

東北大学国際連携推進機構
2020年3月



Report of the Tohoku University
*International
Advisory Board
2019*

東北大学グローバルイニシアティブ構想諮問会議
(東北大学国際アドバイザリーボード)
2019年度開催報告書

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東北大学グローバルイニシアティブ構想諮問会議
(東北大学国際アドバイザリーボード)
2019 年度会議実施概要

1. 日時： 2019 年 10 月 3 日（木）・4 日（金）
2. 場所： 東北大学 片平北門会館 エスパス
3. 参加者
(1) 東北大学国際アドバイザリーボードメンバー

International Advisory Board		
1	Professor Michael Arthur	President & Provost University College London
2	Professor Richard James	Deputy Vice-Chancellor (Academic and Undergraduate) and Deputy Provost The University of Melbourne
3	Professor Hiroshi Ota	Mori Arinori Center for Higher Education and Global Mobility, Research and Development Center for Higher Education, Hitotsubashi University
4	Professor Qi-Kun Xue	Vice President for Research Tsinghua University
5	Dr. Marie Pierre Favre	Vice-President for International Development, Special Advisor to the President INSA Lyon
6	Professor Dr. Harald Fuess	Heidelberg Center for Transcultural Studies (HCTS) and Heidelberg Graduate School for the Humanities and Social Sciences (HGGS) Heidelberg University
7	Professor Fumio S. Ohuchi	Department of Materials Science and Engineering University of Washington
8	Ms. Kumiko Obino	President Interact Japan Inc.
9	Dr. Joël Gallegos	Assistant Provost for International Programs The University of North Carolina at Charlotte

(2) 東北大学

Tohoku University		
1	Hideo Ohno	President
2	Takafumi Aoki	Executive Vice President for Strategic Planning, Provost
3	Hirotsugu Takizawa	Executive Vice President for Education and Student Support
4	Tadahiro Hayasaka	Executive Vice President for Research
5	Toshiya Ueki	Executive Vice President for General Affairs, Financial Affairs and International Relations
6	Masahiro Yamaguchi	Vice President for Education Reform and Global Engagement
7	Noriko Osumi	Vice President for Public Relations and Promotion of Diversity
8	Yoshitaka Kasukabe	Vice Director, Global Learning Center
9	Kazuko Suematsu	Vice Director, Global Learning Center
10	Akiyoshi Yonezawa	Professor and Vice-Director, International Strategy Office
11	Yukako Yonezawa	Associate Professor, Global Learning Center
12	Rintaro Ohno	Senior Assistant Professor, Strategic Planning Office
13	Masako Nyui	Director, Global Engagement Division
14	Tadasuke Yoshigoe	Director, Student Exchange Division

4. プログラム

Thursday, October 3 rd	
Chair: Prof. Toshiya Ueki, Executive Vice President	
10:00-10:05	Opening remarks <i>Hideo Ohno, President</i>
10:05-10:10	Introduction of Board Member
10:10-10:35	Current status, vision and actions of Tohoku University towards 2030 <i>Hideo Ohno, President</i>
10:35-11:00	International Strategy <i>Masahiro Yamaguchi, Vice President for Education Reform and Global Engagement</i>
11:00-11:10	Break
11:10-11:30	Internationalization of Education <i>Hirotsugu Takizawa, Executive Vice President for Education and Student Support</i> <i>Kazuko Suematsu, Vice Director, Global Learning Center</i>
11:30-11:50	Research, Doctoral Education, Young Researchers <i>Tadahiro Hayasaka, Executive Vice President for Research</i>
11:50-12:30	Discussion
14:00-14:15	Classroom observation
14:20-14:50	Discussion with students
14:50-15:00	Break
15:00-15:40	International Graduate Programs in Humanities and Social Sciences

16:00-16:30	Visit: International Research Institute for Disaster Sciences (IRIDeS)
16:45-17:25	Visit: International Mechanical and Aerospace Engineering (IMAC-U, G)

Friday, October 4th	
09:00-10:30	Closed meeting among board members
10:30-10:50	Break
Chair: Prof. Toshiya Ueki, Executive Vice President	
10:50-11:20	Feedback from the advisory board
11:20-11:50	Discussion
11:50-12:00	Concluding Remarks <i>Hideo Ohno, President</i>

**Report of the Tohoku University
International Advisory Board**

2019

The 2019 meeting of the International Advisory Board

The 2019 meeting took place on 3-4 October 2019. The Advisory Board welcomed the opportunity to meet with students and staff and benefitted from concise documentation provided prior to the meeting.

The Advisory Board members are honoured by the opportunity to offer advice on advancing Tohoku University's International Strategy and pleased to present this report to the President of Tohoku University, Professor Hideo Ohno.

Professor Michael Arthur
Chair, Advisory Board
5 February 2020

Advisory Board Members

Professor Michael Arthur	President & Provost, University College London
Professor Richard James	Deputy Vice-Chancellor (Academic and Undergraduate) and Deputy Provost, The University of Melbourne
Professor Hiroshi Ota	Mori Arinori Center for Higher Education and Global Mobility, Center for General Education, Hitotsubashi University
Professor Qi-Kun Xue	Vice President for Research, Tsinghua University
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Ms. Kumiko Obino	President, Interact Japan Inc.
Dr. Joël Gallegos	Assistant Provost for International Programs, The University of North Carolina at Charlotte

Summary of recommendations and suggestions

Area	Recommendations or suggestions
1. Organisational arrangements and organisational chart	Create greater clarity on the roles and responsibilities for internationalisation for the benefit of the Tohoku University community.
2. Communicating the internationalisation imperative, vision and strategy	Communicate more widely the international character and aspirations of Tohoku University, emphasizing that internationalisation is key to the University's social responsibility and community engagement.
3. Establishing Key Performance Indicators (KPIs) for the measurement of progress	Develop and publish KPIs that are relevant and specifically aligned with the University's internal priorities for internationalisation.
4. Influencing government policy	Continue the efforts to influence government policy in relation to the joint cap on the enrolment quota for domestic and international students.
5. Identifying the focus of excellence	Give consideration to the importance of Tohoku University being known for excellence in a wider range of research fields, including the humanities and social sciences.
6. Attracting, recruiting and retaining international faculty	Continue efforts to recruit international talent, with attention to retention, promotion and reward; expand the Early Career Researcher scheme across disciplines; and utilise formal affiliations with partner universities for international engagement.
7. Boosting international student recruitment	Develop a more commercial orientation to undergraduate international student recruitment explore the possibilities for recruitment of Japanese students from the sizeable Japanese diaspora around the world.
8. Two approaches to English-taught degree programs	Consider developing hybrid programs consisting of academic courses taught in English and practical Japanese language courses, which may be attractive for prospective international students.
9. Development of the University's administrative staff	Explore various possibilities, including: exchanges and professional development programs provided by the private sector; the appointment of foreign staff to strategic senior roles; and administrative staff mobility between partner universities among international office staff and other areas.
10. Achieving better integration of domestic and international students	Design programs that bring students together on campus and off campus for purposeful and immersive intercultural and cross-cultural experiences.
11. Building an alumni and endowment culture	Alumni engagement and the development of philanthropy should be treated as high priorities with appropriate levels of financial investment.
12. Listening to and working with industry	Boost links with corporate partners and improve understanding of the skills required by employers.
13. Understanding the status/relevance of international rankings for Tohoku University	Consider whether Tohoku University might align its strategy with specific rankings metrics, noting that the Times Higher Impact rankings might provide a natural alignment with Tohoku University priorities and areas of strength.

14. Focusing the academic exchange agreements with foreign institutions	Continue to review activity levels with agreements to ensure viability and perhaps develop a clearer stratification or classification of the purposes and depth of the relationships with partner institutions.
15. Encouraging more domestic students to benefit from studying abroad	For longer terms programs, give attention to appropriate incentives, including credit transfer and the removal of delays in degree completion times, and ensure students are adequately prepared prior to experience. Also actively encourage shorter-term (1-2 week) study abroad programs.
16. Partnerships with the private sector	Utilise partnerships with the private sector to expand international education and improve its quality, through options such as international student recruitment, language training (foreign languages for Japanese students and the Japanese for international students) and study abroad arrangements.

THE CONTEXT

Internationalisation is integral to the future of Tohoku University as a leading Japanese research university

The Advisory Board begins its observations by re-affirming the importance for Tohoku University of its ongoing internationalisation. As a Designated National University, Tohoku University is a leading Japanese university and a fine global university. It has an obligation to be influential on the world stage, contributing to the solution of common issues and preparing graduates who will be leaders in a complex and challenging world. This can only be achieved through extensive international engagement and presence.

Tohoku University is already an international university with a significant profile. But the next stages involve the broadening and deepening of its international character, reputation and influence. We believe Tohoku University has created a sound platform for taking its internationalisation to the next level.

The progress that has been made

The members of the Advisory Board who participated in the 2016 meeting were impressed by the commitment and allocation of resources over the past three years. Tohoku University is to be praised for the capability and capacity building that has taken place. Many of the developments are grounded in the research foci and research intensity of the University.

The advances since 2016 include:

- investment in infrastructure, including the development of student accommodation;
- the growth in high-quality graduate programs, and advances also in undergraduate programs;
- The widening of training for faculty; and
- The focussing of institutional collaborations on high-level strategic partnerships.

A next phase of internationalization: the ambition needed for the next steps

Tohoku University could be an exemplar of the internationalisation of Japanese higher education. To achieve this requires some courage, for it involves thinking of internationalisation as central and embedded within the University – this has been described as moving from transactional (e.g. quantitative expansion) to transformative (e.g. qualitative improvement) thinking.

Tohoku University is presently moving towards more autonomous direction setting and a lessening of direct government oversight of its future. The Japanese government has assertively promoted and funded internationalisation in higher education, for several reasons, including population demography, global competition and industry needs. Tohoku University has demonstrated its ability to respond successfully. It is time for Tohoku University to confidently assert its own priorities for internationalisation.

At the same time, Tohoku University is balancing an historic organizational culture of devolution and Faculty independence with the contemporary need for central, whole-of-

university strategy and leadership. The second phase of internationalisation, if that is the appropriate way to describe it, involves considerable reflection on any existing constraints imposed by institutional culture and accepted practices and ways of doing things. Existing beliefs do need to be challenged to go to the next level. This would require a very strong roadmap and narrative that emphasises the shared University-wide responsibility to achieve the necessary ‘buy-in’.

In many ways, internationalisation is not a goal in itself but a means for improving the quality and relevance of research and teaching. Internationalisation is potentially a vehicle for wider change within Tohoku University, it is an outward-looking tool to support the University’s social engagement and responsibility — locally, nationally and globally

OBSERVATIONS, RECOMMENDATIONS AND SUGGESTIONS

1. Organisational arrangements and organisational chart

The Advisory Board continues to find it somewhat difficult to understand the organisational arrangements supporting the international strategy. While we received an organisational chart, which shows great efforts to boost international activities and partnerships through diverse frameworks throughout the institution, including several administration offices, institutes, divisions and offices dedicated to international affairs and activities, the relationships between these remain unclear to us as outsiders. We accept that this might be much clearer internally for the Tohoku University community, so we do not wish to over-emphasise this issue but we do note that casual interactions with staff during the Board meeting suggest there could be better clarity.

We can identify leadership roles and administrative arrangements that include:

- Executive Vice-President for International relations
- Vice-President for Global engagement

- Administration bureau

- General affairs and planning department/ Global engagement division
- Education and student support department/ student exchange division

- International strategy office

- Institutes/organizations

- Global learning center
- International joint lab. Center (Organization for advanced studies OAS)
- Organisation for international initiatives
 - o Office for international initiatives
 - o Office of Japan-Russia relations.

We wonder how these functions are integrated? Could the integration be made clearer for the Tohoku University community?

2. Communicating the internationalisation imperative, vision and strategy

The depiction of Tohoku University as an international university, both internally and externally, is important in establishing expectations and achieving support for alignment with strategic activities.

The vision articulated in the strategy for the internationalisation of Tohoku University is clear and focused. It includes education with a global perspective, cutting-edge research, cross-border university-industry collaboration, and solving worldwide social challenges. We believe it would be worthwhile to communicate more widely the international character and aspirations of Tohoku University, emphasizing that the internationalisation of the University is key to its contemporary social responsibility and social engagement. This messaging could involve both internal and external signals through a coordinated marketing and public relations campaign. In the case of internal communication, the vision, objectives, and goals of internationalisation at the leadership level should be cascaded and delegated to department and offices (faculty and staff members) initiating and supporting their commitments and action plans for Tohoku University's internationalisation.

3. Establishing Key Performance Indicators (KPIs) for the measurement of progress/performance

Not everything that is worthwhile can be measured, nonetheless quantitative measurement does have its places. While the measurement of some aspects of internationalisation is admittedly imperfect, there will still be benefits in developing explicit KPIs.

We note that various performance indicators are used for reporting in relation to government requirements, such as Top Global University and the Mid-term Goals and Plans to be submitted every six years for the award of the basic operational funds from the government. The Board also suggests the University frame internal KPIs that are relevant and specifically aligned with its own university mission and internationalisation strategy. This might involve defining careful categories and the collection of data linked to the strategy, to measure efficiently, to utilize strategically, and to permit benchmarking with other institutions.

4. Influencing government policy

The Advisory Board notes the significant limits imposed by policy that places a joint cap on the enrolment quota for domestic and international students. We note and applaud the efforts by Tohoku University leadership to influence government thinking and are pleased that there is optimism that policy changes might be forthcoming in the near future.

5. Identifying the focus of excellence

Tohoku University's internationalisation and its overall vision and strategy appear to emphasise the STEM fields. This is highly understandable, but the Advisory Board wonders about the importance of Tohoku University being known for excellence in a wider range of research fields, including the humanities and social sciences. This question is raised mindful that determining the fields on which to focus, and in which to invest, is an ongoing planning challenge for many universities. Japanese Studies can be strategically considered for one of those focused fields since it appears that other universities selected for the Top Global University Project do not pay particular attention to that discipline.

6. Attracting, recruiting and retaining international faculty

There remains an ongoing need for a strategy to recruit good international talent. More systematic international recruitment is needed, for the proportion of international staff appears to be remaining relatively steady at seven per cent. This will require attention to staff retention, promotion and reward. The Board notes there are indeed significant costs in recruiting top-flight researchers. The Board commends the Early Career Researcher scheme, which could be expanded across disciplines.

Of course internationalisation is not only about hiring international faculty from abroad, for a degree of internationalisation can be achieved through the formal affiliations with partner universities. For example, we note that several Tohoku University faculty have been appointed as Affiliate Professors at the University of Washington through the University of Washington-Tohoku University: Academic Open Space. With these affiliate appointments, staff can formally join research proposals, jointly publish articles and offer lectures at the University of Washington.

7. Boosting international student recruitment

The recruitment of international undergraduates is presently at low levels. The Advisory Board is interested in how Tohoku University might, over time, develop a more commercial orientation and specific action plans for its international student recruitment in collaboration with the private sector, such as recruitment agents and language schools. Pathway programs with private service providers can be considered as part of the international student recruitment strategy. Spending more per capita on international students, as is presently the case with, for example, costly entrance examinations provided in other countries, will not allow for sustainable growth. This will require a significant change in the cost structures.

We note that the recruitment of Japanese students who are either born or raised in the countries other than Japan could be worth pursuing. There is a sizeable Japanese diaspora around the world, including in Brazil but also in the large communities of Japanese and Japanese-American families in major north American cities, such as in the Greater Seattle area. These communities have high achieving students eligible to enter Tohoku University through the “Global Entrance Examination”. Recruiting these students could have a direct positive impact on the domestic students in various ways.

8. Two approaches to English-taught degree programs

The curricula of English-taught degree programs in the STEM fields can be fully delivered in English. However, English-taught degree programs in humanities and social sciences need Japanese language courses for international students embedded in their curricula to support student retention and careers in Japan upon graduation, as Japanese companies still seek Japanese language skills. In other words, a hybrid program consisting of academic courses taught in English and practical Japanese language courses should be more attractive for prospective international students. Successful examples of this approach include Ritsumeikan Asia Pacific University, where no Japanese language ability is required at admissions but is required for graduation.

