

UTokyo COMPASS 

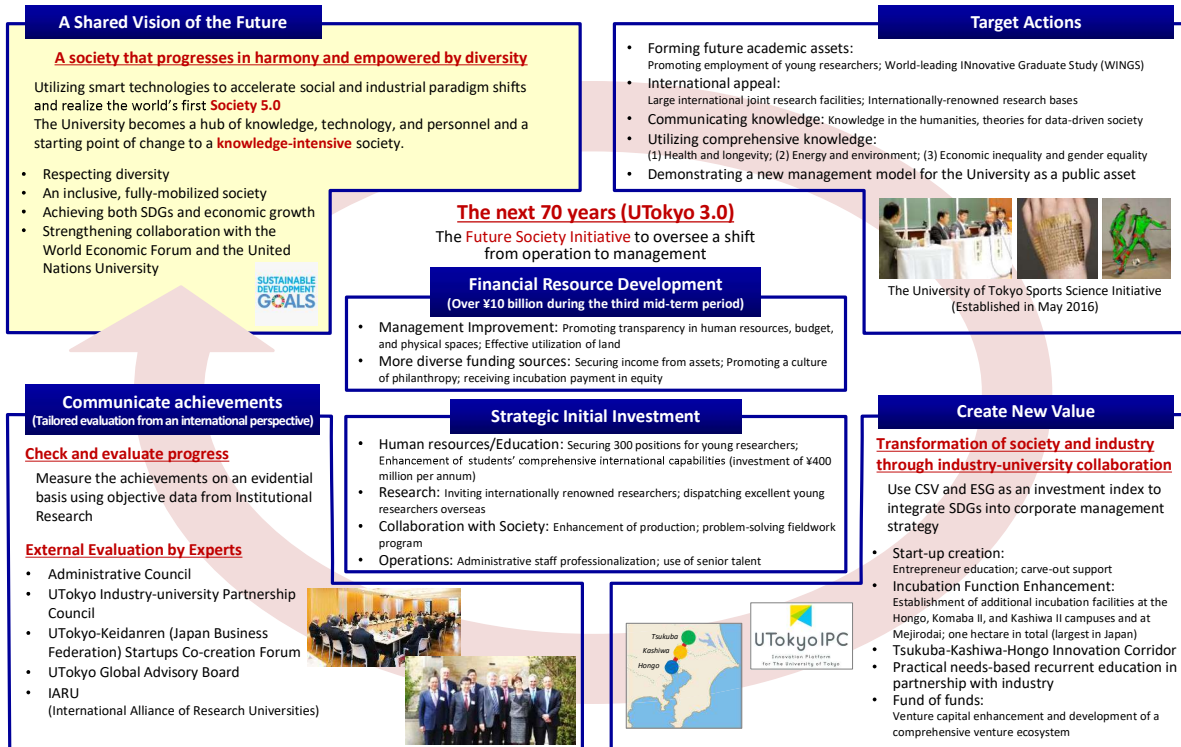
# *Into a Sea of Diversity:* Creating the Future through Dialogue

The guiding principles of the University of Tokyo,  
the ideals to which our university should aspire

1

1. Progress of Designated National University Project
2. Situation Showing Increased International Presence  
as Designated National University Project
3. Future Plans and Prospects  
for the 4th Mid-term Target Period

2



## Main Results of Designated National University Project

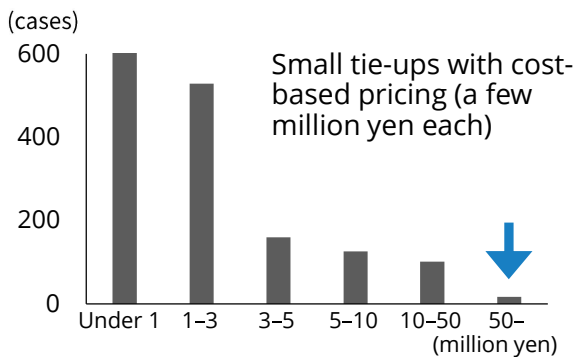
Main objectives and results of the designated national university project

Developing and securing talent	Secure >300 positions for young academic staff	▶ 364 positions by FY2020
Reinforcing research capacity	Strengthen & expand research centers of excellence	▶ Tokyo College (est. 2019), University-wide research organizations (42 collaborative research organizations, 2016-)
Collaborating with society	More than 30 university-related startups annually	▶ Increase of >30 startups every year (133 startups in 4 years)
Enhancing university operations and management	Build ¥10B of flexible financial resources	▶ ¥15.1B by FY2020 (+¥30B of long-term bonds)

We have steadily implemented our roadmap, which ends this March.

# Strategic Collaborations and Development of a New Type of Ecosystem

## Academia-Industry Cooperation



Value of universities' knowledge was underestimated.

