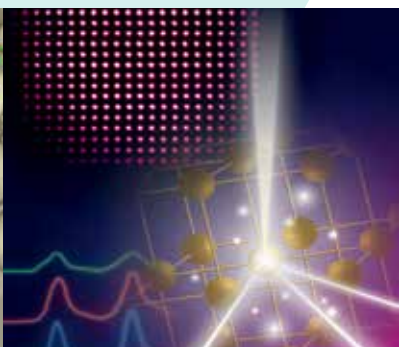
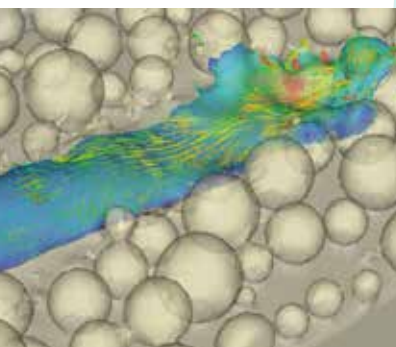


TOHOKU UNIVERSITY

# New Industry Creation Hatchery Center



# Greeting from the Director of NICHe



We propose models of industry-academia collaborations that promote the social implementation of research findings.

The New Industry Creation Hatchery Center (NICHe) was established in April 1998 with a defining mission: to leverage Tohoku University's world-leading research assets to develop innovative technologies, address critical societal needs, and propose the creation of entirely new industries. To realize this mission, NICHe drives cutting-edge research projects selected from across the university. Dedicated faculty and staff from Planning Division for Development collaborate closely with project leaders, vigorously advancing industry-academia collaboration and its strategic social implementation.

While industry-academia collaboration is now commonplace, NICHe's institutional structure remains profoundly unique, functioning as a dynamic collective of projects led by faculty members dedicated exclusively to research and development. The Center's management is characterized by agile decision-making and flexible personnel systems supported by external funding. This is complemented by dedicated research spaces that prioritize stringent security, including advanced access control and secure information networks.

Furthermore, our Planning Division for Development provides comprehensive administrative support for practical, commercialization-oriented R&D. This encompasses strategic coordination, budget management, and rigorous research integrity oversight, such as conflict of interest and security export control, maintained in seamless cooperation with the university headquarters.

Our research initiatives operate under a refined system introduced in FY2023, categorizing projects into five distinct types: "Full-fledged" (core R&D), "Preliminary" (preparatory stage), "Educational" (professional reskilling), "Academic" (elevating global research standing), and "Dawn" (high-potential, challenging endeavors). In FY2026, four new projects joined, bringing the total number of on-going projects to 24. For individual details, please refer to the subsequent pages of this document or visit our website.

Following Tohoku University's prestigious accreditation as the first "University for International Research Excellence" in November 2024, NICHe continues to advance globally preeminent frontier research. This is further accelerated by the March 2025 commencement of shared beamline operations at "NanoTerasu" (the 3GeV synchrotron radiation facility) on the Aobayama Campus. Reflecting on the mission, NICHe is committed to developing research that yields high social impact and efficacy while aiming for the real-world application of our findings.

Adjacent to the Aobayama Subway Station and just two hours from Tokyo Station, NICHe offers outstanding physical proximity to both NanoTerasu and various academic departments, providing an ideal environment for cross-disciplinary research. We earnestly encourage you to utilize our facilities, and we extend our deepest gratitude for your continued collaboration and support.

April 2026

Director, **Dr. Hiroo Yugami**

Tohoku University, New Industry Creation Hatchery Center

## Our Mission

NICHe is one of the inter-department institutes for practical education and research in Tohoku University. The Mission of NICHe is to meet the needs of society by creating new technologies and products by exploring new uses and industries. Original and cutting-edge research are carried out in collaboration with industry. NICHe is a research center for bringing academia-industry ideas to society through collaborative research projects based on academic-industry know-how.

