The University of Tsukuba
&
Industry-University Collaboration Activities

University of Tsukuba
International Industry-University Collaborative Headquarters
Overview
of the University of Tsukuba
Where is Tsukuba?

45min by train (Tsukuba Express) from downtown Tokyo to Tsukuba &
50min by car from Narita Airport (Metropolitan Inter-City Expressway)
Center of Research and Development

Tsukuba is the largest science city in Japan

32 national research institutes,
(= 30% of all national institutes)
more than 200 private Institutes.
1 out of 10 residents of Tsukuba city is a researcher.
2nd Largest Campus in Japan

- Tsukuba (258ha)
- West Michigan (344ha)
- UCLA (170ha)

Campuses in New York (Central Park), Harvard, MIT, Oxford, and Beijing.
44+101 Years of Unique History

145 years of History and Tradition
Funded as Higher Normal School (1872)
→ Tokyo University of Education (1949)
→ University of Tsukuba (1973)

3 Nobel Laureates
Dr. TOMONAGA Sin-Ichiro
(Physics, 1965)
Dr. Esaki Leo
(Physics, 1973)
Dr. SHIRAKAWA Hideki
(Chemistry, 2000)

63 Medals in Olympic Games
Silver Medalists at London Olympics 2012

24
19
19
Number of Students and Staff

Total 20,423

- Undergraduate Students 9,909
- Graduate Students 6,560
- Administrators 1,941
- Faculty 2,061

8 Graduate schools
- Education
- Humanities and Social Sciences
- Business Sciences
- Pure and Applied Sciences
- Systems and Information Engineering
- Life and Environmental Sciences
- Comprehensive Human Sciences
- Library, Information and Media Studies

9 Undergraduate Schools
- Humanities and Culture
- Social and International Studies
- Human Sciences
- Life and Environmental Sciences
- Sciences and Engineering
- Informatics
- Medicine and Medical Sciences
- Health and Physical Education
- Art and Design

2,326 International students from 106 countries

(as of May, 2014)
13 Overseas Offices in 12 Countries

- Bordeaux Office (France)
- Bonn Office (Germany)
- Tunis Office (Tunisia)
- Tashkent Office (Uzbekistan)
- Almaty Office (Kazakhstan)
- Ho Chi Minh Office (Vietnam)
- Jakarta Office (Indonesia)
- Kuala Lumpur Office (Malaysia)
- Irvine Office (United States)
- São Paulo Office (Brazil)
- Shanghai Office (China)
- Beijing Office (China)
- Taiwan Office (Taiwan)
Subject Jukebox for Students of Partners

CAMPUS-IN-CAMPUS for promoting Global Mobility of Students and Researchers

University of Bordeaux

University of Tsukuba

University of California, Irvine

National Taiwan University

Joint Degree Program ~ Separate Diplomas ~

Dual Degree Program ~ Coordinated Single Diploma ~

Transnational Leaders

More Universities
University of Tsukuba Hospital

Mission: advanced medical care and medical research

- Opened 1978
- 34 clinical Departments
- 800 beds
- 1,782 staffs

<table>
<thead>
<tr>
<th>category</th>
<th>number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Staff</td>
<td>294</td>
</tr>
<tr>
<td>Residents and Fellows</td>
<td>279</td>
</tr>
<tr>
<td>Clinical Assistant Professor</td>
<td>67</td>
</tr>
<tr>
<td>Nurses and Maternity Nurses</td>
<td>774</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>49</td>
</tr>
<tr>
<td>Other Paramedical Staff</td>
<td>368</td>
</tr>
</tbody>
</table>

As of Apr. 2014

MRI operating room
Angiography operating room
RU11: Top Research Universities in Japan

RU11 is a consortium, established in 2009, consisting of 11 of the top Research Universities in Japan.

