



OISO Open Innovation
Strategy Organization



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Open Innovation Strategy Organization
University of Tsukuba

Message



Director
KANAHO, Yasunori
Vice President, Executive Director

The University of Tsukuba Open Innovation Strategy Organization (OISO) established a system that enables the implementation of large-scale, company-led, needs-driven collaborative research in order to solve issues related to development research in industry. With an eye on the international expansion of industry-university collaborative research and the establishment of a startup ecosystem, OISO aims an open innovation where universities can contribute to corporate business strategies by preparing a strong compliance structure and overcoming the barriers to put research results into effects that tend to be hesitant under the existing way of thinking.



Vice Director
SARUWATARI, Yasufumi
Executive Officer

The University of Tsukuba has been leading the way in social innovation by providing a "challenge field" where people can boldly take on challenges without fear of failure, and the University has radicalized and advanced its education and research under the field, and returned the results to society. OISO promotes a value creation for the realization of open innovation based on a "challenging mindset" cultivated in the "challenge field".



Vice Director
NISHINO, Yoshitaka
Deputy Director General

Open innovation has become widespread as one of the business models in companies since being advocated by Chesbrough. The combination of "competition and cooperation" and "close and open" strategies gives us several advantages. Although universities have been considered initially open places, as co-creation activities with private sectors deepen, what we need to take a role of coordinating competition and cooperation among companies is becoming more critical. We promote open innovation that takes advantage of the transdisciplinary and international characteristics of the University of Tsukuba.

