1. Outline

【Name of Project】
  OPEN-TECH INNOVATION: An Initiative for Global, Social and Regional Collaboration

【Future vision of the university planned in TGU project】
  We aim to become a core engineering school where the leading researchers, business workers and engineers engaging in the engineering research, industry and education in Japan and abroad gather in pursuit of OPEN RESOURCE (intellectual, human and physical resources) stored in our university, develop an innovation and form an ASIAN HUB of the global network, and also where international sophisticated engineers (TECH LEADER) who can demonstrate leadership to contribute to the globalization of the industrial infrastructure in all countries and regional communities are trained.

【Summary of Project】
  Keys of our project are making resources more attractive in the points of curriculum, human resources, and places.
 For making the curriculum more attractive, with the aim to train sophisticated specialized personnel, "TECH LEADER", we will carry out a school-wide curriculum reform. We will foster a rich humanity by constructing an education system oriented to the international society as well as by offering learning opportunities by making a use of the cultural resources in Kyoto.
  For producing more attractive human resources, we aim to shift the faculty and staff body to become an international group. We will ensure to globalize the university as a whole and promote the establishment of the global inter-university network by sending the faculty and staff members to overseas and also accepting the faculty and staff members from overseas.
  For making places more attractive, we will build and improve a faculty and hub where the world's leading researchers and our teaching staff as well as the regional companies interact, in addition to the Japanese students and students from overseas. We will create an opportunity to meet people with diverse views and background and contribute to the creation of new values and ideas.
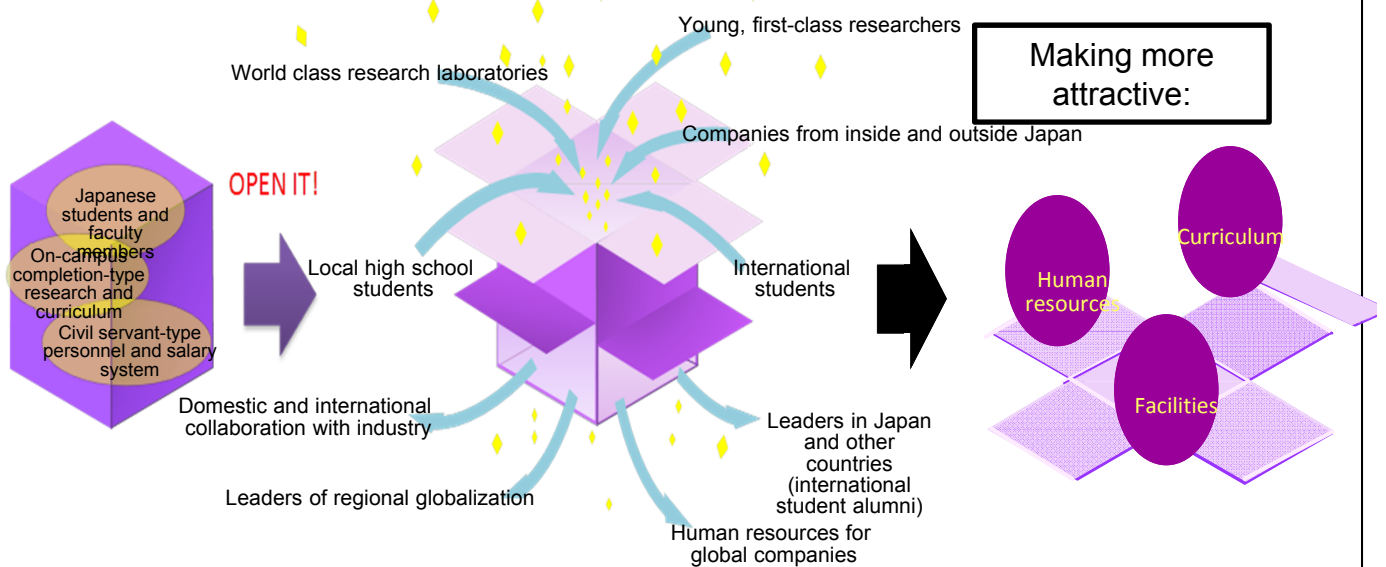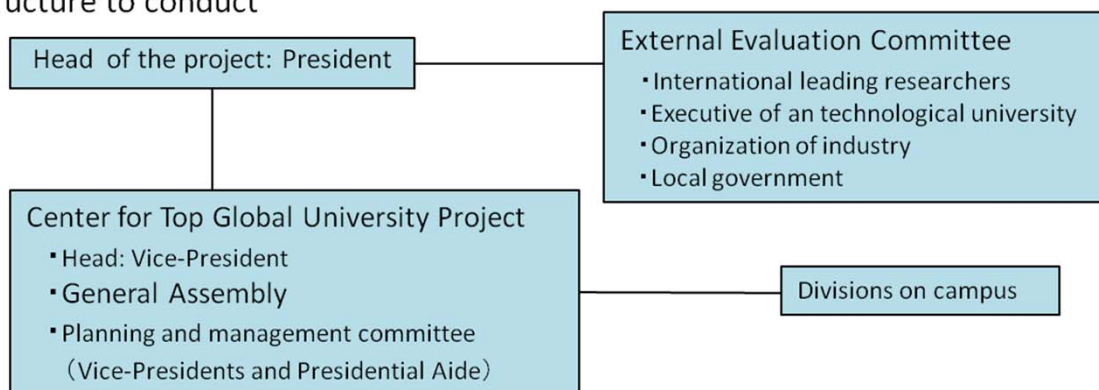
【Summary of the 10-year plan】