*2014 School Basic Survey (Ministry of Education, Culture, Sports, Science and Technology, Japan)
Research Centers for Innovation

**Nationwide joint-use institutes**
- Center for Computational Sciences
- Shimoda Marine Research Center
- Gene Research Center
- Plasma Research Center

**Research cores**
- International Institute for Integrative Sleep Medicine (IIIS)
- Core Laboratory for Algal Biomass and Energy System
- Innovation Medical Research Institute

**Research centers**
- Life Science Center of Tsukuba Advanced Research Alliance (TARA)
- Alliance for Research on North Africa
- Cybernics Research
- Center for Isotopes and Environmental Dynamics (CRIED)
- Tsukuba Research Center for Interdisciplinary Materials Sciences
- Agricultural and Forestry Research Center
- Proton Medical Research Center
Industry-University Collaboration at the University of Tsukuba
OUR MISSIONS

**social and economic innovations**
facilitating technology transfer which leads to social and economic innovations to make a social contribution through research findings of the University of Tsukuba;

**University spin-offs**
supporting university spin-offs by facilitating technological incubation and transfer;

**technology transfer**
promoting cooperative researches with private enterprises as one of the most important means of technology transfer;

**intellectual properties**
obtaining more international utilization of intellectual properties by making improvements of their assessment

**Tsukuba Science City & Region**
promoting university-industry-governmental institutes cooperation within Tsukuba Science City and strengthening community relationships with local public organizations such as Ibaraki Prefecture, Tsukuba City and so forth;

OUR ROLE

The University of Tsukuba International Industry-University Collaborative Headquarters
OUR MISSIONS

social and economic innovations
facilitating technology transfer which leads to social and economic innovations
to make a social contribution through research findings of the University of Tsukuba;

University spin-offs
supporting university spin-offs by facilitating technological incubation and transfer;

technology transfer
promoting cooperative researches with private enterprises
as one of the most important means of technology transfer;

intellectual properties
obtaining more international utilization of intellectual properties
by making improvements of their assessment

Tsukuba Science City & Region
promoting university-industry-governmental institutes cooperation
within Tsukuba Science City and strengthening community relationships
with local public organizations such as Ibaraki Prefecture, Tsukuba City and so forth;

OUR ROLE
The University of Tsukuba
International Industry-University
Collaborative Headquarters
Strong interaction between Faculties: Humanities, Social, Life Sciences, Medical, Engineering, Informatics, Art, Phys. Ed.

At the center of the largest science city in Japan, with 15,000 researchers

# of foreign students, courses given using foreign languages → 2nd highest in Japan

# of university startups: 2nd highest in Japan (2009), e.g., Cyberdyne Inc. founded by Professor Sankai

At the center of the largest science city in Japan, with 15,000 researchers
Interdisciplinary Research for Emerging Society Needs

Faculty Structure optimized for Interdisciplinary Research, including Art, Sports and Medicine.

Unique Research System

Conventional
Professor Chair System
- Professor
- Assoc. Prof.
- Assist. Prof.

U. of Tsukuba
Research Group System
- Group A
  - Professor
  - Assoc. Prof.
  - Assist. Prof.
- Group B
  - Professor
  - Assoc. Prof.
  - Assist. Prof.

⇒ Easy to create interdisciplinary research projects
⇒ Young researchers can easily start new research themes

Interdisciplinary Research Areas

- Integrative Sleep Medicine
- Research Center for Advanced & Interdisciplinary Life Sciences【TARA Center】
- Robot Suit HAL
- Boron Neutron Capture Therapy (BNCT)
- Center for Computational Sciences
- Health, Physical Ed. & Sport Sciences
## Mapping U. Tsukuba’s Research Potential onto Industry Areas

<table>
<thead>
<tr>
<th>Industrial Areas</th>
<th>Faculties of U. of Tsukuba</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>Pure &amp; Appl Sci, Life, Environ.</td>
</tr>
</tbody>
</table>
Concept for Social & Economic Innovations by Interdisciplinary Research at U. Tsukuba

Macro trend of Global Society
- Distributed, sharing and circulation society
- The expansion of EPA & FTA
- The Growth of Emerging countries
- Changes of Global Market

Toward Sustainable Society
- Securing Water Resources, Energy, Food
- Sophistication of Transportation System
- Aging Infrastructure System Upgrading
- Low birthrate & Aging Society Measures
- Reduction of CO2
- Promotion of Resource Recycling

Economic Innovation
- Service for Human Life
- Healthy quality of life
- Next Society System
- Compact City

