

## Tokyo Institute of Technology

### Action Package

March 2022 version

#### Preamble

Tokyo Institute of Technology (hereinafter “Tokyo Tech”, “the Institute”) has set the long-term goal<sup>1</sup> of becoming a world-leading science and technology university, and continues to move forward with efforts to enhance its education, boost its research, and create increased impact in society. When discussing this long-term goal, Tokyo Tech often receives questions from both within and outside the university regarding the meaning of its intended “world-leading” status, and how such a status might be evaluated.

Firstly, the variety of roles sought by universities that arguably achieve this heightened global status is diverse. Discussions on “world-leading” institutions should therefore not involve ranks of higher or lower, as one might do, for example, when comparing the altitude of the highest mountain peaks of the world. Instead, the students, faculty, staff, and alumni who make up the university community—those who seek the truth based on intellectual curiosity, those who develop technologies that contribute to solving societal issues, those who give birth to new industries, those who transform society through activities that engage others—can set their sights on their personal summits based on their individual positions and personalities. In a sense, a “world-leading” institution could be recognized as being at “great heights” like the peaks of the Himalayas, the Alps, or the Andes when viewed from a distance. But surely, definitions for such great heights also vary. Some of us might be concerned with altitude only, but others might be interested in the level of difficulty when ascending Mt. Everest or the Eiger North Face. Yet others might simply focus on the *morgenrot*, the red glow of the morning sun as it hits the Himalayas or the Matterhorn on a clear morning. Like these great summits that captivate for a multitude of reasons, Tokyo Tech’s pursuit of a world-leading status is reflected in its “peaks” of Ookayama, Suzukakedai, and Tamachi, which together aim to attract the interest of individuals around the world. And, while focusing on science and technology, Tokyo Tech believes in its role as a more comprehensive institution which diverse people with diverse interests unanimously recognize as having achieved great heights.

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<sup>1</sup> National University Corporation Tokyo Institute of Technology, 1st mid-term goals, presented to the Minister of Education, Culture, Sports, Science and Technology on May 26, 2004

The individuality of faculty, staff, and students can be an extremely important factor in Tokyo Tech's efforts to build a university of greater heights and gain global recognition of such a heightened status. During the numerous workshops that resulted in the "Tokyo Tech 2030" statement,<sup>2</sup> the university's faculty, staff, and students conducted a self-analysis and concluded that they possess a disposition to push forward with their own passions, cooperate with like-minded people, and not pander to the evaluations of others. In order to make the most of this collective nature of Tokyo Tech, and to have people with diverse interests unanimously recognize the university's newly achieved heights, it is necessary to promote cross-disciplinary cooperation while understanding and respecting the characteristics of each involved individual. This is precisely what is communicated through the spirit of "appreciating diversity" and "collaborative challenges" in the 2018 Tokyo Tech Commitments.<sup>3</sup>

The need to take on collaborative challenges that transcend disciplinary borders has a long history in the Tokyo Tech community. It was highlighted in a document dated November 2, 1945<sup>4</sup> from the academic reform investigation committee, led by then-president Koroku Wada, which examined the past achievements of Tokyo Tech in order to realize a new path for the university. The document states that "the cultural mission of Tokyo Institute of Technology is to strive for the continuous development of science and technology in accordance with sound value judgments made in relation to other cultural fields based on the search for truth and higher values, and to train young individuals who become industrial engineers with independent thinking and creative abilities, thereby contributing to the advancement of human culture and the welfare of humanity." Against this backdrop, Tokyo Tech began its transformation, establishing a humanities department and advancing education in cultural fields by inviting to the university Hideo Kobayashi, Otoya Miyagi, and other leading researchers in the humanities and social sciences. These decisive actions paved the path for the Institute for Liberal Arts (ILA) that exists today. The philosophy of Koroku Wada,<sup>5</sup> that is the cultured contemplation of "what must be done and for what purpose," offers both meaning and direction in our various specialized fields, in which we tend to examine "what and how something can be done." As academia, and science and

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<sup>2</sup> "Tokyo Tech 2030" statement, <https://www.titech.ac.jp/english/tokyotech2030>

