

SATOMI  
VISION



TOHOKU  
UNIVERSITY



## On revising the Satomi Vision

The Satomi Vision summarizes the policies and processes central to realizing the ideal Tohoku University (Seven-Vision Plan). I hope to accomplish this during my tenure (2013–2017) by surveying trends inside and outside the country, as well as keeping the strengths, characteristics, and social roles of the University in mind.

In developing this Vision, I saw Tohoku University as a community of wisdom open to the world where people gather together, learn, and create. As such, my foremost concern was to foster an environment where University members — students and faculty — can fulfill their own potential. By concentrating on the diverse strengths of the University, we will work towards 'Achieving World-Class Status and Leaping Ahead' and 'Leading the Post-earthquake Restoration and Regeneration'.

Today, two years after the Vision was publicized, many of its projects are currently underway. First, we have sent countless students out into the world as part of the Tohoku University Global Leader Program, bringing us one step closer to becoming a world-class university and promoting our students' awareness of their roles as leaders of the future generation. In April 2015, in collaboration with leading universities around the world, we established the International Joint Graduate Program in order to educate students with a global vision. From a research perspective, we established the Frontier Research Institute for Interdisciplinary Sciences in April 2013, and invited promising young researchers from around the world to participate. In October 2013, we opened our international visitor research institute where renowned researchers gather, the Tohoku Forum for Creativ-

ity, which sponsors opportunities for growth for our young researchers.

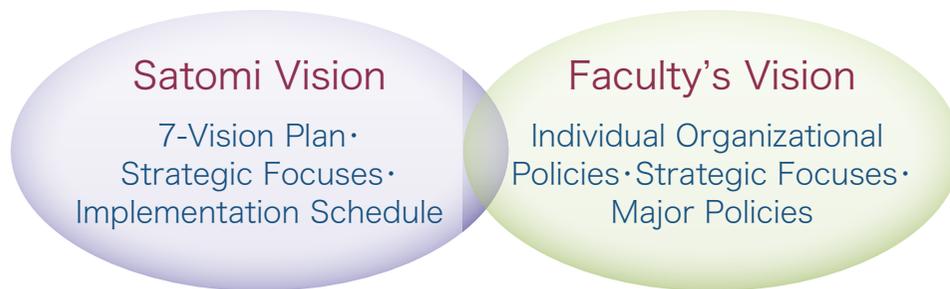
In March 2015, the results of our efforts to lead post-earthquake restoration and regeneration were presented to the world at The Third UN World Conference on Disaster Risk Reduction in Sendai. As the university at the heart of the 2011 Great East Japan Earthquake disaster area, we believe that we can lead reforms by restoring society in the Tohoku region. The Institute for Disaster Reconstruction and Regeneration Research was established soon after the earthquake, and its eight large-scale reconstruction projects are already yielding results. Furthermore, in February 2015 the venture capital Tohoku University Venture Partners, Co., Ltd. was founded as an industry–academia collaboration 100% underwritten by the university. This company is propelling university-led innovations forward.

2016 marks beginning of the 3rd Evaluation for Current Mid-Term Goals for the national university corporation. Proactive reforms at the university must continue in order to develop global human resources and strengthen the innovation function of the university. As I head into the latter half of my term, I renew my resolve to guide Tohoku University in 'Achieving World-Class Status and Leaping Ahead' and 'Leading the Post-earthquake Restoration and Regeneration'.

December 2015  
Susumu Satomi  
President, Tohoku University

## Tohoku University Global Vision

- Guideline for indicating our university future and aiming to proceed with these objectives as the entire university
- Compiled by our University-wide **Satomi Vision** and **Faculty's Vision**, express practical policies and actions during the five-year presidential term
- ◎ Relate to the yearly plan in the 2nd Evaluation for Current Mid-Term Goals, the MEXT Execution Plan for University Reform, the 3rd Evaluation for Current Mid-Term Goals
- ◎ Utilize the special expenditures which stimulate to support university administrative operations and the Presidential budget



## Satomi Vision

### Achieving World-Class Status and Leaping Ahead

Leap ahead on the world stage as a hub for international intellectual endeavors

### Leading the Post-earthquake Restoration and Regeneration

Leading the reconstruction of the Tohoku region and the revitalization of Japan, toward new social paradigm shifts.

### Combine the strengths of diverse individuals



## Satomi Vision

Tohoku University: a fellowship of knowledge, open to the world, where people can gather, learn, and create

Achieving World-Class Status and Leaping Ahead, Leading the Post-earthquake Restoration and Regeneration

### I Guidelines for formulating the Satomi Vision

#### 1. Position of the Satomi Vision

The Satomi Vision reaffirms the modern significance of the fundamental ideals (founding philosophy) and mission that Tohoku University has retained through its history up to the present time. It expresses the direction of our university (7-Vision Plan) for the next five years, and the policies and schedule that will get us there.

The Satomi Vision is not necessarily intended to present an exhaustive plan, but rather to narrow down our areas of emphasis. Specifically, Tohoku University will deepen the broad trust between it and Japan's citizens, while continually contributing to the sustained development of the world community by realizing the following components of the 7-Vision Plan: (1) Education, (2) Research, (3) Post-earthquake Restoration, (4) Industrial-Academic Cooperation, (5) Cooperation with the Community, (6) Campus Environment, and (7) Emphasis on University Administration.

The direction indicated by this vision will be reflected by the yearly plan in the 2nd Evaluation for Current Mid-Term Goals, and be carried out in conjunction with the MEXT Execution Plan for University Reform, in the policies of the 3rd Evaluation for Current Mid-Term Goals, and in our mid-term plans.

#### 2. The importance of universal guidelines for Tohoku University: the university's fundamental ethos and mission

**The role of the university in the era of globalization and innovation**

Our community is undergoing rapid transformations in the midst of globally

expanding competition, collaboration, and coordination. Universities are urgently required to both produce leaders who will clear a path for the globalization age, and to guide us in implementing a new society founded on innovation.

#### **Contributing to the continued development of society as a research-focused university**

In addition to implementing world-class research and education, since Tohoku University's founding it has applied the results of its research to solving problems facing society. It has contributed to the realization of a peaceful and just society by nurturing leaders, based on its tradition of Research First, its Open Doors policy, and its philosophy of Practice-Oriented Research and Education.

#### 3. Shared ethos and direction of the Satomi Vision

**"The university as a fellowship of knowledge, open to the world, where people gather, learn, and create"**

We will create a venue for meaningful activities by our students, instructors and staff, and alumni, who all share a common identity as members of Tohoku University, while fully utilizing their individual abilities rooted in their diverse values.

#### **Achieving World-Class Status and Leaping Ahead, Leading the Post-earthquake Restoration and Regeneration**

By combining the strengths of diverse individuals, we will: (1) leap ahead on the world stage as a hub for international intellectual endeavors, and (2) as one of the universities in the center of the Great East Japan Earthquake disaster area, work for the reconstruction of the Tohoku region and for the revitalization of Japan, while robustly leading new social paradigm shifts.

## II 7-Vision Plan (Direction for our university)

We have formulated 7-Vision Plan to provide benchmarks for the next five years in the execution of our mission. We will establish strategic priorities and develop specific activities based on this plan's visions.



VISION 1  
Create a venue where students will grow into individuals capable of flourishing in the international community.



VISION 2  
Create, in our capacity as a world-leading research center, an open environment in which excellent researchers will gather.



VISION 3  
Accumulate diverse knowledge as a comprehensive university, and develop activities that contribute to recovery from the Great East Japan Earthquake.



VISION 4  
Deepen cooperation with industry to produce innovations.



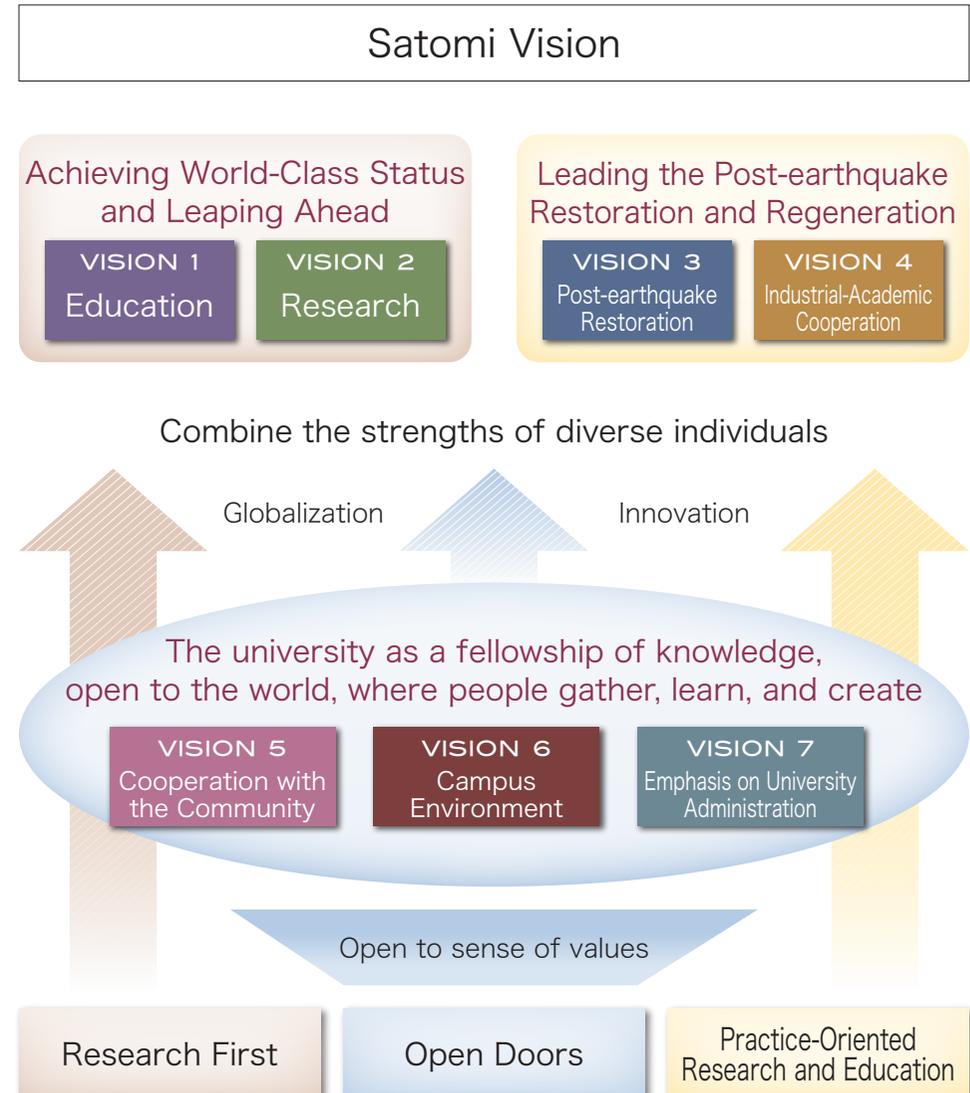
VISION 5  
Collaborate with numerous partners, domestically and abroad, to spread knowledge to society.



VISION 6  
Achieve an open campus where many cultures coexist and interact with diverse value systems.



VISION 7  
Establish a university administrative structure that elevates synergy among individual constituents.



### III Strategic focuses and major policies for realizing 7-Vision Plan

In order to realize 7-Vision Plan, we will determine guidelines for its implementation in the form of strategic focuses, major policies, and an implementation schedule, all to be undertaken in the next five years, starting FY 2013.



## Create a venue where students will grow into individuals capable of flourishing in the international community.

#### Strategic Focus (1)

### Educational reforms, aimed at fostering global leaders, centered on improving the humanities curriculum

#### Major Policies

#### Establish and develop a leading-edge, creative, and advanced humanities curriculum to face modern challenges

We will develop an advanced humanities curriculum, from the students' first undergraduate year to graduate school that will become the foundation for nurturing global leaders who will face the challenges of modern society. The curriculum will be founded on logical cognitive and expressive abilities, and a proactive attitude towards learning. It will foster in students a broad perspective, communication skills, and problem discovery/solving abilities, rooted in knowledge and comprehension of culture, society, and nature. Additionally, it will confer an international mindset that understands and respects both Japanese and other cultures.

#### Organic cooperation between specialized fields and humanities to foster a spirit of creative inquiry, multifaceted/relativistic cognitive skills, and diverse values

We will encourage close cooperation between advanced humanities and specialized education, transcending the faculty/graduate school divide, in order to foster individuals who are capable of creating new value and have broad perspectives that go beyond their specializations and fields. In addition to preparing a substantial degree program and diversified career path education, we will implement collaborative education by deepening our ties with universities abroad.

#### Development of an internationally compatible educational system that stimulates student interest in learning

In response to the internationalization of our community and diversification of values, we will structure a new educational system that stimulates student interest in learning. In order to do this, we will promote efforts that increase our educational system's international compatibility, such as implementing a GPA system and course numbering, adopting a quarter system to provide more diverse learning, and making other improvements to the curricula. We will also consider building flexibility into the academic calendar, including the timing of admissions and graduation.

#### Strategic restructuring of Liberal Education and student support systems

We will structure new Liberal Education and student support systems that distill the collective abilities of Tohoku University and integrate our educational practices with respect to surveys, research, development, and implementation. Our academic management will be bolstered through organic cooperation with specialized education.

Strategic Focus (1): Educational reforms, aimed at fostering global leaders, centered on improving the humanities curriculum					
Major Policies	FY2015	FY2016	FY2017	Remarks	
Establish and develop a leading-edge, creative, and advanced humanities curriculum to face modern challenges	<p><b>Development of advanced humanities curriculum</b></p> <ul style="list-style-type: none"> <li>●Development of Global Education (Global Coeducation class) <ul style="list-style-type: none"> <li>●Expansion of culture and art classes</li> </ul> </li> <li>●Development of creative advanced humanities curriculum</li> <li>●Development of foreign language classes: Expansion of English and foreign-language education for General Education and Specialized Subjects</li> </ul> <p>●Investigation of education and its outcomes at Tohoku University (second investigation): implement, analyze, and improve education</p>			<ul style="list-style-type: none"> <li>●Investigation of education and its outcomes at Tohoku University (third investigation): implement, analyze, and improve education</li> </ul>	Increase the number of active learning Development Seminars to 90 classes by FY2018
Organic cooperation between specialized fields and humanities to foster a spirit of creative inquiry, multifaceted/relativistic cognitive skills, and diverse values	<p><b>Development and implementation of various degree programs</b></p> <ul style="list-style-type: none"> <li>●International Joint Graduate Program in Spintronics</li> <li>●International Joint Graduate Program in Earth Science <ul style="list-style-type: none"> <li>●International Joint Graduate Program in Data Science</li> <li>●International Joint Graduate Program in Cosmological Physics</li> </ul> </li> </ul> <p>●Development of a research ethics program</p> <p>●Provision and implementation of research ethics program</p> <p>●Development and implementation of Leadership for Academic Development Certificate Program(LAD)</p> <p><b>Promoting career education: Systemization of career education through a regular curriculum</b></p> <ul style="list-style-type: none"> <li>●Trial implementation of career education classes</li> <li>●Improvement and further development</li> <li>●Full-scale implementation</li> </ul> <p><b>Development and implementation of Preparing Future Profession (PFP)</b></p> <ul style="list-style-type: none"> <li>●Investigative research</li> <li>●Continuation of Innovation Emergence School</li> <li>●Trial implementation of PFP</li> <li>●Common subjects for graduate schools</li> </ul>				Cooperate with influential, foreign universities to create 7 international joint graduate programs by FY2019
Development of an internationally compatible educational system that stimulates student interest in learning	<ul style="list-style-type: none"> <li>●Investigation and finalization of policy regarding the course numbering system</li> <li>●Investigation and finalization of policy regarding the GPA system</li> <li>●Investigation, system planning, and trial implementation of flexibility in academic year (a quarter system)</li> <li>●Enhancement and translation of syllabus into English</li> </ul>			<ul style="list-style-type: none"> <li>●Begin using the course numbering system (creation of a course numbering system and curriculum map for each department)</li> <li>●Begin using the GPA system (applies to entrants beginning in FY2016)</li> <li>●Evaluation and improvement of practical education</li> </ul>	Implement a GPA system and course numbering system for all courses for all entrants beginning in FY2016

Strategic Focus (1): Educational reforms, aimed at fostering global leaders, centered on improving the humanities curriculum

Major Policies	FY2015	FY2016	FY2017	Remarks
Development of an internationally compatible educational system that stimulates student interest in learning	<ul style="list-style-type: none"> <li>●Development and introduction of delivery methods for classroom recordings and a learning support system</li> </ul>	<ul style="list-style-type: none"> <li>●Implementation of learning support system using videos</li> </ul>		Increase AO entrance examination enrollment capacity to 30% by FY2020
Strategic restructuring of Liberal Education and student support systems	<ul style="list-style-type: none"> <li>●Expansion of AO entrance examination enrollment</li> <li>●Investigation of global entrance examination</li> <li>●Investigation of international baccalaureate entrance examination</li> </ul>	<ul style="list-style-type: none"> <li>●Implement expansion of AO entrance examination enrollment, follow-up investigation, and analysis of entrants</li> <li>●Implementation and expansion of global entrance examination, follow-up investigation, and analysis</li> <li>●Implementation and expansion of international baccalaureate entrance examination, follow-up investigation, and analysis</li> </ul>	<ul style="list-style-type: none"> <li>●Use of external English examination</li> <li>●Investigation of individual selection corresponding to the Academic Evaluation for Prospective University Entrants</li> </ul>	
	Development and implementation of various entrance examination systems			
	Re-evaluation and investigation of the application and significance of individual selection			

## Achievements

### ▷ Development of a new advanced humanities curriculum

The Institute for Excellence in Higher Education solicited a Higher Education Development and Promotions Project from each department, aimed at the development of new classes in higher education as well as a higher education curriculum. Using this information, we began investigating how to establish courses for higher education.

