

Top Global University Project (Type A) Hokkaido University

1. Outline

【 Name of the project 】

Hokkaido Universal Campus Initiative
- Collaborate with the World -

【 Future vision of the University planned in TGU project 】

Improve competitiveness to increase research and education resources, and gain a reputation as a university that contributes to the resolution of global issues.

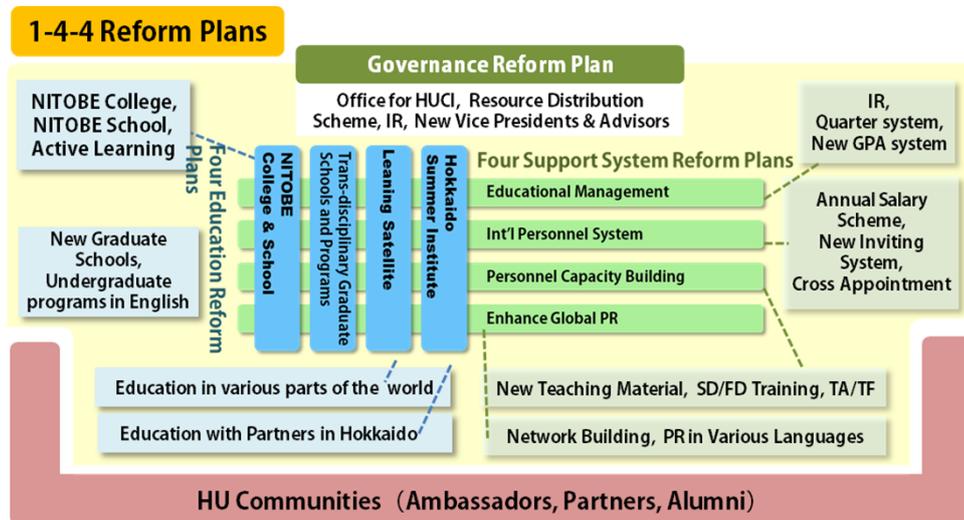
【 Summary of Project 】

Approaching its 150th Anniversary in 2026, Hokkaido University (HU) has developed a strategy of university reform entitled "Future Strategy for the 150th Anniversary of Hokkaido University" by demonstrating a vision, "HU for the resolution of global issues." The HUCI is a project implemented under this strategy.

Based on our strengths and characteristics, the HUCI will establish "Universal Campus," a framework to offer education in various parts of the world in collaboration with universities and research institutions that have achieved remarkable outcomes for the resolution of global issues as well as people who have demonstrated outstanding leadership in such activities.

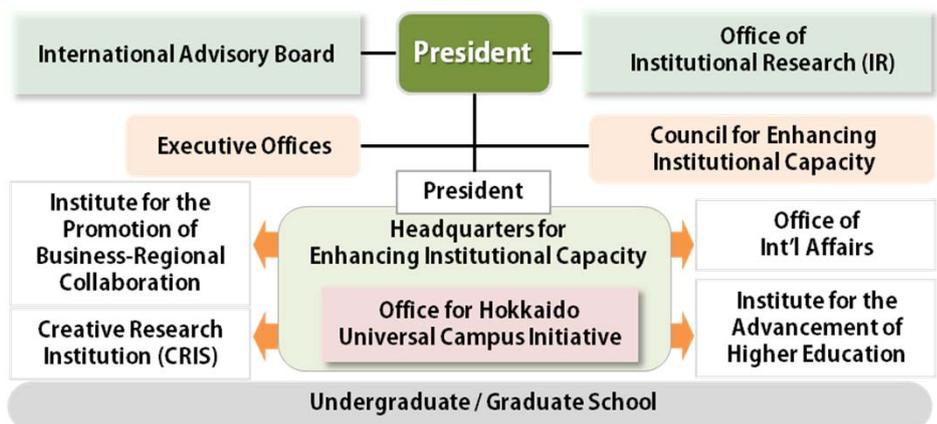
The "1-4-4 Reform Plans" are the backbone of the HUCI.

- One plan to reinforce governance: Establishment of Office of Institutional Research to support quick decision-making by the President as well as a framework to ensure various decisions;
- Four educational reform plans: Development and implementation of degree programs and short-term programs to provide education in collaboration with universities across the world; and
- Four system reform plans: Functional enhancement to effectively achieve educational reform while introducing high-quality education research resources from across the world.



【 Implementation system 】

The HUCI is directed by the Headquarters for Enhancing Institutional Capacity, an organization established for the comprehensive reformation of the University in education and research through the leadership of the President. The Office for HUCI (the Director is the Executive & Vice president) was set up in the Headquarters. The Office will plan, design, and verify activities relating to the 1-4-4 Reform Plans in collaboration with four institutes.