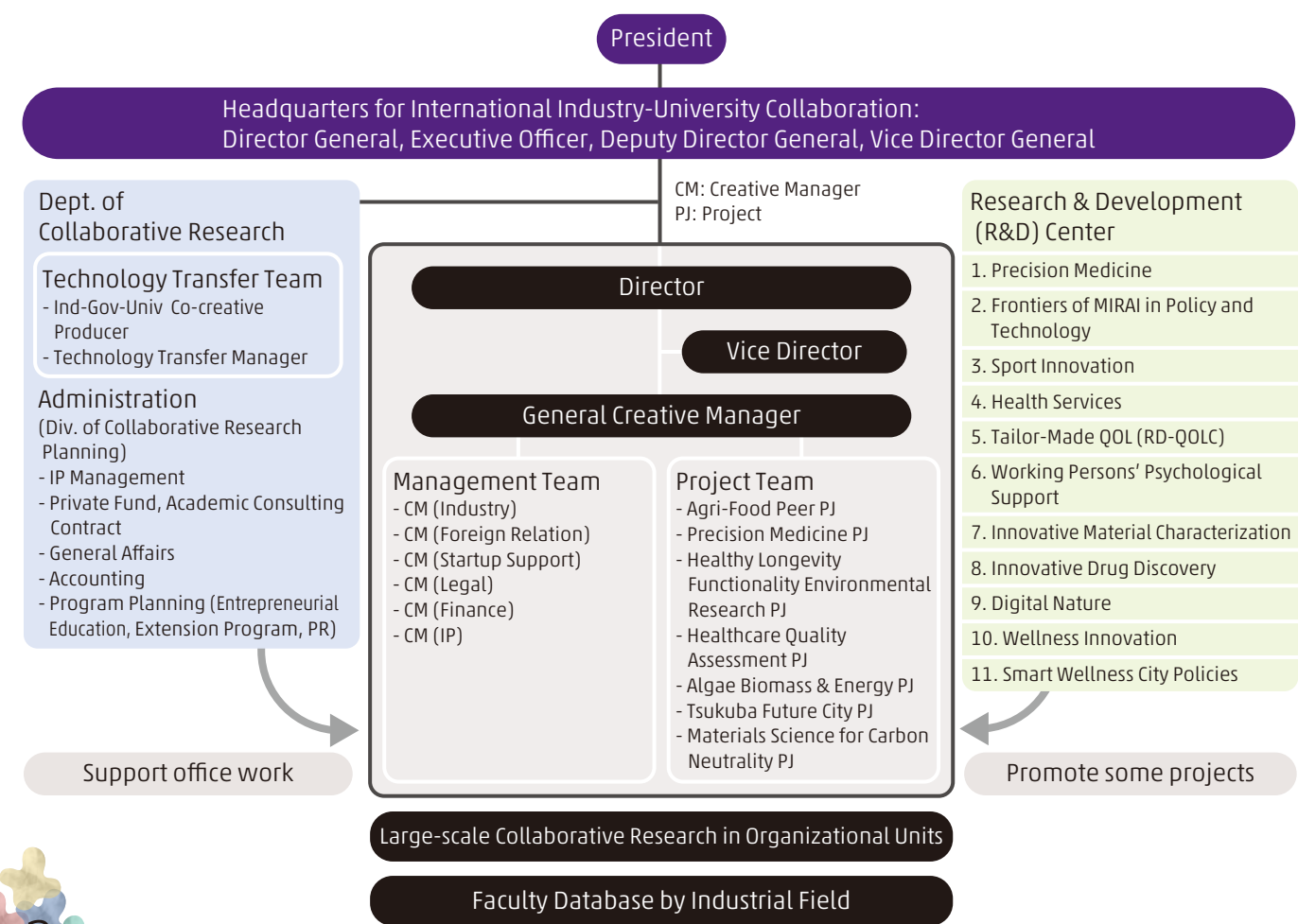


General Creative Manager
MIYAMOTO, Shinichi

With creating innovation by matching company needs with the research capability of the University of Tsukuba, OISO aims to develop industry-university collaboration and transfer it to society. OISO continuously proceeds the three following missions along with experienced Creative Managers.

1. Large-scale and industry-driven collaborative research expansion
2. World-wide collaboration of Open Innovation
3. Startup ecosystem enhancement