○ **Increasing the number of international students**
We will increase the number of international students through the ways such as student exchanges, short-term programs, and giving the admission before coming to Japan. Our goal is to accept 640 international students per year no later than 2023 (16% of all students, 40% of graduate students).

○ **Promoting study abroad of Japanese students**
80% of Japanese students will belong to the "Global Course" in graduate school. In the "Global Course", joining an internship program is obligated. As a result of it, study abroad of Japanese students is promoted.

○ **Curriculum reform for globalization**
We begin the program to enhance the English abilities and make at least half the undergraduates achieve the TOEIC score of 730 or higher. We also provide more graduate courses offered in English to make at least 80% of all courses in graduate school instructed in English no later than 2023. To enhance convenience for students to study abroad, we make our academic calendar more flexible.

○ **Globalizing the faculty and staff members**
We start the dispatch program of faculty and staff members. Also, staff members are obligated to take TOEIC test every year to know their English fluency and make the target of achievement by themselves.
Not only the capacity building of our staff, we invite researchers and students per laboratory from overseas leading universities.

○ **Personnel systems of faculty members meeting the global standard**
We establish and operate personnel systems of faculty members meeting the global standard such as annual salary scheme, tenure track, evaluation standard fitting the globalization.

○ **Enhancing diversity on campus**
Exchanges among international researchers/students and Japanese researchers/students on campus become common by providing dormitories where both international and Japanese students live and promoting activities of exchange.

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

○ Curriculum structure by 3×3 scheme
We change the academic year structure from the scheme of 4-year bachelor, 2-year master, and 3-year doctor to the one of 3-year bachelor, 3-year master and 3-year doctor in effect.

○ Program to enhance the English abilities: seeking the TOEIC score of 730
Students take the program of a great deal of input with high degree of demand in their freshman and sophomore years. The average TOEIC score at the time of entrance of graduate school will be raised from 616 to 730 no later than the year of 2023.

○ Step-up style of structure of Project Based Learning (PBL)
PBL style programs take important roles in our curriculum. Stepping up from On-campus group, region, to overseas, students experience PBL as team projects. Through these experiences, we foster students' leadership.

Photo： Internship program overseas

○ Dispatch program for faculties and staff
We send about 10 faculty members abroad who are expected to conduct the educational collaboration internationally for a year in maximum. We also send a staff abroad for a year in maximum. Through these activities, we promote the globalization of our campus.

○ Inviting overseas leading unit
We invite researchers and students per laboratory from overseas leading universities in the areas of design and architecture, macromolecular and fibrous materials and green innovation, all of which are the core of our plan of ASIAN HUB, in order to develop global standard educational research.

○ Activities of collaboration in TECH SALON and Global Commons
We have set up TECH SALON as the hub of collaboration among international/Japanese researchers and industries, and Global Commons as the hub of collaboration among international/Japanese students. At these facilities, we expect that seminars of advanced knowledge, collaborative researches and learning activities among multi-national members, and multi-cultural exchanges are promoted.