9. Development of the University's administrative staff

The development of Tohoku University at an international level involves professional development for the University's administrative staff as well as Faculty, for many administrators have an influential role in shaping practices. We note that Tohoku University has experienced and highly professional international education staff who add great value to the institution. This is an asset to be nurtured.

Various possibilities for further staff development might be considered, including exchanges and professional development programs provided by the private sector. It may also be worth considering the appointment of experienced foreign staff to strategic senior administrative roles.

In addition to the private sector, administrative staff mobility can be implemented between partner universities among international office staff and other support services. This is an excellent way to improve English language, to benchmark and 'job shadow', and to gain additional skills and competences in a cross-cultural environment and at the same time to enhance a strategic partnership.

10. Achieving better integration of domestic and international students

The Advisory Board has the impression that more efforts might be needed to design programs more systematically so that Tohoku University can bring students together on campus (in classrooms, extracurricular activities, and residence halls) and off campus (local community outreach programs) in more fruitful and productive ways. This could include the design of purposeful and immersive intercultural and cross-cultural experiences.

11. Building an alumni and endowment culture

The Advisory Board notes that alumni engagement is a wider strategic issue for the University, as is the cultivation of philanthropy. It is a lengthy journey to develop alumni /philanthropy/endowment activity but this does need to be nurtured and harnessed. This requires a dedicated professional team and a university wide commitment to develop and support this function. The concept of 'return on investment' is of paramount importance to convincing a university community to go in this direction. The commonest mistake is to underinvest in this function.

International student alumni may over time prove to be a valuable resource for Tohoku University, particularly in assisting to recruit new international students.

12. Listening to and working with industry

Tohoku University's links with industry will partly define its ambitions for internationalisation. Boosting links with corporate partners and understanding the skills required by employers and what the institution is presently supplying may reduce mismatches of expectations.

13. Understanding the status/relevance of international rankings for Tohoku University

It is not clear to what extent Tohoku University presently focusses, or should focus, on a strategy for 'climbing' the international rankings schema. To what extent should Tohoku align its strategy (including Japanese government expectations) with rankings metrics and processes. Can particular rankings schema appropriately reflect the "raison d'être"

(fundamental purpose) of Tohoku University? The goals and activities of Tohoku University appear well aligned with the United Nations' Sustainable Development Goals (SDGs). We note that Tohoku University participated to a limited extent in THE Impact Rankings in 2019 (being ranked 17th on "Industry, Innovation and Infrastructure") and are preparing for full participation in the coming next round in a full scale. This participation is worthwhile.

14. Focusing the academic exchange agreements with foreign institutions

At the whole University level the number of agreements has expanded over the years (155 in 29 countries in 2011, 197 in 32 countries in 2015, and 229 in 36 countries in 2019). Similarly, at the department level: 378 institutions in 47 countries in 2015, 472 institutions in 62 countries in 2019. That is a total number of agreements approaching 700. The Board wonders if all of these agreements remain active and whether there is an assessment of the activity and a review process. The stratification of partner institutions ranging from strategic or comprehensive ones through to those only for student exchange could be considered.

15. Encouraging more domestic students to benefit from studying abroad

Clearly a major thrust for Tohoku University involves facilitating more domestic students to study abroad particularly semester-long and year-long programs. As is already recognised by University management, this requires attention to appropriate incentives, including credit transfer and the removal of delays in degree completion times. As well, preparation is needed pre-experience, for example, TOEFL/IELTS preparation programs and academic (study) skills in English programs and post-experience, for instance, career placement support for students who have studied abroad. Furthermore, the learning outcome assessment of study abroad programs is needed not only to identify participants' growth and accomplishments but also to improve the quality of those study abroad programs. Many assessment tools such as IDI and BEVI are available for such purposes. In 2016, the main obstacles were finance, feeling insecure, lack of language proficiency, and delays to graduation time. According to the most recent student survey in 2017, "Reasons for being hesitant about studying abroad" are as follows: economic burden (54.0%); lack of skills in foreign languages (52.6%); delay of their graduation date (22.6%), concerns about living abroad (24.7%) and Japan's level of comfort and safety (16.4%)

The issues involved with credit transfer and delay in degree completion times for longer term programs might be mitigated in shorter-term (even one or two weeks) study abroad programs. Students who participate in shorter term programs can change their thinking processes and perspectives rapidly. In particular, students participating at early stages in their degrees may experience strong impacts on their future directions. So short-term mobility may be a good way for a first international exposure and cross-cultural awareness, and participants may then feel more self-confident and might want to travel for longer periods later on.

16. Partnerships with the private sector

To expand international education and improve its quality, partnerships with the private sector are recommended as effective options. International student recruitment, language training (foreign languages for Japanese students and the Japanese for international students) and study abroad arrangements and preparations can be carried out effectively by

external partners who have people with the expertise and specialist skills. Thus, it is too costly if the University implements these activities alone (that is, only with its own staff).

Documents provided to us report exchange events for international students and foreign-investment companies targeting future career in global companies. We note that the Center for Career Support provides individual career support services and various exchange events with companies, including the foreign ones, for both domestic and international students.

東北大学
国際アドバイザーボード
報告書
(仮訳)

2019 年

国際アドバイザリーボード 令和元(2019)年会合

2019 年国際アドバイザリーボードの会合は、2019 年 10 月 3 日・4 日に開催された。アドバイザリーボードは、学生や教職員と会う機会があったことを歓迎する。また、会合の前に提供された簡潔な文書が役立った。

アドバイザリーボードのメンバーは、東北大学の国際戦略を推進する上でアドバイスを
行う機会を得たことを光栄に思い、大野英男東北大学総長に本報告書を提出する。

マイケル・アーサー教授
アドバイザリーボード委員長
令和 2(2020)年 2 月 5 日

アドバイザリーボード委員

マイケル・アーサー	ユニバーシティ・カレッジ・ロンドン 学長兼プロボスト、教授
リチャード・ジェームズ	メルボルン大学 副学長(学術・学士課程担当)兼副プロボスト 教授
太田浩	一橋大学 森有礼高等教育国際流動化機構全学共通教育センター教授
薛其坤	清華大学 研究担当副学長 教授
マリー・ピエール・ファーブル	INSA リヨン 国際開発担当副学長、学長特別顧問 博士
ハラルド・フース	ハイデルベルク大学 トランスカルチャー研究センター(HCTS)・人文社会科学研 究科(HGGS)教授
大内二三夫	ワシントン大学 材料科学工学科教授
帯野久美子	株式会社インターアクト・ジャパン 代表取締役
ジョエル・ガレゴス	ノースカロライナ大学シャーロット校 副プロボスト(国際プログラム担当)

推奨・提案の要約

領域	推奨・提案
1. 組織の体制・機構の整備	東北大学のコミュニティに裨益するよう、国際化の役割と責任を明確にする。
2. 国際化の必要性、ビジョン、戦略を伝える	大学の社会的責任とコミュニティへの関与の中核的役割を国際化が担っていることを強調し、東北大学の国際的な特性と目指す方向性とを広範に伝える。
3.進捗測定のための主要業績評価指標 (KPI) を確立する	大学の国際化に関わる学内優先事項に沿った適切かつ独自の主要業績評価指標 (KPI) を開発し、公開する。
4.政府の政策に影響を与える	国内学生・留学生の入学定員のあり方に関して政府の政策に影響を与える努力を続ける。
5.卓越のための重点を定める	東北大学が人文社会科学を含む幅広い研究分野で卓越していることが知られていることの重要性を考慮する。
6.国際的な教員を惹き付け、獲得し、引き留める	勤続、昇進、報酬に注意を払い、国際的な人材を獲得する努力を続ける。若手研究者獲得の取組を幅広い学術分野に拡大し、パートナー大学と連携して国際クロスアポイントメントを活用する。
7.留学生の募集を促進する	学士課程での留学生募集のあり方を、商業的な方向性も考慮して開発し、世界に相当数存在する在外邦人や日系人などの募集を強化する可能性を探る。
8.英語学位プログラムへの2つのアプローチ	留学生にとって魅力的だと思われる、英語での教育課程と実践的な日本語教育とを組み合わせた学位プログラムの開発を検討する。
9.大学職員の育成	民間セクターが提供する交流・専門能力開発プログラム、戦略的上級職への外国人スタッフの任命、国際関係その他の部署において、パートナー大学との職員の人事交流など、さまざまな可能性を探索する。
10.国内学生と留学生との統合を促進する	意図が明確で魅力ある異文化体験をもたらす学内外での共修プログラムを設計する。
11.同窓生、基金の文化を構築する	同窓生のエンゲージメントとフィランソロピー活動の発展は、適切な水準の財務投資を行うべき優先事項として扱われるべきである。
12.産業界の声に耳を傾け、協働する	企業とのパートナーシップを発展させ、雇用主が要請するスキルへの理解を向上させる。

13.国際ランキングにおける東北大学の位置づけとその妥当性を理解する	東北大学が特定のランキングの手法に戦略的に対応していくかどうかを検討する。Times Higher Education のインパクトランキングは、東北大学の優先事項や強みの領域と整合する可能性があることに留意する。
14.外国大学・機関との学術交流協定において重点付けを行う。	階層化や分類などを進めながら、協定大学・機関との関係の目的や範囲をより明確に合意し、継続的な評価を行う。
15.より多くの国内学生が留学できるよう奨励する	長期派遣プログラムの場合は、単位互換や学位取得の遅れの解消など、適切なインセンティブに注意を払い、学生が留学前に十分に準備できるようにする。また、超短期(1～2週間)の留学プログラムを積極的に奨励する。
16. 民間セクターとのパートナーシップ	民間セクターとのパートナーシップを活用して、留学生の募集、語学研修(日本人学生には外国語、留学生には日本語)、海外派遣などの国際教育のオプションを拡大し、質を向上させる。

現状分析

国際化は、日本のリーディングな研究大学としての東北大学の将来に不可欠な要素である。

アドバイザリーボードは、まず、東北大学にとって継続的な国際化が重要であることを再確認した。東北大学は、指定国立大学として日本を代表する大学であり、世界的な大学であることは明白である。東北大学は、世界を舞台として影響力を持ち、世界に共通する課題の解決に貢献し、複雑かつ課題の多い世界でのリーダーとなるべき卒業生を輩出する責務を負っている。以上のことは、広範で国際的なエンゲージメントとプレゼンスを通じてのみ達成できる。

東北大学はすでに顕著なプロフィールをもつ国際的な大学である。しかし、次の段階として、国際性、評判、影響力をさらに拡大し、深化させることが求められる。我々は、東北大学が次のレベルの国際化へと進んでいくための確固とした基盤を築いていると確信している。

進展

平成 28(2016)年の会合に参加したアドバイザリーボードのメンバーは、過去 3 年間のコミットメントと資源配分に感銘を受けた。東北大学がこれまでに獲得し、発展させた力量は称賛に値する。その発展の大部分は、大学の研究の重点化と強化に基づくものである。

2016 年以降の進捗は以下の通りである。

- ユニバーシティハウスの建設を含むインフラへの投資
- 質の高い大学院教育プログラムの拡大および学士課程教育プログラムの充実
- 教員向けの研修の拡大
- 他大学・機関との協力を、高いレベルの戦略的パートナーシップへと重点化

国際化の次のフェーズ: 次のステップに向けた野心的な目標設定の必要性

東北大学は、日本の高等教育の国際化の模範となり得る。その実現のためには、国際化を学内指針の中核に位置づける強い意志が必要である。これは、(量的拡大などの)トランザクションから(質的向上などの)トランスフォーメーションへの転換を意味する。

東北大学は現在、自身の将来について自律的に方針を定め、政府の直接的監督を減少させる方向へと進んでいる。日本政府は、人口変動やグローバルな競争、産業のニーズなどの理由から、高等教育の国際化を明確な態度で奨励し、資金提供を行ってきた。これに対し、東北大学はうまく対応する能力を示してきた。今度は、東北大学が確信を持って、自分自身の国際化のための優先事項を定めていくべきである。

同時に、東北大学は、部局の独立性と分権性という歴史的な組織文化と、全学的視野に立った戦略的な大学リーダーシップという現代的なニーズとのバランスの上にある。国際化の第二段階(という表現が適切であるとすれば)では、既存の制度・文化・慣例を相当に見直すことになる。次のレベルに進むためには、既存の信念が挑戦を受ける必要がある。ここでは、全学で共有された責任において必要なものを外から獲得するような、非常に強力なロードマップや具体策が必要となる。

国際化は、あらゆる意味で、それ自体が目標ではなく、研究と教育の質と妥当性を向上させるための手段である。国際化は、東北大学内に幅広い変化をもたらす潜在力を有しており、東北大学が、ローカル、ナショナル、グローバルに社会へのエンゲージメントと責任とを担っていくことを支援するための、外に目を向けたツールなのである。

観察、推奨、提案

1. 組織の体制・機構の整備

アドバイザリーボードは、国際戦略を推進するための東北大学の組織体制について、まだわかりにくいと感じている。提供された組織図には、国際的事項や活動を担う様々な事務組織、部局、機構などによって国際活動やパートナーシップを活性化させる多大な努力が示されているが、これらの組織間の関係は、外部者にはわかりにくい。東北大学コミュニティの内部ではずっと明確なのかもしれないが、アドバイザリーボードの会合時に行った教職員たちとの率直な議論からも、より明確にできる可能性が示唆された。

以下のようなリーダーシップの役割と管理運営体制が特定できる。

国際展開担当理事・副学長

国際戦略担当副学長

本部事務局

- 総務企画部国際企画課
- 教育・学生支援部留学生課

国際戦略室

部局・機構

- 高度教養教育学生支援機構グローバルラーニングセンター
- 高等研究機構
- 国際連携推進機構
 - 国際連携推進室
 - ロシア交流推進室

これらの諸機能はどのように統合されるのであろうか。東北大学のコミュニティのために、明確になるよう統合していくことはできないか。

2. 国際化の必要性、ビジョン、戦略を伝える

東北大学が国際的な大学であることを国の内外に示していくことは、戦略的活動に対する期待と支援とを獲得する上で重要である。

東北大学の国際戦略で示されたビジョンは明確で焦点が定まっており、世界的視野に立つ教育、世界最先端の研究、国境を越えた産学連携、社会課題を解決して世界に貢献などが盛り込まれている。我々は、大学の国際化が現代の社会的責任と社会へのエンゲージメントの中核に位置づけられることを強調し、東北大学の国際的な特性と進むべき方向性に関してより広範にコミュニケーションを行っていく価値があると確信している。これには、マーケティングや広報のキャンペーンを介した学内外へのメッセージの発信が含まれる。学内のコミュニケーションにおいては、全学リーダーのレベルにおける国際化のビジョン・目的・目標が、各部局・学科や部門(さらには教職員)に段階的に委譲され、彼らの東北大学の国際化へコミットメントとアクションプランが開始され、支援されていくことが求められる。

3. 進捗・業績測定のための主要業績評価指標(KPI)を確立する

価値のあるものすべてが測定可能なわけではないが、それでも定量的測定には適切な役割がある。国際化のいくつかの側面の測定は明らかに不完全であるが、それでも明示的な KPI を開発するメリットはある。

我々は、スーパーグローバル大学創成支援事業や、政府からの運営費交付金を受けるにあたって 6 年ごとに提出される中期目標・中期計画など、政府からの要請に基づいて報告を行うために様々な業績指標が用いられていることは認識している。アドバイザリーボードは、東北大学が自身のミッションに沿った適切で独自の KPI を設けることを推奨する。ここでは、効率性を測定し、戦略的に活用し、他大学とのベンチマークによる比較が可能なように、戦略に沿って分類されデータが収集される必要がある。