Organizational Chart



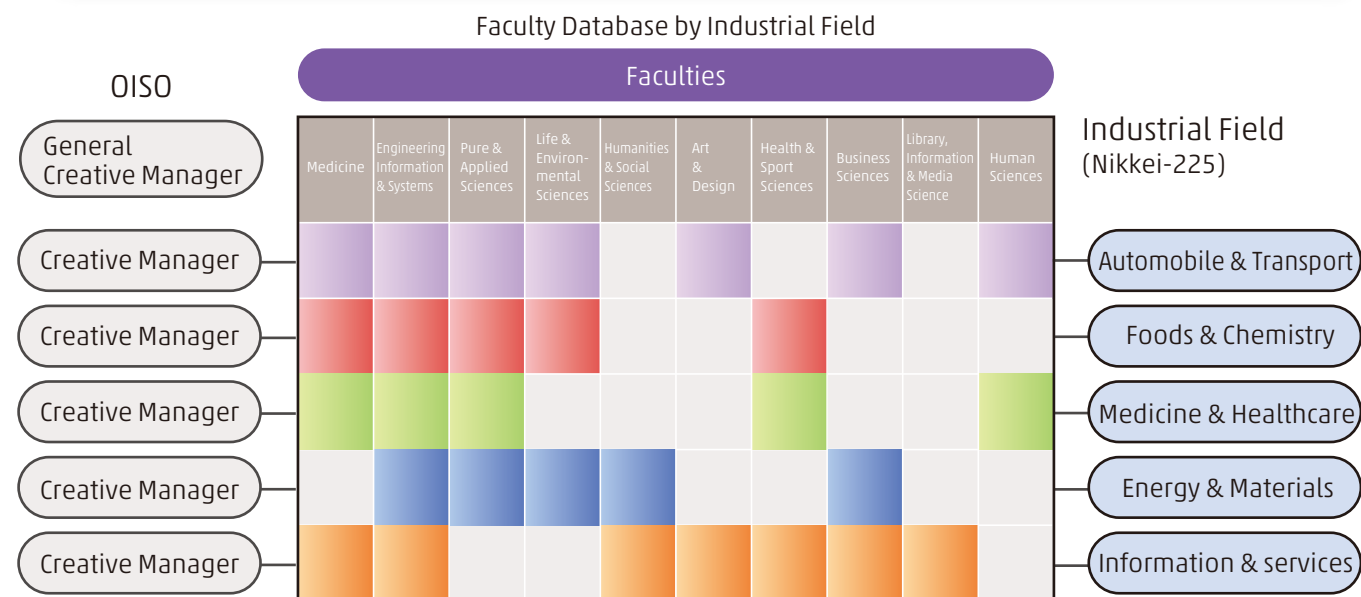
Overview

Expanding	Optimal faculty team for companies' collaborative research needs <ul style="list-style-type: none"> ▪ Build faculty team based on the Faculty Database by Industrial Field ▪ Set up workshops to develop themes of collaborative research Original system for mid-to-long term large-scale collaborative research <ul style="list-style-type: none"> ▪ R&D Center: Operated by external funds ▪ Special Collaborative Research Project: Employ company representatives as faculty members
World-wide	Hub for International Industry-University collaboration and startup support <ul style="list-style-type: none"> ▪ Collaboration with overseas companies ▪ Fundraising from overseas investors ▪ 1. Boston 2. San Diego 3. Silicon Valley
Enhancement	Commercialization of research results by university startups <ul style="list-style-type: none"> ▪ Indicator: numbers of cases -> fund-raise amount -> market capitalization -> sales Startup ecosystem enhancement <ul style="list-style-type: none"> ▪ 1. Collaborative research, 2. Donation, 3. Stock Option, 4. Education
Risk Management & Compliance	Cooperation with four subcommittees and professional teams <ul style="list-style-type: none"> ▪ Subcommittee: Conflict of Interest, Export Control, Confidential Information, Competition Policy ▪ Professional Team: Office of Conflict of Interest and Security Export Control at University of Tsukuba, IPA (Information Promotion Agency)
Major Initiatives <ul style="list-style-type: none"> - Share social issues by industry-driven, build transdisciplinary teams with industries and the university under the One Roof concept, and promote collaborative research. - Utilize overseas hubs to activate license activities and fundraising. - Support university startup launch and enhance collaborative research to achieve a virtuous cycle of funds through the affective use of stock option system. 	



