1. Outline

【Name of project】
Enhancing Tokyo Tech Education and Research Quality through Administrative Reforms for Internationalization

【Future vision of the university planned in TGU project】
Tokyo Institute of Technology (Tokyo Tech) aims to establish itself as a global hub of knowledge and talent in science and technology by sharing Tokyo Tech Quality, the result of lasting hands-on education based on advanced research, and is committed to further enhancing this Quality by revamping its governance system and increasing its organizational strengths.

【Summary of Project】
Tokyo Tech has three core reforms for establishing itself as a global hub of knowledge and talent in science and technology.

1. Administrative reforms for internationalization:
   Enhance personnel, infrastructure, and finance management systems based on a strategy that effectively supports global education and research activities.

2. Innovations for globalized education:
   Provide students with the flexibility to design their own studies and therefore maximize their potential on the global stage. Learning outcomes will be tuned with the world's top universities for greater student mobility.

3. Innovations for globalized research:
   Enhance leadership and mobility for researchers to further promote international collaborative research and provide graduate education at an advanced research hub for nurturing global perspectives in students.
### Summary of the 10-year plan

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### Featured initiatives (Internationalization, university reform, education reform)

**1) Administrative reforms**
- Collaborative Organization for International Education and Research (COIER), the first step towards a centralized governance system, was established in 2014. Strategic Planning Headquarters (tentative), commencing in 2018, will take over all planning. The President will continue to oversee all operations, including Education, Research, and Public Relations Management Centers.
- To ensure centralized management, effective analysis, and efficient use of information, the Institutional Research Office (tentative) was established in April 2015. An automated information collection system is planned for 2018.
- Tokyo Tech Advisory Board (tentative), a group of renowned educators from around the world to be formulated in 2015, will meet regularly to provide advice on Tokyo Tech’s globalization efforts, strategies in advancing research and international exchange, and policies and evaluation.
- A new system dispatching staff abroad for practical training will be launched in 2016 to improve global awareness.

**2) Innovations for globalized education**
- The new education system, commencing in April 2016, will include classes in English and professional development of faculty to facilitate active learning, all in an environment on par with global standards. By 2019, most graduate courses will be conducted completely in English.
- Education and research units composed not only of faculty members but of administrative staff and students will be sent overseas. In addition to boosting regional and institutional collaboration, this system will increase student mobility and improve professional development and global awareness of staff members.
- To improve compatibility of educational content with that of overseas universities, an international accreditation review is planned for 2018. Based on the results, attainment of international accreditation is expected in 2023.

**3) Innovations for globalized research**
- To meet the needs of the global community, a research framework to attract and better accommodate the world’s top researchers will be established in 2018. This will increase the number of incoming graduate students, improve global awareness, and encourage international collaborative research.
- The Tokyo Tech Doctoral Researcher System, to be set up in 2018, will activate exchange between young researchers at institutions around the world.

### Measures for the promotion of collaboration with foreign universities

- Collaboration with universities carefully selected according to region (Europe, the US, Asia, etc.), language (English, non-English), specialty (science and technology, other specialties) that can further strengthen Tokyo Tech. Based on this strategy, collaboration with the world’s best science and technology universities will be increased through the conclusion of agreements, and creation of international university consortiums and double/joint degree programs.
- Based on visits to and information shared with partner universities, a) a variety of exchange programs corresponding to student levels, b) inbound exchange programs matching the needs of overseas partner universities, and c) student exchanges that fully utilize overseas offices will be developed.
2. FY2014 Progress

- Common indicators and targets

**Internationalization**

**Development of student exchange programs**
Various student exchange programs have been developed based on visits to overseas universities. Short-term programs in Europe (Germany, Austria, Sweden) and overseas English training programs for science and technology students in Australia will begin in the summer of 2015.

**Comfortable atmosphere for overseas faculty, researchers, and students**
Building signs on Tokyo Tech campuses, internal accounting guidelines, automated telephone systems, and online guides for international Tokyo Tech community members are available in English, making life easier for overseas faculty, researchers, and students.

**University reform**

**Organizational structure in charge of centralized administrative reforms**
Collaborative Organization for International Education and Research was established. This will eventually merge into the Strategic Planning Headquarters (tentative) which, under the leadership of the President, will be in charge of institution-wide strategy. To strengthen organizational management, the Institutional Research Office was established in April 2015 for efficient information management and analysis.

**Education reform**

**CITL launched, professional development and training of faculty enhanced**
The Center for Innovative Teaching and Learning (CITL) was launched to promote faculty development and ensure education quality. Some examples of professional development include training sessions on teaching methods in English, workshops on the execution of the new curriculum, and discussions about liberal arts at Tokyo Tech.

**Tokyo Tech Lecture Theatre**
This venue has been completely refurbished to facilitate lectures with open experiments for large audiences and foster active exchange of ideas. Aimed at 1st-year students.

**Active learning environment**
Lecture rooms that encourage active learning have been set up. These have already been eagerly utilized by students and faculty.

**Workshop on TA system**
Tokyo Tech held a two-day workshop consisting of a lecture by a professor from UC Berkeley, case studies by Tokyo Tech professors, and group work and discussions between students and faculty members in preparation for the new dynamic Teaching Assistant system.
University’s own indicators and targets

University-wide human resource management
According to a new system established in April 2015, the president, advised by a human resources committee, has increased discretionary authority on personnel affairs of faculty. In line with the president’s vision and Institute’s operating policy, deans and directors are now selected by the president from a pool of appropriate candidates.