### ▷ Improving the university-wide Basics Seminar and expanding the active learning topics and international education topics such as the Development Seminar and the Global Coeducation Seminar

The university-wide Basics Seminar is taken by almost all new students starting in the first semester. It touches on over 160 topics and continues to support students after the semester ends through the Basics Seminar Presentations and FD for faculty members. The Development Seminar begins in the second semester and expands on the culture and arts classes. The number of topics has increased from 30 in FY2013 to 46 in FY2015; furthermore, the number of topics in the Global Coeducation Seminars has increased from 11 topics in FY2013 to 16 in FY2015. In this way, active learning and global education topics have undergone tremendous growth.



Basics Seminar Presentation



Global Coeducation Seminar

### ▷ Implementation of investigation of education and learning outcomes in graduates

The second investigation regarding education and learning outcomes was conducted by Tohoku University using students who graduated in March 2015 from undergraduate and graduate programs. The report was made public and will be used to improve education in each of the undergraduate schools, as well as in the graduate schools.

### ▷ Implementing the Program for Leading Graduate Schools

Following the adoption of the Inter-Graduate School Doctoral Degree Program on Science for Global Safety in FY2012, and the Interdepartmental Doctoral Degree Program for Multi-dimensional Materials Science Leaders in FY2013, we established the Tohoku University Institute for Promoting Leading Programs (renamed in April 2015 as the Institute for Promoting Graduate Degree Programs, Division for Leading Graduate School Programs).



Ceremony acknowledging students of the Tohoku University Program for Leading Graduate Schools



A typical class (Inter-Graduate School Doctoral Degree Program on Science for Global Safety)

- ▷ Developing new research topics by merging different fields of study in accordance with education at the Division for International Advanced Research and Education and training the best globally minded young researchers

We selected the best students engaged in research in new fields of study for enrollment as research education students at the Division for International Advanced Research and Education. In FY2013, we selected 104 students (26 Masters, 78 PhD); in FY2014, 111 students (22 Masters, 89 PhD); and in FY2015, 124 students (as of April, 27 Masters, 97 PhD). For financial support in the form of scholarships and research grants, we also provided 199,320,000 yen and 255,790,000 yen in FY2013 and FY2014, respectively.



Master's and PhD research education student selection ceremony

- ▷ Promoting career path education through the Innovation Emergence School

The Innovation Emergence School (until FY2013, the Advanced Skill Management School) promotes career path education through training camps (42 participants in FY2013; 52 participants in FY2014) aimed at young researchers, e.g., PhD students or post-doctoral fellows who have advanced specialized knowledge. For General Education, we offer career education courses such as "Society and University Students" and "Life/Career Design."



Innovation Emergence School (training camp)

- ▷ Joint education with foreign universities, such as the International Joint Graduate Program in Spintronics

In February 2015, we finalized an agreement with the University of Mainz for their participation in the International Joint Graduate Programs. In April, we began education in the International Joint Graduate Program in Spintronics. As of September 2015, a total of 41 universities and 11 programs are involved in the double degree or joint education program. To provide support for travel fees and scholarships, in April 2015 we began the Support System for International Joint Programs for students enrolled in these programs.



Finalizing the agreement with the University of Mainz for the International Joint Graduate Programs

- ▷ Implementation of Tohoku University certificate programs such as the Educational Management and Leadership Program (EMLP)

In addition to preparing the regulations regarding the certificate programs at Tohoku University, we also supported successful learning programs with eight graduates of the Educational Management and Leadership Program (EMLP) in FY2013, and 31 students enrolled in the Regional Innovation Producer School (RIPS) in FY2014. Both programs consisted of expert seminars and input from advisers, as well as discussion workshops. The EMLP covered human resource development of educators as it pertains to educational management at higher education institutes. The RIPS covered the creation of regional employment opportunities and the nurturing of innovators who can contribute to industrial development.

- ▷ Investigation of flexibility in the academic calendar

We established the Flexible Academic Calendar Investigation Project Team in September 2014 to observe relevant policies at leading universities. The team continues its investigation of the current state of these universities, as well as the benefits and issues related to a flexible academic calendar.

### ▷ Introduction of a course numbering system

After the Educational Affairs Council in July 2014, we established the Course Numbering Working Group, which developed the Tohoku University Course Numbering Implementation Manual. The numbering system is scheduled to be introduced in FY2016.

### ▷ Introduction of the Grade Point Average (GPA) System

The use of a GPA System in Tohoku University baccalaureate degree programs was approved by the Educational Affairs Council in September 2014, and is scheduled to be introduced for all new students starting in FY2016.

### ▷ Expansion of the Student Learning Adviser (SLA) Program

Third-year and later students can serve as SLAs for first and second-year students at the Center for Learning Support in the Kawauchi North Campus. The Center provides four types of support, including one-on-one tutoring, project-based tutoring, class-based tutoring, and independent seminar tutoring, facilitating learning between students. In FY2013, we had 42 SLAs supporting a total of 1,700 students; this total increased to 55 SLAs supporting over 3,500 students in FY2014.



Students at the Center for Learning Support

### ▷ The High School–University Connection

In order to recruit students of various backgrounds, global entrance examination and international baccalaureate entrance examination will begin in FY2016. We also held admissions information sessions in over 20 locations around the country, including Sapporo, Tokyo, and Osaka. The total participants at the Open Campus Day for Tohoku University was the largest among domestic universities (over 60,000 participants).



Tohoku University Admissions Information Session (Tokyo)



Open Campus Day

### ▷ Establishment of the Institute for Excellence in Higher Education

In April 2014, the Center for the Advancement of Higher Education, Center for International Exchange, Institute for International Education, Global Learning Center, Institute of Liberal Arts and Sciences, and the Innovative Leaders Platform combined to become the Institute for Excellence in Higher Education. This Institute uses a matrix of educators' fields of expertise and the affiliated business center to investigate, develop, plan, propose, and implement measures to improve the quality of education at Tohoku University.

## Strategic Focus (2)

### Creation of a global learning environment

#### Major Policies

#### Strategic international student recruitment and learning environment creation

We plan to consolidate our comprehensive internationalization promotion system with the aim of increasing our number of international students. Building on the results of the Global 30 program, we will strategically recruit international students in regions, fields, and programs of emphasis, enhance educational programs for international students, and offer them various forms of support.

#### Promotion of study abroad and international experience by Tohoku University students

In order to foster individuals capable of acting globally, we will expand our system for promoting study abroad and international experience by students at Tohoku University. Besides dramatically increasing short-term study abroad programs at the undergraduate level, we will move forward with the creation of a system for promoting student exchanges and overseas internships. For graduate students directly involved in research, we plan to expand our study abroad programs and accelerate internationalization at our graduate schools.

### Cultivating understanding of other cultures and practical communication skills

In keeping with our aim to foster individuals capable of acting globally, we will work to cultivate advanced communication skills as these will enable students to get along with people with various linguistic and cultural backgrounds while being able to precisely explain their own point of view to others and solve problems. In addition, we will substantially improve foreign language education, particularly in English.

Strategic Focus (2): Creation of a global learning environment						
Major Policies	FY2015	FY2016	FY2017	Remarks		
Strategic international student recruitment and learning environment creation	<b>Development of the Future Global Leadership (FGL) program</b> ●Steady implementation of the FGL program <ul style="list-style-type: none"> <li>●Improvement of undergraduate and graduate level courses and investigation of new courses</li> <li>●Investigation of preparations for implementing a system for course improvement</li> </ul>			●Expansion of undergraduate and graduate level courses	Increase international course ratio to 75% by FY2023	
	<b>Increase in foreign students through various acceptance programs</b> ●Development and implementation of various foreign student acceptance programs			●Strategic measures and preparations to increase acceptance of foreign students		Increase the number of foreign students (full-time) to 3,000 by the middle of the 3rd Evaluation for Current Mid-Term Goals
	<b>Expansion of support through the International Support Office</b> ●Trials for supporting acquisition of Status of Residence ●Begin lifestyle support through the website			●Implement (for all departments) support for acquiring Status of Residence ●Improvement of support for foreign researchers and students		
Promotion of study abroad and international experience by Tohoku University students	<b>Development and implementation of various foreign exchange programs</b> ●Implement foreign exchange programs such as Study Abroad Program (SAP) ●Credits for short-term programs in affiliated schools			●Strategic measures to increase the number of foreign exchange students	●Development and implementation of new programs	Increase the number of foreign exchange students taking credits to 1,000 by the 3rd Evaluation for Current Mid-Term Goals
Cultivating understanding of other cultures and practical communication skills	<b>Implementation of the Tohoku University Global Leader Program (TGL)</b> ●Investigation of improvement and continuation of the TGL program with respect to the Go Global Japan Project			●Investigation of the implementation of the TGL program after the end of the Go Global Japan Project	●Development of new TGL programs	
	<b>Strengthening English-language learning support</b> ●Establish the Tohoku University English Academy (TEA)			●Re-evaluation of the support system for English-language learning	●Expansion of support for English-language learning	

## Achievements

### ▷ Continuation and improvement of the Future Global Leadership (FGL) Program

Each type of project at Global 30 (G30) will continue as university funds are secured; costs are approved at the Presidential budget. Currently, the FGL Program, in which degrees can be earned in English, has 3 undergraduate courses and 13 graduate courses. In FY2013, there were 240 enrolled students, and 271 students enrolled in FY2014. These courses provide a learning environment appropriate for globalization.



A typical class in the Tohoku University FGL program

### ▷ Implementation and public relations regarding the exchange program

Using our network of affiliated schools, the exchange student program accepted 351 and 424 foreign exchange students in FY2013 and FY2014, respectively. In addition to exchange fairs and information sessions for various exchange programs, we produced various pamphlets including Tohoku University Guide, a guide to Tohoku University Exchange and Summer Programs, and Tohoku University Study Abroad Guidebook. Through such activities, we worked towards better relationships.



Closing ceremonies for the Junior Year Program in English (JYPE)



Pamphlets for exchange students

### ▷ Expansion of a scholarship system to accept foreign students and promote foreign exchange

In order to promote the acceptance of foreign students as well as to encourage our students to study abroad, we implemented funding support through the following three programs: the Tohoku University President Fellowship, Tohoku University Fund Study Abroad Scholarship, and the Tohoku University Fund Global Hagi Foreign Exchange Student.

#### Tohoku University President Fellowship

FY2013: 59 undergraduate recipients, 21 graduate recipients

FY2014: 80 undergraduate recipients, 26 graduate recipients

#### Tohoku University Fund Global Hagi Foreign Exchange Student

FY2013: 8 undergraduate recipients, 13 graduate recipients

FY2014: 15 undergraduate recipients, 5 graduate recipients

#### Tohoku University Fund Study Abroad Scholarship

FY2013: 72 recipients

FY2014: 48 recipients



Commendation ceremony for recipients of the Tohoku University President Fellowship



Tohoku University Fund Global Hagi Foreign Exchange Student Encouragement Award

### ▷ Implementation of the Tohoku University Global Leader Program (TGL)

In addition to flexible and strong foundations in specialties, a hallmark of Tohoku University, the Tohoku University Global Leader Program (TGL) was implemented in FY2013 to train students to serve as global leaders. As of June 2015, there have been 1,955 undergraduate students enrolled in the program.



Concepts of the TGL program



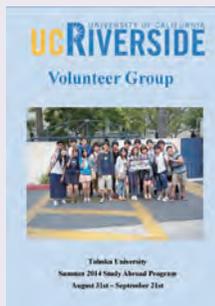
The global career seminar

### ▷ Expansion of the Study Abroad Program (SAP)

In addition to the Study Abroad Program in Europe and the US, we also developed similar programs in Asia. In FY2013, there were 275 participants across 17 programs; and in FY2014, there were 285 participants across 18 programs. Both the number of programs and participants increased, and more students were able to experience study abroad.



The Study Abroad Program



Study Abroad Program reports

### ▷ The first national university to introduce a High School Bridging Program

Starting with FY2014 entrants, we were the first national university to introduce a High School Bridging Program, aimed at students whose early acceptance had been finalized through AO entrance examinations. Students participated in a 2-week program in English at the University of California, Riverside (UCR), learning about a multicultural society in American culture. We hope that increasing the number of motivated students who already have learning experience in a top-level American university will have a positive impact on other students.



High School Bridging Program

### ▷ Enrichment of practical English education

In addition to the extracurricular practical English course, we established practical English skills courses for second-year undergraduates, gradually expanding the number of courses. We also implemented skills improvement through English learning specialist counselors, learning methods for English ability examinations, academic skills necessary for studying abroad, advice for studying English, and English lectures focused on TOEFL and IELTS.

### Strategic Focus (3)

## Improved/enhanced student support

### Major Policies

#### Restructuring/expansion of student financial aid system and creation/improvement of student housing

We will expand our existing financial aid system while creating a new aid system targeting students with excellent academic records. We also plan to develop and expand our student housing (University House dorms) so that they serve as venues where students can develop an independent outlook while learning to respect various value systems and cultures within an international environment.

#### Rigorous harassment policy and improved mental care

We intend to expand our prevention policy for all forms of harassment and our mental care system to ensure that all students, including international students, will be able to lead a secure, healthy campus life. A new campus-wide support system will be provided for students with developmental and physical disabilities.

#### Improved/enhanced support for continuing education/careers

Drastic revisions will be made to our systems for providing support for continuing education and career seeking. We will enhance a number of aspects of our support for students wishing to go on to the graduate level, while further improving our career support for faculty and graduate school students, including international students, and postdoctoral researchers.

#### Expanded support for extracurricular activities

In order to encourage useful extracurricular activities that allow students to nurture interpersonal relationships and learn social skills, we will systematically upgrade and utilize our facilities, establish a support system composed of instructors from specialized fields, increase campus-wide support, and create a system for conferring official commendations.

Strategic Focus (3): Improved/enhanced student support				
Major Policies	FY2015	FY2016	FY2017	Remarks
Restructuring/expansion of student financial aid system and creation/improvement of student housing	<ul style="list-style-type: none"> <li>●Grand design plan for student commendation and financial support</li> <li>●Start investigation of Aobayama University House plan</li> <li>●Investigation of converting Emergency Dormitory accommodations to University House</li> </ul>	<ul style="list-style-type: none"> <li>●Implementation of new student commendation and financial support systems</li> <li>●Implement Aobayama University House plan</li> </ul>	<ul style="list-style-type: none"> <li>●Begin conversion of Emergency Dormitory accommodations to University House</li> </ul>	Prepare and double the capacity of University House relative to FY2015 levels
Rigorous harassment policy and improved mental care	<p><b>Enrich student counseling service regarding health, harassment, and mental health</b></p> <ul style="list-style-type: none"> <li>●Connections between departments (including university hospital) through individualized student support</li> <li>●Provision of information and cooperation regarding student support, preventing harassment, health management, and mental health care through FD.</li> </ul> <p><b>Management of students requiring special assistance</b></p> <ul style="list-style-type: none"> <li>●Investigate and plan in accordance with the Disabilities Discrimination Act</li> <li>●Implement based on appropriate points</li> </ul>			Implementation, including re-evaluation of the standards for disciplinary actions towards students
Improved/enhanced support for continuing education/careers	<ul style="list-style-type: none"> <li>●Development and implementation of career support programs / support for progression to graduate school as a career</li> </ul> <p><b>Improve the hub in Tokyo for job-hunting</b></p> <ul style="list-style-type: none"> <li>●Trial use of Shinjuku Lounge</li> <li>●Continued use of Shinjuku Lounge and investigation/planning for a new hub</li> <li>●Proposal for a new hub</li> </ul>			
Expanded support for extracurricular activities	<p><b>Planning and use of the new Kawauchi Extracurricular Activity Facility</b></p> <ul style="list-style-type: none"> <li>●Completion of the facility, preparations for starting use</li> <li>●Start and continued use of facility</li> </ul> <p><b>Expanding the Circle Club room</b></p> <ul style="list-style-type: none"> <li>●Investigation of principles for expansion of the Club room</li> <li>●Proposal for maintenance of the Club facility and investigation of policies for use</li> <li>●Implementation of Club facility maintenance</li> </ul> <ul style="list-style-type: none"> <li>●Hosting student training for extracurricular and volunteer activities</li> </ul>			

## Achievements

### ▷ Expansion of accommodation support through University House

We expanded University House (UH) even further and prepared UH Sanjo II (capacity: 216 residents) and UH Katahira (capacity: 48 residents) by FY2013.