### NICHe Project Guide and Scope

1. World Leading Research 2. Goals and Timeframes 3. Large Scale Research Endeavours 4. External Funding



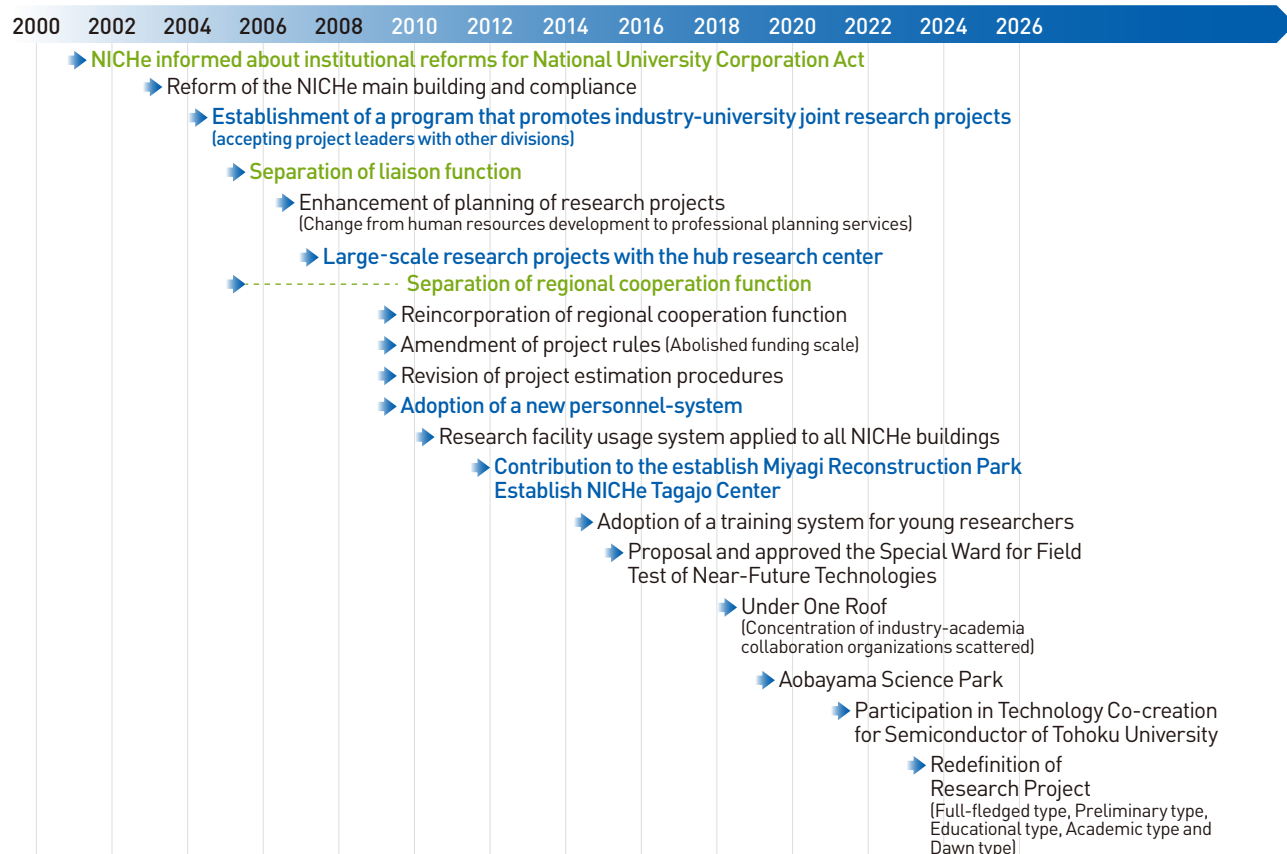
- Research Spaces with Ensured Confidentiality\*
- Planning of Collaborative Research (fund procurement, support for start-ups, clerical work)
- Concentrated Research Environment (free from teaching and administrative duties)