4. 政府の政策に影響を与える

アドバイザリーボードは、国内学生と留学生を一緒に扱う入学定員の制限が政府の政策として課されていることについて、重大な限界であると認識している。アドバイザリーボードは、東北大学のリーダーが政府の方針に影響を与えようとしている努力に注目し、称賛する。近い将来に政策の変更が実現するかもしれないのではないかと、樂觀論に立ち、望ましいと感じている。

5. 卓越のための重点を定める

東北大学の国際化及びその全体的なビジョンと戦略は、理系分野を強調しているように思われる。このこと自体はよく理解できるが、アドバイザリーボードは、東北大学が人文社会科学を含む幅広い研究分野で優れていることで知られることが重要なのではないかと考える。この問題を提起するのは、多くの大学にとって、重点を置き、投資すべき分野を決定することが計画上の継続的な課題であることを念頭に置いてのことである。日本学は、スーパーグローバル大学創成支援事業に採択された他の大学で格段の関心が払われていないことから、戦略的に重点分野のひとつとすることが考えられる。

6. 国際的な教員を惹き付け、獲得し、引き留める

優秀な国際人材を獲得するための戦略が、引き続き求められる。外国人教員の割合は 7% の水準であり変化せずに推移しているが、より体系的な国際リクルートが必要である。ここでは、教員の勤続や、昇進、報酬に注意を払う必要がある。アドバイザリーボードは、一流の研究者の獲得には大きな費用がかかることは認識している。アドバイザリーボードとしては、若手研究者を獲得する取組を分野横断的に拡大していくことを推奨する。

もちろん、国際化は、海外からの国際教員を雇用することだけを意味しない。国際パートナー大学とのクロスアポイントメントを通じて達成することもできる。例えば、我々は東北大学の教員の幾人かが、ワシントン大学と東北大学が共同して展開する大学アカデミックオープンスペース事業によって、ワシントン大学の客員教授として任命されていることを認識している。この客員としての任命により、これらの教員は研究のプロポー

ザルに正式に参加し、ワシントン大学で共同論文を発表し、講義を行うことができる。

7. 留学生の募集を促進する

現在、学士課程における留学生の受入れ水準は低い。アドバイザリーボードは、東北大学が、留学生獲得のエージェントや語学学校などの民間セクターと協力するような形で、より商業的な方向性や具体的なアクションプランなどを、時間はかかるかもしれないが、どのように開発していくかに関心を持っている。民間サービス事業者を通じた留学生募集は、留学生募集戦略の一部と見なすことができる。例えば、高い費用をかけて他国で入学試験を実施するなど、留学生一人あたりに対して多くの費用をかけている現状のあり方は、持続的な拡大をしていく上では許容されない。コスト構造の大きな変更が要請される。

海外で生まれ、育った日本人学生を募集する方策を探索する価値はあるだろう。ブラジルなどには大規模な在外邦人・日系人が居住し、シアトル都市圏など北米の主要都市には大規模な日本人や日系人のコミュニティが存在する。これらのコミュニティには、「グローバル入試」を通じて東北大学に入学する資格のある優秀な学生が存在する。これらの学生を獲得することで、国内の学生にとっても様々な良い影響が直接的にあるだろう。

8. 英語学位プログラムへの2つのアプローチ

英語で教える学位プログラムのカリキュラムは、理系分野では英語で完全に提供することができる。しかし、人文社会科学における英語学位プログラムは、日本企業がまだ日本語のスキルを求めているため、卒業時に学生が日本に定着しキャリアを積む支援をする上では、留学生のためのカリキュラムに日本語教育を組み込む必要がある。換言すれば、英語で教える学術科目と実用的な日本語科目で構成されるハイブリッドのプログラムが、日本留学の希望者にとって魅力的なのである。このアプローチの成功例としては、立命館アジア太平洋大学があり、同大学では入学時には全く日本語の能力が要求されないが、卒業には必須となる。

9. 大学職員の育成

東北大学が国際的なレベルへと発展していくためには、教員だけではなく、大学の実務を担い、影響力を有する大学の事務局スタッフのための職員開発が必要となる。私たちは、東北大学に高度にプロフェッショナルな国際教育スタッフがいて、大きな付加価値を生み出していることを認識している。彼らは大学の財産であり、大切にすべきだ。

職員の交流人事は、現行の民間セクターに加えて、国際部署やその他の支援サービスの教職員について、パートナー大学との国際交流人事を行うことが可能である。これは、職員の英語力を向上させ、ベンチマークや「ジョブシャドウイング」、異文化環境における能力やスキル向上、さらには、戦略的なパートナーシップを向上させる上でも有効な手法である。

10. 国内学生と留学生との統合を促進する

アドバイザリーボードは、東北大学が、キャンパス内(教室、課外活動、および寮)及びキャンパス外(地域社会のアウトリーチプログラム)において、実り多い生産的な方法で学生を統合していくことができるよう、体系的なプログラムを設計する努力を行うべきだと考える。これには、意図的、集中的な異文化体験の設計も含まれる。

11. 同窓生、基金の文化を構築する

アドバイザリーボードは、同窓生によるエンゲージメントとフィランソロピーの文化の発展が、大学にとって広義の戦略的な問題であると考えている。同窓生やフィランソロピー、基金の活動を発展させるのには長い道のりを要するが、これらを育てて活用する必要がある。これには、専任の専門家チームと、この機能を開発・支援する全学的なコミットメントが必要である。「投資に対するリターン」というコンセプトは、大学コミュニティがこのような方向に向かうように説得する上で最も重要である。最もよく見られる間違いは、この機能への投資不足である。

元留学生の同窓生は、特に学生募集の支援において、東北大学にとっての貴重な資源になっていくことが、時間の経過とともに明らかになるだろう。

12. 産業界の声に耳を傾け、協働する

産学連携は、東北大学の国際戦略の目標のひとつとして明示されている。パートナー企業との連携を拡大し、雇用主が求めるスキルや現在供給しているスキルを理解していくことで、期待とのミスマッチを減らすことができる。

13. 国際ランキングにおける東北大学の位置づけとその妥当性を理解する

東北大学が現在、国際ランキングでの位置を高めるための戦略をどの程度重要視しているのか、また、重要視すべきなのかは明らかではない。東北大学は、(日本政府の期待を含む)自身の戦略を、ランキングの指標やプロセスとどの程度整合させるべきであろうか。東北大学の「存在意義」(基本的な目的)を適切に反映できるのは、どのランキングであろうか。東北大学の目標や活動は、国連の持続可能な開発目標(SDGs)とよく整合しているように思われる。東北大学は2019年にTimes Higher Educationのインパクトランキングに部分的に参加し、「産業、イノベーション、インフラ」部門におい

て 17 位にランクされ、次回は全ての項目に参加する準備をしていることを認識している。この参加は価値あるものである。

14. 外国大学・機関との学術交流協定において重点付けを行う

大学間学術交流協定の数、全体としては年々増加している(2011 年 29 カ国 155 大学・機関、2015 年 32 カ国 197 大学・機関、2019 年 36 カ国 229 大学・機関)。

同様に、部局間では、2015 年には 47 か国の 378 大学・機関、2019 年には 62 か国の 472 大学・機関となっている。すなわち、協定数の合計は 700 近くになる。これらの協定が全てアクティブなものなのか、活動の評価が行われているのか、そして、その評価プロセスはどのようなものなのか。パートナー大学について、戦略的・包括的なものから、学生交流のみのものまで、階層化することが考えられる。

15. より多くの国内学生が留学できるよう奨励する

東北大学に対して特に推奨すべきなのは、より多くの国内学生が、特に 1 学期間または 1 年間の留学をするように働きかけることであることは明白である。大学の経営陣によってすでに認識されているように、これには単位互換や学位取得の遅れの解消など、適切なインセンティブへの配慮が必要である。同様に、留学前の準備として、例えば、TOEFL / IELTS 準備プログラムや英語でのアカデミック・プログラムでの(学習)スキルが、また、留学後には、例えば、学生のための就職支援が必要となる。さらに、参加者の成長と達成を特定するだけではなく、留学プログラムの質の向上のためにも海外留学プログラムの学習成果の評価が必要である。このような目的に対して、IDI や BEVI などの多くの評価ツールが利用可能である。

2016 年の時点では、留学をすることへの主な障害は、経済的な負担、安全性、言語能力の欠如、そして卒業時期の遅れであった。2017 年に行われた最新の学生調査によると、「海外留学をためらう理由」は次のとおりである。経済的負担(54.0%)。外国語能力の不足(52.6%)。卒業時期の遅れ(22.6%)、海外生活に対する不安(24.7%)、そして日本の快適さ・安全性(16.4%)であった。

長期留学プログラムの単位互換と卒業の遅延に関する問題は、短期(1 週間または 2 週間の超短期のものも含める)の留学プログラムでは、軽減される場合がある。短期間の留学プログラムに参加する学生は、視野や思考プロセスを急激に変化させることができる。このことは、特に入学後早い段階で参加する学生には、将来の方向性に強い影響を与える可能性がある。したがって、短期の留学は、最初の国際経験や異文化理解のためには良い方法であるだろうし、参加者は自信を深め、後に長期間の海外経験を希望することにつながるかもしれない。

16. 民間セクターとのパートナーシップ

国際的な教育を展開して、その質を向上させる上での効果的なオプションとして、民間セクターとのパートナーシップを拡大することが推奨される。国際的な学生募集、(国内学生のためには外国語、留学生のためには日本語の)語学研修、学生の海外派遣の手配および準備は、専門的な知識と能力をもつ人材を有する外部パートナーによって効果的に行うことができる。したがって、大学が単独(すなわち学内のスタッフのみ)でこれらの活動を行おうとすれば、あまりにも費用が高くなる。

提供された資料から、留学生と外資系企業を対象とした、グローバル企業でのキャリアを目指したイベントの存在がわかった。我々は、キャリア支援センターが、国内学生と留学生のために、個々人のキャリア支援サービスと、外資を含む企業との様々な交流イベントを提供していることを確認した。

Tohoku University

Leading Synergy of Excellence and Innovation



Sendai, home of Tohoku University

2

Tohoku University is located in Sendai, the largest city in the Tohoku region, well known as an *Academic City*.



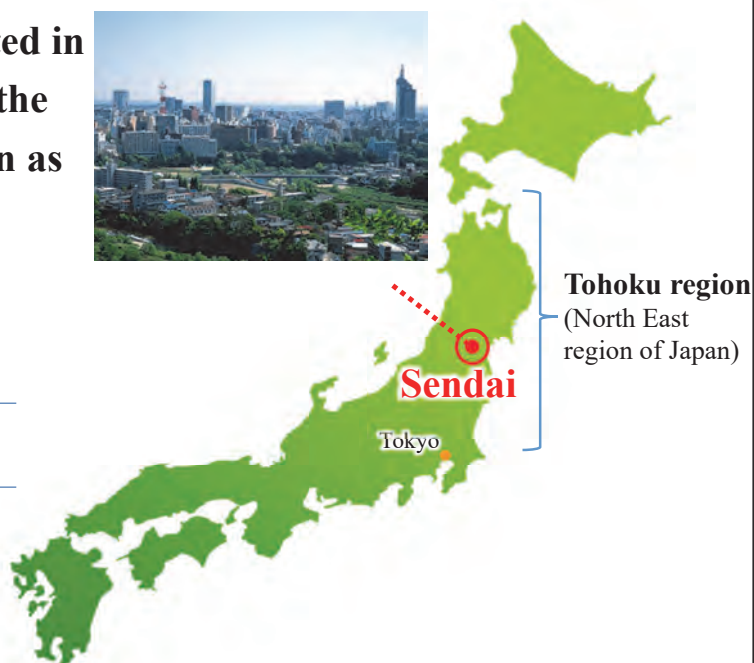
[City of Sendai]

Population **1,089,372**
As of September 2019

By bullet train **350 km**

from Tokyo **1.31 h**

Sendai Airport **20 min**





University Facilities

3

10 Faculties / **15** Graduate Schools

3 Professional Graduate Schools / **6** Research Institutes

Faculties
Arts and Letters
Education
Law
Economics
Science
Medicine
Dentistry
Pharmaceutical Sciences
Engineering
Agriculture

Graduate Schools
Arts and Letters
Education
Law
Economics and Management
Science
Medicine
Dentistry
Pharmaceutical Sciences
Engineering
Agricultural Science
International Cultural Studies
Information Sciences
Life Sciences
Environmental Studies
Biomedical Engineering

Professional Graduate Schools
Law School
School of Public Policy
Accounting School

Research Institutes
Institute for Materials Research (IMR)
Institute of Development, Aging and Cancer (IDAC)
Institute of Fluid Science (IFS)
Research Institute of Electrical Communication (RIEC)
Institute of Multidisciplinary Research for Advanced Materials (IMRAM)
International Research Institute of Disaster Science (IRIDeS)

■ Total Number of Students ■

18,387

■ Total Number of International Students ■

3,405

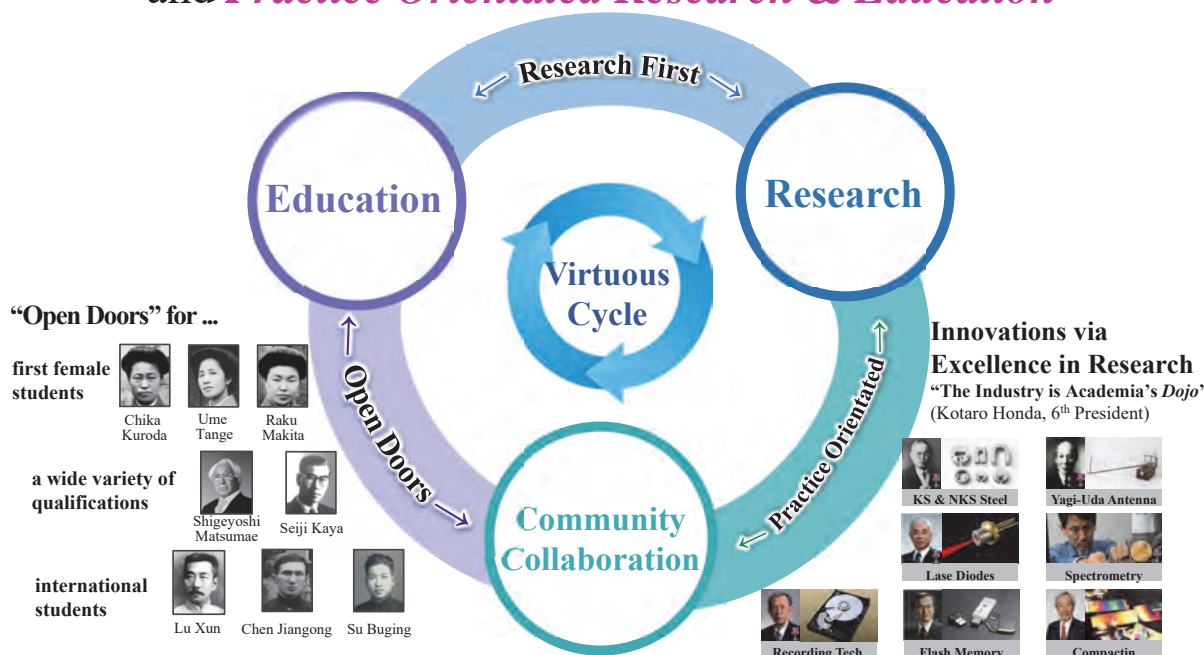


From Tradition to a New Challenge

4

As a University Engaged with Society

Based on *Research First*, *Open Doors*
and *Practice Orientated Research & Education*





Designated National University Corporation

5

- In 2017, first 3 institutes selected (Tokyo, Kyoto and **Tohoku**)
- The new status provides the university with a better platform to further contribute to communities at home and abroad



