

Host Institution's Commitment (in English)

Date 21 February, 2017

To MEXT

Name of host institution: Tokyo Institute of Technology,
Name and title of head of host institution: Yoshinao Mishima, President

Signature

I confirm that the measures listed below will be taken faithfully regarding "Earth-Life Science Institute (ELSI)" adopted under the World Premier International Research Center Initiative.

<Provision in host institution's mid-to-long-term plan>

•Describe clearly the host institution's mid-to-long-term strategy plan and how the center is positioned within that strategy.

Tokyo Institute of Technology (hereinafter Tokyo Tech) laid out its new goal of becoming one of the world's top 10 research universities by 2030 – a year shy of the university's 150th anniversary – and reformulation of its educational and research systems has since progressed. Our primary research objectives are:

- (1) Strengthen the research management system to press on with internationally competitive research
- (2) Establish flexible research organizations which constantly develop and conform to the expectations of society, while generating research findings with the aim of examining scientific principles and systemizing knowledge, contributing to industry and creating next-generation industry sectors, and solving problems in terms of sustainable development
- (3) Allocate and operate the university's resources efficiently, and improve the environment to enhance comprehensive research strengths

Our 2nd mid-term objectives and plans clearly state:

<Mid-term objectives>

- (1) Objectives regarding research standards and findings

I-2-2. develop values created at Tokyo Tech, aim to apply them to society and actively open up new and interdisciplinary fields.

<Mid-term plans>

- (1) Measures to achieve objectives regarding research standards and findings

[25-2] At the Earth-Life Science Institute, a globally competitive research center focused on the study of early Earth, promote research which aims to elucidate the origin and evolution of the Earth and life and to focus on reforming its organization.

Similarly, our 3rd mid-term objectives and plans starting from fiscal year 2016 clearly state:

<Mid-term objectives>

- (1) Objectives regarding research standards and findings

I-2-2. In order to attract both internal and external researchers to lead in innovative science and technology, develop knowledge created at Tokyo Tech and actively open up new and interdisciplinary fields.

<Mid-term plans>

- (1) Measures to achieve objectives regarding research standards and findings

[15] At the Earth-Life Science Institute, a globally competitive research center focused on the study of early Earth, utilize the university president's discretionary resources and other funding to promote research which aims to elucidate the origin and evolution of Earth and life.

The mid-term objectives and plans cite that Tokyo Tech positions the Earth-Life Science Institute as “a highly strategic and ambitious objective and plan”.

<Concrete Measures>

• Describe the concrete measures that the host institution will take to satisfy the following requirements.

(1) How it will support the center’s need to secure resources that match or exceed the project grant through such means as competitive grants obtained by researchers participating in the project, in-kind contributions and other forms of assistance by the host institution (including partial payment of salaries, provision of research space), and/or external donations.

Tokyo Tech will support ELSI’s need to secure resources as follows:

- About 90 million yen per year from president’s discretionary budget will be provided to ELSI as the operating cost of WPI program. Space charge for the president’s discretionary research space will be partly exempt.
- 6 tenure-professors were transferred to ELSI. Tenured professors were exempt from educational duties for undergraduates, and Tokyo Tech provided 3 substitute researchers. Two administrative staff members were also assigned at no cost to ELSI. Tokyo Tech will continuously provide such necessary support.
- Tokyo Tech assured approximately 2,670 m² of research space in an existing building for ELSI-2 and additionally a new research building (ELSI-1: 5,000m²) was completed in FY2015 to become an appropriate research environment.
- Tokyo Tech research administration center, research promotion department and international affairs department provide extensive guidance to foreign members of ELSI to be competitive in attracting external grants. Tokyo Tech offers financial support for submission and publication charges in international academic magazines and journals, Kakenhi coaching seminars in English, and advice and practice for interviews. In order to attract more grants from an overseas foundation, Tokyo Tech is applying for non-profit incorporation overseas.

(2) How it will institute a system under which the center’s director is able to make substantive personnel and budget allocation decisions necessary to implementing the center project—a system, which in practice, allows the center director autonomy in making decisions regarding the center’s operation.

- ELSI will be established as an independent research organization directly under the jurisdiction of Tokyo Tech president and encouraged to establish a more flexible research system than conventional operational systems. Tokyo Tech regards ELSI as a pioneer to reform research organization and to improve its recognition internationally, which leads to attracting more researchers from abroad. The director of ELSI has the authority to make all decisions related to the center, including personnel affairs (excluding hiring and firing of the center director him/herself) and execution of the budget. The director therefore manages ELSI’s organizational reform, international recruitment of scientists, and ELSI’s budget and director’s discretionary funds. The center director will evaluate both researchers and administrative staff members, and can provide them with extra incentives based on their performance.