Diversification and internationalization of administrative staff
In addition to overseas language studies, administrative staff members were provided with on-the-job training opportunities in conjunction with overseas university visits. Discussion, presentations, and negotiations during the visits improved their global competency skills. Tokyo Tech also hosted staff members from overseas partners for the same effect.

Initiatives for the enhancement of international reputation

Organizational reforms to meet international standards
The integration of Tokyo Tech’s 3 undergraduate schools and 6 graduate schools into 6 new Schools in April 2016 will form an education system that better matches international standards. The Institute for Liberal Arts, launched at the same time, will ensure education in the humanities throughout both undergraduate- and graduate-level programs.

Online education system
Together with MIT and Harvard, Tokyo Tech is also part of the edX Consortium and is preparing to launch its first MOOC in September 2015, a course by Professor Kei Hirose of the Earth-Life Science Institute (ELSI), a government-designated World Premier International Research Center.

Results for the promotion of collaboration with foreign universities

• Joint Symposium for International Industry-Academia Collaboration was held at Tokyo Tech with RWTH Aachen University in March 2015. Participants discussed cooperation between Japan and Germany on both university and industrial levels. Concrete projects are currently being planned. The next symposium will be held in the summer of 2015 in Aachen.
• Tokyo Tech-MIT International University-Industry Collaboration Workshop was held in January 2015. Faculty from both universities gave lectures on international collaborative research. Activities also included discussion and planning of a world-class research project that meets industrial needs.
• Uppsala University-Tokyo Tech Joint Symposium was held in Sweden in September 2014. Collaborative ties between the universities were strengthened. The next symposium will be at Tokyo Tech in 2015.
• Tokyo Tech members visited University of California, Santa Barbara in December 2014. Plans to hold a joint workshop in the summer of 2015 progressed. Another tie with one of the world’s top universities was strengthened, and active research and student exchange is expected through the upcoming workshop.
• Tokyo Tech members visited Skolkovo Institute of Science and Technology and Singapore University of Technology and Design, both recently founded. Discussions on cooperative relationships progressed.

Free description

Top Global University Project Kick-off Symposium
The top global university project kick-off symposium was held at Tokyo Tech on January 27, 2015. Guests from Nanyang Technological University and UC Berkeley gave lectures on administrative reforms and the online education environment, and shared ideas regarding Tokyo Tech’s strengths and the challenges posed by the current reforms. The symposium was an important milestone in the Institute’s globalization efforts, and showed the unity of all those involved in changing what was a Japanese university to a truly global Tokyo Tech.
3. FY2015 Progress

- **Common indicators and targets**
  
  **Internationalization**

  **New short-term inbound exchange program**
  The newly created Tokyo Tech Summer Program, a short-term inbound exchange program commencing in 2016, will function as the basis for further promotion of student exchanges with the world’s top universities.

  **Increased student exchanges**
  A total of eight new student exchange programs (Sweden, Germany/Austria, India, Thailand, Australia-winter and summer, and the Philippines), including those utilizing Tokyo Tech’s overseas offices, were launched in FY2015. This greatly exceeded the two new programs originally planned. Through these programs, the number of students studying abroad increased to 250 from 170 in the previous year.

  **University reforms**

  **Office of Institutional Planning expedited**
  The establishment of the Office of Institutional Planning, the core of a university-wide governance system that supports the president’s leadership, was expedited to April 1, 2016 from the originally planned 2018. With the President at its head, the office will take over and drastically reform strategic planning previously carried out by the Planning Office and other offices, forming a centralized system and eliminating sectional barriers.

  **Education reforms**

  **Establishment of new Schools**
  As part of its education reforms, Tokyo Tech will be the first university in Japan to combine its undergraduate and graduate schools into six new Schools in April 2016. Preparatory committees of each of the Schools and the Institute for Liberal Arts (ILA) held meetings throughout the year. A new working group in the Education Planning Office focusing on the implementation of education reforms worked closely with these preparatory committees to create new curricula for the Schools and ILA. To promote independent study with a new internationally compatible curricula, preparations continued regarding the improvement and Japanese and English publication of syllabi, the adoption of a numbering system to indicate level of study, the introduction of a quarter system to further facilitate study abroad and internships, and the teaching of classes in English.

  **International initiatives at Center for Innovative Teaching and Learning**
  With educational assessment, professional development of faculty, and improvement of the learning environment as its three pillars, the Center for Innovative Teaching and Learning (CITL) was established in April 2015 with two professors at its helm. Since then, CITL has carried out training sessions on teaching methods in English, published MOOCs on the edX platform, and held symposiums with prominent international researchers.
University's own indicators and targets

Administrative reforms
With a focus on creating a system that supports the president’s leadership, administrative reforms also progressed. The president, advised by a human resources committee, was granted increased discretionary authority over faculty personnel affairs. A personnel advisory committee, the Office of Institutional Research and Decision Support, and the Tokyo Tech Advisory Board were established to advise the president, who now selects deans and directors from a pool of appropriate candidates to ensure more centralized human resource management. The creation of a stronger system will promote other reforms such as the introduction of an annual salary system and a cross-appointment system. Quantitative and qualitative performance indicators and targets are being achieved as planned.

Initiatives for the enhancement of international reputation

Tokyo Tech Advisory Board
The Tokyo Tech Advisory Board, a group of renowned leaders from universities and other organizations around the world, was created in December 2015 to provide Tokyo Tech advice on its globalization efforts, strategies in advancing research and international exchange, and policies and evaluation. As a result of the first Board meeting held in February 2016, Tokyo Tech continues to strive towards university management with a more international perspective.

