## University of Tsukuba Integrated Report 2023

—To create GLOBAL TRUST—



#### To Our Stakeholders

While it had been the practice of the University of Tsukuba to publish an annual financial management report to deepen your understanding of our university's activities, AY2019 was the first year that we issued an integral report that combined the regular financial management report and non-financial information, such as the university's goals, initiatives, and performance in activities.

Through this report, we hope not only to fulfill our obligations of accountability to society, but also to share with all of you the university's vision for the future, to further increase engagement, and to make constant improvements for the sustained growth of the university based on our views and dialogue with you.

In preparing this integrated report, we referred to the International Integrated Reporting Framework (IIRC). In the future, we intend to further improve the content of this report to publish a full integrated report to deliver to you.

#### [Scope of coverage of this report]

Target period: April 1, 2022 through March 31, 2023 (partially including activities in April 2023 and later)











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The 151st+50th Anniversary of the University of Tsukuba [Tsukuba International Congress Center]

#### September 30, 2023

















A commemoration ceremony took place at Tsukuba International Congress Center to celebrate the 50th anniversary of the founding of the University of Tsukuba. 151 years have passed since the inception of the University of Tsukuba's predecessor school (Normal School), so the series of anniversary events are called "The 151st+50th Anniversary of the University of Tsukuba." At the commemorative ceremony, which was attended by guests from various fields, President NAGATA Kyosuke delivered the following remarks in his ceremonial address:

"As the standard bearer of university reform, the university hopes to be a driving force in rebuilding a society that has become fixed in place." "As we approach the milestone of our 50th anniversary, we will carry on and further develop our founding principles, and for the next 50 years, we will tirelessly develop leading research and education ahead of other universities, aiming to transform society with the fruits of our efforts."

The guests of honor included Mr. YASUE Nobuo, a parliamentary official on behalf of the Minister for Education, Culture, Sports, Science and Technology; Dr. Mahathir bin Mohamad, former Prime Minister of Malaysia; and Dr. Yasin Lacnech, President of Grenoble-Alpes University in France. In addition, a video message was shown from former President ESAKI Leo on the 50th anniversary of his Nobel Prize in Physics (1973).

The ceremony was presided over by two graduates, Mr. TAKETA Shinichi (who graduated from the College of Social Sciences in 1990) and Ms. AOYAMA Yuko (who graduated from the School of Physical Education, Health and Sport Sciences in 1995), and opened with a performance of "Hitachino-no" by the University of Tsukuba Orchestra and Mixed Chorus. Associate Professor OCHIAI Yoichi also performed media art.

#### Commemorative Lecture by Professor Emeritus SHIRAKAWA Hideki

After the ceremony, Professor Emeritus SHIRAKAWA Hideki, a Nobel Laureate in Chemistry, gave a commemorative lecture titled "My Research and Tsukuba: Tokyo Institute of Technology, University of Pennsylvania, and University of Tsukuba."

Special website for The 151st+50th Anniversary of the University of Tsukuba https://50th.projects.tsukuba.ac.jp/



#### Alumni Vividly Talked at "Adventurers' DESIGN THE FUTURE."

"What was the significance of your studies at the University of Tsukuba for your life?" "And what does 'adventure' mean to you?"

Student moderators asked senior alumni such questions in an event that followed the commemorative ceremony. Alumni who are active in various fields took the stage or appeared in video messages under the three themes of "Sports Science," "Media Information," and "Global Scene" and gave messages to the audience

#### Speakers

- Sports Science"
- Mr. KUDO Kimiyasu

(former professional baseball manager / Master of Physical Education) Professor Emeritus SHIRAKI Hitoshi

- Media Information"
- Mr. MATSUMOTO Yukihiro (Executive Director, Ruby Association) Visiting Professor NOBORI Daiyu
- Global Scene"
- Ms. ADACHI Kanako (Deputy Director, Operations Support Department, JICA) Specially Appointed Professor MINOWA Mari

#### October 1, 2023



01



#### Anniversary Event "DESIGN THE FUTURE Marché" [Tsukuba Campus]

The University of Tsukuba, which was founded on October



**President NAGATA:** It has been a long time since we last met, KUDO-san.

KUDO Kimiyasu: Long time no see.

**President:** Thank you for taking the time to join me today. You left our university in the middle of your Master's studies to assume the position of Manager of the Softbank Hawks (in November 2014). I am pleased that you have come back to the university as a doctoral student this time. Given this invaluable opportunity today, I would like to ask you about many different things. Thank you in advance.

#### What 'baseball' means to KUDO Kimiyasu

**President:** This may be an impolite question to ask a master of baseball, but my first question is: What does baseball mean to you?

**KUDO:** Looking back, I feel I owe what I have become to what I have learned through baseball, more than anything else, and that baseball has given me opportunities to get to know many different people. It has changed me so much that it is even scary just to imagine what my life

would have been if I had not encountered baseball. I really feel its significance.

**President:** Your comment shows how happy your encounter with baseball has been. Given the extremely large size of the baseball population, there must be people who feel the same way as you. However, the greater the ability, or the harder or more challenging the situation, the more you will gain each time you overcome an obstacle. Things may depend on talent, at least in part, but the same thing might have happened if you had chosen another sport.

**KUDO:** I am physically not large for a baseball player. Although people often say that I have a good aptitude or talent, I suppose it is only part of the reason. In my opinion, the important thing is your attitude and how you think to improve yourself. I have always placed great importance on constantly asking questions since I was a child. We think and put our thoughts into action in search of answers to a question. Taking action will let us feel something new, which, in turn, will give rise to another question. I suppose it is very significant to repeat this cycle through sports. There may be ridiculously gifted or talented people out there, but most of us are not like that. As such, I believe your attitude, how you think, and how you bring yourself closer to your answers, are very important.

**President:** I have always believed that athletes and artists are the same as researchers. What you have just told me and our university's mission can be said to be the same in the sense that both of us constantly explore our areas of pursuit with numerous questions. It may be a good idea to start inquiry-based learning as a child, but I believe universities stand at the pinnacle of such inquiring. If you had started inquiring in a different field, things might have been wildly different. I guess that is a fortunate thing not only for you, but also for the entire Japanese baseball world. Universities are such places, so it is our pride that someone like you, who has a proven track record and still keeps on inquiring, is active in the field of sports. I also think that you are a good role model for the entire country of Japan.

KUDO: Thank you very much.

#### Graduate "learning"

**President:** What specifically has brought you to begin your graduate studies?

KUDO: When I first thought of entering university, my interest was in the prevention of sports injuries for children. After retiring as a player, I was involved in the physical examination of children together with orthopedists for about a year. It seemed nearly impossible to eliminate sports injuries of children. When I discussed the situation with orthopedists, I felt as if I was talking about something that I had no sufficient knowledge of and was relying only on my experience as a baseball player, so I could only speak about what I understood. I came to realize that I could not provide the necessary information to others or understand what the orthopedists were saying. I also felt the need to understand medical terms, and I found it quite difficult to answer how instructors and parents should respond to the concerns and disabilities of children. Perhaps I might be able to give advice on what they should do, what lifestyle habits should be developed, and so on. However, I felt that I needed to start by learning the basics in this field. This is why I started my graduate studies. To provide effective advice, I thought it was essential to develop a good understanding of the basics of the human body by studying hard about it. Although I have experience as a baseball player, I felt that alone was not good enough.

President: For example, we often hear that it is not a

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good decision to get an adolescent pitcher to pitch in successive games to win the National High School Baseball Championship from the perspective of his future career, because that may damage his body at a young age. One of the best-known examples is how a manager decided to keep an ace pitcher from pitching in the final gualifier game in Iwate Prefecture before the summer championship. The manager made the decision for the good of the pitcher, believing that he should be protected for his future career as someone who should move on to a larger stage in the future. This decision may be controversial, but our university places the greatest importance on rationality; in other words, making decisions based on clear thought and reason, even if winning is everything in sports. Scientific backgrounds are important in all fields.

I suppose you also attended subjects not directly related to your area of specialty in graduate school. How did you find them?

**KUDO:** I have learned many subjects. Subjects that were not directly related were also helpful. Actually, not a single subject has been useless.

**President:** That's great! Thank you for your wonderful comment, which I would like everyone to hear.

**KUDO:** Even things that are not directly related always affect one another in some way after many twists and turns. Of course, I chose some subjects myself, but I also learned many things from the other subjects, just by listening to the instructors. When I was a Master's student, I always sat in the front row during lectures.

**President:** In fact, that is a well-known anecdote about you. I have even gone and seen it myself in secret.

However, you were invited to act as a baseball manager during your studies. Coaching must be a comprehensive job. Were there things where your graduate studies helped you or were there any accomplishments supported by your experiences at the graduate school? Do you have any examples you can share?

**KUDO:** It was important throughout the season for players to condition themselves. I was able to give them advice based on what I had learned at the graduate school. I have learned to see the (muscular) movements of people beneath the skin, as if stripped, although it may be inappropriate to put it this way.

It is not typical in the baseball world to study in university. When I entered the graduate school, however, YOSHII-kun (YOSHII Masato, current manager of the Chiba Lotte Marines) and NISHI-kun (NISHI Toshihisa, former manager of the second team of the Yokohama DeNA BayStars) also started their graduate studies at the same time, which suggests that baseball players are finally beginning to study in university. What is the purpose? It is not only for the good of the baseball players themselves; if you can see players from a broader set of perspectives and show them what is best for them based on a scientific understanding of the basics, rather than relying only on your own rules of thumb, you can help them improve their own knowledge as well. Furthermore, if that encourages more players to begin to study in university after retirement, I suppose the result will be a virtuous cycle of improvement for the baseball community.

I am learning as a graduate student again myself while hoping that I can show as many baseball players as possible the different possibilities for their lives, and how much they can learn in university.

**President:** How wonderful! You may say that you still have a long way to go, but I feel that I am witnessing an amazing role model being created.

#### Encounter with sports science

**President:** I know you had already received instructions from Dr. SHIRAKI Hitoshi (Professor Emeritus, University

of Tsukuba) of the Faculty of Health and Sport Sciences before you entered the graduate school. Do you have some memories to share with us?

**KUDO:** At first, I was introduced to another professor, who turned out to be a non-specialist in training. I wanted to learn from a training specialist, so I made another request and was introduced to Dr. SHIRAKI. When I first met him, I had a muscle tear. As soon as I said to him, "Neither massage nor stretching has worked," he advised me, "It is already past the acute phase. Training could work." After that, I started training, and the large lump began to gradually shrink. It eventually disappeared and my muscle began to lengthen and contract normally again. I was really surprised to witness this.

No one around me, including our team's trainers and training coaches, had been successful in curing the condition. Nevertheless, the idea of "using training as a cure," an approach that seemed the complete opposite to me at that time, actually made a difference, which surprised and shocked me. Until that time, my understanding of training had been limited to the world of baseball. I realized that I had only had a narrow view of things after all. That was when I began to delve more deeply into training methods in sports science by discussing the uses and movements of the body with



researchers. To be honest, I was a layman. However, I asked them candid questions and had them propose new training methods, so that we could put them into practice.

These interactions brought about an endless series of approaches and ideas that would suit baseball. There were many "realizations." For example, we used to pitch a certain way in the past, but perhaps we needed to think from another perspective, or we realized that adopting a new approach could lead to better results.

I was nearly thirty years ahead of many others in practicing

those scientific training methods that are now popularly adopted by many baseball teams. The researchers allowed me to discover things that I had never noticed before and gave me many new ideas. My encounter with them means a lot to me. Once you have experienced the effectiveness of their advice, it is natural to think that "everything they say is right." I trusted them and put their advice into practice one by one. As a result, my muscle strength improved year by year. In fact, my muscle strength peaked at 36.

#### President: Amazing!

## Lastly, a message of encouragement to the University of Tsukuba

**President:** Lastly, the University of Tsukuba will be celebrating its 50th anniversary on October 1 this year. Building upon the legacy of the past fifty years, we continue to move forward in our own way. We would really appreciate it if you could send a quick message of encouragement to our university.

**KUDO:** I am truly happy that I have entered the University of Tsukuba. What I have learned in this university is a valuable asset.

I have established communication with my fellow students, irrespective of age differences, and this experience reminds me of the significance of such encounters with people. Graduate school is where I can move closer to where I want to be, and where I am learning. The desire to know more and the act of turning the unknown into the known will bring people to see the world with new eyes. I hope that the University of



Tsukuba will produce many such young people and will be loved by many people, not only in the sports world, but also in all other fields.

**President:** Thank you very much for joining us today. I wish you continued success.



#### Profile of KUDO Kimiyasu

Born in Aichi Prefecture in 1963.

After graduating from Nagoya Denki High School (current Aikodai Meiden High School), he joined the Seibu Lions. Later, he won fourteen league championships and eleven Japan Series championships during his playing days as a member of the Fukuoka Daiei Hawks, Yomiuri Giants, Yokohama BayStars and other teams, and was called a "victory maker." After spending 29 seasons as a player, he officially announced his retirement in 2011.

He was hired to be the manager of the Fukuoka SoftBank Hawks in 2015 and managed the team to five Japan Series titles during the seven years of his management of the team, which ended in 2021.

In 2020, he completed the Master's Program in Physical Education at the Graduate School of Comprehensive Human Sciences, the University of Tsukuba, and earned a Master of Physical Education during his service as the manager.

He moved on to a Doctoral Program at the same graduate school in April 2022 and has been conducting research and physical examination activities since then, aiming to earn a Doctor of Sports Medicine.

#### Concept

The University of Tsukuba aims to establish free exchanges and close relationships in both basic and applied sciences with educational and research organizations and academic communities in Japan and overseas. While developing these relationships, we intend to pursue education and research to cultivate men and women with creative intelligence and rich human qualities. The University of Tsukuba endeavors to contribute to the progress of science and culture. Formerly, Japanese universities tended to remain cloistered in their narrow, specialized fields, creating polarization, stagnation in education and research and alienation from their communities. The University of Tsukuba has decided to function as a university which is open to all within and outside of Japan. Toward this end, the university has made it its goal to develop an organization better suiting the functions and administration with a new concept of education and research highly international in character, rich in diversity and flexibility and capable of dealing sensitively with the changes occurring in contemporary society. To realize this, it has vested in its staff and administrative authorities the powers necessary to carry out these responsibilities.

#### Crest

The University of Tsukuba's "five-and-three paulownia" crest is derived from the emblem adopted by Tokyo Higher Normal School students in 1903, which was inherited by the Tokyo University of Education in 1949 for their school badge. Later, in 1974, the University Council officially approved the crest as the school insignia of the University of Tsukuba." The "five-and-three paulownia" design is based on a traditional Japanese motif, but brings a unique variation to the classic style: the University of Tsukuba crest is different because only the outline of the flowers is depicted.



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## About the University



Under the leadership of the president, the university decides on the roles and responsibilities of the internal organizations, and establishes appropriate decision-making procedures through the appointment of university executive officers and the Management Committee, which are systems unique to our university. In particular, the university has been making efforts to further strengthen governance and execute prompt business operations through the monitoring of compliance with the Code of Governance for National University Corporations.

#### **Board of Directors**

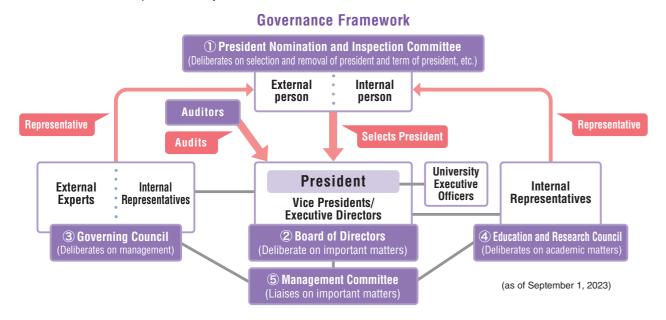
#### Deliberating Bodies of the University

- The president is selected by (1) the President Nomination and Inspection Committee and is appointed by the Minister of Education, Culture, Sports, Science and Technology. The President Nomination and Inspection Committee is composed of members selected from external members of the Governing Council and members selected from the Education and Research Council to reflect not only views on campus but also views of society at large.
- The executive directors (7 full-time and 2 part-time directors, including 1 female director) assist the president in managing the affairs of the university corporation.
- The vice presidents (10 in total, 7 of whom are concurrent directors) assist the president, receive orders from the president, and manage school affairs.
- The university executive officers (15) support the president, receive orders from the president, and supervise specific duties under the university's unique system. The dean of institute (10), who head the faculty organizations, and persons (5) who are in charge of specific tasks are responsible for these duties.
- The auditors (2) are appointed by the Minister of Education, Culture, Sports, Science and Technology. In addition to auditing the university on a regular basis, the auditors cooperate in assessing the performance of the president at the annual meeting of the President Nomination and Inspection Committee.
- \* Furthermore, although not a director of the university, the accounting auditor is appointed by the Minister of Education. Culture, Sports Science and Technology, and conducts audits of the financial statements, business reports (financial segments) and financial results



The 2023 leadership of the University of Tsukuba

- •2 The Board of Directors deliberates on important matters concerning administration, and meets once a month. It is comprised of the president and executive directors (10). The auditors, vice presidents and executive officers also attend board meetings
- ③ The Governing Council is an organization which deliberates on important matters concerning management and meets seven times a year. It consists of the president, seven full-time executive directors appointed by the president, and 10 off-campus council members. To reflect the views of the wider society, the majority of the members are off-campus members. With other officers such as auditors, vice presidents, university executive officers and directors of administrative organizations also in attendance, the Governing Council serves as a venue where a wide range of opinions can be exchanged.
- ④ The Education and Research Council deliberates on important matters concerning education and research, and meets once a month. Comprised of the president, executive directors, vice presidents, heads of departments such as the university schools and colleges, and persons appointed by the president (total of 51 members), the Education and Research Council serves as a venue where the heads of all the organizations responsible for education and research at the university gather together.
- 5 The Management Committee, which is a system specific to our university, serves as a liaison and coordinating organization in important matters concerning the management of university affairs. It is comprised of the president, executive directors, vice presidents and university executive officers (32 members) and auditors also attend its meetings. All matters discussed by the above councils go through the Management Committee, which meets once a week to allow for flexible management. A characteristic of this committee is that the heads of the faculties, who are the heads of the teacher organizations, participate in decision-making from the initial stages as university executive officers of the university.









NAGATA Kyosuke President

KATO Mitsuyasu Vice President and Executive Director for Education





Vice President and

HOMMA Miwako Vice President for Student Affairs





Executive Director for Global Affairs

NISHIO Chizuru Vice President for Planning. Evaluation and Public Relations University Librarian



ITO Kumi Executive Director (Non-full-time)

HARA Akira Vice President and Executive Director for Medical Affairs Director of University Hospital



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**KAGEYAMA Shunji** Auditor



SHIGETA Yasuteru Vice President and Executive Director for Research



NARA Satoshi Vice President and Executive Director for Finance and Facilities



DONKAI Saori Vice President Director of Education Bureau of the Laboratory Schools



SATAKE Masayuki Auditor (Non-full-time)



**KANAHO** Yasunori Vice President and Executive Director for Collaborative Research



KATO Kazuhiko Vice President and Executive Director for General Affairs, Human Resources and Information Infrastructure



**ASASHIMA Makoto** Executive Director (Non-full-time)



TAKENAKA Yoshihiko President's Office Chief of Staff

#### History

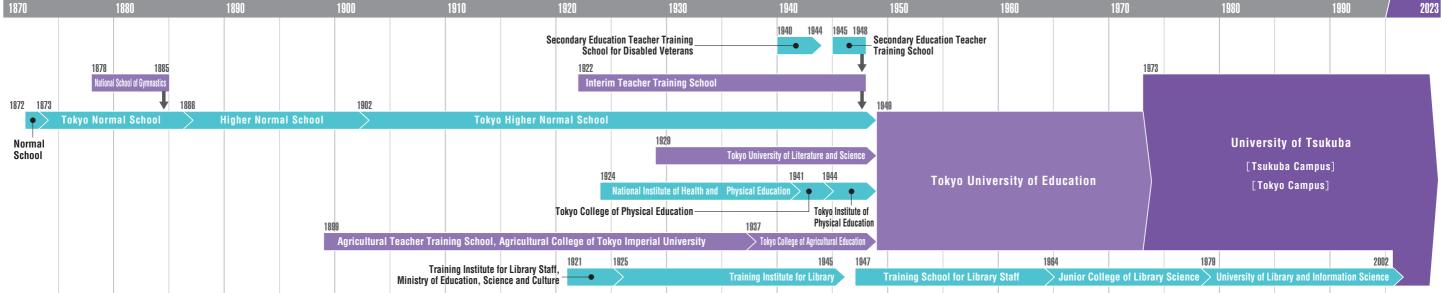
The University of Tsukuba was established in October 1973, due to the relocation of its antecedent, the Tokyo University of Education, to the Tsukuba area. As a new concept comprehensive university in Japan to be established under a country-wide university reform plan, the university featured "Openness" with "New Systems for Education and Research" under a "New University Administration." The university reform plays a major role in our continuing effort for improvement. We are striving to create a unique, active, and internationally competitive university with superlative education and research facilities.