IT/Cloud
- AI/Robotics
- IoT/IoE
- Cyber Security

Products
- Hydrogen Mobility
- Clean Energy
- Industrial Internet

Faculty of University of Tsukuba
- Humanities & Social Science
- Business Science
- Pure & Applied Science
- Engineering, Information & Systems
- Life & Environmental Sciences
- Human Sciences
- Health & Sports Sciences
- Art & Design
- Medicine
- Library Information & Media Science
facilitating technology transfer which leads to social and economic innovations to make a social contribution through research findings of the University of Tsukuba;

University spin-offs

supporting university spin-offs by facilitating technological incubation and transfer;

technology transfer

promoting cooperative researches with private enterprises as one of the most important means of technology transfer;

intellectual properties

obtaining more international utilization of intellectual properties by making improvements of their assessment

Tsukuba Science City & Region

promoting university-industry-governmental institutes cooperation within Tsukuba Science City and strengthening community relationships with local public organizations such as Ibaraki Prefecture, Tsukuba City and so forth;
2nd in the Growth of Industry-University collaboration among Japanese universities

### Average budget growth-rate of Industry-sponsored collaborative research between 2010-2015

<table>
<thead>
<tr>
<th>University</th>
<th>Growth ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Yamagata Univ.</td>
<td>52.7</td>
</tr>
<tr>
<td>2 Univ. of Tsukuba</td>
<td>35.2</td>
</tr>
<tr>
<td>3 Tohoku Univ.</td>
<td>17.2</td>
</tr>
<tr>
<td>4 Nagoya Inst. of Tech.</td>
<td>16.2</td>
</tr>
<tr>
<td>5 Nagasaki Univ.</td>
<td>15.6</td>
</tr>
<tr>
<td>6 Hokkaido Univ.</td>
<td>14.3</td>
</tr>
<tr>
<td>7 Waseda Univ.</td>
<td>13.4</td>
</tr>
<tr>
<td>8 Chiba Univ.</td>
<td>13.1</td>
</tr>
<tr>
<td>9 Toyohashi Univ. of Tech.</td>
<td>12.6</td>
</tr>
<tr>
<td>10 Shinshu Univ.</td>
<td>11.6</td>
</tr>
</tbody>
</table>

### Budget Increase of Industry-sponsored collaborative research from 2014 to 2015

<table>
<thead>
<tr>
<th>University</th>
<th>Budget Increase in 2015 (Million ¥)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Tohoku Univ.</td>
<td>561</td>
</tr>
<tr>
<td>2 Univ. of Tsukuba</td>
<td>560</td>
</tr>
<tr>
<td>6 Hokkaido Univ.</td>
<td>391</td>
</tr>
<tr>
<td>1 Yamagata Univ.</td>
<td>348</td>
</tr>
<tr>
<td>5 Tokyo Univ.</td>
<td>226</td>
</tr>
<tr>
<td>6 Nagoya Univ.</td>
<td>216</td>
</tr>
<tr>
<td>7 Osaka Univ.</td>
<td>207</td>
</tr>
<tr>
<td>8 Keio Univ.</td>
<td>204</td>
</tr>
<tr>
<td>9 Chiba Inst. of Tech.</td>
<td>188</td>
</tr>
<tr>
<td>10 Tokyo Univ. of Scirnce</td>
<td>124</td>
</tr>
</tbody>
</table>

MEXT Report for Industry-University Collaborative Activities in 2015
In 2015, the industry-sponsored collaborative research budget increased by 2-fold compared to 2014.

Why? <Ranking 2nd>

Industry-Sponsored Collaborative Research Budget of the University of Tsukuba
1. Made a platform for interdisciplinary industry-university co-creation

2. Innovated headquarters management structure of Industry-University Collaboration

3. Changed the strategy toward initiating large-scale collaborative research
1. Platform for Interdisciplinary industry-university co-creation

2. Innovation of headquarters management structure

- International Industry–University Collaborative Headquarter (2014 April)
- Industry–University Dep.
- Technology Transfer Cheam
- R&D Center (2015 July)

3. Large scale collaborative research creation program

- M2B2A type collaborative research (2014 Aug.)
- Special collaborative research Project (2014 Dec.)
- Global Matching Program (2014 Aug.)

