



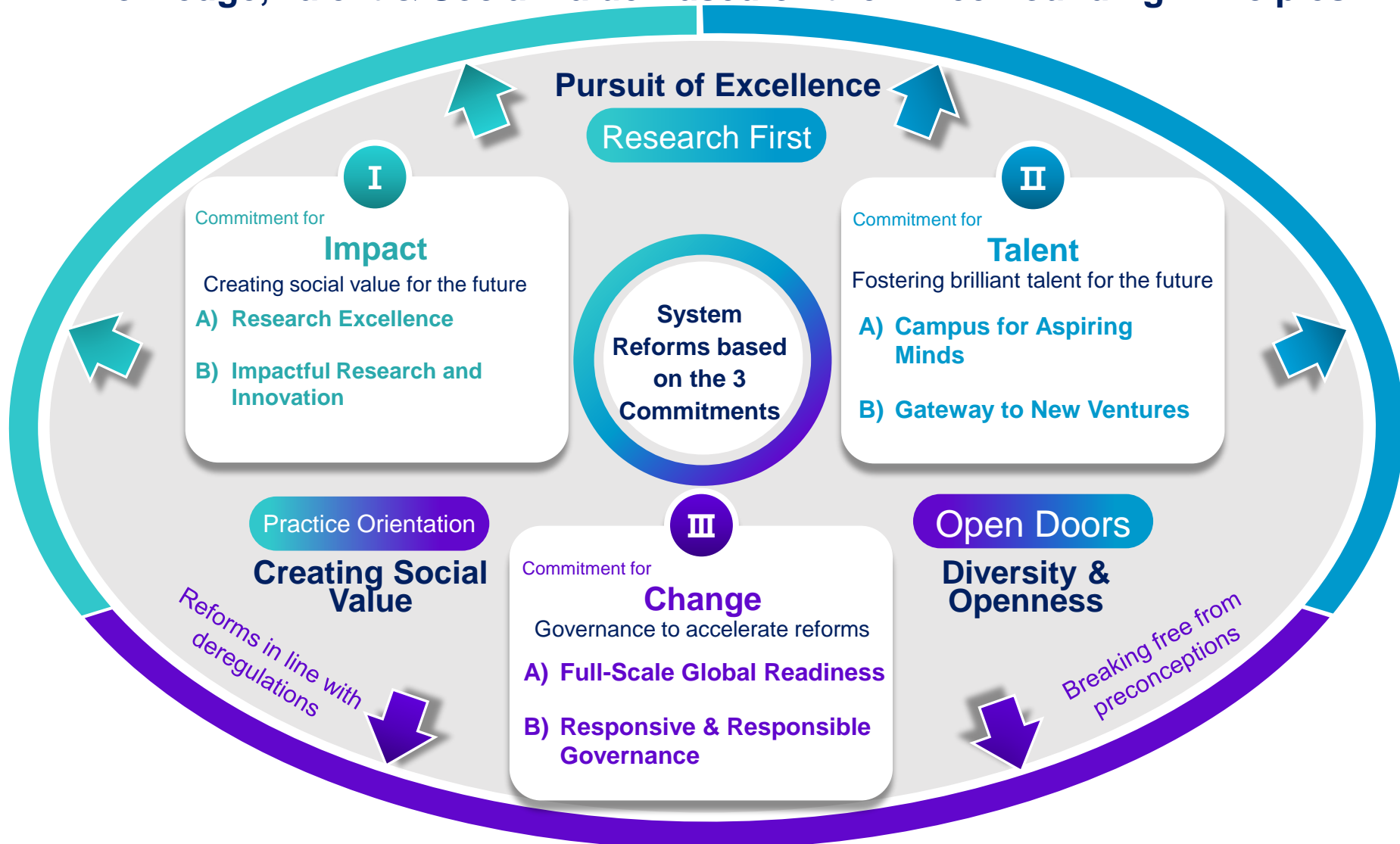
Main Amendments to the Research System Strengthening Plan as University for International Research Excellence

June 14, 2024

National University Corporation
Tohoku University

Overview of the Strengthening Plan

Contributing to Communities at Home & Abroad
Knowledge, Talent & Social Value Based on the Three Founding Principles



Expanding functionality as new open knowledge action platform



Commitments → Goals → Strategies

Mission

Tohoku University contributes to world-wide communities through global excellence in research, education of next generation leaders and collaboration with diverse partners

Founding Principles & Core Values

Research First – Pursuit of Excellence
Open Doors – Diversity and Openness
Practice-Oriented Research and Education - Creating Societal Value

Vision

Based on the three principles, Tohoku University strives to be a creative, open platform that creates new knowledge, fosters talent and establishes new social value for the realization of a sustainable future.

◆ Impact

We will drive excellence in research to create societal value, advance solutions to global challenges and enable resilient societies.

◆ Talent

We strive to be an even more diverse, international gateway for global talent, creating new opportunities for the future through collaboration.

◆ Change

We will drive change, innovate our governance structure and thrive sustainably together with our members, partners and society.

Commitments

I Commitment for Impact

Tohoku University is committed to creating social value through world-class research achievements and taking proactive measures for social innovation based on our experience in contributing to the recovery from the 2011 Great East Japan Earthquake.

II Commitment for Talent

Tohoku University is committed to working with international communities to nurture and educate the next generation of brilliant researchers. Diversity on campus is essential to the individual growth and well-being of each and every member of our university.

III Commitment for Change

Tohoku University is committed to becoming a new knowledge enterprise that pursues both excellence and growth. We will establish effective university governance that enables the realization of all the goals described and promised here.

Goals and Priority KPIs

A Research Excellence

Scientific output, Top 10% publication output & percentile, Top 10% publication output & percentile by early career researchers

B Impactful Research & Innovation

Funds from private companies, number of industry co-creation centers, university start-ups, IP revenue, joint publications with industry partners

A Campus for Aspiring Minds

Ratio of foreign researchers and female researchers, number of PI research units, ratio of PI and staff members, ratio of staff with international expertise

B Gateway to New Ventures

Ratio of international students, international experience of Ph.D. students, financial support for Ph.D. students, number of Ph.D. students, number of Ph.Ds.

A Global Readiness

Ratio of foreign researchers, staff with international expertise, international students, international experience of Ph.D. students, international executives

B Responsive and Responsible Governance

Ratio of independent funding, business scale, own funds, corporate strategic financing, international executives

Strategies

I-A-1: Excellence through solid research strategy
I-A-2: Tohoku University's unique Research Elevation Strategy
I-A-3: A dynamic new research system

I-B-1: Creating an open knowledge action platform
I-B-2: A science & technology hub to attract investments
I-B-3: Improved functionality for co-creation

II-A-1: Creating an attractive environment for researchers
II-A-2: Specialization and enhanced roles of administrative staff
II-A-3: A diverse campus supporting world-class challenges

II-B-1: Career management starting at graduate schools
II-B-2: Graduate school reforms for internationality and openness
II-B-3: Dynamic faculty reforms

III-A-1: Promoting internationalization
III-A-2: International brain-circulation
III-A-3: Creating an international hub for global co-creation

III-B-1: Management focused on growth and new challenges
III-B-2: Advanced governance structure
III-B-3: Management for actions and growth
III-B-4: Supporting diverse talent



Declaration of Determination to Lead Reforms

- Tohoku University's concept focuses not on the promotion of individual research, but on **“systemic reforms”** to enable the University to grow as part of the world's leading institutions.
- We are determined to **lead these university reforms**, which can be considered Japan's last chance, and **become a “node of transformation”**

Commitment for Impact:

Based on the founding principles of “Research First” and “Practice Oriented Research & Education”, and drawing on the experience of the Great East Japan Earthquake, we will uncompromisingly pursue research excellence and create social value.

Commitment for Talent:

Following the spirit of “Open Doors”, accepting the first female students in Japan and breaking conventions, we will attract diverse talent from around the world, nurture their potential, and contribute to a better future for everybody.

Commitment for Change:

We aim to enhance the management and governance structure with a determination to boldly face challenges without fear of change, continuously reviewing and reforming our organization adapting to future requirements



Main Amendments to the Strengthening Plan

5

Item	Opinions from the Advisory Board (1~6) and Main Amendments	Page
Research	1. Roadmap for university wide boosts of research excellence including humanities & social sciences (concrete actions to realize goals for academic & social impact) <ul style="list-style-type: none">● Strategies to improve diverse research excellence● Strategies for value creation in humanities & social sciences● Reinforcing research of clinical faculty members	P6~9 Addendum P10~23
	3. Establishing a dynamic new research structure (promoting the tenure track system, faculty HR management that motivates challenging research) <ul style="list-style-type: none">● New faculty HR management utilizing international excellence	P24~26 Addendum P27~34
Education	4. Graduate school & undergraduate reforms as research university (graduate school education reforms led by the 'Advanced Graduate School', 'Gateway College' to promote international co-learning) <ul style="list-style-type: none">● Education reforms focusing on internationality & openness	P35~37 Addendum P38~45
Global	2. University-wide Internationalization (strategies to attract top level talent, selection of a Chief Global Officer (CGO), JP & ENG as official languages) <ul style="list-style-type: none">● Policies for a city of international excellence that attracts overseas talent● Selection of a CGO to promote internationalization	P46~48 Addendum P49~55
Industry Co-Creation & Finances	5. Advanced financial strategy & increasing revenue through industry co-creation (strategic resource allocation, asset management & procurement, concrete plans toward 10x increment of co-creation revenue, promoting the Science Park Project, plans for startup creation, investment, development & returns, assuring diversity of startups) <ul style="list-style-type: none">● Accelerate corporate integration through industry co-creation reforms● Startup creation based on "DEEP & DIVERSE"● 3 Factors to drastically expand functionality	P56~60 Addendum P61~69 & P70~73 Addendum P74~80
Governance	6. Establishing a sustainable governance structure to implement the Strengthening Plan (division of executive & oversight functionality by the Corporate Strategic Council monitoring research system) <ul style="list-style-type: none">● Advanced governance structure	P81~84 Addendum P85~92

1. Roadmap for university wide boosts of research excellence

Response to Opinion 1





Roadmap for university wide boosts of research excellence

- Clarification of the following 4 strategies outlined in the first draft of the strengthening plan:
 - [Related Strategies]
 - ✓ I-A-1: Excellence through solid research strategy
 - ✓ I-A-2: Tohoku University's unique "Three-layered Research Enhancement Package"
 - ✓ I-A-3: A dynamic new research structure
 - ✓ I-B-1: Creating an open knowledge action platform
- In particular, conducting capability analysis by subject, investigating FTE (Full-Time Equivalent) data, conducting on-site surveys of overseas research universities, and engaging in strategic dialogues on future directions to strengthen research clusters
- Based on the above, we will present specific policies related to "strategies to improve diverse research excellence", "strategies for value creation in humanities & social sciences", and "reinforcing research of clinical faculty members"



Strategies to improve diverse research excellence

- **Establishing a dynamic new research structure:** HR track for international excellence, providing benefits & basic funding on an internationally competitive level. New HCM division to provide comprehensive HR support for early & mid career researchers ※ HCM : Human Capital Management
- **Leading systemic transformation of ECR education:** Expanding functionality of the Frontier Research Institute of Interdisciplinary Sciences. Expansion of tenure positions, reinforcing core facility & startup support ※ ECR: Early Career Researchers
- **Strategic HR management:** Conducting pilot surveys on strategic HR in various fields. Based on survey results, designing a comprehensive faculty HR management system aimed at attracting outstanding researchers who will lead the next generation (including international recruitment, peer review, and tenure track system).
- **Ensuring sufficient research time:** Increasing professional staff by 1000 members, expanding support for researchers. Improving the FTE (Full-Time Equivalent) efforts of researchers from 34.5% (based on recent survey) to 50.0%.
- **Expanding researchers support:** Enabling international exchange, sabbaticals, buy-outs, international joint research support, open access support, core facility support and DEI promotion in collaboration with municipalities for all researchers
- **Enhancing research clusters:** Strengthening Core Research Clusters (disaster science, material science, spintronics, next generation medicine, earth & environmental science) and Research Clusters (cosmic physics, machine science, data science, Nihon-gaku) based on the university's unique "Three-layered Research Enhancement Package".

※ The above research clusters will be continuously updated through data-driven research management.

Example: "Earth & Environmental Science" will be promoted to a Core Research Cluster due to WPI adoption, and "Integrated Chemistry" and "Food Science" are scheduled to be designated as Research Clusters.



Opinion from the Advisory Board

1. Roadmap for university wide boosts of research excellence including humanities & social sciences (concrete actions to realize goals for academic & social impact)

Strategies for value creation in humanities & social sciences

- As a comprehensive university including humanities and social sciences, we will contribute to global communities through the creation of new value based on “comprehensive knowledge”
- 3 Value Creation Strategies
 - 1. Knowledge integration for a Resilient & Sustainable Society:** Based on the experience of the recovery from the Great East Japan Earthquake, we pioneer integrated science aimed at a truly resilient society.
 - 2. International value co-creation based on integrated Nihon-gaku:** We aim to share value creation & problem-solving methods of Japan with the international community.
 - 3. Design & establishment of a society coexisting with AI:** We are challenging the resolution of various issues toward a society that coexists with AI by integrating knowledge from humanities & social sciences with deep insights into cutting-edge technology.
- Through cross departmental “Global Enhancement” in humanities & social sciences, we are promoting measures e.g. expanding opportunities for overseas training, developing international joint research, strengthening international dissemination of results, and expanding international engagement

Reinforcing research of clinical faculty members

- While maintaining the advanced medical system required of universities, we are investing (organized in the form of institutes, etc.) to create true physician-scientists who focus on clinical research.
- Implementing clinical EMCR training in collaboration with the University Hospital as pioneering initiative with dozens of PIs given an independent research environment. Ensuring institutional connectivity through HR tracks for international excellence, fostering outstanding talent
- Enhancing life science research functionality in collaboration with university hospitals, the biobank, etc.
- Comprehensively strengthening research support and business creation by introducing research mentoring teams with diverse expertise and support personnel for IP, BD, and startups with practical experience in the research

※ EMCR: Early-to-Mid Career Researchers

※ IP : Intellectual Property, BD : Business Development

**Specific points regarding the
“Roadmap for university wide boosts of research excellence”**

- Logic tree to achieve research KPIs
- Points for future reinforcements & HR strategy examples to increase research capabilities (primarily in Research Clusters)
- Expanding functionality of the Frontier Research Institute of Interdisciplinary Sciences (FRIS)
- Strategies for value creation in social sciences
- Reinforcing research by clinical faculty members

Logic Tree to Achieve Research KPIs

① More Time for Research

Increasing professional staff by ca. 1,100 members, expanding support system for researchers

- Research FTE: 34.5% → 50.0%

② Establishing a dynamic new research structure

Creating a research system where all talented researchers, can act as leaders of independent research units (PIs).

- 830 laboratories → 1,800 research units
- Asst. Profs. & post-docs → research fellows
- Ph.D. students 2,730 → 6,000

③ Expanding research support

International exchange & joint research support, buy-outs, sabbaticals, open access support, core facility expansion and DEI cooperation with municipalities for all researchers

④ Reinforcing Research Clusters

Strengthen Core Research Cluster & other research clusters of the “3-layered Research Enhancement Package”

⑤ Strategic HR Management

Quality assurance of tenured faculty HR, HR track for international excellence (providing benefits & basic funding on an international level reflecting evaluations) by the Council for Strategic Management of Human Resources

⑥ Reforms for ECR education

Expand functionality of the Frontier Research Institute of Interdisciplinary Sciences (FRIS): (1) tenured positions, (2) fusion of scientific fields by Research Commons, (3) introducing BD, IP & startup support to basic research (4) increase activities in bio-fields

- Independent research environment for 50 ECRs → Developing research front for 100 members

Increased
Research
Activities

Mindset
toward
Excellence

International
Brain
Circulation

Increased
International
Reputation

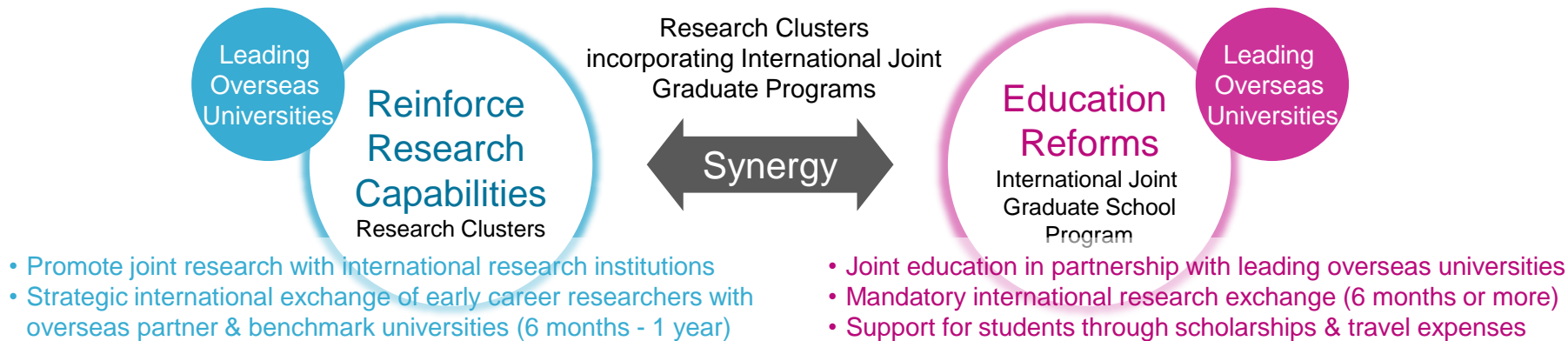
Ca. 2.5x
Top 10%
Publications

Ca. 3.5x
Publication
Numbers

※ECR: Early Career Researchers

Multifaceted evaluations for continuous, comprehensive research excellence

Tohoku University's Unique "Three-layered Research Enhancement Package"



Research Strategy Board (RSB)

International and Broad Perspective for Research Activities

Strengthen Top Research Excellence

Promote strategic research considering strengths and demands of society
Establish world-class critical mass

Core Research Clusters (CRC)

Materials Science (WPI), Spintronics, Next-Generation Medicine, Disaster Science

Strengthen Interdisciplinary Research Groups

Identify strategically important research fronts to facilitate formation of core projects of the next generation

Research Clusters (RC)

Earth System Science (Selected as WPI: Promotion to CRC), Cosmic Physics, Machine Science, Data Science, Nihon-gaku

Research Institutes, Research Co-creation

(semiconductors, AI, quantum, etc.)

SOKAP (Sustainability Open Knowledge-Action Platform)

Strengthen Diverse Research Activities as a Basis for Excellence

Promote diverse research activities based on free ideas of PIs from a long-term perspective

Toward "flat" research units

Reinforce Research Support with HR System

Securing research hours, support staff (URAs, technicians, etc.), EMCR education, core facilities, independent research environment, job opportunity, international sabbaticals, incentives & benefits, etc.

Strategy

Diversity

Overview of Strategic HR

- Trials for strategic HR in all fields (Nov. 2023)
- Planning various HR strategies for boosting research excellence, such as hiring outstanding researchers, cross-appointments, and employing researchers who will lead the next generation

Category	Main Research Area	Strategic HR Targets
Core Research Clusters & Research Clusters	<ul style="list-style-type: none"> • Computational Materials Science, Condensed Matter Physics, Materials Engineering • Spintronics theory calculation, spintronics particles, integrated circuits, quantum material development, quantum computing, new principle computing • Molecular biology, redox biology, cardiovascular biochemistry, cell biology • Disaster risk reduction & crisis management studies, international disaster risk reduction strategy research, disaster medicine, disaster risk reduction education • Oceanography, sedimentary geochemistry, biogeochemistry, climatology, space robotics, data science, Nihon-gaku, elementary particle & nuclear experiments, elementary particle experiments, organic chemistry, etc. 	30 academic fields
Science & Engineering	<ul style="list-style-type: none"> • Isotope geochemistry, marine physics, quantum materials, neutron scattering and physical property physics, organic electronic devices, nano physical property studies, energy dynamics research, aerospace engineering, semiconductors, signal processing, cryptography, magnetic storage, computational science and engineering, seismology, geology, climate change, synchrotron radiation science, measurement and computation fusion, structural chemistry, space robotics, etc. 	80 academic fields
Life Sciences	<ul style="list-style-type: none"> • Molecular biology, cardiovascular biochemistry, tumor immunology, pathology and clinical laboratory medicine, systems biology, anesthetic chemistry, immunology, physiology, pharmacology, chemical biology, metabolism studies, neuroscience, neurogenesis, endocrinology and nephrology, health policy and public health, medical management design, medical technology, skeletal biology, etc. 	30 academic fields
Humanities & Social Sciences	<ul style="list-style-type: none"> • Economics, law, Chinese studies, Russian studies, history, social sciences, cultural anthropology, social psychology, cognitive psychology, public policy, anthropology, international agenda promotion, etc. 	16 academic fields
Total		156 academic fields Ca. 240 members

Challenges for Tohoku University's Research

Insufficient dynamic research deployment to the research front

- Shortcomings of the traditional “Koza” system
- Constraint to traditional fields as an educational organization
- Particularly lagging in focus areas such as bio-pharmaceutical discovery

Insufficient international presence in humanities & social sciences

- Approaches from an international perspective necessary
- Insufficient international PR of research results such as international presentations and publications

Leading ECR Development Reforms

- Independent research environment for ECRs (est. April 2013) ※ECR: Early Career Researchers
- Posts for ca. 50 Asst. Prof. with 500M JPY in total from own funds
- High research performance with FWCI 1.64 (JP avg. 0.94), 15.2% Top 10% publications

International Recruitment

Asst. Profs., fixed term, all fields

Characteristics: Promoting international, interdisciplinary research, pioneering new research fields, highly motivated
Application ratio: 10-20 x

Independent environment Promoting top research

Research funds (max. 11M JPY / 5 years), support for international activities, joint research facilities for interdisciplinary research

Mentor system

PI Education Support

Profs. from mentor departments provide research space and advice

Research exchange in different fields

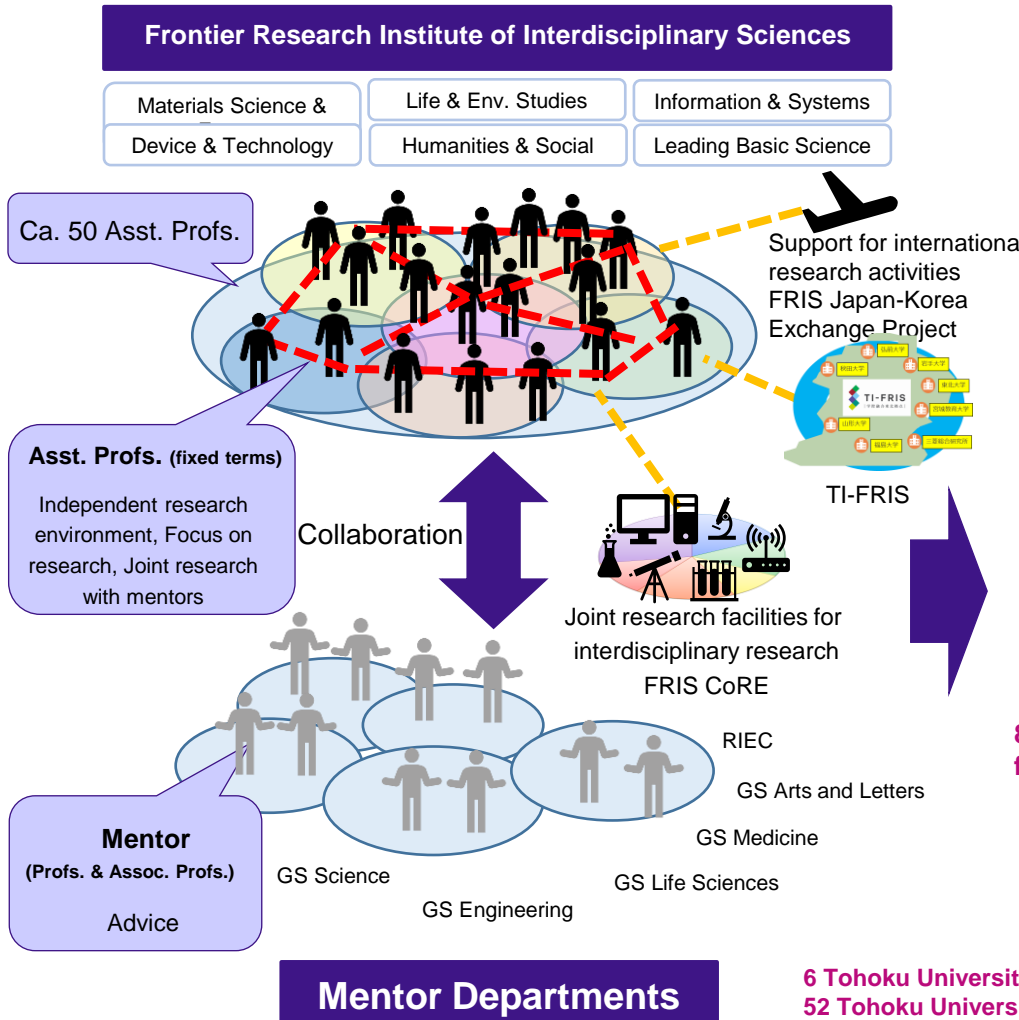
Promoting Interdisciplinary Research

Seminars (monthly), lodging (annually)

FRIS tenure track system

(After 5 years fixed term)

- Tenure Asst. Profs. (tenured)
- Fixed term Assoc. Profs. (5 years term)
- University posts (including cross-appointments)
- Extension of employment (1 year term, max. 2 years)



Leading interdisciplinary research, pioneering new research fields

MEXT's Minister Award
For Young Researchers: 15



11 participants of the JST
Basic Research Program



8 Fusion Oriented Research
for Disruptive Science & Tech.



6 Tohoku University Distinguished Researchers
52 Tohoku University Prominent Research Fellows
As of May 1, 2023 (total)

Expanding FRIS Functionality

Leading Tohoku University's research reform

- **Expansion of tenure positions**

Providing stable tenure posts to ECRs in an independent environment without field limitations, attracting internationally outstanding researchers

- **Acceleration of interdisciplinary integration through Research Commons**

Building spaces for the creation of new areas through interdisciplinary integration, improving research productivity through laboratory automation, etc.

