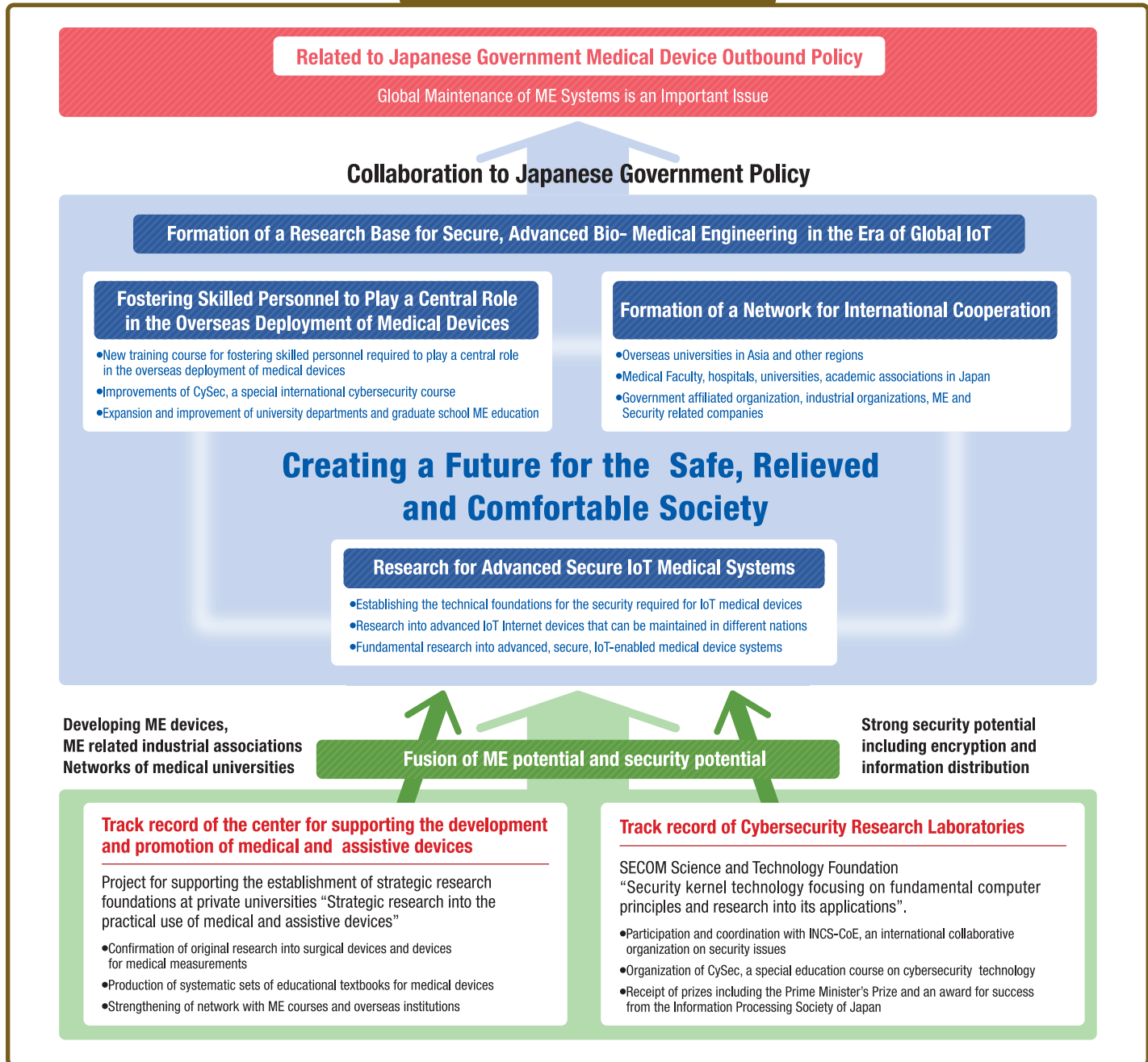


Research Branding Project



Living Smart, Living Secure



Tokyo Denki University President
Tadahiko Ibamoto

In November 2017, TDU was selected by the Ministry of Education, Culture, Sports, Science and Technology to participate in the FY 2017 Private University Research Branding Project . Within TDU, we had already established a commission for investigating our research branding selecting “Creating a Future for the Safe, Relieved and Comfortable Society” as our research slogan and engaging particularly in the core fields of “Biomedical Engineering”, “Energy and Environment”, “Safety and Relief”, and “Information Processing”.