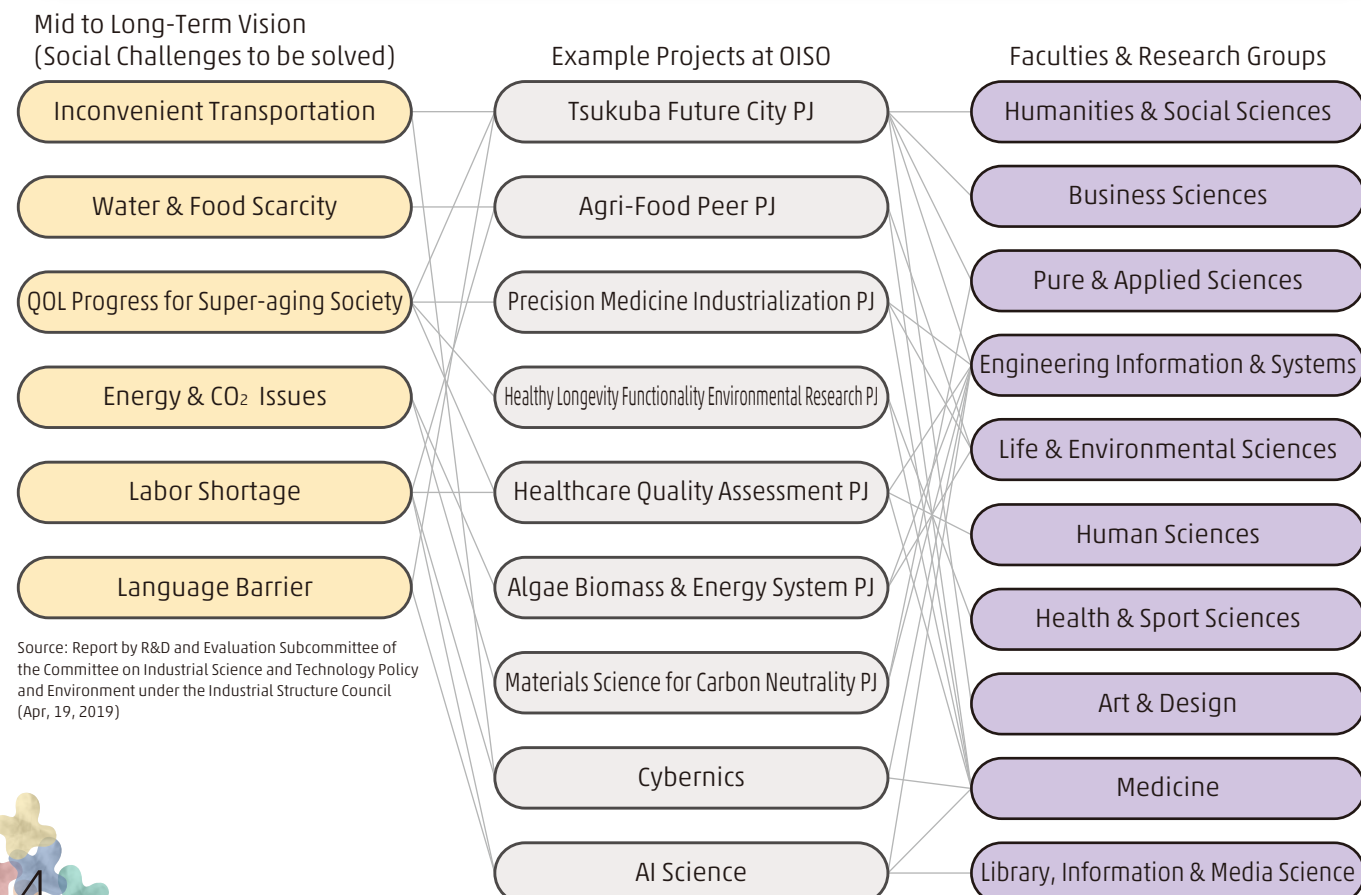
Collaborative Research Management

With the Faculty Database of classifying by the industrial field, the Creative Managers promote industry-driven collaboration.



Concept of Transdisciplinary Research

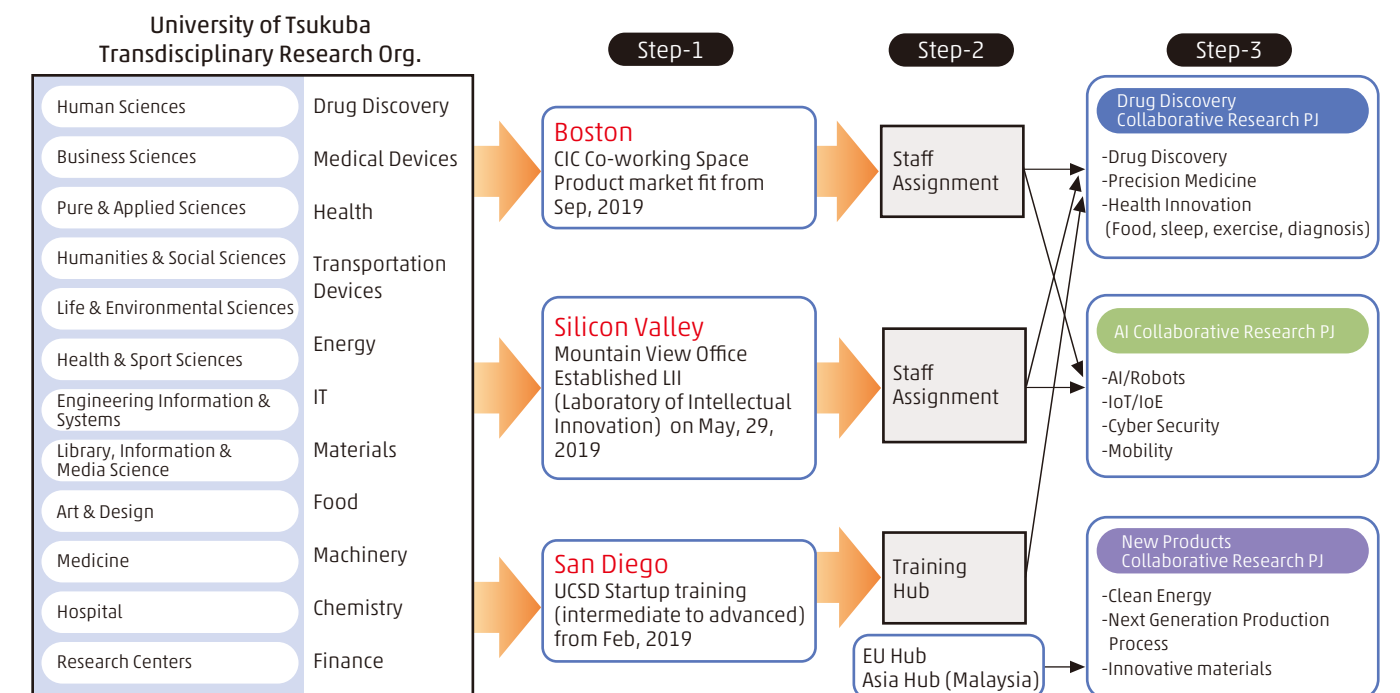
OISO promotes a cross-faculty research system and scales up collaborative research.