- **Introduction of BD, IP, startup support, etc. to basic research**

BD (Business Development) and IP experts provide support starting at basic research to create impactful businesses

※ IP : Intellectual Property

- **Strengthening efforts in the bio-fields, etc.**

Focusing on speed, we are conducting intensive research in the bioscience field, where agile exploration of cutting-edge research areas is essential

Strategies in Social Sciences for Value Creation

As a comprehensive university addressing humanities & social sciences, we will contribute to communities through the creation of new values based on 'comprehensive knowledge'

A. Integration of knowledge contributing to a resilient and sustainable society

Based on the experience of leading recovery and reconstruction after the Great East Japan Earthquake, we are developing practical integrated science for the realization of a truly resilient society, and contributing to global sustainability through various activities of the open knowledge action platform.

B. Co-creation of international values based on integrated Nihon-gaku

In today's world with increasing uncertainty due to the division and conflict of the international community, we share and promote approaches for value creation and problem solving that Japan has cultivated, and contribute to the creation of a prosperous future for everybody while collaborating with emerging countries such as the Global South.

C. Design and practice of AI coexistence

With the advent of generative AI that interprets language, an era is coming where the vast knowledge of humanities and social sciences can be handled as data. It is expected that the co-evolution of academia and AI will further accelerate. Based on deep insights into cutting-edge technology, we are gathering knowledge from humanities and social sciences to challenge the resolution of various issues in a society coexisting with AI.

A. Integration of Knowledge Contributing to a Resilient and Sustainable Society

International deployment of comprehensive knowledge on problem-solving methodologies acquired from experiences of the Great East Japan Earthquake

- Overview:** Various issues are facing global communities, including climate change, natural disasters, environmental and energy problems, infectious diseases, economic crises, and international conflicts, threatening everyday life. To establish a resilient society against unpredictable events, it is necessary to gather and implement comprehensive knowledge that includes not only natural sciences but also humanities & social sciences, and to influence international communities. Tohoku University, with the experience in leading reconstruction after the Great East Japan Earthquake, is pioneering practical comprehensive science for the realization of a truly resilient society and contributing to the sustainability of the world through various activities of the knowledge action platform.
- Actions:** After the Great East Japan Earthquake, more than 230 reconstruction actions that transcended boundaries of arts & science were implemented, including 52 in humanities & social sciences. Examples include grief care by interfaith chaplains, psychological care for children, regional innovation producer training, archives of the earthquake, cultural property preservation, and socio-economic analysis of reconstructions. In disaster risk reduction, contributions to international agendas and other achievements are being promoted.
- Future development & value creation:** We develop research and education in a form that is internationally visible as a practical comprehensive knowledge for realizing a resilient and sustainable society. We focus on (1) promoting research in collaboration with outstanding researchers around the world and implementing results (including rule-making), and (2) strategically developing international talent (Disaster Risk Reduction MBA/MPA, SDGs Education, etc.) to contribute to international communities.
- Examples in Strategic HR to Increase Research Capabilities:** To execute the above strategy, we are planning to collaborate with and invite a diverse range of researchers and practitioners.



B. Co-creation of International Values Based on Integrated Nihon-gaku

New Nihon-gaku from a perspective of relativization, creating an inclusive, prosperous future

- **Overview:** Overseas Japanese Studies, which focus on Japanese culture and society, provide a new perspective based on different values from traditional domestic research. Integrated Nihon-gaku aims to integrate domestic and international Japanese studies through the international network "Hasekura League" and discover new academic and social values that are globally applicable from a relativistic perspective. Looking at history, Japanese culture and society have flexibly absorbed other cultural habits while transforming themselves. In today's world with increasing uncertainty due to the division of the international community, we share and promote value creation and problem solving that we have cultivated, and contribute to the creation of a prosperous future for humankind while collaborating with countries such as the Global South.
- **Actions:** Roots of Tohoku University's Nihon-gaku research can be traced back to the Faculty of Arts & Letter's affiliated Japanese Culture Research, which was also visited by Donald Keene (honorary doctorate of Tohoku University, honorary professor at Columbia University, recipient of the Order of Culture). Interdisciplinary research on contemporary issues in Japan (e.g. social inequality and gender) was conducted in the faculties of arts and letters as well as law. Furthermore, all social science departments came together to establish the "International Joint Graduate Program in Japanese Studies". This initiative expanded to the "Hasekura League" with European universities and culminated in the establishment of the "Integrated Japanese Studies Center" as the core organization of the Japanese studies community in October 2023.
- **Future development & value creation:** We will strengthen our function as an international knowledge creation platform through the use of digital archives while expanding our international joint research and the International Joint Graduate Program with Future Developments not only to EU universities (Hasekura League) but also to leading North American universities. Furthermore we will expand our activities to countries in Asia and the Global South, contributing to the development of human capital in the world's growth centers.
- **Examples in Strategic HR to Increase Research Capabilities:** In order to implement the above strategy, we plan to collaborate with and invite researchers in from North America.

C. Design & Practice of AI Coexistence

Innovation by Co-evolution of AI and Humanities and Social Sciences

- **Overview:** The rapid development of AI is driving societal transformation on a global scale, significantly impacting human life and social structures. It is anticipated that AI with far superior and more general information processing capabilities (AGI) will emerge, raising not only ethical, legal, and social issues (ELSI), but also potential threats to humanity. On the other hand, advanced AI is opening up possibilities for solving various academic and social issues that were previously unattainable. For instance, humanities and social sciences are primarily described in natural language, but with the advent of generative AI that interprets language, we are entering an era where the vast knowledge of humanities and social sciences can be handled as data, accelerating the co-evolution of academia and AI. Anticipating such situations, we are gathering knowledge from humanities and social sciences to challenge the resolution of various issues in a society coexisting with AI, based on deep insights into cutting-edge technology.
- **Actions:** Tohoku University has been focusing on data-driven problem-solving from an early stage, and has been developing the Service and Data Science Research Center (Economics), Yotta-scale Informatics Center (university-wide), and Computational Humanities and Social Sciences (Arts & Letters). Also, as we have the largest research group in natural language processing (NLP) in Japan located on our campus, we have established the Language AI Research Center as a truly interdisciplinary organization and started activities in October 2023.
- **Future Developments & Value Creation:** Utilizing such internationally distinctive actions, we will create a solution hub for AI-driven social problem-solving, and through practical application to various social issues, we will comprehensively clarify the ethical, legal, and social science design of a new society truly coexisting with AI, and widely communicate these findings to the world.
- **Examples in Strategic HR to Increase Research Capabilities:** In order to execute the above strategy, we plan to collaborate with and invite AI researchers, AI ethics researchers, etc.

International development focusing on Humanities and Social Sciences

Cross-departmental international development package

- Achievements in international collaboration:** Tohoku University's humanities & social sciences departments have launched various international projects. Examples include the “International Graduate Program in Japanese Studies” (2019) by all social sciences departments, the international platform for Nihongaku “Hasekura League” (2015, 18 countries & 30 universities in EU & America), the “Integrated Center for Japanese Studies” (2023), the “Asia Education Leader Course” (2014, 6 universities in 4 East Asian countries), the “Center for International Law & Policy” (2023), the “Data Science Research Cooperation Network” (2013, 10 institutions in 5 countries in Asia, EU and America), the “Office of SDGs International Joint Research & Industry Collaboration” (2024), the “Arctic Research Acceleration Project” (2020, joint research with 6 Arctic countries), etc. In addition, through the implementation of the “Multi-Hazards Program” at the Association of Pacific Rim Universities (APRU, 60 universities), the number of papers presented in the field of “Disaster Education” in 2021 has significantly improved to 2nd in the world (14th in 2019).
- Challenges:** Despite these diverse activities, many are limited to specific departments or fields. There is room for improvement in promoting visible international activities as a university, introducing evaluations that value international perspectives, and cultivating a mindset.
- Future developments:** Promote “International Development” across humanities & social sciences departments. Expand international research opportunities (exchange, joint research, etc.), international communication of research results (international publications, international co-authorships, overseas media PR, etc.), and expand international engagements (diverse collaboration projects, diversification of HR, etc.). In addition to individual faculty evaluations, reforms for personal benefits will include career incentives to boost international activities. When assessing and improving effects of measures implemented, we will set up an international advisory board for humanities and social sciences, to fully incorporate an international perspective.



Reinforcing research by clinical faculty members

Creation of true physician-scientists

- Investing in the creation of physician-scientists who focus on clinical research while maintaining an advanced medical care system
 - ✓ Implementing a system that nurtures clinical EMCRs in collaboration with the University Hospital as pioneering initiative (organized as institute), with dozens of PIs given an independent research environment.
※EMCR: Early & Mid Career Researchers
 - ✓ Furthermore, ensuring institutional connectivity through personnel tracks for international excellence, strategically acquiring outstanding talent both from within and outside the university
- Establishing a life sciences research platform
 - ✓ Forming a research mentoring team with diverse expertise
 - ✓ Strategically placing personnel with practical experience in IP & BD support
 - ✓ Strengthening research support and business creation systems centered around the University Hospital and the biobank

Research Universities & Global Linkages – The Founding of Tohoku University

- Before the war, studying abroad had a significant meaning for Japanese scientists. In the case of Tohoku Imperial University founded in 1907, seven researchers who were appointed to be the first professors studied in Germany, France, the UK, and the US as researchers abroad funded by the Ministry of Education, and prepared for the opening of the university.
- Over time, the system for researchers who would stay abroad for longer periods of time was abolished along with the incorporation of national universities. In recent years, the increase in employment due to competitive research funds with full-time obligations, and the increase in duties other than research for faculty members, have made long-term overseas dispatch difficult, and opportunities for overseas research has been decreasing.
- In our concept, by expanding overseas research and sabbatical systems, emphasizing international perspectives in evaluations, and acquiring diverse overseas talent, we will strategically strengthen global linkages from the perspective of enhancing human capital as a research university.



September 1910, faculty MTG, Faculty of Science “Paris Conference”
(expected profs. Majima, Fujiwara, Kusakabe & Aichi outside Paris)



January 1908, postcard by expected professors
(addressed to Majima (Uni. Kiel) by Honda & Kusakabe (Uni. Göttingen))

2. Establishing a dynamic new research structure

Response to Opinion 3





Establishing a dynamic new research structure

- Clarification of the following 3 strategies outlined in the first draft of the strengthening plan:

[Related Strategies]

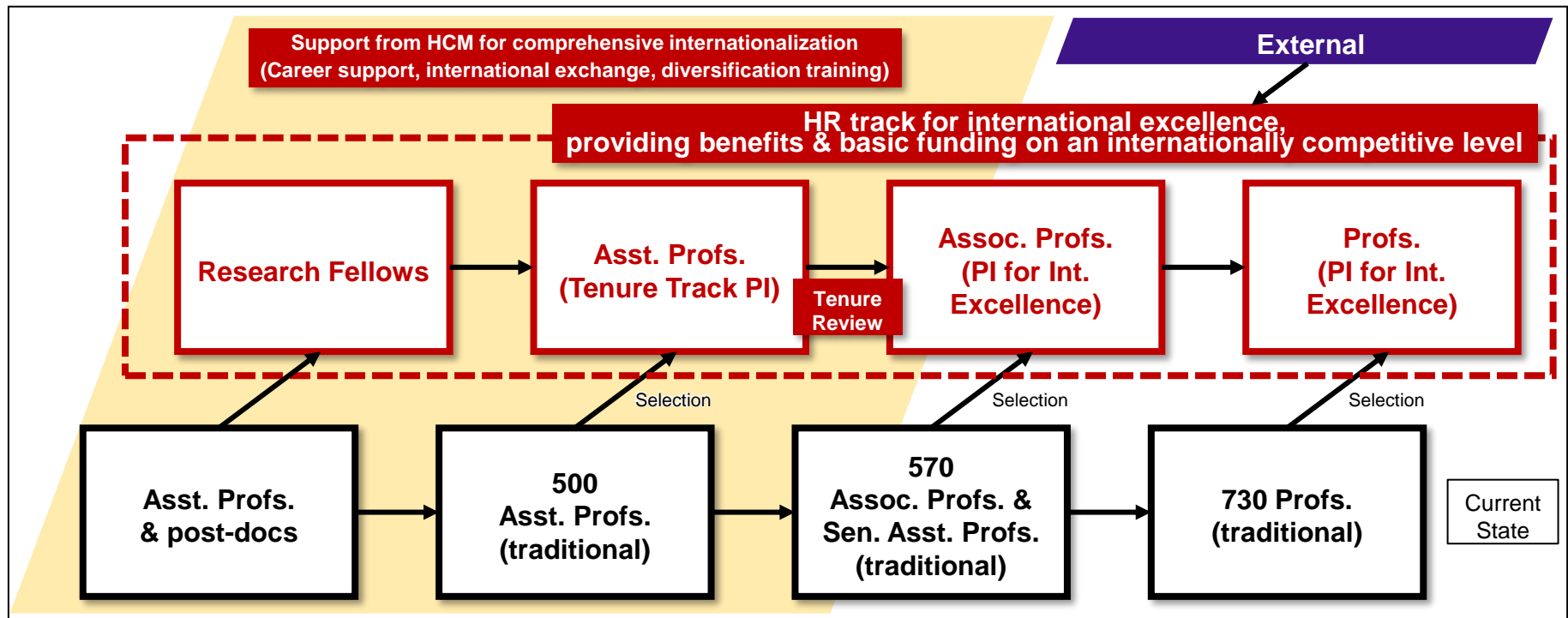
- ✓ I-A-2: Tohoku University's unique "Three-layered Research Enhancement Package"
- ✓ I-A-3: A dynamic new research structure
- ✓ II-A-1: Attractive career paths & benefits for researchers

- In particular, we are conducting trial surveys of strategic personnel in ca. 150 subjects, hearings for the establishment of independent research environments for ECRs, and investigations into the HR systems of leading overseas universities (international recruitment, peer review, tenure track system, etc.). Furthermore, implementing strategic HR measures aimed at acquiring outstanding overseas researchers in humanities & social sciences fields. ※ ECR: Early Career Researchers
- Taking the above into consideration, proposals such as the "HR System for International Excellence" and the "Transition Plan for New Faculty HR Management" to acquire internationally outstanding researchers and researchers who will lead the next generation will be presented.

New faculty HR management utilizing international excellence

- HR track for international excellence, providing benefits & basic funding on an internationally competitive level to Principal Investigators (PIs)
- New HCM division to provide comprehensive HR support for early & mid career researchers. Skills development through diverse professional career support, international exchange, diversification training, etc.
- Expanding functionality of the Frontier Research Institute of Interdisciplinary Sciences (FRIS). Leading ECR education reforms through expansion of tenure positions, reinforcing core facility & startup support

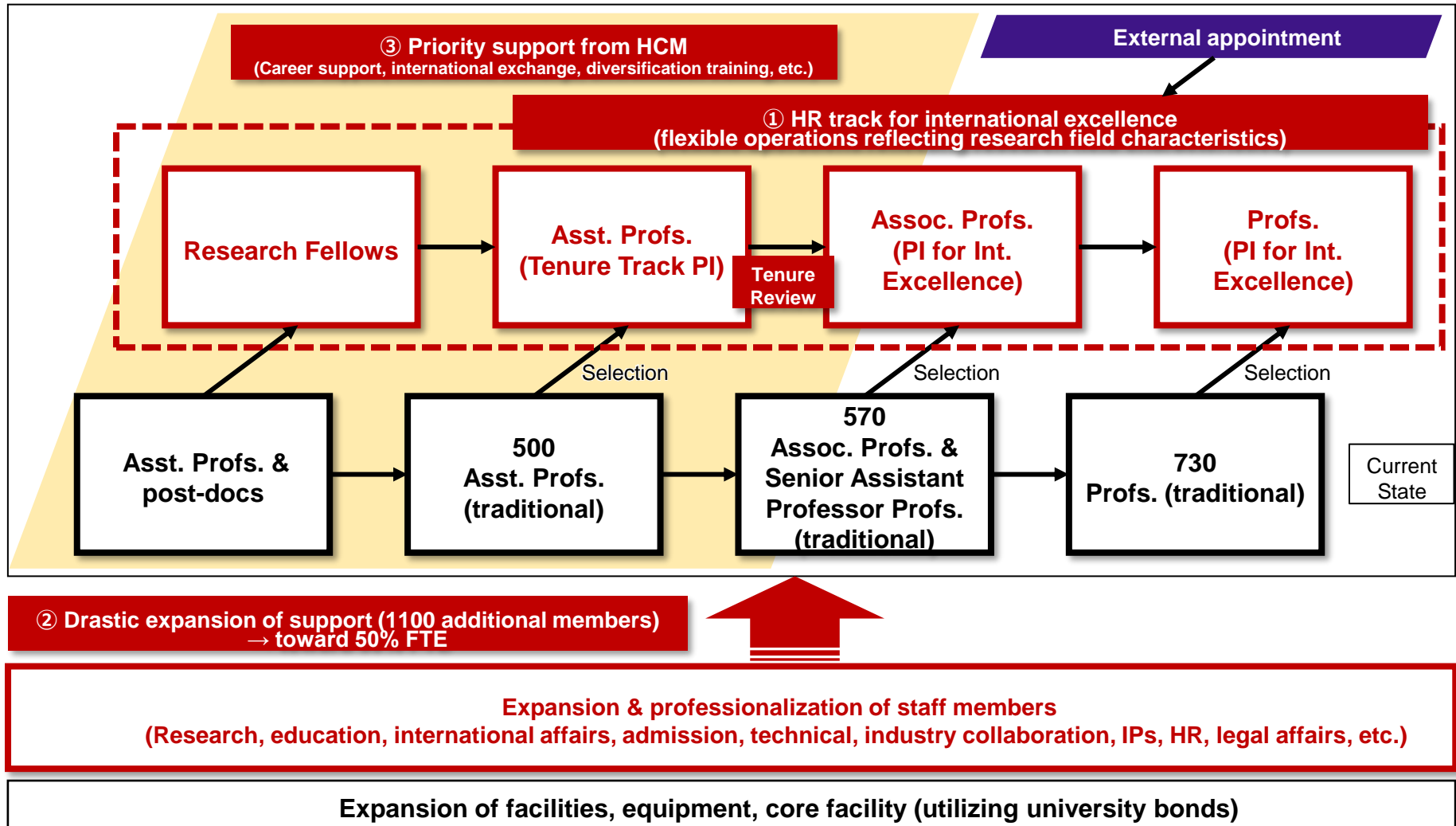
※ HCM: Human Capital Management



**Specific points regarding
“Establishing a dynamic new research structure”**

- University-wide HR track for international excellence
- University-wide HR management (international recruitment, peer reviews, tenure tracks, etc.)
- Functionality of the Office for Human Capital Management (HCM)
- Integrated Enhancement of Research Support Staff & Core Facilities

- ① HR track for international excellence, providing benefits & competitive basic funding
- ② Expand support for researchers and provide more research time (ca. 50% FTE)
- ③ Provide HR support for early & mid career researchers (Office for Human Capital Management)
 - - - Use ca. 80% of additional income from the University Fund for personnel investments



University-wide Faculty HR Management

Topic	Current	Future Actions
Appointment, Allocation & Promotion	Council for Strategic Management of Human Resources (Chair: President), approving all tenure professor appointments	<ul style="list-style-type: none"> • Policy making on all tenure faculty appointments, allocation & promotion by the Council for Strategic Management of Human Resources (Chair: Provost) • Vice President for Faculty HR & Evaluations under the Provost, appoint deputy VPs for assistance
International Recruitment	International recruitment as stated in "Basic Policies on Faculty Selection at Tohoku University"	<ul style="list-style-type: none"> • Revision of the content (qualifications, benefits, basic funds, etc.) • Establish "Diversity Officer" under the Provost • HCM office supporting negotiations for recruitment of overseas researchers
Peer Reviews	Implemented as necessary in each department	Review of "Basic Policies on Faculty Selection at Tohoku University" and "Tohoku University Tenure Track System Guidelines", peer review for hiring and promotion of tenure faculty
Benefits (Evaluation)	<ul style="list-style-type: none"> • Implemented in each department based on "Individual Faculty Evaluation Guidelines" • Development & operation of the "New Researcher Database" system 	<ul style="list-style-type: none"> • Approval by the President & Provost after implementation in each department based on the "Individual Faculty Evaluation Framework" • Develop & operate individual faculty evaluations using the New Researcher Database
Tenure Track	University-wide "Tohoku University Tenure Track System Guidelines", including the Tenure Review Committee and the appeals system	<ul style="list-style-type: none"> • Establish the Tohoku University HR Track for International Excellence and implement clarification of employment conditions and tenure standards according to the characteristics of academic fields • Career support by the HCM office if tenure is not granted

Strategic HR Committed by the Corporate Leader

- **The Provost leads Council for Strategic Management of Human Resources, formulating proposals for appointment, promotion, benefits, evaluation, and budget measures of all tenure faculty, with the President making the final decision**
- **Cross-organizational diverse HR strategies (headhunting, spouse programs, cluster recruitment, etc.) and research support (research environment, support staff, etc.) are deployed as one package**



HCM Office Functionality

Division of Research Staff Management

Employment

- Overseeing the Council for Strategic Management of Human Resources
- Managing HR track for international excellence (faculty appointments, tenure & promotion reviews, etc.)
- Appeals office for tenure reviews
- Support of peer reviews, headhunting, international recruitment, etc.