University House Sanjo II



University House Katahira

### ▷ Financial support through unique university scholarships

Using the Tohoku University Disaster Donation Funds, we provided support for the following numbers of students through three unique university scholarships: The Tohoku University Positive Outlook Support Fund (13 recipients in FY2013, 9 recipients in FY2014); the Rio Tinto-Komatsu Scholarship (34 recipients in FY2013, 33 recipients in FY2014); and the Takeda Shoshisha Scholarship (6 recipients in FY2013, 8 recipients in FY2014).

### ▷ Preparation and enrichment of the university-wide counseling system

Continued use of counseling groups focused on harassment for all students, as well as FD implementation (twice in FY2014) for all faculties and staff. In addition to holding counseling at the Center for Counseling and Disability Services as well as the Student Health Care Center within the Institute for Excellence in Higher Education, we implemented FD for all faculties and staff regarding mental health care (14 times in FY2014).

### ▷ Establishing the Center for Counseling and Disability Services, Special Assistance Room

As a base for supporting reasonable accommodation and support for students with disabilities, we established the Special Assistance Room of the Center for Counseling and Disability Services. Two specialized staff members will provide support, and we also reorganized the support system.

### ▷ Investigation of Student Life after the 2011 Great East Japan Earthquake

We implemented an investigation of student life after the 2011 Great East Japan Earthquake, focusing on new students as well as students enrolled during the earthquake. We used the results to develop measures against PTSD.

### ▷ Academic and work support through the Center for Career Support

We implemented a variety of programs through the Center for Career Support including the Work Guidance Seminar (2,955 total participants in FY2014), Workshops (580 total participants in FY2014), the Career Work Fair (6,563 total participants in FY2014), as well as individual discussions, job-hunting buses, and the opening of Tohoku University Tokyo Liaison Office. Support for doctoral students and post-doctoral fellows included internships at the Innovative Leaders Platform, as well as a variety of other programs such as individual discussions.



The Career Work Fair

▷ Establishment and expansion of facilities for extracurricular activities

In order to support extracurricular activities for students, we began preparations for the Kawauchi Extracurricular Activity Community Center (Kawauchi Hall), as well as plans to build an exercise facility such as Kawauchi Ground. Moreover, we began reconstruction on the Shichigahama Boathouse in 2014 after it was damaged by the 2011 Great East Japan Earthquake.



Kawauchi Extracurricular Activity Community Center (Kawauchi Hall)



Reconstruction of the Shichigahama Boathouse

▷ Extracurricular activity supported by Tohoku University Fund Extracurricular Activity

In FY2013 and FY2014, 8 and 18 groups, respectively, were awarded the Tohoku University Fund Extracurricular Activity. Funds for specific projects were awarded to 12 and 7 groups in FY2013 and FY2014, respectively. These funds help to support students in their extracurricular activities.



Recipients of the Tohoku University Fund Extracurricular Activity

▷ Strengthening PR for extracurricular activity and university-wide support system

We are actively showcasing groups and individuals who have been successful as a team or as individuals in athletic competitions such as the Seven Universities Athletic Meet, with the goal of raising morale for competing athletes and supporting all students and faculty.



Receiving the winner's trophy for the 54th Seven Universities Athletic Meet (third consecutive win)



The man-powered flight club (team name: Windnauts) wins the 38th Japan International Birdman Rally, Man-Powered Propeller Distance Event.



Create, in our capacity as a world-leading research center, an open environment in which excellent researchers will gather.

#### Strategic Focus (4)

Environmental/support systems that extract diverse research abilities

#### Major Policies

Development of university-wide systems, and coordination/cooperation between departments

To create an open venue for research in which excellent scholars from around the world will gather, we will plan innovative, creative, university-wide projects with an international and strategic focus and establish a system of support through interdepartmental cooperation. We will proceed with the establishment of University Research Administration (URA) Center and make systemic reforms within Special Research Zones on campus.

Open research environments based on a flexible personnel system

As it is necessary to secure a wide range of world-class researchers and human resources, including experts in the industrial and political arenas, from both Japan and abroad, we will adopt a joint-appointment system and drastically rethink then reapply the annual contract system. We will design our systems so that the researchers, who come from diverse careers and backgrounds, are not placed at any disadvantages, and create an environment that attracts and retains excellent researchers.

Proactive recruitment of young/female/foreign researchers

In order to pursue strategic, creative research, we will aggressively recruit motivated, excellent young/female/foreign researchers and formulate systems under which they will have access to autonomous research environments.

Career creation for technical research assistants

We will provide an attractive professional environment for technical research assistants (research fellows, technicians etc.) with diverse and advanced specializations to contribute to their motivation and continued growth.

Strategic Focus (4): Environmental/support systems that extract diverse research abilities				
Major Policies	FY2015	FY2016	FY2017	Remarks
Development of university-wide systems, and coordination/cooperation between departments	<ul style="list-style-type: none"> <li>●Information exchange with each department as a function of the Headquarters for Promotion of Research and Investigation regarding new project initiation</li> </ul>			Implementation of annual analysis of research activity for each department
	<ul style="list-style-type: none"> <li>●Determine the research status of each department in the URA Center</li> <li>●Further strengthening of the URA Center system</li> <li>●Stimulate cooperative interaction between the URA Center and its departments through the URA Cooperative Council</li> </ul>			
Open research environments based on a flexible personnel system	<ul style="list-style-type: none"> <li>●Implementation and improvement of new annual salary system (evaluation of faculties' achievements)</li> </ul>	<ul style="list-style-type: none"> <li>●Appropriate measures considering national trends for the 3rd Evaluation for Current Mid-Term Goals</li> </ul>		Increase use of annual salary system by at least 30% by FY2021
	<ul style="list-style-type: none"> <li>●Creation of new personnel system regarding highly specialized jobs such as the URA</li> </ul>	<ul style="list-style-type: none"> <li>●Application of personnel system such as the URA</li> </ul>		
		<ul style="list-style-type: none"> <li>●Use and enrichment of the joint-appointment system</li> <li>●Application of Specially-Invited Professor and Distinguished Professor System</li> </ul>		
Proactive recruitment of young/female/foreign researchers	<ul style="list-style-type: none"> <li>●Hiring young researchers at the Frontier Research Institute for Interdisciplinary Sciences</li> <li>●Promote use of tenure-track policy in each department</li> <li>●Promote exchange with benchmark universities (implement Young Leader Researcher Foreign Exchange Program)</li> </ul>			Secure 50 young researchers for the institute Total of 60 young researchers dispatched by FY2017 Increase foreign faculty members by at least 30% by FY2021
	<ul style="list-style-type: none"> <li>●Increase employment of foreign faculty members through internal revenue sources</li> </ul>		<ul style="list-style-type: none"> <li>●Evaluation, improvement, and strengthening of projects</li> </ul>	
Career creation for technical research assistants	<ul style="list-style-type: none"> <li>●Implement specialized training for each job group</li> <li>●Implement technical English seminars and lectures</li> <li>●Investigate President's Award</li> </ul>	<ul style="list-style-type: none"> <li>●Promote specialized training, technical exchange, and human affairs interaction</li> <li>●Strengthen capabilities toward foreign languages</li> <li>●Implementation of President's Award</li> </ul>	<ul style="list-style-type: none"> <li>●Form a variety of career paths</li> <li>●Promote technical support for international projects</li> </ul>	

## Achievements

### ▷ Strengthening the URA Center

The URA Center was established in FY2012 to support the research strengths of Tohoku University. It is responsible for planning, adjustment, and management of research projects at the university. At the same time, the Center analyzes the research capabilities of the world, as well as world trends, and performs a think-tank function by planning research strategies. A total of 10 URAs were employed at the Center in FY2014, and information exchange and sharing between departments will be conducted through the establishment of a URA Cooperative Council.

### ▷ Construction of a new, strategic personnel system

In order to attract world-class researchers, we drastically re-evaluated the previous policy and created a new, strategic personnel system. Three systems have been prepared: the Specially-Invited Professor System includes salary incentives for those who have received international awards (such as the Nobel Prize); the Distinguished Professor System gives a special title to those in the university with outstanding academic achievements; and the Research Professor System gives a special title to those with outstanding academic achievements and who are expected to receive external funding above a certain value. In addition to the existing annual salary system, we have introduced our own unique incentives to ensure smooth promotion of the strategic personnel system, such as a new annual salary system that includes jobs with succession.

Plan to headhunt talented, external personnel

Establishment of policies with new incentives

Establishment of a flexible personnel system to enable strategic human resources policies in each department

Establishment of Specially-Invited Professor System

Revisions to existing professor system

Use of annual salary system for indefinite-term employment

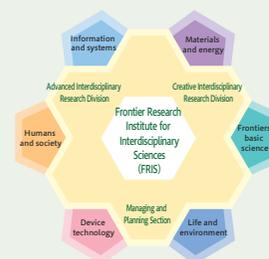
Creation of new strategic personnel system to promote the Tohoku University Global Vision

### ▷ Starting the Joint-Appointment System

In order to promote innovation and the development of new fields of research through the fusion of existing fields, we maximized the resource usage of Tohoku University and began the Joint-Appointment System, which allows joint appointments between Tohoku University, foreign and domestic institutes. As of October 2015, six such appointments have been made in coordination with domestic institutions.

### ▷ Establishment of the Frontiers Research Institute for Interdisciplinary Sciences

The Frontiers Research Institute for Interdisciplinary Sciences, which develops and promotes interdisciplinary research, was established to strategically foster young researchers at the cutting edge of interdisciplinary research, through the cooperation with the departments, institutions and Division for International Advanced Research and Education. This Research Institute comprises the Managing and Planning Section, the Advanced Interdisciplinary Research Division, and the Creative Interdisciplinary Research Division. The Institute currently employs 46 members in the Creative Interdisciplinary Research Division, comprising internationally selected young researchers as associate and assistant professors. The current staff (professors and associate professors) provides research guidance for these young researchers, establishing a connection with the existing departments.



Composition of the Frontiers Research Institute for Interdisciplinary Sciences

Various seminars hosted by young researchers

### ▷ Implementation of Young Leader Researcher Foreign Exchange Program

This program has been implemented with the objective of allowing young researchers (researchers under 40, including faculty members, PhD students, and post-doctoral fellows) to make an impact in their respective fields by strategically placing them in leading foreign research institutions so they can develop into world-class leaders. It is also one of the pillars of the revolution of the research environment in the university. We hope that by seizing the opportunity to participate in a community of leading researchers, young researchers will be able to use their research results and network of contacts to become leaders in their respective fields of research, increasing the presence of the university as well as the young researchers themselves in the global community. We will select applications that clearly indicate the career path of the applicant, as well as how it meshes with the strategic research initiatives of the university, for a 6–12-month exchange opportunity. From October 2013 until the end of FY2014, 22 young researchers were sent to foreign research institutions. Follow-up initiatives, such as reports on their experiences after they return to Japan, also support the development of world-class leaders.



Young researchers activity at their place of study

### ▷ Active appointment of foreign researchers and financial support

In order to actively promote the employment of foreign researchers, we have used internal budgets to supplement personnel costs, and also established a budget for promoting employment of foreign researchers. Additionally, to improve the working environment for foreign researchers currently employed at the university, we set up incentives (i.e., scholarships and stipends) for children of foreign researchers registered at Tohoku University. This financial support for children's education was made possible through the cooperation of the Tohoku International School Nankou Gakuen.



Ceremony formalizing the cooperation with the Tohoku International School Nankou Gakuen

### ▷ Promoting career development of technical research support staff

Technical research support staff (research assistants, technicians, etc.) have varied levels of advanced knowledge specific to their field. In order to promote a working environment where they can continue to grow, we established a technical specialist council for each career type to strengthen the policies surrounding the career. At the same time, we implemented inspections of various internal facilities with help from technical staff, in order to increase interactions between technical staff and promote specialized training in new or advanced technical skills.



Inspection of facilities in the university

## Strategic Focus (5)

### Striving for a world-leading level of research

#### Major Policies

#### Establishing a world-class, leading-edge group of research organizations

We will set up Special Research Zones on campus to pursue leading-edge research using all of Tohoku University's resources. These will focus the efforts of distinguished researchers from around the world and motivated young

researchers. Organic connections will form between these Special Research Zones and Tohoku University's Graduate Schools and Research Institutes, giving rise to new knowledge cycles, while continuously conducting world-leading research.

#### Leaping ahead as a hub for international intellectual endeavors

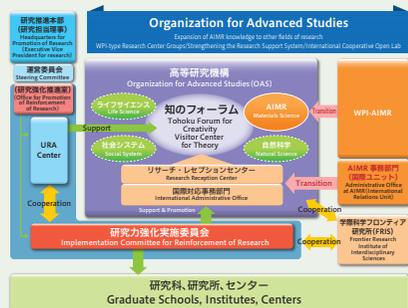
We will leverage our overseas offices and liaison offices to promote international intellectual endeavors while actively using our connections with researchers and international students to expand our global network.

Strategic Focus (5): Striving for a world-leading level of research				
Major Policies	FY2015	FY2016	FY2017	Remarks
Establishing a world-class, leading-edge group of research organizations	<ul style="list-style-type: none"> <li>● Investigate expansion of Organization for Advanced Studies</li> </ul>		<ul style="list-style-type: none"> <li>● Establishment of a WPI-type organization in the Organization for Advanced Studies</li> <li>● Evaluate results of the WPI-type organization</li> </ul>	Expand fields of research to break into top 50 in the world
	<ul style="list-style-type: none"> <li>● Utilize young, female, and foreign researchers; gather individual strengths</li> </ul>			Provide the Organization for Advanced Studies with new fields and research organizations
Leaping ahead as a hub for international intellectual endeavors	<ul style="list-style-type: none"> <li>● Investigation and policy planning for the establishment of overseas liaison offices</li> </ul>	<ul style="list-style-type: none"> <li>● Establishment of overseas liaison offices (International Cooperative Open Lab Center)</li> <li>● Enrichment of International Cooperative Projects</li> </ul>		Increase the number of international joint publications by at least 20%
	<ul style="list-style-type: none"> <li>● Support for mid- to long-term visitors using the research reception center</li> </ul>	<ul style="list-style-type: none"> <li>● Strengthening the global network utilizing overseas liaison offices and benchmark universities</li> </ul>		
	<ul style="list-style-type: none"> <li>● Invite renowned researchers such as Nobel Laureates to implement the Tohoku Forum for Creativity</li> <li>● Development of cutting-edge research</li> </ul>			Tohoku Forum for Creativity Two to three themes/year

## Achievements

### ▷ Establishment of the Organization for Advanced Studies

The Organization for Advanced Studies is a collection of world-class researchers that constitute an international research environment and research support system. The organization was created to initiate new fields of study. World-class researchers from materials science, physics, chemistry, engineering, and mathematics gathered to create a new materials science research organization called the Advanced Institute for Materials Research (AIMR). Currently, organizations in other fields of research are being investigated.



Expanding the knowledge of AIMR to other fields of research

### ▷ Opening the Tohoku Forum for Creativity

The Tohoku Forum for Creativity, the first research program of international visitor research institute to be introduced in a Japanese university, is a program in which renowned researchers such as Nobel Laureates are invited for short-term lecture series. A research topic is strategically chosen in light of issues plaguing the human race or world trends, and a world leader in that field of research is invited to the university. This researcher conducts daily, flexible discussions with young researchers and students of the university. These activities will help develop future global leaders, as well as establish the Forum as an international think-tank hub.



Three programs were implemented in FY2014, with a total of 942 participants from around the world.



TOKYO ELECTRON House of Creativity

### ▷ Selection of benchmark universities

Using database and analysis tools after investigating the research universities of the world, we selected the following six universities as benchmark universities: National University of Singapore, Eidgenössische Technische Hochschule Zürich, University of California Los Angeles, University of California Santa Barbara, University of Cambridge, and University of Chicago.

### ▷ Opening of the Falling Walls Lab Sendai

The Falling Walls Lab, which commemorates the 20th anniversary of the destruction of the Berlin Wall, is a speaking contest hosted by the Falling Walls Foundation, founded in Berlin in 2009. The main concept is to break down various walls around the world. The Lab provides an opportunity for young researchers under 35 to present their research in three minutes. In collaboration with the Falling Walls Foundation, the first Falling Walls Lab Sendai in East Asia was opened at Tohoku University. Twenty-six young researchers from Japan participated in FY2014, and the top three participants were sent to the main contest event in Berlin.



3-minute presentation by young researchers

### ▷ Hosting the Sketches of Science at Tohoku University

The Sketches of Science at Tohoku University was held in collaboration with The Nobel Museum and The Lindau Nobel Laureate Meetings. Over 50 Nobel Laureates described their research or wrote messages on large pieces of paper with crayons. They were then photographed with their creations, which are being exhibited along with Nobel Prize-related materials of Tohoku University. Over 5,000 citizens and students came to the exhibit and listened to a special lecture by Nobel Museum Director Olov Amelin, entitled "The origins of the Nobel Prize, and its impact on the world now and in the future."