Tohoku University Vision 2030 - Collaborate. Innovate. Activate

6



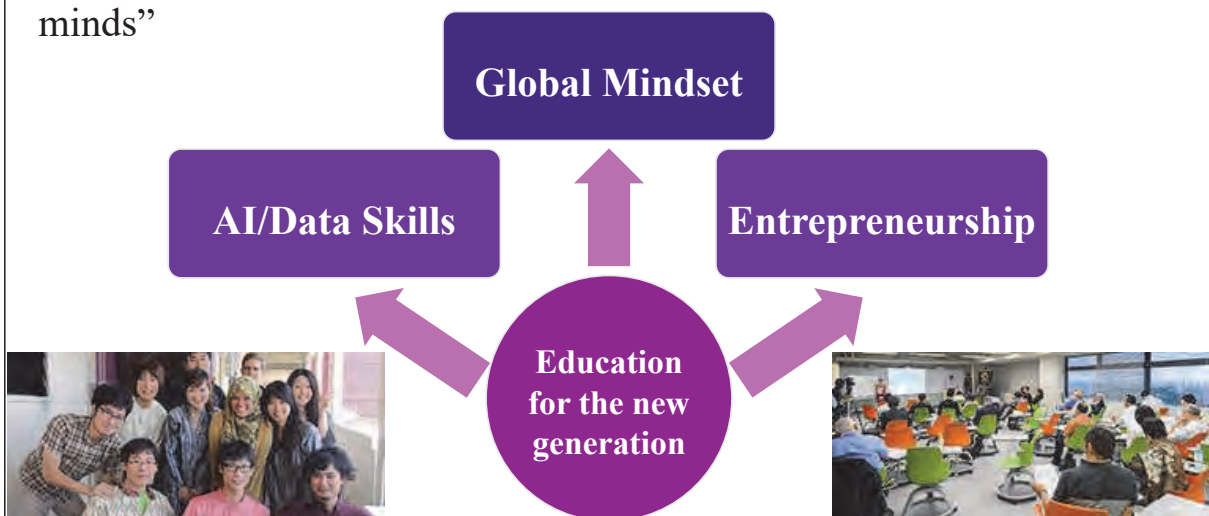
Vision 1 Education



General Education for Future Leaders

8

- Developing practical education to help students acquire **a global mindset, AI/data skills, and a sense of entrepreneurship** which are essential these days
- Developing expanding programs that respond to students' "challenging minds"

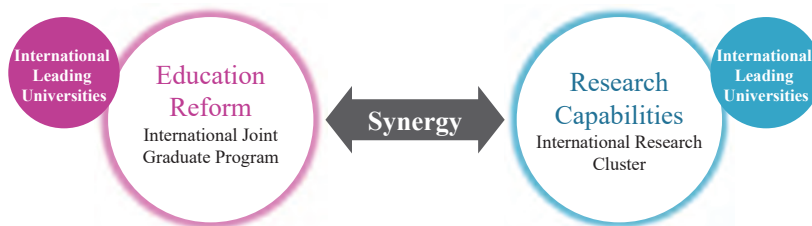


Provide all undergraduate students approx. 2,500



Graduate Education: International Joint Graduate Programmes

9



- Consolidating experience & knowledge across departments
- Joint education in strong international collaboration with leading universities
- Providing scholarships and global travel expenses for participants

Expand Research Fields of Global Top 10

Spintronics 2015~	Env. & Earth Science 2016~
Physics for Universe 2017~	Mechanical Engineering 2018~
Materials Science 2019~	

Challenge New Disciplines

Data Science 2017~	Neuroscience 2018~
Disaster Science 2019~	Japanese Studies 2019~

10

Vision 2 Research



Highly Cited Researchers 2018 (Clarivate Analytics)

11

In terms of the number of researchers who are influential in the academic world (with regard to citations), Tohoku University is

Ranked Second in Japan (11 Researchers)

(out of a total of 90 in Japan)

Number of Highly Cited Researchers per University		
1 st	Tokyo	20
2nd	Tohoku	11
3 rd	Kyoto	9
4 th	Osaka	7
5 th	Nagoya	5



	← Wilhelm Bauer		Multidisciplinary
	Mingwei Chen →		Materials Science
	← Atsushi Hanada		Agri. & Animal Science
	Itaru Honma →		Cross-Field
	← Hideo Ohno		Cross-Field
	Eiji Saitoh →		Physics
	← Shusei Sato		Agri. & Animal Science
	Saburo Takahashi →		Multidisciplinary
	← Kazuo Takimiya		Multidisciplinary
	Shinjiro Yamaguchi →		Agri. & Animal Science
	← Masayuki Yamamoto		Multidisciplinary

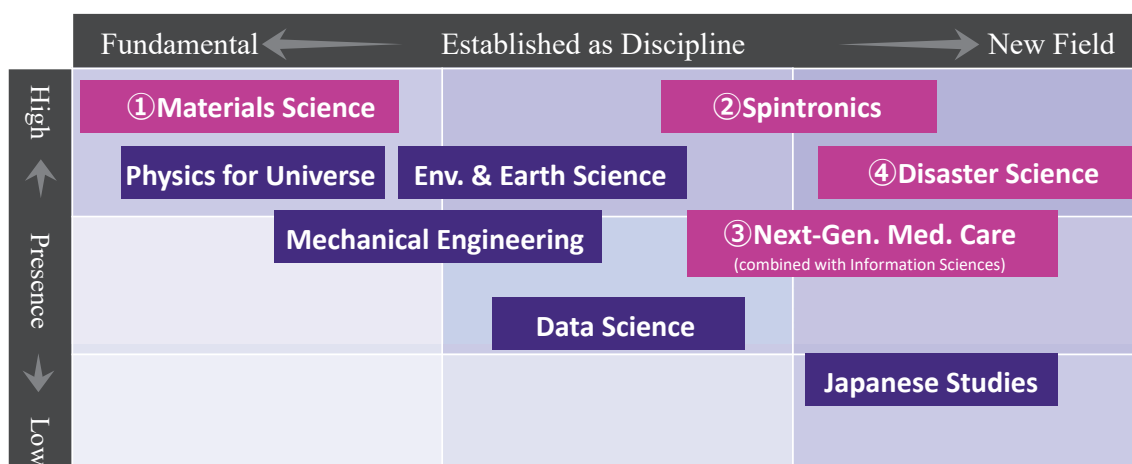
Members of the World Premier International Research Center



Core Research Clusters and World Leading Research Centers

12

- Prioritized promotion of World Leading Research Centers in 4 research areas
- International Research Cluster in 9 fields with 5 other strong areas





Promoting World-Class Research

13

Materials Science

TU produces world-leading research results in the field of Materials Science mainly at the AIMR

- The world's largest research group (about 400 researchers)



Prof. Motoko Kotani, AIMR



Spintronics

Leading the world in Spintronics research and promoting industry-academic collaboration

- The world leader in citations and patents



Prof. Yoshiro Hirayama,
Graduate School of Science



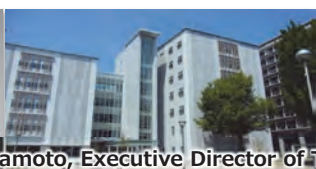
Next-Generation Medicine

The world's first large three-generation cohort survey by the Tohoku Medical Megabank Organization

- R&D of personalized healthcare and prevention



Prof. Masayuki Yamamoto, Executive Director of TOMMO



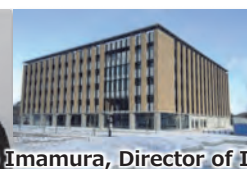
Disaster Science

Pioneering Disaster Science as a new interdisciplinary area

- Establishment of the Global Centre for Disaster Statistics with the UNDP

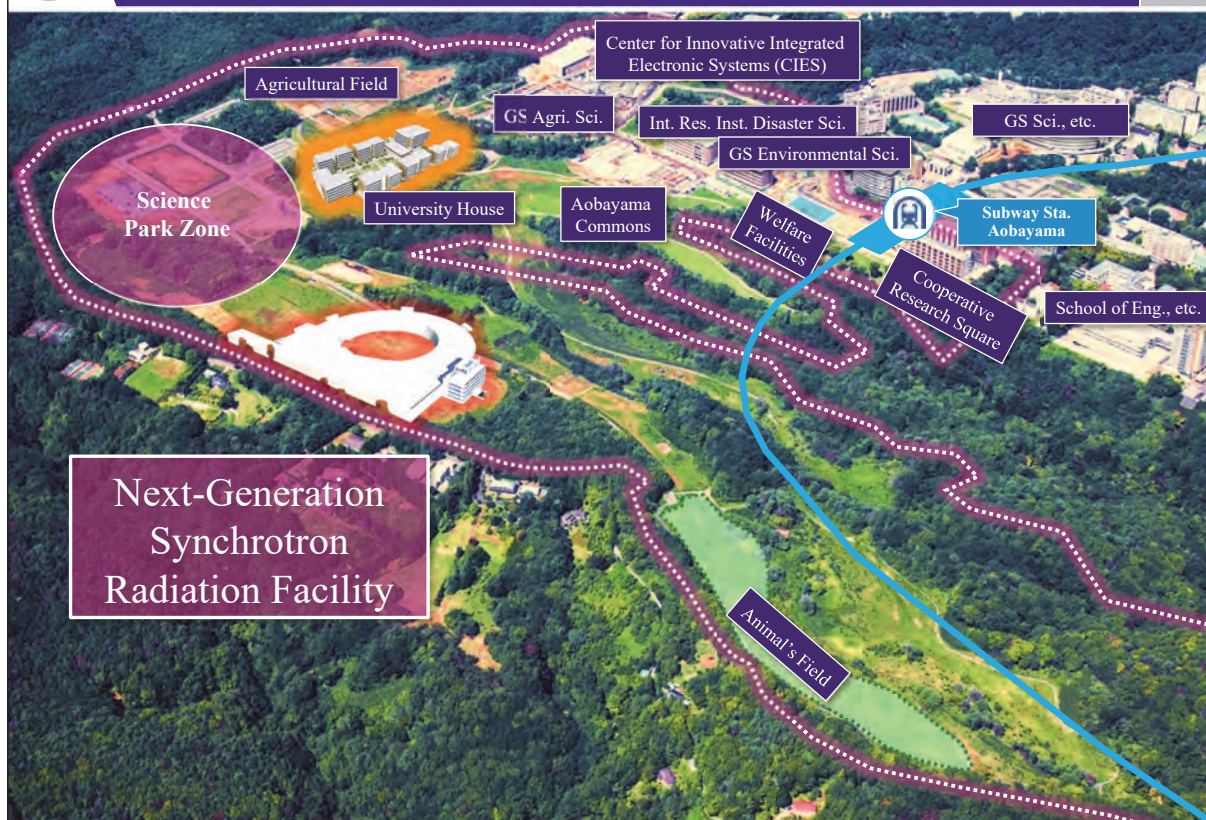


Professor Fumihiko Imamura, Director of IRIDeS



Global Innovation Campus

14



Vision 3 Co-Creation with Community



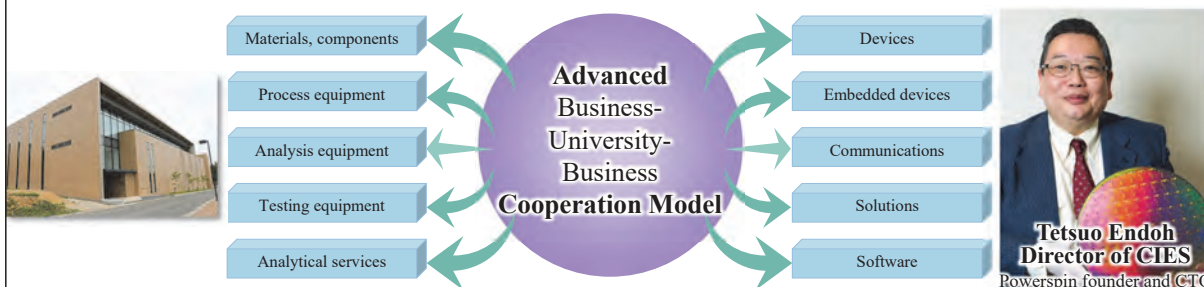
Center for Innovative Integrated Electronic Systems (CIES)

Research and Development of New AI / IoT Semiconductor Technologies in the Society 5.0 Era

- The world's first spintronics AI chip that achieves a power consumption of 1/1,000, as required for the final form of autonomous vehicles (in 2040)

Establishment of the world's largest industry-academia consortium in the field of integrated electronics

Number of joint research grants with foreign countries: Ranked No. 1
(Collaboration with US semiconductor companies)



World Class Research at Tohoku University

- A Leading Pioneer in Spintronics
- Invention of Non-volatile Memory Devices
- Development of New Ultra-low-power Technologies

Special Economic Zones coordinated with national and local government

- Reduced corporate tax for Special Economic Zones to promote private investment (in information service related industries)
- Subsidies for fixed assets such as advanced research equipment



From Disaster Recovery to the Development of Tohoku University SDGs

17

April 2011

Establishment of the IDRRR

Promotion of prioritized research and its implementation within society for reconstruction and regeneration

July 2015

Initiation of “Research with Social Impact”

30 cross-sectoral and interdisciplinary research developments aimed at solving important social issues



Academia Contributions “close the science-policy gap”



Sendai Framework for Disaster Risk Reduction



2015:

Establishment of Three Major Agendas for the International Community



World University Rankings

18



The Times Higher Education World University Rankings 2019-2020

Japan

3rd

Global

251-300



The Times Higher Education Japan University Rankings 2019

Japan

3rd



QS World University Rankings 2018-2019

Japan

5th

Global

82th



U.S. News & World Report, Best Global Universities Rankings 2019

Japan

4th

Global

227th



Thank you for your attention



Tohoku University's International Strategy



Masahiro Yamaguchi
Vice President
Tohoku University



History

2

Tohoku University's Mission:

The tradition of Global Identity from the Establishment in 1907
“Research first” and “Open Door”



Governmental funding project

- Strategic Fund for Establishing International Headquarters in Universities (2005-2009)
- Global 30 (2009-2013)
- Go Global Japan (2012-2016)
- Top Global University (2014-2023)

Distinguished National University (2017-)

Project-driven
internationalization

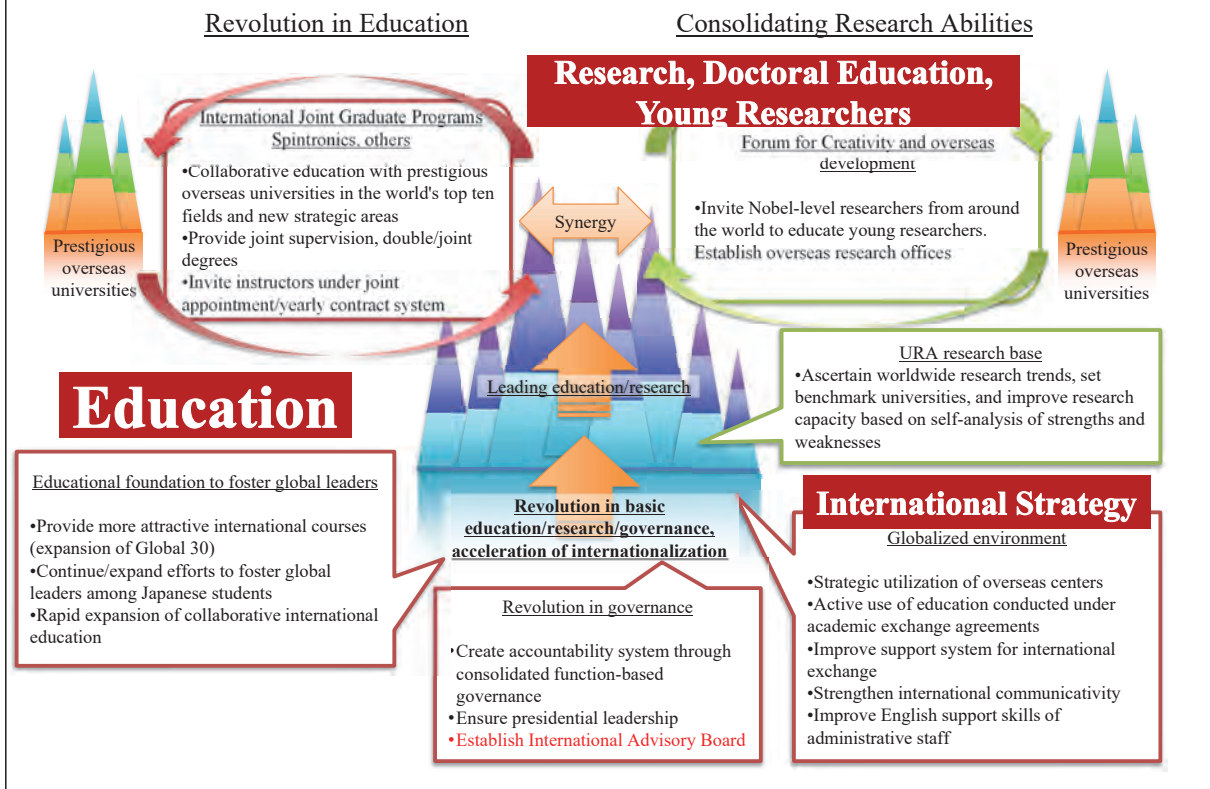


Internationalization
as a mainstream of
university activities



“Top Global University” project

3



Setting up International Strategy

4

Recognition of the needs to set up international strategy

June 2017

- Designated National University



July 2018

- International Strategy Office



November 2018

- Tohoku University Vision 2030



September 2019

- International Strategy



Overall

- Further clarification of international vision and strategy ✓
- Distinctive identity & ownership to be an “enabler” ✓
- Concerns on ranking positions, international profiles & resource allocation