Assessments

- Managing Individual Faculty Evaluation Framework
- Operation & development of the New Researcher Database

Training & career paths ※ EMCR: Early & Mid Career Researchers

- EMCR skills development of including Ph.D. (transferable skills, international exchange, diversification training, etc.)
- Career support for EMCRs including Ph.D. students (employment support, job fairs, internship seminars) etc.

Division for Administrative Staff Management

Employment

- Strategic HR acquisition, reinforcing PR
- Headhunting external HR, etc.

Assessments

- Management of evaluations based on professional characteristics, etc.

Training & career paths

- Provide training for skills development (English, digital transformation, management, technical support, etc.)
- Self-improvement support (Ph.Ds., obtaining qualifications, etc.)
- Expand personnel exchanges with the private sector & other organizations, etc.

Division for Common Strategies

HR Strategies

- Management of basic planning & operations, including staff appointment/dismissal, salaries, benefits & welfare, etc.

DEI Promotion

- Raising awareness, improving university environment & creating structure to ensure diversity

Health & Safety

- Responsibility for the health & safety, preventing occupational hazards, ensuring safety and promoting health etc.

Letter of Offer (Sample)

Letter of Offer (Sample)

<Date>

Personal & Confidential

<Name of Candidate>

<Address of Candidate>



Dear <Name of Candidate>,

I hope this letter finds you well.

It is my pleasure to offer you an appointment at Tohoku University's <Department Name> at the rank of <Associate Professor / Professor> under Tohoku University's Tenure Track System. We are hopeful that you consider this opportunity to join the Tohoku University community.

Appointment

Your appointment will be effective as of <MM/DD/YYYY> or as soon afterwards as a visa can be obtained. Foreign national visas require processing by the Ministry of Foreign Affairs and are subject to their current processing times, which may involve delays beyond Tohoku University's control.

Compensation

The starting annual salary of this appointment will be * ,*** ,*** JPY. (You will receive *** ,*** JPY per month.) This salary includes area allowance, bonuses, retirement allowance, base pay adjustments, housing allowances, and allowances for dependents as well as any expected salary increases that might occur during the first year of your employment. You will be eligible for salary increases in subsequent years. Tohoku University will also provide any commuting allowances if applicable.

Academic Duties

Your primary academic duties consist of research, teaching and related professional activities, including active community collaborations. The eventual renewal of your

appointment and tenure will depend on your effective fulfillment of your duties.

[If applicable] With regard to teaching, you will be required to conduct lectures and student supervision within the guidelines of the department. You are expected to develop a teaching program in line with our curriculum policy, including student evaluations and supervision.

Details regarding the curriculum policy of each department can be found here:

<https://www.tohoku.ac.jp/japanese/disclosure/disclosure/09/education0901/policy03.pdf>

[Add further details if possible.]

[If applicable] With regard to research, you are expected to pursue a successful scholarly career evidenced by high-impact, original research publications and monographs, acquisition of third-party funding as well as presentations and participation at leading international conferences and academic meetings, representing Tohoku University in your area of expertise.

[Add further details if possible.]

We ask of all esteemed Tohoku University members to contribute to services and actions to improve life at the University and the wider international community as well as strive for global academic excellence in their respective fields.

Your academic performance will be reviewed as part of our evaluation process and you will receive feedback on *[an annual / a biennial]* basis by the *[Dean/Director]* or a designate.

Please also familiarize yourself with Tohoku University's principles found here:

<https://www.tohoku.ac.jp/en/about/history.html>

[Add further details if possible.]

Space

You will be allocated an office and laboratory space in the <Department Name, Location>.

Start-up and Research Funding

Tohoku University will provide you with a start-up fund of * ,*** ,*** JPY as a basis for your research operations. This fund must be spent within the first <N> years of your appointment. You are further required to apply for peer-reviewed grants and other third-party funding, including funding and revenue from joint and endowed research through

Letter of Offer (Sample)

industry collaboration.

[Add further details if possible.]

Tohoku University ID, Orientation and Training

If you accept our offer, you will be assigned a Tohoku University ID and a personal email account to access important university information and communicate as a Tohoku University member. You will also find necessary instructions and e-learning courses online, including a seminar for new faculty members on your arrival at Tohoku University. Further regulatory documents and important information can be found here: <https://tutiad.bureau.tohoku.ac.jp/triad2/?lang=2>

Relocation Services

In line with our regulations, Tohoku University will cover any travel expenses you and your family may incur. Travel expenses include the following additional allowances: Relocation allowance, settling-in allowance (a daily allowance and lodging allowance for two days and two nights), and a dependent relocation allowance. The amount is roughly estimated to be *,***,*** JPY.

Please note that the amount paid may differ from the actual costs.

Accommodation

Although Tohoku University provides accommodations to our members, the number of rooms is unfortunately limited. You can move into university accommodation if there are any vacancies on the date of appointment. Please contact the office in charge for further details: ooo@△△.tohoku.ac.jp.

Annual Paid Leave

You will be entitled to twenty days annual paid leave per year. The number of days provided is reckoned as of January 1st. Each year, twenty days are added to any remaining paid leave from the previous calendar year (up to twenty days). Annual leave for the first year of employment is calculated based on the start date (e.g., a start date of April 1st would provide 15 days for the remaining nine months of the calendar year).

Welfare

You will be enrolled as a member of the Ministry of Education, Culture, Sports, Science

and Technology Mutual Aid Association which will provide health insurance for you and any dependents. Tohoku University will also provide pension insurance, employment insurance as well as industrial accident compensation insurance.

This letter is a conditional letter of offer. Before your appointment recommendation can be acted upon formally, we must receive your written concurrence with the proposed terms of appointment as specified above.

Please provide this as soon as possible, but no later than <MM.DD.YYYY>.

If you need assistance or have any questions, please contact the department administrator, [NAME, oo@tohoku.ac.jp].

We look forward to receiving your response.

Sincerely yours,

< President's Name >

President, Tohoku University

<Signatory's Name>

I, <Full Name> _____ accept the

terms herein on <Date> _____.

Integrated Enhancement of Research Support Staff & Core Facilities

● Strengthen & professionalize research support staff

- ✓ Developing a flexible multi-track career path utilizing job-based employment, along with deploying skill enhancement and capability development programs. Proactive recruitment of highly qualified personnel with doctoral degrees, other qualifications and experiences
- ✓ For “super players” who collaborate with top-level researchers on an equal footing, performance-based bonuses and high salaries will be set

● Advancing Core Facilities Providing an Attractive Research Environment

- ✓ Maintaining a shared equipment center with supporting staff for research on each campus. Development of special support for EMCRs ※ EMCR: Early & Mid Career Researchers
- ✓ Establish an attractive research environment by providing members with access to internationally competitive flagship facilities (e.g., synchrotron radiation facility, biobank, semiconductor facilities) in addition to standard core facilities
- ✓ New initiatives such as strategic core facility development in collaboration with private sector and strategic support for startups

※ Obtained the only S rating out of 10 selected institutions for MEXT’s “Core Facility Support Program”

3. Graduate school & undergraduate reforms as research university

Response to Opinion 4





Graduate school & undergraduate reforms as research university

- Clarification of the following 3 strategies outlined in the first draft of the strengthening plan:

[Related Strategies]

- ✓ II-B-1: Career management starting at graduate schools
 - ✓ II-B-2: Graduate school reforms for internationality and openness
 - ✓ II-B-3: Faculty reforms as research university
- In particular, we will formulate a schedule clarifying the processes for the establishment of the Advanced Graduate School and Gateway College, confirm policies for admission reforms by the Admission Office, examine target regions and approaches for strategic international student recruitment, and conduct on-site surveys of leading overseas universities. Furthermore, we will consider relaxation of strict capacity management at graduate schools and faculties
 - Based on the above, we will present a policy package for the “Education reforms focusing on internationality & openness” (related to the Advanced Graduate School, Gateway College, and Admissions Office)

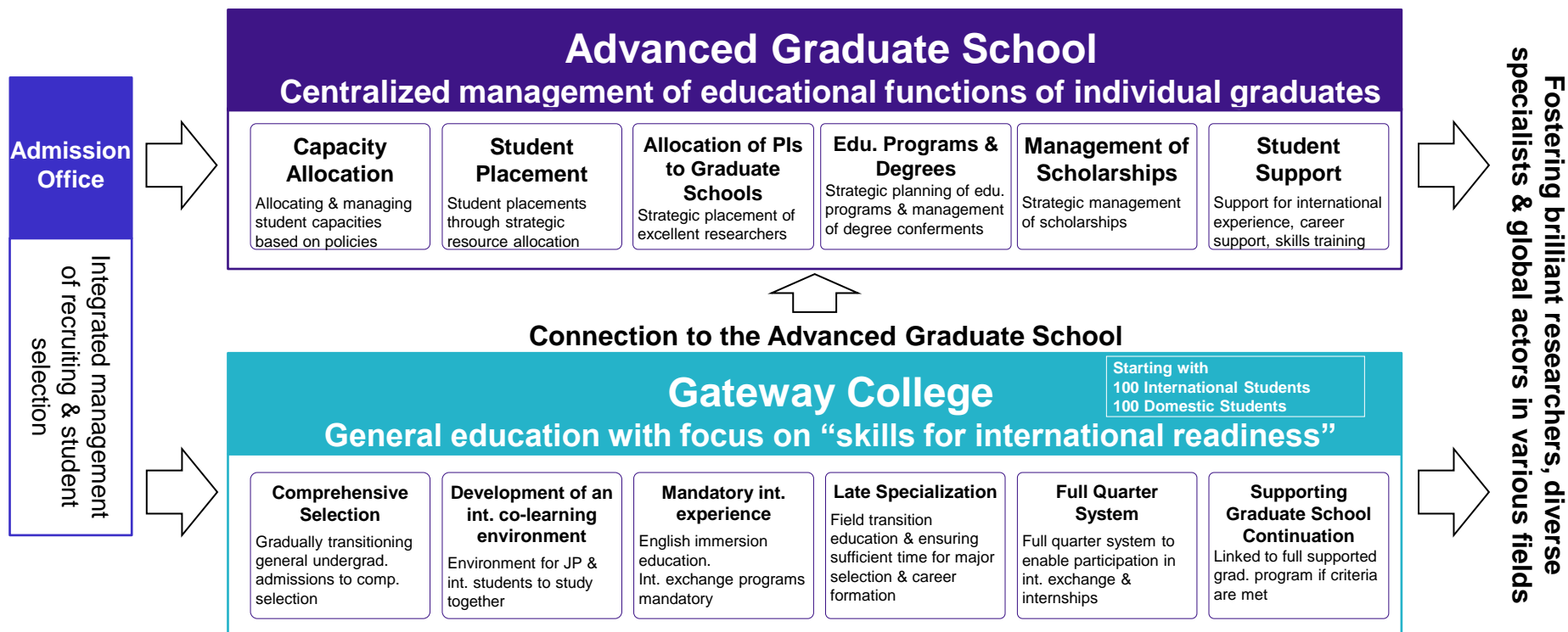


Opinion from the Advisory Board

4. Graduate school & undergraduate reforms as research university (grad. school education reforms led by the 'Advanced Graduate School', Gateway College for international co-learning)

Education reforms focusing on internationality & openness

- **Establishment of the “Advanced Graduate School” for integrated management of graduate education.** Transition from fixed disciplines by graduate schools/majors and the apprenticeship system in laboratories, to **talent development based on an open and university-wide management**
- **Establishment of a “Gateway College” focusing on “the ability to act globally.”** Establishing an environment for Japanese and international students to study together and support each other in an international co-learning environment and developing undergraduate education suitable for a research university
- **Establishing the Admission Organization to supervise student recruitment. Strategic recruitment of international talent** in collaboration with overseas agents and overseas alumni associations



**Specific points regarding
“Graduate school & undergraduate
reforms as research university”**

- Integrated graduate school management by the Advanced Graduate School
- The Gateway College & undergraduate reforms
- Admission reforms & strategic student recruitment by the Integrated Admission Organization
- Requests to review the University (Graduate School) Regulations

Graduate School Reforms

Establishment of the Advanced Graduate School for integrated management of graduate education

Transition from a system based on fixed disciplines by graduate schools/majors and the apprenticeship system in laboratories, to talent development based on an open and university-wide management

- **Be flexible and agile in response to the progress of academia (research fronts, etc.) and changes in societal needs**

The Advanced Graduate School manages the total capacity of all graduate schools, and allocates the capacity flexibly and agilely according to the university's talent development strategy and changes in student demand.

- **Connect excellent researchers (PIs) with motivated graduate students**

The Advanced Graduate School collaborates with departments and degree programs, and determines student placements through strategic resource allocation (student capacity, scholarships, etc.).

Furthermore, strategic placement of excellent principal investigators (PIs) recruited through the HR track for international excellence and other means in departments.

- **Increase the number of graduate students and fostering professional talent who lead the development in various sectors**

The number of graduate students will be increased significantly by developing attractive education programs that respond to changes in society as well as the needs for highly specialized personnel in various sectors such as industry, academia, and international organizations, as well as to the needs of working people who wish to continue their studies. We will cultivate talent who can lead international value creation, including researchers and entrepreneurs, and provide specialists for various sectors.

Integrated Graduate School Management by the Advanced Graduate School

- Graduate school reforms to be flexible and agile in response to the progress of academia (research fronts, etc.) and changes in societal needs
- Reforms to connect excellent researchers (PIs) with motivated graduate students (student allocation, scholarships, etc.)
- Increasing the number of graduate students and fostering professional talent who lead the development in various community sectors

Entry

Advanced Graduate School (to be est. 2027)

Centralized management of educational functions of individual graduates schools

Capacity Allocation

Flexibly allocating student capacities based on the university strategy

Student Placement

Collaboration with departments and degree programs, student placements through strategic resource allocation

Allocation of PIs to GS

Strategic placement of excellent researchers (PIs) recruited through the HR track for international excellence and other means in departments

Edu.Programs & Degrees

Management of cross-sectoral degree programs, strategic planning of education programs and management of degree conferment

Scholarship Management

Strategic management of scholarships (Average support)
Current 1.8M JPY
10th Year 2.4M JPY
18th Year 2.76M JPY
25th Year 3.0M JPY

Student Support

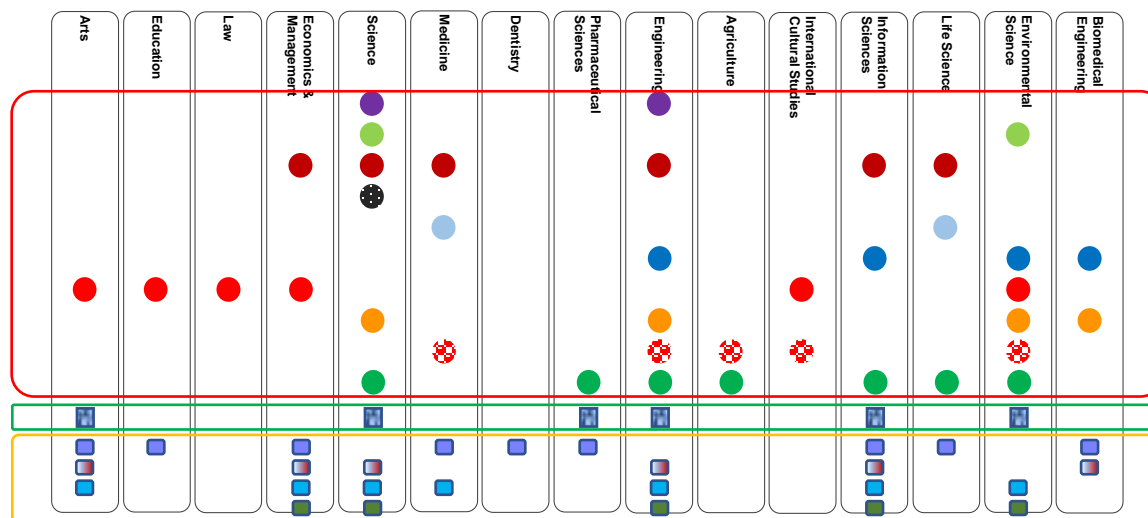
Global exchange to provide international experience, career support in cooperation with HCM, training

Exit

HCM Office

Career support, training programs, etc.

Integrated Admission Organization
Integrated management of recruiting & student selection



Current Cross-sectoral Degree Programs Expand to 25 (50) Programs in 10 (25) Years

International Joint Graduate Programs



Leading Graduate Schools

Multi-dimensional Materials Science Leaders

Graduate School Program for Industry Co-Creation



Undergraduate Reforms

Establishment of a "Gateway College" focusing on "the ability to act globally" and developing undergraduate education suitable for a research university

- **Undergraduate education at a research university**

Establishment of a "Gateway College" (2027) that focuses on education emphasizing "the ability to act internationally," which should be emphasized by a research university. Establishing an environment for Japanese and international students to study together in an international co-learning environment

- **Mandatory international experience**

Implementing thorough English immersion education for the first six months after entering college to improve the ability to think and express oneself in English. Further making international experience a requirement through exchange programs, etc.

- **Late Specialization**

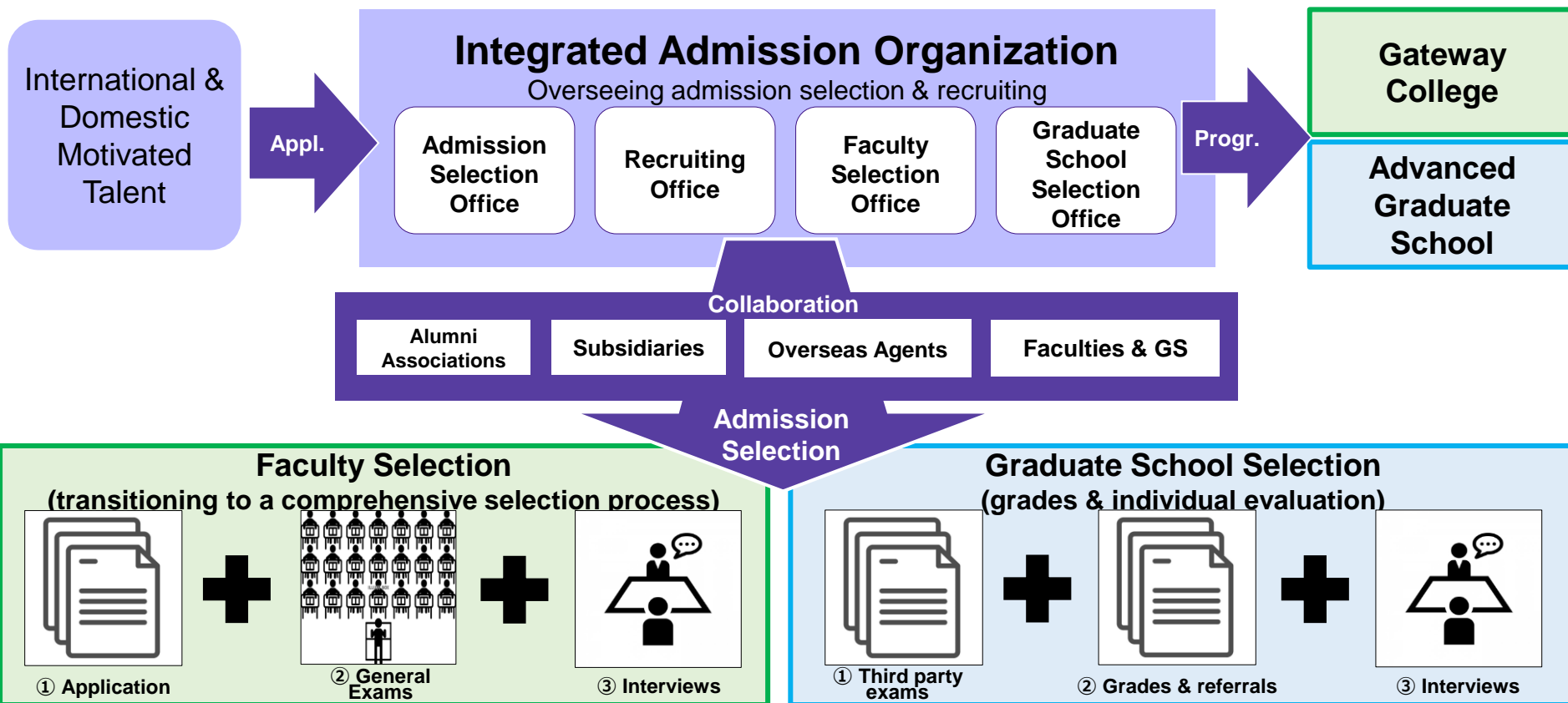
Realizing late specialization through field transition education and ensuring sufficient time for choosing a major and career formation.

- **Transition to comprehensive selection**

Based on the track record of comprehensive selection so far, gradually transitioning general undergraduate admissions to comprehensive selection.

Establishing the Integrate Admission Organization & Reforming the Admission Process

- Fundamentally reviewing admission selection, establishing the “Integrated Admission Organization” to supervise student recruitment in order to attract talent with future global impact
- The Office for Admission Selection Design and the Recruiting Office assign specialized staff to enhance their functions in order to continuously acquire highly talented students
- Undergraduate admission selection is transitioning to a comprehensive selection process and the graduate school admission selection process is transitioning to an evaluation based on academic performance and personal qualities.



