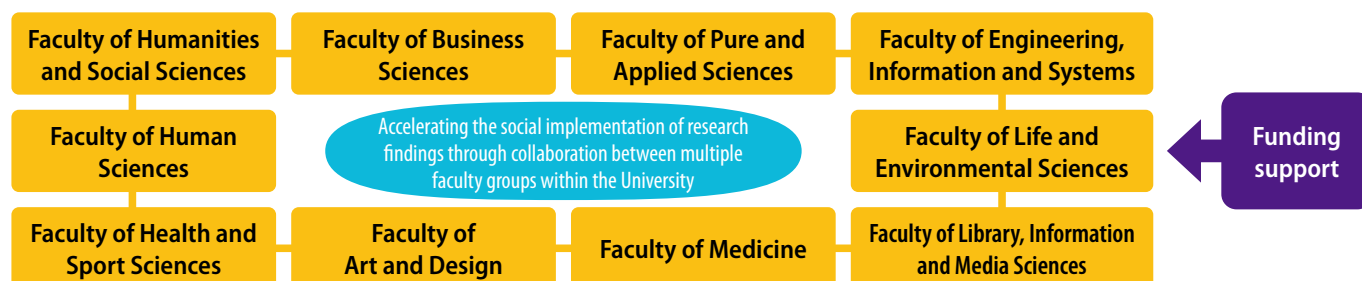
Project for Industry-University Collaboration Strengthening in Tsukuba

The purpose of this program is to support joint research between the University of Tsukuba and research and development organizations in the Tsukuba area, and to promote research activities aimed at technology transfer from the University of Tsukuba to the industrial sector and new business startups.



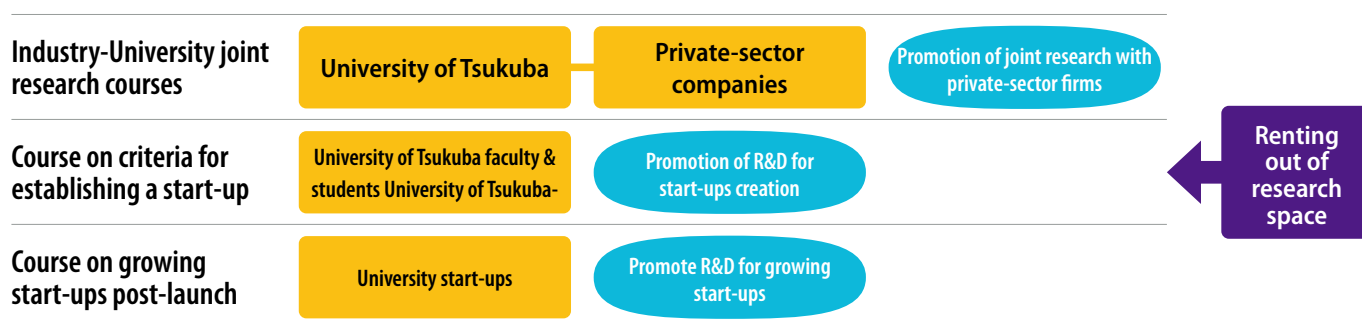
R&D Project with Inter-Faculty Team

The purpose of this program is to support research projects that are carried out through collaboration among researchers across organizational frameworks within the university in order to generate innovation.



Project for Commercialization Promotion

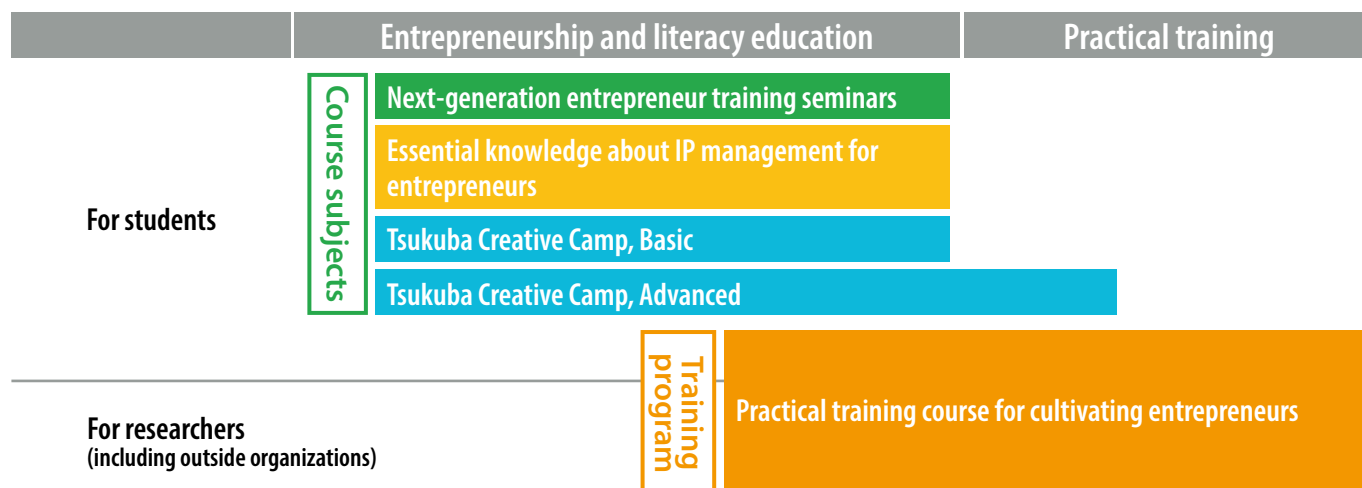
The purpose of this program is to support joint research between the University of Tsukuba and companies in order to promote research activities with the goal of technology transfer from the University to industry and new Start-ups creation. The following three courses are available.