### Management of Collaborative Research

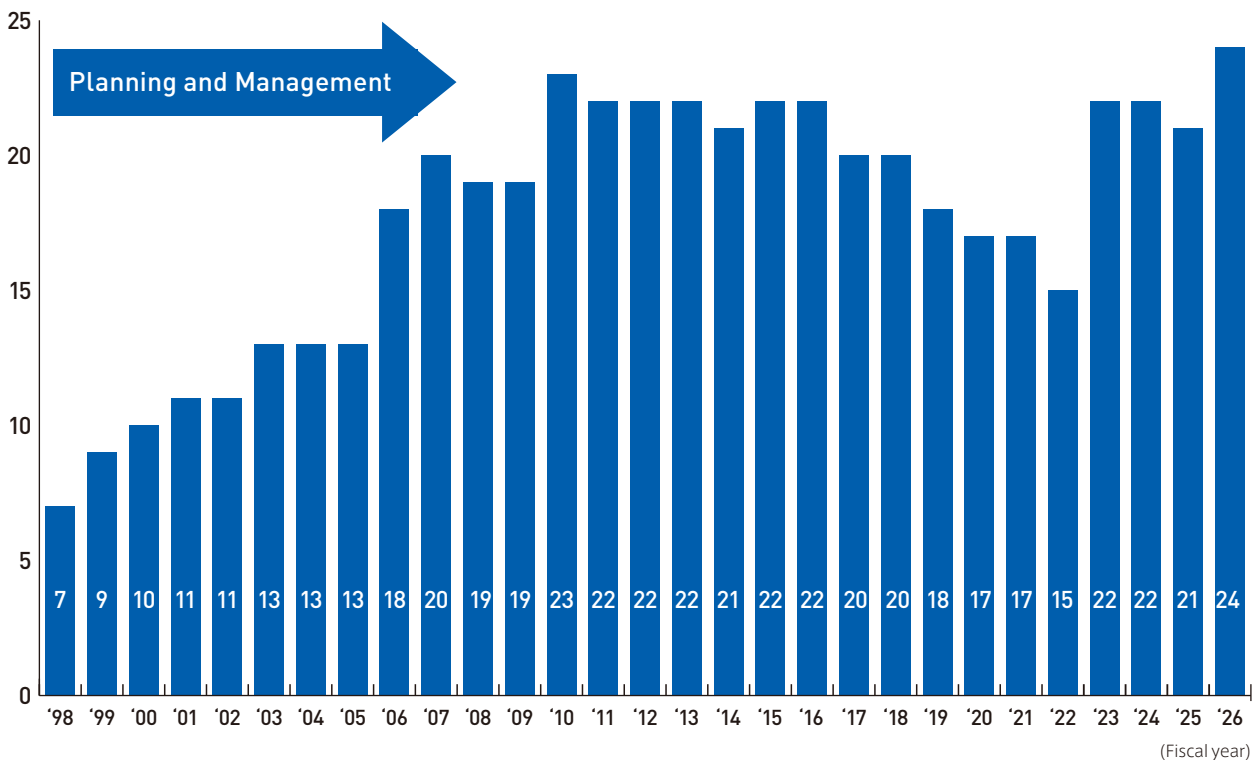
#### \*Confidential Information Management

NICHe's buildings and areas are under strict entry and exit control to protect research and business confidentiality.