Lectures by government officials and symposiums with top university management
Symposia involving executives from top overseas universities and lectures by US government officials were held several times, providing faculty and students with an international perspective.

Results for the promotion of collaboration with foreign universities (Type A only)

The Tokyo Tech-UC Santa Barbara Joint Symposium held at Tokyo Tech in August 2015 further strengthened the university-wide agreement between the institutions. Visitors from UCSB included the chancellor, faculty from various fields, and students. The 3-day event included university overviews, research presentations by Tokyo Tech and UCSB faculty, field meetings, and a student workshop.

Joint symposium with University of California, Santa Barbara

The 2nd Uppsala University-Tokyo Tech Joint Symposium was held at Tokyo Tech in November 2015. Under the theme Emerging Technologies and Systems for a Sustainable Society, participants shared findings and exchanged views on next generation solar cells, industry-academia collaboration, and the establishment of startups.

2nd Uppsala University-Tokyo Tech Joint Symposium

The NTU-Tokyo Tech Joint Workshop, held in Singapore in February 2016, gave Tokyo Tech researchers a chance to exchange views on collaborative research with counterparts at Nanyang Technological University.

Joint workshop with Nanyang Technological University

Free description

Departments within the Office of Institutional Planning
With the decision to establish the Office of Institutional Planning in April 2016, two departments under this office will also be set up — a Top Global University Project planning and management department, and a planning department for the program for promoting the enhancement of research universities. These departments will hold joint meetings to share information on the planning of Tokyo Tech’s education and research activities, and will work together to develop and enhance Tokyo Tech’s international strategy.
4. FY2016 Progress

- Common indicators and targets

Internationalization

Expansion of exchange programs

- In addition to the traditional summer programs, new winter programs brought in more international students from leading universities in Asia, North America, Europe, and Oceania.

- Tokyo Tech implemented short-term study abroad programs in 10 countries for outbound exchange students. A new leadership training program was implemented in collaboration with Georgia Institute of Technology. A credit transfer and scholarship system was developed for outbound exchange students participating in partner university summer and language programs.

- The Global Scientists and Engineers Course was implemented for bachelor-level students, and adjustments were made to expand the course to facilitate graduate-level students’ participation from AY2017 onwards.

Improved international environment

To supplement Tokyo Tech’s bilingual website and personalized email and information support systems, an internal English-language human resources website was launched to support English-speaking faculty and staff with administrative and other work-related issues.

University reform

Office of Institutional Planning (Strategic Management Council) established

The Office of Institutional Planning, a central decision-making body to rapidly and accurately handle issues regarding education, research, international activities, human resources, and finances was established in April 2016, two years ahead of schedule. To more clearly indicate its central role in strategic decisions, this body was renamed the Strategic Management Council in April 2017.

Education reform

New education system

With the aim of providing all students with a world-class education, Tokyo Tech launched its new education system in April 2016, beginning with the joining of its 3 schools and 6 graduate schools in the previous system to form 6 new Schools that make up the new model.

Continued professional development

- Various forms of professional development continued in 2016. Many faculty members joined training in English instruction provided by the University of Queensland.

- With the aim of sharing and learning current overseas and future trends in professional development, Tokyo Tech hosted a symposium on education reform on Nov. 1, 2016. With a University of California, Berkeley expert on teaching and learning providing one of the keynote speeches, the event attracted approximately 100 educators from both within and outside Tokyo Tech.
University’s own indicators and targets

Institute-wide management of resources
• Faculty posts are centrally managed, and new posts filled in 2016 were made into president’s discretionary posts. As a result, the number of such posts increased from 94 in the previous academic year to 160, making up 15% of all posts.
• In line with the promotion of university reforms, the Institute-wide budget was reviewed, a new budget policy was decided on, and funding at the president’s discretion was increased from 4.0% in the previous year to 4.25%.
• Based on the education and research reforms in effect from AY2016, space being used by newly established research hubs was designated as “president’s discretionary space.” As a result, this space increased from 866 Units at the close of FY2015 to 1,326.5 units in March 2017.

Initiatives for the enhancement of international reputation

International accreditation working group launched
• The international accreditation working group was established under the Educational Planning Office, with members consisting of faculty members from each of the Institute’s six Schools, the Institute for Liberal Arts, and the Center for Innovative Teaching and Learning.
• Five faculty members also participated in the 9th International Engineer Education Workshop jointly hosted by JABEE and the Japanese Society for Engineering Education.

Results for the promotion of collaboration with foreign universities
• The Imperial College London – Tokyo Tech Joint Workshop on Bioscience and its Interface with Technology was held on November 4, 2016 at Tokyo Tech. Faculty members, researchers, and students in the fields of bioscience, gene network engineering, brain science, cognitive neuroscience, and data science participated in the workshop.
• Tokyo Tech hosted a second joint workshop with Nanyang Technological University, Singapore (NTU Singapore) on November 17 and 18, 2016. The workshop included 29 faculty members from Tokyo Tech along with a delegation of 21 faculty members from NTU. Representatives from the Japanese robotics industry also participated.