Announcement poster



Special lecture by the Director of the Nobel Museum

## Strategic Focus (6)

### Research that solves problems and contributes to human knowledge

#### Major Policies

#### Promotion of basic and interdisciplinary research, opening new research frontiers

We will create an environment in which a wide range of basic research, from the natural sciences to the human and social sciences, can be freely expressed, while encouraging field-transcending collaboration between researchers and focusing support on new interdisciplinary endeavors in order to continually open up new areas of research.

### Promotion of research that produces innovation

We will form an industrial/academic knowledge consortium to develop world-class research that contributes to the production of innovation in addition to creating systems under which innovative, risky research can be undertaken with confidence.

Strategic Focus (6): Research that solves problems and contributes to human knowledge				
Major Policies	FY2015	FY2016	FY2017	Remarks
Promotion of basic and interdisciplinary research, opening new research frontiers	●Promotion and strengthening of interdisciplinary research through the Interdisciplinary Research Emphasis Program			Continuous evaluation of support programs and support for independent continuation Investigation of trends into research funds conducted by the URA
	●Strengthening the system to obtain external funding (utilize government investments)			
Promotion of research that produces innovation	●Initiate social impact research		●Promote social impact research	Start and promote 10 new projects  Partially operational sensor and PHR service by FY2017
	●Examine COI generic technology [sensors, Japonica Array, PHR service (daily medical examination)]	●Investigational period devoted to development of COI	●Preparations for COI development	
	Attracting people to the International Linear Collider (ILC) and Synchrotron Light in Tohoku, Japan ●Strengthening the regional system      ●Implementation of fund activity			

### ▷ Starting the Interdisciplinary Research Emphasis Program

This program is a research support policy for projects to promote social impact research. By emphasizing support for projects with goals to create a unique, world-class research base by playing on the university's strengths, projects that form the basis for continuous development of the society, or projects that create innovations leading to resolution of societal issues, this university could create a world-leading research environment. This will be accomplished through a network of researchers in a variety of different research fields.

### ▷ Attracting people to the ILC and Synchrotron Light in Tohoku, Japan

The industry, academia, and government collective of the Tohoku region formed the Tohoku Conference for the Promotion of the ILC in FY2012 and the Tohoku Synchrotron Radiation Facility Committee in FY2014. These councils initiated projects that prioritized cutting-edge innovation centers for the reconstruction of the Tohoku region and revitalization of Japan.

### ▷ Start of the Impulsing Paradigm Change through Disruptive Technologies Program (ImPACT)

This program aims to create large changes to industry and society through innovations in disruptive technologies, and to promote high-risk/high-impact aggressive research and development. Two program managers were chosen from the university, and two programs, "Achieving ultimate Green IT Devices with long usage times without charging" and "Tough Robotics Challenge" are already under way.

Program Name Program Manager	Expected impact on industry or society
Achieving ultimate Green IT Devices with long usage times without charging PM: Prof. Masashi Sahashi	Reduced stress with no-charge mobile devices, a completely safe society with disaster sensors that function without charging, as well as emergency access to information. Will lead to a revolution in the electronics industry in Japan.
Tough Robotics Challenge PM: Prof. Satoshi Tadokoro	Use robots as emergency response during times of disaster, recovery, and prevention, contributing to the safety of Japan and the world. Opens the path for future popularization and advanced outdoor robot services.

### ▷ Promotion of social impact research

In order to fulfill the expected functions of a university within society, we need to have a long-term and organizational vision for tackling issues that plague society, issues that society should be facing now and in the future, and issues that will make our future society better. Such issues are difficult to resolve over the short term or on an individual basis, but must be conducted concurrently with basic research. In preparation for the advances that will propel society into 2050, Tohoku University has addressed important issues such as the creation of a sustainable society, construction of an environmental resource-based society, creation and activation of the world's best industry, lengthening healthy lifespans, and the creation of a society rich in spirit. These issues will be turned into research programs by taking advantage of our strengths in basic research. Additionally, in such an interdisciplinary environment, and in light of the challenge of tackling research issues with no guarantee of a correct answer, we hope to contribute to the development of creative personnel who can see the bigger picture and are able to overcome challenges.

### ▷ Establishing the COI base

This position, selected by the Center of Innovation Science and Technology based Radical Innovation and Entrepreneurship Program (COI-STREAM), uses safe ingestible sensors, band aid-type sensors, and mirror-type sensors to silently collect information about activities of daily living, as well as mental and physical information. Using these technologies, the status of your daily living and health, as well as that of your family, is always accessible. By creating strong ties in which you and those around you are watching out for each other, we will try to create a peaceful society with minimal anxiety.



Cooperative development of the Japonica Array, a Japanese genome analysis tool, using the research results of the Tohoku Medical Megabank Project



Healthy living through analysis of medical and sensor-input information



Gather diverse knowledge as a comprehensive university, and develop activities that contribute to recovery from the Great East Japan Earthquake.

#### Strategic Focus (7)

### Steady execution of Tohoku University Reconstruction Action

#### Major Policies

#### Promotion of eight large-scale projects and development of university-wide management

We have been proceeding with eight large-scale government-supported projects since the Great East Japan Earthquake for the purpose of producing results that contribute to the Tohoku region's reconstruction and the revitalization of Japan. In addition to utilizing Tohoku University's resources to pursue these projects in

an organized and uninterrupted manner, we will create a network to disseminate information on them in various forms of media.

#### Supporting areas of policy emphasis and developing new projects

We will contribute to reconstruction by producing results with our own independent project (Reconstruction Action 100+), and provide multifaceted support for new proposals. In working towards "creative reconstruction," we will plan projects to be systematically pursued in the future, expand new research, and pursue human-resources development.

#### Strengthening cooperation with national/local government and enterprise

We will strengthen cooperation with national and local government and enterprise in order to ascertain community needs related to reconstruction, disseminate research results to the community, promote research useful in the creation of new industries that leverage regional assets, and foster human resources that will contribute to the Tohoku reconstruction and revitalization of Japan.

### Strategic Focus (7): Steady execution of Tohoku University Reconstruction Action Major Policies

Major Policies	FY2015	FY2016	FY2017	Remarks
Promotion of eight large-scale projects and development of university-wide management	<ul style="list-style-type: none"> <li>● Investigation into strengthening the functions of the Institute for Disaster Reconstruction and Regeneration Research</li> <li>● Follow-up on project and promotion of collaboration</li> <li>● Investigation of succeeding projects</li> <li>● Hosting the Institute for Disaster Reconstruction and Regeneration Research symposium</li> <li>● Creating an implementation report for The Third UN World Conference on Disaster Risk Reduction</li> </ul>	<p><b>Strengthening the function of the Institute for Disaster Reconstruction and Regeneration Research</b></p> <ul style="list-style-type: none"> <li>● Establishing the Steering Committee</li> <li>● Follow-up on project and promotion of collaboration</li> <li>● Investigation of succeeding projects</li> <li>● Successive commencement of projects considering budgets</li> </ul> <ul style="list-style-type: none"> <li>● Hosting the Institute for Disaster Reconstruction and Regeneration Research symposium</li> <li>● Publishing the Tohoku University Reconstruction Action</li> </ul>	<ul style="list-style-type: none"> <li>● Evaluation and improvement of projects</li> </ul>	<p>Annually Hosting the Institute for Disaster Reconstruction and Regeneration Research symposium</p> <p>Annually Publishing the Tohoku University Reconstruction Action</p>
Supporting areas of policy emphasis and developing new projects	<ul style="list-style-type: none"> <li>● Support for Reconstruction Action 100+</li> <li>● Support for restoration of society</li> <li>● Investigation of the Decommissioning Center</li> </ul>	<ul style="list-style-type: none"> <li>● Operation of the Decommissioning Center</li> </ul>	<ul style="list-style-type: none"> <li>● Evaluation and improvement of projects</li> </ul>	<p>Implementation of continuous support through the Presidential budget</p> <p>30 students/year in the Nuclear Reactor Decommissioning Engineering Program</p>
Strengthening cooperation with national/local government and enterprise	<ul style="list-style-type: none"> <li>● Trend analysis of Japan and the local self-governing body (Fukushima Innovation Coast scheme, regional revitalization, etc.)</li> <li>● Continuation of partnerships and cooperation through groups such as "New Tohoku" Public and Private Partnership Promotion Council, Reconstruction Agency</li> <li>● Partnerships with national wide mass media, as well as promotion through these channels</li> <li>● Implementation of disaster prevention and reduction educational project "Yui Project"</li> <li>● Next-phase planning for the project</li> </ul>		<ul style="list-style-type: none"> <li>● Implementation of the plan for the next phase</li> </ul>	<p>Implement in Miyagi, Fukushima, and Iwate Prefectures</p> <p>Begin collecting donations for development beyond FY2017</p>

## Achievements

### ▷ Transmitting research results through the Third UN World Conference on Disaster Risk Reduction

The Third UN World Conference on Disaster Risk Reduction was held in Sendai, Miyagi Prefecture, from March 14 to 18, 2015, with participation from over 180 member states of the United Nations. There were 4 forums on the Great East Japan Earthquake, 35 symposium/seminars, 15 exhibitions, 8 poster sessions, and 4 study tours. Focusing on the eight projects of the Institute for Disaster Reconstruction and Regeneration Research, as perhaps the only university in the world to have experienced such a great disaster, we shared our experience and findings with the international community. The event represented an important opportunity to contribute to disaster prevention and reduction in the international community.



President Satomi and the Secretary-General of the United Nations Ban Ki-moon shaking hands at the Tohoku University Reconstruction symposium

### ▷ Establishment of the Global Center for Disaster Statistics

#### International Research Project on Disaster Science

In April 2015, the Global Center for Disaster Statistics was established within the International Research Institute of Disaster Science (IRIDeS). Disaster statistics are poorly managed in many countries, and the establishment of a disaster statistics system in every country is essential for effective planning of disaster prevention measures. We hope to contribute to future disaster prevention through the UN Development Programme (UNDP), which has proven support results; the IRIDeS, which can collect and analyze disaster data; and cooperation with various international disaster prevention and research institutions such as the UN Economic and Social Commission for Asia and the Pacific (ESCAP).



At the announcement ceremony for the Global Center for Disaster Statistics in March 2015

### ▷ Establishing the foundation for next-generation medicine originating in the Tohoku area

#### Project for the Reconstruction of Community Health Care

The Tohoku Medical Megabank Organization contributed to rebuilding community medicine through large-scale genome cohort research focusing on disaster areas. It also constructed a biobank of 150,000 people in order to support the realization of next-generation medicine, such as drug-discovery research and individualized vaccinations. In 2013, whole-genome analysis of 1,000 healthy Japanese living in Miyagi Prefecture was completed, and a portion of the verified genome information was published the following year. We are now working to create a whole-genome reference panel through further analysis that is currently underway.



A next-generation sequencer analyzing sample DNA



Supercomputers storing a large amount of data

### ▷ "Relay-by-Smartphone" allows communications outside coverage range during times of disaster

#### ICT Reconstruction Project

We conducted a communication experiment with 27 smartphones on Tohoku University's Aoba-yama Campus. We successfully got the phones to receive e-mail through a mail relay that used the smartphones' Wi-Fi function, without using their communication service provider's cellular telephone lines. This showed that it is possible to build a completely independent network for isolated areas during times of disaster, using smartphones as communication tools.



Smartphone (left) and a screenshot of the mobile application (right)

▷ Development of continuous individual non-destructive type radioactive contamination inspection equipment for marine products

**Radioactive Decontamination Project**

We developed “Continuous Individual Non-destructive Type Radioactive Contamination Inspection Equipment” for marine products. Fish can be placed intact on a conveyor belt approximately 12 meters in length, and the system can measure the concentration of radioactive cesium in the fish using 120 individual detection devices. Previously, fishes were sampled from only the same type of fish and had to be ground up in a mixer for examination. This method destroyed the product, but the new system can examine the fish without destroying them, and if nothing was abnormal the fish could then be shipped on afterwards. This system is capable of testing a maximum of 1,400 fish per hour.



Ishinomaki Harbor, Miyagi Prefecture



Otsu Harbor, Ibaraki Prefecture



Onagawa Harbor, Miyagi Prefecture

▷ Project for the comprehensive dose assessment of disaster-affected animals **Radioactive Decontamination Project**

The radioactive cesium concentrations in organs of cows in the disaster area are proportional to their concentrations in blood, suggesting that the two values are dependent. Additionally, when we investigated the testes, which are highly sensitive to radiation, we did not observe any physical abnormalities. We also found that the level of radioactive cesium in the organs and blood of cows is dependent on where they were raised, as well as on the source of their feed.

▷ Base of operations for the Eight Projects completed

The construction and renovations on the buildings housing the Eight Projects of the Institute for Disaster Reconstruction and Regeneration Research are complete. Researchers from around the world are working every day in investigative research and educational activities to help with reconstruction.



Tohoku Medical Megabank Building, July 2014



Field Science Center, Graduate School of Agricultural Science, September 2014



New Building International Research Institute of Disaster Science, November 2014

▷ Hosting the symposium and publishing Tohoku University Reconstruction Action

In order to communicate the results of our various projects, the Institute for Disaster Reconstruction and Regeneration Research hosts annual symposiums, which began in FY2012. We also periodically publish the Tohoku University Reconstruction Action, which summarizes the projects at the Institute.

▷ Multi-faceted support for Reconstruction Action 100+

**Reconstruction Action 100+**

Reconstruction Action 100+ is a voluntary initiative undertaken by Tohoku University's faculty members to initiate over 100 projects in support of the disaster region's recovery. We hope to utilize our various specialties and strengths to carry out each mission.



Establishment of the Innovative Research Center for Agricultural Sciences (Graduate School of Agricultural Science)



Qatar Science Campus, where children can foster their interest in science and engineering (Graduate School of Engineering)



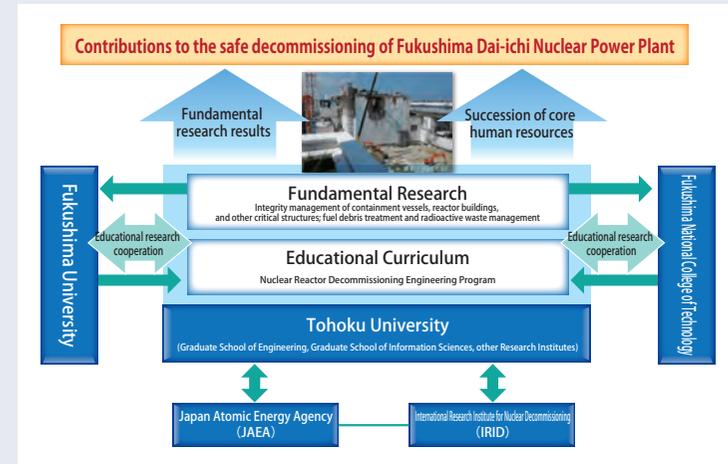
3D data archives of the earthquake disaster ruins (Center for Academic Resources and Archives)



Development of the training program for the Rinsho Shukyo-shi (Interfaith Chaplain) (Graduate School of Arts and Letters).

▷ Fundamental research and core human resources development program towards the decommissioning of the Fukushima Dai-ichi Nuclear Power Plant **Reconstruction Action 100+**

This program began in 2014 after being selected for the Decommissioning Fundamental Research and Human Resources Development Program Commission. In addition to the two graduate schools (engineering and information sciences) and three research institutes (materials research, multidisciplinary research for advanced materials, and fluid science), faculties from Fukushima University and Fukushima National College of Technology participate in and undertake projects such as "integrity management of containment vessels, reactor buildings, and other critical structures" and "fuel debris treatment and radioactive waste management." In 2015, we will initiate the Nuclear Reactor Decommissioning Engineering Program and begin training of personnel who will work to decommission power plants.



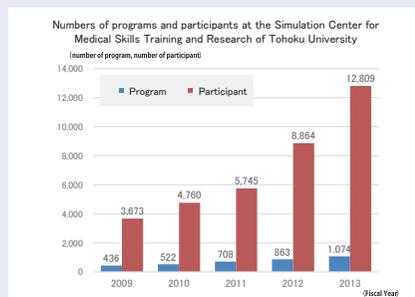
Program summary

▷ Community-accessible Simulation Center for Medical Skills Training and Research **Project for the Reconstruction of Community Health Care**

This simulation center, which is open to the community, was launched with support from the government and Miyagi Prefecture in June 2012, 15 months after the Great Earthquake, to accelerate the restoration of health care systems. The facility provides an opportunity to learn clinical skills using medical simulators and team-based training to achieve clinical risk management.



Training through simulators



Changes in usage of the Simulation Center for Medical Skills Training and Research

▷ Creation of a local energy base **Project for Environmental Energy**

To help realize a disaster energy system, a local energy base has been established at a school by installing solar panels, gas cogeneration, batteries, lighting/outlets for routine and emergency use, and an EV charger.