4. Promotion of industry-univ. collaboration and talent placement

- Innovation Medical Research Institute (2015 Aug.)
- Tsukuba Clinical R&D Organization (T-CReDO) (2015 May)
- Life Innovation Degree Program (2015 Nov.)
- Center for Artificial Intelligence Research (2017 April)
2. Industry-University Collaboration Structure

International Industry-University Collaborative Headquarters

(Established in April 2014)

Industry–University Collaboration Department
- Intellectual property
- National fund
- Research Collaboration contracts

Technology Transfer Team
- 11 Technology Transfer Managers

Research & Development Center (established in July 2015)
- First R&D Center
  R&D Center for Algal Biomass Energy System
## U.Tsukuba Strategies for Industry–University Collaboration

<table>
<thead>
<tr>
<th>I</th>
<th>“R&amp;D Center” framework</th>
<th>July, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>Special Collaborative Research Projects</td>
<td>December, 2014</td>
</tr>
<tr>
<td>IV</td>
<td>Expand international collaborations</td>
<td>Aug, 2014</td>
</tr>
<tr>
<td>V</td>
<td>Innovation Medical Research Institute</td>
<td>Aug, 2015</td>
</tr>
</tbody>
</table>

**Strategic plans to strengthen industry collaborations**

**July, 2015**
- "R&D Center" framework

**December, 2014**
- Special Collaborative Research Projects

**Aug, 2014**
- Market-to-Business-to-Academia Collaboration Process
- Expand international collaborations

**Aug, 2015**
- Innovation Medical Research Institute

**Imagining the Future**
Innovative Organization operated by external funds

I. “R&D Center” framework

Missions of University of Tsukuba

Social Contributions

Research Centers

Research

Education

Schools

Objective

Create innovation
Participation of industry personnel
Speed up research
Cultivate industry-directed culture & entrepreneurial talents

Management

Promote industry-univ. collaboration in research areas with high social demands
5 years duration (with a possibility to extend)
Will be abolished when external funding is no longer available

July, 2015

“R&D Center” framework

University of Tsukuba
R&D Center for Algal Biomass Energy System

Securing Energy Source; A vital problem for Japan

Hydrocarbon Producing Algae

*Botryococcus braunii* produces 118 t oil ha/year

*Aurantiochytrium* has a high-growth rate, with a high content of the hydrocarbon called squalene.

The oil product is shown by yellow spheres.

First R&D Center started in Aug. 2015

Prof. Makoto Watanabe
R&D Center for Precision Medicine

Japan's first $1000 genome analysis center

Current Status: Precious genome information of the Japanese population is outflowing toward overseas.

<table>
<thead>
<tr>
<th>Region</th>
<th>No.</th>
<th>Location of $1000 genome analysis center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>5</td>
<td>Alabama (1), California (2), New York (1), Missouri (1)</td>
</tr>
<tr>
<td>EU</td>
<td>7</td>
<td>GB (3), Iceland (1), DE (1), Austria (1), Sweden (1)</td>
</tr>
<tr>
<td>Korea</td>
<td>1</td>
<td>Seoul (1)</td>
</tr>
<tr>
<td>China</td>
<td>2</td>
<td>Beijing (1), Shanghai (1)</td>
</tr>
<tr>
<td>Middle East</td>
<td>1</td>
<td>Qatar (1)</td>
</tr>
</tbody>
</table>

Next-generation super high-throughput DNA sequencer

5~10 systems connected for 1000$ genome analysis

All-Japan genome analysis scheme

System Operation

- <Consortium>
  - Univ. of Tsukuba (Coordinator)
  - Bio Companies
  - Clinical Res. Companies

Service User

- Nation Reserch Insititutes
- Medical Institutes
- Pharm. Companies

Samples

results
Collaborative research under one-roof between industry and U. of Tsukuba to promote social implementation of research outputs

Mutual understanding of what to be solved to achieve a business goal

Industry & University researchers both participate to accelerate future business

Industry researchers participate in education at the University

1. Industry & University researchers both participate to accelerate future business
2. Industry researchers participate in education at the University
To pursue how the social system will be transformed in the next generation, interdisciplinary research spanning diverse fields is necessary.

