World Premier International Research Center Initiative (WPI)

Field	Name	Contents	Duration
Materials science	Advanced Institute for Materials Research	Advanced Institute for Materials Research (AIMR) at Tohoku University is one of nine research centers established by World Premier International Research Center Initiative (WPI) launched in 2007 by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT), aimed at developing world-class research bases in Japan. After its establishment, AIMR has been active in conducting world-leading research and creating new systems to become a global center for materials science. Since 2012, AIMR has been conducting fundamental research by finding connections between materials science and mathematics. AIMR aims to formulate new scientific principles that can enable the development of materials based on the theoretical prediction. In order to ensure that these developed materials play a useful role in society, AIMR is also engaged in the development of devices and systems that make use of these materials. AIMR's mission is to contribute to creation of a sustainable society through such advanced materials science.	FY2007-FY2016

Innovation Creation Program (COI STREAM)

Thems	Name	Contents	Duration
The Center of Innovation (COI) Program	The Center of Innovation to create a platform for everyday health screening through unnoticeable sensing technology to support human and social well-being	We will develop safe small-sized highperformance sensors of various forms and types, which can be loaded on rice or topping condiments, chop sticks, dishes, or wearable patches. By integrating internationally renowned Tohoku University's cutting-edge research results in the fields of MEMS (micro electro mechanical systems), electronics, ICT, energy, materials, and medical technology, the COI at Tohoku University will create and implement new life science innovations in our everyday life.	FY2013-FY2021

- R&D themes that unlock results
  - ■Pioneering sensor technology will enable the easy collection of data on the user's physical condition and environment during everyday activities (autonomous ultra low-power devices, bio-spintronics, MEMS).
  - ■The integrated management of large amounts of personal health data will contribute to individual wellness, but will also have secondary uses, such as security, beyond healthcare. Technologies (such as Private Cloud PHR) will accelerate the creation of new industries leading to widespread usability improvements in society and solutions to a variety of problems.
  - ■Advanced applications (e.g. weekly health forecasts) will "surface" plans for healthy lifestyles based on data obtained from personal genome and sensor data, and allow people to monitor the health of family members remotely.

The Program for Promoting the Enhancement of Research Universities

Name	Contents	Duration
The Program for Promoting the Enhancement of Research Universities	In recent years, various statistics such as Japan's world share of publications, shows a declining trend. To counteract against this trend, immediate actions for boosting Japanese universities' global competitiveness are mandatory. Necessary actions and efforts include progressive improvement of whole environments surrounding research activities, including support, management and promotion systems, particularly establishment of a strong research administration system by securing skillful research management personnel. This ten-year-period project supports such efforts.	FY2013-FY2022

- Tohoku University Initiatives
  - ■We will improve the Research Administration Center, which is part of the Research Promotion Center, and conduct analysis of worldwide research, social trends, and our university's research capacity. By "surfacing" our research strategy, we will provide planning support and selection of benchmark universities, research institutes, and researchers. We will then increase the number of visiting/resident researchers from these universities etc.
  - ■We will establish the Tohoku Forum for Creativity as a visiting/resident research center to develop pioneering fields of research that will contribute to solving problems common among all human societies.
  - ■We will establish Overseas Research Stations, which will allow young researchers (potential global leaders) to conduct mid/long-term studies at overseas research institutes. International research cooperation/collaboration projects will dramatically accelerate the ideas they incubate overseas.
  - ■A reception system, comprised of the Research Reception Center and International Cooperation Bureau, will be created to facilitate the smooth arrival of visiting/resident researchers. The Research Reception Center will act as a hub for accelerating the internationalization of Tohoku University's administrative staff.