(3) The support it will provide to the center director in coordinating with other departments within the host institution when recruiting researchers for the center, while giving reasonable regard to the educational and research activities of those departments.

- Tokyo Tech will make arrangements directly with those departments that provide researchers belonging to ELSI, to ensure that those researchers will have unusual amounts of time and freedom to concentrate on their research, for example by appointing substitute professors for educational activities.
- Tenured professors were exempt from bachelors-level education, so Tokyo Tech assigned 3 substitute researchers to the department to meet the educational needs. This enables more researchers from other departments to get involved in research activities at ELSI.

(4) Its flexibility in applying, revising, or supplementing the host institution’s internal systems as needed for the center to effectively implement new management methods (e.g., English-language environment, merit-based pay, top-down decision making)

unfettered by conventional modes of operation.

- Tokyo Tech has enacted an agreement on the merit-based salary of fixed-term employees at ELSI so that they are paid according to their performance and abilities. We also reformed the system that provides extra financial incentives for researchers and administrative staff members in recognition of their proven abilities and performance.
- We have introduced a cross-appointment system to recruit top level researchers and to promote research.
- We have organized a support system in English for foreign researchers. To facilitate their prompt settlement and research activities in Japan, we have secured 20 guest rooms at the international house on campus and provide foreign researchers with support to help them adapt to life in Japan. For example, immigration, registration and opening bank accounts for international researchers. We also offer Japanese language classes so that they can acquire conversational skills for living.
- Tokyo Tech president, vice presidents for research, general and financial affairs and the ELSI director have a monthly meeting so that Tokyo Tech can take necessary measures in flexible ways, leaving room for revisions and additions of campus rules relating to ELSI's smooth organization.

(5) Its accommodation of the center's infrastructural requirements (for facilities, e.g., laboratory space; equipment; land, etc.).

- In order to create an environment where researchers from different fields communicate and collaborate on a daily basis, Tokyo Tech assured approximately 2,670 m² of research space in an existing building for ELSI-2 and additionally provided another research building (ELSI-1: 5,000m²), which was completed in FY2015.
- 20 rooms of our on-campus accommodation, the international house, will be reserved for preferential occupancy by ELSI's foreign researchers.
- The Ookayama Campus of Tokyo Tech, housing ELSI, is located near a train station about 30-minutes away from the center of Tokyo. It has a number of large and small conference halls that can hold an international symposium, a main hall, a library, and a restaurant. Therefore, the campus is suited for meetings of world-leading researchers. We will provide support for preferential usage of such common spaces.
- We are prepared to organize space on its campus and to provide more space depending on additional growth of ELSI.

(6) How it will support to sustain the center as a world premier international research center after the WPI-grant period ends.

- Tokyo Tech will position ELSI as a special research district even after the WPI-grant period ends, and will continuously provide support, so that ELSI remains the world premier international research center permanently. We promise 10 full-time equivalent PIs (of which 6 are tenured) and necessary support staff, in addition to president's discretionary expenses (JPY 90 million per year) and research space.
- We will provide an adequate environment for research, graduate educational opportunities to nurture young scientists, interdisciplinary collaboration with top-level scientists and enough support for overseas researchers.
- Based on the success in acquiring a large grant from John Templeton foundation in the U.S., we are applying for non-profit incorporation overseas in order to attract more global funds. Tokyo Tech will continuously aid ELSI in obtaining continuous support from outside of Tokyo Tech, in terms of competitive funds and contribution from foundations and enterprises.
- We will provide enough support to sustain ELSI as a world premier international research center, as stated in our 3rd mid-term plans: "At the Earth-Life Science Institute, a globally competitive research center focused on the study of early Earth, utilize the university president's discretionary resources and other funding to promote research which aims to elucidate the origin and evolution of Earth and life."

(7) Other types of assistance it will provide to give maximum support to the center in achieving its concepts and objectives and becoming a world premier international research center in both name and deed.

- It is beneficial for ELSI's world-class researchers to supervise graduate students and to nurture next generation researchers, so Tokyo Tech will support to establish ELSI's unique international educational

system.

- In order to develop ELSI into a truly global research institute, it is very important to publicize the activities of ELSI both inside and outside of Japan, in order to highlight its presence. From such a viewpoint, ELSI's PR activities will be integrated with the PR activities of Tokyo Tech to effectively advertise the research activities and results together.

- Utilizing ELSI's successful know-hows, Tokyo Tech led World Research Hub Initiative (WRHI) and launched Institutes of Innovative Research (IIR) aiming to create new research fields and next-generation industry. This enables to invite world-class researchers in order to broaden international networks and to activate international collaboration conducted by the students and researchers. Tokyo Tech aims to become a global S&E research hub to attract academic knowledge and human resources, and ultimately achieve "true internationalization".