Entrepreneurial education

Courses in entrepreneurship

Entrepreneurial education at the University of Tsukuba is conducted through class courses in the undergraduate and graduate schools, practical training course for cultivating entrepreneurs, for entrepreneurship and literacy education, and practical education.

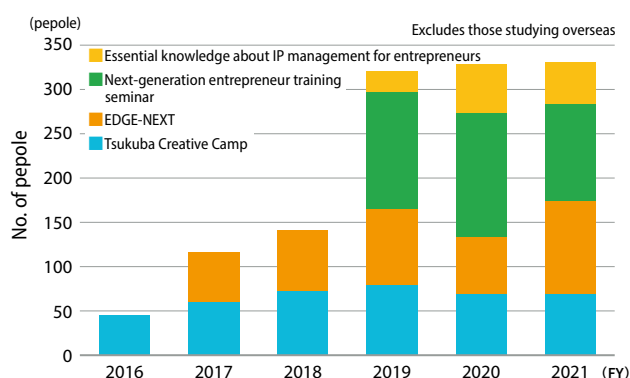


Achievements in entrepreneurial education

We are accelerating the creation of university start-ups through the fostering of entrepreneurial spirit and practical education. The curriculum is expanding, and the number of students enrolled in our entrepreneurship education program is increasing every year.



Changes in the number of students taking entrepreneurial education courses

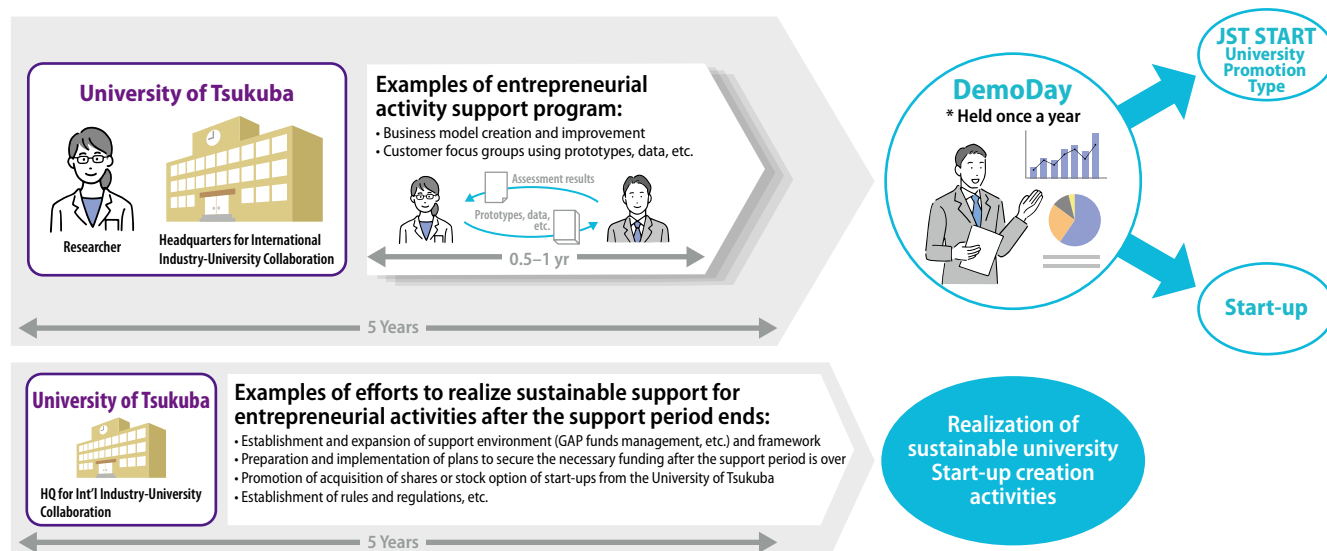


University of Tsukuba Start-Ups Business Acceleration Support Action



JST START (University Promotion Type)

SCORE (university promotion type), a project operated by the Japan Science and Technology Agency (JST), is a program that aims to promote the creation of university start-ups with high growth potential based on outstanding technological seeds from universities. The University of Tsukuba was selected for the project in the 2020 academic year, and since the 2022 academic year has been promoting its program called "University of Tsukuba Start-Ups Business Acceleration Support Action." We also carry out activities to support the creation of university start-ups on a sustainable basis even after the five-year SCORE project ends.