World-Wide Activities

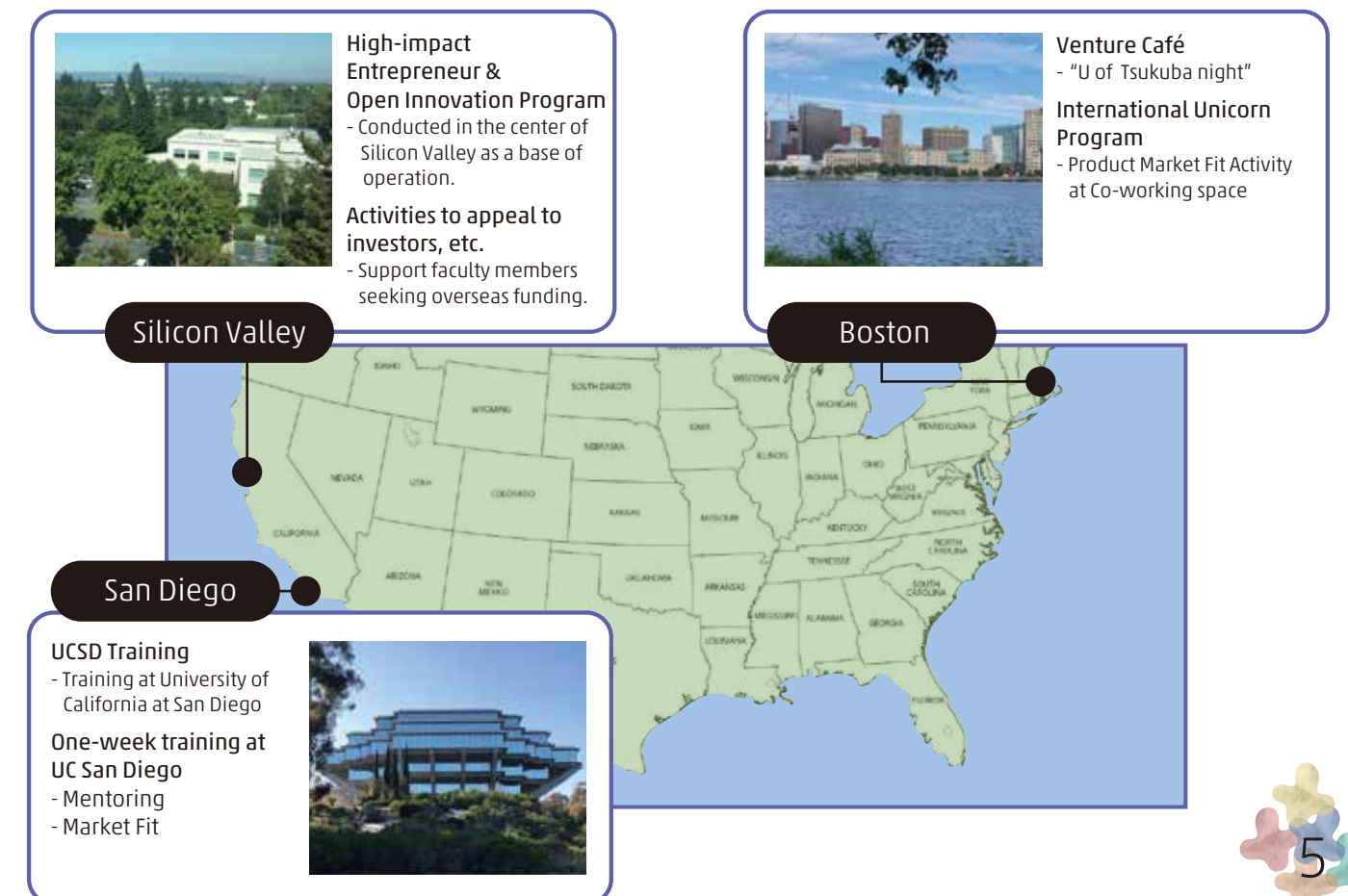
Solve the Challenges of Realizing "Society 5.0" through Transdisciplinary Research

OISO builds international projects in the fields of medicine, AI/robotics and energy by establishing activity hubs in the US, Europe and Asia and assigning a professional staff at each hub in the future.