HOKKAIDO
UNIVERSITY

【Summary of the 10-year plan】

◆ From 2014 to 2015 <Startup stage>

With the intention of enhancing the President's governance, establish new organizations such as the Office for HUCI to supervise this project and the International Advisory Board to advise the President. At the same time, initiate various measures including the NITOB Education System and Resource Redistribution Scheme to orchestrate the University reform.

◆ From 2016 to 2017 <Output initiation stage>

Along with commencement of the Learning Satellite Program (LS) and the Hokkaido Summer Institute (HSI), embark on collaborative education for students in our University and overseas with top researchers across the world and partner universities. Establish multiple graduate schools in cooperation with world-leading universities. Taking the opportunity of ASEAN Office establishment, increase student exchanges by further enhancing cooperation with alumni, HU Ambassadors, and HU Partners in the ASEAN region. In parallel with these new activities, we will have our first graduates from the NITOB Education System.

◆ From 2018 to 2021 <Output increase stage>

Expand measures to achieve the goal by reviewing the approaches already implemented and introducing improvement ideas. In particular, improve frequency and quality of exchanges between HU and universities in North American region by establishing a North American Office, while taking advantage of networks between alumni, HU Ambassadors, and HU Partners in the region.

◆ From 2022 to 2023 <Transient stage to next phase>

Based on review of the activities during the past decade, plan how to implement this project in a continuous and developmental manner even after termination of the financial support period of the Top Global University Project, aiming to achieve the goal established in the Future Strategy for the 150th Anniversary by 2026.

【Featured Initiatives (Internationalization, University reform, Education reform)】

◆ Governance Reform

In advancing this project, it is characteristic that the "Resource Redistribution Scheme" is introduced first. This scheme aims to distribute financial resources to HU faculty based upon the results of evaluation measured by a series of indicators established by the President in exerting his leadership to ascertain how faculty are addressing and contributing to this project. Information required for the faculty in the project is collected and analyzed by the Office of Institutional Research to be newly established.

◆ Educational Reform / Internationalization

Another characteristic of the strategy lies in a stance to drastically change educational methods throughout the University by introducing multiple education programs in which all undergraduate/graduate schools are involved. There are four education programs. The "Nitobe College" and "Nitobe School" programs offer sub-major subjects to selected excellent students. The LS and HSI programs offer opportunities to a larger number of Japanese and foreign students to learn together in specialized fields from world-leading researchers. When a student or teacher hopes to participate in these four programs, each department and major, or each school, is required to implement various reforms to ensure quality of education; for instance, introducing quarter and grading systems compatible with universities around the world; increasing the subjects provided in English and active learning classes; improving the quality of the syllabus; introducing teaching evaluation systems and student portfolios; and collaborative education with researchers and alumni who are active at the forefront of the world.

【Promotional Measures for Coordination with Foreign Universities】

Find new overseas partner institutions and create new collaboration opportunities with existing partners by dramatically increasing interaction between world-leading researchers and our faculties.

◆ Learning Satellites (LS) Program, Hokkaido Summer Institute (HSI) Program

LS and HSI, which offer educational courses abroad and in Hokkaido, are a good start for collaboration. The researchers can collaborate with certain units of one course or multiple credits, joining independently as lecturers or along with their students.

◆ Joint Degree Program (JD), Cotutelle (Joint supervision for doctoral dissertations)

Move from collaborations that last only a few days or several weeks a year in LS and/or HSI to further committed collaborations: both organizations agree to offer JD or Cotutelle in our new graduate school curriculum.

◆ Joint Research

Joint supervision for graduate students will lead to joint authorship and research. Aiming to strengthen the relationship, a new staff invitation system and a cross appointment system are now available to hire counterparts for research. This leads to exploring opportunities for new collaborative activities.

2. FY2014 Progress

■ Common indicators and targets

Internationalization

◆ Ensuring Diversity

- Based on the renewed system, 40 distinguished researchers and teaching faculty from around the world were invited to study at HU for several months. Also, as a result of introducing various measures, the number of international faculty reached 177 persons as of May 2015, increasing by 13% compared to the previous year.
- In order to ensure further diversity, the incentive for the faculty to employ foreign and female teaching faculty members will be increased from the fiscal year 2015.
- As a result of making it possible to accept exchange students in a variety of forms, the number of exchange students as of November 2014 reached 1,768, which was 9.8% of the total number of students, an increase of 167 students from the previous year.