Strategic development by a team of experts

Visits & relationship building with prominent universities and institutions in priority countries & regions, as well as holding explanatory sessions, to attract outstanding applicants

Collaboration & utilization of overseas agents & alumni associations

1. Strengthening recruitment in South Asia, the Middle East, Africa, Central and South America, and exploring new student acquisition routes through the use of overseas agents
2. Implementation of overseas PR such as local university explanatory sessions and recruitment utilizing the global network of the Tohoku University alumni association

Recruiting international students using international networks

1. Prioritizing the allocation of scholarships and the recruitment of outstanding international students utilizing the international networks of research clusters and distinguished researchers (PI).
2. Prioritizing the allocation of scholarships and the recruitment of outstanding international students through various programs such as international joint graduate programs and government-sponsored international student priority placement programs
3. Following up on outstanding international students accepted through summer programs and exchange programs and recruiting them for regular graduate programs

Strategic Recruitment of International Students

Strategic development by a team of experts

1. Reaching top high schools in priority regions: Strategic selection of priority countries & regions based on global community actions, visits & relationship building with prominent high schools as well as holding explanatory sessions, to attract outstanding applicants
2. Reaching students through international accreditation institutions: Recruiting through Cambridge International (10000 schools globally, 20 schools in Japan), International Baccalaureate (5600 schools globally, 216 in Japan), International Schools & Japanese Supplementary Schools, etc.



Collaboration & utilization of overseas agents & alumni associations

1. Strengthening recruitment in South Asia, the Middle East, Africa, Central and South America, and exploring new student acquisition routes through the use of overseas agents
2. Implementation of overseas PR such as local explanatory sessions utilizing the global network of the Tohoku University alumni association



Establishing & expanding referrals by designated overseas schools

Partnering with leading overseas high schools, establishing referrals of students by these designated overseas schools, expanding as necessary



Concept of the Advanced Graduate School & Gateway College

For graduate schools, we are developing degree programs that are flexibly and agile in response to the progress of academia (research fronts, etc.) and changes in societal needs, and we are gradually expanding the capacity with the aim of reaching the scale of graduate schools at leading universities world-wide.

For faculties, as undergraduate education suitable for a research university, we are developing programs focused on “the ability to be globally active”. We are gradually transitioning from the current general entrance examination to a comprehensive selection.

Requests to the Government

- (Current Regulations) Strict capacity management on undergraduate & graduate school
 - Flexibly allocating capacities based on the university strategy
- (Current Regulations) Vast amount of paperwork & formalities for each change in student capacities
 - Simplification of the process and document (general authorizations once every few years, etc.)

4. University-wide Internationalization

Response to Opinion 2





University-wide Internationalization

- Clarification of the following 3 strategies outlined in the first draft of the strengthening plan:

[Related Strategies]

- ✓ III-A-1: Promoting comprehensive internationalization
- ✓ III-A-2: International brain circulation
- ✓ III-A-3: Creating an international hub for global co-creation

- In addition to the implementation of 100% bilingual support in Japanese and English as official languages, we will also collaborate with municipalities in joint projects aimed at creating a more attractive city for overseas talent. Furthermore, we will establish a working group to search for overseas talent and narrow down candidates for the Chief Global Officer (CGO)
- Based on the above, we will present a package of measures aimed at achieving “100% Japanese and English as official languages” and “realizing a city of international excellent that attracts overseas talent”, as well as provide information on the selection policies for the “CGO responsible for university wide internationalization”



Policies for a city of international excellence attracting overseas talent

- **Diverse researcher recruitment utilizing the HR track for International Excellence**, significantly expanding the international brain circulation network. (Currently recruitment of approximately 240 outstanding researchers in about 150 fields. Emphasizing strategic importance while considering research security & integrity.)
- The **“Advanced Graduate School”, “Gateway College”, and “Admissions Office”** collaborate to **strategically recruit brilliant international students** by selecting key countries and regions.
- Through analyses of global industry trends, market growth conditions, and Tohoku University’s strengths, we select key strategic fields and implement co-creation reforms. In particular, accelerating international collaboration, with the **globalization of the industrial value chain** as opportunity.
- To expand staff with international expertise, we will form an overseas talent recruitment team. **We will devise a unique staff recruitment assessment method, targeting overseas talent.**
- In conjunction with acquiring overseas talent, we will **develop measures for environmental improvement, closely collaborating with the local administration.**

Selection of a CGO to promote internationalization

- Establishing a working group to search for overseas talent and narrow down suitable candidates. **Selection from a wide range of candidates with understanding of international research universities, having a broad international network themselves.**
- **Various regulations and application forms have already been made available in both Japanese and English.** Additionally, by utilizing AI translation tools, expanding language training, and promoting the employment of foreign staff, we aim to achieve a 100% bilingual environment of Japanese and English at an early stage.

**Specific points regarding
“University-wide Internationalization”**

- Selection criteria for Chief Global Officer
- Process for English & Japanese as official languages, expansion of staff with international expertise
- Collaboration with local municipalities for a “City for International Excellence”

Comprehensive Internationalization

Executive officer for comprehensive internationalization (CGO)

Transformation to a globally oriented, internationally responsive organization

Expanding networks of International Joint Graduate Schools, alumni associations, overseas offices (3), liaison offices (19), international joint labs (2), AIMR satellites (2), strategic international partners (4), consortia (5), exchange agreements (246), early career exchange (39), etc.

International Members

- Students: 30% (GS: 40%, UG: 20%)
- Researchers: 30%
- Administrative staff: 20%
- Council: 20%, Executives: 30%

Inbound readiness

- JP & ENG as official languages : 100%
- Courses in English: GS 100%, UG 50%
- Reinforcing recruitment
- Staff with international expertise: 50%
- Cross-cultural dormitories: 2x, etc.

Global Linkage & Network

Diversity

Mobility & Experience

International Experience

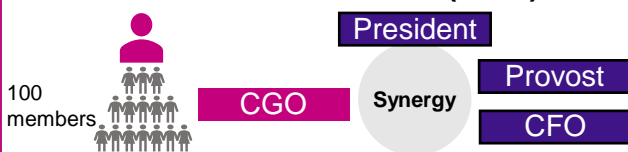
- UG students: 100% (co-learning)
- Ph.D. students: 100%
- Tenured faculty: 100%
- (9x international co-authored papers)

Global Readiness

Outbound readiness

- English level at Gateway College TOEFL iBT® more than 79: 100%
- International co-learning seminars: 2x
- Travel expense support
- Overseas sabbaticals, etc.

Top management by Chief Global Officer (CGO)



Leadership & Structure

Advice from top level overseas experts



Research Strategy Board
University Advisors
Diverse Expert Advisors

Subsidiaries and strategic outsourcing

Reduced load and increased productivity

Policy

Toward a global campus based on fundamental policies and necessary regulatory reforms

Policies for comprehensive internationalization

3 commitments, 6 goals, 19 strategies
5 related priority KPIs



Leadership & Structure

Top management by the CGO

- **Establishing the Strategic Leadership Team (SLT)**

The president, the provost, the chief financial officer (CFO), and the executive officer for internationalization (CGO) are the 4 main executives coordinating efforts for organic collaboration and smooth business execution.

- **Expand linkage with diverse overseas stakeholders**

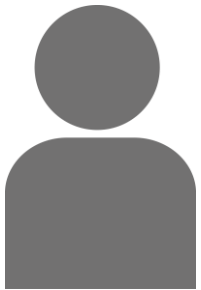
Strengthen international linkage for all university actions (partnerships, hub creation, brain circulation, HR acquisition, alumni events, etc.)

- **Oversee fundamental internationalization of the university**

Improve global readiness and awareness of university members, and ensure internationalization across organizational silos in addition to building strong relations with overseas institutions

Suggestions from International Advisors

Regular meetings with 5 international advisors from November 2022 to May 2023



- In order to implement comprehensive internationalization, two aspects have to be considered. One is the operational aspect, which requires individuals who have knowledge about the recruitment methods of international students, the rules of entry related to studying abroad, and the methods of accepting international students. The other is the presence of senior leadership-level individuals who can discuss the university's strategy on a larger scale. These individuals have to be capable of solving problems that occur within the university in collaboration with others at the same senior leadership level.
- A CGO (Chief Global Officer) needs to have a deep understanding of strategy, management, and internationalization. Interpersonal skills are also required. The CGO needs to be given the authority to exert influence throughout the entire university.
- The CGO needs to engage in dialogue with the university's upper management and researchers, and be able to exchange ideas at the same level as them. Not only dialogue, but also concrete proposals for improvements are of the essence.
- Candidates for the CGO should, as the first point, be individuals who understand the characteristics of large-scale research universities. They should have experience working in an environment where there are many departments, competing priorities and where authority is decentralized. The second point is that they should be individuals who have gained executive experience in various research institutions. Candidates should also be well-versed in all aspects of research and research operations, and also be familiar with Japan. They should also have knowledge about recruitment and other related matters.

Selection Criteria for the CGO

- **Selection Criteria**

Appointment of someone from global market with a wide international perspective with abilities to oversee university-wide internationalization irrespective of nationality

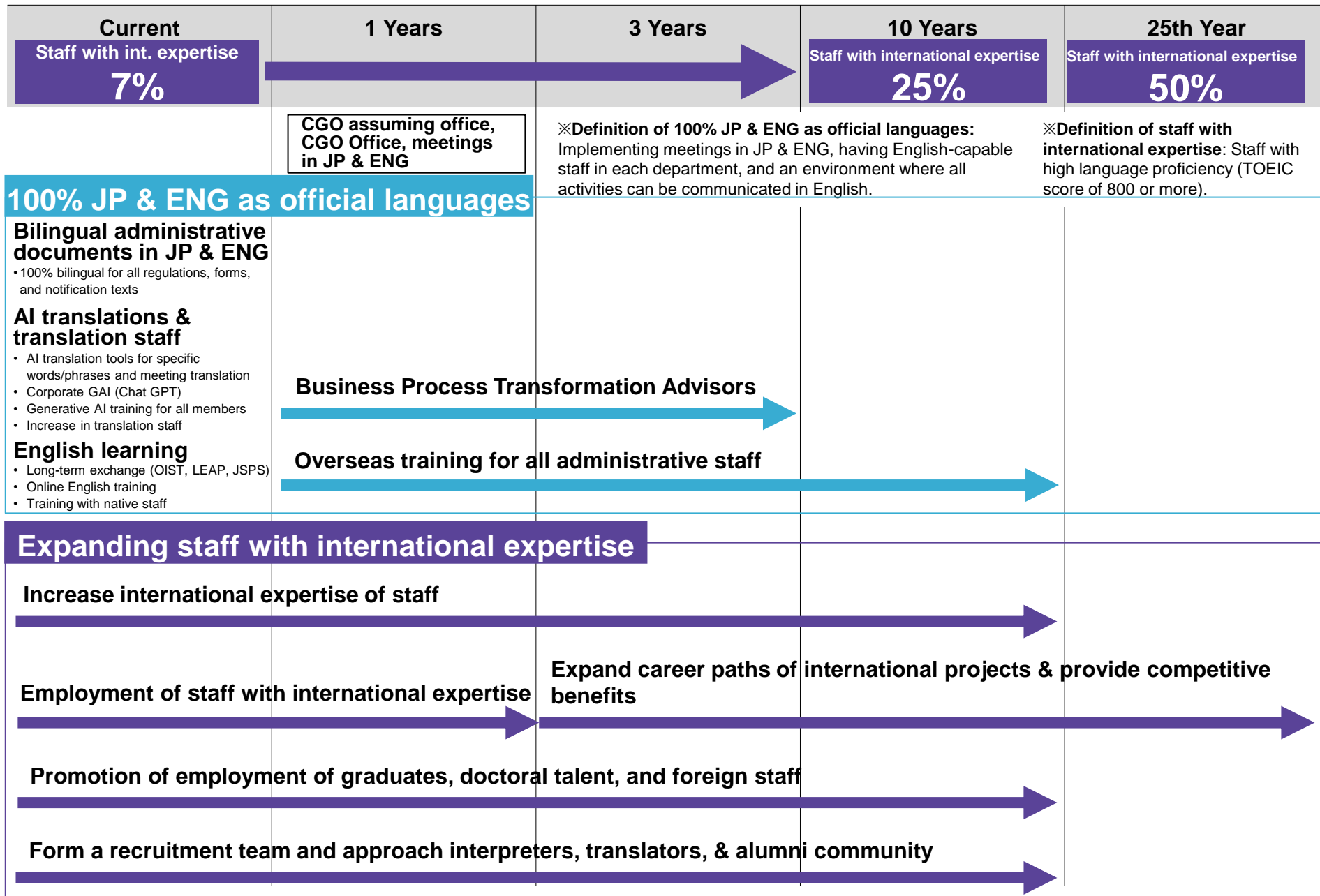
Relevant skills are as below:

1. Being able to talk about the university's strategy with a attended vision, supervising problem-solving based on an understanding of the characteristics and complexity of and university management
2. Being able to expand Tohoku University's international linkage with a wide, global network
3. Being able to become a trailblazer in promoting reforms of the university.

- **On-going Actions**

Selection from a wide range of candidates with understanding of international research universities, having a broad international network themselves. Appointment ca. 1 year after successful selection as University for International Research Excellence

Global Readiness



Collaboration with Sendai City toward a City for International Excellence

Tohoku University

Support for accepting international researchers & students

- Provide various support to ease the burden of starting a new life in Japan due to differences in the Japanese system, customs, and language, and to facilitate a smooth transition into university life.
- Enhancement of support for international students by creating a bilingual campus (bilingual administrative documents, improvement of English proficiency of staff, etc.)

Tohoku University & Sendai City

Established April 2022 One-stop Support Organization: The International Support Center



Cooperation with Sendai City to create a comfortable city for international talent to live in

As a result of Tohoku University being the sole remaining candidate as University for International Research Excellence a working team was set up with Sendai City. The International Support Center at our university is planned to be expanded and enhanced as a joint center with Sendai City, the "Center for the Joint Promotion of Internationalization" (tentative), to further utilize talent and improve services.

Challenges

Current Status

Enhancements & Expansion

① Promotion of online administrative procedures

The current administrative procedures e.g. resident registration, pension, and insurance are primarily conducted in person at the counter. Additionally, there are long waiting times due to the concentration of procedures during enrollment periods and the need for English support.

Discussions with the Aoba Ward Office have led to the installation of a dedicated booth for Tohoku University within the ward office to handle the concentrated enrollment periods.

Procedures will be conducted online, and the documents will be issued at a campus office to allow of various applications to be completed before arriving in Japan.

② Internationalization of medical services

Only few medical institutions are capable of providing services in English, and the situation is particularly challenging for addressing mental health issues. There is a shortage of female obstetrics and gynecology doctors, and there is a need to improve international applicability from a religious perspective.

Arrangements and reservations will be handled by the interpretation services of the Sendai Multicultural Center and our International Support Center.

Placement of specialized counselors and the establishment of a network for medical care for foreigners. Tohoku University will also consider setting up a consultation desk at the International Support Center and exploring assistance for outpatient visits.

③ Support for employment & education of accompanying family members

The options for children's education are limited in terms of both the region and the type of school. Additionally, there is a lack of organizational support for the employment of spouses and other family members, and the situation relies heavily on individual efforts.

In addition to preferential treatment for tuition fees at international schools, a special classroom (international classroom) will be established in the Sanjo district, where the university's foreign student dormitory is located.

Efforts will be made to internationalize the enrollment procedures and expand schools accepting foreign children. Furthermore, the establishment and expansion of a support system for the employment of spouses and family members (network of cooperative corporate organizations, learning support for language learning for employment, etc.) will be considered.

5-1. Increasing revenue through industry co-creation

Response to Opinion 5





Increasing revenue through industry co-creation

- Clarification of the following 3 strategies outlined in the first draft of the strengthening plan:

[Related Strategies]

 - ✓ I-B-2: Attracting investments through science, technology and innovation
 - ✓ I-B-3: Improved functionality for co-creation
 - ✓ III-B-1: Management focused on growth and new challenges
- Conducting surveys on international industrial trends and analyzing market growth by field. Furthermore, clarifying the approach to setting goals for the university's co-creation business income and establishing a framework for achieving those goals, as well as formulating plans for the development of industry collaboration facilities at each campus (with facility development being implemented in advance for the Science Park)
- Based on the above, presenting “basic strategies for creating an innovation ecosystem”, “industry collaboration reforms to accelerate corporate integration”, and “market growth prospects and revenue plans for key strategic fields”



Accelerate corporate integration through industry co-creation reforms

● Selection of key strategic fields

- ✓ In order to utilize Tohoku University's strengths, characteristics and assets, we will select mid to long term key strategic fields where the university itself plays a role in strengthening private R&D and business creation, and creates impactful innovative technologies and solutions.

● STI Platform and Investments for the Science Park Project

- ✓ Develop advanced research and industry co-creation facilities on each campus (utilizing university bonds, etc.), and co-create with industry by making all university campuses places for open innovation.
※ STI : Science, Technology and Innovation

● Accelerate corporate integration through industry co-creation reforms

- ✓ Strengthen "Co-Creation Research Institutes" that allow access to on-campus services, personnel, and facilities, enabling companies to realize their business development and research functionality on campus.
- ✓ Develop robust industry co-creation through outcome-focused project management, utilizing "Intellectual Contribution Fees" to value the "knowledge" of researchers and Ph.D. students.
- ✓ Accelerate international collaboration, taking globalization of the industrial value chain as an opportunity.

● Utilizing & expanding joint venture subsidiaries

- ✓ Dynamically develop attractive business and HR development for companies by utilizing external resources.
- ✓ Create valuable networking and co-creation opportunities for companies across sectors.



Startup creation

- Clarification of the following 3 strategies outlined in the first draft of the strengthening plan:

[Related Strategies]

- ✓ I-B-3: Improved functionality for co-creation
- ✓ III-B-1: Management focused on growth and new challenges
- ✓ III-B-2: Advanced governance structure

- In particular, we will formulate strategies to accelerate the creation of startups, plans for investment, development & returns, and basic policies to expand IP revenue. Furthermore, we will outline collaboration with government and businesses in the new development of startup hubs in the city center
- Based on the above, we will present “Tohoku University's unique seamless support system to accelerate the creation of diverse startups”, “plans for investment and returns”, and “the governance system for co-creation business development”



Startup creation based on “DEEP & DIVERSE”

- **Creation of unique startups with Tohoku University's seamless support**
 - ✓ **Comprehensive support** from nurturing the next generation of entrepreneurs to business feasibility validation, investment, and commercialization
 - ✓ Developing the entire **City of Sendai as a startup campus in collaboration with the local government.** Creating diverse startups in interdisciplinary fields, including social innovators solving societal issues & problems
 - ✓ Implementing value creation strategies linked to startups (strategies for IPs, investment, and HR).

The “SENDAI STARTUP CAMPUS”

Developing Startup Centers

1 2 3 Tohoku University Innovation Center

(Aobayama Garage, Kawauchi Garage, Seiryō Garage, etc.)



4 NTT Urban Net Sendai Central Building
(Sendai Startup Studio, etc.)



Leading Entrepreneurship Education

1 4 Collaboration with leading universities world-wide

Creating Startups that Excel Globally

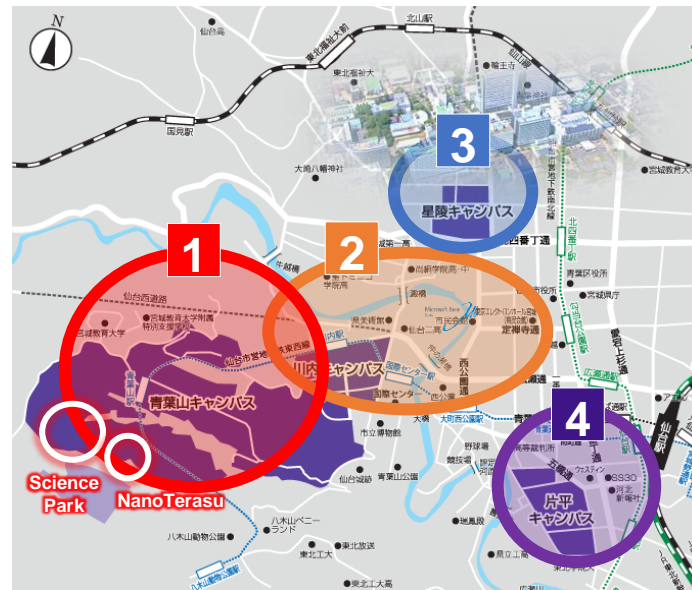
1 4 Providing One-Stop Support for Startups
Global Accelerator Community Hub

Creating startups through the use of leading technology and Science Park, NanoTerasu

1 Next Gen. Synchrotron Radiation Facility
NanoTerasu & other state-of-the-art research facilities



3 Medical facilities & centers such as the Tohoku University Hospital, School of Medicine, School of Dentistry, Institute of Development, Ageing and Cancer, Tohoku Medical Megabank Organization, etc.
4 Institute for Materials Research, Research Institute of Electrical Communication, Institute of Multidisciplinary Research for Advanced Materials, Institute of Fluid Science with outstanding world-class research results



**Specific points regarding
“Increasing Revenue” & “Startup Creation”**

- Logic tree for the 10 times expansion of revenue from co-creation projects & rationale for goals
- Basic strategies to expand co-creation projects
- Creating startups & business growth

Increasing revenue through industry co-creation

Expansion of revenue from co-creation projects & rationale for goals

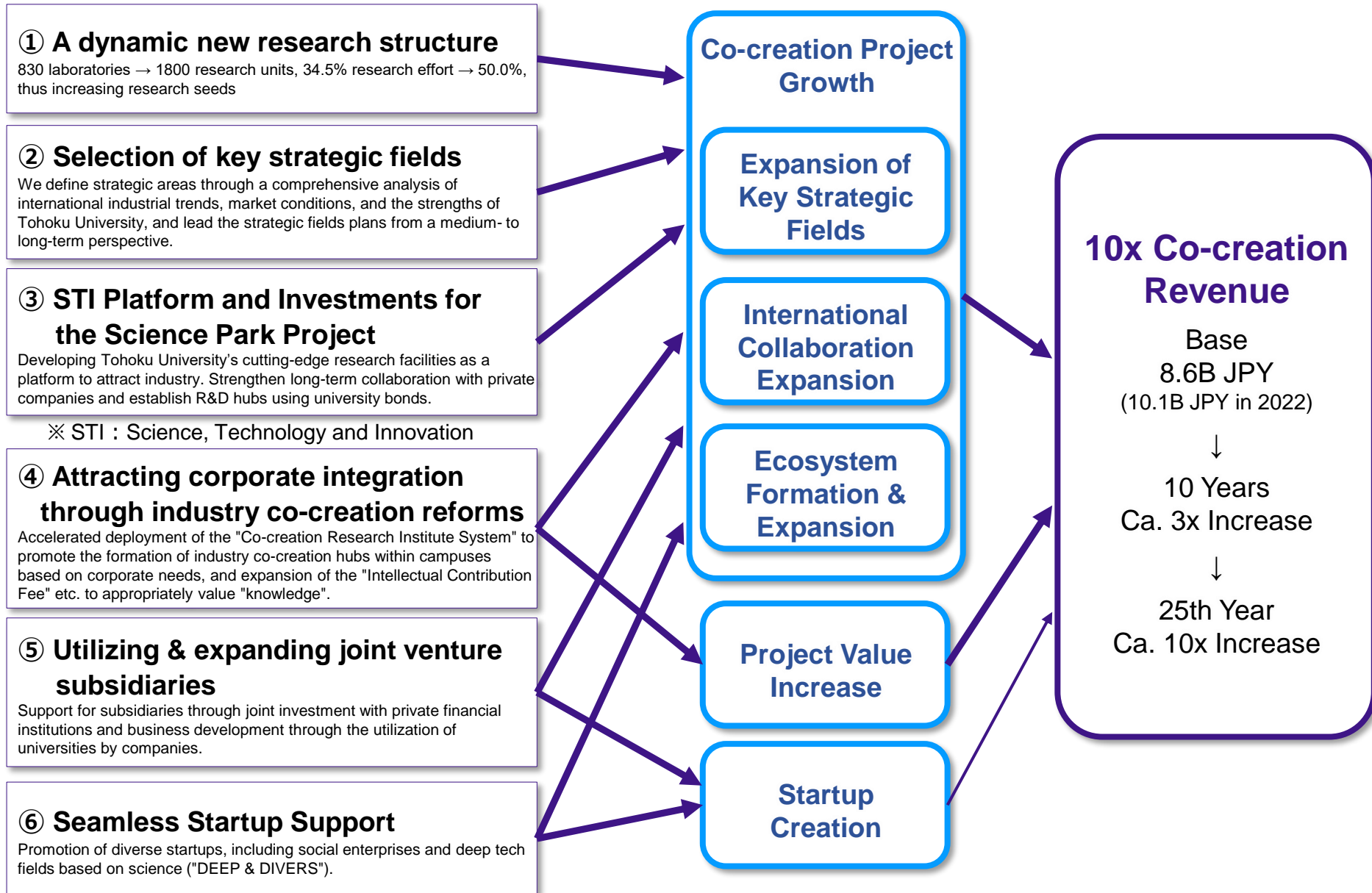
1. Growth target of 9% p.a. (25 years)

Analyzing the growth rate of the government's target of 10.5% p.a. (3x research funding from companies to universities by FY2025) and the growth rate of Tohoku University's priority strategy and emerging fields, we have set a goal of 9% annual growth (approximately 3x to 26.3B JPY in the 10th year, and approximately 10x to 95.9B JPY in the 25th year). ※The actual result for FY2022 is ca. 10.1B JPY, which has grown ca. 1.2x.