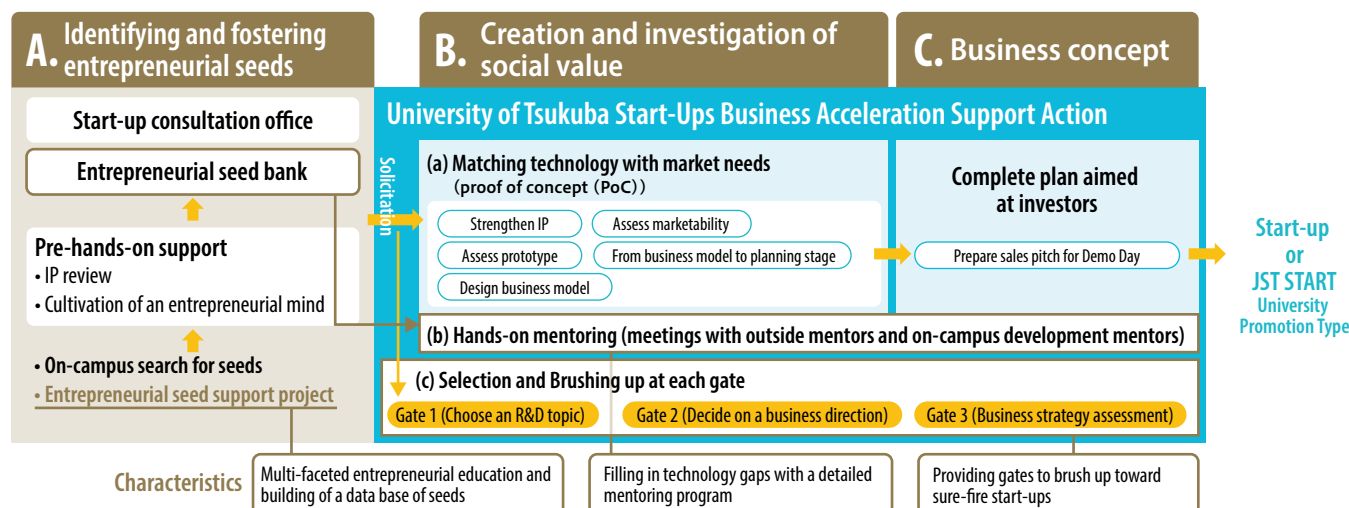


TSUBASA is a guiding light for researchers

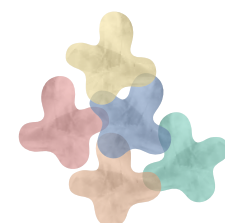
Crossing the Valley of Death between research and commercialization with TSUBASA

About six teams will be selected each year for five years starting from academic year 2020, and professional mentors will be assigned to each team to provide hands-on support necessary for commercialization. In addition, financial support (the GAP Fund) is also provided.

Total support during the three phases from the cultivation of entrepreneurial seeds to the business concept



Open Innovation Strategy Organization



OISO Open Innovation Strategy Organization

Program overview

The Open Innovation Strategy Organization (OISO) was founded in October 2019, after the Ministry of Education, Culture, Sports, Science and Technology selected the University of Tsukuba for its Open Innovation Organization Development Project. The OISO facilitates industry-university collaboration by matching the University of Tsukuba's superior research capabilities with corporate needs to create innovations that can be implemented in society. To achieve this, we have brought together people with experience in a broad range of fields and are committed to the following activities on an ongoing basis.

Plan to increase external funding through needs-driven joint research	Optimal group of faculty members to meet joint research needs of companies <ul style="list-style-type: none"> • Build faculty teams based on the Faculty Database by industrial area • Workshops to develop joint research topics 	Unique system for medium- to long-term large-scale joint research <ul style="list-style-type: none"> • R&D Centers: Externally funded • Special joint research projects: Company representatives hired as faculty members
International expansion of open innovation	Establishment of the International Center for Industry-University Collaboration and Start-up Development <ul style="list-style-type: none"> • Inter-organizational collaboration with overseas firms • Funding raising from overseas investors 	① Boston ② San Diego ③ Silicon Valley
Strengthening the Start-up Ecosystem	Commercialization of research findings by university start-ups [Change in indicators] No. of projects ⇒ Amt. of funds raised ⇒ Market capitalization ⇒ Sales	Strengthen the start-up ecosystem <ul style="list-style-type: none"> ① Joint research ② Donations ③ Stock option ④ Education
Compliance framework	Promotion through collaboration between four subcommittees and specialized teams <ul style="list-style-type: none"> • Subcommittees: Security Export Control, Conflicts of Interest, Information Security, Competition Policy • Teams of experts: University of Tsukuba Office of Conflicts of Interest and Security Export Control, Information Technology Promotion Agency (IPA) 	

Project overview

The Open Innovation Strategy Organization is currently promoting projects in six different fields (agriculture, life sciences, biotechnology, services, smart cities, and environmental energy).

Two of these projects are described below.

Agriculture

Project : Agri-food peer

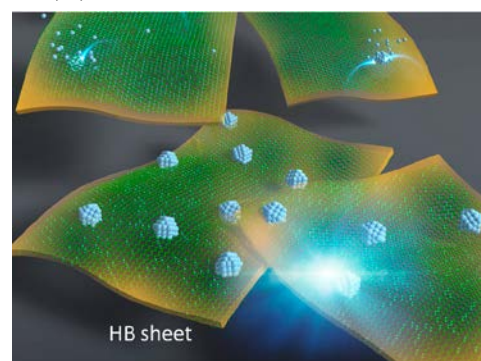
A world first, this project uses genome-editing technology (CRISPR/Cas9) to develop tomatoes that are rich in GABA (gamma aminobutyric acid), which is effective against hypertension. Notification to government agencies has been completed, and product marketing began in May 2021.