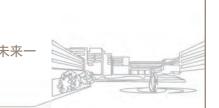
#### The University of Tsukuba and Tsukuba Science City

Tsukuba Science City is the largest leadingedge R&D center in Japan. The city boasts of more than 30 national research institutions, or about 30% of all national research institutes, and over 20,000 researchers are engaged in various research activities. The University of Tsukuba plays a central role in the city, aiming to create a new center for industry-academia-government collaboration that will generate innovation.



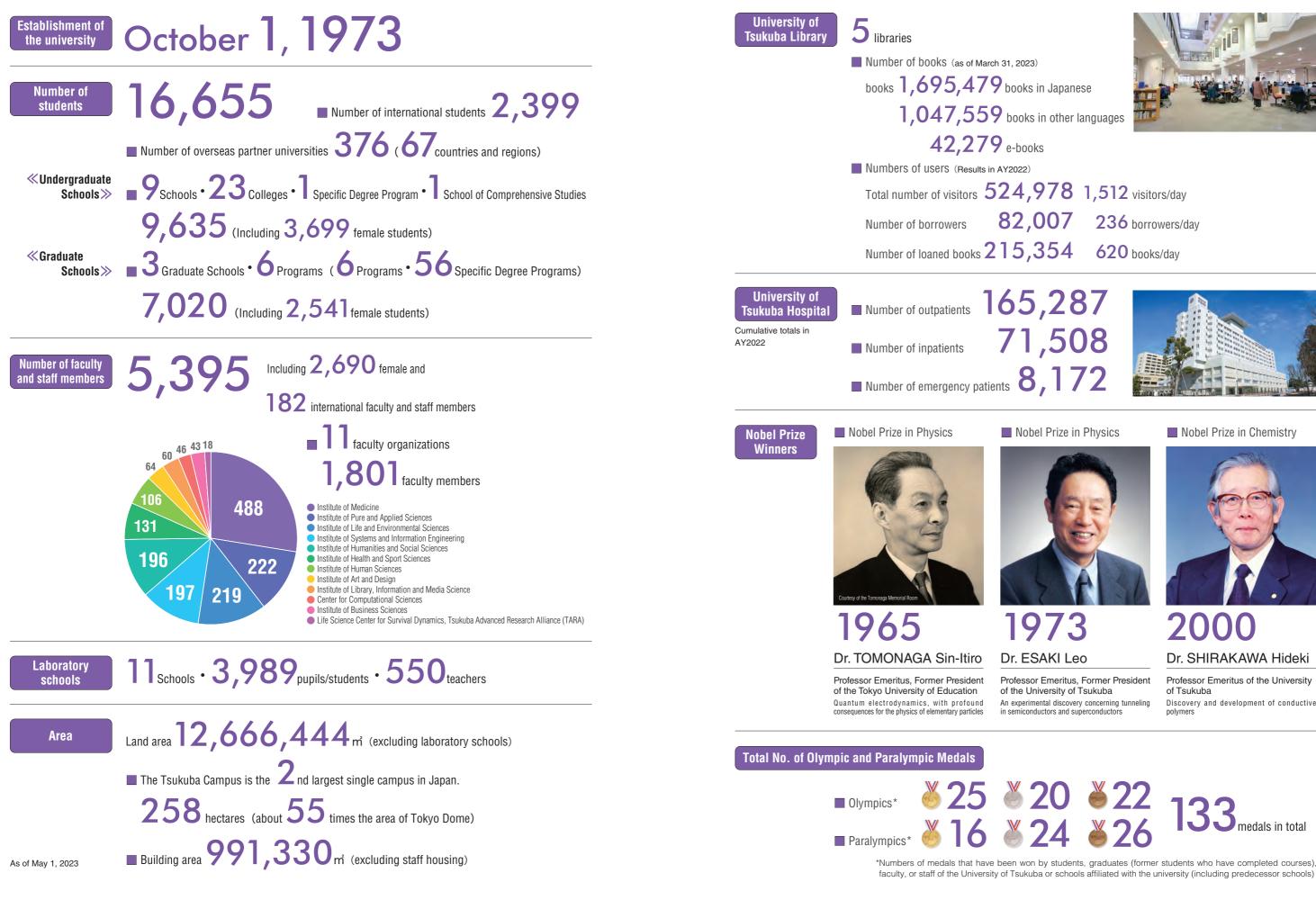








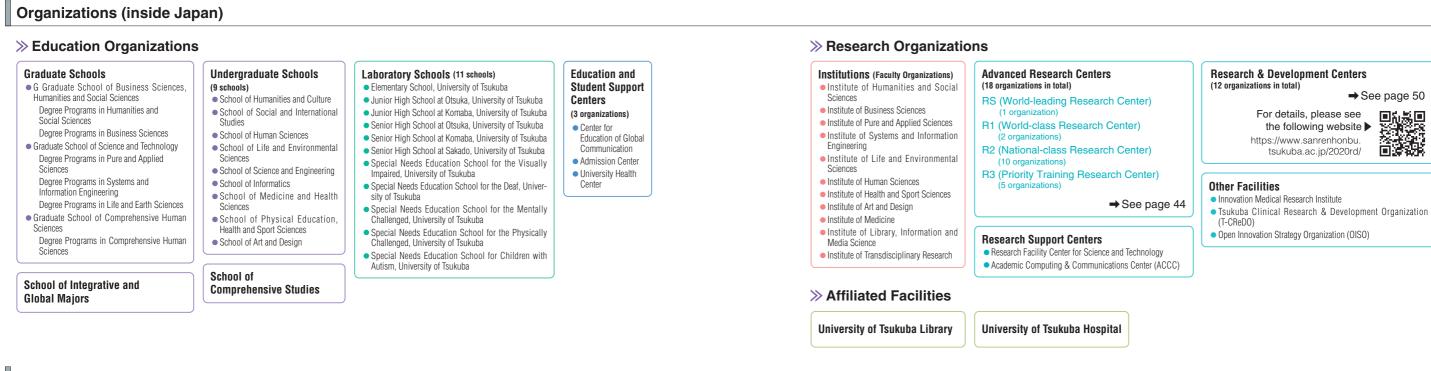
### University of Tsukuba in Numbers



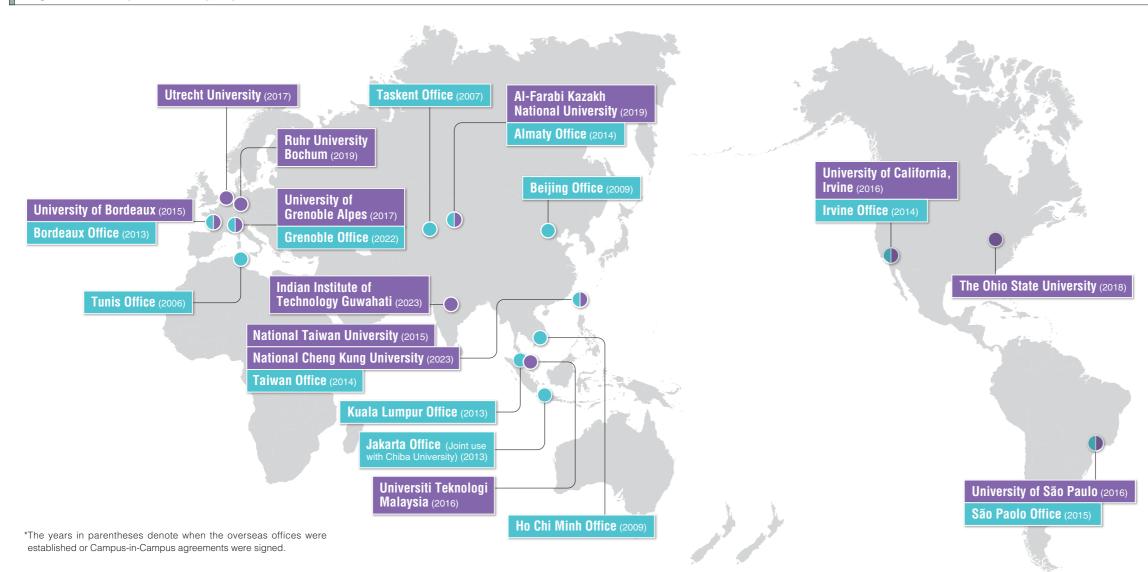




Discovery and development of conductive



**Organizations (outside Japan)** 



#### **Overseas Offices**

#### Twelve offices

(established in eleven different countries and regions\*) \*Including some within CiC partner institutions

We have established overseas offices to support international cooperation in promoting education and research activities as part of our internationalization efforts. We have offices in eleven different countries and regions as of now, the purpose of which is to carry out a wide range of activities in line with their respective missions, such as attracting international students, supporting students on study-abroad programs in the countries and regions, promoting and supporting academic exchanges with related universities and other organizations, and constructing alumni networks.

#### Campus-in-Campus

Twelve universities in nine different countries and regions

The Campus-in-Campus (CiC) Initiative is a scheme of sharing campuses among the partner universities with a purpose of utilizing our respective research and educational resources without any national or institutional barriers. Moreover, through the CiC scheme, partner universities are highly expected to enhance the mobility of exchange students, faculty members and administrative staff.

### **DESIGN THE FUTURE, TOGETHER.**



NAGATA Kyosuke President of the University of Tsukuba

We celebrated the 50th anniversary of the establishment of the University of Tsukuba in October 2023.

The university traces its roots to the Normal School, Japan's first institution of higher education, founded in 1872, which later became the Tokyo University of Education, the immediate predecessor of the University of Tsukuba, making 2023 also the 151st year since our founding. Since 1973, in which we were re-established as a "new concept university," we have committed to being open and promoting constant reforms and have been playing a leadership role in leading Japan's university reforms as a one-of-a-kind university in Japan that is unique from both a philosophical and structural perspective. While remaining fully aware of the role, we are determined to go beyond all kinds of borders to create new value through research and education and continue to fulfill our social roles.

Having marked its 50th anniversary, the University of Tsukuba is now pursing fundamental change once again. We declare to "DESIGN THE FUTURE, TOGETHER" with society, in continuation of our previous guiding theme "IMAGINE THE FUTURE"; in other words, envisaging an opener future, by striving to achieve the goal under the slogan "Beyond the Borders." Taking advantage of the excellent legacy and good traditions from the Tokyo University of Education, the predecessor school, as well as the abilities that the university has accumulated during the fifty years since its

foundation, we intend to conduct research across the boundaries of different disciplines, get ahead of the world in terms of educational models, make the most of our location in Tsukuba Science City to actively promote university-industry collaboration, and so on, as a truly comprehensive university committed to creating new knowledge to design future society. Through such initiatives, we will head for a better future hand in hand with you.

In April 2022, which marked our new beginning as a Designated National University Corporation, we established a set of basic policies, entitled "University of Tsukuba Vision 2030," to set out our vision for the university and how to realize it as part of our

efforts to achieve the above initiatives. (For details, please see the next page.) To create "GLOBAL TRUST." all members of the university will make concerted efforts to make the four elements of the Vision, namely Open University, and its Education, Research, and Co-creation with Society, intersect with one another to evolve into something more advanced. We look forward to your continued support and cooperation.

\* "GLOBAL TRUST" refers to a relationship of trust not only between individuals, or between an individual and an organization or society but also between societies, organizations, or countries, and is a concept that supports our mission, "create knowledge for resolving global issues and contributing to the development of the society of the future including the cultivation of human resources who will take the initiative



## University of Tsukuba Vision 2030

The University of Tsukuba aims to create GLOBAL TRUST and has summarized the ideals for the university and basic policies for achieving the ideals into The University of Tsukuba Vision 2030 to realize the aim. The Vision casts a fresh light on the meaning of "a university that is open in every sense of the word," which the university aims to be in its Mission Statement, and accordingly redefines the university as "a university that will deepen its engagement with society and co-create a future society as it should be alongside our stakeholders, particularly our students." It can be said that Tsukuba Science City, where many different research organizations and companies are clustered, provides an optimal environment (experimenting field) for bold large-scale experiments in the areas of education, research, and social contribution activity. Taking advantage of the favorable environment of the city, which has been designated as a National Strategic Special Zone for the Super City initiative, we intend to accelerate the realization of dreams of all stakeholders through our efforts from Tsukuba Science City, with our solid traditions and visionary spirit of innovation in mind

The University of Tsukuba Vision 2030 consists of the following four elements:

- Open University Vision 
  → For details, please see Page 23
- Education Vision → For details, please see Page 31
- **Research Vision**  $\rightarrow$  For details, please see Page 40
- Co-creation with Society Vision → For details, please see Page 47

While Education Vision, Research Vision, and Co-creation with Society Vision correspond to the education, research, and social contribution activities of the university, which are its missions, respectively. Open University Vision is meant to represent what the university aims to be, which forms the foundation for the other three elements. "Co-creation with Society" has evolved from traditional social contribution activities, in response to a need to redefine the basic characters of the University of Tsukuba.

#### Designated National University Corporation Scheme of the University of Tsukuba -Towards a "truly comprehensive university" committed to resolving global issues -

April 1, 2022 marked our new beginning as a Designated National University Corporation. Designated National University Corporations are national university corporations designated by the Minister of Education, Culture, Sports, Science and Technology of Japan as showing a certain level of promise for world-class education and research activities. with the aim of accelerating the improvement of education and research standards and the creation of innovations in Japanese universities. Designated universities are expected to go beyond the scope of domestic competition inside Japan to compete with leading universities around the world in the competitive international environment and are expected to lead reform efforts across Japanese national universities by proactively sharing specific outcomes of their contributions to social and economic development. To become a truly comprehensive university committed to

> Information about the Designated National University Corporation scheme of the University of Tsukuba is also available on the following website of the Ministry of Education, Culture, Sports, Science and Technology of Japan https://www.mext.go.jp/b\_menu/houdou/mext\_00343.html

For details, please visit the following website of the Bureau of Strategic Management Initiatives https://www.bsmi.sec.tsukuba.ac.jp/



resolving global issues, which is our vision for the future, we have set three goals under the slogan "Beyond the borders."

- 1. Enhance research beyond disciplines
- 2. Develop human resources without borders
- 3. Implement research results to solve global issues

As a Designated National University Corporation, the University of Tsukuba is expected to play a leadership role in the reform of national universities. We are sure that by meeting this expectation we can become a driving force behind further growth of higher education in Japan and overall development of the country. We will strive to make this come true, being fully aware that the whole world is the stage for our collaboration and competition.





## **University of Tsukuba Process for Creating Value**

### To create GLOBAL TRUST

### Governance

### Mission, Vision

### Founding Principle

Designated National University Corporation Scheme

### Activities & Outputs

#### 

- Establish independent and strategic university management to create GLOBAL TRUST
- Expand the fan base of the University of Tsukuba by increasing engagement
- Build a next-generation university oriented toward a digital society

#### Education Vision strategies $\Rightarrow$ P.31

- Implement education that helps students grow more resourceful as human beings, so that they can become good leaders in the post-VUCA era
- Promote new types of education and research activities to help people achieve personal development and meet diverse social education needs
- Promote an education system with international interchangeability worldwide

### University of Tsukuba Vision 2030

Open University Vision Education Vision Research Vision Co-creation with Society Vision

#### Research Vision strategies P.40

- Promote intellectually stimulating research that examines principles
- Create new academic fields by promoting interdisciplinary research
- Develop and improve environmental infrastructure for the creation of knowledge to help young talent reach their potential

#### Co-creation with Society Vision strategies 🔶 P.47

- Take on challenges towards co-creation of a future society through industry-academiagovernment-bank collaboration
- Strengthen the venture ecosystem of the University of Tsukuba
- Accelerate the co-creation of a future society through social implementation of R&D results

Finance

Diversification of Social Needs —Addressing Global Issues—

# GOALS

**External Environment** 

Financial Conditions, Technology Changes, Social Issues, Environmental Issues, etc.

### Inputs

### Capital

#### AY2023 Budget Amount: 109.6 billion yen

- Management Expense Grants · · · 35.8 billion yen
- Non-subsidy Revenue ..... 50.7 billion yen
- Other Revenue
   Please note that as figures less than one hundred million have been
   rounded off, their sum may not coincide with the total
- Human Capital

#### Faculty Members: 5,395

Executive Officers, Faculty Members, Researchers	
	2,351
Technical Staff and Medical Staff      · · · · · · · · · · · · · · · ·	1,851
Administrative Staff	1,193
Students: 16,655	
Students: 16,655     Undergraduate	9,635
	,

### **Physical Capital**

(Financial Results for AY2023)

#### Fixed Assets: 353.0 billion yen

- Land Area: Approx. 12.67 million m  $^2 \cdot \cdot$  241.7 billion yen
- Building Area: Approx. 990,000 m<sup>2</sup>····· 75.2 billion yen
- Tools, Furniture and Fixtures  $\,\cdots\,$  11.6 billion yen
- Number of Books: 2.74 million  $\cdots \cdots 10.4$  billion yen
- Other
   14.1 billion yen



### Engagement with Stakeholders

### Impact

Contributions to Resolving Global Issues

### Outcomes

- Making dreams come true as a university that is open in every sense of the word
- Promoting independent university management by increasing openness and transparency
- Developing basic skills in understanding the essence of things and seeing things from many different sides
- Providing a free environment that allows students to keep trying as many times as they want and developing human resources who have diverse values and a good sense of ethics and are able to explore the best possible measures to solve issues and put them into practice
- Promoting interdisciplinary collaborations between researchers with a high degree of professionalism and a broad vision
- Promoting research in traditional academic fields by thinking outside of the box while trailblazing in innovative research fields
- Networking with the world from Tsukuba Science City to work on global issues
- Promoting social implementation of R&D results that lead to resolving global issues, thereby contributing to the co-creation of a future society
- Strengthening cooperation with society to achieve the SDGs, ESG goals, and carbon neutrality

Promote independent university management to make dreams come true as a university that is

open in every sense of the word by increasing openness and transparency.

#### 🖗 What Open University Vision represents 》

We are expected to enhance and promote independent and strategic university management. Making the University of Tsukuba a university that attracts and attach people is an essential element of meeting the expectations. We wish to be a one-of-a-kind university that provides all members with an environment that allows them to engage in activities vibrantly and proudly and cocreates dreams with all stakeholders both inside and outside the university. To catch up with the world's leading universities that are financially independent, it is an urgent task for us to establish a system that will enable us to make institutional and speedy decisions, while at the same time diversifying our financial sources and reinforcing our compliance system and governance.

#### Strategy 1 Establish independent and strategic university management to create GLOBAL TRUST

- >>> Strengthen our financial base through the diversification of financial sources
- >> Reinforce compliance
- >> Promote agile governance

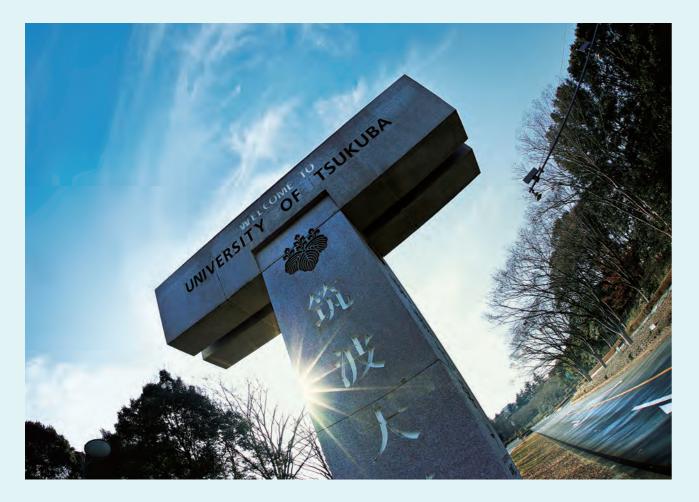
For details of our efforts to reinforce our governance system and compliance, see Page 57.

#### Strategy 2 Expand the fan base of the University of Tsukuba by increasing engagement

- >>> Establish an empowering environment for people who will lead a "diversity, equity & inclusion" society
- >>> Strengthen partnerships with society and community
- >> Energize Tsukuba Science City through organic collaborations

#### Strategy 3 Build a next-generation university oriented toward a digital society

- >> Promote a digital campus to accelerate the circulation and sharing of information
- >> Create new value by restructuring work conditions



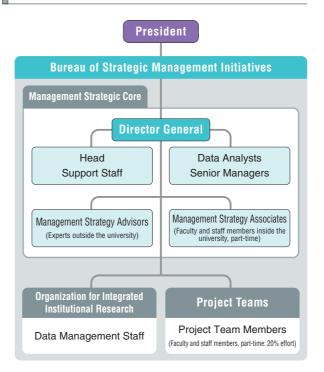
### Towards more independent and strategic university management: Establishment of the Bureau of Strategic Management Initiatives

The Bureau of Strategic Management Initiatives is a new organization that was only launched in April 2022 with the mission of establishing medium- to long-term management strategies for the University of Tsukuba and making them realities. The office involves both faculty and staff members Website of the Bureau of Strategic and works to promote continued growth and development of the university through a Management Initiatives wide variety of initiatives, including promotion of the University of Tsukuba Vision 2030. https://www.bsmi.sec.tsukuba.ac.jp/

### Mission and duties of the Bureau of Strategic Management Initiatives

- **Duties** Planning and implementation of corporate management strategies
  - Management analysis and future forecast utilizing IR data teams to solve them

#### System of the office (Organization chart)



#### Improvement of engagement

The Office seeks to increase engagement, for example by holding a symposium, opening its website, and publishing interviews with faculty and staff for the achievement of Vision 2030.