2. Framework for achieving goals

Considering the expansion of research seeds due to the creation of a vibrant research system (ca. 2.2x: 830 labs → 1,800 units) and the improvement of research time (ca. 1.4x: 34.5% research effort → 50.0%), we expect an increase in co-creation projects (ca. 3x: 1,500 cases → 4,000 cases). Furthermore, by improving the unit price of projects through the monetization of knowledge (intellectual contribution fee system, etc.) (3x+: from 7M JPY to 24M JPY), we aim to achieve 4,000 cases x 24 M JPY \cong 96B JPY.

10x Expansion of Revenue from Co-creation - Logic Tree



Creating an Innovation Ecosystem (1)

Strategies to expand co-creation projects

1. Selection of key strategic fields

To solve social issues and strengthen industrial competitiveness, the university itself plays a role in strengthening private research and development and business creation, and creates impactful innovative technologies and solutions. To this end, we define strategic areas through a comprehensive analysis of international industrial trends, market growth conditions, and the strengths of Tohoku University, and select key strategic fields from a medium- to long-term perspective.

- ① Semiconductors, quantum, AI
- ② Life Sciences
- ③ Rapid expansion in material innovation and other new fields
(solving issues in space, environment, society etc.)

※Considering global trends, SLT leads the review of strategic areas.

2. STI platform and investments for the Science Park Project

By strategically developing advanced research facilities (NanoTerasu, large clean rooms, supercomputers, biobank-related equipment, cryo-electron microscopes, etc.), we attract investments from private companies, strengthen long-term cooperation with industry, and create a new innovation ecosystem through collaboration with various actors, including startups. We will develop industry collaboration hubs using university bonds, etc. on each campus, and integrate companies by making all our campuses places for open innovation.

※ STI : Science, Technology and Innovation

Creating an Innovation Ecosystem (2)

3. Attracting corporate agglomeration through industry co-creation reforms

✓ Accelerated development of the "Co-creation Research Institute System"

Company associates will be appointed leaders of the activity centers and set up company business development and research functions within our campus (currently 30 centers)

By significantly expanding the industry collaboration space in the Aobayama Science Park, Seiryō Campus, and Kawauchi / Katahira Campuses, we will set up 47 centers after 10 years and 200 centers by the 25th year

✓ Deployment & expansion of strategic pricing

In addition to the co-creation research institute system that accounts for joint research expenses and activity expenses by centers on campus, we will enhance the "intellectual contribution fee system" that appropriately values and accounts for the "knowledge" of researchers (and the "knowledge" of doctoral students in the future).

✓ Accelerated development of overseas collaboration

Overseas collaboration is rapidly expanding due to the globalization of the value chain of key strategic areas, and we are accelerating the acceptance of research funds from overseas institutions by establishing overseas offices, overseas diplomacy, and drastically strengthening the legal and contract departments

4. Utilizing & expanding joint venture subsidiaries

We have established a subsidiary, "Tohoku University Co-creation Initiative (THCI)" through joint investment with private financial institutions, and are developing a co-creation platform that effectively consolidates technology, talent, and funds, which are the sources of innovation, by fully utilizing resources and networks of universities and finance. Support for business development and HR development through the use of universities by companies.

Seamless Startup Support

Creating startups & business growth

1. Strengthening of our unique seamless support system

In addition to expanding external funding and revitalizing industry collaboration, we also anticipate the expansion of university startups. We provide seamless support from nurturing entrepreneurship to business feasibility support and investment in university ventures.

2. New developments based on DEEP & DIVERSE

Transforming the entire city of Sendai into a startup campus and strongly promoting support to back the creation and growth of unique startups at Tohoku University.

- ✓ **New developments in DEEPTech** Creation and fostering of startups as key players in the innovation ecosystem based on semiconductors, bio
- ✓ **New developments in DIVERSITY** Accelerating diversity with startups in interdisciplinary fields (medical engineering, disaster science, integration of arts and sciences), social entrepreneurs tackling regional issues, startups that become the core of the regional ecosystem and global expansion.

3. Investment Strategies

By expanding investments through various routes such as direct investment from the university, investment from university VCs, and collaboration with external and overseas VCs and financial institutions, we aim to accelerate the creation and fostering of startups and expand returns. Furthermore, through strategic equity investment, we aim to achieve large profits in both income gain and capital gain, and develop a new method for business growth.

Tohoku University's Unique Seamless Startup Support System

Entrepreneurship education

Supporting feasibility studies

Invest in university ventures

Entrepreneurship Education Programs

Fostering an entrepreneurial culture at Tohoku University, various programs are offered to students and researchers across the university (2,328 participants in 2023)

- Entrepreneur Tutoring School
- Japan Bio Design Tohoku Program
- Garage Gathering
- Early Work Program/Organic Ideas Program
- Tohoku University Business Idea Contest
- Idea-thon (Dai-ichi Life × NTT Data)

Gap fund program (Support funds for researchers & students)

Tohoku University's unique gap fund, the Business Incubation Program (BIP) is operational since 2013.



Supporting 95 Projects

Joint operation of the Michinoku Gap Fund by universities in Tohoku & Niigata since 2021



Tohoku University Supporting 30 Projects

Tohoku University Venture Partners Established February 2015



100% funded by Tohoku University Venture Capital

6 newly listed companies

Fund No.1 established Aug. 2015 (9.68B JPY, 10 years) Invested in 26 companies

Fund No.2 established Oct. 2020

(7.8B JPY, 10 years) Invested in 19 companies

Total of No.1 & 2: Investments in 45 companies

Tohoku University Startup Garage (Entrepreneurship Education Project)



- Providing a place to interact with like-minded people who aspire to start a business at the permanent community space (Aobayama Garage, Kawauchi Garage, Seiryō Garage)
- Entrepreneurship school & pitch events
- Support matching between university seeds & companies
- Collaborate with VC & financial institutions to support fundraising
- Mentors fully support startup consultations & launches
- Back up by alumni & advisory team
- Various events such as the Startup Cafe

Fostering an entrepreneurial culture at Tohoku University & creating many Tohoku University startups!!

Startups in DEEPTeCH are rising, addressing regional issues with social entrepreneurship and DIVERSITY startups in interdisciplinary fields such as medical engineering, disaster science, and integration of arts and sciences.

Social Entrepreneurship

Rurio Inc.



CEO: Masayuki Kobayashi
(4th year Engineering student,
at time of foundation)



- ◆ Supporting community formation through tours and magazine publications centered around Futaba Town, Futaba District, Fukushima. Multinational team
- ◆ Student entrepreneur (Mar. 2023), Resident of the Aobayama Garage

Disaster Science

RTi-cast Inc.



Founder, CTO:
Prof. Shunichi
Koshimura



- ◆ Tsunami inundation prediction & damage estimation service (utilizing Tohoku University's supercomputer)
- ◆ Adopted in the Cabinet Office's disaster prevention system



MIC Minister's Award (2019)

Integration of Arts and Sciences

QueenB Inc.



CEO: Kazuki Nemoto
(4th year Economics student,
at time of foundation)

- ◆ Managing research communities for universities, research institutions, and startups, and providing an intern matching platform
- ◆ Student entrepreneur (Feb. 2023)
Resident of the Aobayama Garage

Integration of Biomedical Engineering

Crane Vascular Inc.



- ◆ Development of medical devices to reduce "arteriovenous shunt stenosis" in hemodialysis patients
- ◆ Fourth iteration of the Japan Biodesign Program

CEO: Ai Kajiyama

Examples of collaboration with world-wide leading universities

- In **June 2023**, to accelerate research in the field of quantum science and to foster international quantum talent, a new quantum alliance, "**Chicago-Tohoku Quantum Alliance**," was launched with the **University of Chicago in the US**. Leveraging each other's strengths, we are expanding joint research in the field of quantum science, student exchange, industry collaboration, support for startups, and accelerating social implementation.
- In **October 2023**, a joint workshop was held in Sendai.
- In **February 2024**, a symposium was held, co-hosted by both universities, under the auspices of the U.S. Embassy, the Cabinet Office, QST, and Q-STAR.

In addition to introducing the trends of the Japanese government and the case studies of Tohoku University, key persons from the University of Chicago, which leads the world in the field of quantum innovation, were invited. The latest developments in the formation of a quantum ecosystem in Chicago, starting with the introduction of the U.S.-based quantum startup creation program "Duality," were introduced, and the possibilities of international collaboration from basic research to commercialization in the quantum field were discussed.

CHICAGO-TOHOKU QUANTUM ALLIANCEシンポジウム

量子技術イノベーションと スタートアップ創出に向けて

Chicago-Tohoku Quantum Alliance Symposium
Toward Quantum Technology Innovation and Startup Creation

開催挨拶 Opening Remarks
大野 英男 (東北大学総長)
Prof. Hideo Ohno, President of Tohoku University

基調講演 Keynote Remarks

「量子戦略及びスタートアップ振興に関する取り組み」
"Quantum Strategies and Initiatives related to startup promotion"

川上 大輔 氏 (内閣府科学技術・イノベーション推進事務局 審議官)
Dr. Daisuke Kawakami, Deputy Director General for Science, Technology and Innovation Policy, Cabinet Office

講演 (抜粋) Lectures (Excerpt)

「産業界が関与する量子エコシステム」
"The quantum ecosystem for industrial engagement"

デイビット・ウォシュロム 氏
(シカゴ大学 教授)
Prof. David Awschalom, The University of Chicago, Director of the Chicago Quantum Exchange

「東北大学量子ソリューションセンターによるスタートアップ創出」
"Creation of startups by Quantum Solution Center in Tohoku University"

大間 真之
(東北大学情報科学研究科 教授)
Prof. Masayuki Ohzeki, Graduate School of Information Sciences, Tohoku University

「東北大学量子スタートアップ紹介 (量子センシング分野)」
"Introduction to the quantum startups from Tohoku University (in the field of quantum sensing) -Highly sensitive spintronic sensors-"

大兼 幹彦
(東北大学大学院工学研究科 教授)
Prof. Mikihiko Oogane, School of Engineering, Tohoku University

詳細なプログラムは裏面をご確認ください。 Please check the back page for the detailed program.

参加方法 How to Attend

下記のQRコードまたは裏面のURLからご登録ください。(登録締切: 2024年2月9日 (金))
Please register using the QR code below or the URL on the back side.
(Registration deadline: Friday, February 9, 2024)

参加費 無料 Free of Charge

日英
同時通訳
English-Japanese
Simultaneous
interpretation
available

2024.2.14 WED 13:00 - 17:10
Doors open at 12:30

東京ミッドタウン日比谷 6F (東京メトロ日比谷駅直結) | BASE Q
BASE Q, 6F, Tokyo Midtown Hibiya, 1-1-2, Yurakucho, Chiyoda-ku, Tokyo *On-site only.

5-2. Advanced Financial Strategy

Response to Opinion 5





Advanced financial strategy

- Clarification of the following 3 strategies outlined in the first draft of the strengthening plan:

[Related Strategies]

- ✓ III-B-1: Management focused on growth and new challenges
- ✓ III-B-2: Advanced governance structure
- ✓ III-B-4: Supporting diverse talent

- In particular, we analyzed the financial status, management personnel, and governance structures of leading overseas research universities. Based on this, we developed a logic tree to achieve sustainable business growth and the formation of unique funds through significant functional expansion of the university.
- Based on the above, we present specific measures related to the three elements supporting functional expansion, “strategic use of evidence data”, “appointment of a CFO at the core of business growth”, and “establishment of an SLT to accelerate transformation”

※ SLT: Strategic Leadership Team



3 Factors to drastically expand functionality

- **Reinforcement of financial basis in conjunction with functional expansion**
 - ✓ Expanding functionality towards value creation with diverse stakeholders
 - ✓ Expanding discretionary strategic financial resources through the acquisition of new funds with university bonds & deregulation
 - ✓ Realizing sustainable business growth and the formation of unique funds through grants from the university fund matched with external funding acquisition
- **3 Elements for sustainable growth**
 1. **Strategic utilization of evidence data**

In addition to the “Strategic Management Database” that analyzes important management indicators for each organization, we are maintaining a “Next Generation Researcher DB” visualizing the performance of individual researchers. Furthermore, promoting comprehensive Digital Transformation and developing management strategies based on obtained data
 2. **CFO (Chief Financial Officer) at the core of business growth**

To realize sustainable growth, we formulate strategies to maximize the value of the knowledge management platform from the perspectives of management and finance, and implement new management methods
 3. **SLT (Strategic Leadership Team) to accelerate reforms**

We will establish the SLT, composed of the President, Provost, CFO, and CGO, to formulate resource allocation policies linked to the university's management strategy

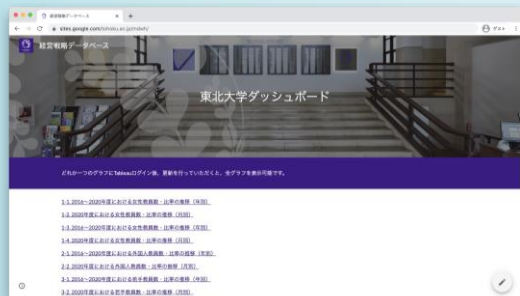


3 Factors

for sustainable growth

01

Strategic utilization
of evidence data



02

Advanced
financial strategy
by the CFO



03

Resource
Allocation
by the SLT



Main 4 Executives:
President, Provost,
CFO & CGO

※ SLT: Strategic Leadership Team

Value Creation with the Involvement of Diverse Stakeholders

**Specific points regarding
“Advanced Financial Strategy”**

- Logic tree for the realization of sustainable growth
- Drastic expansion of university functionality
- Strategic utilization of evidence data
- CFO at the core of business growth
- SLT (Strategic Leadership Team) for accelerated reforms

Realization of Sustainable Growth - Logic Tree

① Drastically expanding university functionality

Tohoku University's unique initiatives, collaborations with various actors, issuance of university bonds, deregulations such as expansion of investment target businesses, utilization of subsidiaries, etc.
(Achievement: Sustained growth of the University Hospital with an average growth of 3.3% p.a.)

② Strategic utilization of evidence data

Expansion of the database utilizing digital transformation and management of strategic resource allocation based on evaluation results using evidence data

③ CFO at the core of business growth

The CFO oversees financial activities from a management perspective and implements measures to enhance the value of the university as a knowledge management platform through financial decisions.

④ SLT to accelerate reforms

The Strategic Leadership Team (SLT) consisting of the president, the provost, CFO and CGO will be the four main policy-makers to execute business decisions and accelerate necessary transformations

Expand
external funds
& self-
generated
income

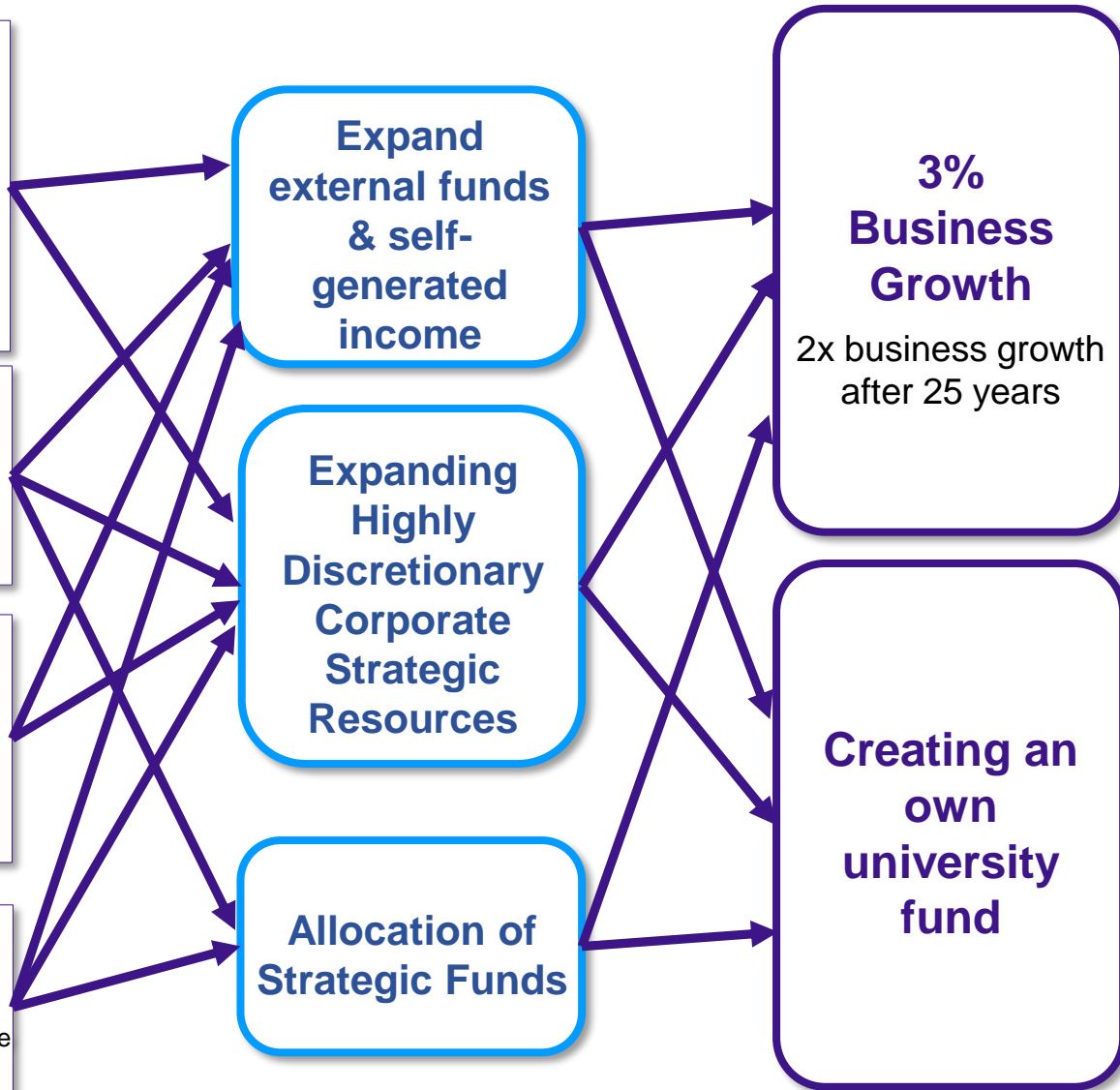
Expanding
Highly
Discretionary
Corporate
Strategic
Resources

Allocation of
Strategic Funds

**3%
Business
Growth**

2x business growth
after 25 years

**Creating an
own
university
fund**



Drastic expansion of university functionality

Reinforcement of financial basis in conjunction with functional expansion

1. Unique initiatives and strategic pricing

By expanding and enhancing the "Co-creation Research Institute System" in the Science Park that sets up the R&D functions of companies on campus based on private sector needs, and by introducing the "Intellectual Contribution Fee System" that values "knowledge" of researchers and records it as a contract, we will significantly increase the amount of external funding, utilizing overhead revenue etc.

2. Acquisition of new funds through university bonds & deregulation

By issuing university bonds, we will realize a speedy business expansion, and by utilizing IPs and assets, we will expand income with high degrees of freedom. While expanding the unique funds as corporate assets (under the new system), we will realize sustainable growth through strategic investment and operations. Practicing new management methods of universities such as establishing subsidiaries related to university operations and externalizing businesses due to deregulation such as expansion of investment targets

3. Acquisition of university fund grants through matching

By matching external funds acquired, we will realize sustainable business growth and formation of unique funds through university funds.



**Expanding highly discretionary
"corporate strategic financial resources"
to ca. 50B JPY p.a. in ca. 10 years.**

Strategic utilization of evidence data

Integration of Management Accounting & Business Strategy

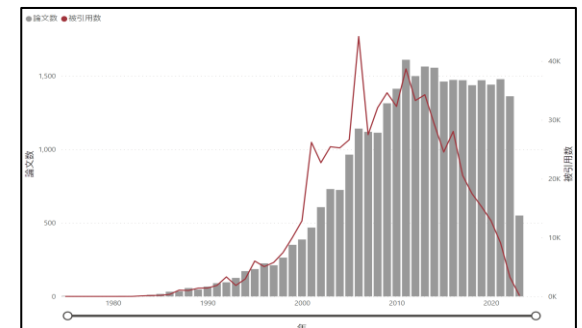
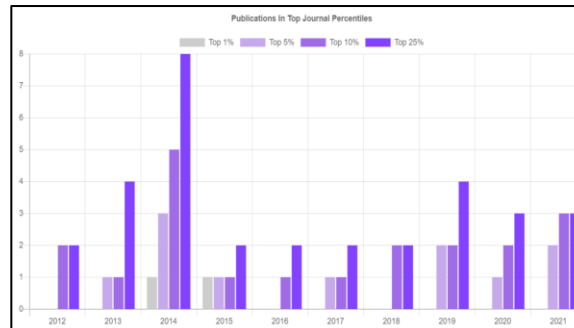
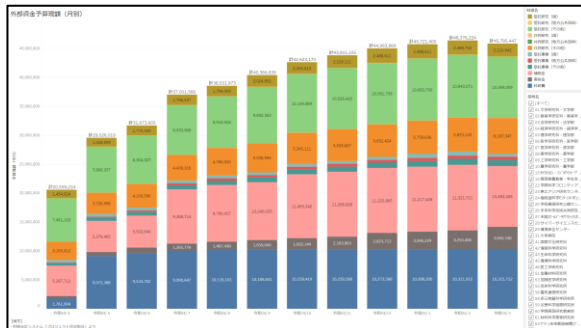
In addition to the "Strategic Management Database" that analyzes important management indicators for each organization, we are building a "New Researcher Database" that visualizes the performance of individual researchers. By strategically allocating resources through evidence-based evaluations, we promote the improvement of organizational and individual performance.