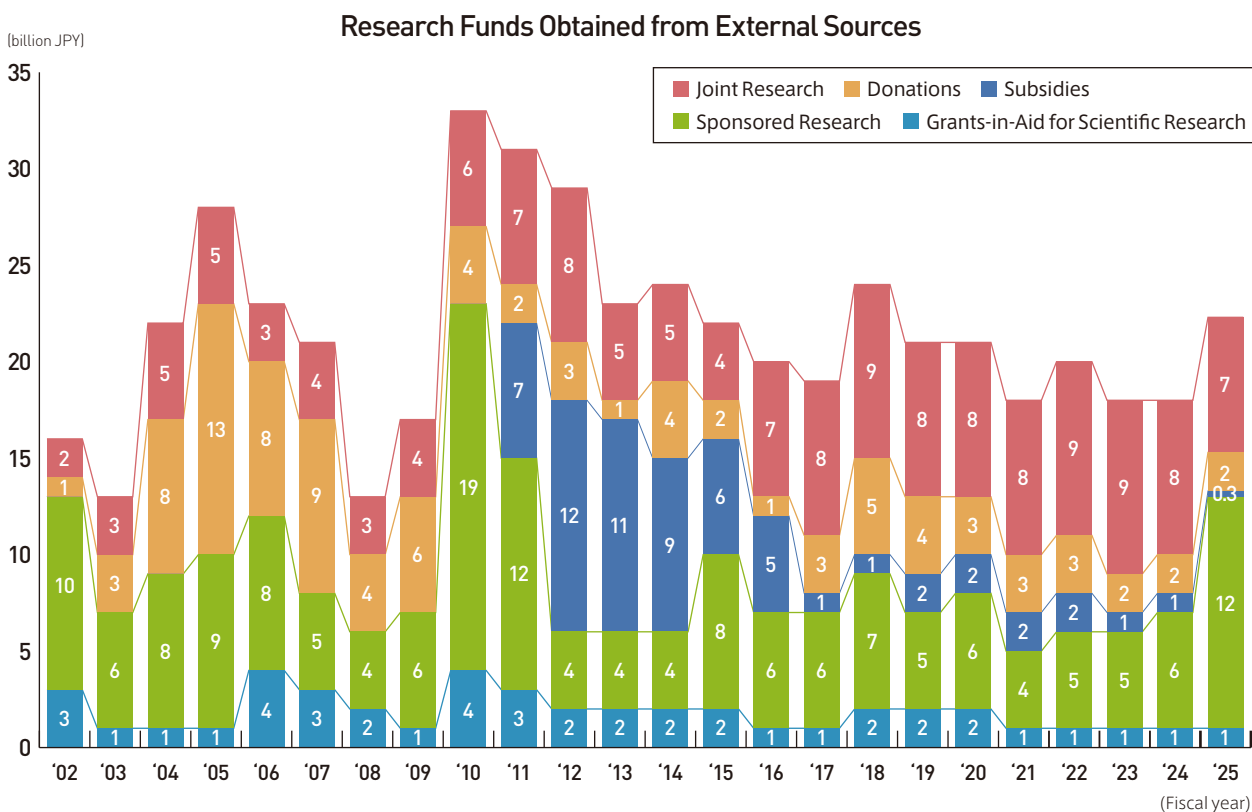
## History of NICHe



## Number of Project



## Research Funds





New industry creation hatchery center(NICHe) is an inter-departmental institute of Tohoku University established in 1998 with the purpose to develop regional enterprises from laboratory breakthroughs in collaboration with industry. Projects initiated with NICHe emphasize economic value and innovation in developing products, processes and manufacturing techniques.

## Facilities

NICHe has three research buildings on the Aobayama Campus of Tohoku University as described below.

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### New Industry Creation Hatchery Center

Main Building

**[OUTLINE]** NICHe's center (6 stories, 4,600m<sup>2</sup>) is built for establishing joint industry-university research:

Floor(1F): Planning & Development/Administration

Floor(2F): Enterprise Partnerships  
Tohoku Techno Arch Corporation (TLO)

Floors(3F-6F): Joint Industry-university research

Entry and exit to each floor are monitored 24 hours per day to ensure secure research settings.

**[FEATURES]** The Head Office of Enterprise Partnerships and Tohoku Techno Arch Corporation(TLO) is located on the second floor along with Tohoku University Collaboration Business Incubator(T-Biz) to provide a centralized facility for Industry-academia collaboration. Security card gates are installed on each room on the laboratory floor to control entry and exit.



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### Fluctuation-Free Facility

for New Information Industry

**[OUTLINE]** NICHe Fluctuation-free Facility(6 stories, 6,400m<sup>2</sup>) was constructed to bring about a leap forward in technological advances (fluctuation-free power, vibration, contaminant control) for Japan's semiconductor and flat panel display field. The creation of this facility was supported by industry for the "New Semiconductor / Display Industry Project" developed by Tohoku University.