## Strategic Collaborations



Beyond AI Project

"Food, Water, Environment"

Collaboration on organizational level

Sharing future vision

Accurate estimate of intangible intellectual property

## UTokyo has established long-term strategic collaboration partnerships with:

Hitachi (2016), NEC (2016), Daikin (2018, **over ¥10 billion**), SoftBank (2019, **¥20 billion**), IBM (2019), Mitsui Fudosan (2020. 1), Nippon Paint (2020. 5), Sumitomo Forestry (2020. 9), TCS (2020. 10), **Kubota (2021. 11, ¥10 billion)**

# Building Bridges for Co-creation

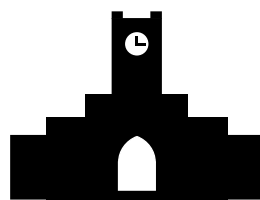
Model Cases in Semiconductor and Quantum Technology

### Semiconductor technology: 24 companies

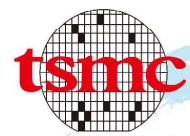
#### Participants

Toppan Printing Co., Ltd.  
Panasonic Corporation  
Hitachi, Ltd.  
MIRISE Technologies  
Tokyo Electron Limited  
etc.

Industry



The World



Semiconductor Strategy  
(from 2019. 11)



Quantum Strategy  
(from 2019. 12)

### Quantum technology (QIIC): 10 companies

#### Participants

JSR Corporation  
Toshiba Corporation  
Toyota Motor Corporation  
Mizuho Financial Group, Inc.  
Mitsubishi Chemical Corporation  
Mitsubishi UFJ Financial Group, Inc.  
etc.



Systems Design  
Lab (d.lab)  
(from Oct 2019)

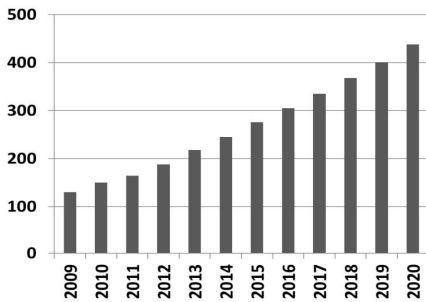


Quantum Innovation  
Initiative Consortium (QIIC)  
(from Jul 2020)

### Leading platforms overseas

Universities, **companies**,  
**startups**, etc.

## Total number of startups



## Market cap of top 5 startups



## Total

More than 430 startups  
Total market capitalization exceeding ¥2 trillion  
23 IPOs

## UTokyo group companies for startup support



Innovation Platform for The University of Tokyo

UTokyo Investment Company / 2016

No. 1 fund: ¥25 billion in total, invested in 57 companies so far, 2 IPOs

No. 2 fund: Initial capital of ¥2.765 billion, increased to a full-fledged fund with a maximum of ¥25 billion

Endorsed TCFD Declaration in 2019



UTokyo Venture Capital / 2004

Managed 4 funds with a cumulative value of approximately ¥54.3 billion

Invested in about 110 companies, with 13 IPOs & 12 M&As



UTokyo Technology Transfer / 1998

Cumulative license revenue of ¥10.47 billion

5,432 contracts signed in total

Actively transferring SDGs-related technologies

7

## Social Application of Research Results by Subsidiaries



Professors of UTokyo provide a thorough explanation of systematic data science theories from the very basics

- A central hub for disseminating UTokyo's various educational contents to society
- Classroom for 80 students in central Tokyo and lectures started in 2019
- The number of students is rapidly increasing up to over 1,000 in FY2021
- Established in Dec. 2018
- Shareholder: UTokyo (100%)



Data-driven analysis / EBPM by UTokyo faculty and UTEcon experts with academic expertise