Networking

- Clear policies for academic exchange ✓
- Selective strategic partnerships ✓
- Systemic usage of overseas offices
- Monitoring & assessment utilizing indicators fit for purposes
- Widen participation towards international activities

Education-Research Nexus in internationalization

Research

- Activate international collaboration in humanities and social sciences
- Promote international mobilities, enhance exchange of young researchers
- Faculty and staff development for enhancing international capacity

Educational internationalization for all students

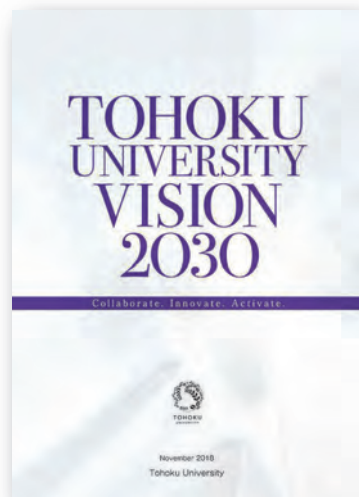
Education

- Substantial lifting of the mobilities among both students & teachers
- Internationalization at home: curriculum & English Medium Instruction (EMI) towards wide range of students
- Reducing psychological & linguistic barriers, and support for acquiring self-confidence
- Provide Multi-cultural & multi-disciplinary experiences
- Joint arrangements on credits and degrees



International Strategy

Realization of the University Mission and Vision through the
Advancement of International Collaborations and
Comprehensive Internationalization



- Strategic advancement of international collaborations (Main Policy 56 of Vision 2030)
- University-wide, cross-sectoral globalization on campus (Main Policy 57 of Vision 2030)



Direction in International Strategies

7

Times of Global Change

- Globalization and Localization
- The 4th Industrial Revolution, Digital Innovation, etc.
- Knowledge-based Society

Issues and Objectives

- SDGs
- Sendai Framework for Disaster Risk Reduction
- Paris Agreement
- Aging and Population Decline

Tohoku University's Identity:

To be a Global University with Creativity and Innovation

- Creation of global cutting-edge knowledge
- Accept a wide range of talents involved in the community
- Leading the development of Tohoku and Japan



Processes and Targets of our International Strategy

8

Process 1: Advancement of International Collaborations

We will bring together the wisdom with a variety of external partners and advance autonomous international collaboration

Process 2: Comprehensive Internationalization

Through cross-border "Open Doors", we will develop a hub for diverse talents, resources, and networks from around the world



Target 1: Education with a Global Perspective

We will attract talented students and faculty members from home and abroad, and foster future leaders with a global perspective for the times of global change

Target 2: Cutting-Edge Research

We will create innovations and become pioneers in new academic fields through the cutting-edge research and knowledge creation

Target 3: Cross-border University-Industry Collaboration

We will develop international university-industry collaborations through the global innovation campuses and international networks

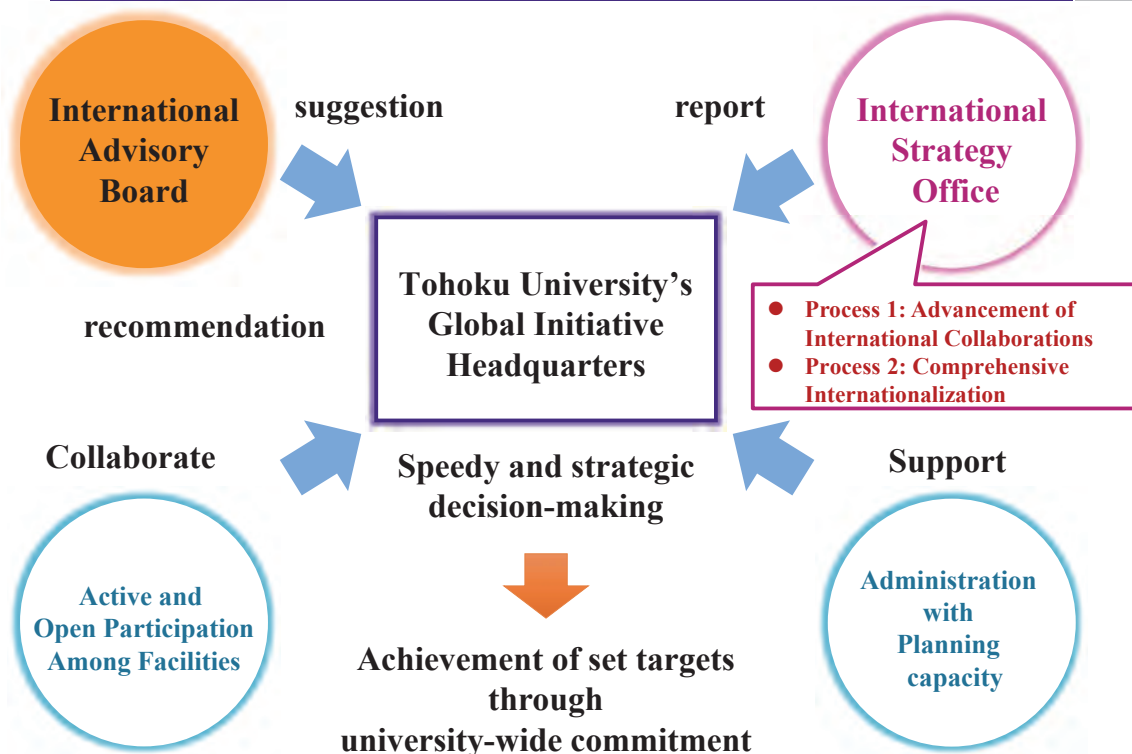
Target 4: Solving Worldwide Social Tasks

Through Community Collaboration, we will play a leading role in solving various global social challenges



System to proceed international strategy

9



International Exchange with clear guideline and efficient process

10

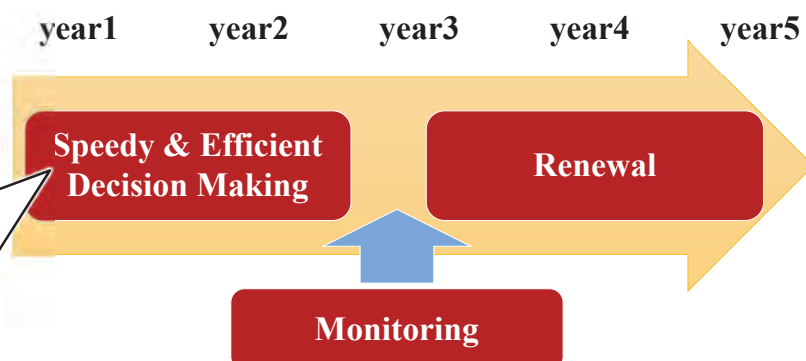
Guideline

- Encourage various initiatives both at university and at schools/institutes
- National & regional balance, academic profile
- Fit to the University mission: education with global perspective, cutting-edge research, branding of Tohoku University identity
- Systemic and strategic monitoring
- Speedy decision making with effective collaboration with schools/institutes/decisions

Agreements on Academic Exchange (as of Sep 2019)

University Level
240
School/Institute Level
479

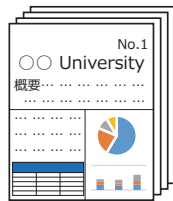
- World leading activities in education, research and social contribution
- Presidential level exchange
- University-wide exchange
- Sustainability and potentiality





Systemic monitoring based on various indicators

11



University College London

UCL was founded in 1826 to bring higher education to those who were typically excluded from it. In 1878, it became the first university in England to admit women on equal terms as men.

大学カルテ (Universitätskarte) Dashboard on International Exchange

Key Facts

	ST比	学生数	留学生割合	学生男:女
UCL	10.6	31,696	51%	43:57
TU	5.5	17,687	11%	74:26

Exchanges

- Student exchange
- Joint Supervision, Double Degrees
- Faculty exchange
- Agreements
- Contact persons
- Co-authorship
- Funding projects

Future perspectives

UCL is planning...

Integration of Data

Inbound students	Outbound students	Exchange agreements	Inbound researchers	Outbound faculties
Acceptance of study visits	Jointly Supervised Degree Programs	Outbound students for Joint supervision	Inbound Students for Joint supervision	Joint research



Selective strategic partnerships

12



Tohoku University Day in Melbourne(2018)

Strategic partnerships:

- Selection under the presidential leadership and mutual agreement
- Intensive support and monitoring for enhancing university wide exchange and collaboration

Candidates for strategic partners:

•UCL •Melbourne •Tsinghua •Lyon •Washington and others



Active usage of consortiums

13

Systemic monitoring and interaction for active participation and initiatives



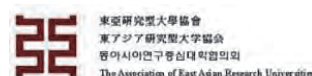
Osaka 2018



APRU IRIDeS Multi Hazards Program



Heidelberg 2019



Systemic usage of overseas offices

14

Overseas Representative Offices

- 1 China Office @JSPS Beijing (Apr 20,2007)
- 2 Thailand Office @Chulalongkorn University(Mar 14,2016)
- 3 UW-TU Academic Open Space @University of Washington (Apr 14. 2017)

Joint Laboratories

- 1 ElytMax @Université de Lyon (INSA-Lyon) (Mar 5, 2018)
- 2 Top Mass @University of Science and Technology Beijing (Nov 17,2016)
- 3 @National Chiao Tung University (in process)



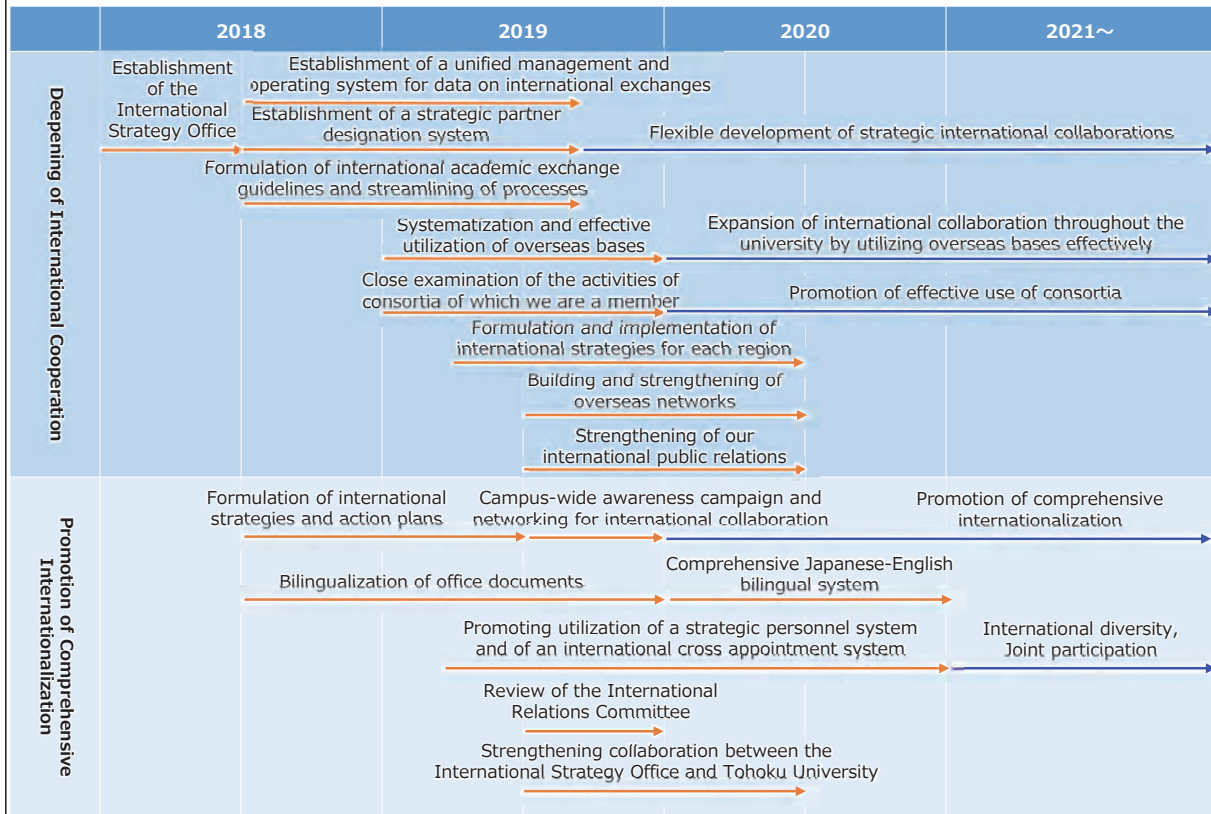
Liaison Offices (established by the departments' Initiative)

1	The University of New South Wales (International Office) Australia (May 17, 2002)	8	Royal Institute of Technology (Faculty of Mechanical Engineering) Sweden (June 28, 2012)
2	Moscow State University (Faculty of Physics) Russia (June 21, 2002)	9	The University of California, Riverside, USA (February 1, 2013)
3	Syracuse University (L. C. Smith College of Engineering and Computer Science) USA (November 11, 2003)	10	Université de Lyon (June 2, 2015) ※Based on the Liaison office @INSA-Lyon since January 23, 2004 (Institute for Fluid Science)
4	Korea Advanced Institute of Science and Technology (Department of Mechanical Engineering) South Korea (December 18, 2003)	11	Foreign Trade University, Vietnam (December 19, 2015)
5	Research Institute for Tropical Medicine, Philippines (May 1, 2007)	12	National Chiao Tung University (College of Electrical and Computer Engineering) Taiwan (May 4, 2017)
6	Institut Teknologi Bandung, Indonesia (August 2, 2011)	13	Sichuan University (West China School of Stomatology) China (March 1, 2018)
7	Seoul National University (College of Engineering) South Korea (December 1, 2011)		



Roadmap

15



16

Appendix





Process 1. Advancement of International Collaborations

17

- We will develop international exchanges in a more open manner through the clear guidelines for international academic exchange agreements
- We will strategically strengthen partnership with overseas universities with whom Tohoku University can build mutually beneficial relationships
- We will activate the international exchange through effective monitoring and assessment based on an integral database on international exchange
- We will effectively use overseas bases and participate inter-university consortia actively
- We will activate international exchanges tailored to each region and country using networks inside and outside the university
- We will enhance the Tohoku University overseas network beyond regions and generations by using such organizations as the overseas alumni associations
- We will improve of our international presence through the development of our international public relations