The project selected is entitled “Formation of a Research Base for Secure, Advanced Bio- Medical Engineering in the Era of Global IoT”. This project is entirely in alignment with our core research areas. It will explore innovative new ground by fusing security research conducted at the Cybersecurity Research Laboratories with the track record of research into bio-medical engineering conducted by the Medical Equipment Practical Development Support Center in the Research Institute for Science and Technology.

For the more than 110 years since our foundation, the mission of TDU has been to harness technology to contribute to society. Through this project, we intend to make further contributions to society through the research and development in the field of specialist medical devices that will harness IoT technology and other new technologies including remote maintenance, modularization and advanced security technology.

Formation of a Research Base for Secure, Advanced Bio- Medical Engineering in the Era of Global IoT.

The Significance of Research Branding Project

Through our previous work, we have sought to harness the results of research into IoT and security to provide benefits in the field of biomedical engineering, contributing to the construction of a society that provides safety, peace of mind and comfort. Specifically, we are leveraging IoT technology to develop medical device systems that can be maintained remotely while guaranteeing security. This work takes place in three main areas, Research for advanced secure IoT medical systems, Fostering Skilled Personnel to Play a Central Role for the Overseas Deployment of Medical Devices, Formation of a network for International Cooperation. Up until now, this research has been conducted separately, but under the research branding project, we will be working to cooperate and move forward as an organization. We are committed to making a success of this branding project through cooperation with other universities, institutions and private-sector companies.



IoT-enabled Evaluation and Preservation of Evidence

Supervisor Responsible for Research Branding Specialized Professor,
General Research Institute
Cybersecurity Research Laboratories
Director: Ryoichi Sasaki

Project Summary

TDU will fuse long-standing research into biomedical engineering and cyber security in order to create a biomedical engineering center that can develop secure IoT-enabled medical device systems. Specifically, the center will harness IoT technology in order to develop secure medical device systems that include remote control functionality. The aim is to produce medical devices that can operate successfully not only in Japan but in a wide range of different environments around the world. The development of such easily-maintained systems will be accomplished through collaboration between industry, academia and the government.

In addition, TDU will establish a new training course for fostering skilled personnel required to play a central role in the overseas deployment of medical devices. The course will accept overseas students from Asia and around the world, who will aim to put the project into practice. Our aim is to ensure that TDU develops an unparalleled reputation for providing secure IoT-enabled biomedical engineering, as we had to contribute to the creation of a society that provides safety, relief and comfort.

Expectations of the Research Branding Project

IoT functionality and the resolution of security issues are extremely important. For the widespread use of Japanese medical device technology in Asia.

We are making efforts to provide solutions by fusing research in security and biomedical engineering fields. Our aim is to make progress in designing reliable, robust and easy-to-maintain devices, and in order to achieve this we also need to train researchers capable of designing these devices. In this branding project, we are aiming for the global deployment of Japanese ME devices, and also the growth of individuals who might be involved in this international expansion. In other words, we need to educate not only healthcare professionals, but those responsible for designing the equipment and devices they use to help their patients. The development of medical device systems requires collaboration between medical institutions and medical device manufacturers.

We are committed to the formation of collaboration networks between hospitals and ME device companies, and between academia, industry and the government.



Medical Engineering, Assistive Engineering

Supervisor Responsible for Research Branding Project Specialized Professor,
General Research Institute
Medical Equipment Practical Development Support Center
Director: Takeyoshi Dohi

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