**[FEATURES]** NICHe Fluctuation-free Facility offers ultra fine processing and high precision measurements on a nano-meter level, control of variants such as detection of contamination, monitoring power-supply voltage fluctuations and just about any other types of fluctuations such as power or vibrations, while maintaining energy conservation measures. This facility is available for use from planning, designing and manufacturing and for conducting tests with a uniform basis. There are two clean rooms with clean spaces (605m<sup>2</sup> and 692m<sup>2</sup>), faculty and conference rooms, CAD equipment, measurement and evaluation rooms as well as free space for researchers.



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### New Industry Creation Hatchery Center

Annex

**[OUTLINE]** NICHe Annex was constructed by a grant from the Ministry of Economy, Trade and Industry under the title of the "2008 Grant for Public Facilities for Promoting the Attraction of Enterprises to Regions". To put the outcomes of research into practical use quickly, researchers are engaged in activities in collaboration with parties from large companies and small to medium-sized enterprises(SMEs), especially for domestic SMEs aiming to be global NICHe players.

**[FEATURES]** NICHe Annex(5 stories, 3,500m<sup>2</sup>) houses large-scale research activities with each floor(446m<sup>2</sup>) having no partitions. Partitions can be erected according to space requirements. Entry and exit management are thoroughly maintained by keeping electronic records to ensure security and to prevent unauthorized entry or loss of information.





## TOHOKU UNIVERSITY New Industry Creation Hatchery Center

6-6-10, Aramaki Aza Aoba, Aoba-ku, Sendai,  
Miyagi 980-8579, Japan

### [Planning Office for Development]

TEL. +81-22-795-4004 FAX. +81-22-795-7985

### [General Affairs Section]

TEL. +81-22-795-7527 FAX. +81-22-795-7985

<https://www.niche.tohoku.ac.jp/>



### [Subway Tozai Line]

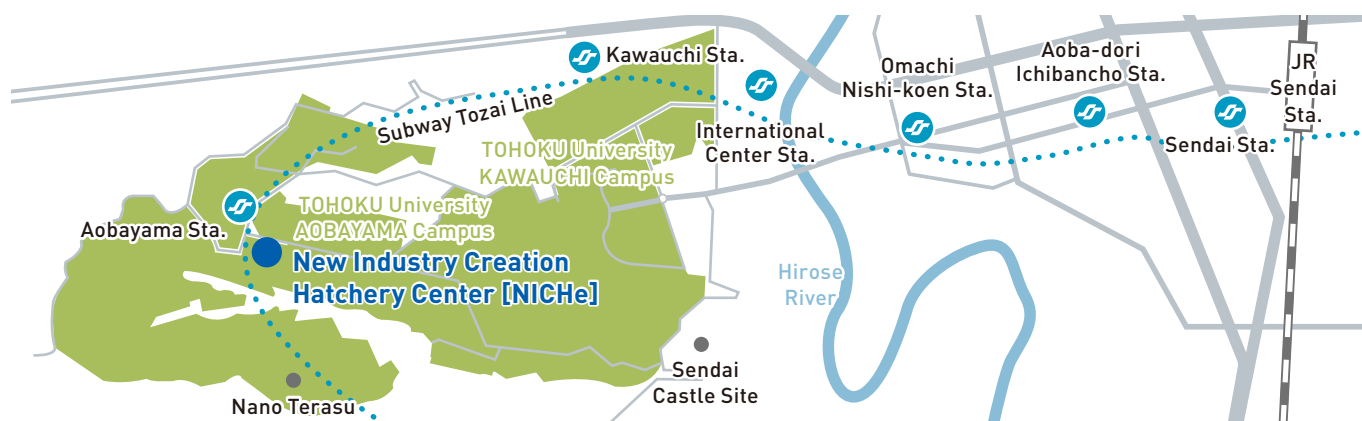
Time / 9 minutes

From "Sendai" station, take the (East-West) Tozai Subway bound for "Yagiyaama Zoological Park",  
Get off at "Aobayama" station.

### [Taxi]

Time / 20 minutes

Taxis are available at Sendai Station for travel to NICHe.