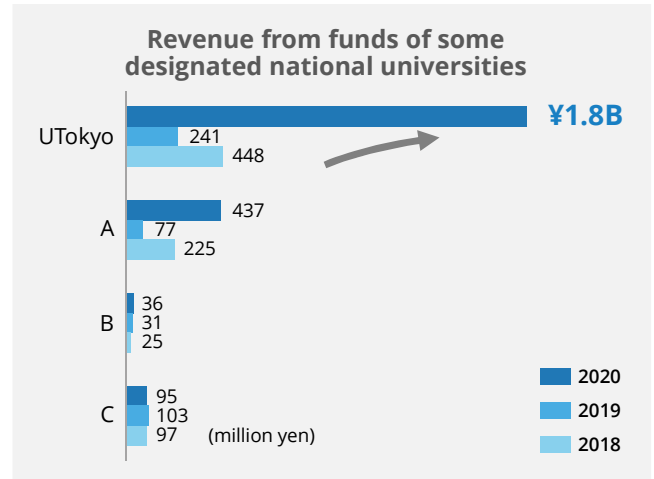
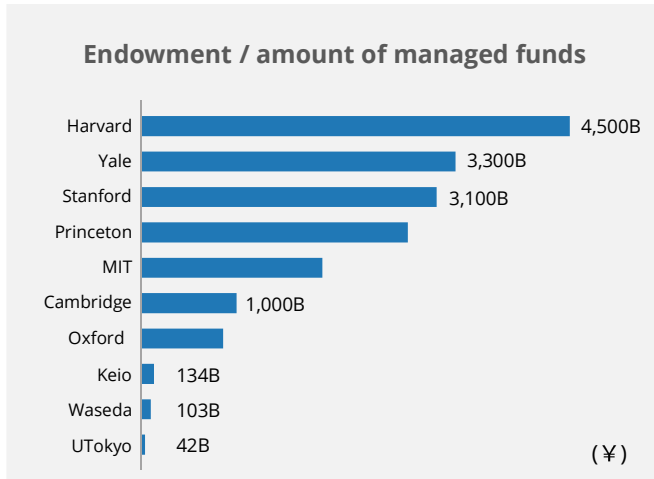
- Provide services to a wide range of clients such as private firms, national and local governments, law firms, etc.
- Strong performance from the first year of establishment
- Established in Aug. 2020
- Major shareholders: UTokyo, Nikkei Inc., TOKYO SHOKO RESEARCH Ltd.

8

# Advanced Fund Management by Endowment

Based on the concept of endowments in universities abroad, the graph below compares the amount of managed funds in Japanese universities (not only endowments).

Portfolio-based international diversified investment revenue of **¥1.8B** in FY2020



Sources: Nikkei (2019.10.12) (<https://www.nikkei.com/article/DGXMZ05093379059A011C1K15200/>), Websites of each university

Sources: Websites of each university

## UTokyo FSI Bonds

Issued long-term university bond in Oct 2020 (first in Japan)

Rated comparable to Japanese government bonds  
Received highest rank as social bond

¥126B in applications for ¥20B 40-year bond  
Annual interest 0.823% (as low as governmental fiscal investment bonds and debt securities)

- 2020 Sustainable Finance Awards (Research Institute for Environmental Finance)
- Debut Debt Deal of the Year (DealWatch)
- Best Deals of 2020 (Capital Eye)

¥151B applications for ¥10B bond (Dec 2021)  
Annual interest 0.853%



SDG Bonds



DEALWATCH AWARDS 2020

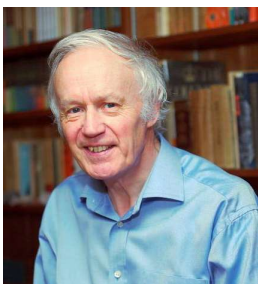


1. Progress of Designated National University Project
2. Situation Showing Increased International Presence as Designated National University Project
3. Future Plans and Prospects for the 4th Mid-term Target Period



**An academic platform to:**

Cultivate knowledge with outstanding researchers & intellectuals from around the world  
 Share and discuss that knowledge with people throughout society



**Honorary Director**  
**Sir Anthony Leggett**  
 2003 Nobel Prize in Physics,  
 Professor at the University of  
 Illinois at Urbana-Champaign

The Joy of Discovery and the Power of Knowledge

The earth and human society in 2050

Digital revolution and future of humanity	Humanities in 2050: World philosophy, world history and world literature
Tackling the planetary boundaries through interdisciplinary approaches	Life and its value for future society
Japan viewed from inside and outside	





Tokyo college held 51 lectures & symposia in FY2020, 41 in FY2021 (until December). The total number of views is about 168,000.



Online オンライン開催  
English 英語  
Japanese simultaneous interpretation available  
日本語同時通訳あり

Thursday, 2<sup>nd</sup> December 12月2日(木) 20:00-23:00JST/11:00-14:00GMT  
Friday, 3<sup>rd</sup> December 12月3日(金) 20:00-23:40JST/11:00-14:40GMT



21,500 views on two days total (8,000 views for Tokyo Forum 2020)

# Expansion to New York

The University of Tokyo  
New York Office (UTokyoNY)



Established in 2015 to facilitate research as well as academic and social collaboration activities in US

Holding seminars, workshops, and meetings in a prime NYC location

Communication hub has been added in 2020 to further promote UTokyo's activities in US

The University also utilizes UTokyoNY to establish relationships with stakeholders in the US as well as to encourage donations.

(UTokyoNY is a 501(c)(3) nonprofit organization.)



## Mayor Bill de Blasio Announces Finalists to Anchor City's Climate Solutions Center on Governors Island

DEC 21 2:27 PM



# World Economic Forum

The president of UTokyo is invited to the annual meeting at Davos every year. The meeting is an important opportunity to talk with leaders from all over the world and to participate in the [Global University Leaders Forum \(GULF\)](#).

Faculty members from UTokyo held sessions at the [UTokyo IdeasLab](#) during the annual meeting and the "Summer Davos" in China.

