Okinawa Institute of Science and Technology Graduate University

(University Functions to be Enhanced: 1. Boost academic excellence in specific areas of the university's strength, 2. Generate innovation that can help solve global issues and advance societal reform, 3. Take a lead in resolving regional issues through collaboration with regional communities.)

Collaborators: Keio University, University of the Ryukyus

Participators: Tohoku University, The University of Tokyo, Osaka University, Kyushu University, RIKEN, University of Cambridge, Max Planck Institute, Stanford University, Scripps Institution for Oceanography, University of California, San Diego, University of Hawai'i, French National Center for Scientific Research, Chalmers University of Technology, University of Oxford

Summary

Background of vision formulation

Conducting top quality research in Japan and became among the world best in 10 years since establishment, but OIST is still growing and in the middle of its development.

✓Small in size (about 90PIs), Limited research area [Constraints of size, research area] ✓Challenges in external communication due to its diversity [Language/cultural barriers] ✓Access and transport challenges to "Okinawa, Onna Village" [Geographical constraints] ✓Unique features and resources are not yet generating benefits to others domestic entities ✓Limited staff exchanges with domestic entities in Researchers, URA, Technical & Admin staff ✓More room for contribution to the development of Okinawa and Japan's economy and society Required diversification of financial resources for self-sustaining operation

To overcome the challenges and carry out bold reforms based on "nexus" concept, established a grand design university vision

Strengthen our research support system and environment, create synergy with the J-PEAKS facilities **programs**, expand research activities overseas, domestically, and in Okinawa. Promote international brain circulation, shared use of facilities and equipment, and undertake reforms to become part of research universities groups that will drive the strengthening of Japan's research capabilities. Pursue world-class research excellence





Enhance contributions to Okinawa by linking to our strengthened innovation Linking the 3 aims of the programme

A vision for OIST in 10 years with "Enhanced Research Capabilities": OIST nexus

■We will build on our existing foundations as an international center of excellence in life sciences and quantum research etc., to intersect, integrate, and synergize the wisdom of all OIST researchers and staff including students, postdocs and other early career researchers, the world-class research resources and potential of the university, develop a university-wide, systematic initiative to promote cutting-edge, "curiosity-driven", interdisciplinary research.





- ■We will be a "bridge between Japan and the world", using Okinawa as a home to promote seamless and sustainable international collaboration and brain circulation. We will build a global 'Wider OIST' platform through industry-academia-government-finance partnerships, maximizing and strengthening our research capabilities and operational infrastructure to overcome the above-mentioned constrains and challenges.
- ■We will strengthen even further our world-class research, internationality and interdisciplinarity, and under the banner of "One World One Health" and "promotion of Okinawa", to create disruptive innovations and accelerate discovery of solutions to global and regional challenges, to present an "attractive image of a university in the 21st century" and grow into a "world-class research university" to become the "Best in the World".

Strategic structure & Partners

Enhancement of university management capability & governance

Innovation

Contribution to Okinawa

Research excellence

- 1. Strengthen gateway function by establishing a global collaboration platform
- 2. Establish world-class Open Clusters
- 3. Foster next-generation, early career leaders, and promote international brain circulation
- 4. Strengthen industry-academia-government-finance collaborations and innovations; promote generating benefits to Okinawa
- 5. Increase external funding; increase operational flexibility of high-trust funding
- 6. University-wide administrative reform; increase operational efficiencies and capabilities

(Partner University) Keio University, University of the Ryukyus *Shared use of Facilities and equipment, resource sharing such as appointing partnership liaisons (Partner Institutions) Tohoku University, The University of Tokyo, Osaka University, Kyushu University, RIKEN, University of Cambridge, Max Planck Institutes, Stanford University, Scripps Institution for Oceanography at UC San Diego, University of Hawai'i, French National Center for Scientific Research, Chalmers University of Technology, Oxford University *Enhancing institutional collaborations

The OIST-nexus strategy (6 pillars·17 initiatives)

1. Strengthen gateway function by establishing a global collaboration platform	 ①Strengthen international & domestic collaborations with universities and industries ②Reinvigorate core facilities & promote international shared use ③Establish a support staff training system
2. Establish world-class Open Clusters	④Establish strategic Open Clusters⑤Identify fields for next-generation clusters
3. Foster next-generation, early career leaders, and promote international brain circulation	©Create an independent early-career scientist system ©Establish a carer training system for next-generation leaders ®Establish a system for international and domestic brain circulation
4. Strengthen industry-academia- government-finance collaborations and innovations; promote contributions to Okinawa	 © Establish an industry-academia-government-finance collaboration system © Establish a system to promote scientific solutions for social implementation and to tackle regional challenges © Establish a system for launching global start-ups
5. Increase external funding; increase operational flexibility of high-trust funding	 Strengthen capabilities for international and large research grants acquisition Strengthen capabilities to identify industrial contacts and gain industrial funding Strengthen the operational flexibility of the high-trust funding system
6. University-wide administrative reform; increase operational efficiencies and capabilities	 Strengthen the management structure led by the president Enhance administrative capabilities through recruiting outstanding support personnel Digital transformation of research support operations

Keio University

Univ. of Rvukvus

Academia

[15 partner institutions]

* Industry collaboration coordinator

***Collaboration liaison**

(Other 13 partners)

<Domestic: 5>

Tohoku Univ. The Univ.