Environmental energy

Project : Materials Science for Carbon Neutrality

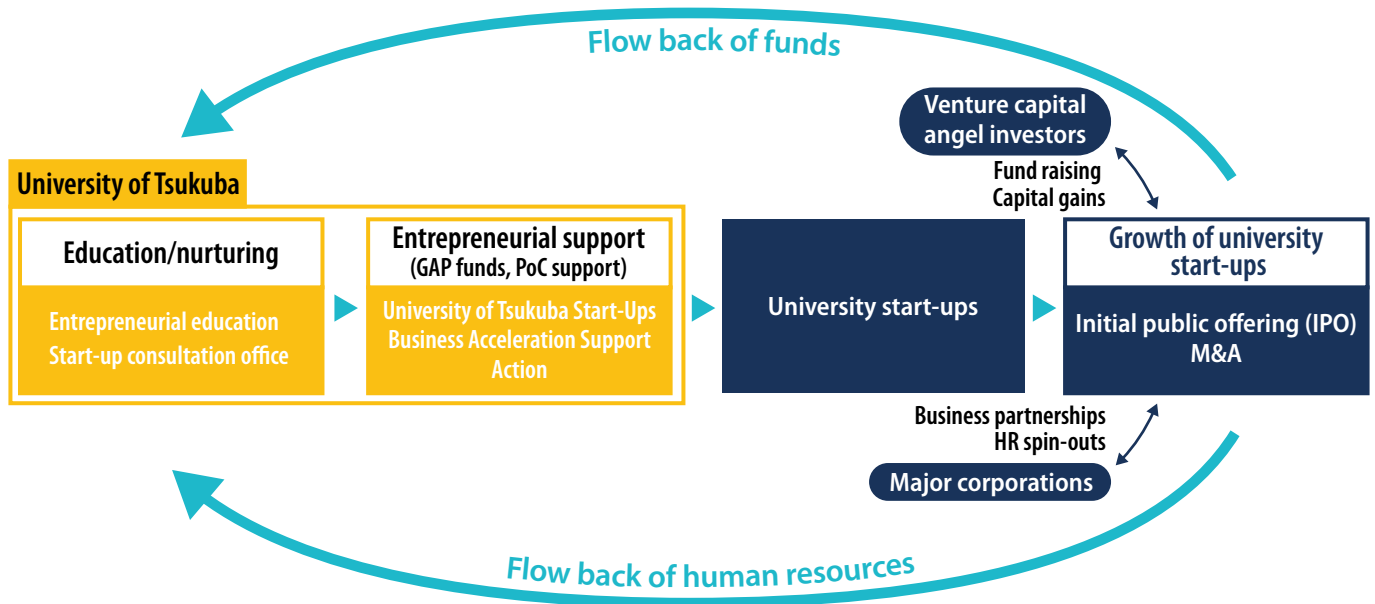
This project involves the development of hydrogen boride nanosheets, a new material with high potential for application in hydrogen production and storage, carbon dioxide adsorption, and fuel conversion, to meet the needs of industry for carbon neutrality by 2050.



University Start-ups

The University of Tsukuba's Start-up ecosystem

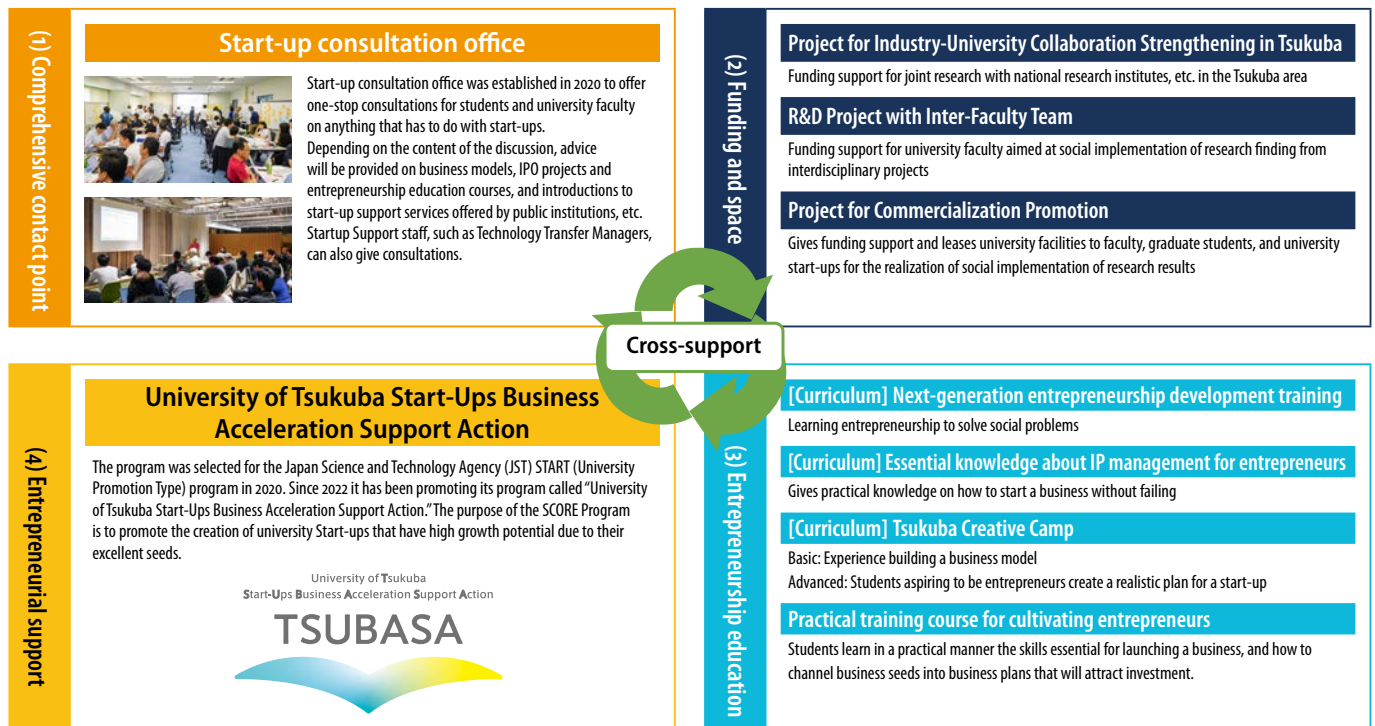
In order to continuously and autonomously realize the social implementation of research results and the supply of entrepreneurial human resources to society, we are working on the following areas, from entrepreneur education to entrepreneurship itself.