### Among the GULF member universities

- US: Columbia, Harvard, MIT, Princeton, Stanford, UC Berkeley, Yale
- UK: Cambridge, Oxford
- China: Peking, Tsinghua
- Singapore: National University of Singapore
- Japan: Keio, UTokyo



© World Economic Forum / Sikarin Fon Thanachaiyri



© Hitachi

## The Nippon Challenge: Society 5.0

Former President Gonokami held a press conference with then President Nakanishi of Keidanren regarding Society 5.0, a social ideal proposed by Japan.



# Strategic Development of Internationalization

## Strategic collaboration with world's leading universities and international organizations

- Strategic partnership projects with 10 universities
- Directing collaborations through IARU as Chair
- Enhanced relationships with World Economic Forum, UN organizations

## "Go Global Gateway" to foster Global Competence

- The university offers comprehensive and accessible information about global activities available to students
- Students create a portfolio of all global activities in which they participate
- Students receive a certificate that attests to their global competence

## International Alliance of Research Universities (IARU)

Alliance of 11 international research-intensive universities / est. 2006  
Jun 2019 – Feb 2021 President Gonokami served as Chair

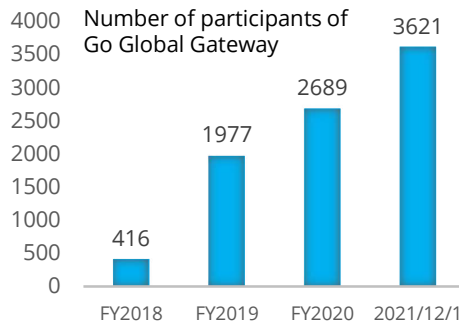
Members	UTokyo (42, 23)	Cambridge (2, 6)
	Australia National (49, 24)	Cape Town (156, 200)
	ETH Z (11, 7)	Copenhagen (116, 79)
	National U Singapore (23, 11)	Oxford (1, 5)
	Peking (31, 30)	Yale (8, 15)
	UC Berkeley (15, 27)	

Numbers indicate the rank in the World University Rankings 2022 (THE), and QS University Rankings 2022



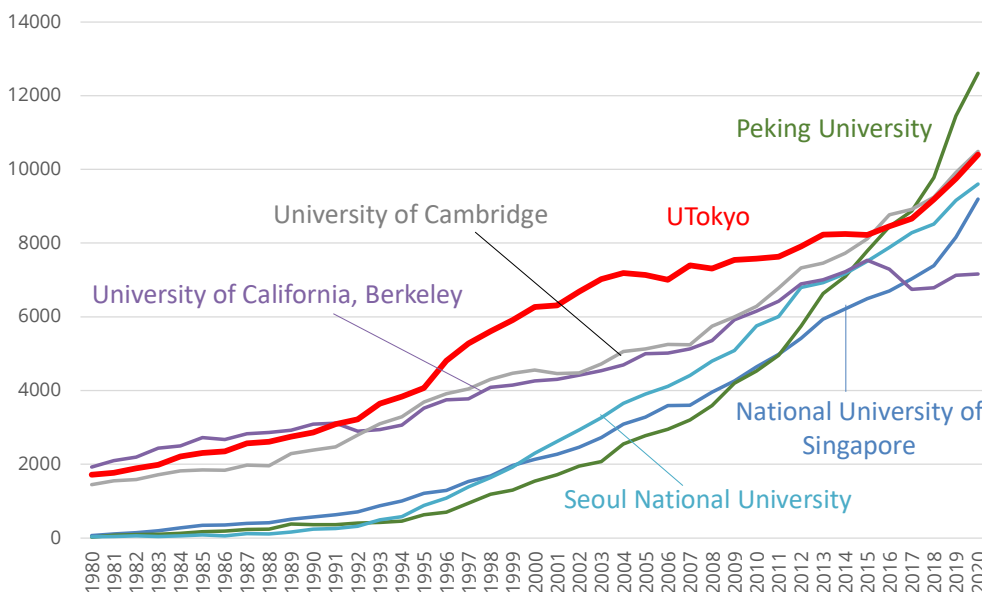
### Five Elements of Global Competence

Global competence: The ability to live and work together with all kinds of people throughout the world