2. FY2014 Progress

■ Common indicators and targets

Internationalization

○ **Inviting overseas leading units**

We invited overseas leading units from Princeton University, Université de Paris, National University of Singapore, and so on, and held conferences and workshops.

Also we invited leading units from ETH Zurich and Royal Academy of Arts (London), and held workshops after April 2015.

○ **Activities of model globalization laboratories**

13 laboratories were specified as "Model Globalization Laboratories", and developed activities such as seminars by international researchers, training for students to make presentation at international conferences, collaborative projects with students in foreign universities, and accepting international students to the laboratory. Here are some examples of outstanding outcomes:

*Japanese student completed his master thesis in English.

*An international master student who came in a short-term project felt great satisfaction with research activities in the host laboratory and decided to seek his doctoral degree in Kyoto Institute of Technology.

Collaborative activity conducted by a model globalization laboratory

○ **Support for promoting global internship programs**

To promote our global internship programs, we supported faculty members leading the programs with budgeting their travel cost from Top Global University Project Budget (Cost for students are supported by Japan Student Service Organization (JASSO) or our International Exchange Promotion Fund. In FY2014, 89 Japanese students joined the program and 62 of them got credits on this activities.

○ **TOEIC test and trial of speaking test we originally developed**

Freshmen besides ones belong to the evening program were asked to take TOEIC test and 471 of them took it.

Concerning the speaking test, we originally developed the one targeted to evaluate the skill to use English in practical situations. The trial of the test was held and 834 students took it. (Photo: Trial of speaking test)

○ **Preparation for dispatch program of faculty and staff**

We completed the preparation for dispatch program of faculty and staff. The program started in FY2015, where nine faculties (three of them to the UK, two to the US, other four to Canada, France, Singapore, and Thailand) and one staff (to the US) will be sent.

University reform

○ **Setting up the center to promote the project**

Center for Top Global University Project Office, whose head is the Vice-President for international, has been set up. Under this center, general committee and planning committee has been set up.

○ **Annual salary scheme for faculties**

Regulations for the scheme have been established and enacted them to eight faculties currently hired. We also hired two new faculties under this scheme.

○ **Establishment of facilities for international exchange**

We have established two facilities; one is "TECH SALON", which is for global exchanges among researchers and industries, and the other is "Global Commons", which is for exchanges among students.
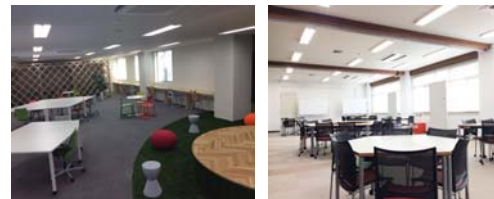
Left: TECH SALON,
Right: Global Commons

Education Reform

○ **Starting the curriculum of 3×3 structure**

We enacted the 3×3 structure.

○ Development of the indicator for TECH LEADER

For fostering TECH LEADERs which is one of our final goals, we developed the indicator to make the goal more concrete and set the standard for measuring the achievement. The indicator has been developed by doing surveys and interviews to people in global industries, create a test based on the result of surveys and interviews, have some students take the test, and verify the result.

■ University's own indicators and targets

○ Establishment of OPEN-TECH Consortium

As a consortium of researchers and industries from foreign countries and Japan, we established "OPEN TECH Consortium" where they share the forefront knowledge in the world and do joint researches. There are 46 members (in total of organizations and personnel) as of March 2015.

○ Symposium for Japanese and international researchers and industries

As we also have been committing to "Center of Community" (COC) Project, at the kick-off of Top Global University Project, we held a joint symposium of COC and Top Global University Project. We had about 280 participants from both on and off campus.

（Photo：joint project）

■ Featured initiatives based on the characteristics of the university

○ Step by step system to foster TECH LEADERs in 6-year curriculum

Applying the 6-year curriculum for undergraduate and master based on 3 × 3 structural reform, we started the new style of education. According to this style, first half of the whole curriculum (3 years) are to consolidate the basis with the way such as the program to enhance the English abilities and the team program of Project Based Learning (PBL) on campus and regional area. On second half of the curriculum (3 years), the team program of PBL overseas is provided. Through this process, talents for a TECH LEADER is fostered.