Vision Symposium (held on May 18, 2022)

Website of the Bureau of Strategic Management Initiatives



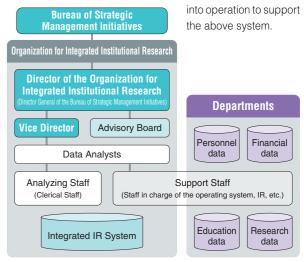
**Mission** Establish and realize medium- and long-term management strategies and promote evidence-based university management

Identification of cross-jurisdictional and cross-sectoral issues, and establishment and management of project

#### Promotion of evidence-based corporate management

The Organization for Integrated Institutional Research was established under the Bureau of Strategic Management Initiatives in April 2023 to provide a system that enables the office to collect, provide, and analyze the necessary data to support corporate decision-making in a cross-sectoral manner.

At the same time, an integrated IR system that provides a BI tool-based visualization function has been introduced and put







Published interviews with faculty and staff

#### Strengthening our financial base through the diversification of our financial resources

#### Issuance of "University of Tsukuba Social Value Creation Bond"

We issued a sustainability bond\* named "The University of Tsukuba Social Value Creation Bond" in October 2022 to cocreate a future society based on new social value with society.

It was decided in May 2023 that funds raised through this bond would go towards three projects based on the University of Tsukuba Vision 2030 (1. IMAGINE THE FUTURE Forum, 2. Sport Complex for Tomorrow, and 3. Future Society Design Building), which the university would carry out to co-create a future society based on new social value with society itself as part of its efforts to help achieve carbon neutrality and the SDGs.

\*A bond funds raised for projects that contribute to solving global environmental and social issues

#### >> Outline of IMAGINE THE FUTURE Forum (scheduled to be completed in AY2027)

This project is about developing a facility to create new social value, aiming to convert the intelligence, networks, human resources, and other resources and value accumulated in the University of Tsukuba into social value, for example by promoting genuine needs-driven industry-academia collaborative research to proactively resolve social issues and seeking to cocreate innovations leading to social reforms.

>> Outline of Sport Complex for Tomorrow (scheduled to be completed in AY2025)

This project is about developing a space that can be utilized to practice

tutorial education to promote the production of social problem-solving

research and future-making people, which the University of Tsukuba aims

to achieve, as well as to help students think of new ideas, showcase their

student culture, and interact with local communities.



Architectural perspective



Architectural perspective

#### >>> Outline of Future Society Design Building (scheduled to be completed in AY2025)

This project is about developing a space that can be utilized to practice tutorial education to promote the production of social problem-solving research and future-making people, which the University of Tsukuba aims to achieve, as well as to help students think of new ideas, showcase their student culture, and interact with local communities.



Architectural perspective

#### Tsukuba Futureship

Since April 2010, the university has been awarding the Tsukuba Futureship to students who demonstrate the potential to pave a new path for the future to provide them with a stable environment where they can concentrate on studying and research and with opportunities to engage in various mutual exchanges as well as to contribute to promoting education and research at the university, and also social contribution activities.

The Tsukuba Futureship has both a General Fund and Specified Funds. The General Fund mainly provides financial support to elementary, secondary, and tertiary students for study and research purposes and for international exchanges and development of global human resources.

The Specified Funds, which are established for the implementation of specific projects conducted by the university, are used for purposes such as training and strengthening athletes and teams in sports clubs and developing human resources who will provide high-quality medical care at the University Hospital.

The Study Support Fund, which is a specified fund, provides support to students who have difficulty studying due to economic reasons. In accordance with the tax deduction scheme introduced under fiscal 2016 tax reforms, donors to this fund can receive a tax deduction by choosing either an "income deduction" or "tax deduction," whichever is more advantageous.

In addition to tax incentives for making donations, the university also gives commendations to donors based on the amount of their donations, as an expression of gratitude to donors.

We thank you for your understanding of the mission of the Tsukuba Futureship and we look forward to your continued support.

#### Crowdfunding

In AY2017, we launched a business partnership with READYFOR Inc. for crowdfunding, a powerful tool for obtaining donations. In AY2022, we implemented five projects with a funding amount of approximately 69 million yen. As a university carrying out a broad range of educational and research activities, we invite crowdfunding contributions

mainly from outside the university for project themes that can benefit society. The university will continue actively implementing projects concerning its education, research, cooperation with local community members and other activities and communicating these activities to encourage the formation of donation habits and increase new donors, thereby strengthening its financial base through diversification of its financial resources.

#### Projects Implemented in AY2022

#### Renewing the dilapidated synthetic turf on a soccer field of the University of Tsukuba

The former First Soccer Field of the University of Tsukuba was tested for performance and was diagnosed as being below the JFA standards in many categories, including shock absorption and stability, indicating that it was no longer safe as a training environment, after many years of utilization and aging. If nothing is done about this, we will face an urgent situation, because it cannot be used for official university soccer matches, and things will become difficult for men's and women's soccer teams, soccer-related research, and other activities of the University of Tsukuba. The objective of this project is to repair the soccer field of the university for the future of the Japanese soccer world.

Amount raised: 18,145,000 yen (10,000,000 yen)

#### O To pass down the Kellner Rice Paddy, an agricultural legacy of Komaba, to the future

The Kellner Rice Paddy, located in Komabano Park in Meguro Ward, was originally founded as part of the Komaba Agricultural College, which opened in 1878. This rice paddy, named after Professor Oscar Kellner, who was invited from Germany at that time, laid the foundations for the development of modern agricultural research and education.

Junior and Senior High Schools at Komaba, the University of Tsukuba, have been using the rice paddy for educational activities each year since the foundation in 1947 and have implemented maintenance work on it several times by now. Now that nearly forty years have passed since the last repair work, continued utilization of the rice paddy is very difficult due to soil deterioration, water leakage, poor drainage, and other problems. Funds raised through this project will go towards repair work aimed at maintaining and passing down this invaluable rice paddy with a history.

Amount raised: 42,496,000 yen (28,000,000 yen)

#### 3 Wider distribution of "*Kusuri Hajimete Guide* (Beginners' Guide to Medication)," a leaflet for people with developmental disabilities

"Kusuri Hajimete Guide (Beginners' Guide to Medication)" is a leaflet about medical services and medication for people with developmental disabilities that is created by a team led by a researcher with developmental disabilities (Dr. Nakata, University of Tsukuba) and joined by families of people with developmental disabilities and medical specialists. Although this leaflet is only distributed within limited areas at the moment, it has been requested not only by hospitals and people with developmental disabilities but also by many welfare service Website of Tsukuba Futureship https://futureship.sec.tsukuba.ac.jp/



and research activities, we invite crowdfunding contributions penefit society.

providers, school teachers, and other people, and few copies are left now. This is the reason that we need to reprint the leaflet to continue with our activity, so that it can reach more people with developmental disabilities across Japan to give them better informed access to medical care in the future. The immediate aim of this project is to print 10,000 additional copies of the leaflet. Funds raised through this project will also go towards the cost of distributing it to more people with developmental disabilities and their supporters.

Amount raised: 2,622,000 yen (1,800,000 yen)

#### Miraikan Project of the University of Tsukuba R&D Center for Digital Nature

The University of Tsukuba R&D Center for Digital Nature, which was launched in 2020, is mainly engaged in R&D activities, development of human resources, and social implementationoriented initiatives. The purpose of this crowdfunding project is to invite the general public to contribute funds to cover part of the costs for an exhibition that the R&D Center for Digital Nature will hold at Miraikan - The National Museum of Emerging Science and Innovation. Funds raised through the project will go towards showcasing the social implementation and academic-industrial collaboration results of research projects carried out by the center in the form of "an exhibition" to be held at the museum, as well as towards the costs associated with moving in the Research Area of Miraikan and other expenses for development of research.

Amount raised: 2,715,000 yen (2,500,000 yen)

#### Making Japan healthier by discovering sources of energy from the bodies of athletes

We are engaged in a project that conducts detailed examination of what is happening in the bodies of elite athletes (in other words, super healthy bodies), and aims to apply the results to the health of general people. In this research project, we examine a hypothesis that elite athletes carry special elements in terms of genes and blood that keep them healthy, with the aim of putting the results to good use. This project has the potential to detect "sources of energy," which are the elements that keep elite athletes healthy. We have decided to start this crowdfunding project because we wish to involve direct support from sports lovers who are moved and encouraged by watching athletes, as well as amateur athletes who frequently enjoy doing sports themselves, as we take the first step into the research.

Amount raised: 3,149,000 yen (3,000,000 yen)

The amounts in parentheses show the target amounts.

#### The empowerment of everyone starts with individuals. Aiming to bring a smile to each and every individual with the help of everyone: Establishment of the Bureau of Human Empowerment (BHE)

The University of Tsukuba established the Bureau of Human Empowerment (BHE) in January 2023 to become a university where all members, including both students and staff, respect and cooperate with one another, and sometimes facilitate each other's growth through friendly competition as good rivals. As an "open university," the university has always placed special emphasis on diversity and inclusion. Today, we are living in an era in which all of our surroundings are changing more and more rapidly, which makes it increasingly difficult to forecast the future. This is the time when we are required to pay even greater attention to diversity and inclusion than ever before and create new methods and value that are not extensions of what we have traditionally been doing by transforming diverse differences into power, thereby responding effectively to changes.

Building upon the experience and knowhow that the Diversity, Accessibility and Career Center, the predecessor of BHE, has accumulated in the areas of gender support, accessibility support, and career support, BHE forms issue-specific cross-sectoral taskforces to get them to work on action plans. In addition, BHE consists of members from a wide variety of backgrounds, such as faculty members in art, physical education, and human sciences and those from corporations, who are also diverse in terms of age, sex, sexuality and disability. They work in cooperation with, and seek opinions from, students depending on their activity themes as they carry out their tasks.

Disparities and discrimination can be corrected through institutional intervention, such as abolition of unfair systems and establishment of new guidelines, when they are visible. Inclusion, however, means allowing all individuals to feel that they are "respected as team members while contributing to their teams in one way or another themselves," irrespective of whether they have special needs or whether they are minorities or majorities, and it is something that consists of the behavior of each person. BHE proactively makes new attempts to make the University of Tsukuba even more inclusive by working in partnership with organizations and individuals both inside and outside it.

#### **Major initiatives**

- Providing intensive courses and seminars concerning diversity and inclusion
- Creating a policy to provide reasonable accommodations to faculty and staff with disabilities
- Developing peer tutors to support students with disabilities
- Organizing International Women's Day and Pride Month awareness-building activities
- Providing "KITEKITE," a space for LGBTQ+ students (limited-time)
- Holding a science forum for female junior high school and high school students
- Providing career support services for international students and post-doctoral researchers
- Providing seminars to support participation in corporate internship programs
- Providing portfolio and career path seminars for those with a doctor's degree
- Implementing public information and awareness-building activities concerning diversity and inclusion for other universities. etc. (certified as "Joint Usage/Research Center" by the Minister of Education, Culture, Sports, Science and Technology) Other programs jointly developed with companies and other universities

Website of the Bureau of Human Empowerment https://dac.tsukuba.ac.jp/





#### **Bureau of Human Empowerment**

#### **Basic principle**

We respect the rights, potential and diversity of each member of the University of Tsukuba, including students and staff, and build an environment where each individual's ability is demonstrated and utilized to the fullest. Through these efforts, we will foster a university culture that promotes the empowerment of people.

In order to create a virtuous cycle of value based on human diversity and inclusion by establishing relationships of trust with organizations inside and outside the university, our behavioral guidelines aim to achieve the following:

- their career paths.
- each organization and individual.
- 3 Implement educational activities to help members understand and respond appropriately to a diverse group.
- Generation of the second secon empowerment of people both physically and mentally.
- 3 Carry out activities to create a society that is inclusive of diversity by collaborating and cooperating with local communities and the international community



Exchanges between students with disabilities and peer tutors



Joint career fair



Participation in TOKYO RAINBOW PRIDE 2023

#### Behavioral guidelines

• Support human resource development so that members can maximize their diverse individual abilities according to

2 Support the creation of a fair and impartial environment that utilizes members according to the goals and objectives of





#### Towards maximum utilization of human, intellectual, and material assets related to physical education and sports: Establishment of the Bureau of Physical Education and Sports

Dr. KANO Jigoro, who served as principal of the Tokyo Higher Normal School, the predecessor of the University of Tsukuba, laid the foundations for the development of physical education and sports in Japan and other parts of Asia by establishing Japan's first physical education course and acting as the first member of the International Olympic Committee in Asia. Since then, the University of Tsukuba has produced numerous athletes over its long history, which started with the Tokyo Higher Normal School. Our traditions of over 140 years have continually been passed down to today, and will be carried through to the future.

Building upon the traditions, the University of Tsukuba established the Bureau of Physical Education and Sports in April 2023 to centralize all of its physical education- and sports-related operations. Operations concerning physical education and sports, which had been allocated across different departments in the past, became centralized in this university-wide organization, which enables more sophisticated development of human resources through physical education and sports and works to maximize the well-being of all individuals involved in physical education and sports by making effective use of the diverse assets owned by the university.

> For more information about sports at the University of Tsukuba https://www.tsukuba.ac.jp/about/action-sport/



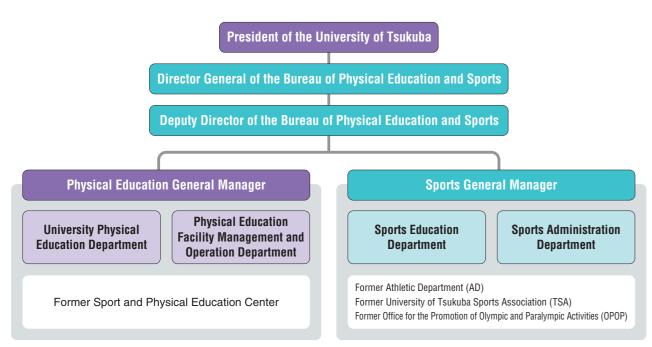
#### Goal and main measures

Aim to enhance education and social contribution activities by making the most of the human, intellectual, and material assets that the University of Tsukuba owns in the field of physical education and sports to strengthen our revenue base and allow students who participate in university sports to develop competence and carry out sports activities safely and securely because universities are increasingly required to have more independent and stronger management bases.

#### Establishment of the Bureau of Physical Education and Sports

The operations and functions that had been performed by different physical education and sports organizations (Sport and Physical Education Center, Athletic Department, University of Tsukuba Sports Association, and Office for the Promotion of Olympic and Paralympic Activities) in the past became centralized in the Bureau of Physical Education and Sports, which consists of four new departments that manage physical education and sports activities within the university: University Physical Education Department, Physical Education Facility Management and Operation Department, Sports Education Department, and Sports Administration Department.

The bureau aims to improve physical literacy, promote character development of students, foster school spirit, acquire external funds, and promote regional revitalization through university-wide asset management and utilization and reinforcement of partnerships with external organizations (including private companies, municipal governments, and elementary, junior high and high schools), in addition to streamlining of operations.



#### University Physical Education Department

The aim of the department is to increase physical literacy by compiling course curriculums, including that for the common subject course "Physical Education," and taking care of related instruction-related operations, in addition to implementing measurements of physical fitness of students enrolled in the "Physical Education" course. Besides this, the department promotes research concerning university physical education and sports and mutual faculty development between faculty members, plans and manages risk management-related activities, and so on.

#### Physical Education Facility Management and Operation Department

The aim of the department is to facilitate the acquisition of external funds by working in cooperation with the university's external corporations to raise revenue through effective utilization of its physical education and sports facilities, in addition to inspecting and managing the physical

#### **Main Initiatives**

#### >> "TSUKUBA LIVE!"

"TSUKUBA LIVE!" is a home game event organized by the University of Tsukuba with the vision of "expanding the potential of university sports and creating exchange, excitement, and culture through sports." It is planned and implemented by sports administrators and students who volunteer to join them to realize a future where students, organizations within the university, and local communities can join forces as one through the home game event and grow together, while multiplying each other's energy.

#### >> Student Athlete Leadership Training

In this human resource development program, which aims to educate student athletes, participants take part in group works and discussions beyond the boundaries of teams to explore the leadership qualities they each own while looking back on their past lives.

The University of Tsukuba is planning to continue to educate human resources through sports in the future, while developing and promoting effective programs, so that they will be introduced to schools and universities across Japan.

#### >> Coaching Seminar

At present, Japanese schools are faced with the challenge of securing coaches in response to the shift in school sports club activities from coaching by teachers to local community coaching.

The University of Tsukuba places emphasis on initiatives concerning the development of sports coaches in local communities with the goal of contributing to the development of school sports in the Japanese society.

#### >> Career Support Program

The purpose of the Career Support Program is to help student athletes add what they have experienced and learned through sports to their own value, so that they can make more satisfying career choices.

The University of Tsukuba aims not only to produce advanced human resources through university sports activities but also to provide career support to student athletes, so that more of them can find even more satisfying career paths.

education and sports facilities inside the university, and establishing maintenance plans and providing a network environment for them.

#### Sports Education Department

The aim of the department is to promote the character development of students by implementing a university-wide educational program that is designed to take advantage of the power of sports to allow students to develop advanced expertise and applied skills through sports activities (do/watch/support), establishing a system to monitor the learning results, and evaluating them.

#### Sports Administration Department

The department aims to foster school spirit, acquire external funds, and promote regional revitalization by supporting internal sports activities, holding sports events, promoting international exchanges, implementing community contribution and public relations activities, and so on.





Student Athlete Leadership Training



Coaching Seminar



Career Support Program

Developing basic skills in understanding the essence of things and seeing things from many different sides through a wide range of academic studies. Providing a free environment that allows students to keep trying as many times as they want and developing human resources who have diverse values and a good sense of ethics and are able to explore the best possible measures to solve issues and put them into practice.

#### What Education Vision represents 》

Taking advantage of being a "truly comprehensive university" that covers a broad spectrum of academic disciplines, the University of Tsukuba intends to place even greater emphasis than before on the development of human resources who have the basic knowledge that forms the basis of different academic areas of study and the ability to co-create society by working independently in cooperation with others while making bold attempts to create new fields. In fact, these are the qualities and abilities that are essential for surviving the coming age, when things are expected to become more and more complex. We aim to nurture these gualities and abilities through our unique degree programs that are designed to clarify the essence of issues found by individual students themselves and deepen their explorations into them. The University of Tsukuba offers powerful support to students who strive to make their dreams come true not only in the area of academic studies but also in other areas, such as starting up businesses or studying abroad, and seeks to provide an environment that allows diverse students to work comfortably to achieve personal development. Furthermore, we intend to accelerate the construction of an educational environment that can meet social needs, such as recurrent education and lifelong learning-oriented education, that are transforming with shifts in work patterns.

#### Strategy 4 Implement education that helps students grow more resourceful as human beings, so that they can become good leaders in the post-VUCA era

- >> Practice university-wide tutorial education based on design thinking
- >> Provide personalized educational programs and utilize the visualization of learning results
- >> Proactively support activities that promote the value of experience



#### Strategy 5 Promote new types of education and research activities to help people achieve personal development and meet diverse social education needs

- >> Promote the development of practical problem-solving human resources who have a spirit of mutual prosperity (Undergraduate programs)
- >> Expand the development of creative researchers and advanced specialist professionals under the University of Tsukuba brand (Graduate programs)
- >> Promote lifelong learning-oriented education, including recurrent education for those who are already employed

#### Strategy 6 Promote an education system with international interchangeability worldwide

- >> Develop educational programs that bring together students from different countries
- >> Promote the Tsukuba Education System abroad
- >> Create innovative approaches to the reform in articulation between high school and university



#### Initiatives by the University <Examples>

### Towards the development of problem-solving human resources: Establishment of the Organization for Advanced Teaching and Learning

Taking advantage of being a "truly comprehensive university" that covers a broad spectrum of academic disciplines, the University of Tsukuba intends to place even greater emphasis than before on the development of human resources who have the basic knowledge that forms the basis of different academic areas of study and the ability to co-create society by working independently in cooperation with others while making bold attempts to create new fields. With this goal in mind, we established a new organization named "Organization for Advanced Teaching and Learning" in AY2022 to introduce leading-edge educational systems, enhance excellent educational contents, and promote more international educational activities.