IARU Presidential Meeting at Peking University / May 2018

# Trends in the Number of Research Papers



InCites Data acquisition : 2021/12/16  
Analysis period : 1980–2020

Document types: Articles, reviews  
Research Area: ESI

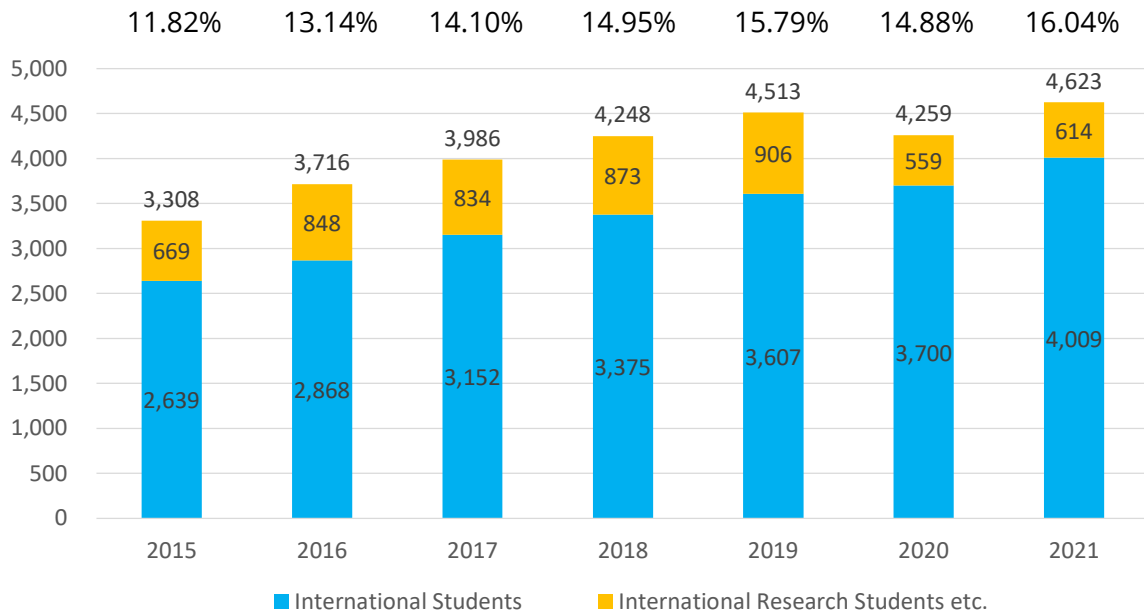
## Share of Research Output in the Nature Index Annual Tables 2021

Harvard	1 (2)
Stanford	2 (5)
MIT	3 (7)
UTokyo	4 (8)
Oxford	5 (9)
Cambridge	6 (10)
Peking	8 (12)
Berkeley	12 (17)
Singapore	24 (29)
Seoul	51 (58)

Numbers indicate the rank among universities, numbers in parentheses indicate the rank among all institutions.

# Increase in International Students

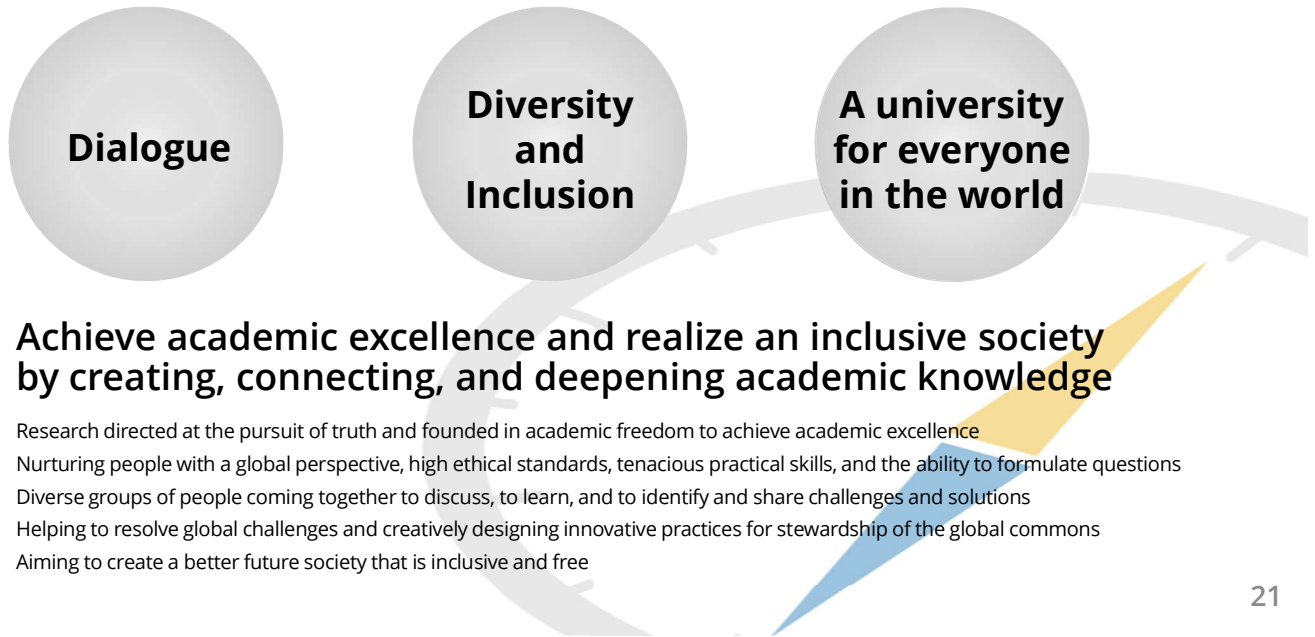
(Ratio of International Students)