○ Establishing the platform of exchange among researchers and industries

As a consortium of researchers and industries from foreign countries and Japan, we established "OPEN TECH Consortium". There are 46 members (in total of organizations and personnel) as of March 2015. And we opened TECH SALON as a facility for exchange.

As the kick-off of the consortium, we held a joint symposium of COC and Top Global University Project. 280 including researchers from world leading universities, and people in Japanese industries and regional communities gathered and had a time to communicate with each other.

In TECH SALON, international seminars and collaborative researches with international researchers will be held from now on.

○ Educational program suitable for "Kyoto"

Based on the strength that we are located in Kyoto, where is a traditional cluster of industry, we have provided some courses related to traditional industry and culture of Kyoto. In FY2014, we expanded the number of courses in this category (9 courses in FY2013 → 20 in FY 2014). The number of students registered these courses was dramatically expanded.

■ Free description

○ Seeking the flagship in Asia

One of our goal is to foster many TECH LEADERs, and another goal is to become "ASIAN HUB" of education and research – take the flagship in Asia.

We especially seek the flagship in the fields of design and architecture, fibrous materials and macromolecular, and green innovation. We have already invited several units from leading universities in the world. We will begin the same activities in other two fields mentioned above. Continuing these activities in 10 years effort will make us the ASIAN HUB.

○ Contribution to globalization of the region

Kyoto is a cluster of research and development-oriented enterprises, and major companies are running their business globally. On the other hand, many small companies are not ready enough for globalization.

Based on our outstanding outcomes on collaboration with the region through the COC project, we conduct the Top Global University Project to contribute to globalization of the region at the point of fostering the leaders to make the regional industry globalized and setting up the opportunities for regional industry to make communication with international researchers and industries.

3. FY2015 Progress Report

■ Common Indicators and Targets

Internationalization

○ World Leading Units Invited
We made an agreement on the Academic Unit Program with Cambridge University in England and 5 other universities, and set up an environment for inviting leading international researchers. We also gave students opportunities to develop international insights by inviting 15 research units in the fields of design and architecture, and 2 units in the fields of macromolecular and fibrous materials. In addition, we held workshops, such as a Kyoto urban renewal project, with students.

○ Model Globalization Laboratories Active
Proactively setting an example of university internationalization for other institutions, we nominated 11 of our laboratories as Model Globalization Laboratories. Each laboratory held collaborative seminars and workshops with overseas universities, advised students on the presentations they were to give at international conferences and invited researchers from overseas to lecture at KIT.

〈 A Workshop at Chiang Mai University 〉

○ Global Internship Program Expanded
115 students participated in internship programs held in the United States, France, Thailand, Malaysia and other countries. We gave credit to students who fulfilled program requirements. We actively negotiated with overseas companies to expand future overseas internship lists and concluded fundamental agreements on the acceptance of our students with some companies.

○ Overseas Hubs Established
We set up our first overseas office on the campus of Rajamangala University of Technology Thanyaburi in Thailand and had a signing ceremony for a new joint degree program with Chiang Mai University to start in 2017. This means we are now ready for interchange with Thai students and people from industry and will begin educational research activities and overseas internship projects through academia-industry cooperation at ASEAN country hubs.

〈 Signing Ceremony at Chiang Mai University in Thailand 〉

University Reform

○ Instructors' Annual Salary System Revamped
We applied an annual salary system to newly hired and all other full-time instructors and streamlined the monthly salary system. In addition, by increasing instructor salary system categories, it became possible for us to employ various categories of instructors, revitalize our organization, secure superior human resources, and introduce ability- and performance-based pay.

○ Personnel Evaluation System Revamped
To evaluate personnel more objectively and transparently, we initialized a system that makes the best use of performance data registered in the university database. We examined data retroactive to job performance evaluations from December 2015 and assigned points to each instructor according to their level of international contribution, such as sending and accepting international students, or concluding international exchange agreements. Other points we evaluated clarified whether the contributions were for work abroad or were for work in Japan (at KIT). This system enables us to credit instructors who undertake international education/research, and as it is an internationally valid evaluation system, it will be understood by new non-Japanese professors.

Education Reform

○ English Training Programs Begun
An "extensive reading program" was introduced using a specifically designed support/administration website with the aim of enabling students to acquire English skills over the TOEIC 730 score level by the completion of their undergraduate degree. English classes have a new focus on increasing freshman knowledge of English vocabulary. We established a system for comprehensively monitoring each student's assignment achievement status. Furthermore, we conducted TOEIC tests for all freshmen twice a year (April and December) and incorporated the results into student grades.