Proof-of-concept experiment at Kazuma Elementary School, Ishinomaki, Miyagi Prefecture



▷ Contributing to the local fisheries industry **Tohoku Marine Science Project**

The Tohoku Marine Science Project supports real-time access to oceanographic observations in Miyagi Prefecture, including ocean temperatures at Onagawa Bay, Shizugawa Bay, Nagatsura Bay, and Samenoura Bay. Additionally, at the local fishery in Yamamoto in Miyagi Prefecture, fishing operations were disrupted due to the accumulation of large amounts of debris in the fishing grounds; however, a new fishing method was devised in response to the accumulated debris. This new method led to the revitalization of the surf clam fishery, and we continue to cooperate with experienced fishermen to devise further improvements to the industry.



Proof-of-concept of new operational methods

▷ The Prudential Foundation Grant

**Regional Industries Restoration Support Project**

The Regional Innovation Producer School (RIPS) received a grant for 100 million yen from The Prudential Foundation over three years, beginning in FY2014. The grant supports the innovative businesses of excellent RIPS graduates who will lead the restoration of the disaster-affected areas. In FY2014, three outstanding individuals were awarded a total of 28 million yen in working grants.

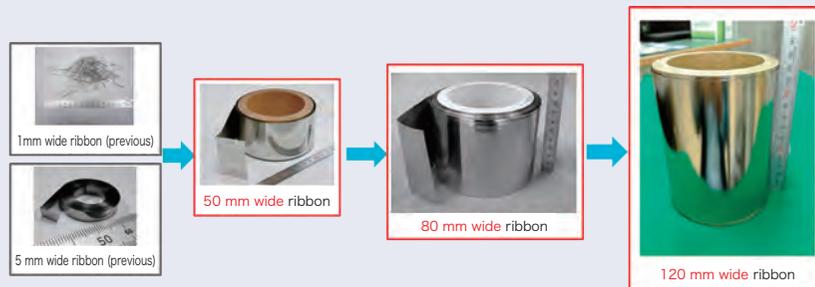


Grant recipients

▷ Success in producing nano-crystalline materials for reducing significant electrical power loss

**Industry–University Collaboration Development Project for Reconstruction**

We have developed a new nano-crystalline alloy whose soft magnetic properties surpass those of previous ones alloys, in terms of its high saturation magnetic flux density and low core loss. The resultant core, which is used in transformers and motors, exhibits extremely low core loss. Thus, this alloy is expected to contribute significantly reduce losses in electric transmitting and electricity consumption in the use of household electric appliances.

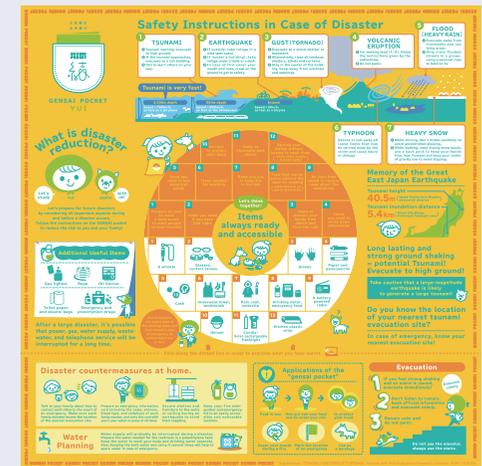


Successful widening of a new nano-crystalline, flexible metallic sheet to 120mm

▷ Gensai Pocket “Yui” Project

**International Research Project on Disaster Science**

We began the disaster prevention and reduction educational project, the "Yui Project", in FY2014, with the objective of heightening response capacity during times of disaster and carrying this information to the next generation. This project is an accumulation of research results from Tohoku University that can be crammed into a handkerchief; these packages will be distributed to fifth grade students in targeted municipalities. In accordance with requests of schools or municipalities, there will also be a class conducted aimed at heightening awareness of disaster prevention. In the first year of this project, all fifth grade students in Miyagi Prefecture were targeted, and in FY2015, this program expanded to include students in Fukushima Prefecture. In FY2016, we expect to expand to Iwate Prefecture as well.



Gensai Pocket “Yui”

▷ Cooperation with "New Tohoku" Public and Private Partnership Promotion Council, Reconstruction Agency

As a promoter and member of the "New Tohoku" Public and Private Partnership Promotion Council, Reconstruction Agency, which was established to support information sharing and exchange, Tohoku University participates in meetings for various projects related to the disaster area.



## Deepen cooperation with industry to produce innovations.

### Strategic Focus (8)

#### Further promotion of industrial/academic cooperation

##### Major Policies

##### Expansion and enhancement of collaborative/commissioned research

To ensure that the fruit of university research leads to innovation in enterprise, we will expand collaborative, commissioned industrial/academic research by improving our external communication capacity, fostering a spirit of cooperation between industry and academia among university instructors, systematically strengthening various ties, and improving our connections with regional enterprise.

##### Application/commercialization of research results

We will move forward with the application and commercialization of research results by promoting collaborative research aimed at meeting enterprise product needs, and creating collaborative research courses/departments that will become platforms for interpersonal cooperation with enterprise on campus.

##### Research results that give traction to new industry creation

Using operating cost subsidies and government investments apportioned in the FY 2012 supplementary budget, we are, as per the terms of these investments, promoting the commercialization of research results by steadily implementing collaborative research with enterprise. We are closely watching the trend towards systemic reform that will enable investment by universities through university-launched venture support funds etc., and promoting strategic industrial/academic cooperation that will contribute to the creation of new industries.

##### Retraining for professionals

We will provide educational opportunities to the professionals who are the creative partners of industry, and support their retraining in addition to broadening their activities throughout our community.

##### Creation/utilization of intellectual property

We will strive to create/utilize strategic intellectual properties based on a wide range of university research while designing an intellectual property management system aimed at supporting the creation of collaborative research that leverages these properties.

##### Strengthening the Office of Cooperative Research and Development's support systems and functions

In order to strengthen the systems and functions of the Office of Cooperative Research and Development, which plays the role of providing a seamless link between industry and academia, we will work on enhancing support systems by leveraging the URA system, advancing and securing human resources for industrial/academic cooperation, and promoting cooperation on campus with relevant organizations while clarifying the position of personnel involved in industrial/academic cooperation.

### Strategic Focus (8): Further promotion of industrial/academic cooperation

Major Policies	FY2015	FY2016	FY2017	Remarks
Expansion and enhancement of collaborative/commissioned research	<ul style="list-style-type: none"> <li>● Strengthening external communication capacity</li> <li>● Investigation to improve collaborative research throughout the university (improving Indirect Expenses ratio, increasing coordinators)</li> <li>● Strengthening organizational cooperation</li> </ul>	<ul style="list-style-type: none"> <li>● Reevaluation based on the Enterprise Partnership PT report</li> </ul>	<ul style="list-style-type: none"> <li>● Implementation of expansion of collaborative research based on re-evaluation</li> </ul>	Increase the number of collaborative research projects with industry by 7% relative to FY2015 levels
Application/commercialization of research results	<ul style="list-style-type: none"> <li>● Promoting the establishment of collaborative research courses</li> <li>● Constructing a framework for large-scale industry-academia cooperation related to social issues</li> <li>● Strengthening the system for the Office of Innovation and Business</li> </ul>	<ul style="list-style-type: none"> <li>● Reevaluation based on the Enterprise Partnership PT report</li> </ul>	<ul style="list-style-type: none"> <li>● Promoting the establishment of collaborative research courses</li> <li>● From the framework for large-scale industry-academia cooperation related to social issues, develop specific proposals and practical examples of issue resolutions</li> <li>● Enhancement of individual practical projects</li> </ul>	Increase the number of collaborative research courses and departments by 30% relative to FY2015 levels Establish more than one large-scale industry-academia cooperative project with a view toward actual social implementation
Research results that give traction to new industry creation	<ul style="list-style-type: none"> <li>● Strengthening the system for the Office of Innovation and Business</li> <li>● Organize venture capital and funds and begin university-funded projects</li> </ul>	<ul style="list-style-type: none"> <li>● Reevaluation based on the Enterprise Partnership PT report</li> </ul>	<ul style="list-style-type: none"> <li>● Construct a system to support strategies for intellectual property, assuming industrialization starting from the research stage, related to fields of study and issues that are emphasized by the university (Office of Innovation and Business)</li> <li>● Establish the second fund and continue to expand university-funded projects</li> </ul>	Launch the first project in FY2015 Support 10 startup companies in 10 years (two of which will be global companies)
Retraining for professionals	<ul style="list-style-type: none"> <li>● Commencing a benchmark program for the development of marketing-type entrepreneurial personnel</li> <li>● Evaluation of issues for the development of entrepreneurial personnel</li> </ul>	<ul style="list-style-type: none"> <li>● Reevaluation based on the Enterprise Partnership PT report</li> </ul>	<ul style="list-style-type: none"> <li>● Implementation of marketing-type entrepreneurial personnel training program, evaluation of issues reported in feedback from program participants, and actions to address these issues</li> </ul>	Construct proof-of-concept program for practical development of industry-academia interdisciplinary management personnel
Creation/utilization of intellectual property	<ul style="list-style-type: none"> <li>● Consolidate related operations in the university and organize and share various strategies for intellectual property</li> <li>● Create a system within the university for a high-quality patenting system</li> </ul>	<ul style="list-style-type: none"> <li>● Reevaluation based on the Enterprise Partnership PT report</li> </ul>	<ul style="list-style-type: none"> <li>● Implementation of high-quality strategies for intellectual property based on the re-evaluation</li> </ul>	Creation of new forms of intellectual property and re-evaluation of rules for utilizing them Achieve revenue of 120 million yen from implementation in FY2017

### Strategic Focus (8): Further promotion of industrial/academic cooperation

Major Policies	FY2015	FY2016	FY2017	Remarks
Strengthening the Office of Cooperative Research and Development's support systems and functions	<ul style="list-style-type: none"> <li>●Inauguration of Head Office of Enterprise Partnerships</li> <li>●Summary of enterprise partnership PT report</li> <li>●Establishing policies such as the Enterprise Partnership Fellow Policy</li> <li>●Make the activities of Enterprise Partnerships visible and high-level</li> </ul>	<ul style="list-style-type: none"> <li>●Implementation of issues in the Enterprise Partnership PT report</li> <li>●Formulating a system for proposing and investigating important issues related to making improvements within the university and in relations with government and industry</li> <li>●Creating an environment that enables commitment from the entire university</li> <li>●Formulating a university system that considers resolutions to social issues, as well as projects for individual technologies and social implementation</li> </ul>		<p>Investigate issues with the Enterprise Partnership PT by December 2016</p> <p>Organize functions for handling measures and proposals with respect to the Enterprise Partnership</p>

#### Achievements

##### ▷ Expansion of collaborative research, collaborative research courses and departments, and license revenues

The number of collaborative research has risen steadily from 831 in FY2012 to 974 in FY2014 (increase of 143). Additionally, the number of collaborative research courses and departments that conduct collaborative research with scientists from industry grew from 1 in FY2013 to 10 in FY2015. The amount received per course/department was 23.9 million yen (6 times the 3-year average collaborative research costs 4 million yen per year). License revenues increased from 88,581,000 yen in FY2012 to 107,425,000 yen in FY2014.

##### ▷ Commencing the Tohoku University Matching Support Project

With cooperation from the National Institute of Advanced Industrial Science and Technology (AIST), we began a support program to match research seeds between AIST and the University, leading to new projects.

##### ▷ Establishing the Center for Innovative Integrated Electronic Systems (CIES)

CIES was established in FY2012, and the building was completely funded by the private investment in FY2013. Since its foundation, CIES has led R&D activities on innovative integrated electronic system technology. CIES works to create practical applications from innovative core technologies created by Tohoku University, through our collaboration with a diverse range of Japanese and foreign companies in fields such as materials, equipment, devices, circuits, and systems. We manage and operate the CIES Consortium, an organization consisting of seven industry-academic collaborations, and three major national projects (the JST-ACCEL, ImPACT, and NEDO projects).

CIES was formed as a "many-to-many co-creation field" with industry-academic collaboration to cover the entire innovative technology supply chain. Through

this activity, CIES constructed the second such base for collaborative research between industry and academia in the world organized by a university in this academic area (other being in the U.S.) with first 300mm wafer process line and facilities for device characterization & physical analysis in Japanese university with dozens of Japanese and foreign companies participating.



The Center for Innovative Integrated Electronic Systems (CIES)

### ▷ Establishment of the Material Solutions Center (MaSC)

Through partnerships between Tohoku University and industry, the Material Solutions Center was established in FY2013 to support research and development of new materials for society of the future. Based on our world-leading practical accomplishments and tradition of material science research, and utilizing the research institutes of the Katahira Campus, our objective is to continue innovating and contributing to industrial reconstruction in the Tohoku region, as well as to strengthen Japan's international competitiveness.



The Materials Solutions Center

### ▷ Establishment of the Research Center for Rare Metal and Green Innovation (RaMGI)

RaMGI was founded in FY2013, with the aim of establishing a supply chain for stable material flow of rare metals, and became operational in FY2014. Strategic research and development with cooperation from industry, government, and academia occurs in four departments related to rare metals: securing primary resources, reducing usage and developing substitute materials, development of clean energy-related devices, and regrowth. The research center will focus on contributing to strengthening Japan's industrial competitiveness, becoming an active international research and development hub, and training world-class personnel.



The Research Center for Rare Metals and Green Innovation (RaMGI)

### ▷ Establishment of the Innovation Center for Creation of a Resilient Society (INCRS)

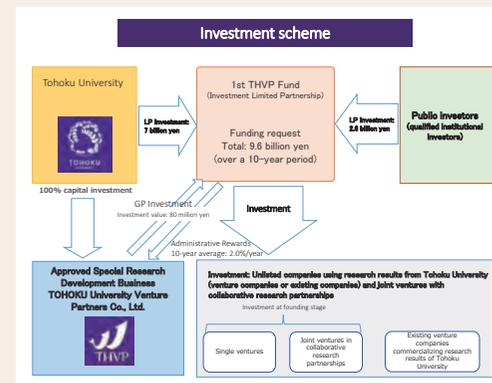
INCRS was established in FY2014 as a research base to build a society resilient and responsive to major issues such as aging and large-scale disasters. INCRS, a research and development center belonging to the COI Tohoku group, is involved in the development and social uptake of ingestible sensors that will gather information about the internal status of the body. Additionally, the Center is expected to be outfitted with a simulated environment that will allow practical testing of such sensors in a controlled setting.



The Innovation Center for Creation of a Resilient Society (INCRS)

### ▷ Establishment of the TOHOKU University Venture Partners Co., Ltd. (THVP)

In order to promote commercialization of research results to support university-led ventures, the Ministry of Education, Culture, Sports, Science, and Technology (MEXT) invested 100 billion yen in FY2012, along with four national universities including Tohoku University (Tohoku University: 12.5 billion yen). In FY2014, we founded the TOHOKU University Venture Partners Co., Ltd. (THVP), funded entirely by the university, and established the first venture support fund in FY2015. In the future, we plan to select research seeds for investment for capital gain, as well as to connect these projects to future innovations.



Investment scheme

### ▷ Japan's proud material world: Material Festival in Sendai

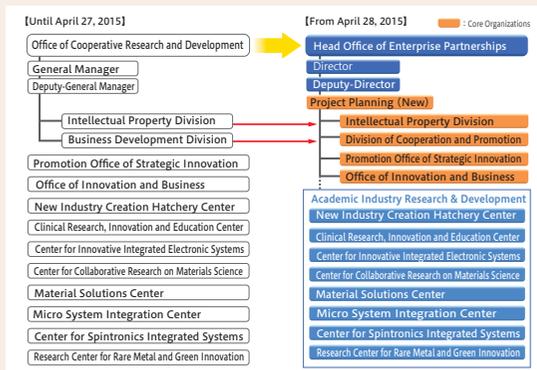
In order to communicate to the world with research results related to materials technology that is our strong fields, the university, National Institute of Advanced Industrial Science and Technology, and National Institute for Materials Science co-sponsored the event "Japan's Proud Material World: Material Festival in Sendai." Industry and students put on an exhibition, and there were a total of 2,640 participants.



Convention center for Material Festival in Sendai

### ▷ Establishment of the Head Office of Enterprise Partnerships

Considering the environmental changes surrounding the national university corporations, the enterprise partnership activities of various organizations within our universities must cast a wider net. Additionally, in order to implement enterprise partnership activities that are visible and high-level, the Office of Cooperative Research and Development underwent restructuring and renovations in April 2015 to become the Head Office of Enterprise Partnerships. In the future, under this system, we hope to tackle social implementation of our research results.



From the Office of Cooperative Research and Development to Head Office of Enterprise Partnerships



Collaborate with numerous partners, domestically and abroad, to spread knowledge to society.

#### Strategic Focus (9)

### Enhanced cooperation with the regional community

#### Major Policies

#### Create university-wide system to promote cooperative activities with the community

We will establish a university system to promote responsibility and encourage Tohoku University students and instructors to proactively engage in activities with the community. We will work hard to raise the profile of our liaisons between the university and community, increase visibility of university-wide community activities, strengthen ties with local government, and promote projects that address community issues.

#### Close collaboration between the community and alumni, expanding cooperative foundations

We will create a venue where Tohoku University students, instructors, and alumni can learn and conduct activities together with local residents, and establish a cultural/living environment in which they support one another harmoniously. By expanding the activities of the Tohoku University Shuyukai Alumni Association, we will deepen cooperation and exchange within the alumni network.