1. Progress of Designated National University Project
2. Situation Showing Increased International Presence as Designated National University Project
3. Future Plans and Prospects for the 4th Mid-term Target Period



# UTokyo COMPASS Basic Principles



**Achieve academic excellence and realize an inclusive society by creating, connecting, and deepening academic knowledge**

- Research directed at the pursuit of truth and founded in academic freedom to achieve academic excellence
- Nurturing people with a global perspective, high ethical standards, tenacious practical skills, and the ability to formulate questions
- Diverse groups of people coming together to discuss, to learn, and to identify and share challenges and solutions
- Helping to resolve global challenges and creatively designing innovative practices for stewardship of the global commons
- Aiming to create a better future society that is inclusive and free

## UTokyo COMPASS Action Plans



## Seek Solutions to Global Problems

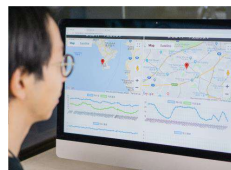
**GX:** Green Transformation  
**DX:** Digital Transformation



**Lead GX on a global scale**  
Global Commons Stewardship Indicators  
**Race-to-Zero (UNFCCC)**  
**GAUC**



Student Dialogue  
@ COP26 in Glasgow



**Creating and realizing a society of data utilization**

mdx: secure and fast data platform (using SINET 5/6)  
DX headquarters



**Promote diversity and inclusion**

New organization for promoting diversity research & education  
Declaration of diversity and inclusion



**Elevate UTokyo's international presence and reputation**

Overseas laboratories



# Global Commons Stewardship Index (GCSI)

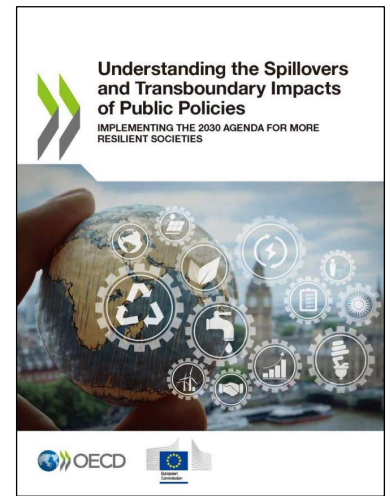
Together with UN-SDSN and Yale University, UTokyo is developing a comprehensive index that compares environmental impacts.



<https://cgc.ifi.u-tokyo.ac.jp/en/news/gcs-index2021-100countries-en/>

	Overall	Domestic	Spillover		Overall	Domestic	Spillover
Argentina	BB	CCC	A	Japan	B	BB	CCC
Australia	CCC	CCC	CCC	Korea, Rep.	B	B	B
Austria	B	BB	CCC	Latvia	BB	BB	BB
Bangladesh	BBB	BBB	A	Lithuania	BB	BB	B
Belgium	CCC	BB	CCC	Luxembourg	CCC	B	CCC
Brazil	BBB	BB	A	Mexico	BB	B	A
Canada	CCC	CCC	CCC	Netherlands	CCC	BB	CCC
Chile	BBB	BB	A	New Zealand	CCC	CCC	BB
China	BB	BB	A	Norway	BBB	BBB	A
Colombia	BBB	BB	A	Poland	BB	BB	BB
Costa Rica	BBB	BB	A	Portugal	BB	BB	BB
Czechia	BBB	BB	A	Romania	BB	BB	BB
Denmark	BBB	BB	A	Slovakia	BB	BB	BB
Egypt	BBB	BB	A	Slovenia	B	BB	CCC
France	BBB	BB	A	South Africa	BB	B	BBB
Germany	BBB	BB	A	Spain	B	B	B
Greece	B	B	B	Sweden	B	BBB	CCC
Hungary	BBB	BB	BBB	Switzerland	CCC	BBB	CCC
Iceland	CCC	CCC	CCC	Turkey	BB	B	BBB
Ireland	B	BB	CCC	United Kingdom	B	BBB	CCC
Israel	CCC	CCC	CCC	United States	B	CCC	B
Italy	B	BB	CCC				

Comprehensive index to measure each country's contribution towards global commons, represented by stress on climate change, biodiversity, and water.



GCSI was introduced in a book published by OECD and the European Commission-Joint Research Centre (EC-JRC).

## ETI-CGC Energy Transition Initiative-Center for Global Commons

Platform of industry-academia collaboration, aiming to develop Japan's pathways to achieve decarbonization

Officially launched on Nov. 5, 2021 at COP26 with the participation of Lord Adair Turner (left), Chair of ETC (Energy Transitions Commission).