Process 2. Comprehensive Internationalization

18

- Based on the principle of “Open Doors”, we will create a university community that does not discriminate with regard to nationality, religion, race, gender, age, values, disability, sexual identity, sexual orientation, and so on, and we will establish an environment where members can demonstrate their diverse talents
- Moving away from internationalization through a separated specialized division, we will foster an organizational culture of comprehensive internationalization through a university-wide campaign and networking for promoting international perspectives on all activities at the whole university
- We will realize the thorough Japanese-English bilingual system so that non-Japanese speakers can actively participate and contribute to all of the university’s activities
- We will aim to realize an internationally competitive remuneration system and attractive working environment
- Through the restructuring of international relations departments and committees, we will strengthen planning functions, and the acceleration of decision-making



Target 1. Education with a Global Perspective

19

- We will strategically enroll excellent international students based on the expansion of international degree courses instructed in English
- We will reform undergraduate education programs by setting our main purpose in fostering talents who will lead the global society
- We will enhance the International Joint Graduate Programs which provide international collaborative education connected to world-leading research and professional education
- We will widen our international co-education to all undergraduate students and graduate students, and foster concrete understanding and action on global citizenship and diversity
- We will strengthen support for students' studying abroad and international careers through the improvement of foreign language skills
- We will accelerate campus internationalization throughout the university through the active use of University Houses (international mixed-residence dormitories), which boast the largest capacity among dormitories at national universities



Target 2. Cutting-Edge Research

20

- We will establish further the Core Research Cluster, in the fields of Materials Science and Spintronics in which Tohoku University leads the world, and in fields in which we are expected to lead: Disaster Science and Next Generation Medicine
- In fields where Tohoku University has world-class potential and research resources, we will deepen collaborations with overseas partners and forming of an International Research Cluster which will lead the world
- We will develop research on a global scale through Joint Laboratories and cross appointments in cooperation with leading overseas universities and research institutes
- We will establish an open research environment by promoting diversity, and supporting of autonomous and vigorous research exchange and international joint research among diverse members
- We will improve our international presence by promoting strategic international joint research based on data and analyses of global research trends



Target 3. Cross-border University-Industry Collaboration

21

- We will accelerate large-scale university-industry collaborations with global enterprises based on the “Vision Co-Creation Partnership”
- We will expand the B-U-B (Business-University-Business) model, open innovations at Tohoku University, to the global scale.
- Through the active usage of the Aobayama Campus as a global innovation campus and the Next Generation Synchrotron Radiation, we will further pursue innovations in science and technology
- We will foster and support globally competitive entrepreneurs through strategic partnerships with leading overseas universities
- We will facilitate international university-industry collaboration based on the appropriate protection of intellectual property and international contracts, and the system for security export control



Target 4. Solving Worldwide Social Challenges

22

- We will contribute to the improvement of the world’s capacity to prevent disasters through cooperation with the UN via the Sendai Framework for Disaster Risk Reduction, and collection and archiving of information on disasters at the Global Center for Disaster Statistics
- We will contribute for solving worldwide social challenges through active participation and leadership in SDGs for the achieving of a sustainable world via multidisciplinary international joint research on global environmental change
- We will promote international joint research and dispatch for advanced social challenges which Japan and Tohoku face in advance of the rest of the world, such as a declining birth rate and super aged population, while collaborating with local communities using our core research bases such as that for Next Generation Medicine



Overall

- Further clarification of international vision and strategy
- Distinctive identity & ownership to be an “enabler”
→ **Tohoku University Vision 2030 & International Strategy**
- Concerns on ranking positions, international profiles & resource allocation
→ **Systemic analysis and actions by Strategic Planning Office**

Networking

- Clear policies for academic exchange
→ **Guidelines for International Exchange Agreement**
- Selective strategic partnerships
→ **Strategic partnership with selected universities**
- Systemic usage of overseas offices
→ **Systemic monitoring and rearrangement (ongoing)**
- Monitoring & assessment utilizing indicators fit for purposes
→ **Systemic monitoring based on various indicators and evidences (ongoing)**
- Widen participation towards international activities
→ **Systemic facilitation of alumni networks and networking leaders (ongoing)**



Education-Research Nexus in internationalization

- Activate international collaboration in humanities and social sciences
→ **International graduate programs in humanities and social sciences (Japanese studies, Global governance and sustainable development, etc.) [Afternoon Meeting]**
- Promote international mobilities
→ **Systemic student support and campus internationalization [Education]**
- Faculty and staff development for enhancing international capacity
→ **Systemic support and capacity development [Research & Education]**



Educational internationalization for all students

- Substantial lifting of the mobilities among both students & teachers
→ **[Education] [Research]**
- Internationalization at home: curriculum & English Medium Instruction (EMI) towards wide range of students
→ **International Co-Education, etc. [Education]**
- Reducing psychological & linguistic barriers, and support for acquiring self-confidence
→ **Tohoku University Global Leader Program [TGL], Language Education, etc. [Education]**
- Provide Multi-cultural & multi-disciplinary experiences
→ **Campus Internationalization [Education]**
- Joint arrangements on credits and degrees
→ **Jointly Supervised Degree / Double Degree Programs [Education]**

Tohoku University International Advisory Board



Internationalization of Education at TU Fostering Creative Talent and Future Leaders

Hirotsugu Takizawa
*Executive Vice President
for Education and Student Support
Tohoku University*

Kazuko Suematsu
*Special Advisor to the President (International Affairs)
Professor / Deputy Director
Global Learning Center
Institute for Excellence in Higher Education
Tohoku University*



TU International Strategic Plan

2

Target 1. Education with Global Perspective

- Strategically enroll **excellent international students** based on the expansion of international degree courses conducted in English
- Reform undergraduate education programs by focusing on **fostering talents who will lead global society**
- Enhance the International Joint Graduate Programs which provide international collaborative education connected to world-leading research and professional education
- Widen our **international education** to all undergraduate students and graduate students, and foster concrete understanding and action on global citizenship and diversity
- Strengthen support for student **studying abroad and international careers** through improving their foreign language skills
- Accelerate **campus internationalization** through the active use of University Houses



Discussion points

3

1. **Attract excellent international students**
2. **Foster global talents**
3. **Internationalize the curriculum and TU campus**



Discussion point 1

4

**Attract excellent
international students**



1. Attract excellent international students

5

What we have achieved

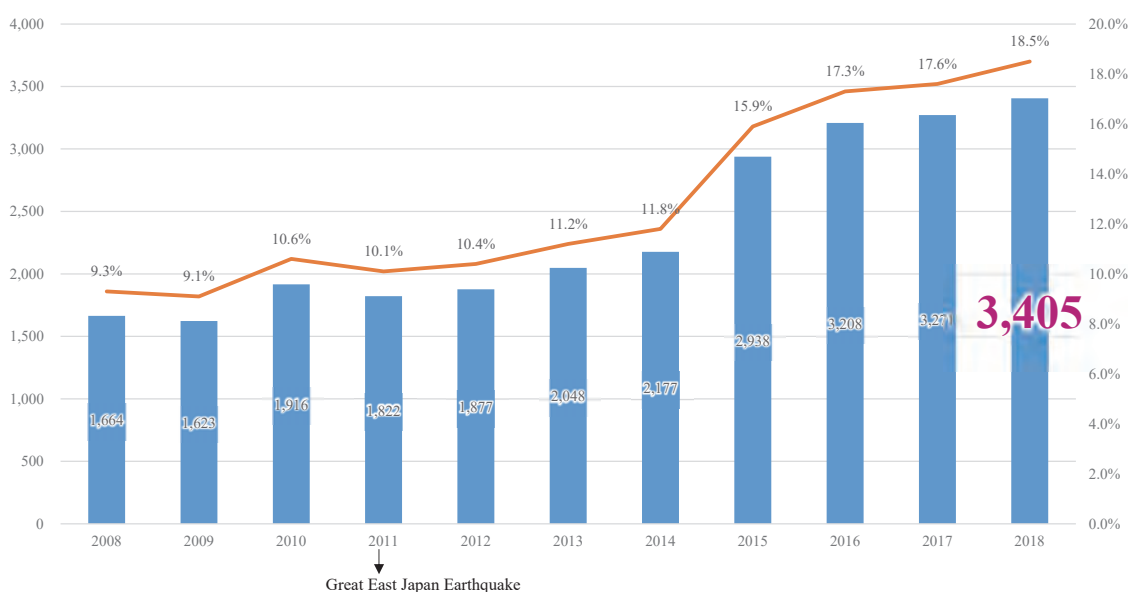
- ✓ The number and proportion of international students has favorably **increased**.
- ✓ **Scholarships for all doctoral students** were fully arranged.
- ✓ “Future Global Leadership (FGL), which are degree courses taught in English, became **a stable** program that secures a consistent number of high-quality applicants.
- ✓ International Mechanical and Aerospace Engineering (IMAC-U) **became a popular undergraduate course in FGL**; the number of applicants exceeds the capacity every year.
- ✓ Linkage with top high schools has been established through TU overseas offices to **recruit talented students for the program**.



1. Attract excellent international students

6

Overseas students (annual)



2008 : 1,664 (9.3%)

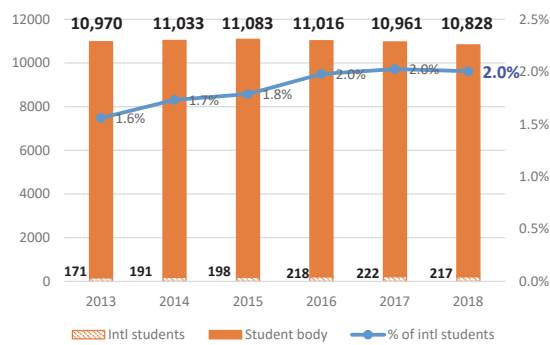
2018 : **3,405 (18.5%)**



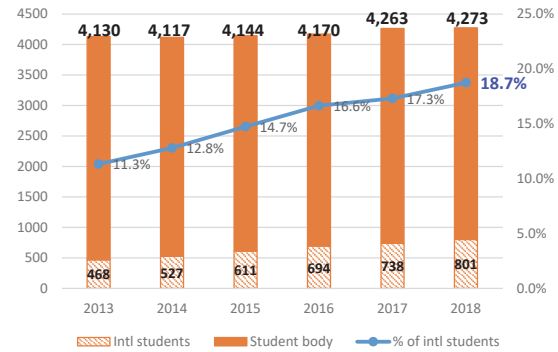
1. Attract excellent international students

7

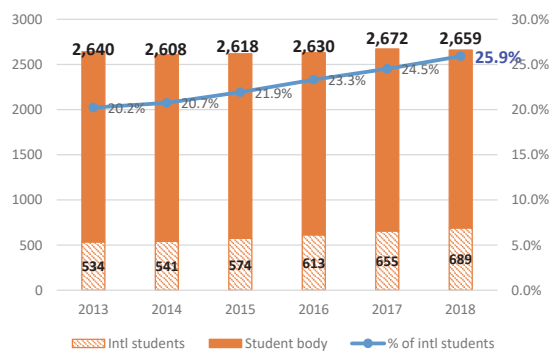
Undergraduates (as of Nov.1)



Master's Program (as of Nov.1)



Doctoral Program (as of Nov.1)



1. Attract excellent international students

8

Number of degree courses taught in English

Graduate : 21 courses in 2013 → **48** courses in 2019

Undergraduate : 3 courses in 2013 → **3** courses in 2019

Proportion of the subjects taught in foreign languages

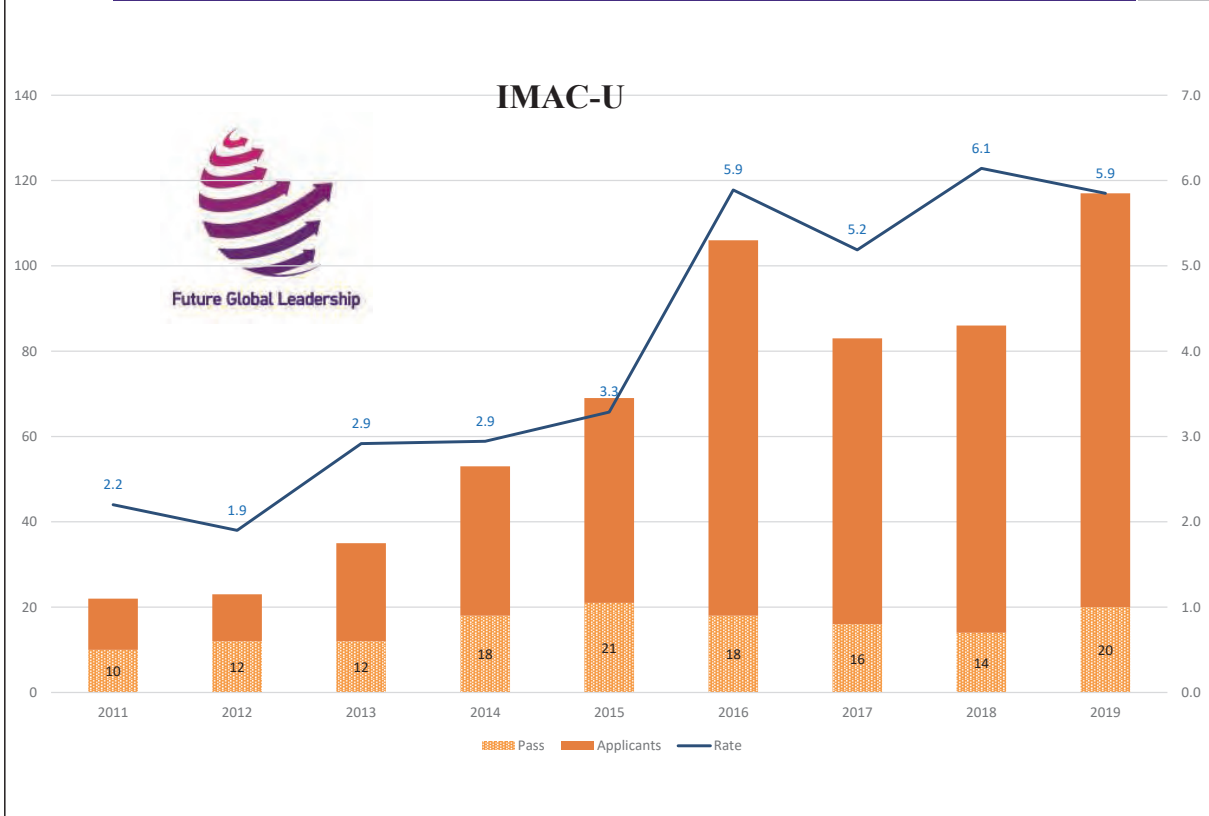
Graduate : 8.9% in 2013 → **15.7** % in 2019

Undergraduate : 5.6% in 2013 → **6.9** % in 2019



1. Attract excellent international students

9



1. Attract excellent international students

10

FGL: Future Career

After completing undergraduate courses, >70% of students go to graduate schools

- not only Tohoku University but also overseas (Cambridge, Oxford etc.)

Some work for Japanese companies

- Hino Motors in Japan
- Tokyo-Mitsubishi UFJ Bank in Indonesia

After receiving a master's degree, some continue to

- Doctoral courses

Others work for companies in Japan

- TOYOTA
- HITACHI
- DENSO, etc.