〈 Speaking Test 〉

○ Multilateral Selection of Applicants Developed
We launched an "English speaking test working group" to work toward incorporating an English speaking test in our da Vinci (AO) entrance examination. This year's second trial freshman speaking test results showed an obvious improvement in student positivity, compared with the previous testing. The trials enabled us to examine the feasibility of testing students' oral English ability as part of our entrance examination.

○ **Active Learning Enabled**

We have been offering a course, "producing things with industrial cooperation," with the aim of enabling students to acquire the skills to multilaterally foresee the overall (cradle to cradle) process of producing "my product." Filling a request from a product development company, students in this course actually design and follow products through actual manufacture. With this course, we are heightening our students' motivation for learning.

■ KIT's Own Indicators and Targets

○ **TECH LEADERs Trained**

As part of our SGU vision, we set a goal to nurture TECH LEADERs with expertise, leadership skills, a command of a foreign language and an objective cultural identity. To train such human resources, we drew up a program infrastructure in 2014 with specific TECH LEADER indicators. In 2015, we added diploma and curriculum policies for 2016. We also initiated lectures, attended by 62 students, which furthered their understanding of leadership and facilitated its actual practice. With the aim of becoming TECH LEADERs who can flourish anywhere in the world, 136 of our graduate students participated in PBL studies in 2015. Specifically, these were overseas internships and entrepreneur programs.

■ Featured Initiatives Based on KIT Strengths

〜Producing More Attractive Human Resources〜

○ **Faculty Dispatched Overseas**

To promote the internationalization of our curriculum, we set up a system for faculty dispatch in 2014. Since the start of 2015, we have dispatched 9 instructors to overseas universities: 3 of them to England, 2 to the United States, and 1 each to Canada, France, Singapore, and Thailand. They acquired more effective English lecture styles, interactively questioning and answering students and using gestures to explain lecture content. This is expected to result in more dynamic instruction and an increase in more globally aware lecture styles on campus. It also provided clues on how best to set up a suitable environment here to ease students into study overseas.

○ **Staff Internationalization Reinforced**

We began administrator dispatch. Our long-term dispatch was to a U.S. university. This administrator gained a broad understanding of their higher education system through practical training, resulting in great expectations of his ability to contribute to our university's internationalization. We also sent 4 administrators to universities in Australia. They deepened their understanding of the need to promote recognition and respect for different cultures and administrative systems in Australian universities. With these training programs, we succeeded in increasing the number of administrators who have English skills over the TOEIC 730 score level and bumping up our average score.

〜Making Encounter Spaces More Attractive〜

○ **Establishment of Facilities for Multicultural Exchange**

At the "Global Commons" we established as a space for interaction among all our students, Japanese and non-Japanese alike and held special classes where they could learn other languages. We also scheduled Chinese, Korean, Vietnamese, English and Japanese speaking staff to converse with students about their countries and culture in a casual atmosphere. We worked on this continuously. These activities enabled Japanese students to learn more about foreign countries before studying abroad. Moreover, we provided reference materials on Japan for international students.

〈 Multicultural Exchange at "M café" in the Global Commons 〉

○ **OPEN TECH Symposiums Held**

At our TECH SALON, we held 8 OPEN TECH symposiums on the themes of innovative mindsets, developing sophisticated human resources overseas by inviting, as lecturers, researchers and parties in the industrial world at home and abroad. We had 38 participants from local companies. At lectures held by the overseas researchers we invited, students gained insights into future career paths and were inspired by discussion taking place in English.

〈 7th OPEN TECH Symposium 〉

〜Making the Curriculum Structure More Flexible〜

○ **6-year Consecutive Learning Program Launched (3×3 Structural Reform)**

In 2014, we constructed a "3×3 (three by three)" teaching/learning system in which 4th year undergraduates were re-labeled as graduate students. In the first year of this teaching system, 2015, we conducted the first 3×3 entrance examination for master's program students admitted in April. In 2016, successful applicants took master's program classes and were designated "M0" students, meaning they were in the first of a three-year program. This breakthrough system enables students to study abroad more easily in the first or second year of their 3-year master's degree.