#### Contributing to the establishment/expansion of intellectual communities

We will embrace and encourage the intellectual curiosity of the community and promote nurturing education and research activities by widely leveraging Tohoku University's facilities and academic assets.

Strategic Focus (9): Enhanced cooperation with the regional community				
Major Policies	FY2015	FY2016	FY2017	Remarks
Create university-wide system to promote cooperative activities with the community	<ul style="list-style-type: none"> <li>●Inspect and evaluate the system for promoting cooperative activities with community, implement necessary changes, and make improvements</li> </ul>			
	<b>Visualization of social contributions</b> <ul style="list-style-type: none"> <li>●Operate and improve website</li> <li>●Share information with academic research staff database</li> </ul>	<ul style="list-style-type: none"> <li>●Improvement and enrichment</li> </ul>		
Close collaboration between the community and alumni, expanding cooperative foundations	<ul style="list-style-type: none"> <li>●Operate and expand network of Tohoku University Shuyukai Alumni Association</li> <li>●Strengthen cooperation and support functions among department alumni associations / Systematize department, accredited and class-year alumni associations</li> <li>●Expand support to graduates</li> <li>●Community activities cooperated with each alumni association member</li> <li>●Public involvement culture events related to cooperative research and development</li> </ul>			Improve capture ratio of post-graduate information to 50% within 5 years
	<ul style="list-style-type: none"> <li>●Investigate Tohoku University Curator System (ex. Tohoku University Shiho System)</li> </ul>		<ul style="list-style-type: none"> <li>●Implementation and inspection</li> </ul>	Launch WG in FY2015
	<b>Expansion of Tohoku University Fund</b> <ul style="list-style-type: none"> <li>●Expand funding menu</li> <li>●Strengthen the university promotional policy (construction of DB, sharing of information between departments, strengthening personnel system)</li> <li>●Develop strategic fundraising</li> <li>●Cooperate with post-graduates (hosting social gatherings with influential people, cooperation with Shuyukai)</li> <li>●Enrich project content</li> </ul>		<ul style="list-style-type: none"> <li>●Develop and evaluate strategic fundraising</li> </ul>	Establish six new special funds in FY2015 and gradually establish more Enrich donation rewards (ex. distribute Tohoku University calendars starting in FY2016) Increase the number of donations and maintain repeat donations ratio at 60%
Contributing to the establishment/expansion of intellectual communities	<ul style="list-style-type: none"> <li>●Expand and improve Science Café and Liberal Arts Salon</li> <li>●Promote cultural events utilizing Tohoku University's facilities and academic assets</li> <li>●Attract conventions cooperating with regional governments</li> </ul>			Support promotional efforts to annually host 50 international seminars and conferences
	<ul style="list-style-type: none"> <li>●Investigate new projects, such as a community college</li> </ul>		<ul style="list-style-type: none"> <li>●Implementation and inspection</li> </ul>	

## Achievements

### ▷ Close collaboration between the community and alumni, expanding co-operative foundations

In order for parents and guardians of current students to understand university projects and the learning environment, we invited them to participate in a discussion session. Participants in this event came from all over Japan. The parents and guardians toured the educational facilities, such as the library and lecture halls, as well as the student cafeteria. The President of the university and Executive Vice President also spoke and explained the vision for Tohoku University, the educational curriculum, and support for student life. We also held a meeting over tea, where parents could meet each other and socialize in a relaxed atmosphere. Additionally, on Homecoming Day, which is co-sponsored by the Tohoku University Shuyukai Alumni Association, participants can experience themes related to famous people from Tohoku University or Sendai, see invited guests in seminars, or eat sweets at Sweet Town, a collection of famous confectioneries. Through this collaborative event, post-graduates can become more connected to the community.

Tohoku University Shuyukai Alumni Association: <http://www.bureau.tohoku.ac.jp/alumni/index.html>



Parents/guardians visiting and experiencing the cafeteria



Meeting over tea

### ▷ New activities with the community

As part of establishment of an intellectual community, we are actively involved in promoting educational activities to satisfy people's hunger for learning. In 2005, we began Science Café, the first of its kind in Japan, which has become a regular community event in which all types of people, from high school students to adults, participate. In January 2014, we held our Special Tohoku University Science Café 100th Edition, and emphasized the significance of the Science Café program to its many participants. Additionally, we sponsored concerts as part of a Four Seasons program and lectures by Nobel Laureates at the Tohoku University Centennial Hall, and are working to play a central role in the creation and exchange of culture in the community. We plan to hold lobby concerts starting in FY2014 using the lobby of the Kitamon Hall in the Katahira campus, with performances by professional musicians including singers, pianists, and violinists. We hope that these events will make the campus seem approachable to all members of the community.

Tohoku University Science Café:  
<http://cafe.tohoku.ac.jp/>



### ▷ Tohoku Future Project Lecture

This joint project between Tohoku University and Kahoku Shimpō Publishing Company introduces the latest in scientific technology to the general public. This project, which started in FY2013, occurs once annually. In FY2013, it was entitled "The Earthquake and the memories it left behind: How best to convey the experience and memory of the Earthquake." In FY2014, the project was entitled "A society based on revolutions and evolutions in optical technology."

## Strategic Focus (10)

### Enhanced cooperation with the international community

#### Major Policies

#### Strengthening international communicativity

In order to improve communication with the international community, we will make it a university-wide task to appoint full-time staff for conducting general public relations in English in addition to cooperatively improving both the hard and soft aspects of our overseas-facing information communication systems. Moreover, we will work to host/attract international symposiums, and attract international academic research institutes promoted by local industry, academic organizations, and government.

#### Raising our worldwide university ranking

We will plan and implement effective measures for raising our worldwide university ranking, which will in turn lead to better name recognition for Tohoku University abroad and contribute to increasing our number of international students.

### Fundamental improvements aimed at revitalizing outgoing international programs

After defining our global expansion strategy within our university-wide system, we will create systems that will encourage active participation in overseas programs by students and young researchers, and promote the development of new fields that will lead international trends.

#### Strategic utilization of overseas centers

We will utilize our overseas centers, which act as the international "face" of Tohoku University, as liaisons for personnel exchange (including the sending and receiving of international students), public relations activities, promoting international collaborative research/consortium creation, and information gathering activities.

#### Basic improvements aimed at stimulating recruitment of foreign personnel

In cooperation with the various departments, one of our university-wide tasks will be to systematically and comprehensively create an infrastructure to support the recruitment of foreign personnel.

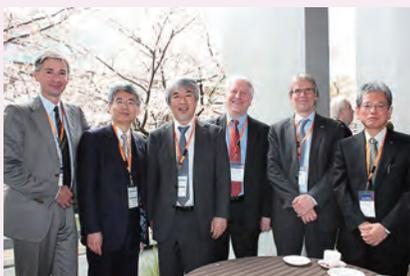
**Strategic Focus (10): Enhanced cooperation with the international community**

Major Policies	FY2015	FY2016	FY2017	Remarks
Strengthening international communicativity	<ul style="list-style-type: none"> <li>● Introduce the latest projects of the university through an international network of various consortia, such as HeKKSaGOn and APRU / Strengthen the network with world leading universities</li> <li>● Send research groups to various workshops held by the consortia, and introduce the university's strengths in education and research</li> </ul>	<ul style="list-style-type: none"> <li>● Host various workshops and consortia</li> </ul>	<ul style="list-style-type: none"> <li>● Enhance the English version of the website</li> <li>● Establish a university-wide support system to publish press releases in English</li> <li>● Develop multidimensional methods for disseminating information (reorganization of an English version of the annual review, e-Newsletters, SNS)</li> <li>● Establishment and operation of the information lounge</li> </ul>	<p>FY2015: Host HeKKSaGOn general meeting, T.I.M.E. general meeting</p> <p>FY2016: Host the AEARU workshop and APRU summer school</p> <p>Begin university-wide support for disseminating information in English in FY2015</p>
Raising our worldwide university ranking	<p><b>Implementation of Top Global University Project</b></p> <ul style="list-style-type: none"> <li>● Commence the International Joint Graduate Program; establish an educational foundation to cultivate global leaders</li> </ul>	<p><b>Implementation of the Program for Promoting the Enhancement of Research Universities</b></p> <ul style="list-style-type: none"> <li>● Host the Tohoku Forum for Creativity and establish overseas liaison offices; establish URA research foundation</li> </ul>		Well-organized promotion aimed at achieving target value for each project
Fundamental improvements aimed at revitalizing outgoing international programs	<ul style="list-style-type: none"> <li>● Establish new academic exchange agreements, and renew existing ones, to provide a foundation for active foreign exchange of young researchers and students</li> <li>● Establish new academic exchange agreements specific to student exchange</li> </ul>	<ul style="list-style-type: none"> <li>● Finalize academic exchange agreements to establish International Joint Graduate Programs</li> </ul>		Finalize academic exchange agreements to establish three International Joint Graduate Programs by FY2017
Strategic utilization of overseas centers	<ul style="list-style-type: none"> <li>● Proactively develop projects through cooperation with existing overseas liaison offices</li> <li>● Establish Office in Hanoi and Liaison Office at the University of Lyon</li> </ul>	<ul style="list-style-type: none"> <li>● Establish new overseas offices</li> </ul>	<ul style="list-style-type: none"> <li>● Investigate the feasibility of establishing new overseas offices</li> </ul>	FY2016: Establish Bangkok Office and Russian Far Eastern Region Office
Basic improvements aimed at stimulating recruitment of foreign personnel	<ul style="list-style-type: none"> <li>● Start supporting foreigners in their application for Status of Residence</li> <li>● Publish a website that provides support information on daily life</li> </ul>	<ul style="list-style-type: none"> <li>● Enhance support to foreigners in their application for Status of Residence and various other aspects of daily life</li> <li>● Enhance support information on daily life</li> </ul>		Enable support system for application for Status of Residence in all campuses in FY2015

## Achievements

### ▷ Participation in international university consortia (APRU, AEARU, T.I.M.E., HeKKSaGOn, RENKEI)

Through our participation in general and director's meetings for each consortium, we are continually presenting the university's latest education and research projects to international universities. In order to present our latest research, we have also sent research groups representing each field of research to workshops hosted by these consortia. In April 2015, we hosted the Fourth HeKKSaGOn (The German-Japanese Universities Alliance), including the President's meeting, plenary sessions, and workshops spanning eight fields of research.



HeKKSaGOn President's meeting



RENKEI summer school hosted by Tohoku University

### ▷ APRU-IRIDeS multi-hazard summer school

Since 2013, the International Research Institute of Disaster Science (IRIDeS) has functioned as the hub of the multihazard program of the Association of Pacific Rim Universities (APRU). The third iteration of the program, held in FY2015, was entitled "Towards implementation of a new international framework for disaster prevention." The lectures in this program were based on lessons and experience gained during the 2011 Great East Japan Earthquake, which involved medical care during times of disaster, education, disaster archives, residential reconstruction, and a framework for disaster prevention in Sendai. 45 people from universities in 10 countries participated in this program.

### ▷ Top Global University Project

Tohoku University was selected for the Top Global University Project in FY2014 by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). The Tohoku University Global Initiative enhances the existing foundations for global education and further accelerates globalization. Additionally, we also established seven international joint graduate programs, propelling the university forward to become a center of excellence for education and research. Our goal is to continue these activities and become a university that is well-respected throughout the world for its strengths and successes.



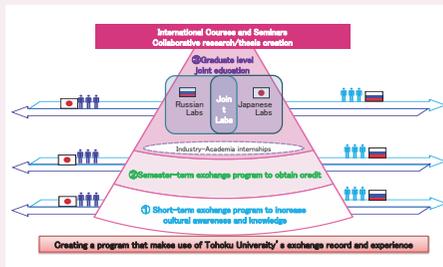
Tohoku University's Framework for our "Top Global University Project"



Top Global University Project Kickoff Symposium held in February 2015

### ▷ Re-Inventing Japan Project (Russia)

In order to train new and valued personnel in Japan and Russia, we established a program to promote exchange through cooperation with Russian universities and the Russian Academy of Sciences. This program included the following components: a short-term student exchange aimed at mutual cultural understanding; a pre-departure exchange in which students can earn credits; and an exchange of education and research for graduate school students, based on a high level of joint research.



A model for stepwise student education and exchange with collaborating Russian universities



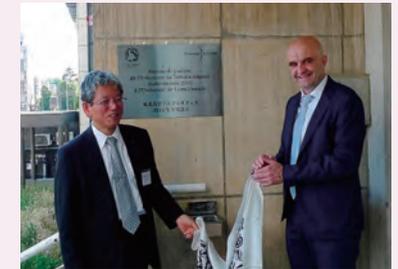
Ceremony for completing the cultural experience program

### ▷ Establishment of the Liaison Office at the University of Lyon

In June 2015, Tohoku University and the University of Lyon established joint projects spanning a multitude of educational and research fields. In order to promote activities that support academic cooperation and knowledge sharing, the two universities agreed to establish liaison offices in their respective countries. Until now, MOU was routed through INSA-Lyon, but this system has been replaced by a model of direct communications with the University of Lyon, based on past successful interactions with the university.



Signing the agreement for the establishment of the liaison office



Ceremony celebrating the opening of the liaison office

### ▷ Establishment of the International Support Office

In 2014, Tohoku University established the International Support Office in order to ease the transitions of internationally renowned researchers and qualified students. This support office, which is aimed at foreign exchange students and researchers, provides support for obtaining Status of Residency, as well as tips on living in Japan. Moreover, the website introduces useful information, including necessary pre-departure formalities, information on daily life, and international exchange support in Sendai.



TU Support: the website providing life support information to foreign exchange students and researchers

## Strategic Focus (11)

### Enhance capacity for informative communication

#### Major Policies

#### Establishing and communicating Tohoku University's identity

We will conduct strategic informative communication activities based on a strong reaffirmation of Tohoku University's identity. This will be predicated on a renewed shared awareness on the part of our constituents regarding our university's fundamental ideals, mission, history, and vision for the future.

#### Development of effective, personalized communication

We will conduct effective communication by quickly and smoothly providing appropriate content by appropriate delivery channels to meet the diverse needs of the target audience (those who will receive the information). In addition to systematically ascertaining a wide range of university information, we will expand and enhance our public relations system in order to deliver personalized and effective informative communications.

Strategic Focus (11): Enhance capacity for informative communication				
Major Policies	FY2015	FY2016	FY2017	Remarks
Establishing and communicating Tohoku University's identity	<ul style="list-style-type: none"> <li>●Creation of departmental history videos (ten undergraduate and graduate schools)</li> <li>●Creation of CD and book for the university anthem</li> </ul>	<ul style="list-style-type: none"> <li>●Creation of departmental videos (six graduate schools, research institutions)</li> <li>●Popularization of the university anthem and the official song of Tohoku University</li> </ul>		Creation of a campus map timed to opening of the subway (FY2015: Kawauchi, Aobayama; FY2016 and beyond: Katahira, Seiryō)
	<b>Implementation of the strategic communication based on the university's identity</b> <ul style="list-style-type: none"> <li>●Revision and creation of the campus map</li> <li>●Development of university-themed products</li> <li>●Cooperation with Tohoku University Shuyukai Alumni Association (Homecoming Day, meeting with the alumni, hosting discussion sessions for parents and guardians)</li> </ul>			
Development of effective, personalized communication	<ul style="list-style-type: none"> <li>●Improving and enriching the public relations system</li> <li>●Improving and enriching dissemination of information based on the website</li> <li>●Strengthen international communicativity (Enhance the English version of the website; establish a university-wide support system for publishing press releases in English; develop multidimensional methods for disseminating information [reorganization of an English version of the annual review, e-Newsletters, SNS]; establishment and operation of the information lounge)</li> <li>●University-wide sharing of PR tools</li> <li>●Inspection and improvement of advertising media</li> <li>●Hosting events appropriate for stakeholders (Discussion sessions for parents and guardians; social gatherings with influential people; discussion sessions with media in Sendai; events co-hosted with media)</li> </ul>			Publication of the FY2015 annual review reorganization and the e-Newsletter in English Start of university-wide support for disseminating information in English in FY2015 Installation of digital signage (three locations in FY2016)

## Achievements

### ▷ Establishment of the International Public Relations Center

In order to strengthen the dissemination of information in English, we established the International Public Relations Center, which employs a native English writer and web developer. They refreshed the English version of the website and established accounts with six social network services, creating high-impact news with materials they obtained on their own. They also support for departments to disseminate their information to overseas, working to strengthen the university-wide communication system.



Interviewing at the Fukushima Studio Tour

### ▷ Improving and enriching dissemination of information based on the website

In order to improve and enrich the university website, we completely revised and refreshed the contents of the English version. In order to attract foreign researchers and exchange students, the information on the revamped website highlights the world-leading research performed at the university. We are also active on SNS, enabling real-time dissemination of information.