Support for the creation of start-ups

The University of Tsukuba's support for the creation of start-ups consists of:

(1) comprehensive coordination, (2) funding and space allocation, (3) entrepreneurial education, and (4) University of Tsukuba Start-Ups Business Acceleration Support Action.



Initiatives to create start-ups in the Tsukuba region

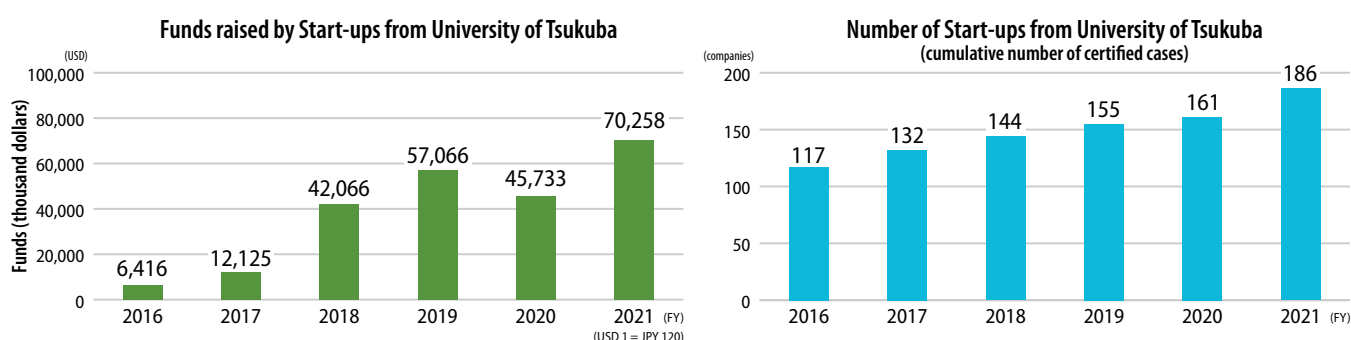
Tsukuba Science City is a treasure trove of large-scale tech seeds and is home to about 20,000 researchers.

As a hub for education and research, the University of Tsukuba promotes the discovery of entrepreneurial seeds and the creation of Start-ups in the Tsukuba region by providing financial support and entrepreneurial education.



Data on Start-ups from the University of Tsukuba

The University of Tsukuba boasts one of the largest numbers of university start-ups among all the universities in Japan, and the amount of both funds raised by start-ups from University of Tsukuba and joint research with them has been steadily increasing in recent years.



Number of university start-ups (ranking)

	2016	2017	2018	2019	2020	2021
Univ. of Tokyo	227(1)	268(1)	271(1)	268(1)	323(1)	329(1)
Kyoto Univ.	103(2)	154(2)	164(2)	191(2)	222(2)	242(2)
Osaka Univ.	80(3)	102(4)	106(4)	141(3)	168(3)	180(3)
Univ. of Tsukuba	80(3)	104(3)	111(3)	114(6)	146(4)	178(4)
Tohoku Univ.	76(5)	86(6)	104(5)	121(4)	145(5)	157(6)
Kyushu Univ.	74(6)	88(5)	90(6)	117(5)	124(6)	120(8)

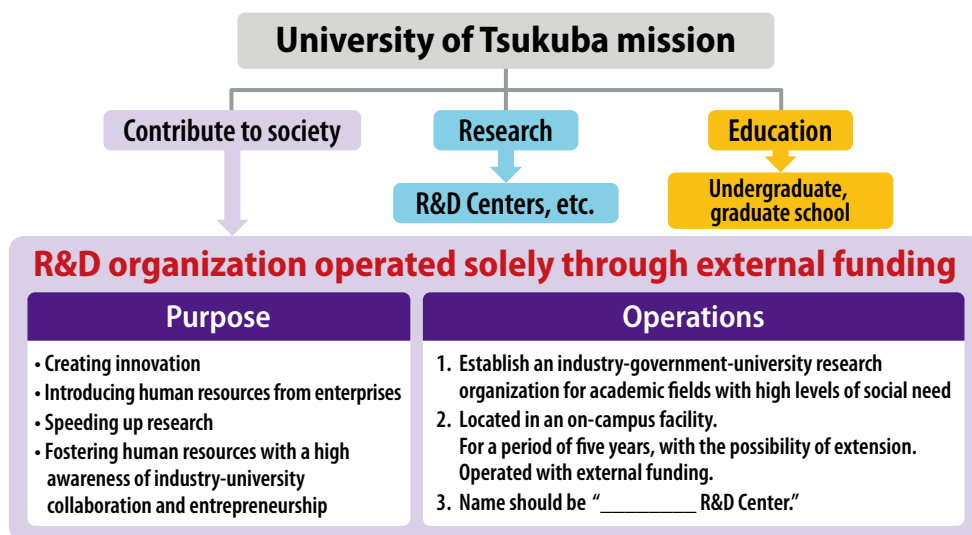
(From the report on the Ministry of Economy, Trade & Industry Field Survey on University-Sponsored Start-ups)



Research & Development (R&D) Center

What are R&D Centers?