Automaker’s Needs for Solutions toward the coming Society

“Accessible society system”
- Public transportation system
- Human behavior science
- Urban structure with smart accessibility
- City design
- Human friendly functions
- Economic system
- Legal framework

U.Tsukuba’s Research Potential

Faculty Structure optimized for Interdisciplinary Research
- Psychology
- Cultural anthropology
- Economics
- Law
- Risk Engineering
- Policy sciences
- Service Engineering
- Design
- Ergonomics

Create new discipline in academic research

Example of a Full-scale university-industry research collaboration: Special Collaborative Research PJ with an Automobile Company

“Advanced research for realization of smart accessible society”

Started in November, 2015
Tries to transfer technologies & IPs developed at universities

**Academia to Business to Market (A2B2M)**

- **Academia**: Seeds, IPs
- **Business**: Value Chain
- **Market**: Social & Economic Innovation

**A new strategy for expanding industry collaboration**

Exploits University’s research potential to realize future business plan of the Industry

**Market to Business to Academia (M2B2A)**

- **Academia**: Research Potential
- **Business**: Value Chain
- **Market**: Needs for future Society & Economy

Research Potential such as: facility, science network, academic knowledge, educational environment, clinical environment, technical seeds & IPs etc.
Management of M2B2A System in the University of Tsukuba

Candidate Corporations
Nikkei 225, World TOP20 pharma, regional corporations

Internal activities
Analyze research potential
⇒industry vs research DB & mapping

III
Market-to-Business-to-Academia Collaboration Process
Aug, 2014
IV Expand international collaborations

Plans for large-scale collaborative research
Focusing to global top 20 pharma

(Global pharma Ranking in 2013)

Domestic pharmas with ongoing collaborative research

- (16)
- (18)
- (20)

Started in 2015

- (5)
- (15)
- (16)

Negotiating to start in 2016

- (1)
- (9)
- (GE)
- (Saint-Gobain)
# Ranking of Collaborative Research Funding from Foreign Companies (FY2016, million yen)

<table>
<thead>
<tr>
<th>University</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tohoku Univ.</td>
<td>245</td>
</tr>
<tr>
<td>Univ. of Tsukuba</td>
<td>130</td>
</tr>
<tr>
<td>Nagoya Univ.</td>
<td>123</td>
</tr>
<tr>
<td>Univ. of Tokyo</td>
<td>122</td>
</tr>
<tr>
<td>Tokyo Inst. of Tech.</td>
<td>95</td>
</tr>
<tr>
<td>Kyoto Univ.</td>
<td>80</td>
</tr>
<tr>
<td>Osaka Univ.</td>
<td>37</td>
</tr>
<tr>
<td>Waseda Univ.</td>
<td>35</td>
</tr>
<tr>
<td>Tokyo Univ. of Marine Sci. &amp; Tech. (東京海洋大学)</td>
<td>27</td>
</tr>
</tbody>
</table>

---

# U. Tsukuba’s Collaborative Research Funding from Foreign Companies

<table>
<thead>
<tr>
<th>Year</th>
<th>Million Yen</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>154</td>
</tr>
<tr>
<td>2014</td>
<td>129</td>
</tr>
<tr>
<td>2015</td>
<td>129</td>
</tr>
<tr>
<td>2016</td>
<td>154</td>
</tr>
</tbody>
</table>
To develop revolutionary medical therapy that insures healthy quality of life toward the age of super-aging Japanese society

Research Focus: Proactive P4 Medicine
Predictive, Preventive, Personalized, Participatory

Total floor capacity 6000 m²
Innovation Medical Research Institute

Industry-University collaboration under one-roof

5th Floor
R&D of Efficient Medical Drugs
(Pharma & Startup companies)

4th Floor
Health promotion by Food and Exercise
(Fuji Film, Tanita, Renaissance, NIPPN, Kyowa-Hakko-Bio)

2nd, 3rd Floor
Revolutionary clinical diagnostic technologies
*Prof. Sato: Shimadzu Co. Fellow & Director of Shimadzu Life Science Laboratory

1st Floor
Entrance Hall
Industry-University Collaboration Department

MEXT Center of Innovation Program
*COI Stream “Food & Exercise Expert” Satellite

University of Tsukuba
IMAGINE THE FUTURE.
3-1 OUR MISSIONS

social and economic innovations
facilitating technology transfer which leads to social and economic innovations to make a social contribution through research findings of the University of Tsukuba;