The organization works to further promote the education of the university and enhance learning activities, for example by realizing "university-wide tutorial education," which aims to develop human resources who can think in a transborder manner and put such thoughts into practice by setting questions and finding answers for themselves, and promoting educational DX.

In addition, the organization has been selected by the Ministry of Education, Culture, Sports, Science and Technology for the Grant-in-Aid for University Reform to implement "a project that aims to develop highly specialized human resources who drive industrial DX by combining digital technology with specialized fields" (adopted in AY2021 and implemented in AY2022). This project has enhanced the digital educational infrastructure for data science-related subjects for four Master's courses and one undergraduate course (Policy and Planning Sciences) in different disciplines (policy and planning sciences, service engineering, materials science, and informatics) and has established a place where diverse participants can have cooperative discussions on real-life DX issues raised by companies and others to provide an educational system to develop human resources who can go beyond the boundaries of different disciplines to create and propose solutions.

#### To sustainably ensure and improve educational quality: Initiatives of the Office of Management for Teaching and Learning

Since the foundation, the University of Tsukuba has been seeking to improve its education by listening to the opinions of students. To make further improvements, we have established the Office of Management for Teaching and Learning with the aim of sustainably ensuring and improving the educational quality of Master's and Doctoral Programs, at the same time as our switch to the university-wide degree program system (AY2020).

The purpose of the office is to promote the establishment and advancement of internal guality assurance mainly through Master's and Doctoral Program monitoring (annual self-inspection) and program reviews (comprehensive inspection, evaluation, and talk implemented every several years), in addition to internal reviews for the creation and reorganization of Master's and Doctoral Programs, analysis of data concerning education, teaching, and learning, guestionnaire surveys on respective types of stakeholders, promotion of systematic faculty development, and research and studies about higher education.

The IR Department was established within the office in AY2022 to reinforce its system to promote evidence-based educational improvements and enhance the analysis and sharing of information about the learning states and other aspects of students based on various data.

#### Moving across international borders to attract diverse human resources: Admissions reform initiatives

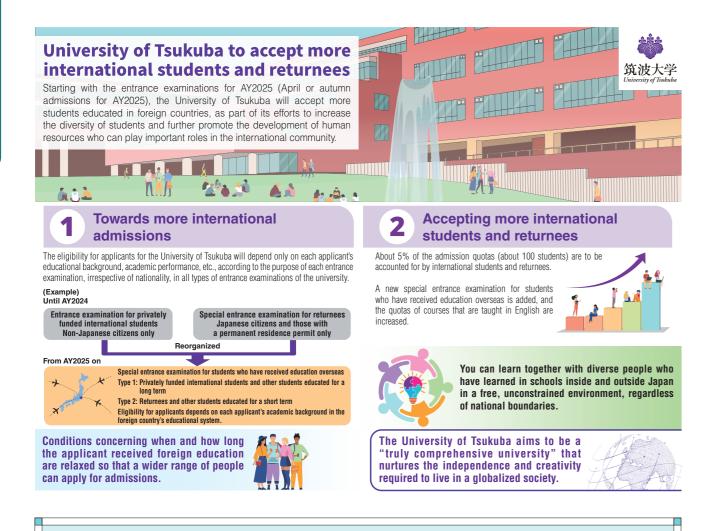
#### A new special admission system for students who have received education overseas

Starting with the entrance examinations for AY2025, the eligibility for applicants for the University of Tsukuba will depend only on each applicant's educational background, academic performance, etc., according to the purpose of each entrance examination, irrespective of nationality, in all types of entrance examinations of the university. In addition, the university announced in AY2022 that the entrance examination for privately funded international students and special entrance examination for returnees would be reorganized into a special examination for students who have received education overseas.

#### Expansion of admission quotas for entrance examinations for international students, returnees, etc.

As part of its efforts to further bring internationality into everyday lives on campus while moving across international borders to attract diverse human resources, the University of Tsukuba has decided that about 5% of the admission quotas of respective schools should be admitted through special entrance examinations for international students, returnees, etc., starting with the entrance examinations for AY2025.

The university announced in AY2022 that the admission quotas of English programs, etc., would be increased, in addition to the establishment of the above special examination for students who have received education overseas.



#### Preparations for the opening of the Malaysia Campus

The University of Tsukuba has been making necessary arrangements in preparation for the establishment of an overseas campus in Malaysia to become the first Japanese university to offer Japanese degrees abroad.

As a result of systemic revisions in 2005 and 2008, Japanese universities are now allowed to set up overseas campuses. In reality, however, they need to overcome extremely high hurdles to open campuses, such as meeting both requirements imposed by domestic systems and institutional challenges associated with establishing universities, etc., in target countries, as well as financial and managerial challenges associated with putting in limited human and material resources. Consequently, no Japanese national, municipal or private universities have ever established overseas campuses where local students can earn Japanese degrees even after 15 years.

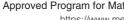
We completed the corporate branch registration procedure in Malaysia in November 2022 and submitted an application to the Ministry of Higher Education of Malaysia for approval to establish an institution of higher education in December of the same year, which was approved in February 2023. In Japan, we submitted an application to the Ministry of Education, Culture, Sports, Science and Technology for approval to establish the campus in March 2023. We are planning to continue to follow the necessary procedures in the two countries in the future, and start activities to attract students once the establishment of the campus is officially approved.

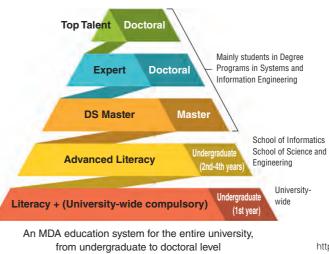
#### Promoting lifelong learning-oriented education, including recurrent education for those who are already employed

The University of Tsukuba has been leading continued education for working members of society, mainly at graduate school level, by developing and implementing a broad variety of educational systems that are specially designed for those who are already in employment, since it established Japan's first night graduate school for working members of society in 1989. In addition, we also provide extension programs and certificate programs besides traditional educational curriculums. We have been striving to develop and promote educational programs that take into account the career and background diversity of adult students, resulting, for example, in three of our programs becoming adopted by the Ministry of Education, Culture, Sports, Science and Technology as Recurrent Education Promotion Projects for Producing Work-Ready Human Resources in Growth Fields for AY2023 (AY2022 supplementary budget). Furthermore, Ibaraki Prefecture, the industrial community, the University of Tsukuba, and other educational institutions are working in partnership and repeating discussions to promote the re-skilling of corporate employees in the prefecture through the Ibaraki Prefecture Re-skilling Promotion Council, which was established by the prefecture in AY2022.

### To develop human resources who can become good leaders in the post-VUCA era

The common foundation subject "Information Literacy (2 credits, and 4 credits for students admitted in AY2019 and later academic years)," which aims to get students to develop basic information literacy and computer skills, has been a compulsory subject for all undergraduate students of the University of Tsukuba from the establishment of the university to today. This program was certified by the Ministry of Education, Culture, Sports, Science and Technology of Japan as an "Approved Program for Mathematics, Data Science and AI Smart Higher Education (Literacy +)" in AY2021, and a program offered by the School of Informatics as an advanced version of the above program was certified as "Advanced Literacy" level in AY2022. (An application for "Advanced Literacy" level certification was submitted in AY2023 for a program offered by the School of Science and Engineering.)





#### Promotion of transborder education and research exchanges beyond national and institutional boundaries

The Campus-in-Campus (CiC) initiative has been adopted for the Top Global University Project by the Ministry of Education, Culture, Sports, Science and Technology. By now, we have signed CiC agreements with twelve overseas universities to achieve the initiative

It aims to allow students, faculty, and staff members to freely utilize universities around the world as their home campuses by providing the Course Jukebox System, which enables courses to be shared between CiC partner universities, launching and implementing Joint Degree and Double Degree Programs, inviting overseas research units, setting up mutual offices, and so on, with the goal of realizing transborder education and research exchanges beyond national and institutional boundaries by sharing campus facilities with international partner universities that have signed CiC agreements with the University of Tsukuba. As of October 2023, we have signed CiC agreements with the following partner universities:

University of Bordeaux (France) / National Taiwan University (Taiwan) / University of São Paulo (Brazil) / University of Technology Malaysia (Malaysia) / University of California, Irvine (US) / Utrecht University (Netherlands) / University of Grenoble Alpes (France) / The Ohio State University (US) / Ruhr University Bochum (Germany) / Al-Farabi Kazakh National University (Kazakhstan) / National Cheng Kung University (Taiwan) / Indian Institute of Technology Guwahati (India)

In September 2023, a new Double Degree Program (Master) was launched with the University of Grenoble Alpes in the Degree Programs in Systems and Information Engineering to expand the university's internationally compatible educational programs.

Furthermore, our program titled "Empowering International Startup Talent to Create an Inclusive Smart Society" was adopted for the Inter-University Exchange Project (Ministry of Education, Culture, Sports, Science and Technology) for AY2023. The objective of this program, designed around the keywords of "inclusive smart society," is to develop human resources who can play leadership roles in creating a more inclusive society and international social startup talent by giving students of the University of Tsukuba and Ohio State University the opportunity to work in collaboration to propose innovative societychanging ideas and put them into practice in society while involving the cities of Tsukuba and Columbus and private-sector companies.

Approved Program for Mathematics, Data Science and AI Smart Higher Education > https://www.mext.go.jp/content/20210315-mxt\_senmon01-000012801\_1.pdf

> The University of Tsukuba demonstrates an advantage in carrying out interdisciplinary research to solve issues across different fields by making effective use of mathematics-data science-AI (MDA) and developing MDA human resources (for example, by developing not only information specialists but also human resources who can put informatics and data science to work in other fields). The university established the Interdisciplinary Mathematics-Deta Science-Al promotion Office, headed by the Vice President of Education, in AY2021 to promote MDA education university-wide with the aim of building an MDA education system for the entire university, from undergraduate to doctoral level.

MDA education program-related initiatives at the University of Tsukuba

https://www.tsukuba.ac.jp/education/data-science-programs/





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#### International exchange agreements

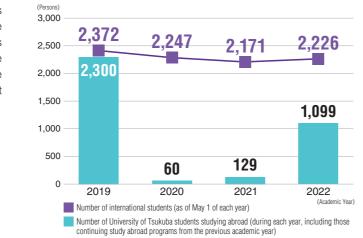
The university has signed international exchange agreements with a total of 376 overseas universities: Campus-in-Campus agreements with 12 universities, interuniversity exchange agreements with 172 universities, and inter-departmental exchange agreements with 194 universities. We have the largest number of partner universities in China, followed by the U.S. and Germany, in that order.



#### Receiving international students and providing support for studies abroad

The university is playing host to international students from over 100 different countries and regions in the world. One characteristic is that the university allows these students to receive tailored Japanese language education according to their Japanese proficiency, while at the same time offering many degree programs that can be completed in English only.

> 2,226 Number of accepted international students Number of University of Tsukuba students studying abroad



#### Creation of new learning through the Japan Virtual Campus (JV-Campus), a made-in-Japan international online education platform open to people both inside and outside of Japan

The Japan Virtual Campus (JV-Campus) is a made-in-Japan international online education platform that allows internationally competitive Japanese higher education to be published online in and outside of Japan. It was developed under the leadership of the University of Tsukuba and was put into pilot operation in March 2022. Through this collective international gateway to Japanese higher education, online educational contents are published to increase international students, provide education to those who have returned from studies abroad and encourage students to study abroad. This supports the further internationalization of Japanese higher education by helping to create a more internationally competitive educational environment, for example, by improving the environment for studies abroad.

More than 50 national and private universities, international organizations, etc., in Japan have participated in this platform, while overseas universities from Taiwan and many other parts of the world have decided to take part in it during the past one year.

JV-Campus serves as a bridge between Japan and the rest of the world as an international gateway to Japanese higher education. You are strongly urged to visit the website of JV-Campus, which has been working to further enhance its contents.



### Provision of an environment that allows diverse students to work comfortably to achieve personal development (student support)

#### **Enhancement of the Tuition Fee Exemption**

The university exempts students who have difficulty paying due to financial reasons, students who are deemed to have unavoidable circumstances, and students who are recognized as having outstanding grades from paying the enrollment fee and tuition fees in whole or in part.

A new learning support system for higher education was put into practice in AY2020. In AY2022, 176 students were granted exemptions from enrollment fees totaling approx. 42 million yen and 5,004 students were granted exemptions from tuition fees totaling approx. 984 million yen.

1,200 1,000 600 200

#### **Receiving International Students and Improving Support for Overseas Study**

The Tsukuba University Student Scholarship, Tsukuba Scholarship, is a program that provides financial aid to international students and emergency support for educational expenses.

This is the university's own scholarship program, which provided 51.36 million yen in support of 73 students in AY2022. The Study Abroad Support Program (Habatake! Scholarship) is another of the university's unique scholarship programs for studying abroad. In AY2022, the university provided financial aid (travel expenses, etc.) to 487 students. The university has also supported programs that send students overseas while earning them credits through an interactive exchange program aimed at improving the international mobility of students (Fly High!). Besides these, other initiatives have also been implemented to build momentum for studying abroad, including holding events such as a special week dedicated to encouraging study abroad counseling and information sessions, and conducting public relations activities to make the scholarship programs better known.

#### Financial Assistance for Students with Outstanding Grades

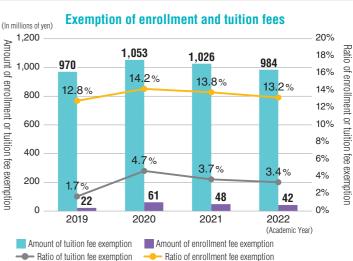
Research scholarships started in AY2021 as another source of financial assistance for outstanding students, in addition to university recommendation scholarships for continuing to graduate school and scholarships for students with outstanding grades, which were launched in AY2019.

#### Support for Doctoral Students

The university was selected for the Support for Pioneering Research Initiated by the Next Generation (SPRING) program by the Japan Science and Technology Agency (JST) in AY2021 and began to provide financial support to outstanding doctoral students to cover their expenses (living and research expenses). In AY2022, 351 students were selected and a total of about one billion yen was granted to them. By helping doctoral students to conduct free, challenging and interdisciplinary research, thinking outside of the box, while providing them with living expenses, this project aims to allow these students to focus more on their research, as well as develop PhD human resources who can follow diverse career paths and play important roles.

Besides the above, the University Fellowship Program for the Creation of Innovation in Science and Technology (adopted in AY2020) offers an annual fellowship worth 2.3 million to 2.5 million yen to each of 31 students per school year up to AY2027. In AY2022, 58 students received the assistance.

While doctoral students are preferentially exempted from tuition fees, exemption of tuition fees began to apply also to fellowship students in AY2022. A total of 794 students, including those enrolled in special programs, were exempted.



Ratio of enrollment or tuition exemption =

Amount of enrollment or tuition fee exemption / Amount of enrollment or tuition fee revenue

#### Support for Students from Ukraine

Russian troops have been invading Ukraine since February 2022. Under such circumstances, acceptance of Ukrainian students evacuated from Ukraine who wished to continue to their studies and research was implemented as follows:

- The Special Measures for International Students in Response to the Ukrainian Crisis (authorized by the president) were established for international students expected to have difficulty returning to Ukraine after graduating from or completing programs in the university in March 2022. In accordance with the measures, the university accepted a Ukrainian student as a research student while waiving tuition and other fees for the student.
- 2 The university's undergraduate and graduate programs decided to accept 50 non-degree students as special auditors and research students (30 special auditors and 20 research students), to support students unable to find places to study or conduct research due to the worsening situation in Ukraine. As of the end of AY2022, the university has admitted 44 students, the largest number accepted by a Japanese national university.

#### Housing and life start support

- Ibaraki Prefecture has offered free rent in seven municipal housing units, which are now shared by 20 students. The other 18 students have begun to live in the Student Residence Halls of the university. Currently, there are also plans for the two students who are scheduled to be accepted later to move into the Student Residence Halls.
- Each of the municipal housing units was renewed and furnished by the University of Tsukuba, Ibaraki Prefecture, and related companies
- Faculty and staff of the university and related companies also provided material support to the students by offering everyday commodities.
- Tsukuba City provided 50 recycled bicycles, which are lent to the students.

#### Financial support

- The university's fund for Ukrainian students and the Tsukuba Futureship Association for International Student Support provide financial support to cover their living expenses (50,000 yen/month), travel expenses for returning to Ukraine (up to 150,000 ven planned), learning and living environment improvement expenses, and so on.
- A total of 42 students who applied for the Nippon Foundation Support for Evacuees from Ukraine through the University of Tsukuba have successfully received financial assistance from the foundation (1,000,000 yen/year in daily living expense assistance for up to three years, 500,000 yen/housing unit in home furnishing expense assistance, and up to 300,000 yen in travel expense assistance, or only travel expense assistance). Of the 42 students, 27 are receiving daily living expense assistance.

• The Otsuka Toshimi Scholarship Foundation unofficially decided to provide scholarship assistance to 13 students, of whom 11 students who had already arrived in Japan were officially adopted as scholarship students in August 2023 (1,500,000 yen/year per student).



#### **Post-COVID Support for Student Exchanges**

A summer festival took place on the patio of the Global Village in late July 2023. This festival started in 2018 when all Global Village buildings were put into operation to promote exchanges between international students and the Japanese students who reside in the Village and for the international students to experience Japanese culture and customs. However, we were not able to hold the event in the three years from 2020 to 2022 due to the COVID-19 pandemic. This year's summer festival, held for the first time in four years, was attended not only by Global Village residents and Short-term Exchange Students living in the Short-stay House but also by Ukrainian students to deepen exchanges.

The festival featured performances by student clubs, such as "Bon Live,"



Summer Festival

uchiwa (Japanese paper fan) making, and yukata (light cotton kimono) wearing experiences offered by "Ask Us Desk," fair games such as water yo-yo fishing, sparklers, and cotton candy making. It provided about 300 students the opportunity to enjoy the atmosphere of a traditional Japanese summer festival.

The festival was co-hosted by the university and the Daiwa Lease Group, to which the management of the Global Village is outsourced.

#### >> Initiatives led by students to put information about student organizations online

Extracurricular activity clubs and other student organizations (hereinafter referred to as "student organizations") had limited opportunities to recruit new members in AY2020 due to COVID-19. This is the reason that the All Colleges Students' Representative Council launched a special website named "Shinkan Web" to allow these student organizations to provide information to promote themselves online.

On this website, users can collectively view information about student organizations, including descriptions of their activities and their posters for recruiting new members. At the same time, a special X (former Twitter) account for recruiting new members has also been launched to provide the latest information through regular tweets about registered student organizations and it is an invaluable source of information.

In addition, the paper version of the student organization information magazine ceased to be published in AY2023, replaced by an online leaflet, which carries information about all student organizations recognized by the University of Tsukuba and is available throughout the year.

This online leaflet is one of the initiatives undertaken by the International Special Committee of the All Colleges Students' Representative Council to encourage international students to participate more in student activities. As such, it is written in both Japanese and English and features some internationalization efforts, such as the use of marks that show the characteristics of individual student organizations (Japanese proficiency level required, level of involvement of international students, and ratio of beginners to experienced participants). It is the result of co-creation by students and faculty that has been completed after repeated deliberations between them.

#### >> Helping students start and run their own projects and increasing opportunities for exchanges

The Tsukuba Action Project (T-ACT) is the University of Tsukuba's unique student support program that helps students to start and run their own projects that are in line with their own interests, as well as to participate in projects started by other students or faculty or staff members. The T-ACT Promotion Office, where support from resident consultants and volunteer advisors is available, works to enable the creation of voluntary activities organized through close cooperation between students, faculty, and staff.

These activities were still limited due to COVID-19 infection control measures in AY2022. Nevertheless, restrictions gradually became relaxed and the numbers of projects and participants recovered to about 80% compared to AY2019. Furthermore, we were able to hold two annual events, the activity reporting meeting and open symposium, online this year. This allows students, faculty, and staff to interact with local community members and other participants. The AY2022 activity reporting meeting was held in June 2023, as the first face-to-face activity reporting meeting

in three years, and reports were presented on a total of eleven projects: nine T-ACT Action projects (activities led by students), one T-ACT Plan project (activities led by faculty/ staff), and one T-ACT Volunteer project (activities led by community action groups). The targets for AY2023 and beyond are to expand opportunities for students to launch projects that are in line with their own interests by enhancing support for commercialization-oriented projects that have been increasing in number in recent years and reinforcing partnerships with community action groups, while activities with these groups have decreased due to COVID-19.