◆ Mobility, Overseas Study Support System, Openness of the University

- A new GPA system that is in line with academic results tables and standards of overseas universities was established, which will be applied to students enrolling as undergraduates from the fiscal year 2015.
- Decided to adopt a new entrance examination system from the fiscal year 2018, where the International Baccalaureate and American uniform exams (SAT, ACT) will be utilized for academic assessment for admission to departments.
- Created a faculty manual to certify credits that were acquired at partner universities overseas.

University reform

◆ Personnel System

- From January 2015, an annual salary system was adopted for the regular faculty. In relation to the goal, 215 persons applied for the system during a three month period, and exceeded the target of 80 persons.
- Based on the "Cross Appointment System," four professors were employed as regular faculty in the GI-CoRE from Stanford University, the University of Melbourne, and the National University of Ireland, Dublin.



Prof. Quynh-Thu Le (left) and President Yamaguchi (right) at the Appointment Ceremony

◆ Governance

- An executive & Vice President in charge of international affairs was appointed as a director of the Office for HUCI.
- The President appointed three faculty members in the fiscal year 2014 and one member in the fiscal year 2015 as Vice Presidents to support his decision making and execute decisions made. They manage gender equality, Nitobe College, Nitobe School, the overseas offices, and the International Student Center.
- Commissioned three persons possessing worldwide networks as "Executive Advisors for International Coordination."
- Started interviews in English in the recruitment examination for administrative staff, and developed training programs to increase personal capability of existing staff. As a result, the number of staff with TOEIC scores of 700 points or more had increased to 8.3% as of May 2015 from 5.9% in the previous year.

Education reform

◆ Implementation of a Teaching Fellow System

- While maintaining the traditional Teaching Assistant (TA) system, in order to further improve the teaching abilities of doctoral students and to enhance undergraduate education, a "Teaching Fellow (TF) system" was introduced from the fiscal year 2015.

◆ Advancing the Implementation of the Active Learning Method

- Conducted teaching faculty training directed towards the utilization method of active learning, with a total of 72 participants. In addition, 24 persons participated in a model class that adopted flipped classrooms using digital teaching materials and active learning methods.

■ University's own indicators and targets

◆ NITOBE education system

- 222 applicants for the second phase of Nitobe College were admitted from a total of 413 applicants. The number of students of the College who studied abroad significantly increased from 23 in 2013 to reach 110 in 2014 because of the increase in short-term study abroad programs. The College received the highest S assessment in its midterm review (only 5 universities received an S assessment out of 42).
- With a view to opening in May 2015, "The Nitobe School International Symposium" was held, attracting 98 participants, to foster understanding about this School. A total of 64 inaugural class students will enter the School (118 applicants).
- Students will graduate for the first time from both Nitobe College and Nitobe School in March 2017 as planned.



Opening remarks by
President Yamaguchi

◆ Collaborative education

- With a view to developing collaborative education with world-leading researchers, financial support was provided to 64 plans proposed by faculties to begin negotiation with overseas universities. As a result, more than 10 Learning Satellite courses, which award credits, will be held overseas in 2015. More than 60 preparatory activities will be conducted in Hokkaido this year with an aim to inaugurate the Hokkaido Summer Institute in 2016. Some of the initiatives will be developed into joint-degree programs and cotutelle (joint supervision for doctoral dissertations).

◆ International joint papers

- Both the number of international joint papers as well as the total number of papers increased from the fiscal year 2014. The ratio of international joint papers amongst the total papers increased by 0.3% to reach 25.3%.

◆ Hokkaido University ambassadors and partners

- The President of HU organized alumni social gatherings in March 2015 to meet candidates for HU's Ambassadors and Partners to develop a stronger human network and support the establishment of alumni associations. The President called for cooperation of HUCI with 112 participants in Jakarta (Indonesia) and 79 participants in Bangkok (Thailand). On this occasion, "The HU Indonesia Alumni Association" was established. Furthermore, it was decided to establish "The HU Thailand Alumni Association."

◆ Redistribution of internal resources

- In the fiscal year 2015, approximately 420 million yen - more than double the amount of the previous year - is scheduled to be distributed based on evaluation of the measures taken by the faculty, taking into account the contribution to this HUCI project.