R&D Centers are organizations that operate solely through external funding that have been established under the Headquarters for International Industry-University Collaboration since July 1, 2015. The purpose of the Centers is to create joint industry-government-university research systems in academic fields with high levels of social demand.



Further accelerating socially beneficial R&D

Thirteen R&D Centers were in operation as of April 2022.

Research at the centers covers a broad range of fields, and they are making constant social contributions through joint research and other programs with the private sector.



See the following website to view a pamphlet on the R&D Centers that describes each center's research activities.

<https://www.sanrenhonbu.tsukuba.ac.jp/2020rd/>



Domestic collaboration (Industry-University Collaboration platform)

What is the Industry-University Collaboration platform?

The Industry-University Collaboration platform provides “a place for co-creation” where companies and participating institutions can collaborate. Anyone can browse the research seeds, and inquiries about the seeds are handled free of charge, while consultations from companies and other organizations are forwarded to participating institutions by the University of Tsukuba.

We also offer infographic video clips about patent information that explain patents in an easily understandable way.

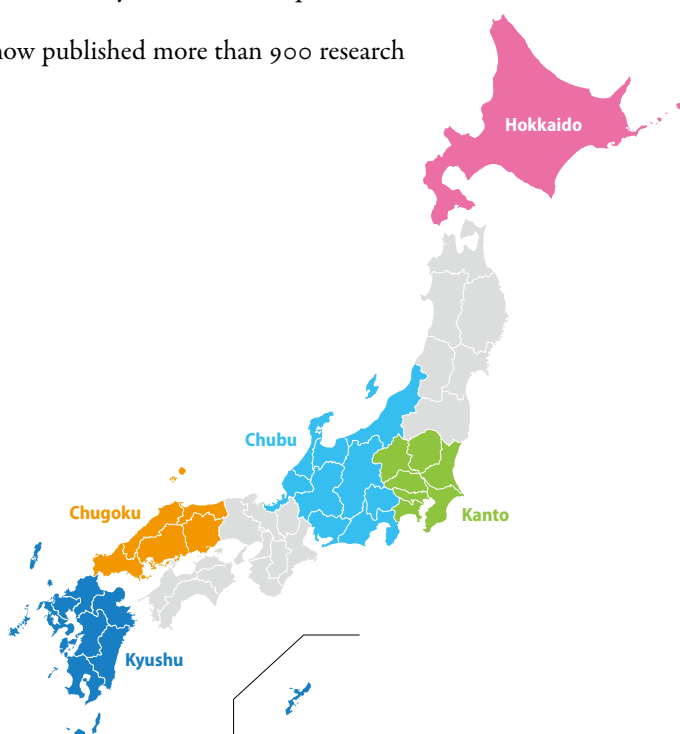


Participating organizations (17 universities, 5 national research institutions, 1 technical college)

The Industry-University Collaboration platform is operated by the University of Tsukuba and publishes the research seeds of participating organizations.

Twenty-three institutions have joined the platform, which has now published more than 900 research seeds on its website (as of March 31, 2022).

Hokkaido	Hokkaido Univ., Obihiro Univ. of Agric. and Veterinary Medicine, Muroran Inst. of Technology, Otaru Univ. of Commerce
Kanto	Univ. of Tsukuba, Tsukuba Univ. of Technology, Chiba Univ., Ibaraki Univ., National Agriculture & Food Research Organization, Gunma Univ., Chuo Univ., Japan Atomic Energy Agency, National Inst. of Technology Tokyo College, National Inst. for Quantum Science & Technology, Tokyo Metropolitan Univ., Tokyo Univ. of Agriculture & Technology, Japan Agency for Marine-Earth Science and Technology, National Institute for Environmental Studies
Chubu	Japan Advanced Inst. of Science & Technology, Nagoya Inst. of Technology
Chugoku	Hiroshima Univ.
Kyushu	Kyushu Univ., Kyushu Inst. of Technology



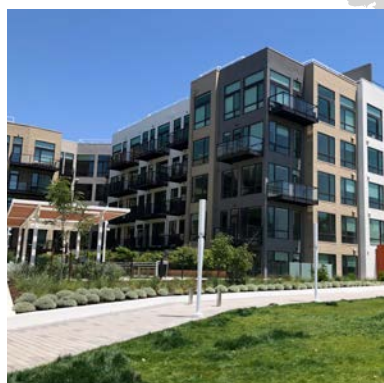
<https://sme-univ-coop.jp/>



Overseas activities

Establishing overseas locations

We have offices at the Laboratory of Intellectual Innovation (LII) in Silicon Valley, USA, and a co-working space at the Cambridge Innovation Center (CIC) in Boston, USA, where we promote international joint research and entrepreneurial development. In the future, we plan to expand international operations further by setting up bases of operation in Europe and Asia.