Free description

Tokyo Tech 2030 workshop
In order to visualize the Tokyo Tech of the future, and to create an action plan to realize this image, the students, faculty, staff, and management of the Institute held several workshops over the academic year to brainstorm Tokyo Tech’s unique strengths and societal impact. As a result, the Tokyo Tech 2030 statement was formulated.
5. FY2017 Progress

Common indicators and targets

**Internationalization**

*New doctoral student exchange program*

In an effort to continuously diversify its overseas exchange programs, Tokyo Tech implemented the 1st Imperial-Tokyo Tech Global Fellows Programme, the inaugural doctoral student exchange program between the two institutions. Through group discussions, special lectures by experts, poster presentations, field trips, and other joint activities focusing on eradicating poverty, the initiative aimed to build a collaborative network between young researchers while developing their leadership and communication skills. Of the 39 participants (19 from Tokyo Tech, 20 from Imperial College London), 95 percent believed their ability to collaborate in diverse groups had improved upon completion of the program, while 97 percent said they would recommend the program to other students.

*Molecular Frontiers Symposium*

The Molecular Frontiers Symposium, initiated by the Royal Swedish Academy of Sciences in 2006, was held at Tokyo Tech to connect Japanese high school students with internationally acclaimed scientists. Through lectures by Nobel laureates and other pioneers from both Tokyo Tech and abroad, group work mentored by Tokyo Tech students, and hands-on experiments, the event raised public appreciation of molecular science and engaged the youth who will lead the breakthroughs of tomorrow.

Enhanced governance

*Strategic Management Council*

The former Office of Institutional Planning, Tokyo Tech’s central decision-making body, was renamed the Strategic Management Council in April 2017. In addition to strategic planning, its functions were enhanced to ensure more rapid, accurate handling of Institute-wide issues. The previous 18 Planning and Management Offices were streamlined into four new Offices—the Office of Campus Management, the Office of Public Engagement, the Office of Research and Innovation, the Office of Education and International Cooperation—directly under the Strategic Management Council, which now includes the heads of administrative departments (in addition to the traditional directors of Offices, School deans, and Institute directors) to ensure a more inclusive, efficient Institute management system.

Efficient management

Education reforms

*Guidance on securing employment in Japan for international students*

In November 2017, the Student Career Support Section at Tokyo Tech’s Student Support Center held a Guidance Seminar on Job Hunting for International Students. The event, held in English by Tokyo Tech career advisors and representatives from Japan’s International Students Support Network, aimed to assist and encourage international students to seek employment in Japan by outlining the basics of the local job hunting process and the support system offered by Tokyo Tech. Feedback from the 120 participants at Ookayama Campus and 70 students at Suzukakedai Campus was positive, with many expressing hope that similar sessions be held on a regular basis.
University’s own indicators and targets

President’s discretionary funds
During the formulation of Tokyo Tech’s annual budget policy, and after review of the results from the previous fiscal year, the President’s discretionary funds were increased from 4.25% in FY2016 to 4.5% in FY2017.

Ratio of female faculty/staff in managerial positions
In FY2017, the ratio of female faculty and staff members in managerial positions increased to 20.4% from 14.3% in the previous fiscal year.

Initiatives for the enhancement of international reputation

International accreditation
Tokyo Tech’s Vice President for Education, members of the international accreditation working group, and several administrative staff members visited The University of Melbourne, which has been recognized as an outstanding institution by EUR-ACE and other international accreditation bodies, to exchange opinions with specialists. In March 2018, Tokyo Tech applied for a preliminary review by the Japan Accreditation Board for Engineering Education.

[Results for the promotion of collaboration with foreign universities (Type A only) ]
Tokyo Tech held its 3rd Joint Workshop with Singapore’s Nanyang Technological University on September 11 and 12, 2017. Participants included the executive vice president for research, vice president for education, vice president for research development, and nine outstanding Tokyo Tech researchers specializing in new molecular chemistry, hydrogen energy, recycling of materials and separation of elements or nuclides, and engineering technologies for combating infectious diseases. Faculty members and students of the Education Academy of Computational Life Sciences were also present.

Free description

Tradition meets innovation—Tokyo Tech visuals
In its efforts to boost its global presence, Tokyo Tech created ukiyoe-esque illustrations that represent the synergy of tradition and innovation at the Institute. These creations are now used to represent Tokyo Tech in various media including pamphlets targeting international students, QS World University rankings, etc.

Workshops to envision the future of Tokyo Tech
Tokyo Tech held a series of workshops to brainstorm and share the future image and identity of the Institute. While working as a unified team, a total of 207 executives, faculty, staff, and students also considered how they can contribute individually to the realization of a better future society through their efforts at Tokyo Tech.
6. FY2018 Progress

■ Common indicators and targets

**Internationalization**

*Tokyo Tech ANNEX Aachen*

Particularly since the development of its “faculty and staff unit dispatch scheme,” Tokyo Tech has planned and rapidly advanced with strategic international education, research, and information sharing activities through collaborations overseas universities, research institutions, and businesses. These plans include the establishment of new overseas hubs, Tokyo Tech ANNEXes, to promote and advance the Institute’s education and research. Based on collaboration with RWTH Aachen in Germany, the Institute opened its first European base — Tokyo Tech ANNEX Aachen — on the campus of RWTH Aachen, holding an opening ceremony on March 22, 2019. This is the second ANNEX to open after Tokyo Tech ANNEX Bangkok launched in March 2018.

**Social media**

Tokyo Tech has stepped up its efforts to engage international audiences on social media. By regularly posting photos, videos, and stories about Tokyo Tech’s achievements, history, campuses, and surroundings, the Institute aims to expand its online sphere of influence among prospective students, alumni, and other friends of Tokyo Tech. This initiative is also expected to strengthen links with overseas alumni associations.