※ Reference: For the 3rd mid-term period of National University Corporations (2016-2021), Tohoku University was first for MEXT's corporate evaluation.

Utilizing data for visualizations and analyses from various perspectives

● Future examples of data utilization

- ✓ Visualize monthly trends of external funding income by category & organization. Comparisons with other organizations & analysis by income category. This is used for strategic planning for income acquisition through inter-organizational collaboration.
- ✓ Visualize annual trends of individual researchers' top n% paper numbers In addition to understanding own research capabilities, this is used as part of individual evaluations in the organization and reflected in benefits, etc.
- ✓ Visualize transitions and aggregations of total number of publications, number of citations, etc. by organizational hierarchy in a multifaceted manner. Analysis & comparison of details for entire organization and by department/course are possible. This is used as reference data for strategic planning for research improvement and organizational restructuring.



Tohoku University's Connected University Strategy

Comprehensively promoting digital transformation in
education, research, community co-creation, and management

Connecting with the world beyond
barriers such as distance, time, country,
organization, culture, and values

Overcoming social divisions & disparities
Inclusively connecting the world



- Japan DX Award "Grand Prize (Support Organization, Univ. Hospital)" (2022)
- Japan DX Award "Special Award (People & Organization, Admin.)" (2023)
- Open Badge Award "Excellence Award (Educational Institution)" (2023)

- Assumption of presidency of the University ICT Promotion Council (AXIES) (EVP Aoki, 2023~)
- Assumption of presidency of the National University Corporation Informationization Liaison Council (Manager Fujimoto, 2024)
→ Leading digital transformation of national universities

CFO at the Core of Business Growth

The CFO oversees financial activities from a management perspective and implements measures to enhance the value of the university as a knowledge-powered enterprise

1. Actions driving business growth

- ✓ As a member of the Strategic Leadership Team (SLT), the CFO formulates and executes strategies to most effectively enhance the value of the knowledge-powered enterprise from both management and financial perspectives.
- ✓ Regarding fundraising, the CFO understands the status of the corporation, determines the scale, timing, and method (borrowing, investment, donation, etc.) of fundraising, and oversees all related activities.
- ✓ In order to assure sustainable growth, the CFO may also utilize the establishment of subsidiaries and joint ventures, and the outsourcing of businesses to implement new management methods. To enhance the value of the knowledge-powered enterprise, the CFO also oversees the timing of management decisions, risk analysis and problem solving, and guidance for deregulations.
- ✓ For the funds collected, the CFO presents strategies to most effectively enhance the value of the knowledge-powered enterprise through budget and KPI management.
- ✓ Transparent information will be distributed to diverse stakeholders.

2. Strong cooperation with the CIO

We will appoint a Chief Investment Officer (CIO) for fund management, who will be supported by an appropriate governance system and portfolio

SLT to Accelerate Reforms

The Strategic Leadership Team (SLT) consisting of the 4 main executives, the president, the provost, CFO and CGO, will accelerate reforms

1. Resource allocation policy linked with finances

- ✓ The policy for allocation is established in 3 categories: (1) strategic budgeting through corporate strategic resources, (2) community co-creation project budgets based on contracts and other agreements, and (3) basic budgeting through operating expenses, etc.
- ✓ In allocating these funds, we place importance not only on executive-led projects but also on proactive proposals from organizations and departments, reviewed at hearings.
- ✓ Allocation is also implemented for various programs that contribute to the promotion of basic academic fields and the long-term development of the university.

2. Approval by the Management Policy Council

The resource allocation policy by the SLT is deliberated and approved by the Council before distribution. The Council not only confirms the resource allocation policy for each fiscal year, but also checks and supervises the progress of the projects, and provides advice and proposals.

6. Establishing a sustainable governance structure

Response to Opinion 6





Establishing a sustainable governance structure

- Clarification of the following 2 strategies outlined in the first draft of the strengthening plan:

[Related Strategies]

- ✓ III-B-2: Advanced governance structure
- ✓ III-B-3: Management for actions and growth

- In particular, we investigated the governance structure of overseas research universities, including the role and composition of collegial bodies (such as the board of executives), the functions of committees established under these bodies, and the executive structure.
- Based on this, we will clarify the “function and composition of the Management Policy Council” to ensure the continuity and effectiveness of reforms, as well as present specific policies regarding the “division of roles between executive and supervisory functions” and the “development of university management reflecting the voices of stakeholders”

※Management Policy Council: New collegial body required by the amendments to the National University Corporation Act



Advanced governance structure

● **Functionality of the Management Policy Council**

- ✓ The formulation of management policies involves not only the leadership of the president but also the participation of individuals with diverse expertise from within and outside the university. This is to ensure the continuity and stability of the organization's management policies while promoting truly effective reforms.
- ✓ Decisions on important matters related to university management, such as the Research System Strengthening Plan, are deliberated and supervised, ensuring the continuous implementation of the plan.
- ✓ The necessary knowledge, expertise, and abilities required of the president to ensure the steady implementation of the Research Systems Strengthening Plan are suggested to the President Selection & Supervision Council.

● **Composition of the Management Policy Council**

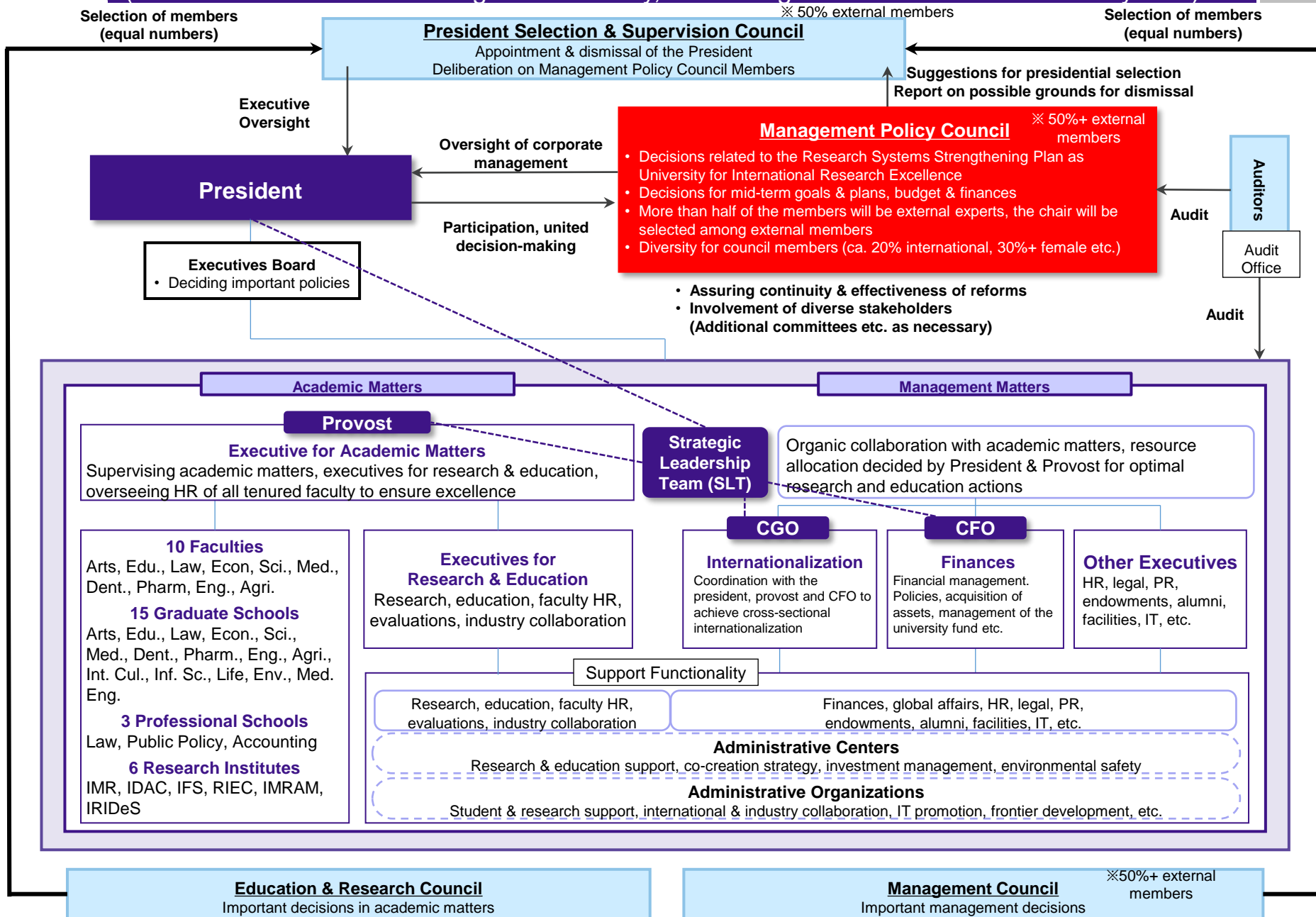
- ✓ The chair is selected among external members who form a majority of the council.
- ✓ The council prioritizes diversity (ca. 20% international, 30%+ female members)
- ✓ External members include experienced people from domestic and international businesses, university management, and experts in accounting and law, as well as leading figures from academia, industry, and other sectors of society.
- ✓ The SLT (President, Provost, CGO, CFO) participates as members from within the university.

● **University management reflecting the involvement of stakeholders**

- ✓ Committees involving diverse internal stakeholders under the Management Policy Council established as necessary



6. Establishing a sustainable governance structure to implement the Strengthening Plan (division of executive & oversight functionality, monitoring transition to new research system)



**Specific points regarding
“Establishing a sustainable governance structure”**

- Establishing a “Management Policy Council” as required by the amendments to the National University Corporation Act
- Enhance the division of roles for executive and supervision functionalities
- University management reflecting the involvement of diverse stakeholders

Commitment for Change ~ Executing System Reforms

- The world's top universities are significantly expanding their functionality as 'Knowledge Management Platform' beyond traditional higher education institutions and are demonstrating remarkable growth.
- However, Japanese research universities are rapidly losing vitality and significance due to the solidification of traditional hierarchy and typology, and a conservative management environment under many constraints.
- Tohoku University, with the founding principle that esteems the spirit to challenge as an intrinsic virtue, will implement system reforms and pursue a new research university model as a world-class knowledge management platform
- In order to boldly and reliably execute transformative changes based on the trust of the people, we will establish truly effective governance in which a wide variety of stakeholders participate.

Concentrating Diverse Wisdom

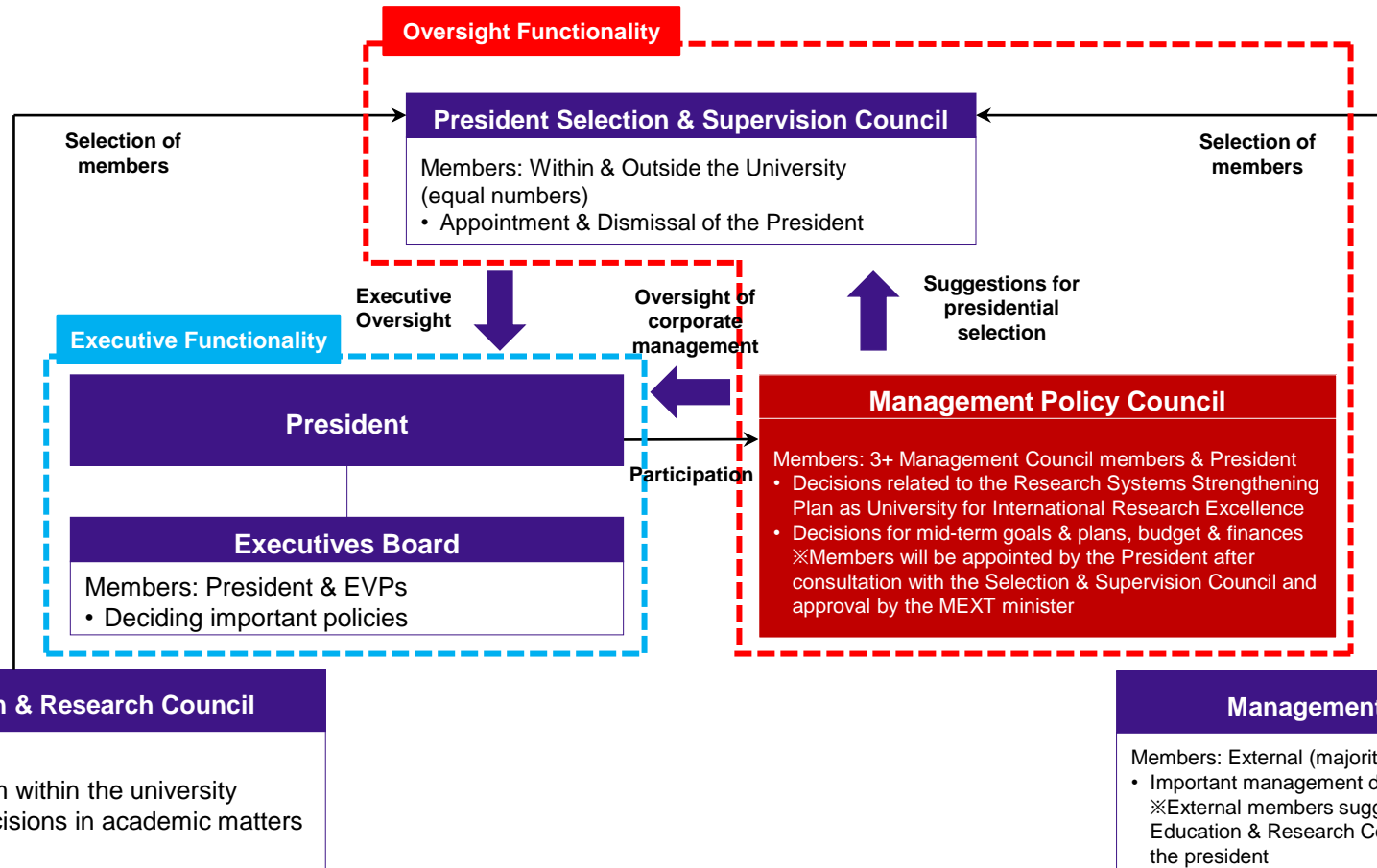
- Not only the president alone, but also members with diverse expertise from both inside and outside the university participate in formulating management policies. While ensuring the continuity and stability of the university's major operational policies, we promote truly effective reforms
- Advanced decision-making that incorporates dialogue with various stakeholders. Strengthening oversight functionality over executives centered on the president.
- Deliberate and supervise implementation of important matters in university management, including the Research System Strengthening Plan as University for International Research Excellence
- Clarifying the knowledge, expertise, and abilities required of the president to ensure the steady implementation of the Research System Strengthening Plan. Ensure that individuals with necessary qualities become president by providing suggestions to the President Selection & Supervision Council

Chair selected from external members, council composition considering diversity

- The chair is selected among external members who form a majority of the council. The term of external members is 2 years, with the possibility of reappointment, ensuring continuity in oversight
- The council composition takes diversity into account (ca. 20% international, 30%+ female members)
- External members include experienced people from domestic and international businesses, university management, and experts in accounting and law, as well as leading figures from academia, industry, and other sectors of society.
※ As indicated in the "Basic Policy for Promoting the Enhancement of Systems for Research and Utilization of Research Results at University for International Research Excellence," participation of members with appropriate knowledge, skills, and experience is demonstrated through a skills matrix (university management, corporate management, research & education, international business development, finance & fundraising, innovation, legal & accounting, social co-creation & contribution).
- Internal members consist of the President, Provost, CGO, and CFO (SLT: Strategic Leadership Team)

Framework of the Governance Necessary as University for International Research Excellence

Above policies implemented in compliance with the legal framework (illustrated below)



- Amendments to the National University Corporation Act (Oct. 2024) mandate the establishment of a Management Policy Council
- Regulations and policies regarding Universities for International Research Excellence specify requirements regarding the collegial bodies of Universities for International Research Excellence

Enhancing channels of dialogue through various committees

- Additional committees under the Management Policy Council etc. as necessary enabling participation of diverse stakeholders

Decision-making support through the participation of diverse stakeholders (examples):	
Promotion of Endowments	<ul style="list-style-type: none"> • Participation of parents, alumni, and other donors, implementing recommendations aimed at strengthening engagement with various stakeholders and enhancing financial resources
Students & Alumni Associations	<ul style="list-style-type: none"> • Participation of students and alumni, implementing enhancements to the student council and strengthening exchange between alumni and the university
Talent Acquisition	<ul style="list-style-type: none"> • Utilizing external agents, we will broadly survey both domestic and international talent for university management and maintain a long list of potential candidates
Investment	<ul style="list-style-type: none"> • Participation of financial experts, enhancing monitoring functions for expected future expansions in investments and asset management
Regulatory Reforms	<ul style="list-style-type: none"> • Participation of experts from government agencies and industry, implementing recommendations for regulatory reforms at the university and communicating university findings to society

“Management Council” as venue for strategic dialogue

- Largest number of external council members among Designated National Universities (16 members for the last fiscal year)
- 3 international & 5 female members appointed for the current fiscal year
- Reflecting numerous suggestions by council members for the Research Systems Strengthening Plan

- | |
|---|
| <ul style="list-style-type: none"> • The reason why university reforms in Japan have not been successful is thought to be the overwhelming shortage of staff compared to overseas universities, which leads to increased burden on faculty members and a decline in research capabilities. |
| <ul style="list-style-type: none"> • We have a situation in Japan where young people do not go abroad or to graduate schools, and I would like Tohoku University to lead in promoting measures to nurture and develop young talent. It would be wonderful if through this application, Tohoku University could demonstrate a vision for change to young people worldwide. |
| <ul style="list-style-type: none"> • Universities still only have limited contact points with society. Rather than using university knowledge to solve societal issues, I want the university to face these challenges and develop research and education from within. Tohoku University should show a way that contributes to solving Japan's issues and leads to growth and development. |
| <ul style="list-style-type: none"> • Centralized management of student placements and capacities at graduate schools. The university needs to work toward systematically designing researchers' career paths, including the industrial sector. |
| <ul style="list-style-type: none"> • Promote the internationalization of the entire university, focusing on how to attract talented students and researchers from outside the community. |
| <ul style="list-style-type: none"> • Complex requirements such as Management Policy Councils etc., may not be understood by the community. I am concerned that there will be dissent between community members and the university, and want Tohoku University to refine its governance even after amendments to the law are enacted. |

Upgrading Education and Governance ~ Restructuring the Executive System

- The executive system, under the division of roles in education and management, enhances functionality with suitable methodologies including placement of executives, with the SLT at the center of organic collaboration.
- ‘Academic Matters’ are overseen by the provost. The executive officer leads the optimal allocation of various resources based on a deep understanding of academic diversity, providing continued quality assurance. The realization of a research environment that attracts diverse talent with international appeal, and the cultivation of next-generation talent based on outstanding research results, are core functionalities as a research university
- ‘Management Matters’ will be enhanced by accelerating university reforms as management body. The appointment of external professionals and overseas experts, the introduction of management methods from the private-sector, as well as business developments linked to regulatory reforms will improve the university’s performance. Support for strengthening the management foundation to sustainably drive systemic reforms and speedy business developments, etc.
- The new position of CGO will be appointed from a world-wide selection of experts, promoting comprehensive internationalization with a strong supporting organization. This executive will be a trailblazer in university top management, providing a global perspective for future developments

※ SLT: Strategic Leadership Team; CGO: Chief Global Officer

**Tohoku University's First Draft of the Strengthening Plan as
University for International Research Excellence
Publication Material as of 2023.09.01**





Tohoku University's Plan for “Universities for International Research Excellence”

The Tradition of “Research First”, “Open Doors” and “Practice Orientation”

1907: Foundation of Tohoku University
as third national university



Diversity

Japan's first female
university students,
1913 (110 years ago)



Chika
Kuroda



Ume
Tange



Raku
Makita

Open to diverse backgrounds



Seiji
Kaya



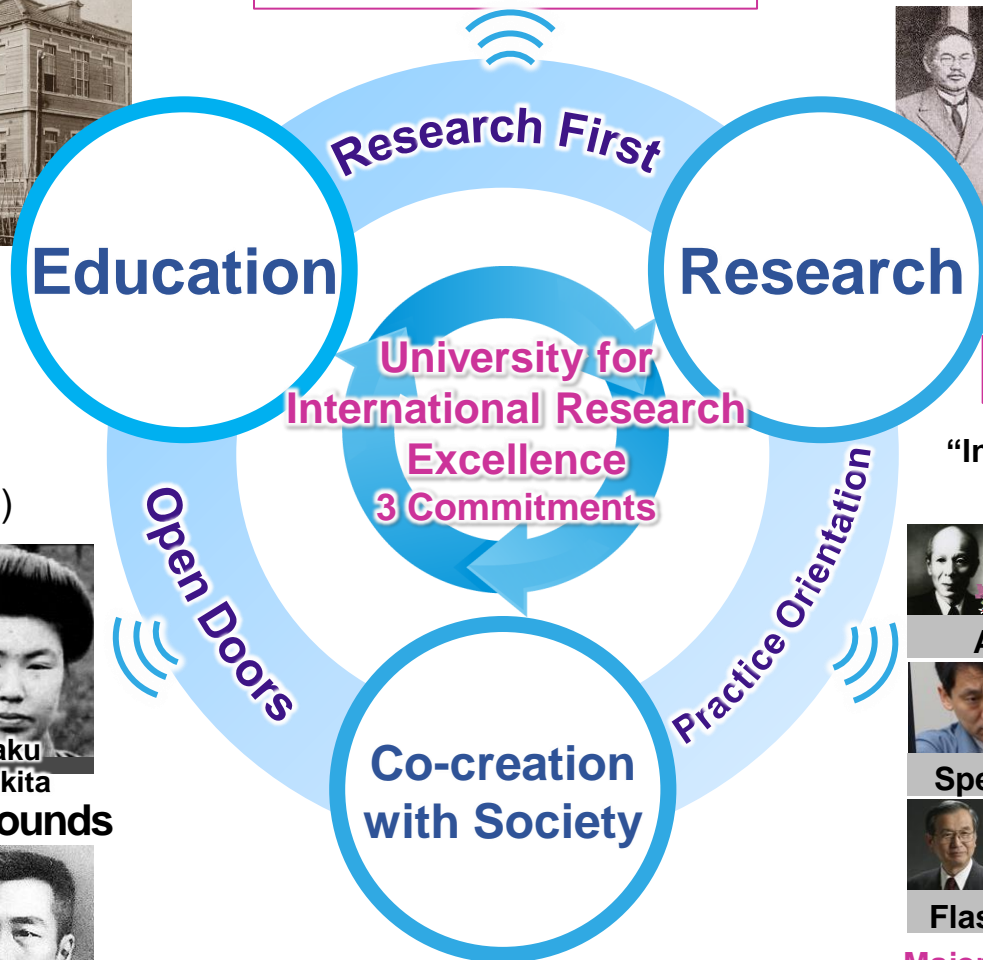
Shigeyoshi
Matsumae



Lu Xun

Tohoku University was founded with
considerable donations from third parties

Synergy of Research and Education



*“Sendai is a city most
suited for research”*

- A. Einstein, 1922



Creating Social Value

“Industry is Academia's Dojo”
(Kotaro Honda, 6th President)



Antenna



Laser Diodes



Spectrometry



Recording Tech.