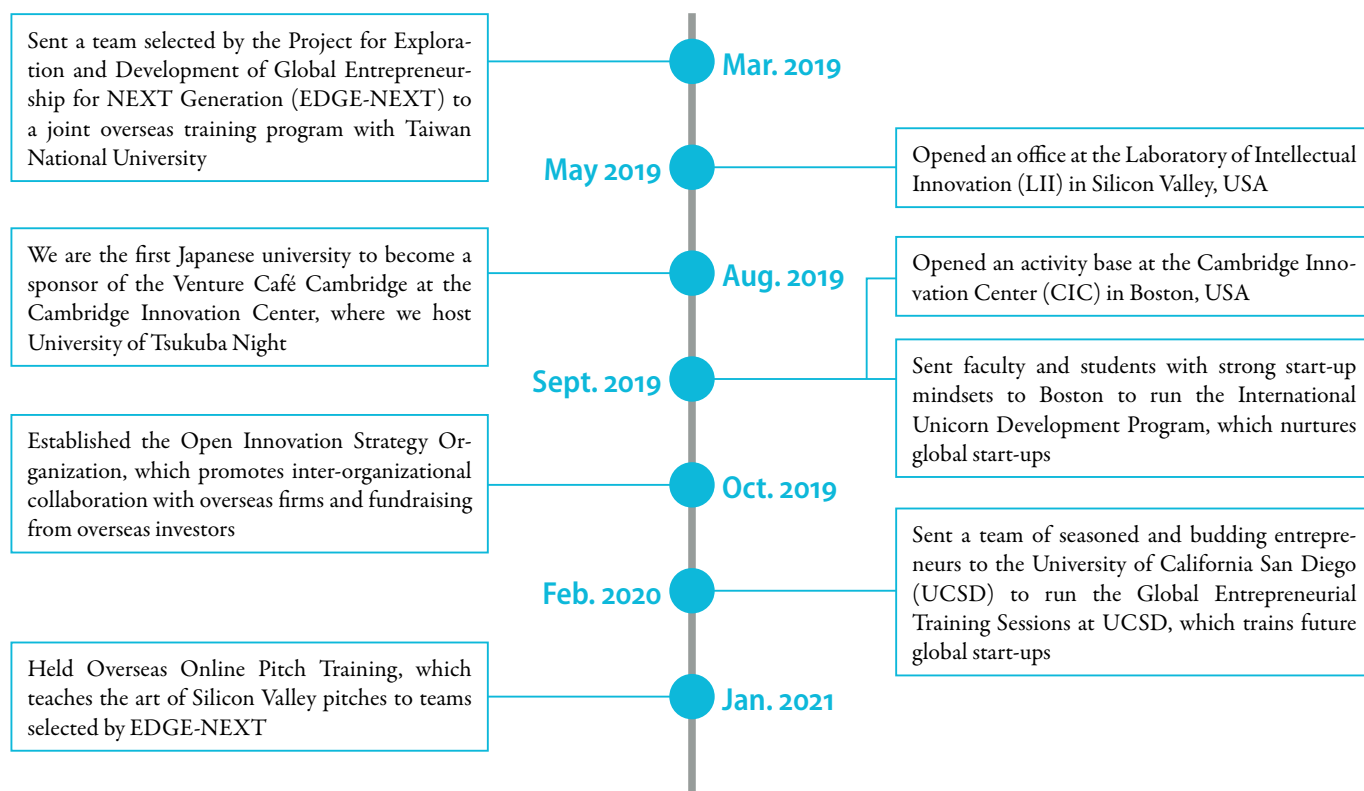
Laboratory of Intellectual Innovation (LII)



Cambridge Innovation Center (CIC)

Recent initiatives in international expansion

The Headquarters for International Industry-University Collaboration promotes the international development of industry-government-university collaborative activities and entrepreneurial development.

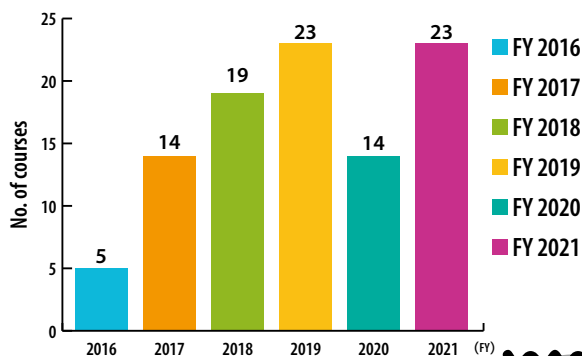


Extension program

Program overview

Since 2016, the University of Tsukuba has been offering programs to improve the development of the knowledge and skills that are needed by both working professionals and the general public by disseminating and spreading the University's academic research findings, including specialized research results for which there are high levels of social and corporate need, with the aim of contributing to the cultivation of the knowledge and skills that are needed in work and day-to-day living.

Program track record



Annual number of applicants accepted

More than **700**

Satisfaction rate

100%

Tailor-made training services

The most important point about creating measures for management issues is whether they are appropriate for your company's specific needs. Our extension program brings together the latest research knowledge from the University of Tsukuba and provides an evidence-based academic approach to the individual management issues faced by individual companies.

For companies responsible for HR development and those of you who are looking for corporate training content! Don't miss out!



We will respond to your request !

We are here to meet your corporate needs!

What is training that aims to improve corporate growth and performance?

This is what we want to make better!

We want to have training at a time that works for our company!

Please feel free to contact us!

We offer proposals for training that is geared to your company and based on University of Tsukuba research.