**University reform**

*Committee for coordination of Institute-wide projects*

The Strategic Management Council, in charge of Institute-wide strategic planning and administration, amended the three committees handling the Top Global University Project, the program for promoting the enhancement of research universities, and Designated National University Corporation affairs respectively into working groups, and established a committee for the coordination of Institute-wide projects to oversee progress in all three areas. This committee can now analyze effectively relevant KPIs for each area, develop attainable goals further while identifying problematic ones, and take suitable measures concerning expenses.

**Education reform**

*Global Scientists and Engineers Course — Developing engineers and scientists who work across borders —*

Highly skilled scientists and engineers aiming to provide solutions to global issues must also be adept at cross-cultural communication, capable of promoting their ideas, and able to work with others toward a common goal. To help students develop such abilities, Tokyo Tech offers the Global Scientists and Engineers Course (GSEC) in addition to its standard courses. GSEC allows students to acquire the foundations required to become global leaders through its beginner and intermediate levels, which are divided into four programs.

1. **Global Awareness Program**
   Develop a global perspective while working with diverse teams

2. **English and Communication Program**
   Acquire a level of English required for study at overseas universities

3. **International Cooperation Practice Grounded in Science and Technology Program**
   Identify the true nature of complex issues and present solutions while working across borders and cultures

4. **Study Abroad or International Internship Program**
   Through overseas experiences, develop risk management skills and the ability to work overseas independently

Approximately 200 students joined GSEC when the course launched in 2013. This has now increased to roughly 1,200 students.
University’s own indicators and targets

**Tokyo Tech doctoral researcher system**
To develop globally active science and engineering professionals and enhance international joint research, and to activate the long-term exchange of outstanding young researchers around the world, the Institute deployed the Tokyo Tech doctoral researcher system in FY18. After recruitment procedures for this system at each of the Schools, etc., Tokyo Tech dispatched one researcher on a trial basis in FY17, and in FY18 decided to dispatch another researcher in the following year.

**Initiatives for the enhancement of international reputation/**
Featured initiatives based on the characteristics of the university

**International certified evaluation and accreditation**
The Department of Mechanical Engineering and the Department of Department of Electrical and Electronic Engineering, both under the School of Engineering, underwent preliminary investigations by the Japan Accreditation Board for Engineering Education, and received preliminary approval. Both departments have submitted applications for final approval, which is expected in FY19.

【Results for the promotion of collaboration with foreign universities (Type A only)】

**Tokyo Tech Summer Program 2018**
One of the Institute’s international initiatives in collaboration with US and European partner universities was the Tokyo Tech Summer Program 2018. Held for the third time, the program brought together 34 participants who carried out research at Tokyo Tech labs, joined lectures, and experienced Japanese culture through social activities and a compulsory Japanese Studies course.

**Tokyo Tech Winter Program**
To promote internationalization through collaboration with partner universities in the Oceania region, the Institute held the Tokyo Tech Winter Program 2018, the third of its kind. A total of 18 students from the University of Melbourne, the Australian National University, the University of Sydney, and the University of New South Wales participated.

**Laboratory for Design of Social Innovation in Global Networks (DLab) launch on Oct. 28, 2018**
Tokyo Tech’s Laboratory for Design of Social Innovation in Global Networks (DLab) aims to create a brighter, more prosperous world by designing “the future we want” through open, sincere discussions among Tokyo Tech faculty, staff, students, alumni, and members of the public, and the proposal of new science and technology, and relevant policies, required to realize this future. In addition to internal members, core DLab members include experienced business professionals representing the public who participate in determining the ideal direction of the entity. Approximately 130 members, including Tokyo Tech faculty, staff, and students, alumni, high school students, and regular citizens joined DLab’s kickoff event in October 2018.

DLab will continue to develop as a mechanism through which Tokyo Tech and the public can openly discuss the creation of a better future society. Future workshops will continue to encourage participants to think together about a future we truly want.
Common indicators and targets

Internationalization
Tokyo Tech-Tsinghua University Joint Graduate Program celebrates 15th anniversary
Tokyo Tech and Tsinghua University celebrated the 15th anniversary of the Tokyo Tech-Tsinghua University Joint Graduate Program on October 21, 2019 on Tokyo Tech campus. The event was attended by roughly 100 participants, including nine representatives of Tsinghua University, members of MEXT, businesspeople from supporting companies, Tokyo Tech professor emeriti and students, and graduates of the joint program.

Enhanced governance
Tokyo Tech strategic plan 2018-2023
In pursuit of its long-term goal of becoming “a world-leading science and technology university,” Tokyo Tech introduced in 2017 “Tokyo Tech 2030,” a statement declaring the Institute’s shared vision for the future. To reinforce the Institute’s values and dedication to leading global standards, Tokyo Tech’s three commitments were announced the following year in 2018.

More recently, “Tokyo Tech strategic plan 2018-2023” was released to provide a more comprehensive guide towards a shared vision for the next five years while Institute-wide discussions involving all stakeholders continue.

The strategic plan consists of four goals—enhancing creativity through diversity, facilitating progressive student-centered learning, creating impact through robust research, and pursuing institutional effectiveness and financial stability—which are executed together by faculty, staff, students, and alumni as Team Tokyo Tech.

Education reforms

Data science and artificial intelligence training for all graduate program students
Tokyo Tech launched the Progressive Graduate Minor in Data Science/Artificial Intelligence (DS/AI), a new graduate education program, in April 2020. The course brings together students from diverse specializations to learn advanced DS/AI and aims to forge collaborations that provide solutions to pressing issues and create new industries. All graduate students can join the program. Four-year undergraduate students can take part in certain components with the permission of their academic supervisor.