Future Global Leadership

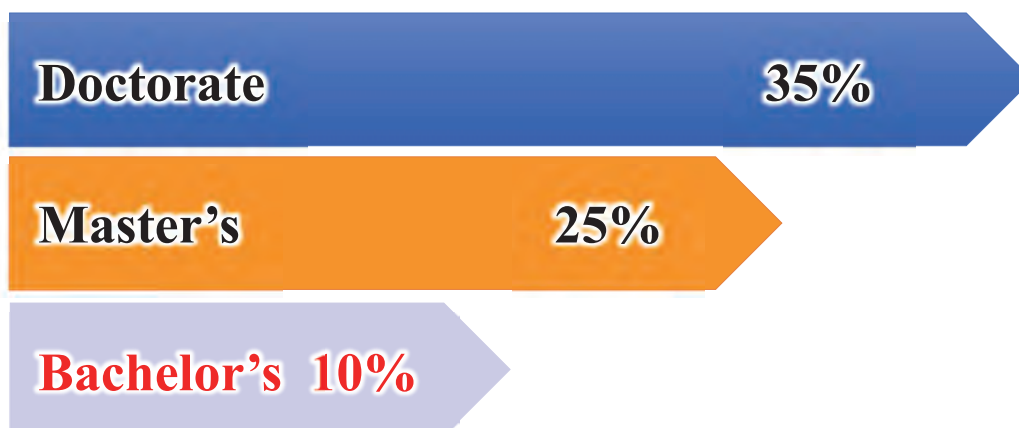


1. Attract excellent international students

11

Next steps

Our goal for the international student proportion by 2030



1. Attract excellent international students

12

Next steps

How can we achieve our goal?
To increase excellent international students at the bachelor's level, we will:

- Enrich undergraduate courses, which attract students from around the world
 - Develop more undergraduate international programs
 - Create linguistically hybrid programs
- Internationalize the core education system
 - Reform the admission and recruiting systems
 - Improve teaching quality for students with different cultural and linguistic backgrounds



Foster global talents



What we have achieved

- ✓ Outbound student mobility steadily **increased**.
- ✓ Students' **study-abroad experiences diversified**.
- ✓ **English ability** of undergraduate students **improved** in the past five years.
- ✓ Tohoku University Global Leader Program (TGL) launched in 2012 **led us to internationalize curriculum**.
- ✓ “Tohoku University Vision 2030” situated the TGL program at **the core of fostering global talents** in undergraduate education.
- ✓ TGL contributed to creating a clear image of “**international campus and education**” for high school students.
- ✓ Through TGL, **our network of industries and local communities expanded**.



2. Foster global talents

15

Tohoku University's Outbound Programs



Program	Regions and Universities	Duration
Short Study Abroad Programs (Study Abroad Program/Faculty Led)	USA, Canada, UK, Germany, Spain, Malaysia, Thai, Vietnam, Indonesia, Australia, New Zealand, etc.	2 to 5 weeks (summer, spring)
Exchange programs based on academic exchange agreements	229 universities in 35 countries and states	1 semester to 1 year
COLABS (Cooperative Laboratory Study Program)	Universities with whom we have an exchange agreement	10 days to 1 year
Double Degree (Joint Education) Programs	25 programs	1.5 years to 2 years
Other programs organized by partner universities	Universities with whom we have an exchange agreement	2 to 8 weeks

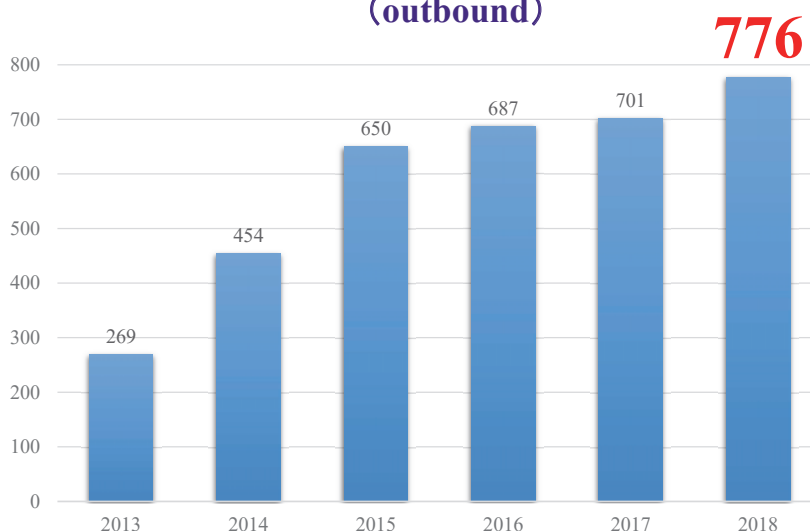


2. Foster global talents

16

The number of students who experienced studying abroad

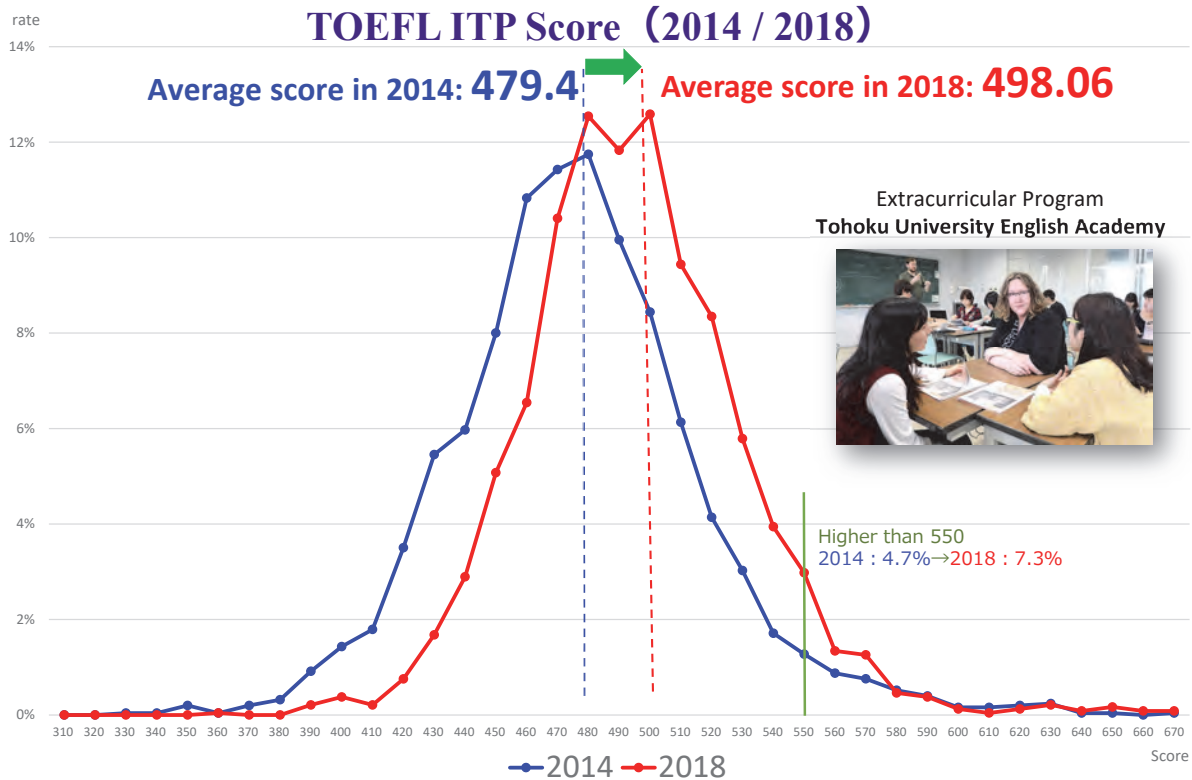
Student exchange with partner universities
(outbound)





2. Foster global talents

17



2. Foster global talents

18



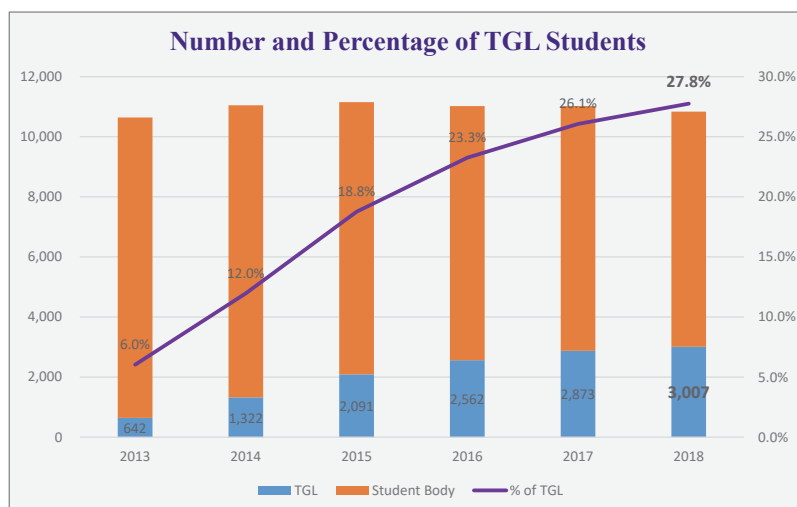
Academic Foundation



2. Foster global talents

19

Number of TGL students



2. Foster global talents

20

Next steps

- Reform language education (on-going)
- Secure budget to support students' study abroad experiences
- Integrate TGL Program further into the TU core curriculum.
E.g. Make students' achievement in TGL visible in their transcript
- Assure the quality of TGL by verifying its effects
- Build both "vertical" and "horizontal" networks among TGL as well as former TGL members.
- Develop better connections between TGL and student careers



Internationalize the curriculum and TU campus



What we have achieved

- ✓ Established a group of “Intercultural Education” subjects in general education to make it easy for students to choose and register intercultural education subjects. (2018)
 - ✓ Defined Tohoku University’s version of Intercultural Collaborative Learning (ICL).
 - ✓ Developed FD for teaching staff through making guidelines for designing ICL classes to improve teaching quality in intercultural education.
 - ✓ Increased the number of ICL classes as well as students who registered for ICL classes.
- TU became one of the leading national universities that offers the subjects that enhance students’ intercultural competencies.



3. Internationalize the curriculum and TU campus

23

Annual number of
participating students:
1,083

Number of classes in the intercultural
education subjects:

85 classes (2019 academic year)

Number of ICL classes

2014	2015	2016	2017	2018	2019
18	22	34	54	64	70



3. Internationalize the curriculum and TU campus

24

- International collaborative learning through living at the
**“University House” co-educational international
dormitories**
- **University House Aobayama**
(since October 2018, total capacity of 752)
- **Among the largest dormitories in Japan,
housing 1,720 residents**
= 921 Japanese residents + 799 overseas residents

Educating a
Global Mindset

Cultivation of
Social Skills





Next steps

- Implement intercultural education more into the ongoing curriculum reform in general education to make it more accessible to ALL students.
- Encourage students to take intercultural education subjects.
- Put theory into practice and improve teaching of intercultural education subjects.
- Facilitate linkage with industry and community to integrate intercultural education for the betterment of the society.
- Establish a hub for Intercultural Collaborative Learning (ICL) to enhance research and practice of ICL.



Next steps

Inbound

- Future Global Leadership Program (FGL)

Outbound

- Tohoku Global Leader Program (TGL)



Global Campus

- Enhancement of International Education and Intercultural Collaborative Learning



Tohoku University International Advisory Board

Research, Doctoral Education, Young Researchers

Tadahiro Hayasaka
Executive Vice President
for Research
Tohoku University

2

Vision 2 Research

Creating Knowledge via Excellence in Research
- Promoting innovations and pioneering studies





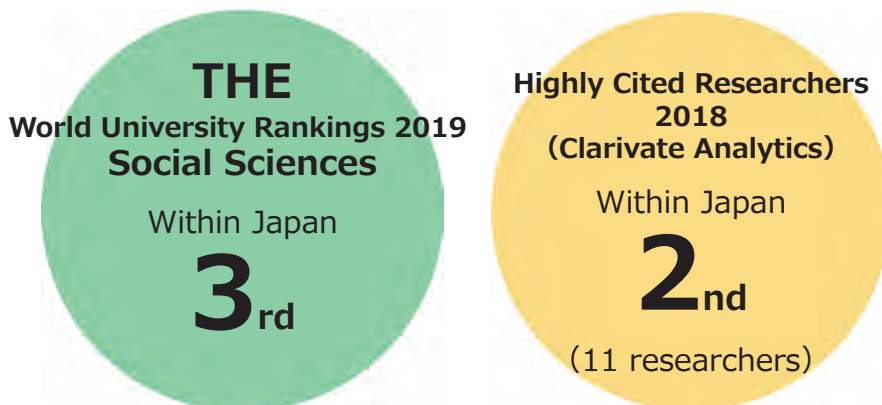
Tohoku University Vision 2030 - Collaborate. Innovate. Activate

3



Outstanding Achievements in Research

4



QS World University Rankings by Subject (published 2019)

Engineering - Mechanical	#38	Physics & Astronomy	#41
Materials Science	#43	Natural Sciences	#46
Engineering & Technology	#68	Engineering - Chemical	#51-100
Anatomy & Physiology	#51-100	Chemistry	#51-100



Highly Cited Researchers 2018 (Clarivate Analytics)

5

In terms of the number of researchers who are influential in the academic world (with regard to citations), Tohoku University is

Ranked Second in Japan (11 Researchers)

(out of a total of 90 in Japan)

Number of Highly Cited Researchers per University		
1 st	Tokyo	20
2nd	Tohoku	11
3 rd	Kyoto	9
4 th	Osaka	7
5 th	Nagoya	5



	← Wilhelm Bauer		Multidisciplinary
	Mingwei Chen →		Materials Science
	← Atsushi Hanada		Agri. & Animal Science
	Itaru Honma →		Cross-Field
	← Hideo Ohno		Cross-Field
	Eiji Saitoh →		Physics
	← Shusei Sato		Agri. & Animal Science
	Saburo Takahashi →		Multidisciplinary
	← Kazuo Takimiya		Multidisciplinary
	Shinjiro Yamaguchi →		Agri. & Animal Science
	← Masayuki Yamamoto		Multidisciplinary

Members of the World Premier International Research Center



Strategic Formation of Research Centers & System Reform

6

3-Layered “Research Innovation System” with Organization for Advanced Studies

Goal

● Formation of Research Centers

● Cross-Sectoral Interdisciplinary Research





Promoting World-Class Research

7

Materials Science

TU produces world-leading research results in the field of Materials Science mainly at the AIMR, Institute for Materials Research, and Institute of Multidisciplinary Research for Advanced Materials

- The world's largest research group (about 400 researchers)



Prof. Motoko Kotani, AIMR



Spintronics

Leading the world in Spintronics research and promoting industry-academic collaboration in Japan and overseas to make advances in integrated electronics

- The world leader in citations and patents



Prof. Yoshiro Hirayama,
Graduate School of Science



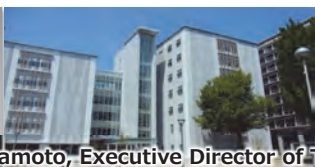
Next-Generation Medicine

The world's first large three-generation cohort survey by the Tohoku Medical Megabank Organization, contributing to future medical care (a biobank with data on 150,000 individuals)

- R&D of personalized healthcare and prevention



Prof. Masayuki Yamamoto, Executive Director of TOMMO



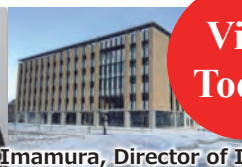
Disaster Science

Pioneering Disaster Science as a new interdisciplinary area that combines humanities and sciences to disseminate the experience of the Great East Japan Earthquake to the world