A T-ACT project that promotes cross-cultural exchanges through soccer and futsal



A T-ACT project that organizes knitting-themed workshops and art events

#### Formation of Leading Primary and Secondary Education Centers: Initiatives of Laboratory Schools

The affiliated school segment consists of the Education Bureau of the Laboratory Schools (Education Bureau), which manages and coordinates the affiliated schools, and eleven schools: namely Elementary School, University of Tsukuba; Junior High School at Otsuka, University of Tsukuba; Junior High School at Komaba, University of Tsukuba; Senior High School at Otsuka, University of Tsukuba; Senior High School at Komaba, University of Tsukuba; Senior High School at Sakado, University of Tsukuba; Special Needs Education School for the Visually Impaired, University of Tsukuba; Special Needs Education School for the Deaf, University of Tsukuba; Special Needs Education School for the Mentally Challenged, University of Tsukuba; Special Needs Education School for the Physically Challenged, University of Tsukuba; and Special Needs Education School for Children with Autism, University of Tsukuba (referred collectively as "the affiliated cluster"). The purpose of the segment is to promote practical research on the education and care of infants, pupils, and students who receive regular or special needs education.



Education Bureau of the Laboratory Schools Bunkyo (inside the School Building on Tokyo Campus)

Website of the Education Bureau of the Laboratory Schools https://www.gakko.otsuka.tsukuba.ac.jp/



#### Implementation of Inclusive Education

In place of the communal life program that gives participants the opportunity to spend several days together, which had to be cancelled due to COVID-19, a one-day exchange event was held to remind us of the importance of providing opportunities and spaces for exchanges towards greater inclusiveness. As our society is expected to become more and more inclusive in the future, it will be an essential task to establish an educational system that respects the diversity not only of children with disabilities but also of those without. We now feel fresh respect for the importance of establishing further mutual cooperation within the affiliated cluster to resolve the task and realize a Tsukubastyle inclusive education system. In addition, faculty members and researchers of the university and affiliated school teachers have formed a project research group under the Education Bureau with the theme of constructing an inclusive education system and have begun



Students trying to keep a balloon with a bell inside in the air at the exchange event

to analyze new social needs, while at the same time summarizing the results of inclusive educational support implemented by affiliated special needs schools and conducting research on the realities of support operations.

#### Worldwide Learning (WWL) Consortium

The Education Bureau continued to serve as the lead manager of the WWL Consortium and organized a liaison meeting of teachers of WWL Consortium and Super Global High School (SGH) Network member schools and the All Japan High School Forum for students, both online. In the latter, faculty members and students from the Office of Global Initiatives, Bureau of Global Initiatives, Bachelor's Program in Global Issues, and Institute of Life and Environmental Sciences offered guidance and support to help high school students discuss themes related to the SDGs in English, thereby contributing to the development of internationally minded human resources. In addition, the Education Bureau also played a leading role in applying for the new WWL project "R&D Project towards the Construction of



A student exchange session at the All Japan High School Forum

Individually Optimized Learning Environments" under the theme of "Construction of an Online Dual Enrollment System for Human Resource Development for the Creation of a Sustainable International Society" and the application was successfully adopted. The project team visited schools with dual enrollment for research purposes and conducted a needs survey on high schools to which online contents are to be provided. Based on the results, they have begun to explore the contents to be provided in the dual enrollment system of the University of Tsukuba, while receiving contents from the School of Medicine on a pilot basis.

## **Research Vision**

Promoting interdisciplinary collaborations between researchers with a high degree of professionalism and a broad vision who think outside the box while pursuing their own interests and concerns, and seek the truth with passion and integrity. Promoting research in traditional academic fields and trailblazing in innovative research fields.

#### ≪ What Research Vision represents ≫

The University of Tsukuba is a one-of-a-kind comprehensive research-oriented university that covers a broad range of disciplines, including not only humanities and social sciences, science and technology, information, life sciences, and medicine but also human sciences, library and information, health and sport, and art. Taking advantage of this strength, the university has been going across the boundaries of traditional disciplines, thinking outside the box, and promoting interdisciplinary research, which is a great source of innovation. Building upon this, we see it necessary to enhance our research environment, so that we can further improve the quality of our research and focus on basic research for a longer term, as well as to provide an environment that allows researchers with deep expertise to exchange with each other to facilitate the formation of new research organizations. It is also vital to accelerate the social implementation of research results in society. We are thinking of building a new Science City model that can promote a wide variety of experiments and social implementation initiatives by making the most of Tsukuba Science City as a large-scale social experimenting field for bold attempts.

#### Strategy 7 Promote intellectually stimulating research that examines principles

- relationships between people
- >> Accelerate basic research on technologies for the future
- >> Promote a research environment that supports research from a longer perspective

#### Strategy 8 Create new academic fields by promoting interdisciplinary research

- >> Form and enhance intersections of knowledge
- >>> Build a research environment that encourages the creation of new academic fields
- >> Construct a new Science City model

#### Strategy 9 Develop and improve environmental infrastructure for the creation of knowledge to help young talent reach their potential

- >> Develop and enhance research fields to attract new researchers
- >>> Enhance training programs for young researchers, including overseas training



>> Promote research that aims to achieve a deeper understanding of the essence of humanity and

#### Initiatives by the University <Examples>

#### **Providing a Friendlier Research Environment to Researchers**

The University of Tsukuba has been building a research environment that is friendly to researchers from a researcher's point of view. The university's Research Information Portal "COTRE-COmmunity for Tsukuba REsearchers" is a website that provides a wide range of information that is helpful for research to increase the convenience of daily activities of researchers. We also provide a database that integrates internal research articles, named "Gakusha no Mori (Forest of Scholars)," to allow users to search by keywords for online information related to specific researchers belonging to the university, serving as a route that connects related parties outside the university to researchers.

The research funding information website "RISS-Research Information System for Strategy" is a mechanism that consolidates funding information pre-screened for eligibility for researchers in a single location and allows individual researchers to retrieve information customized for themselves. It also offers a reminder function to prevent researchers from missing out on the information they need, no matter how busy they are. Although it is only available to internal users, it is accessed as many as about 10,000 times on average per month.

The electronic submission system "u-Rad" has streamlined the cumbersome processes associated with the application, selection, and reporting of internal grants, which were traditionally carried out by email and paper-based communication, enabling automation, energy saving, and management of deadlines.

Besides the construction of the above multiple IT systems that support research activities, other research environment improvement measures are examined and implemented based on fact-finding surveys on researchers, with the aim of helping researchers secure time for research and increase motivation. We have also been working to improve our research environment for young researchers according to their needs by getting URAs to accompany and support them as part of the Top Runners in Strategy of Transborder Advanced Researchers (TRiSTAR) Program, METI's Strategic Professional Development Program for Young Researchers, implemented through collaboration between universities, national research institutes, and companies. We are also striving to expand our range of research support towards an even larger objective, which is to ensure the well-being of researchers

Another goal is to improve and enhance our research environment by promoting university-wide sharing of research facilities and equipment and optimizing management. Here are activities that are carried out to this end:

- 1) The University of Tsukuba Open Facility Week: Many programs, such as consultation meetings, facility introduction sessions, and seminars for users of Open Facilities, are organized by cooperating with university faculty and staff members and equipment manufacturers, and are attended by about 300 people from both inside and outside the university.
- 2) Open Facility Support: The following incentives are offered to users and owners of Open Facilities with the aim of facilitating the registration of new facilities, strengthening the functions of registered facilities, and encouraging young researchers to use these facilities.
- a. Startup support: Reuse, startup, and supplies expenses are covered for new Open Facilities to be registered.
- b. Function strengthening support: Sophistication, renovation, improvement, repair, and utilization promotion expenses are covered for registered Open Facilities.
- c. Emergency support for infrastructure facilities: Maintenance work-related expenses are covered for Open Facilities.
- d. Improvement and renovation support for infrastructure facilities: Facility and equipment expenses are covered for the improvement and renovation of Open Facilities.
- e. Updating support for infrastructure facilities: Necessary expenses are covered for updating Open Facilities.
- f. Support for young researchers: Researchers adopted for the FOREST Program (SOHATSU) are allowed to use Open Facilities free of charge.

Website of the Top Runners in Strategy of Transborder Advanced Researchers (TRiSTAR) Program, implemented through collaboration between universities, national research institutes, and companies https://tristar.sec.tsukuba.ac.jp/



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#### Aiming to Mobilize the Wisdom of the University to Resolve Social Issues: The University of Tsukuba's Program to Employ the University Wisdom

To resolve global challenges, such as global warming and other environmental problems, infections, population issues, food issues, energy issues, and disasters, it is essential that the whole society should understand these challenges and work in cooperation to resolve them. Universities and other research institutions are also striving to help resolve these major challenges by promoting interdisciplinary joint research projects between natural sciences and humanities and social sciences, as well as developing human resources who can go beyond the boundaries of specific areas of research.

Aiming to be among the first to contribute through research to resolving the wide variety of challenges caused by the COVID-19 pandemic, the University of Tsukuba launched an internal research grant funding program named "Employing the University Wisdom to Fight against the COVID-19 Crisis" and communicated to society that the pandemic was causing numerous problems that were not yet really recognized as of 2020, such as the isolation of people and interrupted inheritance of culture, and how significant they were. Following this program, the Knowledge Utilization Program to Create an Era of 100 Years of Happy Life was launched in AY2022, with the aim of further stimulating research and contributing to society by focusing on supporting the formation of teams in which specialists from a broad variety of fields work in cooperation and carry out interdisciplinary research to resolve social issues, as well as communication of information, and bringing the wisdom of the university to society in many different ways.

#### Number of research projects

- Employing the University Wisdom to Fight against the COVID-19 Crisis (AY2020): 27 projects
- Knowledge Utilization Program to Create an Era of 100 Years of Happy Life (AY2022): 33 projects

### Efforts Aimed at Obtaining External Funds

The University of Tsukuba provides university-wide support to obtain external funds in cooperation with URAs belonging to the Research Administration/Management Office, departmental URAs, and the Department of Research Promotion. We have established a help desk to support the improvement of applications for Grant-in-Aid for Scientific Research (KAKENHI) and other grants, such as CREST, PRESTO Sakigake, FOREST PROGRAM, International Leading Research, Bilateral Exchange Program, and Japan Society for the Promotion of Science (JSPS) Program, to cooperate with URAs to analyze and address the reasons for rejection, clarify research concepts, and improve the logical structure of research applications and the ease with which the significance and value of the project can be communicated, while ensuring consistency between the application forms and the projects.

We have also provided optimal information to researchers by developing and running the research funding information website RISS, helped researchers to plan projects in accordance with the university's research strategy and obtain large-scale external funding, and stimulated the acquisition of research funds for international joint research projects.

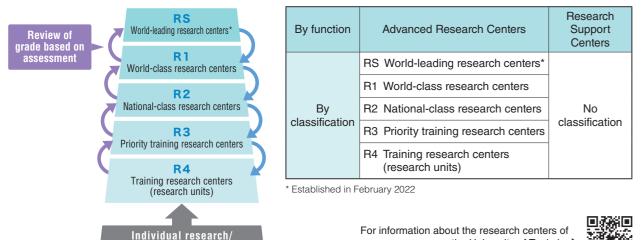
In addition to offering support through the help desk, we also provide information for researchers through the university's Research Information Portal "COTRE," such as information about various seminars and workshops that support applications.

Website of the "Employing the University Wisdom to Fight against the COVID-19 Crisis" program https://www.osi.tsukuba.ac.jp/fight\_covid19/



#### Operation of the "Research Cycle System," the Effective Framework for Promoting Research Based on Growth Stages of the Research

The system categorizes the research centers into functions (advanced research centers and research support centers) to activate the metabolism (turnover) of the university's research as a whole and grades the advanced research centers according to four classifications and allocates priority and strategic resources based on their classification as follows. RS: world-leading research centers, R1: world-class research centers, R2: national-class research centers, R3: priority training research centers, and R4: training research centers (research units). Furthermore, it established an assessment system to stimulate the research activities of the research centers by assessing each research center every five years (with an interim assessment in the third year). The highest grade, RS (world-leading research centers), is a new classification that was only added in AY2022 to promote the formation of world-class research centers and creation of new fields, and the International Institute for Integrative Sleep Medicine, which had been adopted for the World Premier International Research Center Initiative (WPI) by the Ministry of Education, Culture, Sports, Science and Technology, was categorized as an RS center.



the University of Tsukuba https://www.tsukuba.ac.jp/research/



#### Professor YANAGISAWA Masashi, International Institute for Integrative Sleep Medicine, **Receives Clarivate Citation Laureates**

Just before Nobel Prize Week, Clarivate Analytics, a British academic information service company, announces the "Clarivate Citation Laureates" for researchers worldwide who are likely to win Nobel Prizes in the future.

This year's Clarivate Citation Laureates were announced on September 19. Professor YANAGISAWA Masashi, Director of the International Institute for Integrative Sleep Medicine, University of Tsukuba, received an award in the "Physiology or Medicine" field.

Clarivate analyzes academic articles published by researchers around the world and nominates the Citation Laureates based on factors such as the number of citations, the impact on a research field, records of other awards, and research areas previously focused by Nobel Prizes. Since many winners of the Citation Laureates later receive the Nobel Prize, the media, both domestic and international, refer to the award as "the closest academic award to the Nobel Prize." Since

the award was established in 2002, 71 Citation Laureates have received the Nobel Prize.

research group

Professor YANAGISAWA received the award for his work on the genetics and physiology of the sleep-wake cycle and for his discovery of orexin that is also implicated in the etiology of narcolepsy as an important sleep regulator. Co-recipients were Dr. Emmanuel Mignot of Stanford University and Dr. Clifford B. Saper of Harvard University. Professor YANAGISAWA and his colleagues' research has "influenced a wide range of fields in sleep science and has triggered a significant progress in research related to narcolepsy" (Clarivate), with more than 4,000 citations (4,121 regarding the 1998 paper).



### Advanced Research Centers (18 organizations in total)

#### >> RS (World-leading Research Center) (1 organization)

#### International Institute for Integrative Sleep Medicine (IIIS)

We spend nearly one-third of our lives asleep. However, the fundamental principles of sleep/wake biology are still unknown. Our director, Masashi Yanagisawa, and other researchers discovered a new neuropeptide, orexin, which plays a prominent role in sleep/wake regulation, and demonstrated the functions of the neuropeptide before the rest of the world, thereby generating a new research field in neurobiology of sleep and metabolism. To aim at deciphering the mysteries of sleep, researchers of the institute carry out innovative research across basic biology, including molecular genetics, neuroscience, and physiology, as well as data engineering, drug discovery, and human sleep physiology.

#### >> R1 (World-class Research Center) (2 organizations)



#### **Center for Computational Sciences**

Computational science is the third approach to scientific discovery and is driven by computational simulations of physical phenomena. It aims to solve problems that were not possible with traditional theory and observation.

Using the university's own PACS/PAX series systems of supercomputers, we promote research on highspeed simulations and large-scale data analysis in a variety of scientific research fields, the development of high-performance computing systems and high-speed network technologies, and tier application methods.

#### >> R2 (National-class Research Center) (10 organizations)

Tsukuba-Plant Innovation Research Center Shimoda Marine Research Center Plasma Research Center Alliance for Research on the Mediterranean and North Africa (ARENA) Center for Cybernics Research Center for Research in Radiation, Isotopes, and Earth System Sciences Center for Artificial Intelligence Research Microbiology Research Center for Sustainability Advanced Research Initiative for Human High Performance (ARIHHP) Proton Medical Research Center





#### Life Science Center for Survival Dynamics, Tsukuba Advanced Research Alliance (TARA)

Aiming to elucidate the fundamental mechanisms that support the survival, adaptation, symbiosis, and evolution of life, we promote research in the areas of metabolism, immunity, circulation, and reproduction, while integrating this research to conduct life dynamics research not only at the individual but also at the population level.

Under a dynamic research system in which medical, biological, agricultural, pharmaceutical, health, and other sciences collaborate with each other, we will elucidate the unknown aspects of life and uncover the hidden survival strategies of living organisms.

#### >> R3 (Priority Training Research Center) (5 organizations)

Research Center for West Asian Civilization Tomonaga Center for the History of the Universe Tsukuba Research Center for Energy Materials Science Mountain Science Center Transborder Medical Research Center

#### >> Research Support Centers (2 organizations)

Research Facility Center for Science and Technology Academic Computing Communications Center

#### Developing and Improving Environmental Infrastructure for the Creation of Knowledge to Help Young Talent Reach Their Potential: Tsukuba Conference and TGSW

The Tsukuba Conference, which aims to be a "Young Davos' Summit" to bring together outstanding young people from industrial, governmental, and academic circles around the world to Tsukuba Science City to discuss society, science, and technology, has been held every two years since AY2019, under the leadership of the University of Tsukuba. The third Tsukuba Conference took place in September 2023 with the main theme of "Design the Future: Curiositydriven Quests for Global Solutions."

The Tsukuba Global Science Week (TGSW), which also brings together a wide range of researchers and students, from young to experienced, from around the world to Tsukuba Science City, has been held since AY2010. It gives participants the opportunity to engage in discussions beyond national borders and fields of research in an effort to build an international collaboration network and aims to provide a forum for heated debate to solve global issues.

Through the Tsukuba Conference and TGSW, the university continues to actively promote itself and the international city of Tsukuba while promoting the development and improvement of environmental infrastructure for the creation of knowledge. 回援回

> Website of the Tsukuba Conference https://tsukuba-conference.com/





Opening Ceremony



"Two Nobel Laureates and Young Scientists Discuss" at the Third Tsukuba Conference



Young researchers speaking to Nobel laureates

### **Dissemination of Research Results**

#### >> TSUKUBA JOURNAL

A special website that carries press release information from the University of Tsukuba, including research results.

> Website of TSUKUBA JOURNAL https://www.tsukuba.ac.jp/journal/

#### **TSUKUBA FUTURE**

The University of Tsukuba is a comprehensive university that covers a wide variety of academic disciplines, including not only humanities and sciences but also sports and art, where many unique interdisciplinary research projects are conducted. Articles in TSUKUBA FUTURE aim to introduce young researchers who engage in distinctive research and education activities at this future-oriented university, focusing on their research topics and portraits.

Website of TSUKUBA FUTURE

https://www.tsukuba.ac.jp/journal/tags/?s\_tag=TSUKUBA%20FUTURE

#### **TSUKUBA FRONTIER**

The University of Tsukuba, as a base to create a future, has many leading authorities in various research fields. This website introduces some of these researchers representing our university, who are front-runners paving a pathway to a new era, by showing their history and passion for education and research works.

Website of TSUKUBA FRONTIER https://www.tsukuba.ac.jp/journal/tags/?s tag=TSUKUBA%20FRONTIER

#### >>> Gakusha no Mori (Forest of Scholars)

This is a database that makes the researchers of the University of Tsukuba visible, where you can collectively view different types of contents, including easyto-read articles written in Japanese and video introductions to research projects, in addition to their latest research achievements and research themes.

> Website of Gakusha no Mori (Forest of Scholars) https://forest-of-scholars.sec.tsukuba.ac.jp/

### >>> The University of Tsukuba Podcast "Side Stories from Research Sites"

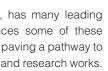
"Kenkyu-shitsu Side Story (Side Stories from Research Sites)" is a podcast series that shares behind-the-scenes stories about the various research projects undertaken at the University of Tsukuba. Listeners will hear conversations in which the researchers themselves speak about how they have achieved their research results, mainly what was going on behind the scenes, which is not normally shared.

The University of Tsukuba Podcast "Side Stories from Research Sites" https://podcasters.spotify.com/pod/show/university-of-tsukuba







































## **Co-creation with Society Vision**

Strengthen our functions that work as intellectual driving forces behind the creation of a future
society. Network with the world from Tsukuba Science City to strive persistently to identify potential
global issues. Promote the social implementation of R&D results that lead to resolving the issues,
thereby contributing to the co-creation of a future society.