■ Initiatives for the enhancement of international reputation ■ Free description

- Launched in April 2014, GI-CoRE invited world-leading research units, established two global stations, and initiated joint research. One is "The Global Station for Quantum Medical and Engineering" established in the radiotherapy field with Stanford University (United States); the other is "The Global Station for Zoonosis Control" established with Melbourne University (Australia), University College, Dublin (Ireland), and King Abdullah University of Science & Technology (Saudi Arabia). In April 2015, it was decided to establish a third station, "The Global Station for Food, Land and Water Resources."
- The joint study with the unit of Stanford University was reported on the website of the academic journal "Medical Physics" and a paper was published in the journal. Moreover, a joint paper with University College Dublin was published in the academic journal "Nature Communications." Furthermore, the number of interviews by international media is on the rise thanks to active research activities.
- To take advantage of the results of GI-CoRE, a preparatory committee was launched to establish the "Graduate School of Quantum Medical and Engineering," the "Graduate School of International Infectious Diseases," and the "Graduate School of Food Resources" (tentative names) in April 2017.

【Cooperation record with overseas universities】

- HU submitted the educational plan of the "East Russia-Japan Expert Education Consortium (RJE3)" with five Russian universities (Far Eastern Federal University, North-Eastern Federal University, Sakhalin State University, Pacific National University, and Irkutsk State University). As a result, the plan successfully obtained Japanese government financial aid for five years and started mutually dispatching students and professors to these universities. At the same time, the Arctic Research Center was established in April 2015 to strengthen cooperation with universities and research institutes in the region.

3. FY 2015 Progress Report

■ Common indicators and targets

Internationalization

◆ Towards a Diversified Institution

•The number of international students exceeded the immediate target figure of 10% of all students and reached 1,875 (10.4%; as of November 1, 2015) because of continuous efforts to increase the number of overseas partner universities and short-term inbound programs.

•Concerning the establishment of the *Diversity Promotion Office*, daily office e-mails sent from the administrative bureau have been translated into English since January to create a better working environment for international staff and students.

◆ Mobility, Overseas Study Support System, Openness of the University

•In accordance with the *Manual for Credit Transfer with Overseas Universities* formulated in fiscal year (hereinafter, FY) 2014, all undergraduate and graduate schools have introduced statutory rules for credit transfers and increased courses in which overseas-university credits and academic achievements can be recognized. As a result, 273 students earned a total of 546 credits in FY2015 for overseas studies (50 students and 100 credits more than the previous year).

•Guidelines for a cotutelle program were produced to promote a jointly supervised doctoral degree program in co-operation with overseas universities, and a related briefing session was held on campus in March. In FY2016, the Graduate School of Agriculture plans to enter an agreement on a cotutelle program with the University of Sydney, and the Graduate School of Environmental Science plans to enter a similar agreement with the University of Tasmania.

•Support was provided for the establishment of overseas alumni associations in order to promote greater networking among previous students. Alumni associations were established in Zambia and Thailand, following similar establishments in Brazil, China, Indonesia, South Korea, and Taiwan.

University Reform

◆ Personnel System

•The *Cross-appointment System* has been used to appoint faculty members from Stanford University, Melbourne University, and University College Dublin since FY2014. The system added members from the King Abdullah University of Science and Technology, and brought the total number of recruited members to 12.

•To increase the number of international faculties, a *10-year Tenure Track System* was established, and five assistant professors were employed through international open recruitment.

•The newly established *Distinguished Professor System* honored nine faculty members who are making world-class achievements and are expected to further advance in research and raise the profile of Hokkaido University (hereinafter, HU). They were granted the title of “Distinguished Professor” and a special allowance. One of them is Dr. Jian Ping Gong who is engaged in innovative research on soft and wet materials created with hydrogels.

◆ Governance

•For ensuring the implementation of President Yamaguchi’s vision, three presidential advisors were added, thereby increasing the total to 22, which includes six women and one non-Japanese national. Each of the four Executive Offices employed an international faculty member to enhance its diversity.

•The *Office of Institutional Research* was established in July to support the HU president in managing HU. Five special staff members were assigned to the office, and the *HU Fact Book* was compiled with various data.

•The *Higher Education Training Center* was established in April to further promote the development of faculty and administrative members, as well as graduate students. The Center organized nine workshops for deans and project management training for middle-level faculty and administrative members to improve the university’s management capacity.

•A TOEIC-IP test was conducted to gauge the English proficiency levels of the full-time administrative staff. It was taken by 508 staff members. The results were analyzed and used for rebuilding the human management and development system.

Education Reform

• The *Modern Japanese Studies Program* was established, and 16 students from 11 countries were admitted into it. These students share some classes with the Japanese students from the Nitobe College honor program and learn together in English.

• Detailed information on the admissions policy was released for a new international entrance exam system being launched in FY2018. The International Baccalaureate and other external tests such as SAT will be used for undergraduate admission. The new system is intended to appeal to internationally minded individuals.