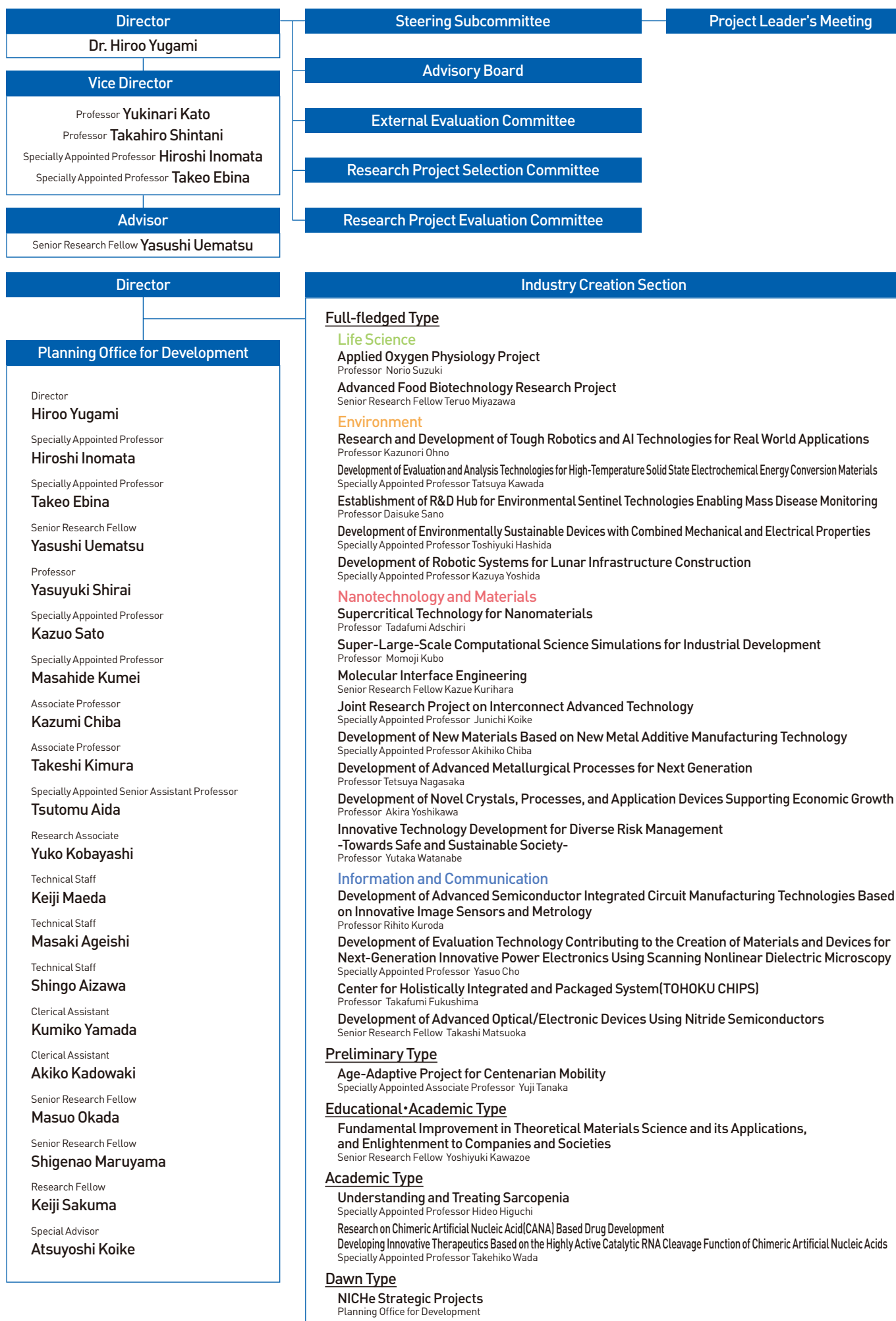


### The CO<sub>2</sub> Emission from Printing

Bookbinding of this pamphlet is given carbon offset through J-Credit scheme.

# ORGANIZATION

This page was last modified: April 2026



## THE LIST of NICH<sub>e</sub> PROJECTS

Life Science   Environment   Nanotechnology and Materials   Information and Communication   Special Project

[illegible]