Activities in the US

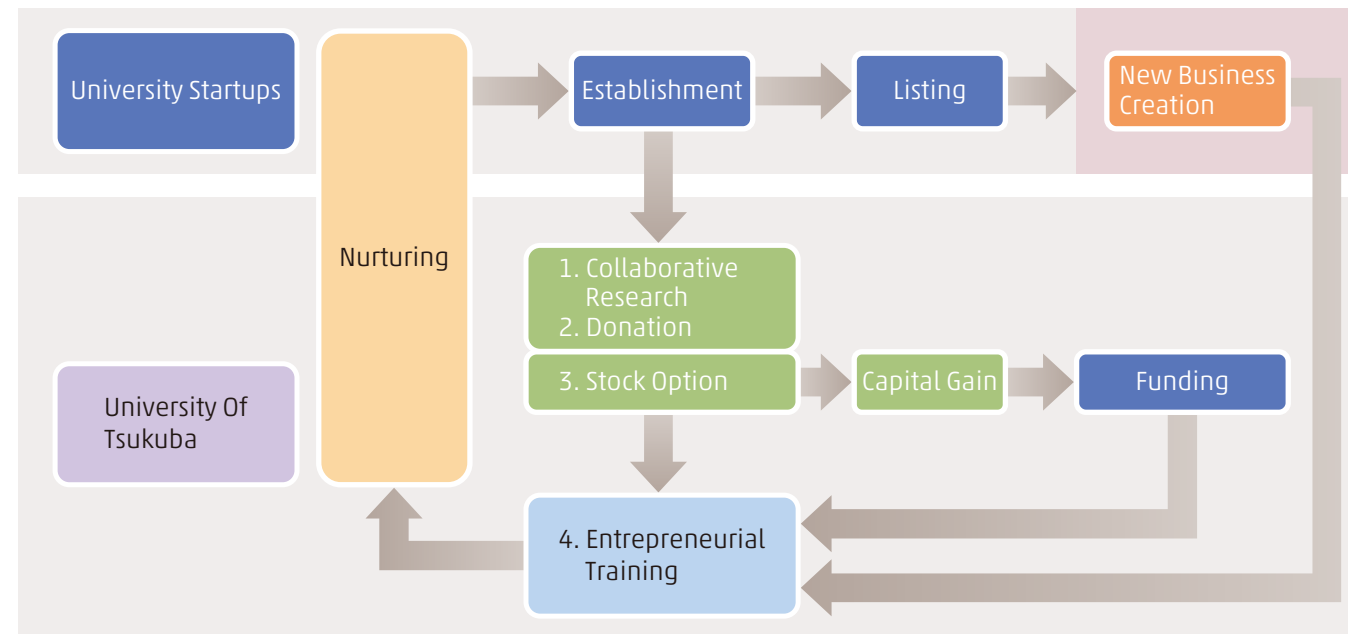
OISO establishes the hubs in the US innovative areas (Boston, Silicon Valley, and San Diego) and dispatches faculties and students to create collaboration.