Tohoku University website: <http://www.tohoku.ac.jp/>



Full overhaul of the English version of the website



Google+ social networking service

### ▷ Creating a university identity

Mr. Kazumasa Oda, an alumnus of Tohoku University, wrote and composed the university anthem, "Green Hills." The song originated from a discussion with the President, who approached Mr. Oda to create the song in order to boost the morale of the alumni, students, faculty members and staff of the university who were actively involved in recovery and reconstruction efforts after the Great East Japan Earthquake. "Green Hills" is sung during convocation, and we hope that this song will continue to inspire the community of Tohoku University in the future.

University anthem "Green Hills": <http://www.tohoku.ac.jp/japanese/midori/>



Cover for university anthem "Green Hills"



Backside of cover featuring artwork by Mr. Oda

In addition, in FY2013 we created a promotional video introducing the history of the university from its establishment until the present day, "The History of Tohoku University." This video has been used during orientation as well as during class, and is also shown on the website and at alumni events. The film is intended to remind all members of the Tohoku University community of our university's mission and identity. We are also in the midst of creating videos to showcase the history of each department; we plan to complete this project in FY2015.



Achieve an open campus where many cultures coexist and interact with diverse value systems.

Strategic Focus (12)

Creating a multicultural campus utilizing our unique surroundings and history

Major Policies

Creating a campus that encourages international and intellectual exchange

Our campus environment will become vibrant with international intellectual exchange, which will be focused on open spaces where international and Japanese students, instructors, and visitors from abroad can freely drop by or meet, and

where the results of Tohoku University's research will be exhibited. In addition to upgrading the University Library to act as our main learning commons, we will create spaces where people can relax and interact near university entrances, such as the new subway stations.

Using our history and natural environment to create scenery that facilitates academic work

We will maintain a campus environment that promotes learning and academic work by students, instructors, and the Sendai community by leveraging our lush, beautiful surroundings, historical buildings and memorials, trees, and monuments on our campuses.

Establishing an environmentally friendly campus to lead the post-earthquake reconstruction

We will proceed with the restoration and construction of our buildings to achieve a campus that leads the world in terms of safety and security. We will steadily implement environmentally friendly policies, such as reducing power consumption and adopting technologies that reduce our environmental footprint.

Strategic Focus (12): Creating a multicultural campus utilizing our unique surroundings and history				
Major Policies	FY2015	FY2016	FY2017	Remarks
Creating a campus that encourages international and intellectual exchange	<ul style="list-style-type: none"> <li>●Organization of the square in front of the Sendai City Tozai Subway Line</li> <li>●Establishment of an integrated library as a base for intellectual exchange</li> <li>●Establishment of a public space capable of disseminating information</li> </ul>			Establish the University House beginning operation in FY2019
		<ul style="list-style-type: none"> <li>●Preparing a learning environment such as the University House, which allows strategic admission of foreign exchange students</li> </ul>		
Using our history and natural environment to create scenery that facilitates academic work	<ul style="list-style-type: none"> <li>●Arrangement of the Katahira Campus, taking advantage of historical buildings</li> </ul>			
	<ul style="list-style-type: none"> <li>●Arrangement of the Kawauchi and Seiryō campuses (such as the campus mall)</li> </ul>	<ul style="list-style-type: none"> <li>●Arrange the area around the Kawauchi South Lecture Hall, taking advantage of a beautiful landscape full of greenery</li> </ul>		
Establishing an environmentally friendly campus to lead the post-earthquake reconstruction	<ul style="list-style-type: none"> <li>●Establish the new building for the Graduate School of Environmental Studies</li> </ul>	<ul style="list-style-type: none"> <li>●Establish Operation and Medical Check Building; continuing to support buildings that are resistant to disasters, as leading rolls for reconstruction and revitalization</li> </ul>		Establish Operation and Medical Check Building, beginning operation in FY2018 Beginning education and research in FY2018
	<ul style="list-style-type: none"> <li>●Arrange the new Aobayama Campus (construct new buildings for the Graduate School of Agricultural Science and equip the Animal Research and Plant Systems Research Institutes)</li> </ul>	<ul style="list-style-type: none"> <li>●Continued arrangement of the Aobayama Campus</li> </ul>		
	<ul style="list-style-type: none"> <li>●Investigation of specific measures based on the report by the campus master plan advisory committee</li> </ul>	<ul style="list-style-type: none"> <li>●Implementation and validation of measures</li> </ul>		Publish " Environmental Management Report " annually
	<ul style="list-style-type: none"> <li>●Investigation of the effects of energy-saving measures</li> <li>●Reduction of greenhouse gas emissions and appropriately regulating supply and demand of electricity in summer and winter</li> </ul>			

Achievements

▷ Renovations to Tohoku University Library

The first floor of Tohoku University Library has been renovated and reopened as an active learning space (Learning Commons). In addition to being a tranquil reading and learning environment and source of educational materials, this new space supports both independent study and active group learning. Now students can focus on searching for information, as well as conduct co-learning sessions through debates and discussions. In response to increased globalization, we also constructed a global floor on the second floor of the library. In the Global Learning Room, we provide English learning materials, foreign exchange program information, and reference books for foreign exchange students. In the adjacent Global Reference Room, we provide 100 seats and UN and EU materials, as well as earthquake-related materials. With these renovations, the second floor has become a place ideal the global environment.



1st floor Learning Commons



2nd floor Global Learning Room, lined with language materials

▷ Renewal of the area around Tohoku University Centennial Hall (Kawauchi Hagi Hall)

We built a sidewalk between the Tohoku University Centennial Hall (Kawauchi Hagi Hall) and Sendai International Center. With the completion of this sidewalk, the entire Kawauchi sector can be used, revitalizing this area and making the convention capital of Sendai a reality. A new cafe also opened on the 1st floor faculty club of Centennial Hall, providing new places for interaction.



A new sidewalk



Centennial Hall 1st floor cafe Mozart Klee's coffee

Renewal of the Kawauchi South Campus

The Multidisciplinary Research Building has been completed, providing a better learning environment. In addition to the lecture rooms, which host lectures for the Graduate School of Economics and Management and Graduate School of Law, we have also built a common space and a cross culture space for students.



Multidisciplinary Research Building



Common space



Cross culture space

▷ Constructing buildings based on the lessons learned in the earthquake

We completed renovations on buildings rendered unusable by the earthquake, which included the Departments of Electrical, Information, and Physics Engineering; Metallurgy, Materials Science and Materials Processing; and Civil Engineering and Architecture in the Graduate School of Engineering. Although the design and plan for each building differs, three common concepts have emerged: seismic base isolation, cultural exchange, and dissemination of research results. We also completed Science Complex C in the Graduate School of Science, which incorporates seismic base isolation.



Electrical, Information, and Physics Engineering Building No. 1



Materials Science and Engineering, Education and Research Building



Civil Engineering and Architecture, Laboratory Building of Architecture



Science Complex C

▷ Reducing emissions of greenhouse gases

In 2008, the university implemented "Measures for reducing greenhouse gas emissions" with the goal of reducing the volume of carbon dioxide emissions by 2% annually. In FY2014, we succeeded in reducing emissions by 6.4% relative to the previous year. We accomplished this by introducing equipment and facilities with a high energy efficiency, improving methods for use of research equipment, implementing simultaneous closures, and devising creative ways to save energy through temperature settings and off-lighting. The university is committed to actively promoting energy reduction with cooperation from all personnel, not only in the research setting but also in the daily environment.



## Establish a university administration structure that elevates synergy among individual constituents.

### Strategic Focus (13)

#### Restructured/enhanced administrative infrastructure/operation framework

##### Major Policies

##### Clear division of roles and optimization within the university administration

We will establish a system that allows the president to, with the cooperation of department heads, take university-wide leadership based on the opinions of all the university's constituents to enable the development of strategic activities. Furthermore, we will clarify and optimize the roles and functions of university administration.

##### Fostering management personnel to take on university administration

To ensure that capable staff members become deeply involved in strategic operations within university administration, we will move ahead with the creation of systems that maximize performance by our team of instructors and staff by providing high-quality workforce enhancement and staff training.

##### Establishing campus-wide, English-fluent systems

We will undertake structural reforms to improve the English fluency of our administrative functions. In addition we will make active university-wide efforts to improve our personnel's English abilities by employing English-speaking staff and implementing practical English training and testing.

#### Creating mechanisms to improve our capacity for on-site education and research

We will decisively implement structural workplace reforms, such as discontinuing unnecessary meetings/tasks, and consolidating "boilerplate" work. We plan to optimize on-site role division of instructors and staff, and create an environment in which each staff member can fully carry out his/her own work planning and implementation. With regard to on-site departmental education and research, we will construct mechanisms that recruit and support projects aimed at improving on-site capacity by individual staff and small groups comprised of various units -departments, majors, divisions, etc. We will continue to gather excellent human resources and create a rewarding workplace.

#### Enhanced application of information infrastructure to support diversified education and research

We will continue to promote the efficient and rational use of limited university resources, and affect necessary changes of consciousness, in order to support the diversified education and research activities that are appropriate to a world-class university. Simultaneously, we will plan for the sustained operation, enhanced application, and further advancement of our information infrastructure.

#### Promoting true gender equality

Under its "Open Door" policy, our university became the first national university in Japan to accept female students 100 years ago. Since then, we have striven to amend the gap between men and women, enhance our inclusive support system, and improve the research and work environment at Tohoku University even more. In addition, we will promote further comprehensive, organized efforts based on the Tohoku University Action Plan for Gender Equality.

Strategic Focus (13): Restructured/enhanced administrative infrastructure/operation framework

Major Policies	FY2015	FY2016	FY2017	Remarks
Clear division of roles and optimization within the university administration	<p><b>Realization of the Tohoku University Global Vision</b></p> <ul style="list-style-type: none"> <li>●Harmonized work for university-wide and departmental strategies (shared governance)</li> </ul> <p><b>Establishment and optimization of functional centralized governance</b></p> <ul style="list-style-type: none"> <li>●Rapid decision-making and clarification of systems for taking responsibility</li> <li>●Establishment of international advisory board and implementation of external evaluations</li> </ul>		<ul style="list-style-type: none"> <li>●Evaluation and improvement of projects</li> </ul>	<p>Establish the international advisory board in FY2015 and implement external evaluations in FY2016</p> <p>Periodic reporting of IR analysis results to President Assistance Meeting</p>
	<p><b>Strengthening the structure of IR functions</b></p> <ul style="list-style-type: none"> <li>●Establishment of the Office of Institutional Research</li> </ul>	<p><b>Utilize data and analysis results of the Office of Institutional Research</b></p> <ul style="list-style-type: none"> <li>●Collection and analysis of necessary data</li> <li>●University-wide sharing of primary data and analysis results</li> </ul>		
Fostering management personnel to take on university administration	<p><b>Re-evaluation of personnel evaluation policy of administrative staff</b></p> <ul style="list-style-type: none"> <li>●Trial implementation of personnel evaluation</li> <li>●Investigation of potential improvements in personnel management</li> </ul>	<p><b>Shift to new personnel evaluation policy for administrative staff</b></p> <ul style="list-style-type: none"> <li>●Revision of personnel evaluation manual</li> <li>●Continuous investigation of issues and effect of implementation</li> </ul>	<ul style="list-style-type: none"> <li>●Implementation of personnel management based on new personnel evaluation policy (amendment of personnel policies, development of new training programs)</li> </ul>	
	<ul style="list-style-type: none"> <li>●Continual implementation of our own employment exam for administrative staff</li> </ul>			
Establishing campus-wide, English-fluent systems	<ul style="list-style-type: none"> <li>●Implementation of TOEIC Institutional Program Test and English study seminars</li> <li>●Implementation of e-Learning English course and English language training</li> </ul>			<p>Increase at least 100 administrative staff with TOEIC scores over 700 by FY2021</p>
		<ul style="list-style-type: none"> <li>●Personnel management based on an understanding of English ability and training record</li> </ul>	<ul style="list-style-type: none"> <li>●Gradual implementation of making all administrative documents bilingual in English and Japanese</li> </ul>	
Creating mechanisms to improve our capacity for on-site education and research	<ul style="list-style-type: none"> <li>●Investigate issues through the Business Operations Reform Task Force, and plan and propose action plans</li> <li>●Decision-making on measures to resolve issues by the Business Operations Reform Project Team and tracking implementation</li> <li>●Evaluation and improvements for issue resolution</li> </ul>			<p>Establish framework for collecting new opinions on business operation reforms and streamlining in FY2016</p>

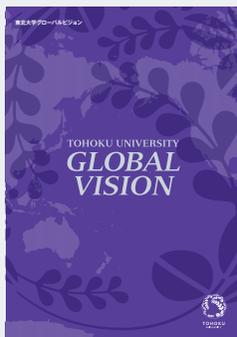
Strategic Focus (13): Restructured/enhanced administrative infrastructure/operation framework

Major Policies	FY2015	FY2016	FY2017	Remarks
<p>Enhanced application of information infrastructure to support diversified education and research</p>	<p>Promotion of university-wide optimization and centralization of the information technology infrastructure</p> <ul style="list-style-type: none"> <li>●Introduction of new main network</li> <li>●Promoting usage of "TU Mail" Tohoku University E-mail for faculty and staff</li> </ul> <p>Strengthening disaster resistance and security</p> <ul style="list-style-type: none"> <li>●Intercept P2P communications used to send and receive files that infringe on copyrights</li> <li>●Establishment of information-related business continuity plan (BCP)</li> <li>●Strengthening the information technology infrastructure</li> </ul>	<p>Promotion of university-wide optimization and centralization of the information technology infrastructure</p> <ul style="list-style-type: none"> <li>●Additional functions for "TU Mail"</li> <li>●Promote and support transfer of department-specific mail environment</li> </ul> <p>Strengthening disaster resistance and security</p> <ul style="list-style-type: none"> <li>●Establishment of information-related business continuity plan (BCP)</li> <li>●Strengthening the information technology infrastructure</li> <li>●Consolidate facilities and optimize firewalls to reduce risk</li> <li>●Simulator training against targeted threat emails</li> <li>●Strengthening information security systems</li> </ul>	<p>Promotion of university-wide optimization and centralization of the information technology infrastructure</p> <ul style="list-style-type: none"> <li>●Promote and support transfer of department-specific mail environment</li> </ul>	<p>Increase number of departments that have transferred from department-specific mail environment</p> <p>By FY2016, develop future plans for information technology infrastructure after FY2018</p>
<p>Promoting true gender equality</p>	<ul style="list-style-type: none"> <li>●Preparations for establishment of the third nursery school on the new Aobayama campus</li> </ul>	<ul style="list-style-type: none"> <li>●Projects to increase the proportion of women in faculty and staff</li> </ul>	<ul style="list-style-type: none"> <li>●Begin operations at the third nursery school</li> <li>●Integrated operations between the third nursery school and Kawauchi Keyaki nursery school</li> </ul>	<p>Increase the proportion of women faculty members to 19% by the end of FY2021</p>

## Achievements

### ▷ Planning for the Tohoku University Global Vision

This vision was devised as a guideline for the future of our university, with the goal of proceeding with these objectives as a whole university. The global vision is comprised of the Satomi Vision, drawn from a university-wide perspective (7-Vision Plan, Strategic Focuses, and Implementation Schedule) and the Faculty's Vision (Individual Organizational Policies, Strategic Focuses, and Major Policies). Both Visions work together to support the development of global human resources and reinforcement of innovative practices at the university level, and summarizes projects and actions planned until FY2017. The Faculty's Vision introduces specific goals at the forefront of diverse education, research, and community partnership activities, based on each faculty's organizational mission. The Vision also clearly states what needs to be done, now and in the future, in order to achieve these goals.



Tohoku University Global Vision

### ▷ Construction of functional centralized governance and reconstruction of internal regulatory system

In order to support rapid decision-making, we underwent a reorganization aimed at concentrating and optimizing university resources by function. This effect resulted in establishment of the following six organizations: 1) Institute for Excellence in Higher Education, 2) Institute for Promoting Graduate Degree Programs, 3) Organization for Advanced Studies, 4) International Initiatives Organization, 5) Head Office of Enterprise Partnerships, and 6) Institute for Disaster Reconstruction and Regeneration Research. We also studied, inspected, and organized the essential elements of the internal regulatory system and implemented this information in a formally written document. We also inspected and re-evaluated internal regulations in accordance with the partial revisions to the School Education Law and National University Law; these efforts focused on strengthening governance functions.

### ▷ Revisions to the departmental evaluation index

New indices have been established for aiming at improving numerical index, strategic focuses for each department based on redefined missions, and individualized plans targeting the 3rd Evaluation for Current Mid-Term Goals.

### ▷ Revisions to personnel evaluation policy for administrative staff

The revisions to the personnel evaluation policy affecting administrative staff include addition of bottom-up objectives, sharing objectives within the organization, and other trial projects such as feedback of evaluation results communicated via interviews and evaluation of achievements considering non-target office achievements.

### ▷ Implement our own employment exam for administrative staff

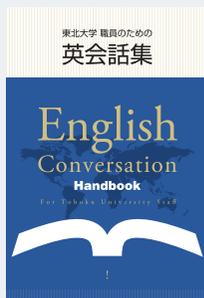
In order to secure talented personnel, we introduced two our own employment exams in addition to the public service employment exam. The first was aimed at new graduates, and the second was aimed at those with experience in the private sector.