#### 🔣 What Co-creation with Society Vision represents 》

The University of Tsukuba has been sharing its value with society by promoting industry-academia-government collaborative research projects, creating startups originating in the university, and providing extension programs and other educational programs. We consider it essential to seek proactive feedback from society for these activities, accelerate the co-creation of a future society, and enhance our roles as a member of society. In particular, it is important to strengthen cooperation with society to achieve the SDGs, ESG goals, and carbon neutrality. From these perspectives, we have refined our university's mission and have evolved our traditional unidirectional mission, social contribution, into a bidirectional one, namely, "co-creation with society,"

#### Strategy 10 Take on challenges towards co-creation of a future society through industry-academia-governmentbank collaboration

- >> Establish a platform for co-creation with society
- >>> Strengthen partnerships around large-scale joint research projects between organizations
- >> Promote needs-driven research

#### Strategy 11 Strengthen the venture ecosystem of the University of Tsukuba

- >> Enhance next-generation entrepreneurship education
- >> Accelerate the creation of startups originating in the University of Tsukuba
- >> Stimulate the venture ecosystem

#### Strategy 12 Accelerate the co-creation of a future society through social implementation of R&D results

- » Accelerate contributions to the SDGs and carbon neutrality and promote research based on co-creation with society
- » Promote the transfer of leading-edge medical research results to society through the development of advanced medical technology
- >> Promote contributions to society through affiliated companies



#### Initiatives by the University <Examples> Taking On Challenges Towards Co-creation of a Future Society through Industry-Academia-Government-Bank Collaboration System of the Headquarters for International Industry-University Collaboration President Headquarters for International Industry-University Collaboration: Director General, Deputy Director, Advisor to the Deputy Director **Operating Team Open Innovation Strategy Organization (OISO)** 1. R&D Center for Precision Medicine Entrepreneurship Education Team Specially Appointed Professor, **Director, Vice Director** Technology Associate Professor, Assistant Professor 3. R&D Center for Sport Innovation 4. R&D Center for Health Services **General Creative Manager Technology Transfer Team** 5. R&D Center for Tailor-Made QOL (Research collaboration and intellectual property management Support Management Team Associate Professor in Charge of Field-specific Creative Manager Intellectual Property Technology Transfer Manager 9. R&D Center for Digital Nature Contract Coordinator **Project Team** Promoting social problem-solving projects 11. R&D Center for Lifestyle Innovation **Extension Program Team** Materials \*Centers that are fully externally funded **Division of Collaborative Research Planning (Administration)**

IP management, private funding and academic consulting contract management, general administration (human resources, accounting, research support), planning (entrepreneurship development, start-up support, PR), the OISO, and the TSUBASA, as well as the Extension Program Team

### Initiatives of the Headquarters for International Industry-University Collaboration

- Special Joint Research projects, Joint Research, Commissioned Research, Academic Consulting
- Intellectual property management
- Support for social implementation and entrepreneurship
  - Social implementation support programs
  - Entrepreneurship education
  - TSUBASA Project
  - Open Innovation Strategy Organization
- Startups originating in the University of Tsukuba
- Research & development centers
- Domestic collaboration
- (Industry-academia collaboration platform)
- International expansion
- Extension programs

Website of the Headquarters for International Industry-University Collaboration https://www.sanrenhonbu.tsukuba.ac.jp/

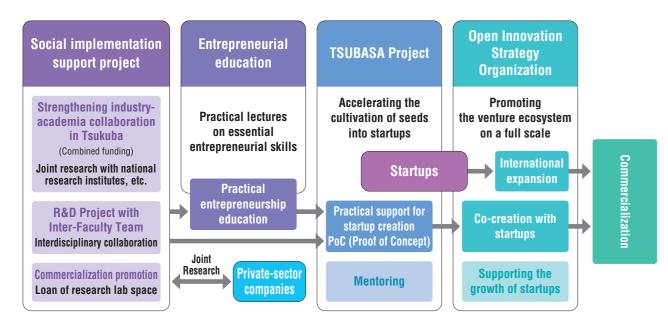






#### Integrated support for social implementation and entrepreneurship

The University of Tsukuba provides one-stop support for the social implementation of research results and entrepreneurship through its "Social Implementation Support Project," an on-campus open competition program; "Entrepreneurship Education" for students and internal and external researchers; the TSUBASA Project (JST START (University Promotion Type)), an internal program to promote the creation of university startups; and the "Open Innovation Strategy Organization," a management system designed to promote large-scale industry-academia collaborative research projects between organizations.

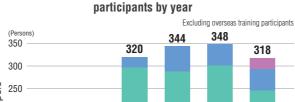


#### Achievements in entrepreneurship education

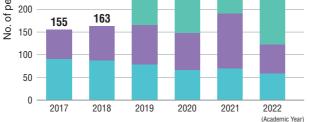
We are accelerating the creation of university startups by fostering entrepreneurial spirit and practical education. The curriculum is expanding, and the number of students enrolled in our entrepreneurship education program is increasing every year.

#### **Overview of courses**

Next Generation Entrepreneur Training Course
Learn about entrepreneurship to solve social problems
Essential Knowledge of Management and Intellectual Property for Entrepreneurs
Learn how to avoid failure when launching a start-up
Tsukuba Creative Camp
Basic Learn how to construct a business model through experience and acquire practical entrepreneurial knowhow
Advanced Aspiring entrepreneurs create realistic plans for starting up businesses
Entrepreneurial Course to Build up Skills for Creating Start-ups
Researchers with research seeds learn the basic knowledge for creating start-ups
Tsukuba Entrepreneur Development Program
A practical program that enables researchers to develop essential skills for commercialization and convert research seeds into investible business plans "Implemented as an EDGE-NEXT program from AY2017 through AY2021
Overseas Training
Improve English sales pitch skills and understand overseas markets



Numbers of entrepreneurship education course



Entrepreneurial Course to Build up Skills for Creating Start-ups Essential Knowledge of Management and Intellectual Property for Entrepreneurs Next-Generation Entrepreneur Training Course Tsukuba Entrepreneur Development Program Tsukuba Creative Camp



#### **Promotion of Research & Development Centers**

The university establishes research & development centers as a system for creating venues for applying the university's interdisciplinary research capabilities to create next-generation industries. These centers are fully financed by external funds and are intended to create innovations, introduce excellent corporate human resources, increase the speed of research, and develop people with positive attitudes towards industry-university collaboration and entrepreneurship. They actively engage in research and development with companies in academic fields where there is a strong social demand and establish collaborative research frameworks. With a focus on these development research centers, we will promote industry-university collaboration of researchers in various fields and actively contribute to achieving Society 5.0 and the SDGs. R&D centers are established in internal facilities and evaluated every five years for renewal or abolishment depending on the evaluation results.

#### **R&D** Center for Precision Medicine

Japan's first 1,000 dollar genome analysis center



Director of the Center SATO TakaAki

#### R&D Center for Frontiers of MIRAI in Policy and Technology

Advanced research center for mobility infrastructure that realizes Society 5.0



#### R&D Center for Sport Innovation

Center for research on improvement of sports performance



Director of the Center TAKAGI Hideki

#### **R&D** Center for Health Services

Japan's first center specializing in the study of services that bring health and happiness



Director of the Center TAMIYA Nanako

#### **R&D** Center for Tailor-Made QOL

Provision of programs for improving QOL on an individual basis through food, exercise and sleep



Director of the Center ISODA Hiroko

#### R&D Center for Working Persons' Psychological Support

Development research center for research on providing psychological support for working persons and building social contribution infrastructure



Director of the Center OKADA Masaki

#### **R&D** Center for Innovative Material Characterization

Toward innovative measurement and evaluation technologies



Director of the Center ITOH Masahide

#### R&D Center for Innovative Drug Discovery

100 years of vitality with new drugs and new technologies





Director of the Center SHIBUYA Akira

#### **R&D Center for Digital Nature**

Exploring the new relationship between computers and nature





Director of the Center OCHIAI Yoichi

#### **R&D Center for Smart Wellness City Policies**

Aiming to create evidence-based policies to foster wellness and longevity





Director of the Center KUNO Shinya

#### **R&D Center for Lifestyle Innovation**

Exploring healthy and happy lifestyles to pass on to the next generation





Director of the Center YOSHIMOTO Hisashi

#### R&D Center for Zero $CO_2$ Emission with Functional Materials

Aiming to realize a carbon-neutral hydrogen economy





Director of the Center KONDO Takahiro

#### Ideal venture ecosystem for the University of Tsukuba

starting a business

**TSUBASA Project** 

the universities.

(4) Entrepreneurship

suppor

We aim to establish a system for the circulation of funds and human resources by providing entrepreneurship education and startup support and promoting the growth of startups, with the goal of sustainably and independently achieving the social implementation of research results and supply of entrepreneurial human resources to society.

The University of Tsukuba's support for the creation of startups includes: (1) a comprehensive consultation office, (2) funding and facilities, (3) entrepreneurship education, and (4) entrepreneurship support (TSUBASA Project).



250

200

150

100

50

0

132

2017

Number of startups launched at

161

2020

212

2022

(Academic Year)

186

2021

(Companies) the University of Tsukuba (Cumulative total)

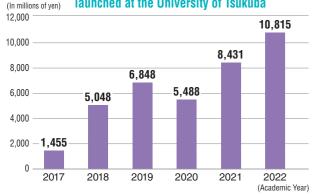
155

2019

144

2018

#### Amount of funds raised by startups launched at the University of Tsukuba



#### Number of university startups (Rankings)

	2017	2018	2019	2020	2021	2022		
The University of Tokyo	268(1)	271(1)	268(1)	323(1)	329(1)	371(1)		
Kyoto University	154(2)	164(2)	191 (2)	222(2)	242(2)	267(2)		
Keio University	69 (11)	81 (8)	85(8)	90 (10)	175(5)	236(3)		
University of Tsukuba	104(3)	111 (3)	114(6)	146(4)	178(4)	217(4)		
Osaka University	102(4)	106(4)	141 (3)	168(3)	180(3)	191 (5)		
Tohoku University	86(8)	104(5)	121 (4)	145(5)	157(6)	179(6)		
(Source: "Report on the Results of the Survey on University-Developed Venture Businesses" by the Ministry of Economy, Trade and Industry)								

**IMAGINE THE FUTURE Forum** 

We have been promoting the IMAGINE THE FUTURE Forum project, funded through the University of Tsukuba "Social Value Creation Bond.'

This project is about developing a facility to create new social value, aiming to convert the intelligence, networks, human resources, and other resources and value accumulated in the University of Tsukuba into social value, for example by promoting genuine needs-driven industry-academia collaborative research to proactively resolve social issues and seeking to co-create innovations leading to social reforms.

Making the most of our locational advantage of being situated in Tsukuba Science City, we are constructing a facility to promote large-scale collaborative research. The facility is scheduled to have a large-scale proof-of-concept (POC) space at its center, surrounded by research slots, where we are thinking of inviting corporate R&D departments to set up business-to-academia (B2A) laboratories.

Research slots: We plan to invite corporate R&D departments to set up B2A laboratories POC space: A proof-of-concept space to be utilized for large-scale demonstration experiments to resolve social issues



Architectural perspective

#### Basic policies

- advantage of the resources and interdisciplinary research capabilities of the University of Tsukuba.
- Realize the social implementation of research results contributing to resolving global challenges.
- Produce new social value and create innovations and economic effects leading to social reforms.

The University of Tsukuba established Tsukuba Twin Spark. Inc., a wholly owned business company, on June 17, 2022 as part of its efforts to promote needs-driven R&D. The main business of the company is to undertake research commissioned by private-sector business operators and other clients to commercialize the results of technological research conducted at the University of Tsukuba (promotion of utilization of research results), so that clients can do business to meet social needs, for example through supporting technological development, civil activities, or health promotion. We aim to produce new value from Tsukuba through sparks between social needs and academia seeds

#### Governance

- wholly owned company.

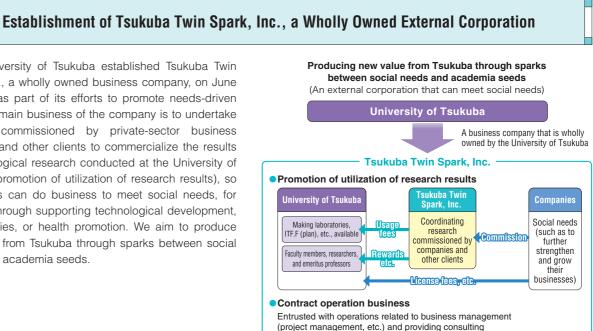
University of Tsukuba Integrated Report 2023

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## To Promote Genuine Needs-driven Industry-academia Collaborative Research:

Example of use of the POC space: Demonstration experiments with drones and autonomous robots

• Promote needs-driven R&D activities and demonstration experiments through society-university collaboration, taking



• The University of Tsukuba is the corporate decision-maker over the management of Tsukuba Twin Spark, Inc., which is a

• The statement of operation procedures for the National University Corporation University of Tsukuba gives the Auditors of the university the authorization to investigate the status of property of Tsukuba Twin Spark, Inc., so they shall investigate it.

#### Initiatives for Achieving the SDGs

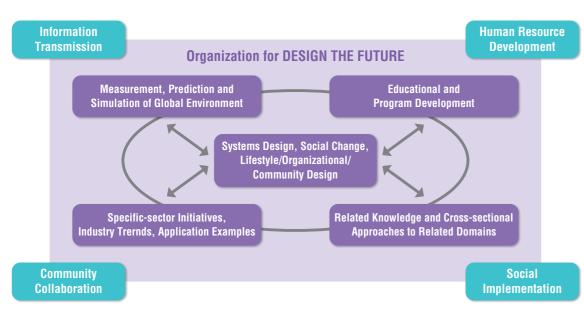
#### Initiatives of the Organization for DESIGN THE FUTURE

The Organization was established in April 2022 to explore the contributions that the University of Tsukuba can make to achieve the Sustainable Development Goals (SDGs) adopted by the United Nations and going "Beyond SDGs" to resolve global challenges faced by society at present and in the future, thereby seeking to build a healthy future for people and the Earth.

More specifically, the Organization revolves around seven goals out of the 17 SDGs and aims to help build a healthy future society for people and the Earth not only through measurements, simulations, and studies and R&D projects contributing to solving issues, but also by integrating many different kinds of knowledge as a comprehensive university, including that about institutional, life, organizational, and community designs, to provide specific strategies to society in relation to global environmental and social problems.

> Website of the Organization for DESIGN THE FUTURE https://www.osi.tsukuba.ac.jp/sdgs/





The University of Tsukuba ranked third among Japanese universities in the Times Higher Education (THE) Impact Rankings 2023 (UK), a visualized assessment of universities against the SDGs!

"Times Higher Education (THE)," a British magazine specializing in higher education, published the "THE Impact Rankings 2023" on June 1, 2023, where the University of Tsukuba ranked third among Japanese universities in the overall ranking table (101st-200th among all 1,591 target universities in the world).

As for the rankings for individual SDGs, we ranked first among Japanese universities (54th in the world) for SDG 11 (sustainable cities and communities) and SDG 12 (responsible consumption and production), and was named in the world top 100 for SDG 1 (no poverty) and SDG 6 (clear water and sanitation).

#### [THE Impact Rankings]

Rankings aimed at visualizing how institutions of higher education are evaluated in terms of the Sustainable Development Goals (SDGs), adopted by the United Nations.



**NISHIO** Chizuru

Director of Organization for DESIGN THE FUTURE (Professor, Institute of

Business Sciences)

#### Initiatives for Achieving the SDGs

#### >> Visualization of CO<sub>2</sub> Emissions Begins! Project to Display Carbon Footprint of Products (CFP) on Cafeteria Menus

The first step the Organization for DTF has taken towards reducing CO<sub>2</sub> emissions is to tackle the challenge of visualizing invisible CO<sub>a</sub>.

First, we have decided to show the carbon footprints of food products familiar to students, faculty, and staff. We expect this to increase awareness among them, encourage them to think and act independently, and give them experiences that lead to lifestyle reforms, thereby producing even more future-oriented creative ideas.

This project is implemented in cooperation with the following partners: ECHO UT, a student organization (planning), SHiDAX CONTRACT FOOD SERVICE CORPORATION (offering recipes and helping display carbon footprints at the student cafeterias), and Sustainable Management Promotion Organization (SuMPO) (CFP calculation).

#### [Carbon Footprint of Products (CFP)]

CFP is defined as greenhouse gas emissions of a product or service through its life cycle stages, from material acquisition to recycling, converted into CO<sub>2</sub> equivalents to measure its environmental impact. (Source: Website of the Sustainable Management Promotion Organization (SuMPO))

スモークサーモン1人分で、 つくばセンターからどこまで行ける?

ばセンターから路線バス「筑波大学循環(右回り)」の1人分の CO2排出量で表すと、どこまでと同等の距離でしょう?



## = 5.74 km ≒ TARAセンター前

※1:サーモン1切れ14g+野菜12g ※2:NAVITIME算出(https://www.navitime.co.)



#### Global Warming Initiatives —Holding the Tsukuba 3E Forum—

The Tsukuba 3E Forum was collaboratively organized by universities, research institutes, and municipalities in 2007 with the aim of tackling research that establishes Tsukuba as an energy-saving, low-carbon city of science. Task forces (TF) organized within the forum propose technologies and systems to the city to achieve an eco-city through demonstration and incorporation.



SHIDAX CONTRACT FOOD SERVICE CORPORATION members, Alisa Marie Belitz (College of Biological Sciences, School of Life and Environmental Sciences), representing ECHO UT, and Director NISHIO Chizuru





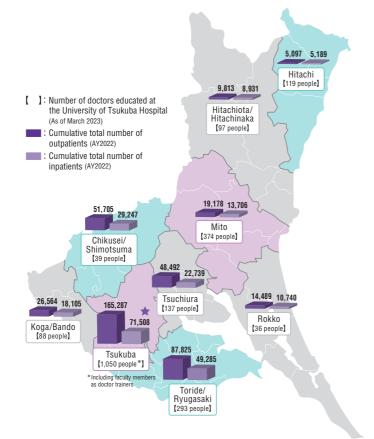


## Returning Leading-edge Medical Research Results to Society through the University of Tsukuba Hospital

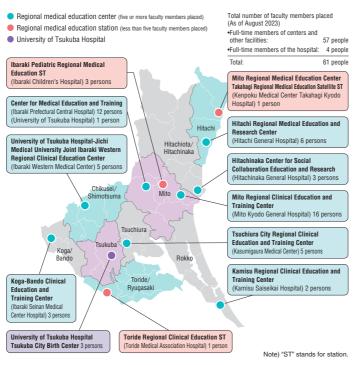
The University of Tsukuba Hospital strives to provide advanced medical care, produce excellent medical human resources, and develop next-generation medical care, aiming to fulfill the three functions of a hospital affiliated to a university, which are medical care, education, and research.

#### Development of quality medical human resources

- Ibaraki Prefecture has the second lowest number of medical doctors per 100,000 residents in Japan. To address the urgent task of preventing the collapse of local medical services caused mainly by the shortage of medical doctors, we are working in cooperation with administrative authorities (at prefectural and municipal levels), medical associations, JA Ibaraki-Kouseiren, National Hospital Organization, companies, and other related parties to revitalize local medical services through a wide variety of approaches, by placing faculty members of the University of Tsukuba in core medical institutions in the prefecture to contribute to the improvement and quality enhancement of the region's medical care system.
- · We have regional medical education centers and other facilities in all secondary medical districts (nine districts) of the prefecture; we have established twelve such facilities, where many full-time faculty members of the University of Tsukuba are placed, under whom many residents and other trainees are receiving training while the systems for education, research, training and instructions are being strengthened. These faculty members also assist local medical services as doctors in communities that are short of doctors through close coordination and cooperation with the hospitals that have established the centers, while at the same time transferring education and research resources and knowhow from the University of Tsukuba Hospital, so that these centers can be utilized as educational centers for students and other people and as training centers for the development of clinicians and clinical researchers.
- One result of these initiatives is our high reputation among students in the residency matching program in AY2022; we ranked seventh and 25th among 81 hospitals affiliated to national, municipal, and private universities in Japan in terms of the number of matches (58 people) and the number of residents from one's own university (25 people), respectively. When 47 people in hospitals established by regional medical education centers are added, the number reaches 105 people, which accounts for about 57% of all matches in the prefecture, showing that we also contribute to increasing the number of medical doctors.
- The University of Tsukuba Hospital became the third hospital affiliated to a national university, and the first hospital in Ibaraki Prefecture, in August 2016 to be designated as a training institution for specific action training, which is designed to systematically train nurses to perform specific actions to support future medical care (acute-stage medical care at home) in 2025, when Japan's baby-boom generation will reach 75 years of age or older, and accepted 28 trainees in AY2022. As of now, 172 nurses have completed this training (45 internal and 127 external nurses).



#### Location of regional medical education centers and other facilities





#### Activities of the Tsukuba Clinical Research & Development Organization (T-CReDO), an International Base for Clinical Development

The Tsukuba Clinical Research & Development Organization (T-CReDO) has been established to convert a broad range of medical seeds generated in industrial, governmental, and academic research institutes based mainly in Tsukuba Science City into innovative pharmaceuticals, medical instruments, regenerative medicine, and other products. As a result of its efforts to excavate seeds, for example by holding internal information sessions to openly solicit ideas and signing inter-departmental partnership agreements with the National Institute of Advanced Industrial Science and Technology and National Institute for Materials Science, the number of registered seeds, which was 222 (including 92 non-organizational ones) in AY2021, increased to 224 (including 99 non-organizational ones) in AY2022. T-CReDO establishes clear exit plans for individual registered seeds according to their stages and profiles, provides consultation on intellectual property strategy, and offers support to help overcome the challenges of putting the seeds to practical use. Being an international base for clinical development, it seeks to advance further, while providing spaces for drug trials and clinical research.

#### Disaster Prevention and Infection Control Using Hydrogen Fuel Cell Buses

In addition to accepting patients with moderate and critical COVID-19 infection as a medical institution designated by Ibaraki Prefecture to focus on treating COVID-19 patients, the University of Tsukuba Hospital has implemented thorough control measures against hospital-acquired infection at the COVID-19 response headquarters, set up according to a business continuity plan (BCP), to prevent outbreak clusters, thereby fulfilling its functions as Ibaraki Prefecture's only Special-Purpose Hospital and Advanced Emergency and Critical Care Center. Furthermore, the hydrogen fuel cell buses, which the University of Tsukuba developed in AY2021 as mobile systems for disaster prevention and infection control, combines a speediness (a COVID-19 PCR test result can be given in about 40 minutes at shortest after accepting patient) and large testing capacity (up to 3,000 tests per day), and have been sent to temporary testing centers to perform PCR tests on medical workers designated as very close personal contacts and other essential workers at the request of Ibaraki Prefecture. Between April 2022 and March 2023, a total of 15,000 people have been tested in the buses.