### ETI-CGC

#### Center for Global Commons at UTokyo

CGC serves as a secretariat. It applies ETC's analyses to mobilize global knowledge and experience.



#### Member Companies

Energy	TEPCO, JERA, Mitsubishi Gas Chemical
Materials	Sumitomo Chem, Mitsubishi Chem, AGC
Transportation	Toyota Motor
Trading	Mitsui & Co.
Finance	Mitsubishi UFJ FG, Sumitomo Mitsui FG
Others	DAIKIN, Hitachi, SoftBank

### Race to Zero

The international campaign to achieve zero greenhouse gas emissions worldwide by 2050 was launched in June 2020 by UNFCCC (UN Framework Convention on Climate Change), representing 35 regions, 799 cities, 4475 businesses, 731 higher education institutions, and 250 financial institutions around the world (more than 70% of the world's economy). UTokyo joined in October 2021, the first Japanese national university to do so.



### RACE TO ZERO

UTokyo held a student dialogue event connecting Japan and Glasgow during COP26.

Planning and implementing carbon neutrality as an urban university without diminishing the efficacy of research and education



# Fostering Advanced Human Resources to Lead Green Transformation (GX)

## Tackling onto global issues by UTokyo as a whole



### Core programs:

GX Bird's Eye View Lecture Series, Green Future Exchange Meetings, and GX Inspired Lectures

### Advanced skill training programs:

Overseas training program, industry-university internship program, and transferable skills acquisition

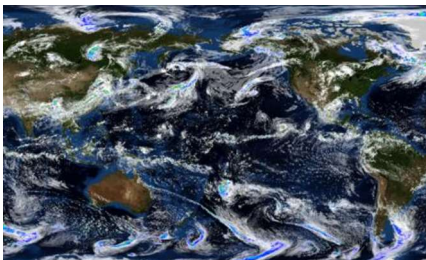
25

# Find a Global Solution to Climate Change with the University of Tokyo

## Contributions to the Intergovernmental Panel on Climate Change (IPCC)



“Recent changes in the climate are widespread, rapid and intensifying, and unprecedented in thousands of years.”



### Global atmospheric simulation using supercomputer *Fugaku*

Developed the world's most advanced weather and climate solution research utilizing Japan's computing technology



### IPCC Sixth Assessment Report (AR6)

Contributions from UTokyo to AR6:

- 10 authors and
- 2 review editors



### Dr. Syukuro Manabe 2021 Nobel Prize in Physics

Graduate of UTokyo

UTokyo serves as a hub for domestic climate change research through:

- Institute for Future Initiatives
- Atmosphere and Ocean Research Inst.
- Institute of Industrial Science, etc.

# UTokyo Compass: New Efforts for Diversity and Inclusion

## Develop Campus with Diversity and Inclusion (Planned Investment by the 2<sup>nd</sup> FSI Bond)

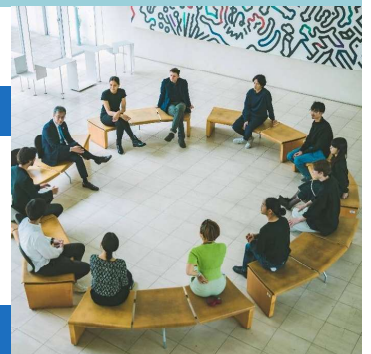
To invest in campus development for inclusion of diverse human resources and dialogue with society at large through industry-academia collaboration.