Before the launch of the program, a pilot was conducted on December 2, 2019 at the state-of-the-art Tokyo Tech Lecture Theatre to introduce students to the interactive, hands-on format of the course.

Education reform symposium
The Education Reform Symposium AY2019 was held on January 23, 2020 with the aim of utilizing online resources more effectively and creating lectures that increase student engagement.

Over 100 faculty and staff members, students, and others from within and outside the Institute joined to explore enhanced student engagement through a combination of active learning and other teaching and learning methods, both online and in person. The turnout demonstrated the high level of interest in creating lectures that lead to high-quality learning.
University’s own indicators and targets

International accreditation
After undergoing a preliminary evaluation and receiving provisional approval, the Department of Mechanical Engineering and the Department of Electrical and Electronic Engineering, both part of Tokyo Tech’s School of Engineering, passed the main evaluation by the Japan Accreditation Board for Engineering Education (JABEE) and were granted international accreditation.

Initiatives for the enhancement of international reputation (Type A only)

Tokyo Tech Summer Program 2019
Tokyo Tech Summer Program 2019, an initiative to promote collaboration with partner and other universities mainly in Europe and the United States, was held from June 4 to August 8, 2019. Twenty-six international students joined the program, the fourth of its kind since its establishment in 2016, affiliating themselves with Tokyo Tech labs and receiving guidance from the Institute’s faculty members. After ten weeks of research and exchange with local students, the participants shared their findings through final presentations.

[Results for the promotion of collaboration with foreign universities (Type A only)]

Deeper ties with ICL through Imperial-Tokyo Tech Global Fellows Programme 2019

The Imperial-Tokyo Tech Global Fellows Programme 2019 was held for the second time from June 10 to 14, 2019 to facilitate exchange between doctoral students at Imperial College London (ICL) and Tokyo Tech.

This program was designed to develop the leadership skills and communication abilities of doctoral students, and to build a collaborative network of young researchers across academic and geographical borders.

In 2019, twenty doctoral students from each institution united at Lee Valley Velopark—the cycling venue for the 2012 London Olympic Games—to brainstorm solutions specifically regarding Climate Action, one of the Sustainable Development Goals of the United Nations.

Free description

DLab launches Transchallenge concept and Tokyo Tech Future Chronology

On January 20, 2020, Tokyo Tech’s Laboratory for Design of Social Innovation in Global Networks (DLab), a platform launched to create a better future together with the public, announced its image of future society—the Transchallenge concept—and the Tokyo Tech Future Chronology at a public event in central Tokyo after roughly 18 months of teamwork by a diverse group of participants.

Over 100 people, including university and high school students, company and government representatives, and Tokyo Tech members gathered for the talk session and workshop to share ideas and experience the DLab approach to creating the “future we all want.”
8. FY 2020 progress

- **Common indicators and targets**

  **Internationalization**

  **Landmark student exchange hub**
  **Hisao & Hiroko Taki Plaza completed**
  The construction of Hisao & Hiroko Taki Plaza, a large student exchange hub in the heart of Ookayama Campus, was completed in November 2020. The hub took shape thanks to a donation from Tokyo Tech alumnus Hisao Taki, chairman and director of Gurunavi Inc. In line with the donor’s wishes, Taki Plaza was designed as a space where international and Japanese students connect, deepen ties, and create the future together.

  Students play a central role in planning and operations at the facility. They designed the floor concepts, and plan and organize workshops and other events at Taki Plaza.

  **Governance reform**

  **Tokyo Tech Advancement and Strategic Management Office established**
  In April 2020, Tokyo Tech Advancement (TTA), an office led by the president, and the provost-led Strategic Management Office (SMO) were launched. TTA advances strategic executive-level relationship building led by the president and works to enhance the reputation of the Institute by surveying and boosting the Tokyo Tech brand, among other measures. SMO conducts evidence-based cost analyses across the Institute, clarifies the flow of internal funds, and shares this information with deans and directors. In FY 2020, both offices played key roles in gathering information on overall financial status and data on each School, research institute, etc., and in creating the 2020 Financial Report, a document that includes details on the Institute’s finances, management resources, and management strategies.

  **Education reform**

  **Tokyo Tech Academy of Energy and Informatics launched**
  The Tokyo Tech Academy for Energy and Informatics was established after its program was selected by MEXT as a Doctoral Program for World-leading Innovation and Smart Education (WISE) in FY 2020. The five-year integrated doctoral program, created in collaboration with universities, research institutes, and businesses at home and abroad, is the third WISE program to emerge from Tokyo Tech. It aims to develop multi-scope energy professionals—experts in multidisciplinary energy science who transform and design a new energy society using big data science and social design skills.

  **Tokyo Tech Writing Center set up to boost written English skills**
  The Tokyo Tech Writing Center (TTWCR) was established to boost English academic writing skills among undergraduate students, and to prepare them for graduate-level courses. Students receive tutoring from trained TAs to improve their writing skills in both Japanese and English. TTWCR held an online symposium in March 2021 with the University of Tokyo and Waseda University on the current situation and prospects of tutoring.

  **Student Survey 2020 completed**
  Student Survey 2020 was completed to incorporate student opinions into university operations and make Tokyo Tech a better place. Conducted every other year, the survey involved voluntary student staff members who created survey questions, collected and analyzed the results, and created a proposal for change based on these results. This proposal was submitted to the president of Tokyo Tech in March 2021.