• The results of class questionnaires completed by undergraduate students have been fed back to faculty members in charge of classes and to the staff responsible for course subjects. Information on issues raised by students and the improvements made by faculty members is posted on the website in the interests of class improvement and progressive information disclosure.



HU president & Thai alumni

■ University's own indicators and targets

◆ NITOBÉ Education System

- The Nitobe College honor program requires at least one semester or two short terms of overseas study. In FY2015, 22 students engaged in a study abroad experience that lasted over three months, while 132 students engaged in a short-term overseas experience. The number of students studying abroad increased, as students in the inaugural class of a hundred students graduated at the end of FY2016.
- The Nitobe School honor program for graduate students was founded in May with 64 students, including ten international students. Ten courses, including the "Problem-Solving Course," have been started. The first year proved to be successful, increasing the average TOEIC score of students by 55 points and improving the target abilities as seen in the results of the SEQ competency assessment test.

◆ International Degree Programs

- Proposals to establish the Graduate School of Biomedical Science and Engineering, the Graduate School of Infectious Diseases, and the Graduate School of Global Food Resources (provisional names) were submitted to MEXT in March 2016. These institutions will be established through international joint efforts made in the GI-CoRE. The establishment of new graduate schools is being planned along with the re-organization of existing graduate schools and educational reform.

◆ Learning Satellite and Hokkaido Summer Institute (see the last section of this page)

◆ International Joint Research Papers

- The percentage of international joint research papers by HU members has reached 30.1%. The target of 29.0% for FY2016 has already been achieved several months ahead of schedule.

◆ Hokkaido University Ambassadors and Partners

- The *Hokkaido University Ambassador and Partner System* was designed to enhance HU's international presence based on personal connections. The delegation of ambassadors and partners will begin its activities in the beginning of FY2016, with South Korea at the top of the list. It will support graduates who are active in various countries.

◆ Redistribution of Internal Resources

- Activities in FY2014 were evaluated, and the departments actively working to achieve the university's objectives were prioritized for budget allocation totaling 420 million yen in FY2015. Some evaluation indexes were reviewed for FY2016 allocation to support the achievement of objectives in the Top Global University Project.

■ Initiatives for the enhancement of international reputation

- *The Global Station for Food, Land, and Water Resources* was established as the third project organization of the GI-CoRE. It invited three world-class researchers, including an ex-UNESCO Assistant Director-General, as its advisors.
- It was decided that three more Global Stations (hereinafter, GS) would be established in April 2016. The *GS for Soft Matter* hosts research units from the University of North Carolina, the *GS for Big Data and Cyber Security* hosts those from the University of Massachusetts, and the *GS for Arctic Research* hosts those from universities in several northern countries. As a result, six international education and research projects will be conducted simultaneously under the management of the president in FY2016. New graduate schools and the re-organization of existing graduate schools are planned as outcomes of each GS activities.

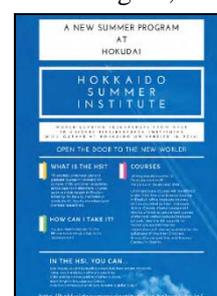
■ Free description

- *The Arctic Research Center* was established in April 2015 to support the expansion of HU's strengths. In its role as a Japanese hub for interdisciplinary and international research/education toward the resolution of global issues, the Center works to strengthen collaborative relationships with Russia's North-Eastern Federal University and the USA's University of Alaska, as well as universities and research institutes in Norway, Finland, and Germany. It successfully attracted an office for a joint international research project on Ecosystem Studies of Sub-Arctic Seas (ESSAS) in March 2016.

【Results of the promotion of collaboration with foreign universities】

- The *Learning Satellite* project was launched to promote collaborative work between faculty members from HU and overseas universities in teaching specialized subjects overseas. A total of 22 subjects, which has already exceeded the target of FY2016, were taught in collaboration with several institutions, including Karolinska Institutet in Sweden, the Swiss Federal Institute of Technology, and the National University of Singapore, in ten countries and one region, and 88 HU students were sent abroad.

- HU started the *Hokkaido Summer Institute* (hereinafter, HSI), a collaborative educational program of HU faculty members and overseas researchers, on a trial basis, and took measures to address related issues before the inauguration in 2016. A total of 212 students from overseas were hosted for 24 educational activities in collaboration with overseas universities, including the University of British Columbia in Canada, the University of Pisa in Italy, and National Taiwan University. A total of 71 courses, exceeding the FY2016's target of 50 courses, have been prepared for summer 2016 and a call for students worldwide has been posted on the website (<http://hokkaidosummerinstitute.oia.hokudai.ac.jp/>).



A flyer for HSI 2016