# Strengthening Governance

## Framework for Use and Management of Education and Research Funds

The university has established the Education and Research Funds Misuse Prevention Plan to prevent the wrongful use of education and research funds, and has taken various measures to eliminate the causes of misuse and promote appropriate use and management of education and research funds.

The university also strives to raise awareness about the prevention of misuse by implementing compliance education and awareness building activities for faculty and staff, and has established a framework for strengthening the organization to ensure that it can respond to risks at an early stage.

#### Use and Management of Education and Research Funds

We have established a system of accountability in regard to the use and management of education and research funds, with the president as the chief administrative officer, and we have clarified roles and responsibilities under this system

The general managing officer, who assists the Chief Executive Officer and supervises the organization-wide framework for preventative measures against misuse, organizes the Committee on Promotion of Preventative Measures Against Misuse of Education and Research Funds to identify the causes of misuse and establishes the National University Corporation University of Tsukuba Education and Research Funds Misuse Prevention Plan to eradicate the causes.

Based on this misuse prevention plan, the department officers take necessary measures and report the status of implementation to the general managing officer. They also implement compliance education

and awareness building activities within the respective departments that they manage and supervise, manage education and research funds, monitor the status of management and provide guidance for improvement.

The Office of Auditors monitors the progress and penetration of each measure from a university-wide perspective, and reports to the Chief Executive Officer and the Committee on Promotion of Preventative Measures Against Misuse of Education and Research Funds.

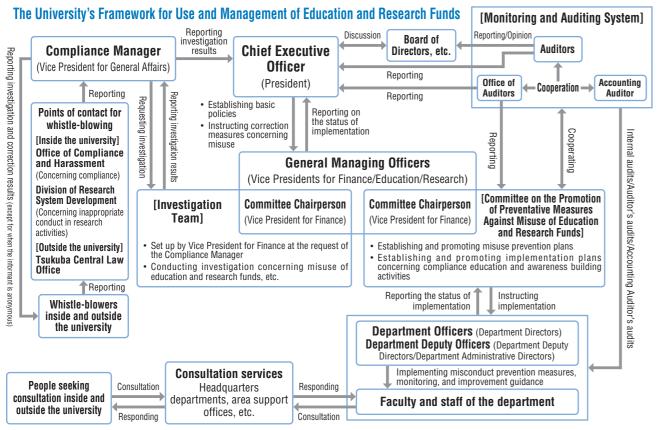
The auditors work in cooperation with the Office of Auditors and the Committee on Promotion of Preventative Measures Against Misuse of Education and Research Funds to check the status of development and operation of internal control over misuse prevention from an organization-wide perspective and express opinions about the results at Board of Directors and other meetings.

#### Clarification and Unification of Accounting Rules, Compliance Education, and Awareness Building Activities

Accounting rules are reviewed in a timely manner based on actual conditions of business to ensure consistency in their operation.

To ensure all accounting rules are easy for faculty and staff to understand, we have prepared the Accounting Rules Handbook. In addition, we make efforts to educate and raise the awareness of faculty and staff by providing compliance education and awareness building activities about the prevention of misuse for appropriate use and management of education and research funds through e-learning in line with the Implementation Plan Concerning Compliance Education

and Awareness Building Activities Aimed at Prevention of Misuse of Education and Research Funds, established by the general managing officer. The plan was revised in AY2023 to require all members of the University of Tsukuba to participate in compliance education programs to prevent the misuse of education and research funds at least once a year, increasing the frequency from "at least once every three years," as well as to give tests to check participants' understanding and require them to score full marks to complete their programs to make sure that participants reach higher levels of understanding.



Initiatives to prevent the misuse of education and research funds at the university are also posted on the university website. https://www.tsukuba.ac.ip/research/compliance-guideline/

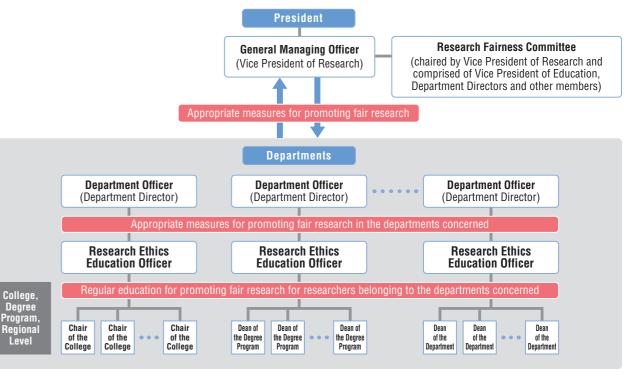
## **Promoting Fair Research Activities**

The University of Tsukuba has established the University of Tsukuba Research Fairness Rules to prevent inappropriate conduct and to put in place a framework for realizing fair research activities. The university has also established guidelines for research ethics education and the storage of research materials and strives to maintain fair research activities.

#### Establishment of a Framework for Promoting Fair Research Activities

Based on the Guidelines for Responding to Misconduct in Research Activities (decided by the Minister of Education, Culture, Sports, Science and Technology), we established the University of Tsukuba Research Fairness Rules and a framework consisting of a general management officer (Vice President of Research), department officers (department directors), Research Ethics Education Officers (appointed by the director in each department), and the Research Fairness Committee.

#### Framework for Promoting Fair Research Activities



Research ethics education aims to ensure that researchers engage in responsible research activities by independently observing norms, thereby establishing trust in science and contributing to the sound development of science.

Researchers are required to store research materials to prove the validity of their activities in the event any doubt arises concerning research misconduct or to ensure the possibility of third-party verification

Furthermore, because the results of research and the data on which they are based have the characteristics of public assets, it is the responsibility of each researcher and the university to properly manage and preserve research materials.

Guidelines for Research Ethics Education [March 2, 2017, decided by the President]

#### Method of Study and Period of Implementation (University Faculty)

- Research ethics training at the time of recruitment Obligation to undertake regular study through Research
- Ethics e-learning (eL CoRE or eAPRIN)
- Regular participation in research ethics FD workshops
- Research ethics training based on characteristics of the research field

#### Method of Study and Period of Implementation (Graduate Students)

Research ethics training at the time of admission and advancement to specialist programs

Guidelines for the Storage of Research Materials, etc. [March 2, 2017, decided by the President]

#### Data and Material Subject to Storage Obligations, **Storage Period and Storage Method**

- The storage period for documents (documents, numerical data, images, etc.) is 10 years after their publication
- The storage period of objects such as specimens (experimental samples and specimens) and equipment is five years after the publication of the paper concerned

## **Building an Information Security Management System**

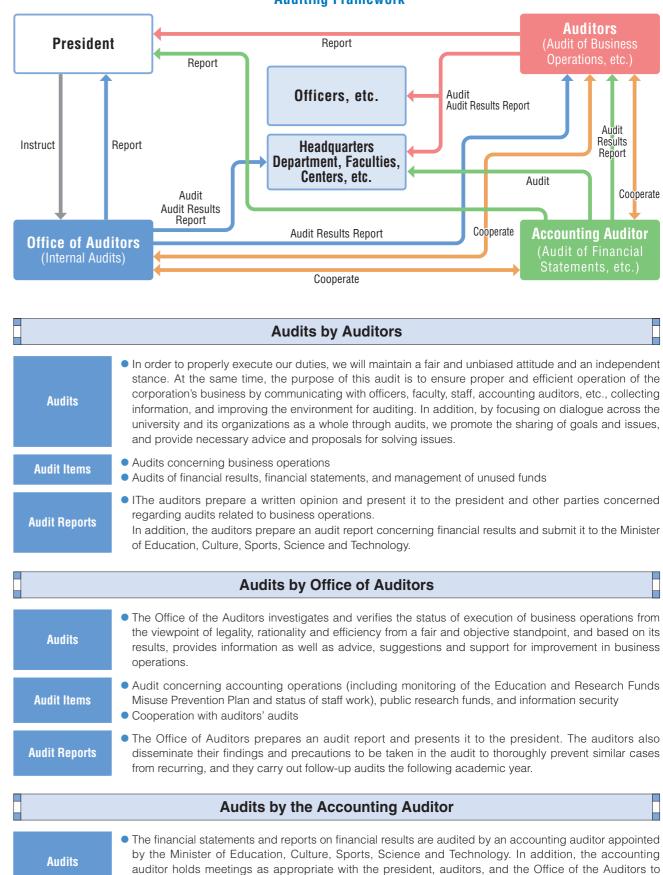
The University is making efforts to strengthen the security of its risk management and network system by making information security education mandatory and through audits. For example, we have established an information security management system that is recognized internationally in terms of rating the confidentiality of information and establishing a dedicated system for storing confidential information.

	Information security education through e-learning and seminars for students and faculty	
Education	<ul> <li>e-learning (INFOSS Information Ethics)</li> <li>Information security seminars</li> <li>Targeted email attack training</li> </ul>	
	Information security audits	
Risk Management	<ul> <li>Audits in cooperation with the Office of Auditors and the Information Security Risk Management Office on the status of systematic initiatives for information security and the status of incident response systems, etc. for five departments</li> <li>Follow up audits for departments audited the previous academic year</li> </ul>	
	Initiatives to prevent incidents, minimize damage, and prevent damage from spreading	
Network System Security	In preparation for advanced cyber-attacks, • Implemented detection and prevention of security invasions in the core network systems • Periodically implemented vulnerability diagnosis using vulnerability check tools • Monitored communication from inside to outside the university	
Confidentiality	Enhanced the keyword-based rating of confidentiality of information and clarified information han- dling procedures according to the level of confidentiality	
Management	<ul> <li>Undertook the rating of information handled in work duties, and formulated and implemented information handling restrictions and handling procedures based on the information rating</li> </ul>	
Confidential Information System	<ul> <li>Established a dedicated system for storing confidential information and operation rules requiring mandatory registration on user terminals and encryption of terminals</li> <li>O Developed and put into operation the online storage system (UTOS) to prevent confidential information being taken off campus</li> <li>Enforced the rules for mandatory registration and encryption of UTOS user terminals</li> </ul>	
		_
Enhancement of the Keyword- based Rating of Confidentiality of	lisplay of confidentiality, confidential	encryptic bition of storage

## **Auditing Framework**

The university cooperates with business operation audits of the auditors, internal audits of the Office of Auditors, and audits of the accounting auditor, and makes efforts to verify these to improve the quality of education and research, and maintain and improve the appropriateness, rationality, efficiency, and soundness of business operations.

#### **Auditing Framework**



share information on issues in accounting procedures and other matters



B/S: Balance Sheet

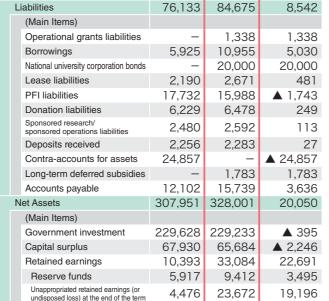
A balance sheet presents the financial conditions of a corporation on the day of settlement. The liabilities and net assets indicate the breakdown of the procured funds, while the assets show how the procured funds have been managed.

Item

#### 《Characteristics of the University of Tsukuba》

Fixed assets, such as land and buildings, account for 76.8% of the assets of the university. Although 58.6% of its liabilities is represented by borrowings, national university corporation bonds (The University of Tsukuba Social Value Creation Bond), lease liabilities, and PFI liabilities, the university stabilizes its financial management through systematic repayment. Net assets account for 79.5% of the total of liabilities and net assets, of which 55.6% is accounted for by government investment, such as land and buildings contributed in kind by the national government. (In millions of yen)

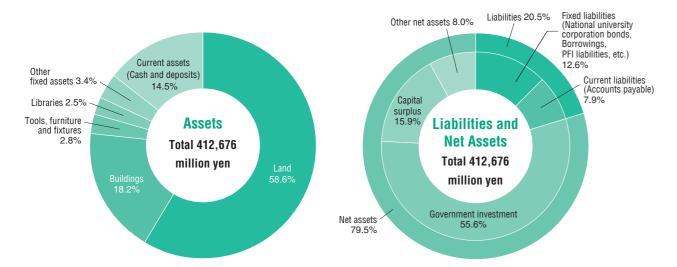
	Item	AY2021	AY2022	Change		
ļ	Assets	384,084	412,676	28,591	Li	iabilities
	(Main Items)					(Main Ite
	Land	242,563	241.706	▲ 857		Operatio
	Land	242,303	241,700	<b>A</b> 057		Borrowir
	Buildings	79,756	75.227	▲ 4,530		National ur
	Dullulings	19,150	13,221	4,550		Lease lia
	Tools, furniture and fixtures	10,668	11,604	936		PFI liabi
		10,000	11,004	550		Donation
	Libraries	10,388	10,418	30		Sponsored sponsored
	Librarios	10,500	10,110	00		Deposite
	Construction in progress	3074	9,412	6,338		Contra-a
	e chick de lien in progreeo	0071	0,112	0,000		Long-ter
	Investment in securities	4,300	2,702	▲ 1,598		Account
		1,000	2,102	<b>_</b> 1,000	Ν	let Assets
	Reserved assets for	_	473	473		(Main Ite
	depreciation		110	170		Governn
	Cash and deposits	23,041	48,935	25,894		Capital s
		20,041	10,000	20,004		Retained
	Accounts receivable	7,946	9,708	1,762		Reserv
		7,040	0,700	1,102		Unapprop



AY2021

AY2022

Change



#### Total assets: 412,676 million yen (year-on-year increase of 28,591 million yen 1)

The main factors contributing to the increase were increases in cash and deposits (issued by the University of Tsukuba Social Value Creation Bond, a national university corporation bond) and the amount of construction in progress (renovation of Building B of the University Hospital, etc.). Land and buildings decreased due to sale of the premises for the old accommodation facilities for foreigners and the old staff quarters site and due to an increase in the amount of accumulated depreciation of fixed assets (total amount of expenses that have been booked as depreciation in the past) and for other reasons, respectively.

#### Total liabilities: 84,675 million yen (year-on-year decrease of 8,542 million yen 1)

The main factor contributing to the increase was an increase in borrowings resulting from systematic borrowings for the issue of the University of Tsukuba Social Value Creation Bond, a national university corporation bond, and renovation of Building B of the University Hospital. PFI liabilities (for the University Hospital Redevelopment Project) decreased because the university regularly repaid them.

#### Total net assets: 32,801 million yen (year-on-year increase of 20,050 million yen 1)

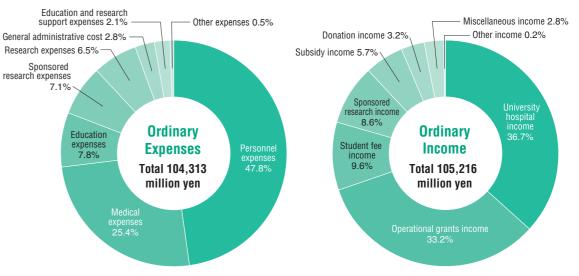
The main factor contributing to the increase was a rise in retained earnings (reserve funds/unappropriated retained earnings at the end of the term) resulting from an increase in extraordinary profit associated with the revision of the Accounting Standards for National University Corporations (See Page 68). The amount of government investment decreased due to sale of the premises for the old accommodation facilities for foreigners and the old staff quarters site and capital surplus decreased due to an increase in the amount of accumulated depreciation of fixed assets.

P/I * Profil and Loce Statement	s statement ir iod (fiscal ver
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#### (Characteristics of the University of Tsukuba)

Personnel expenses and medical expenses accounted for 47.8% and 25.4%, respectively, of the university's ordinary expenses. Of the ordinary income, 36.7% and 33.2% were occupied by university hospital income and operational grants income, respectively.

(In millions of							mons or yen)
Item	AY2021	AY2022	Change	Item	AY2021	AY2022	Change
Ordinary Expenses	102,335	104,313	1,978	Ordinary Income	106,076	105,216	▲ 860
(Main Items)				(Main Items)			
Education expenses	7,171	8,119	948	Operational grants income	35,728	34,943	▲ 785
Research expenses	7,019	6,779	▲ 241	Student fee income	10,056	10,113	57
Education and research support expenses	2,214	2,208	▲ 6	University hospital income	36,690	38,568	1,878
Medical expenses	24,670	26,470	1,800	Sponsored research income	6,709	5,842	▲ 867
Sponsored research expenses	5,572	4,652	▲ 920	Joint research income	1,787	2,041	255
Joint research expenses	1,514	1,705	191	Sponsored operations income	944	1,170	226
Sponsored operations expenses	863	1,082	219	Subsidy income	5,842	6,013	171
Personnel expenses	50,205	49,840	▲ 366	Donation income	2,401	3,395	994
General administrative costs	2,763	2,897	133	Reversal of per contra liabilities for property acquisition	2,677	-	▲ 2,677
Financial costs	308	531	223	Miscellaneous income	2,744	2,958	214
Extraordinary loss	133	64	▲ 69	Extraordinary profit	762	22,076	21,314
Gross income	4,476	23,672	19,196	Reversal of reserve	106	758	652



#### Ordinary expenses: 104,313 million yen (year-on-year increase of 1,978 million yen 1)

The main factors contributing to the increase were increases in education expenses resulting from rising utility expenses associated with price fluctuations (escalating electricity and gas prices) and in medical expenses (relaxation of restrictions on medical activities caused by the spread of COVID-19). The amount of sponsored research expenses decreased due to the termination of the Strategic Innovation Promotion Program (SIP), etc., and the amount of personnel expenses decreased due to renewed placement of faculty and staff, etc.

#### Ordinary income: 105,216 million yen (year-on-year decrease of 860 million yen 1)

The main factor contributing to the decrease was a reduction in sponsored research income resulting from the termination of the Strategic Innovation Promotion Program (SIP), etc. The amount of university hospital income increased because the numbers of operations and patients on expensive medication rose as a result of the relaxation of restrictions on medical activities caused by the spread of COVID-19.

#### Extraordinary income: 22,076 million yen (year-on-year increase of 21,314 million yen 1)

The main factor contributing to the increase was the reversal of per contra liabilities for property acquisition associated with the revision of the Accounting Standards for National University Corporations (See Page 68).

#### Gross income: 23,672 million yen (year-on-year increase of 19,196 million yen 1)

(Ordinary income + Extraordinary income + Reversal of reserve) - (Ordinary expenses + Extraordinary loss)

65

#### indicates a corporation's operating conditions during a given accounting ear) by showing the amount of income less expenses as profit.

(In millions of ven

#### C/F:Cash Flow Statement

A cash flow statement presents the flow of corporate cash during an accounting period (fiscal year). The amounts of cash that came into the corporation and went out of the corporation during the accounting period, and for what reasons, are shown separately for operating, investing and financing activities.

	(In millions of yen)							
	Items	AY2021	AY2022	YoY change				
Ι	Cash flow from operating activities	11,900	9,066	▲ 2,834				
	Education and research operation expenditure	▲ 16,388	▲ 17,021	▲ 632				
	Medical operation expenditure	▲ 21,764	▲ 23,059	▲ 1,294				
	Personnel expenditure	▲ 52,114	▲ 51,223	891				
	Other operation expenditure	▲ 2,700	▲ 3,066	▲ 367				
	Operational grants income	36,205	36,281	76				
	Student fee income	9,045	9,019	▲ 26				
	University hospital income	36,667	37,715	1,047				
	Sponsored research income	10,109	9,061	▲ 1,048				
	Subsidy income	6,463	5,369	▲ 1,094				
	Donation income	3,045	2,946	▲ 99				
	Change in other operating activities	3,332	3,044	▲ 288				
I	Cash flow from investing activities	311	<b>4</b> 0,701	▲ 41,012				
	Expenditure from investment in securities	▲ 1,000	-	1,000				
	Income from redemption of securities	300	1,600	1,300				
	Expenditure from acquisition of fixed assets	▲ 9,548	▲ 8,902	646				
	Income from sale of fixed assets	841	1,348	508				
	Expenditure from placement of fixed deposits	▲ 30,800	▲ 70,500	▲ 39,700				
	Income from repayment of fixed deposits	38,500	33,800	<b>▲</b> 4,700				
	Income from facility fees	2,360	2,923	563				
	Change in other investing activities	▲ 341	▲ 971	▲ 629				
Ш	Cash flow from financing activities	▲ 1,256	20,872	22,128				
	Income from issue of national university corporation bonds	-	19,877	19,877				
	Income from long-term loans	2,738	5,194	2,456				
	Expenditure from repayment of long-term loans	▲ 109	▲ 109	<b>▲</b> 0				
	Expenditure from repayment of lease liabilities	▲ 1,522	▲ 992	530				
	Change in other financing activities	▲ 2,363	▲ 3,098	▲ 735				
E	fect of exchange rate changes on cash	2	4	2				
С	hange in the amount of cash	10,958	▲ 10,759	▲ 21,716				

#### (Major factors contributing to the changes)

[Cash flow from operating activities]

#### Personnel expenditure

Decreased due to renewed placement of faculty and staff etc.