<sup>3</sup> 2018 Tokyo Tech Commitments, <https://www.titech.ac.jp/english/public-relations/about/president/message/commitment2018>

<sup>4</sup> 100 Years' History of Tokyo Institute of Technology (Overview), [http://www.cent.titech.ac.jp/DL/DL\\_Collections/100th%20Anniversary.pdf](http://www.cent.titech.ac.jp/DL/DL_Collections/100th%20Anniversary.pdf), p.669

<sup>5</sup> 100 Years' History of Tokyo Institute of Technology (Overview), [http://www.cent.titech.ac.jp/DL/DL\\_Collections/100th%20Anniversary.pdf](http://www.cent.titech.ac.jp/DL/DL_Collections/100th%20Anniversary.pdf), pp.704-705

engineering scholarship in particular, has matured and each field has become highly specialized, we should remind ourselves of this philosophy and apply it to create change in the present day. Tokyo Tech possesses the inherent collective spirit to take on this challenge of “redefining science and technology.” The time is ripe to build and share with others greater heights, new levels of achievement which will be recognized globally as the university’s strengths.

Similarly, it is time to change our mindset regarding learning, teaching, and the development of professionals. Tokyo Tech was founded as Tokyo Vocational School in 1881. Because of its origins, the university was long recognized by society as a school of practical learning that not only pursues academic principles but also trains people to lead industry and engineering, a role that has not changed to this day. However, it is important to note that, when training professionals to lead in industry and engineering, the goal is not simply to train them to lead in the current environment. When considering the establishment of a vocational school, Arata Hamao of the Ministry of Education stated, “In Japan, [. . .] we do not want to build industrial factories and then start an industrial school. Rather, we should start a school first, produce graduates, and then create industrial factories.”<sup>6</sup> This reminds Tokyo Tech of its important mission of cultivating leaders who can also start new industries, or in more recent terms, entrepreneurs.

From this perspective, Tokyo Tech’s Cross-Campus Innovation Ecosystem concept 2031, which was initiated in conjunction with the redevelopment of Tamachi Campus, is also timely. Ookayama Campus, which is expected to function as the axis for education in the future, will foster entrepreneurship. Suzukakedai Campus, which is envisioned as Tokyo Tech’s hub of research, will be home base for creating technologies that form the seeds for startups and developing technology in existing startup companies. The renewed Tamachi Campus will support the commercialization of these technologies. This cross-campus concept aims to provide a cycle for creating new Tokyo Tech-born innovations. Naturally, education at Ookayama Campus will not be solely about fostering entrepreneurship, and there is no intention to focus all research conducted at each of the campuses on the creation of business seeds. Rather, the unique characteristics of the three campuses can be utilized in unison to further contribute to the creation of new industries and train leaders who can develop new businesses, two achievements that will boost the Institute’s stature globally.

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<sup>6</sup> Idem, p.39

Based on the mission, objectives, and the resulting vision of the Institute as described above, this action package lists strategies for realizing the image, or vision, of a desired future of National University Corporation Tokyo Institute of Technology during the fourth mid-term goals period (fiscal years 2022-2027), and in the years that follow. Some of these strategies have been combined with the objective outlines presented by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), and have been approved as part of the Institute's mid-term plans by the Minister of Education, Culture, Sports, Science and Technology. As these strategies are obligations agreed upon with the government, their progress will be evaluated and no changes will be allowed without special justification. Other strategies will be implemented while reviewing their appropriateness through dialogue with Tokyo Tech faculty, staff, students, and other stakeholders, and while considering the progress of each initiative and its relationship to effectiveness and cost. This strong intent is reflected in the university's "decisive action," the third component of the 2018 Tokyo Tech Commitments.<sup>3</sup> The responsibility for these decisive actions naturally rests with the university president and other members of the executive management team.

Finally, the strategies described in this action package include ambitious and challenging ones that go beyond the conventional boundaries of national university corporations. These strategies not only aim to set Tokyo Tech apart from other national university corporations, but are also viewed as necessary for the university to achieve world-leading standards and be recognized as having attained "great heights" globally. As a result, the Institute's appearance and positioning may deviate from those of other national university corporations in the near future. Tokyo Tech, however, is unafraid of change, for "we see an alternate future."<sup>2</sup>