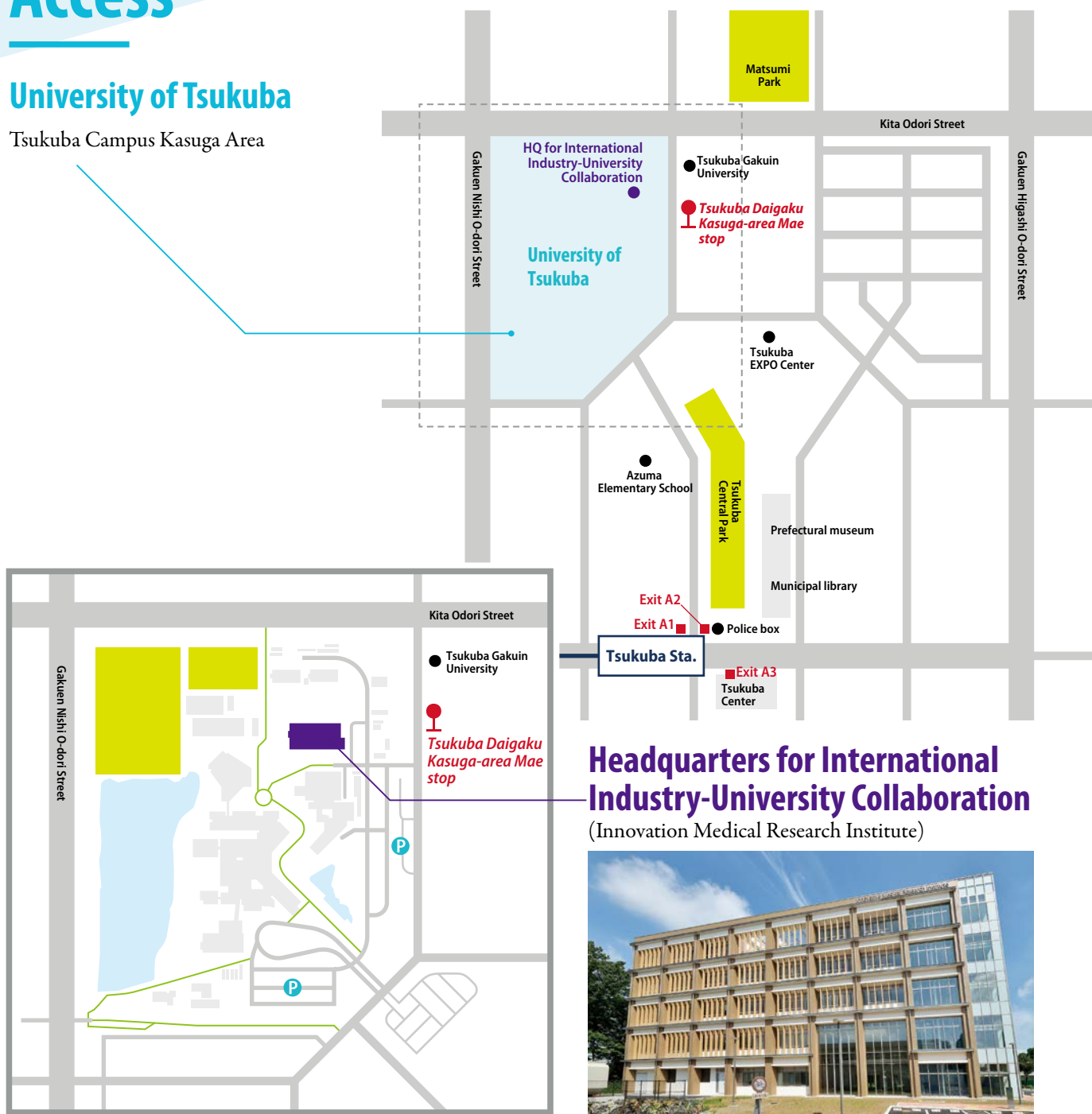
<https://extension.sec.tsukuba.ac.jp/>



Access

University of Tsukuba

Tsukuba Campus Kasuga Area



Headquarters for International Industry-University Collaboration (Innovation Medical Research Institute)



Access from Tsukuba Station (Tsukuba Express)

We are a 10-minute walk from Tsukuba Station (Exit A1 or A2). Alternatively, take a bus or cab from Tsukuba Station (Exit A3)..

Bus

At the Tsukuba Center Bus Terminal, go to boarding area 6, and take either the University of Tsukuba Hospital bus or the Tsukuba Daigaku Junkan Migi-Mawari bus, to the Tsukuba Daigaku Kasuga-area Mae stop.



A List of Websites and Social Media Channels

Websites

Headquarters for International Industry-University Collaboration

<https://www.sanrenhonbu.tsukuba.ac.jp/en/>



Industry-University Collaboration Platform

<https://sme-univ-coop.jp/>



Extension Program

<https://extension.sec.tsukuba.ac.jp/>



Open Innovation Strategy Organization (OISO)

<https://oiso.tsukuba.ac.jp/en/>



University of Tsukuba Start-Ups Business Acceleration Support Action

<https://www.sanrenhonbu.tsukuba.ac.jp/score/>



SNS

Twitter

<https://twitter.com/innovation298/>



Facebook

<https://www.facebook.com/innovation298/>



YouTube

<https://www.youtube.com/c/sanrenutsukuba/>





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