University spin-offs
supporting university spin-offs by facilitating technological incubation and transfer;

technology transfer
promoting cooperative researches with private enterprises as one of the most important means of technology transfer;

intellectual properties
obtaining more international utilization of intellectual properties by making improvements of their assessment

Tsukuba Science City
promoting university-industry-governmental institutes cooperation within Tsukuba Science City and strengthening community relationships with local public organizations such as Ibaraki Prefecture, Tsukuba City and so forth;

The University of Tsukuba International Industry-University Collaborative Headquarters
OUR ROLE
University Startups support

Industry–University Collaboration PJ

- Rents rooms for startup companies
- Awards incubation funds to startups

ILC (Industrial Liaison and Cooperative Research Center)

20 startup room

Startup Numbers

University Ranking 2

University Ranking 5

Startups: 26, 32, 44, 57, 65, 72, 77, 82, 85, 91, 98, 99, 101, 110

University of Tsukuba Spin-offs Making a Global Impact

A university venture company

**Cyberdyne**

Established in 2004 by Prof. Yoshiyuki Sankai at ILC center.

- **HAL is the World’s first cyborg-type robot**
- **HAL** detects electrical signals from the nerves & physical movements of muscles
- A leading Spin-off in Japan (IPO company)
- **Market capitalization =** 350 billion yen
  Listed in 2014/3/26

Towards a society with elderly and physically-challenged people having daily life as safely and as independently as possible.
University of Tsukuba Spin-offs from ILC

**Laughwell CO., LTD**

Keiko Hayashi, Ph.D (Medical, 1999)

Visiting Nursing Care; Prevention of life-style-related disease with laugh

Founded 2006

---

**R-body Project CO., LTD**

Takeshi Suzuki, Ph.D (Sports Medicine, 2008)

Training, Exercise, Education with 50 trainers

http://www.r-body.com/trainers/index.html

Founded 2003

---

**SoftEther CO., LTD**

Daiyu Npbori (PhD Student)

The world’s 2nd company in “Virtual Private Network”

Founded 2004
facilitating technology transfer which leads to social and economic innovations to make a social contribution through research findings of the University of Tsukuba;

promoting cooperative researches with private enterprises as one of the most important means of technology transfer;

The University of Tsukuba
International Industry-University Collaborative Headquarters

promoting university-industry-governmental institutes cooperation within Tsukuba Science City and strengthening community relationships with local public organizations such as Ibaraki Prefecture, Tsukuba City and so forth;
In Tsukuba, there are 32 public research centers and R&D centers.

Over 15,000 researchers work in Tsukuba including 8,000 Ph.D.'s
Collaboration with National Institutes in Tsukuba

AIST & Tsukuba Matching funds

「Awasewaza funds」in 2014

67 applications in 2014. Funds awarded to 9 projects

AIST & Tsukuba Univ. each contributes 10 M¥ to the fund to support collaborative research projects

An example

**[U. of Tsukuba]**

Kinetics analysis of factors that stimulate mitochondria for energy metabolism

Observation technique using a Super-Resolution Fluorescent Microscope (equivalent to 2014 Nobel prize)

Observe live cells and proteins with nano resolution

**[AIST]**

Video observation of mitochondria-stimulating factor MAF

- therapy for mitochondria disease
- anti-aging preventive medicine

*Awasewaza: Combining Difference Technology. Etymology Judo*
Over 15,000 researchers work in Tsukuba including 8,000 who have PhD.

There are 15 research centers or R&D centers in Tsukuba.

"Tsukuba Collaboration-Boost PJ" in 2015

21 projects are ongoing, which were selected out of 102 applications

Expanded to all Tsukuba area

**Tsukuba Collaboration-Boost PJ**

- AIST: 17 projects
- NIMS: 2 projects
- RIKEN: 1 project
- NIBIO: 1 project

Target: Industry Collabo.

**Industry**

- Transport
- Electronics
- Materials
- Chemical
- Medical
- Service
The University of Tsukuba
&
Industry-University Collaboration Activities

University of Tsukuba
International Industry-University Collaborative Headquarters