Flash Memory



Compactin

Major contributions by members
to disaster recovery after the
2011 Great East Japan Earthquake



Commitments → Goals → Strategies

Mission

Tohoku University contributes to world-wide communities through global excellence in research, education of next generation leaders and collaboration with diverse partners

Founding Principles & Core Values

Research First – Pursuit of Excellence
Open Doors – Diversity and Openness
Practice-Oriented Research and Education - Creating Societal Value

Vision

Based on the three principles, Tohoku University strives to be a creative, open platform that creates new knowledge, fosters talent and establishes new social value for the realization of a sustainable future.

◆ Impact

We will drive excellence in research to create societal value, advance solutions to global challenges and enable resilient societies.

◆ Talent

We strive to be an even more diverse, international gateway for global talent, creating new opportunities for the future through collaboration.

◆ Change

We will drive change, innovate our governance structure and thrive sustainably together with our members, partners and society.

Commitments

I Commitment for Impact

Tohoku University is committed to creating social value through world-class research achievements and taking proactive measures for social innovation based on our experience in contributing to the recovery from the 2011 Great East Japan Earthquake.

II Commitment for Talent

Tohoku University is committed to working with international communities to nurture and educate the next generation of brilliant researchers. Diversity on campus is essential to the individual growth and well-being of each and every member of our university.

III Commitment for Change

Tohoku University is committed to becoming a new knowledge enterprise that pursues both excellence and growth. We will establish effective university governance that enables the realization of all the goals described and promised here.

Goals and Priority KPIs

A Research Excellence

Scientific output, Top 10% publication output & percentile, Top 10% publication output & percentile by early career researchers

B Impactful Research & Innovation

Funds from private companies, number of industry co-creation centers, university start-ups, IP revenue, joint publications with industry partners

A Campus for Aspiring Minds

Ratio of foreign researchers and female researchers, number of PI research units, ratio of PI and staff members, ratio of staff with international expertise

B Gateway to New Ventures

Ratio of international students, international experience of Ph.D. students, financial support for Ph.D. students, number of Ph.D. students, number of Ph.Ds.

A Global Readiness

Ratio of foreign researchers, staff with international expertise, international students, international experience of Ph.D. students, international executives

B Responsive and Responsible Governance

Ratio of independent funding, business scale, own funds, corporate strategic financing, international executives

Strategies

I-A-1: Excellence through solid research strategy
I-A-2: Tohoku University's unique Research Elevation Strategy
I-A-3: A dynamic new research system

I-B-1: Creating an open knowledge action platform
I-B-2: A science & technology hub to attract investments
I-B-3: Improved functionality for co-creation

II-A-1: Creating an attractive environment for researchers
II-A-2: Specialization and enhanced roles of administrative staff
II-A-3: A diverse campus supporting world-class challenges

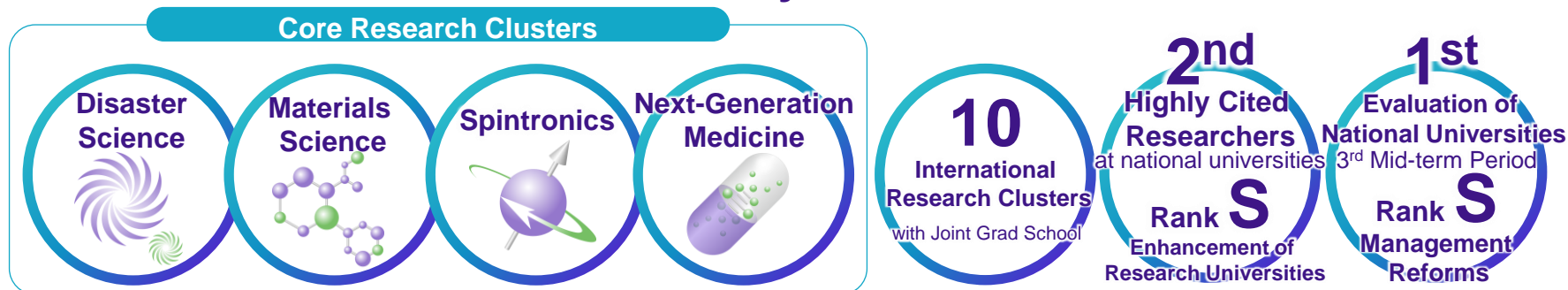
II-B-1: Career management starting at graduate schools
II-B-2: Graduate school reforms for internationality and openness
II-B-3: Dynamic faculty reforms

III-A-1: Promoting internationalization
III-A-2: International brain-circulation
III-A-3: Creating an international hub for global co-creation

III-B-1: Management focused on growth and new challenges
III-B-2: Advanced governance structure
III-B-3: Management for actions and growth
III-B-4: Supporting diverse talent



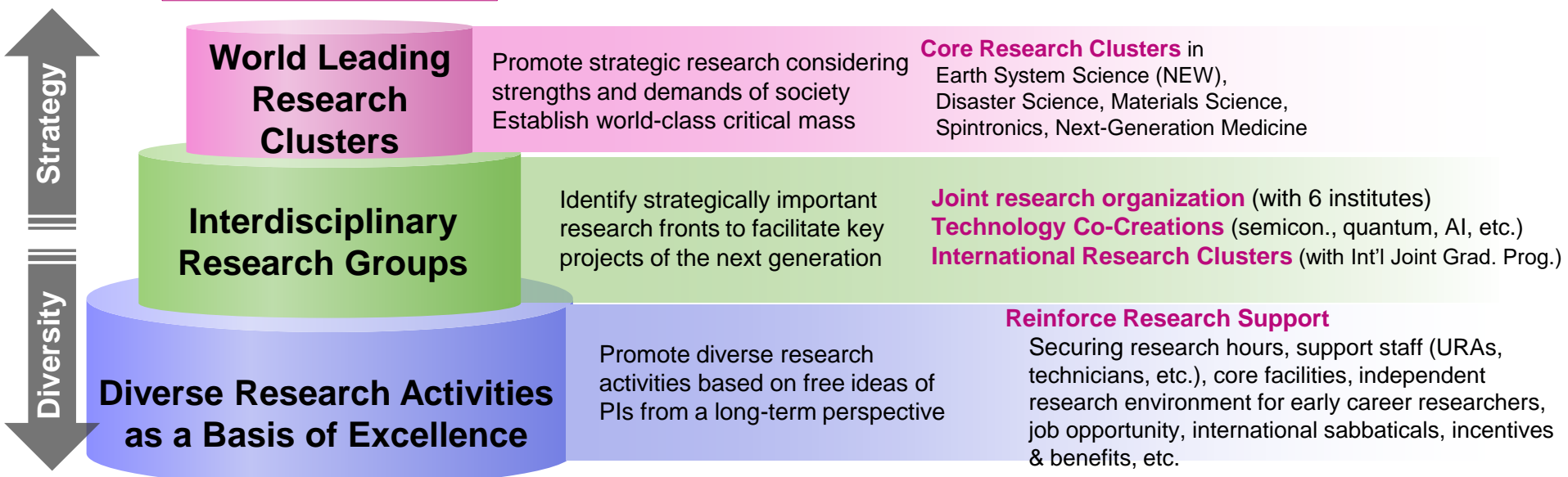
Tohoku University's Achievements



Fostering research excellence through diverse ideas and strategic collaboration “Three-layered Research Enhancement Package”

Research Strategy Board (RSB)

Review of research activities from an international perspective





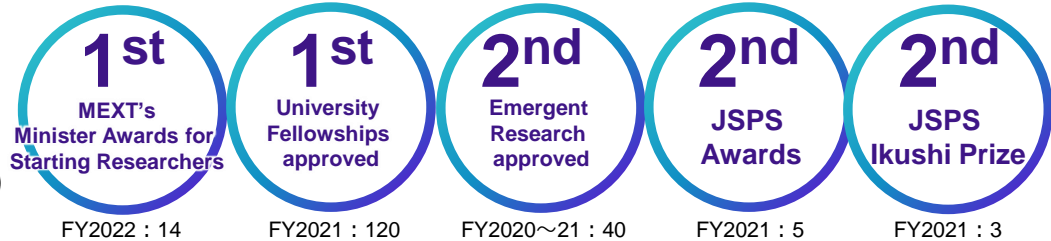
Actions & Policies

ECR: Early-Career Researcher, EMCR: Early- & Mid-Career Researcher

- Reduce administrative and teaching duties etc. for faculty members (securing research hours)
- Opportunities for early- and mid-career researchers (EMCRs) to engage in challenging research

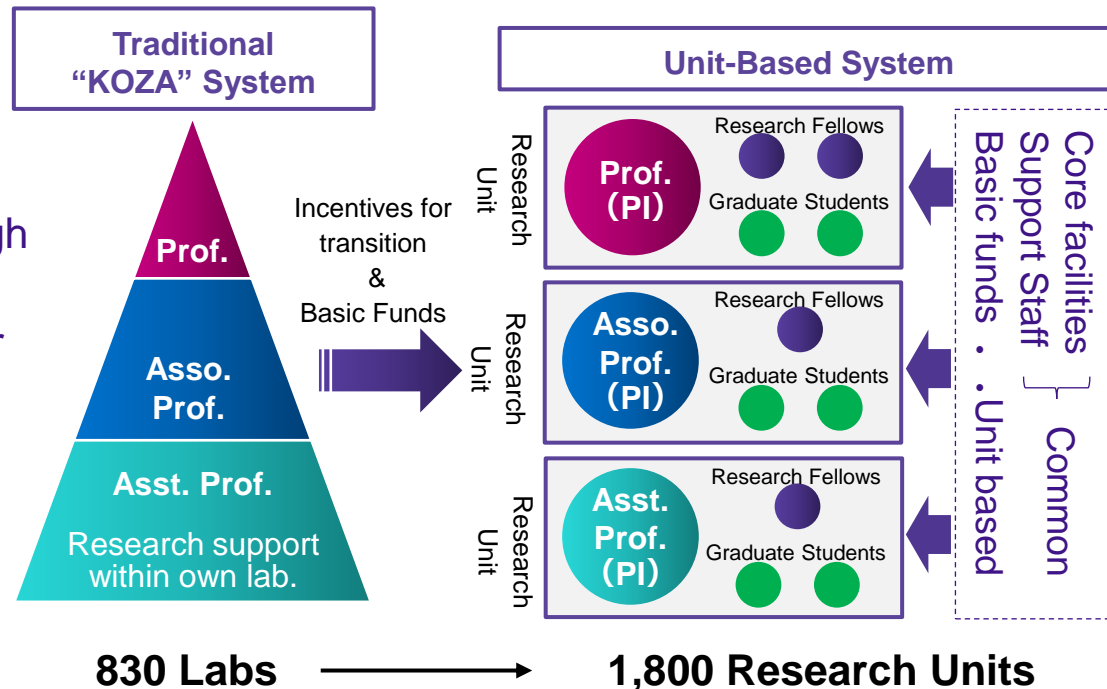
Current Initiatives

50 Early career researchers engage in top-level research at the Frontier Research Institute for Interdisciplinary Sciences (FRIS)



Strategic Transition of Research System

- Provide equal leadership opportunities for all 1,800 researchers as independent PIs
- Promote independence of early career researchers (ECRs) through tenure-track system
- Provide basic funding to empower ECRs as independent PIs
- Enable the formation of subject-based research groups
- Expand professional staff (1,100 members for URAs, technical staff, and IP managers, etc.)





Actions & Policies

EMCR: Early- & Mid-Career Researcher

- Foster career opportunities for EMCRs
- Expand opportunities for early independence & success

Current Initiatives

- “Tohoku University ECR Promotion Initiative” with 3 billion JPY per year
- “Faculty HR Strategy Council” for university-wide monitoring

31.6%
ECR
Faculty

120
Additional benefits
for prominent
scholars

5
Attracting
outstanding
researchers

Research Professor,
Distinguished
Researcher

Distinguished/Invited
Professors, University
Research Lead

e.g. University of Gothenburg,
Bordeaux University

Three Key Policies

A :

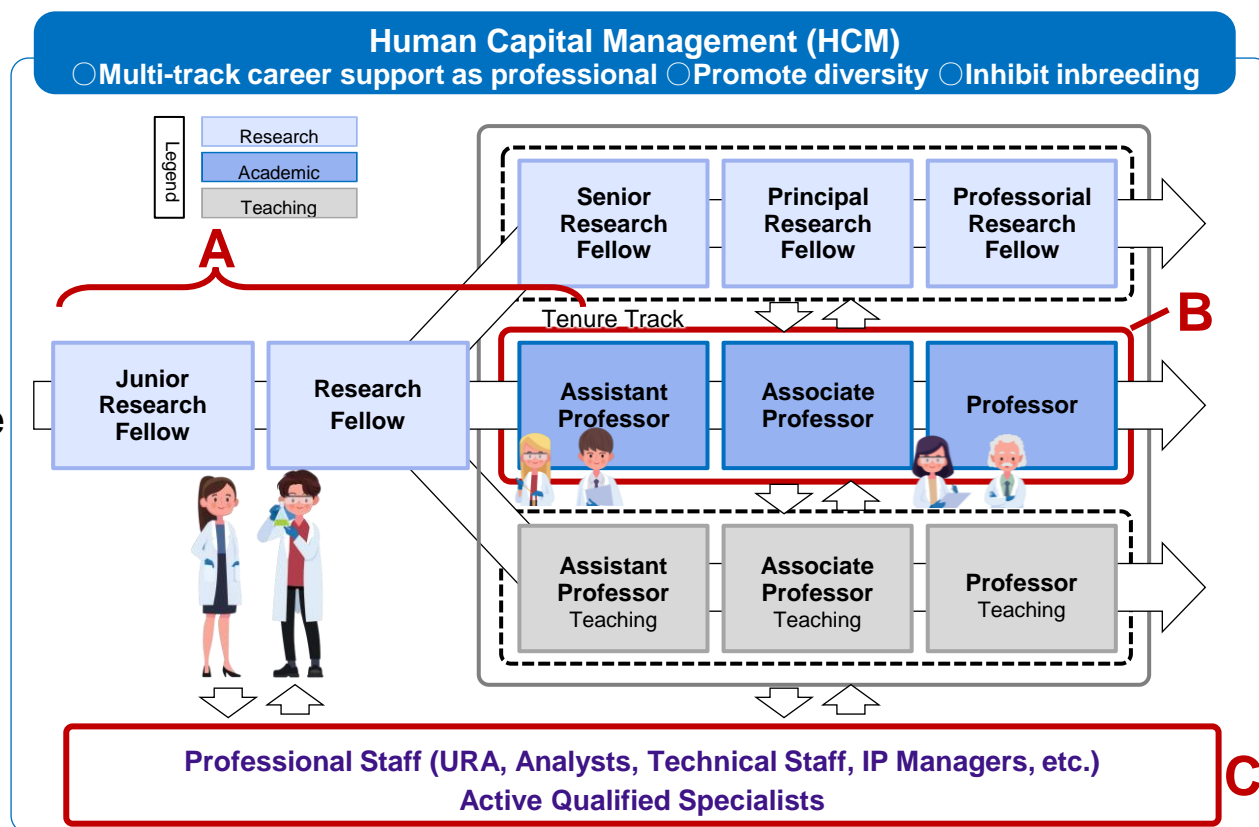
Empowering EMCR careers:
Comprehensive support for
diverse researchers through
Human Capital Management
(HCM).

B :

Providing merit-based attractive
environment: Flexible research
units for vibrant research
ecosystem.

C :

Expanding support for PIs:
professional staff and core
facilities.

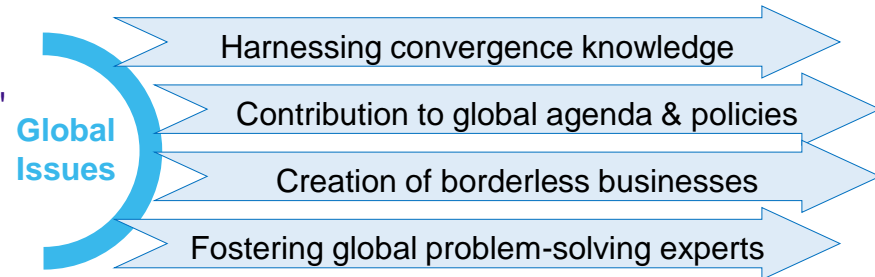




Open Knowledge Action Platforms

Contributing to global value creation through collaboration with diverse stakeholders

- Going beyond traditional linear research model:
“Basic Res. ➡ IP ➡ Business Dev. ➡ Soc. Deployment”
- New research frontiers for global challenges leading to
“Streamlined multi-actor global action”



Disaster Science

Globalizing the “BOSAI” concept through initiatives, such as post-Sendai Framework for Disaster Risk Reduction (DRR), World BOSAI Forum, DRR ISOs, DRR MBA, DRR startups and “Fukushima Campus” activities

Sustainability

Leveraging biodiversity researches, contributing to COP (on climate change and biodiversity), TCFD/TNFD, post-SDGs, etc.

Nihon-gaku

Enriching humanities and social sciences by juxtaposing Japanese values with global perspectives. Collaborating with 25 universities worldwide

Tohoku University's Contributions

- 2011.03 ● Great East Japan Earthquake
- 2011.04 ● Reconstruction Actions
- 2012.04 ● International Research Institute of Disaster Science (IRIDeS)
- 2015.03 ● 3rd UN World Conference on Disaster Risk Reduction in Sendai
- 2015.07 ● Research with Social Impact



Three Global Agendas (2015)



- 2017.11 ● 1st World BOSAI Forum in Sendai
- 2019.11 ● 2nd World BOSAI Forum in Sendai
- 2021.04 ● Green Goals Initiative
- 2023.03 ● 3rd World BOSAI Forum in Sendai
- 2023.05 ● Mid-term evaluation of the Sendai Framework for Disaster Risk Reduction, UN meeting in NY
- 2023.05 ● G7 Science and Technology Ministers' Meeting



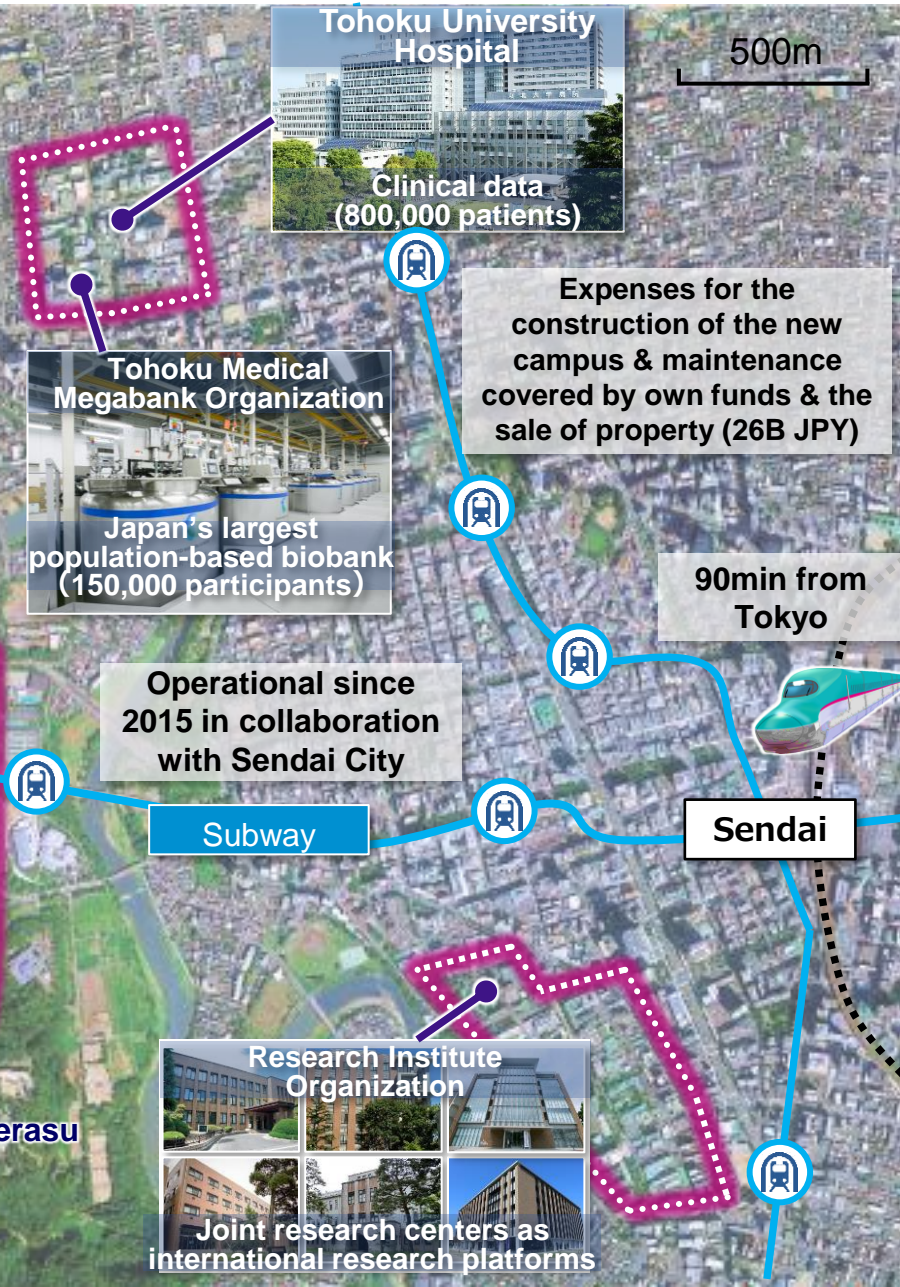
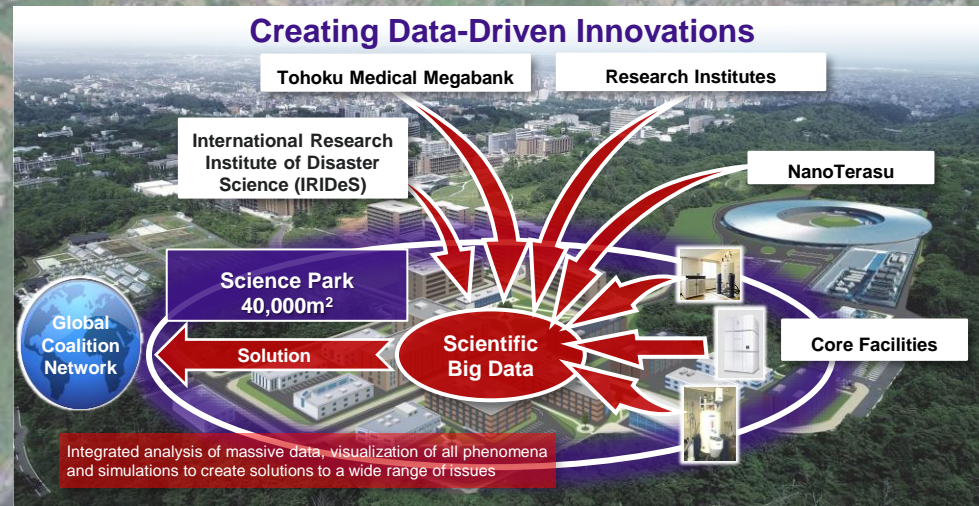


Urban Campuses as a Hub of Innovation

I-B-2

100

Creating Data-Driven Innovations





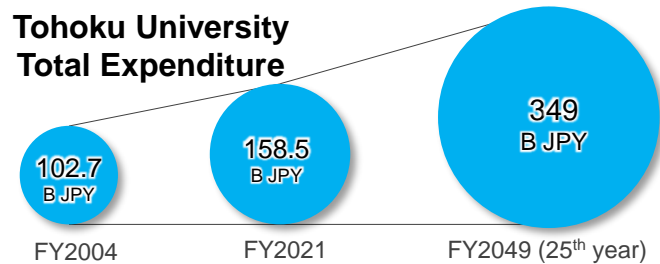
Actions & Policies

Driving sustainable growth for societal value creation through expanded revenue

Current Initiatives

- Rapid growth of private investments by 13% p.a.
※FY2022: over 10B JPY (2x compared to FY2017)
- Development of advanced facilities (incl. Next-generation Synchrotron Radiation Facility “NanoTerasu”)

Tohoku University
Total Expenditure



Expanding STI Platform & Science Park to Attract Investments

※STI : Science, Technology and Innovation

- **Leading Flagship Facilities (Leveraged by Private Investments)**
 - ✓ NanoTerasu, Tohoku Medical Megabank, Semiconductor Technology Co-Creation, etc.
 - ✓ Super Facility Network through integration of advanced research facilities on campus
- **Our unique Science Park Initiative**
 - ✓ Establishing key research hubs in critical national tech. domains (quantum, bio, etc.)
 - ✓ Developing an innovation ecosystem for public-private co-creation
- **On-campus R&D Centers**
 - ✓ Expanding Partnerships with industry through Co-Creation Research Centers
- **New Business Strategies**
 - ✓ University bonds for the Science Park
 - ✓ Japan's first university joint venture subsidiary business ※TU Co-creation Initiative, Inc.