- **University’s own indicators and targets**

  **Development of next-generation HR strategy**
  All members of Tokyo Tech must be active in suitable roles for the Institute to be able to conduct outstanding education and research, and to create significant impact in society. To boost motivation, Tokyo Tech established a next-generation human resources (HR) strategy that includes a new annual salary system for all faculty. The Institute also created new positions for highly skilled staff members who have the capabilities to participate in management and conduct to non-routine work, or who can contribute to operational and management-level planning activities. Career paths for technical staff were also revised, providing opportunities for these staff members to advance to newly created chief technical specialist and senior technical specialist positions.
Initiatives to enhance international reputation (Type A only) [Tokyo Institute of Technology]

New Tokyo Tech Admissions website launched
Tokyo Tech Admissions, a new English-language website, was launched to attract and assist outstanding prospective students from overseas. One highlight of this website is the Student Ambassadors section, where current students regularly publish blogs on life at Tokyo Tech and other topics. The website also provides easy access to information regarding curricula and entrance examinations.

Online events at overseas Tokyo Tech ANNEXes
Tokyo Tech ANNEX Bangkok hosted the Research Showcase event in September 2020 and again in March 2021 with the aim of introducing the Institute’s research to a broad range of universities, businesses, and other partners in Thailand. Tokyo Tech ANNEX Aachen held six Joint Workshops between November 2020 and February 2021. These workshops introduced the research findings of numerous Japanese and German researchers, and included fruitful discussions on potential future collaborative research.

Results of collaboration with overseas universities (Type A only)

Joint online course with Georgia Institute of Technology
The 2020 Global Leadership Practice intensive course, held jointly with Georgia Institute of Technology from June 9 to 19, was delivered online due to the effects of COVID-19. Despite the time difference between Atlanta and Tokyo, 18 students from eight countries participated in the interactive sessions, which focused on group work and discussions.

Tokyo Tech Winter Program—Bringing Ideas in Remote Discussion held online
The Tokyo Tech Winter Program—Bringing Ideas in Remote Discussion (BIRD) was held online from February 12 to 22, 2021. While the traditional ten-week winter program invites about 20 students from universities in Oceania to receive research supervision at Tokyo Tech’s laboratories, COVID-19 forced this year’s program online. Eleven Tokyo Tech students joined nine University of Melbourne students to conduct group work, discussions, and presentations on the topic of public health.

Tokyo Tech-MIT Japan Language Exchange Program
The Tokyo Tech-MIT Japan Language Exchange Program was organized online from June to July 2020, with 18 students from MIT Japan and 17 students from Tokyo Tech participating. Students were matched randomly with a partner from the other institution to develop communication skills in a second language—English or Japanese—and to broaden perspectives through language exchange.

Free description

Measures to prevent spread of COVID-19
Tokyo Tech’s COVID-19 Task Force formulated a response policy to manage appropriately education and research operations during the pandemic. Based on this policy, faculty, staff, and students were able to maintain education and research activities in hybrid format while prioritizing their own safety and the safety of others. Support for students in financial need was provided in the form of the unique Team Tokyo Tech Student Support Program, which includes an emergency loan program, extension of tuition payment deadlines, and tuition exemption in case of extension of the enrollment period. Welcome counseling services were made available for new bachelor’s program students, and thesis and dissertation reviews were made more flexible. In terms of research, the Social Rebooting Technology Initiative was launched to revitalize society together with industry during and after the COVID-19 era. The Institute made 131 patents free of charge for a certain period of time and released the Tokyo Tech New Normal Research Map to convey clearly to the public its COVID-19-related research topics.

Tamachi Campus Redevelopment Project
After selecting business partners in December 2020, Tokyo Tech announced the Tamachi Campus Redevelopment Project at a joint press conference in March 2021. The project will include the relocation of Tokyo Tech High School of Science and Technology from Tamachi to Ookayama Campus, after which business operators will lease, develop, and manage the land for a set lease period. The renewal of Tamachi Campus is part of a much larger-scale urban development of the broader area around Shinagawa and Tamachi Stations. Further internationalization of Haneda Airport, construction of the tentatively named Haneda Airport Access Line, the opening of Takanawa Gateway Station, and the greatly anticipated arrival of the maglev Chuo Shinkansen will change the area significantly. Tokyo Tech aims to position the redeveloped Tamachi Campus as its global business incubation and research hub.
Common indicators and targets

Internationalization

Broader exchange at Taki Plaza between local and international students
Tokyo Tech’s International Student Support desk moved to Hisao & Hiroko Taki Plaza, the new student exchange hub, and now offers counseling services in Japanese, English, and Chinese. At the new global lounge, students can watch international broadcasts and read international magazines. Since the second half of FY21, students have been able to communicate openly in various languages at the new multilingual chat room, creating additional opportunities for exchange. Cross-cultural exchanges also increased through new events such as the welcome reception for new international students and the English Cafe communication event.

Governance reform

Approaching 150 years of Tokyo Tech—Action Package formulated
As it prepares for its 150th anniversary in 2031, Tokyo Tech formulated its Action Package, a guide that aims to bring about a prosperous future society and sustainable development for the Institute and the world through co-creation with society as Team Tokyo Tech. The Action Package, which is based on Tokyo Tech’s desired future direction, includes ambitious and challenging initiatives that will lead to reforms in education, research, and governance, and will be reviewed and implemented on a regular basis.