### Campus that anyone in the world would want to join

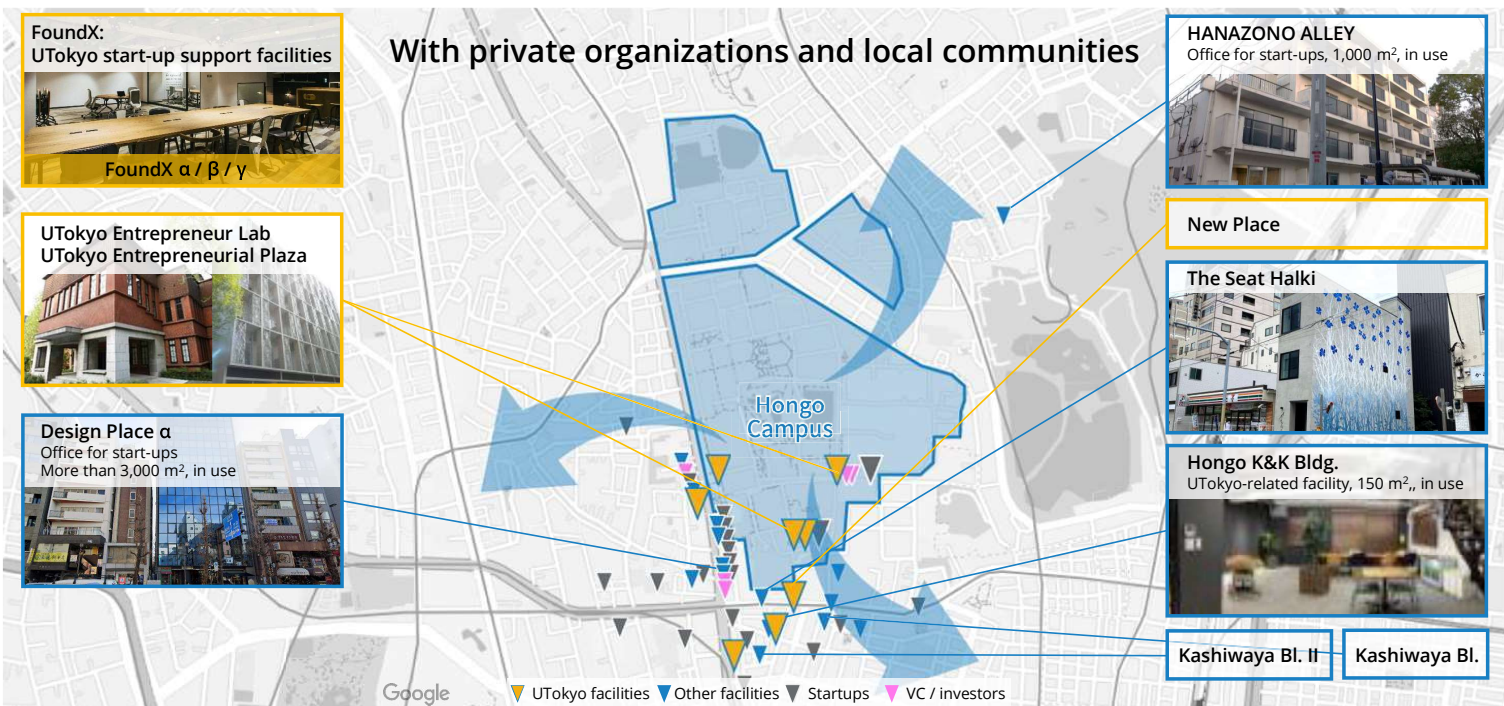
- Develop place for open interaction to realize an inclusive campus, regardless of nationality, culture, gender, disability, etc.
- Develop barrier-free facilities so that members with various difficulties can actively engage in university activities
- Create new value in sports facilities

### Promote Green Transformation and Digital Transformation

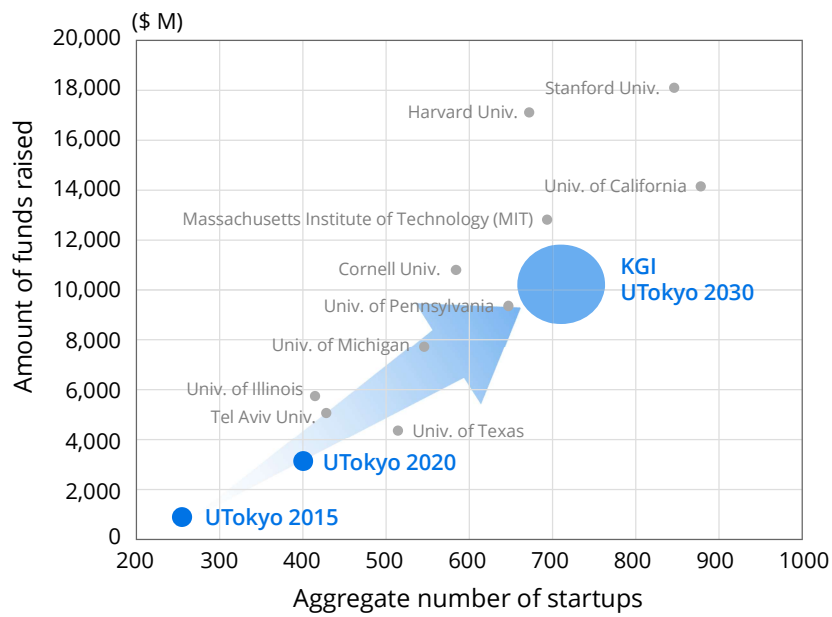
- Co-creation with industry in cutting-edge fields
  - Establishment of helium recycling system
- Division for Nurturing the Next Generation (est. Dec. 1, 2021)
  - Working Group on Diversity and Gender Declaration
  - Taskforce for Increasing the Number of Female Faculty
  - Survey on Diversity Consciousness (2020)



## Hongo Intelligence Hill / Hongo Valley (about 100 start-ups)



Fostering UTokyo startups to launch global businesses



The goal for UTokyo startups in 2030 ➡ ¥1 trillion in capital & 700 companies

UTokyo COMPASS

## Further Progress in Solving Global Issues