Tohoku University Science Park





Tohoku University's Achievements

179

Tohoku University
Startups
+108% compared to FY2017

1

Unicorn Company

2,071

Participants
per year

Entrepreneurship
Programs

84

Business
Incubation
Programs
Seed Funding

Tohoku University
Venture Partners

Fund No.1
9.68B JPY,
26 investments

Fund No.2
7.8B JPY,
12 investments

5

IPOs
e.g. ispace, inc.

2

M&As

12

Seed Funding for
10 Universities
from Tohoku &
Niigata

Survey on University-Developed
Venture Businesses by METI

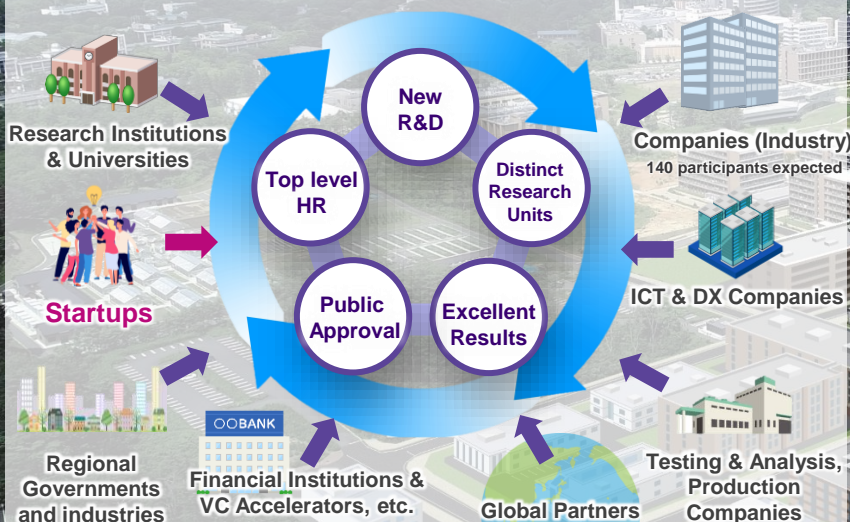
Participants in FY2022

※Investments centered around Deep Tech

University's Innovation Ecosystem × University Startups

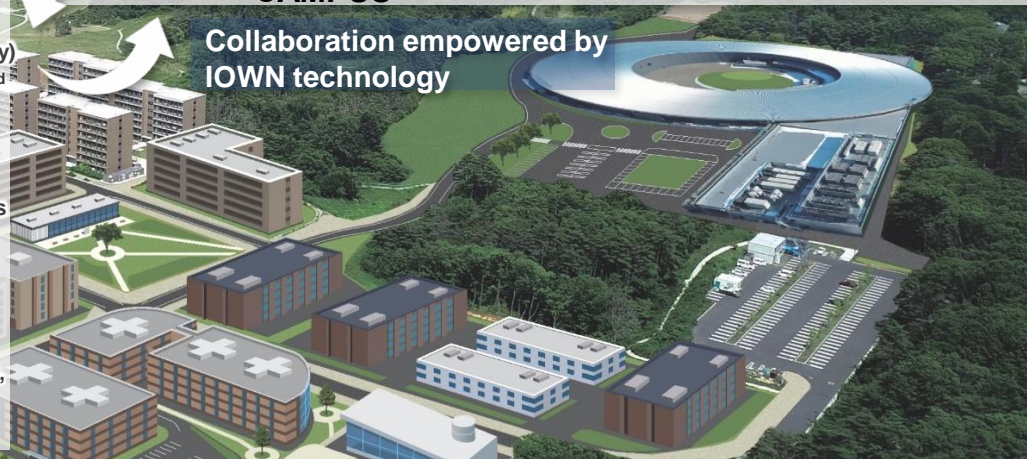
Innovation ecosystem with diverse actors
Joint venture subsidiaries with banks※ (Japan's first)

※Sumitomo Mitsui Trust Bank, Ltd.



- Sendai Startup Studio: Collaboration with NTT & municipalities to create a startup hub in the city
- Satellites of leading overseas universities, developing entrepreneurship education
- Collaboration with overseas accelerators to create the globally connected “SENDAI STARTUP CAMPUS”

Collaboration empowered by
IOWN technology





Graduate and Undergraduate Reforms

II-B-1

II-B-2

II-B-3

103

Tohoku University's Achievements in Education

1st

THE Japan University Rankings
for 4 years

1st

Asahi Shimbun University Rankings
Overall Rating from High Schools
1st place for 15 times in 2006~2022

1st

Asahi Shimbun University Rankings
Universities with good COVID-19 response
FY2022

1.8M JPY p.a.

Financial Support for all Ph.D. Students
Effectively free tuition per student

10

International Research Cluster
with Joint Int. Graduate Program

30 %

AO entrance as of FY2021
AO entrance as tool to uncover talent

Strategic Admission

Acquisition of near full SAT score students in collaboration with high schools



Integrated Admission Organization

Overseeing all admissions

- Transitioning all admissions to comprehensive selection

Strategic Recruiting

- Attracting talented international students through collaboration with overseas graduates & agents

Relieving researchers from admissions tasks

- Elevating admissions through professional expertise

Outsourcing

Collaboration

Subsidiaries
Overseas Agents
Overseas Graduates, etc.

Graduate School Reforms for Global Openness

Students: Ph.D. (Int.)		Master (Int.)		25 Years
6,000	(40%)	6,000	(40%)	
2,700	(30%)	4,000	(17%)	

Increasing number of Ph.D. students to foster future leaders

- Expanding financial support (1.8 → 3M JPY), treatment as researchers
- Integrated program with international perspective starting from master's course (12,000 students)

Advanced Graduate School for unique education governance

- Management of graduate school capacities, student placements and degrees
- Flexible, cross-sectoral degree programs for academic and societal needs (17 → 50 programs, participation of all students)
- Mandatory international experience in collaboration with overseas universities

Linked to

'Advanced Graduate School'

Undergraduate Reforms as Research University

Undergraduate Students (Int.)		25 Years
10,000	(20%)	
	(2%)	

'Gateway College' with intensive international co-learning

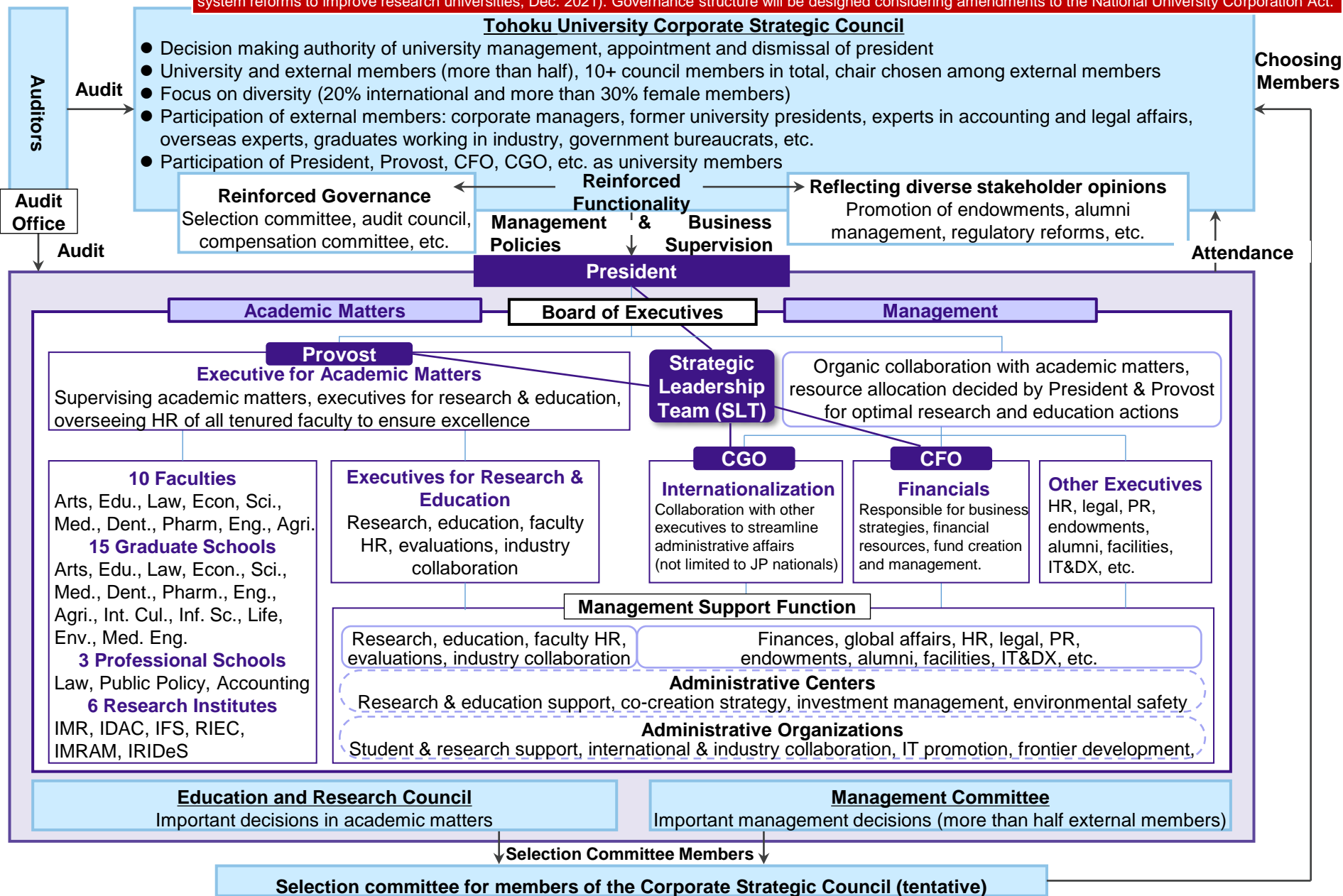
- Reorganize capacities from existing undergraduate schools (8,000 students)
- Co-learning environment with 2,000 international and 6,000 domestic students
- Mandatory study abroad to top level overseas colleges (1st-2nd year)
- Late specialization with trans-disciplinary education
- Solid professional education with broad perspective

(3rd-4th year)

Globally Active, Excellent Researchers
Highly Specialized Personnel in Diverse Areas

Attracting Global Talent

Based on “The role of globally competitive research universities (final summary)” (CSTI, Feb. 2022) and “Discussions for system reforms” (Meeting of the committee for system reforms to improve research universities, Dec. 2021). Governance structure will be designed considering amendments to the National University Corporation Act.



Executive officer for comprehensive internationalization (CGO)

Transformation to a globally oriented, internationally responsive organization

Expanding networks of International Joint Graduate Schools, alumni associations, overseas offices (3), liaison offices (19), international joint labs (2), AIMR satellites (2), strategic international partners (4), consortia (5), exchange agreements (246), early career exchange (39), etc.

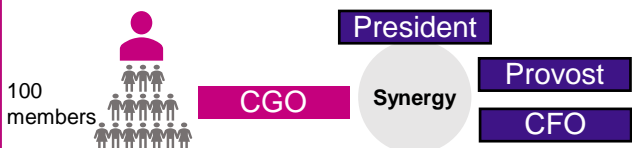
International Members

- Students: 30% (GS: 40%, UG: 20%)
- Researchers: 30%
- Administrative staff: 20%
- Council: 20%. Executives: 30%

Inbound readiness

- JP & ENG as official languages : 100%
- Courses in English: GS 100%, UG 50%
- Reinforcing recruitment
- Staff with international expertise: 50%
- Cross-cultural dormitories: 2x, etc.

**Top management by
Chief Global Officer (CGO)**



Global Linkage & Network

Diversity

Mobility & Experience

International Experience

- UG students: 100% (co-learning)
 - Ph.D. students: 100%
 - Tenured faculty: 100%
- (9x international co-authored papers)

Outbound readiness

- English level at Gateway College
TOEFL iBT® more than 79: 100%
- International co-learning seminars: 2x
- Travel expense support
- Overseas sabbaticals, etc.

Advice from top level overseas experts



Research Strategy Board
University Advisors
Diverse Expert Advisors

Subsidiaries and strategic outsourcing

Reduced load and increased productivity

Policy

Toward a global campus based on fundamental policies and necessary regulatory reforms

Policies for comprehensive internationalization

3 commitments, 6 goals, 19 strategies
5 related priority KPIs

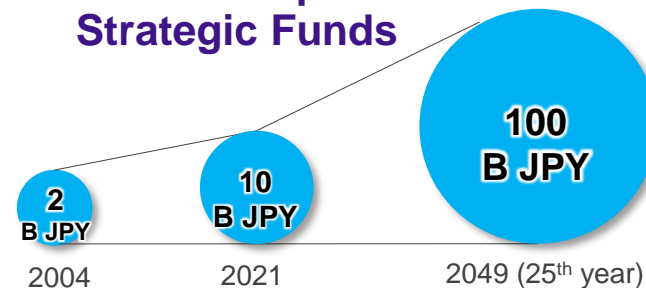




Tohoku University's Achievements

- One of Japan's largest corporate strategic funds as national university (ca. 10B JPY). The anticipated 100B JPY will be strategically managed under the leadership of the president.
- Driving organizational renewal, assessing viability through a stage-gate process for heightened vitality.

Scale of Corporate Strategic Funds



Strategic Resource Allocation

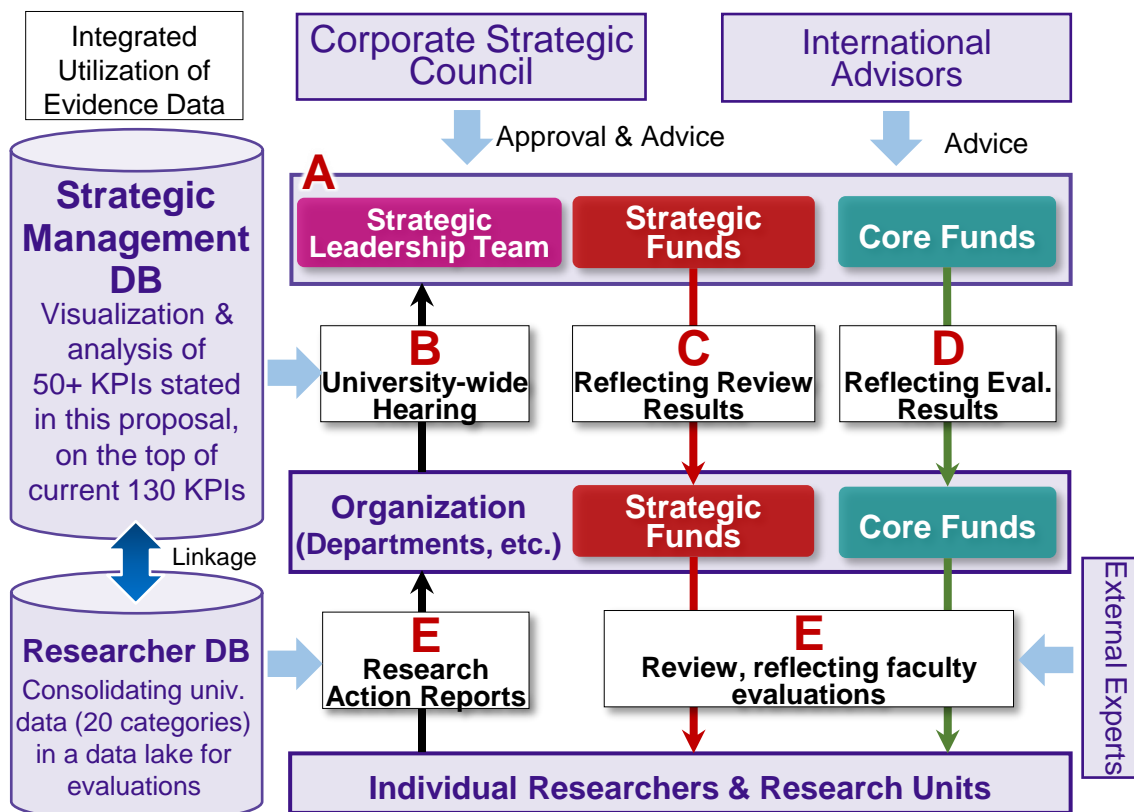
A Budgetary decisions by the Strategic Leadership Team (SLT) consisting of the President, Provost, CFO & CGO

B University-wide review of action proposals (incorporating insights from international advisors)

C SLT decides allocation of strategic funds

D Based on organizational evaluations using evidence data, including reorganizations, core funds is allocated.

E Funds are allocated in alignment with the division director's strategy through faculty evaluations based on evidence data and external expert peer reviews.



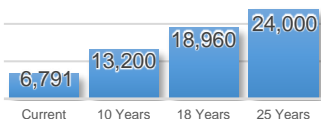


Goals and Priority KPIs

107

Goal I - A Research Excellence (Academic Impact)

Publication numbers (per year)



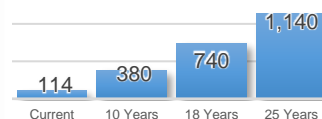
Top 10% publications (per year)



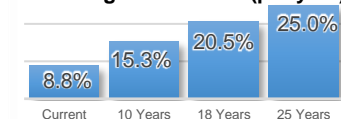
Top 10% publication percentile (per year)



Top 10% publications by starting researchers (per year)

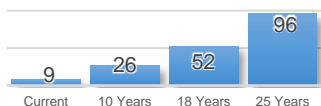


Top 10% publication percentile by starting researchers (per year)

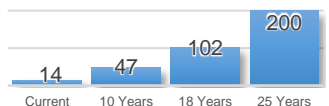


Goal I - B Impactful Research and Innovation (Social Impact)

Research funds from private companies (1B JPY)



Industry co-creation centers



University start-ups



IP revenue (1M JPY)

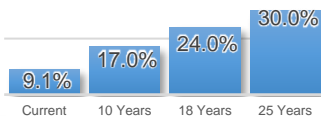


Industry joint publications

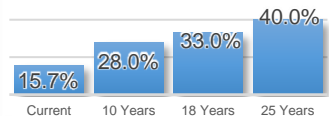


Goal II - A Campus for Aspiring Minds

International researchers



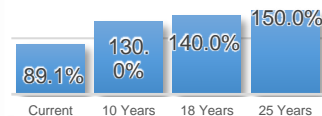
Female researchers



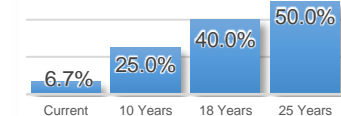
PI research units



Ratio of PIs and staff members

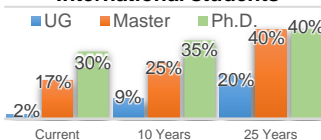


Staff with international expertise

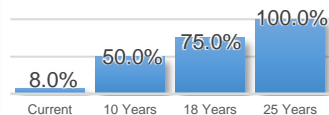


Goal II - B Gateway to New Ventures

International students



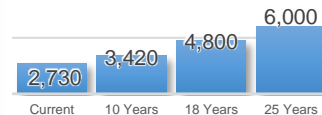
Ph.D. students with International experience



Financial support for Ph.D. students (1M JPY)



Ph.D. students



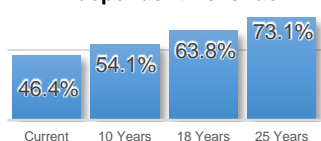
Ph.D.s conferred



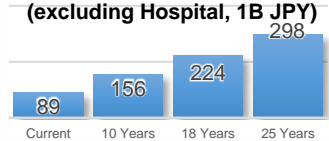
Goal III-A Global Readiness (Coinciding KPIs with other Goals)

Goal III-B Responsive and Responsible Governance

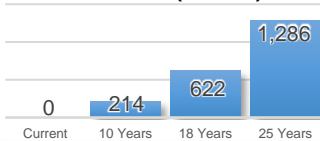
Independent Revenue



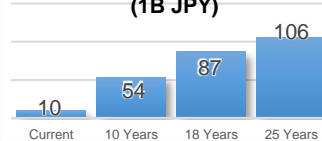
Business scale (excluding Hospital, 1B JPY)



Own fund (1B JPY)



Corporate strategic financing (1B JPY)



International executives