- Establishment of the Global Centre for Disaster Statistics with the UNDP



Professor Fumihiko Imamura, Director of IRIDeS



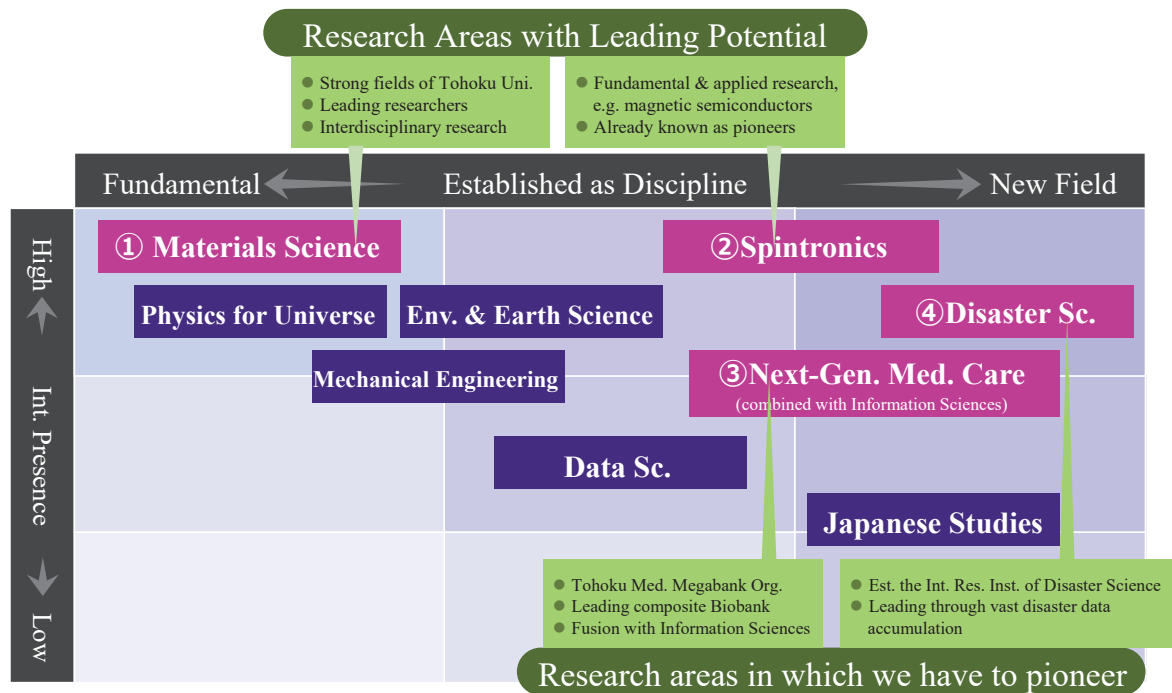
Visit
Today



Priority Objective: World Leading Research Centers

8

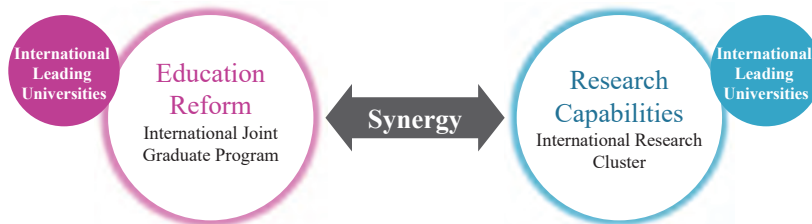
- Prioritized promotion of World Leading Research Centers in 4 research areas
- International Research Cluster in 9 fields with 5 other strong areas



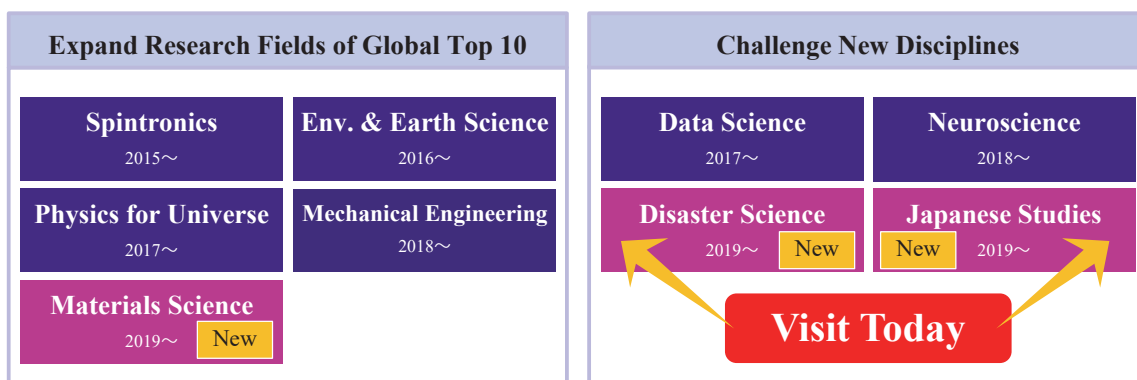


Graduate Education: International Joint Graduate Programs

9



- Consolidating experience & knowledge across departments
- Joint education in strong international collaboration with leading universities
- Providing scholarships and global travel expenses for participants



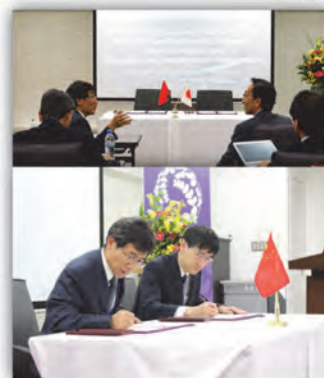
Matching Fund Schemes with World-Leading Universities

10



Tsinghua University

Research Areas	3 areas (Materials Science, Spintronics, Disaster Science)
Number of applications	6 applications
Projects supported	6 projects (4 in Materials Science, 1 in Spintronics, 1 in Disaster Science)
Funding Period (for 2 academic years)	Tohoku: April 1, 2019 to March 31, 2021 Tsinghua: April 1, 2019 to December 31, 2020
Funding amount	JPY3.3M max per project for 2 years from each university



University College London (UCL)

Research Areas	All areas (6 prioritized areas: Disaster Science, Neuroscience, Materials Science, Data Science, Higher Education, Equality & Diversity)
Number of applications	13 applications
Projects supported	7 projects (1 in Disaster Science, 2 in Neuroscience, 2 in Materials Science, 1 in Data Science, 1 in Equality & Diversity)
Funding Period (for 1 academic year)	Tohoku: June 1, 2019 to March 31, 2020 UCL: June 1, 2019 to May 31, 2020
Funding amount	JPY700,000 max per project for 1 year from each university





International Research Expansion: International Joint Laboratory Centers

11

Japan-France Joint Laboratory (ELyTMax)



Established in January 2016 by Tohoku University,
Université de Lyon and CNRS

—Achievements—

- Peer-reviewed International Conference Proceedings: 7 papers
- Presentations at over 40 international conferences
- Fund acquisition:
Grants-in-Aid for Scientific Research (Scientific Research A, B), Nuclear Decommissioning Joint Program, Private Companies (DENSO etc.)

**Tohoku University –
National Chiao Tung University
Joint Laboratory**



**Tohoku University – University of
Science and Technology Beijing
Joint Research Laboratory**



University of Washington – Tohoku University Academic Open Space (UW-TU:AOS)

12



Sendai



An administrative framework to
catalyze collaborative research,
education and information exchange
between UW and TU.



Seattle



Started in April, 2017

Current Achievements: 9 research workshops, 10 educational collaborations,
16 joint papers*

(*including "those in preparation")

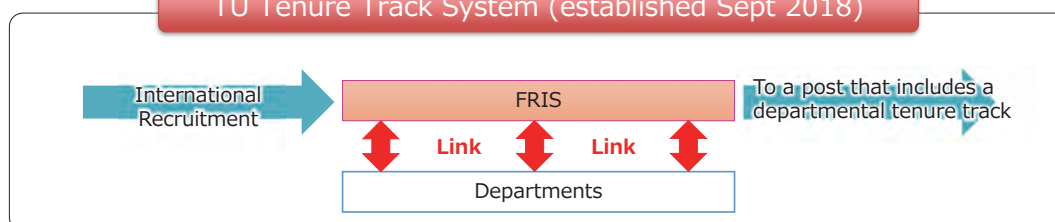


The Frontier Research Institute for Interdisciplinary Sciences

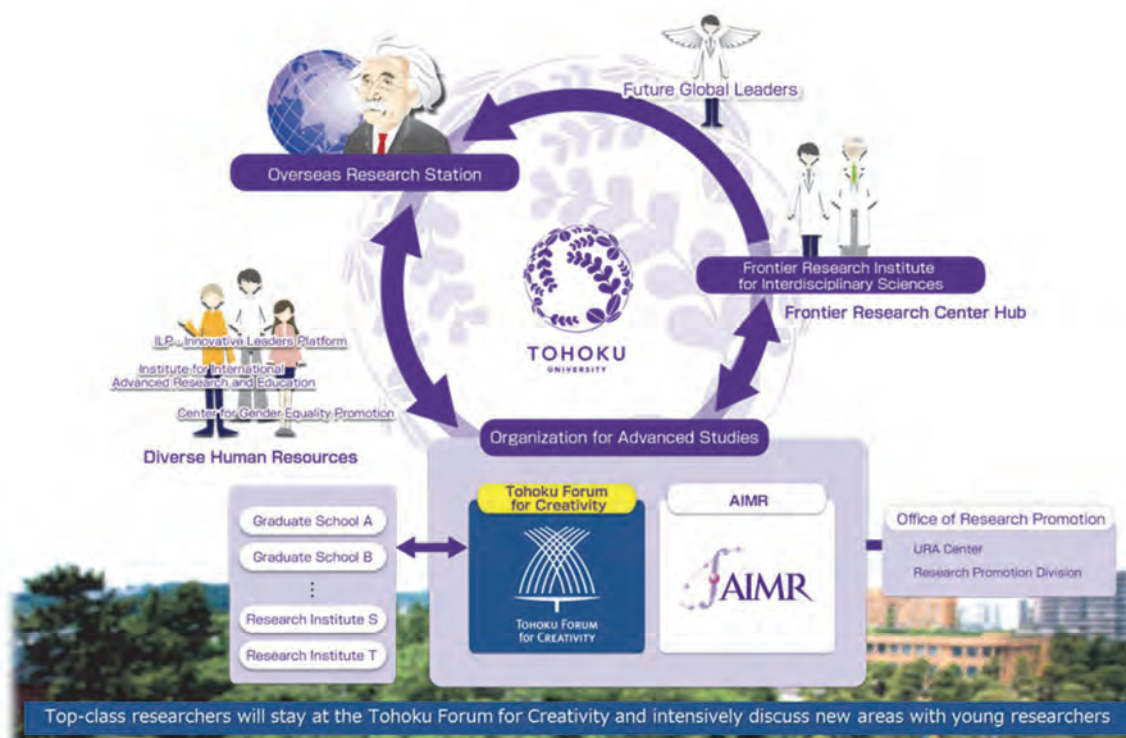
- A Support System for Outstanding International Early-career Researchers
 - FWCI: **FRIS 1.63**, Tohoku University 1.18, University of Tokyo 1.35
 - Top 10% Papers: **FRIS 19.8%**, Tohoku University 13.2%, University of Tokyo 16.7%
- World-class Recruitment Ratio: **50% from outside, 29% overseas Japanese**

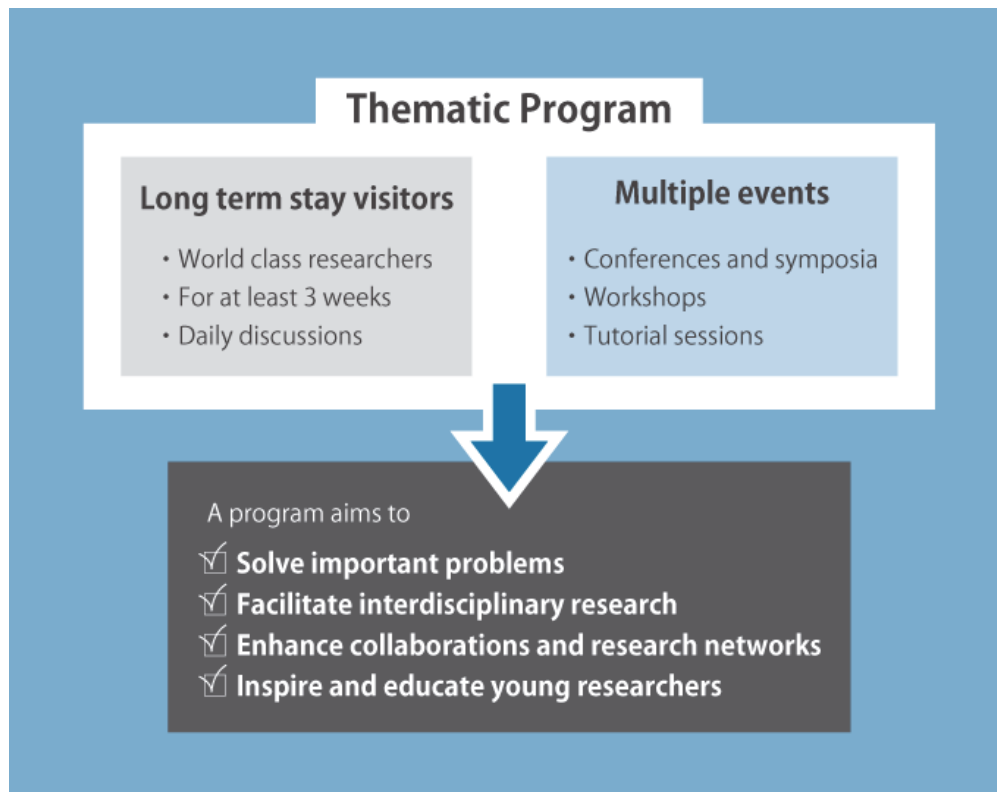
	2014	2015	2016	2017	2018	2019
Recruitment Ratio	14	22	24	27	14	10

TU Tenure Track System (established Sept 2018)



- A final evaluation is made in the fifth year after hiring, and employment is possible for up to two further years after the employment period expires
- At the time of hiring, and in the third and fifth years of employment, the employee's mentor will make a recommendation to continue the researcher's employment to the department director





The number of young researchers dispatched for 6 months or more: A total of 100 people

A total of 74 researchers
as of the end of fiscal year 2018



Promotion of cross appointments with Japanese universities and private enterprises

17

July 2019

Comprehensive partnership agreement with Ochanomizu University



For the purpose of promoting education in AI, mathematics, and data literacy, and of the development of global female leaders, as well as the promotion of diversity, we are strengthening our research capabilities using cross appointments, forming research cluster, and implementing our research results within society

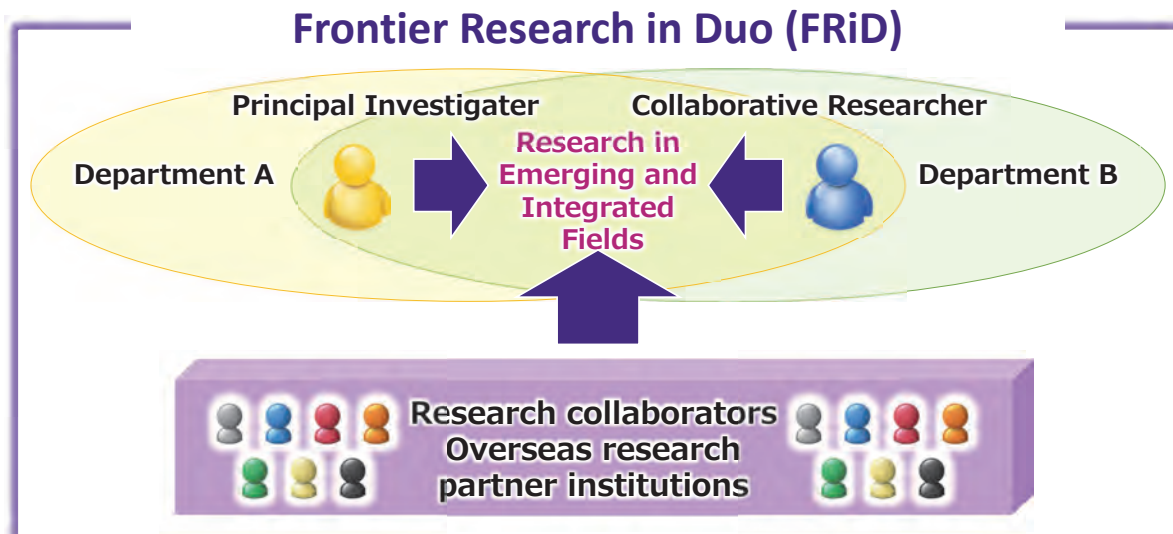


Frontier Research in Duo (FRiD)

18

Promoting Research in Emerging and Integrated Fields and Leading the World in Developing Frontier Research

Frontier Research in Duo (FRiD)



Realization of “Going beyond existing concepts to create new values” and “Challenging ourselves to create new research areas”

東北大学グローバルイニシアティブ構想諮問会議
(東北大学国際アドバイザリーボード)

2019年度開催報告書

Report of the Tohoku University International Advisory Board 2019

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2019*