#### Medical operation expenditure/University hospital income

Medical operation expenditure increased as a result of the relaxation of restrictions on medical activities caused by the spread of COVID-19. University hospital income also increased because the numbers of operations and patients on expensive medication rose in association with the above relaxation.

#### [Cash flow from investing activities] Income from sale of fixed assets

Increased due to sale of the premises for the old accommodation facilities for foreigners and the old staff quarters site.

#### Expenditure from placement of fixed deposits

Increased due to the issue of the University of Tsukuba Social Value Creation Bond, a national university corporation bond, and the cash raised was put into fixed deposits, and due to the transfer of fixed deposits in response to financial difficulties of our main bank.

#### [Cash flow from financing activities]

Income from issue of national university corporation bonds

Increased as a result of raising funds through the issue of the University of Tsukuba Social Value Creation Bond, a national university corporation bond.

Change in the amount of cash

+

(An increase in cash)

(A decrease in cash)

(An increase in cash)

#### Outline of cash flow in AY2022

#### Cash flow from operating activities: 9,066 million yen

Income and expenditure concerning the university's operating activities as a national university corporation; specifically, education, research, and medical activities. The university generated funds worth about 9.1 billion yen through operating activities.

#### Cash flow from investing activities: **▲** 40,701 million yen

Income and expenditure concerning investing activities aimed at reinforcing the operating foundations for the future. The university recorded a deficit of about 40.7 billion yen through fund management activities, including proactive capital investment and fixed deposits.

#### Cash flow from financing activities: 20,872 million yen

Income and expenditure concerning raising and repayment of funds. The university raised funds through the issue of 20 billion yen worth of the University of Tsukuba Social Value Creation Bond, a national university corporation bond.

			Financia	al conditions according to cash flow		
Operating	Investing	Financing	Туре	Financial conditions		
+	+	+	Stable	While operating activities are profitable, funds are raised through the sale of assets and loans.	1	
+	+	-	Improving	Funds obtained through operating activities and sale of assets are utilized to repay loans.		The
+	—	+	Proactive	Funds obtained through operating activities and loans are utilized to make proactive capital investments.		univ
+	-	-	Healthy	Profits generated through operating activities are utilized to make capital investments and repay loans.		cas
_	+	+	At risk	Deficits from operating activities are covered through the sale of assets and loans.		AY2
_	+	-	Some caution needed	Operating activities are running deficits while loans are repaid through the sale of assets.	1	in th
-	-	+	Aggressive	Operating activities are running deficits while loans are utilized to make capital investments.		
_	-	-	Business planning	Operating activities are running deficits while capital investments are made and loans are repaid.		

## **Revision of the Accounting Standards for National University Corporations**

#### Removal of "contra-accounts for assets" from accounting record keeping

As regards "balancing of profit and loss," which made national university corporation accounting less easy to understand, "recording of liabilities accumulated after purchase of assets (contra-accounts for assets\*1)" and "recording of the same amount of income as depreciation expenses (reversal of per contra liabilities\*2)" were abolished (except for organization subsidies etc.)

- \*1 Contra-accounts for assets: A liability item recorded as liabilities because it is necessary for assets acquired via financing through operational grants, tuition fees, subsidies, donations, etc., to contribute to the operations of the university,
- recorded as contra-accounts for assets is transferred.

#### Up to AY2021

#### [Balance sheet]

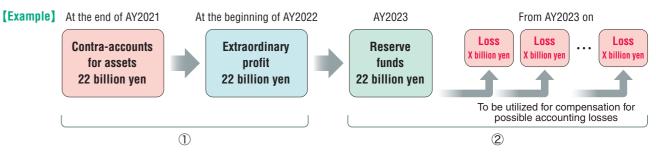
Assets	Liabilities (Contra-accounts for assets 60)*1			
(Buildings 60)	N	et Asse	ts	
Profit and loss statement]	1st year	2nd year	3rd year	
<b>Expenses</b> (Depreciation expenses)	20	20	20	
Income Reversal of per contra liabilities)*2	20	20	20	
Profit	0	0	0	

Profit and loss balanced each academic year

#### Recording of "contra-accounts for assets" as "extraordinary profit"

① "Contra-accounts for assets" at the end of AY2021 were fully monetized at the beginning of AY2022 and were recorded as extraordinary profit (exceptional accounting treatment adopted only for AY2022).

2 The above extraordinary profit is an accounting profit that is not backed by cash according to depreciation expenses and is to be utilized for compensation for possible accounting losses that may arise in the following and later academic years after approval by the Minister of Education, Culture, Sports, Science and Technology as "reserve funds" in the following academic year.



#### Change in the classification of segment information for disclosure in financial statements

The practical guidelines have been revised, requiring all national university corporations to disclose segment information by faculty/ graduate school with a view to facilitating the visualization of distribution of resources (budgets, distribution of personnel, assets, etc.) within the individual corporations.

The University of Tsukuba, which had already been separately disclosing segment information in this Integrated Report for respective groups of related education and research organizations, began to disclose information in smaller segments in its financial statements in response to the revision.

Classification of segment information for disclosure stipulated by the practical guidelines	Clas
Faculties and graduate schools [New]	Gradu Integr
University hospitals	Unive
Joint use and joint research centers	Joint
Affiliated schools	Affilia

Consequently, we can now provide financial information that is more in line with standard business accounting practices.

\*2 Reversal of per contra liabilities: An income item recorded as ordinary income when the same amount of income as depreciation expenses for assets

From AY2022 on [Balance sheet] Financial sources are not transferred to "contra- accounts for assets" and are fully monetized at the time of acquisition of fixed assets.							
Assets				-			
(Buildings 60)	Net Assets (Net Profit 60)						
(Profit and loss statement)	1st year	2nd year	3rd year				
<b>Expenses</b> (Depreciation expenses)	20	20	20				
Income ([Example] Operational grants income)	60	0	0	<b>↓</b>			
Profit	40	▲20	▲20				

Profit and loss not balanced each academic year

#### sification of segment information for disclosure adopted by the University of Tsukuba

luate schools, undergraduate schools, and faculties (including the School of rative and Global Majors and the School of Comprehensive Studies)

versity of Tsukuba Hospital

use and joint research centers

ated schools

#### **Financial Conditions**

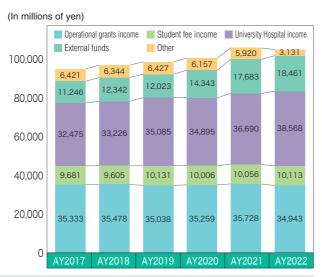
National university corporations are expected to play core roles in Japan's creation of innovations while competing with leading universities around the world by promoting world-class education and research.

To make sure that national universities are able to meet social demand, it is important for them to establish a stable financial base. With the goal of strengthening its financial base through diversification of internal financial resources, the University of Tsukuba has promoted the diversification of financial resources for the Fourth Mid-term Goals Period, through effective utilization of various internal assets, returns from society resulting from the creation of social value, donations, etc., while at the same time further strengthening the acquisition of external funds

The figures and tables below show how the university's ordinary income and ordinary expenses changed during the past six years. Both the ordinary income and ordinary expenses increased as a result of acquisition of external funds and expansion of business associated with strengthening of the medical treatment functions of the University Hospital and other changes.

### **Ordinary Income**

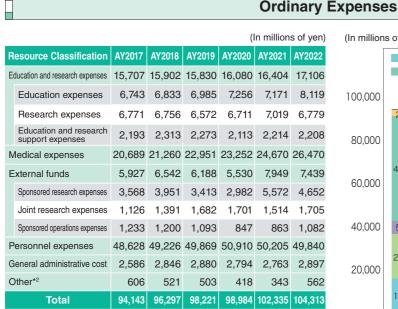
(In millions of yen)						
<b>Resource Classification</b>	AY2017	AY2018	AY2019	AY2020	AY2021	AY2022
Operational grants income	35,333	35,478	35,038	35,259	35,728	34,943
Student fee income	9,681	9,605	10,131	10,006	10,056	10,113
University hospital income	32,475	33,226	35,085	34,895	36,690	38,568
External funds	11,246	12,342	12,023	14,343	17,683	18,461
Sponsored research income	4,156	4,695	4,111	3,714	6,709	5,842
Joint research income	1,253	1,587	1,927	1,982	1,787	2,041
Sponsored operations income	1,353	1,320	1,194	919	944	1,170
Subsidy income	2,320	2,244	2,106	5,102	5,842	6,013
Donation income	2,164	2,496	2,685	2,626	2,401	3,395
Other*	6,421	6,344	6,427	6,157	5,920	3,131
Total	95,156	96,995	98,704	100,660	106,076	105,216

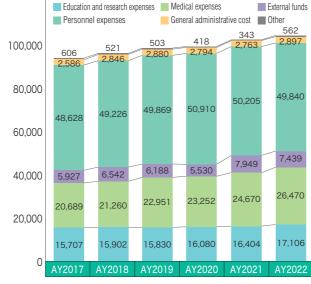


\* Other: Facility expense grants income, reversal of per contra liabilities for property acquisition, financial income and miscellaneous income

Interannual variability trends: The operational grants income remained roughly flat while ordinary income as a whole was on the increase as the university hospital income increased due to a greater level of sophistication of the functions of the hospital, and the sponsored research income, joint research income, subsidy income and donation income rose as a result of acquisition of external funds.

(In millions of ven)





\*1 Subsidy and donation expenses are included in educational expenses, research es, personnel expenses, etc \*2 Other: Financial cost and miscellaneous loss

Interannual variability trends: The education and research expenses remained roughly flat while ordinary expenses as a whole were on the increase as the medical expenses increased due to a greater level of sophistication of the functions of the hospital, and the sponsored research expenses and ioint research expenses rose as a result of acquisition of external funds.

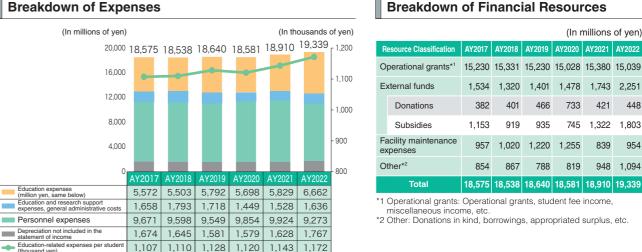
## **Costs and Financial Resources Concerning Education and Research**

Education and research activities are covered by the education expenses and research expenses shown in the financial statement as well as by education and research support expenses used to support and manage all education and research at the university, general administrative costs, personnel expenses for faculty and staff working in education and research, and other expenses. The education-related expenses and research-related expenses below show the extent to which funds are spent on our university's education and research, respectively.

### Costs Related to Education [Education-related Expenses]

Education-related expenses in AY2022 were approximately 19.3 billion yen (excluding the University Hospital segment and affiliated school segment), working out to roughly 1.17 million yen per student.

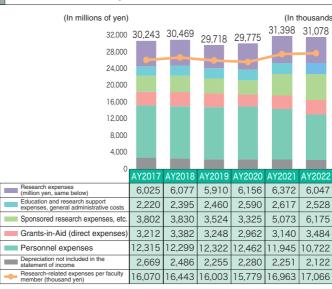
As the annual tuition fee per student is about 530,000 yen, the university is investing more into education-related expenses than it is receiving in annual tuition fees to develop people to play a role on the global stage These expenses are covered by various sources of revenue, primarily operational grants and student fee income.



#### Costs Related to Research [Research-related Expenses]

Research-related expenses in AY2022 were approximately 31.1 billion yen (excluding the University Hospital segment and affiliated school segment), working out to roughly 17.07 million yen per faculty member. To further invigorate research activities of the university, we have been seeking to attract subsidies and research funds from private companies for joint research and sponsored research expenses, among others. These research-related expenses were covered by various sources of revenue, primarily operational grants and external funds.

#### Breakdown of Expenses



#### **Breakdown of Financial Resources**

ds of yen) (In millions of yen)									
<sup>3</sup> [ <sup>2</sup>	20,000	R	esource Classification	AY2017	AY2018	AY2019	AY2020	AY2021	AY2022
	- 16,000	0	perational grants*1	14,903	14,703	14,828	15,450	15,037	15,236
		E	xternal funds	12,586	13,160	12,538	11,745	13,672	13,345
- 1	12,000		Donations	854	983	965	799	814	884
- 8	8,000		Sponsored research expenses, etc.	5,099	5,184	4,923	4,518	6,254	6,175
	- 4.000		Subsidies	1,494	1,371	995	1,142	828	550
			Grants-in-Aid for Scientific Research	3,587	3,773	3,678	3,404	3,589	3,924
2	0		Indirect expenses	1,552	1,850	1,976	1,882	2,186	1,811
7			acility maintenance	1,458	1,346	1,327	1,574	1,522	1,140
8 5			ther*2	1,297	1,261	1,025	1,006	1,167	1,356
4			Total	30,243	30,469	29,718	29,775	31,398	31,078
2		* 1	Operational grapter	Onerati	onol are	nto otur	lant foo	income	

#### Breakdown of Financial Resources

\*1 Operational grants: Operational grants, student fee income

miscellaneous income, etc

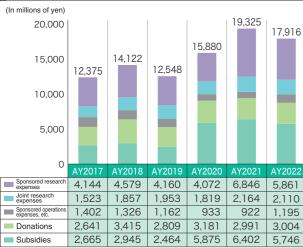
\*2 Other: Donations in kind, borrowings, appropriated surplus, etc

## **Amounts of External Funds Received and Financial Indicators**

#### Amounts of External Funds Received

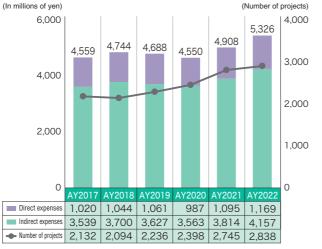
We seek to obtain operational grants and other external funds from private companies, national and local governments, and others to further invigorate our education and research activities

### Sponsored research expenses, Joint research expenses, Sponsored operations expenses, etc., Donations, Subsidies



Although AY2022 saw year-on-year decreases due to termination of large scale sponsorship contracts and a reduction in the amount of subsidies the university received in relation to COVID-19, the amounts of external funds received by the university are on the increase overall.

#### Grants-in-Aid for Scientific Research

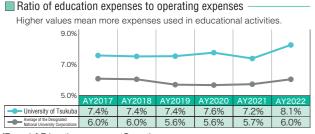


The number of projects and the amount of funds received by the university have been on the rise as a result of its strategic research support. The highest numbers were recorded in AY2022 due to the adoption of a large-scale project (Fund for Accelerating International Collaborative Research (Strengthening International Collaborative Research)) and other factors

#### **Financial Indicators**

We consult financial statements and other information published by other Designated National University Corporations (Tohoku University, University of Tokyo, Tokyo Medical and Dental University, Tokyo Institute of Technology, Hitotsubashi University, Tokai National Higher Education and Research System Nagoya University\*, Kyoto University, Osaka University, and Kyushu University) to identify our financial and operating conditions. Setting financial indicators and accordingly comparing changes allows us to objectively examine our strengths, weaknesses, positions, etc., so they can help us in management improvements and operational reforms.

\*Compared against the Tokai National Higher Education and Research System for financial information



[Formula] Education expenses/Operating expense

#### General administrative expense ratio



#### [Formula] General administrative expenses/Operating expenses



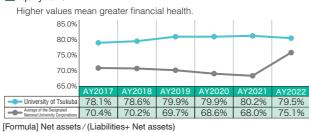
[Formula] (Sponsored research income + Joint research income -Sponsored operations income + Donation income) / Ordinary income

#### Ratio of research expenses to operating expenses



[Formula] Research expenses / Operating expenses

#### Equity ratio



#### University Hospital income per hospital bed



[Formula] University Hospital income / No. of beds

## **Financial Conditions of the University Hospital**

### B/S: Balance Sheet [University Hospital segment]

#### 《Characteristics of the hospital》

The main factor contributing to the increase in assets was an increase in the amount of construction in progress (renovation of Building B of the University Hospital, etc.). The amounts of "buildings" and "tools, furniture and fixtures" decreased due to an increase in the amount of accumulated depreciation of fixed assets (total amount of expenses that have been booked as depreciation in the past). The main factor contributing to the increase in liabilities was an increase in borrowings resulting from systematic borrowings for the renovation of Building B of the University Hospital. PFI liabilities (for the University Hospital Redevelopment Project) decreased as the university regularly repaid them. The main factor contributing to the increase in net assets was an increase in capital surplus resulting from an increase in fixed assets financed by reserve funds carried forward from the previous Mid-term Plan Period (appropriated surplus).

Item	AY2021	AY2022	Change
Assets	45,319	51,304	5,985
(Main Items)			
Land	7,180	7,180	-
Buildings	17,248	15,844	▲ 1,404
Tools, furniture and fixtures	4,716	4,478	▲ 238
Libraries	-	-	-
Construction in progress	2,991	8,808	5,817
Investment in securities	-	-	-
Reserved assets for depreciation	_	-	-
Cash and deposits	5,617	6,027	410
Accounts receivable	7,251	8,599	1,348
Pharmaceuticals and medical materials	237	278	41

#### 《Characteristics of the hospital》

The main factor contributing to the increase in ordinary expenses was an increase in medical expenses associated with the relaxation of restrictions on medical activities caused by the spread of COVID-19. The main factor contributing to the increase in ordinary income was an increase in university hospital income resulting from increases in the numbers of operations and patients on expensive medication associated with the relaxation of restrictions on medical activities caused by the spread of COVID-19. The main factor contributing to the increase in extraordinary profit was the reversal of per contra liabilities for property acquisition recorded as a result of the revision of the Accounting Standards for National University Corporations.

	Item	AY2021	AY2022	Change
C	Ordinary Expenses	43,332	45,344	2,012
	(Main Items)			
	Education expenses		484	168
	Research expenses	642	727	85
	Education and research support expenses	-	-	-
	Medical expenses	24,670	26,470	1,800
	Sponsored research expenses	1,142	644	<b>4</b> 98
	Joint research expenses	236	225	▲ 11
	Sponsored operations expenses	288	366	78
	Personnel expenses	15,568	16,020	452
	General administrative costs	215	206	<b>A</b> 9
	Financial costs	246	200	<b>4</b> 6
	Extraordinary loss	2	2	0
	Gross income	2,811	1,784	▲ 1,027



	Item	AY2021	AY2022	Change
L	Liabilities		37,464	5,790
	(Main Items)			
	Operational grants liabilities	-	19	19
	Borrowings	4,271	9,389	5,118
	Reserves	1,729	1,906	177
	Lease liabilities	1,275	611	▲ 664
	PFI liabilities	14,575	12,933	▲ 1,642
	Subsidies for facilities received	-	1,173	1,173
	Donation liabilities	1,044	1,219	175
	Sponsored research/sponsored operations liabilities	533	736	203
	Contra-accounts for assets	1,801	-	▲ 1,801
	Long-term deferred subsidies	-	502	502
	Accounts payable	6,134	8,813	2,679
Ν	et Assets	13,646	13,839	193
	(Main Items)			
	Government investment	850	850	-
	Capital surplus	8,621	8,821	200
	Retained earnings	4,175	4,168	▲ 7
	Reserve funds	1,364	2,384	1,020
	Unappropriated retained earnings (or undisposed loss) at the end of the term	2,811	1,784	▲ 1,027

#### P/L: Profit and Loss Statement [University Hospital segment]

	Item	AY2021	AY2022	Change	
Ordinary Income		46,145	46,372	227	
	(Main Items)				
	Operational grants income	2,538	1,959	▲ 579	
	Student fee income	-	-	-	
	University hospital income	36,690	38,568	1,878	
	Sponsored research income	1,402	840	▲ 562	
	Joint research income	279	269	<b>1</b> 0	
	Sponsored operations income	319	402	83	
	Subsidy income	3,461	3,165	▲ 296	
	Donation income	1,012	994	<b>▲</b> 18	
	Reversal of per contra liabilities for property acquisition	241	-	▲ 241	
	Miscellaneous income	189	172	▲ 17	
	Extraordinary profit	0	595	595	
	Reversal of reserve	-	163	163	

(In millions of ven



## University of Tsukuba Integrated Report

The integrated report can also be viewed at the following website: University of Tsukuba Integrated Report https://www.tsukuba.ac.jp/public/report/

Relevant Detailed Information

➡Financial Information (Financial Statements, etc.)

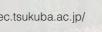
https://www.tsukuba.ac.jp/public/misc/teikyo\_22.html#zaimu

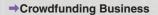
→Mid-Term Goals and Mid-Term Plan

https://www.tsukuba.ac.jp/public/publicity\_term.html

→Tsukuba Futureship

https://futureship.sec.tsukuba.ac.jp/





https://readyfor.jp/lp/university\_of\_tsukuba/



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