Ecosystem

Collaboration between University of Tsukuba and University Startups

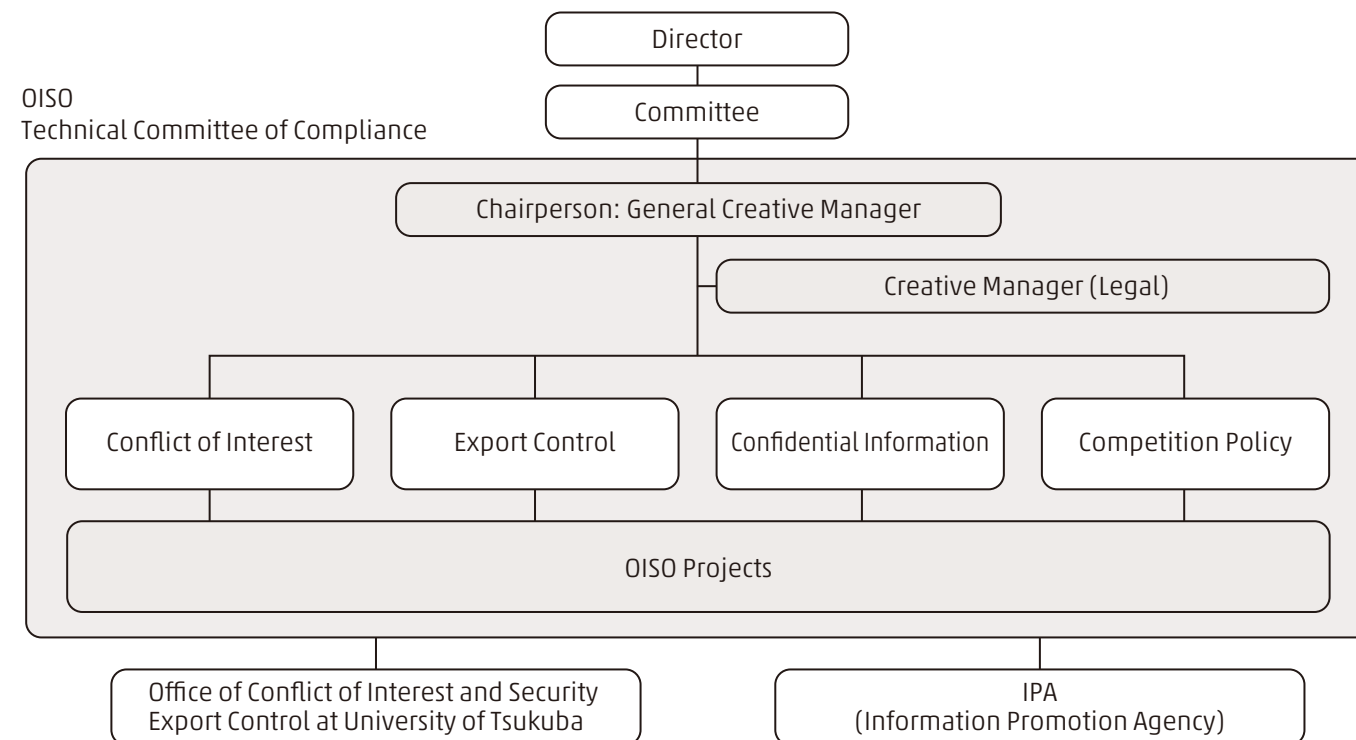
The university nurtures university startups and implements an ecosystem that generates collaborative flows with the university in collaborative research, donations, and stock options.



Risk Management & Compliance

OISO Compliance Structure

Based on the activities of the four subcommittees, OISO promotes Technical Committee of Compliance to enhance compliance of industry-university collaboration at the University of Tsukuba.



Projects

OISO currently promotes projects in seven areas of agriculture, life science, biotechnology, service, energy, smart city, and material.

Area: Agriculture
Project: Agri-Food Peer

The first in the world, GABA-rich tomato which is effective against hypertension was developed by using genome editing technology (CRISPR/Cas9). Notification to government agencies was completed and the product was launched in May 2021.



Area: Life Science
Project: Precision Medicine

1. Industrial achievement: iLAC Co., Ltd., which is one of the university startups, concluded a business alliance with ITOCHU Corporation.
2. Academic achievement: Kyoto University which is the partner of collaborative research was published in *Nature*.



Area: Bio Technology
Project: Healthy Longevity
Functionality Environmental Research

At this project, functional factors (substances and stimuli) that enhance healthy longevity are studied, and collaborative researches to contribute to Active Wellness are conducted with several companies.



Area: Service
Project: Healthcare Quality Assessment

Health Services R&D Center and Fast DOCTOR Inc., are conducting the large-scale, multi-year collaborative research.



Area: Energy
Project: Algae Biomass & Energy System

The new technology that algae using sewage transforms to bio-crude oil. The key to the project is efficiency at the industrial level.



Area: Smart City
Project: Tsukuba Future City

The project consists of public demonstrations, experimentations, transdisciplinary research in Next-Generation Mobility, Future Medicine and Healthcare, Infrastructure Management, Disaster Prevention and Energy, and Education with a collaborative endeavor between Tsukuba City, industries, universities, governments, local communities.



Area: Material
Project: Materials Science for Carbon Neutrality

A "hydrogen boride sheet" that could be applied to carbon neutrality through hydrogen release and storage has developed. Collaborative researches with several companies are underway.