Tokyo Institute of Technology Integrated Report 2021 published
In line with its goal of gaining recognition as a world-leading science and technology university, Tokyo Tech published Tokyo Institute of Technology Integrated Report 2021 to promote better understanding of its current status and challenges among a wide range of stakeholders, and to advance reforms while engaging in dialogue with society. Through discussions involving the president, executive vice presidents, researchers, students, and external businesspeople and experts, the report covers Tokyo Tech’s management strategy, education, research, collaboration with industry, diversity, and other initiatives, and introduces the types of reforms being undertaken. The special feature addresses co-creation with the world and depicts the Institute’s efforts and vision to continue global collaboration for the creation of new knowledge.

Education reform

Progress with B2D Scheme
The B2D Scheme, which began in FY19, is Tokyo Tech’s original program for bachelor-level students who wish to begin research early and progress swiftly to a doctoral degree. The first 16 participants became 3rd-year students in FY21, and began research one year earlier than usual. Three students graduated early and entered the master’s degree program in April 2022. In FY21, 15 new students in the 2nd year also registered, suggesting that the foundations for the scheme are being established steadily.

Institute-wide professional development 2021
An Institute-wide professional development session for faculty members was held online with the aim of systematically improving the quality of education at Tokyo Tech. The overarching theme was “Enhanced student-centered learning: Classroom design and in-lab education in the age of the new normal.” The content was designed to deepen and develop the realization of education where students learn and think for themselves, one of the pillars of Tokyo Tech’s education reforms which were initiated in FY16.

New learning management system in T2SCHOLA
In order to develop autonomous learners who are actively involved in their own learning, a new learning management system, T2SCHOLA, was launched. This has created an environment where faculty members can utilize online learning content actively and students can learn effectively and efficiently within and outside the classroom.

University’s own indicators and targets

Rigorous self-inspection and evaluation
With an eye on the end of the Top Global University Project in March 2024, Tokyo Tech reviewed and verified each project-related measure, and identified potential problem areas. A self-assessment report was created for all measures, each of which included three items—progress of measure, status of achievement, and future actions—with a three-level evaluation of achievement status. Further improvements will be made while receiving advice on the results of the self-assessment from external experts in FY22. The self-assessment report also contains items related to the Designated National University scheme, Tokyo Tech’s vision for the future until 2030, demonstrating the Institute’s development and its progress throughout the Top Global University Project.
Initiatives to enhance international reputation

Tokyo Tech ANNEX Berkeley opens
After the opening of Tokyo Tech ANNEX Bangkok in FY18 and Tokyo Tech ANNEX Aachen in FY19, the Institute opened its third overseas base for international collaboration, Tokyo Tech ANNEX Berkeley, in Berkeley, California in October. Opportunities for collaboration and the creation of joint research topics were sought through research showcases and workshops at these ANNEXes. The opening of the third Tokyo Tech ANNEX further strengthens the Institute's international communications and enhances the global reputation of Tokyo Tech.

Tokyo Tech Global Webinars series kicks off
The Tokyo Tech Global Webinar Series was launched to recognize and continuously promote the value of exchanges with overseas and domestic universities, research institutions, etc. even under the restrictive circumstances caused by COVID-19. Through online symposiums and webinars in this series, Tokyo Tech shared its research achievements and new initiatives regarding science and technology and international cooperation, and explored the nature of education and research in the post-COVID-19 era.

Results of collaboration with overseas universities

Tokyo Institute of Technology

Continued collaboration with MIT
The School of Engineering, the School of Materials and Chemical Technology, and the School of Environment and Society renewed their student exchange agreement with the Department of Nuclear Science and Engineering at the Massachusetts Institute of Technology (MIT). With this update, the exchange between the counterparts was promoted to an official program in FY21.

Collaboration also continued through the Tokyo Tech-MIT Japan Language Exchange Program, which was held for the second time in July-August and joined by 22 Tokyo Tech students and 22 MIT Japan students. The program allowed participants to enhance their second-language communication skills while discussing different cultures and ideas with their diverse counterparts.

Global Leadership Practice course 2021 with Georgia Tech held
The 2021 Global Leadership Practice, an intensive course held since FY18, took place from June 15 to 25 in partnership with Georgia Institute of Technology (Georgia Tech), a partner university of Tokyo Tech. Fifteen students participated in the online sessions. The advanced preparations and sessions themselves utilized various tools and the support of teaching assistants to create a motivating learning environment. With a focus on group work, the classes allowed participants from diverse cultural backgrounds to conduct fruitful discussions while practicing multicultural teambuilding.

New doctoral program with RWTH Aachen
After the birth of Tokyo Tech ANNEX Aachen, a new co-supervised doctoral program was launched in addition to the existing exchange program with RWTH Aachen. Under this new program, students enrolled in the doctoral program at Tokyo Tech stay at RWTH Aachen for at least six months, in principle, to receive research guidance from RWTH Aachen faculty members, and vice versa. The program is designed to broaden students’ global perspectives by providing them with international experience, and to encourage them to engage in collaborative research with overseas counterparts.

On the research front, joint online workshops in areas such as hydrogen energy and smart wearables provided great opportunities for Tokyo Tech and RWTH Aachen researchers to inspire and engage with each other.

Enhanced information sharing with prospective international students
Tokyo Tech’s website for prospective students was fully renewed to improve access to information regarding education at the Institute. My Tokyo Tech, an English video series featuring current international students who talk about various topics such as research, dorm and student life, and the highlights of their stay in Japan, was also launched on the Tokyo Tech YouTube channel and Discover Tokyo Tech, an English website aimed at prospective international students. The series currently contains seven videos, all created with the student's perspective in mind. The Institute will continue to launch videos that provide inside views into the current life of Tokyo Tech students.