### ▷ Establishing the Business Operations Reform Project Team

In order to speed up business operations and make them more efficient, in FY2014 the Business Operations Reform Project Team was established to determine the direction of business reform. The five most important reform issues were assigned to the appropriate Business Operations Reform Task Force: Purchase Operations, Travel Expense, Investigation into making student/faculty/staff ID cards into IC cards, Departmental Overhead Processing, and Working Hours Monitoring for Faculty Members.

### ▷ Strengthening the English skills of administrative staff

Due to recent progress in globalization, it is necessary to provide support for foreign researchers and exchange students, whose numbers are expected to increase in the future, as well as globalize the administrative system. We are aiming towards an organization that can provide high-quality interactions with international businesses. To that end, we have begun projects to ensure that, in the future, all members of administrative staff will have a base level of English ability. These efforts include bilingual administrative documents in English and Japanese, e-Learning English training, TOEIC Institutional Program Test, and overseas training.



"English-mail & letter: Example Sentences Handbook" and "English Conversation Handbook for Tohoku University staff"



Overseas training for administrative staff at the University of Sydney

### ▷ Organization of the student/faculty email environment

We introduced a new email system to unify the method of communication between the university and its students; this system went online in October 2014. In March 2015, we introduced "TU Mail" Tohoku University E-mail for faculty and staff that began providing services in April of the same year. These two mail systems provide a structure for the email environment, establishing a unified method for communications.

### ▷ Strengthening disaster resistance and security

We introduced and began using a firewall for the university in July 2014. We abandoned decentralized management on a department-level basis, and switched to a centralized management system that manages addresses and security measures.

### ▷ Implementation of the 100th Anniversary of the 1st Women Students Project

In 1913, Tohoku University became the first university in Japan to admit women students, and in 2013, we celebrated the 100th anniversary of that historic event. In commemoration of this event, we held a symposium, "The 100th Anniversary of the First Women Students - From 100 years of Rikejo to the development of future women leaders." An anniversary logo was also created for this event. A 10-year guiding principle, "Promotion of shared and cooperative participation between men and women in Tohoku University," was established. In accordance with these guiding principles, the Center for Gender Equality Promotion was established in 2014.



Acknowledgement of material donations of Chika Kuroda, received by Kotaro Kuroda



Panel discussion at the anniversary symposium



Logo for the 100th Anniversary of the 1st Women Students

Strategic Focus (14)

Compliance promotion system

Major Policies

Construction of a risk management system and advancement of individual and organizational compliance

We will establish a practical risk management system, able to cope with various internal and external risks, in which each constituent of the university will be a conscientious risk manager. We will work to advance individual and organizational compliance as a community and public entity.

Establish systems that emphasize research ethics in implementing and publicizing outstanding research

We will establish and disseminate rules related to research ethics in order to guarantee our various university research activities.

Strategic Focus (14): Compliance promotion system				
Major Policies	FY2015	FY2016	FY2017	Remarks
Construction of a risk management system and advancement of individual and organizational compliance	<ul style="list-style-type: none"> <li>● Investigate system and method of risk management</li> <li>● Maintain standards of conduct and manuals, and implement compliance education</li> </ul>	<ul style="list-style-type: none"> <li>● Continuous development and improvement (Monitoring and improvements to various measures; development of compliance education)</li> </ul>		Mandatory compliance education for all personnel involved with research funds
	<ul style="list-style-type: none"> <li>● Strengthening various measures (measures to prevent misuse of research funds, harassment measures, measures for personal information management, measures for managing legal documents)</li> </ul>	<ul style="list-style-type: none"> <li>● Continuous development and improvement of various measures (Measures to prevent misuse of research funds, harassment measures, measures for personal information management, measures for managing legal documents)</li> </ul>		Strengthen education related to protection of personal information through e-Learning
		<ul style="list-style-type: none"> <li>● Strengthening university-wide promotional activity for compliance</li> </ul>	<ul style="list-style-type: none"> <li>● Continuous development and improvement of university-wide promotional activity for compliance</li> </ul>	Organization of a manual for management of legal documents and support tools for legal document management
Establish systems that emphasize research ethics in implementing and publicizing outstanding research	<ul style="list-style-type: none"> <li>● Establish Promoting Fair Research Activities Conference</li> <li>● Planning for guidelines such as research ethics education</li> <li>● Establish e-Learning lectures on research ethics education</li> <li>● Mandatory research ethics education</li> <li>● Establish a Medical Research Committee for research involving humans</li> </ul>	<ul style="list-style-type: none"> <li>● Establish a system for monitoring compliance status through standards of conduct and guidelines</li> <li>● Continuous improvement of a system for promoting fair research activities</li> <li>● Popularization of e-Learning lectures for research ethics education</li> </ul>		Mandatory research ethics education for all personnel involved in research

## Achievements

### ▷ Activities to ensure appropriate use of research funds

We established a compliance system for the appropriate use and management of research funds. In accordance with new guidelines published by the Ministry of Education, Culture, Sports, Science, and Technology (MEXT), we established rules surrounding the use and management of research funds. Under the leadership of the President, the system of responsibilities was clarified, awareness through the compliance education for faculty members and staff improved, frameworks and monitoring systems to prevent misuse at an organization level were established, and risk approach monitoring was implemented.

### ▷ Establishment of a system for promoting fair research activities

In FY2013, we investigated the model behaviors that researchers should follow, reflecting current social etiquette, and established a variety of measures such as "The official rules for promoting fair research activities at Tohoku University." In FY2014, we established a system to promote implementation of research ethics education, in accordance with new guidelines published by the Ministry of Education, Culture, Sports, Science, and Technology (MEXT). This was communicated to the university as "The construction of a system for promoting fair research activities at Tohoku University."

## Strategic Focus (15)

### Enhanced financial infrastructure

#### Major Policies

#### Enhance our financial infrastructure to enable a more active university administration

We will formulate a stable financial infrastructure by enhancing external fund acquisition, promoting funding from enterprise, and rigorously reducing costs. We will allocate budget to the areas of greatest need.

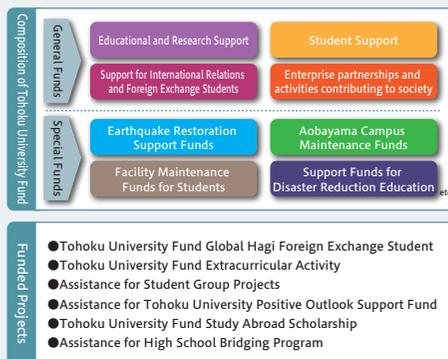
Strategic Focus (15): Enhanced financial infrastructure				
Major Policies	FY2015	FY2016	FY2017	Remarks
Enhance our financial infrastructure to enable a more active university administration	<ul style="list-style-type: none"> <li>●Projects for securing coming Management Grants</li> <li>●Investigation of measures to strengthen external fund acquisition</li> <li>●Implementation and organization of a new personnel salary system (annual salary system, joint-appointment system)</li> </ul>	<ul style="list-style-type: none"> <li>●Evaluation, improvement, and strengthening projects</li> <li>●Investigation and implementation of measures to strengthen external fund acquisition</li> <li>●Implementation, evaluation, improvement, and strengthening of a new personnel salary system</li> </ul>		Employment of a public relations staff at the funding office (three full-time employees)
	<ul style="list-style-type: none"> <li>●System organization and implementation to expand Tohoku University Fund (expansion of funding projects, diversification of fund menu)</li> </ul>			

## Achievements

### ▷ Expansion of Tohoku University Fund

In order to determine how best to use the funds, we established the "Special Funds" in close collaboration with the university and departmental visions. These funds will support a multitude of specified endeavors, so that the intentions of the donating person can be reflected in the operations of the university.

Starting in FY2012, we began accepting donations through credit card payments, in addition to bank transfers and postal transfers. By simplifying the donation process and providing more avenues for donations, we hope to increase regular and continuous donations, as well as support many who share our cause.



Tohoku University Funds Kansha no Tsudoi (Ceremony for Service Award)

## Strategic Focus (16)

### A world-class hospital for a world-class university

#### Major Policies

#### Establish facilities and functions on par with international hospitals

In order to maintain and develop our leading-edge medical standards, the Tohoku University Hospital will become a hospital that is open to the world. We will cooperate and exchange personnel with leading international hospitals, particularly those in Asia, to conduct medical treatment, education, and research.

#### Establish a more stable administrative infrastructure

In order to practice leading-edge medicine at a level appropriate to a university hospital, we will improve medical care in critical areas and streamline administration to establish a stable administrative infrastructure.

#### Promote clinical research, translational research, and advanced treatments

As Tohoku University Hospital is one of Japan's leaders in innovation and advanced treatments, we will promote clinical and translational research. We will prepare a research infrastructure aimed at realizing next-generation treatments, construct a network spanning not only Miyagi Prefecture, but the entire Tohoku region, and develop our clinical research.

#### Foster medical professionals in response to community needs and providing medical services to the disaster area

In order to foster and produce medical professionals with advanced knowledge, qualifications, and forward-looking attitudes, we will construct new education and research systems for each profession. In order to restore regional medical services, we will support medical systems in the disaster area. In addition we will create model regional medical institutions to attract medical professionals to the disaster area.

### Strategic Focus (16): a world-class hospital for a world-class university

Major Policies	FY2015	FY2016	FY2017	Remarks
Establish facilities and functions on par with international hospitals	<ul style="list-style-type: none"> <li>● Establishment and operation of Tohoku University Hospital Advanced Medical Training Center (TAMTC)</li> <li>● Organization of system for admitting international patients</li> </ul>	<ul style="list-style-type: none"> <li>● Create international collaborative network for global health and medicine / Implement personnel exchange with international hospitals</li> <li>● Continuation and improvement of medical techniques of physicians employed at related medical institutions, as opportunities arise at TAMTC</li> <li>● Improve globalization of hospital public relations</li> <li>● Organization of system for diagnosing and treating international patients through mobile device-assisted translation</li> <li>● Hosting international research conference and patient investigation conference using a teleconference system</li> </ul>		Increase the annual number of healthcare-related users of TAMTC to at least 1,000
Establish a more stable administrative infrastructure	<ul style="list-style-type: none"> <li>● Periodic analysis and evaluation of hospital administration to secure profits</li> <li>● Optimization of operational hospital bed</li> </ul>	<ul style="list-style-type: none"> <li>● Investigation and implementation of resource optimization in the new Operation and Medical Check Building, considering operations at full capacity</li> <li>● Strengthening the Important Medical Treatments Department, based on analysis of operation and medical check records</li> <li>● Promoting reduction of expenses, and well-planned and effective utilization of personnel</li> <li>● Increase the number of operations</li> </ul>		
Promote clinical research, translational research, and advanced treatments	<ul style="list-style-type: none"> <li>● Organization of the Clinical Trials Core Hospitals system</li> </ul>	<ul style="list-style-type: none"> <li>● Promotion of translational research</li> <li>● Strengthening interdisciplinary cooperation</li> <li>● Organization of systems for observing and monitoring clinical trials</li> <li>● Strengthen the functions of the cancer center</li> </ul>		Increase the number of registered research seeds to at least 250 Develop pharmaceutical products and medical devices with the goal of placing at least 10 of them on the market
Foster medical professionals in response to community needs and providing medical services to the disaster area	<ul style="list-style-type: none"> <li>● Enrichment and improvement of education and clinical training programs</li> <li>● Proposal and implementation of a regenerative medicine model</li> <li>● Strengthening cooperation between Tohoku University Hospital and Tohoku Medical Megabank Organization</li> </ul>			All personnel involved in educational training for medical safety and management, as well as infection management

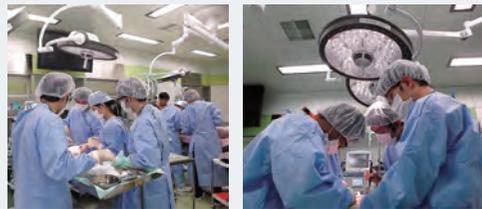
## Achievements

### ▷ Establishment of Tohoku University Hospital Advanced Medical Training Center (TAMTC)

TAMTC was established in FY2013 as a surgical training facility using experimental animals. Training was conducted for healthcare professionals from all departments and associated hospitals including at the earthquake disaster area, and was not limited to first-time training of physicians. Lectures are provided given by experts in animal research ethics and animal research welfare. Students can learn surgical techniques, as well as receive direct, state-of-the-art technical guidance from these lecturers. During the first year of operation in FY2013, we had 500 participants, which grew to 904 participants in FY2014.



Tohoku University Hospital Advanced Medical Training Center (TAMTC)



Actual training

### ▷ Establish a more stable administrative infrastructure

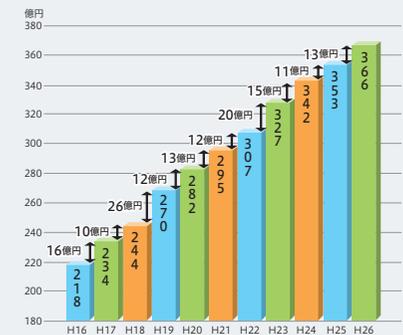
We are promoting financial optimization, while continuing to strengthen the Important Medical Treatments Department and providing cutting-edge medical care suitable for a university hospital. The implementation plan for increasing revenue was developed through the Committee for Strategic Financial Planning. For example, one component of the plan was to increase the proportion of generic drugs in FY2014.

● Changes to revenue for Tohoku University Hospital

36.6 billion yen in FY2014 (increase of 2.4 billion yen over the past 3 years)

● Percentage of operational hospital beds

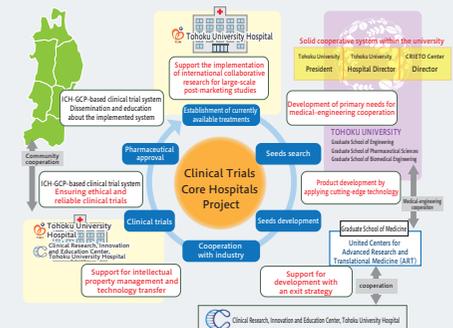
2014	85.66%	Medical	[+0.77%]
		Dentistry	[+25.89%]



Changes to revenue at Tohoku University Hospital

### ▷ Approval of Clinical Trials Core Hospitals under the Medical Service Law

Tohoku University Hospital was selected by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) as a part of Clinical Trials Core Hospitals Project in FY2013. This project includes 10 institutions involved in the creation of revolutionary medicines and medical devices, development of new treatments for rare or pediatric diseases, or the establishment of ideal treatment methods for rare or pediatric diseases. As a result of our efforts to organize the system for promoting clinical research, in August 2015 we were acknowledged as a Clinical Trials Core Hospital. This recognition indicates that we fulfilled the required conditions, as dictated by the Japanese Medical Service Law, to the highest level.



Summary of Clinical Trials Core Hospitals Project

### ▷ Starting the Japan Biodesign Program

In October 2015, we established the Japan Biodesign Program, a training program for participants seeking to innovate in the fields of medicine and medical devices. This program is a joint program between Tohoku University, The University of Tokyo, Osaka University, and Stanford University. Biodesign, initiated by Stanford University in 2001, is a training program that features translation of innovations in the field of medicine to practical applications through advances aimed at solving particular needs. The program takes into account the entire process from the early stages of development to commercialization. In this program, we will not be introducing the Stanford Biodesign development program, but will instead adapt and develop the program to fit the specific needs of Japan. As such, we hope that new innovations will be created to address our unique needs, such as those that only arise in an aging society.



Ceremony for the signing of Japan Biodesign

### ▷ Establishment of the Center for Reconstruction of Community Medicine

The Center for Reconstruction of Community Medicine was established in FY2013 through cooperation of Tohoku University Hospital, Graduate School of Medicine, and Tohoku Medical Megabank Organization. This Center will address the needs of the Tohoku region, such as rebuilding community medicine after the Great East Japan Earthquake and implementing survey-based studies to determine the needs of healthcare workers at community medical institutions. These types of objective data are periodically collected and analyzed, with cooperation from each administrative organization and associated hospital, and used to adjust the schedules of healthcare workers. Additionally, we established a medical treatment zone with the core hospital serving as a hub. Managing and applying an information network, the core hospital communicates with small to medium-sized medical institutions through a rotational system for medical treatment, in order to guarantee medical treatment within the zone, and to establish a model for community medicine.



Organizational summary of the Center for Reconstruction of Community Medicine

### Establishment of the Perioperative Oral Care Support Center

In order to strengthen cooperation with our medical and dental colleges, we established the Perioperative Oral Care Support Center, which began operations in April 2015. The goal of this Center is to promote faster recovery for patients following treatment by a team of dentists, dental hygienists, and dental technicians. A clean mouth before and after surgery for cancer treatments, organ transplants, and cardiovascular disease can prevent post-operative complications such as pneumonia, as well as enabling oral ingestion at an earlier stage. The Support Center is actively involved in disseminating information, not only to hospitalized patients but also to the community at large, in order to inform citizens about the importance of a healthy mouth. In addition, in cooperation with community dentists, the Center aims to help hospitalized patients maintain their oral health.