<Overseas: 8>

of Tokyo, Osaka Univ.

Kyushu Univ,. RIKEN

Univ. of Cambridge,

Mac Planck Institute,

Stanford Univ., Scripps

UC San Diego, Univ. of

Univ. of Technology,

Univ. of Oxford

.....

<Municipality>

promotion etc.

Hawai'i, CNRS, Chalmers

(Other institutions)

Okinawa College, Okinawa

Univ., Tokyo Institute

Institution of Oceanography at

*related to facility program:

National Institute of Technology,

of Technology, Univ. of Tsukuba,

Hitotsubashi Univ., Harvard Univ.

MIT, James Cook Univ., Sorbonne

Univ., EPHE, Weizmann Institute

Nanoscience and Nanotechnology

of Science, Catalan Institute of

Okinawa Pref. Onna Village etc.

CAO: Okinawa Development and

***Cooperation in Okinawa Promotion** Policy, Start-up Policy, Marine science

*** Collaboration in Okinawa**

Promotion Bureau and OGB,

METI, NEDO, JAMSTEC etc.

Creation, Local industry

<Government etc.>

Development Policy, Startup

Prefectural University of Arts, Kyoto

(2 partners with grants)

liaisons

collaborations

Under One Roof

OIST-neXus strategy promotion structure

■ Newly established as a "Decision-making body" of the OIST-neXus strategy implementation

■ Under the leadership of the President, establish an "All-Member-Participation system" in which all constituent OIST members are united.

■ By "Industry-academia-government-finance collaboration, under one roof" operations, enhance "institute to institute" partnership and create "Dialog, co-creation and co-working place", promote OIST neXus strategy, and realize "Wider OIST"

■ Flexible management and rapid response to issues and situations, not limited to traditional meetings

Strategy implementation lead, President: Karin Markides

Operational Lead Provost: Amy Shen

• Strategy implementation team leads

- OIST executive members
- Representatives from partner institutions
- Representatives from partner companies, finance, VC and municipalities

*Possible to attend as observers

Instructions on implementation

Review & OIST-neXus Strategy verification implementation team 70 members

Appoint leaders to 17 initiatives. A cross-organizational team is formed under each initiative.

Execution

Participation |

Resources

Status

report

Industry, Academia, government and finance institutions also join each team

***30 staff participation including new URAs**

***20** exchange posts including companies and municipalities

Instructions on implementation

individual issues

Planning Unit 10 members

Status

report

On-site

Support

Resources

Dialog, co-creation and co-working place by

industry-academia-government-finance

collaboration

Committee Meeting" attended by core members,

and "Issue-Specific Working Group Meetings" for

XIn addition to "Plenary Meeting", "Steering

Coordination Planning, comprehensive 2 units coordination, evaluation, collaborate and and verification of specific work together strategies, initiatives, etc. ***Management talent acquisition**

Facilitation Unit 10 members

On-site coordination, dialogue, and support with the strategy implementation team, relevant sections ***Coordination talent acquisition**

International Advisory Board 7 members

3rd party

review

On-site

Support

Conduct third-party evaluation by international panel based on evaluation and verification results

* Commissioned by domestic & overseas academic, management experts

Integration of functions of COE and horizontal development within the university

Quantum Technology International Collaboration Hub Okinawan start-up hub Okinawa BioCommunity Global Bio convergence center J-Innovation HUB regional open innovation hub

Government

Global Platform

Industry

*Joint research and other R&D, donation acquisition, startup collaboration, social implementation, etc. Open innovation promotion Career development for PhDs etc.

Global Network <Companies>

NTT docomo, Toshiba, Suntory HD, Sony CSL, SCSK,

Corundum System Biology Misawa home, 3M, ZEISS, CREATIVE LAB.

Shinetsu, DBIC, datamix, YOKOGAWA, Rigaku, Orion beer, EF polymer, Novartis biomedical research institute, Evonik, Cirrus360, Boehringer Ingelheim.

(Selected examples of existing and potential companies in OIST's global industry network)

<Finance·VC>

Development Bank of Japan, Lifetime Ventures, Unison Capital, Okinawa **Development Finance** Corporation, Okinawa Bank, INSPIRE

(Selected examples of existing and potential companies in OIST's global industry network)

****Management support** and investment expansion startup creation, R&D and social implementation promotion etc.







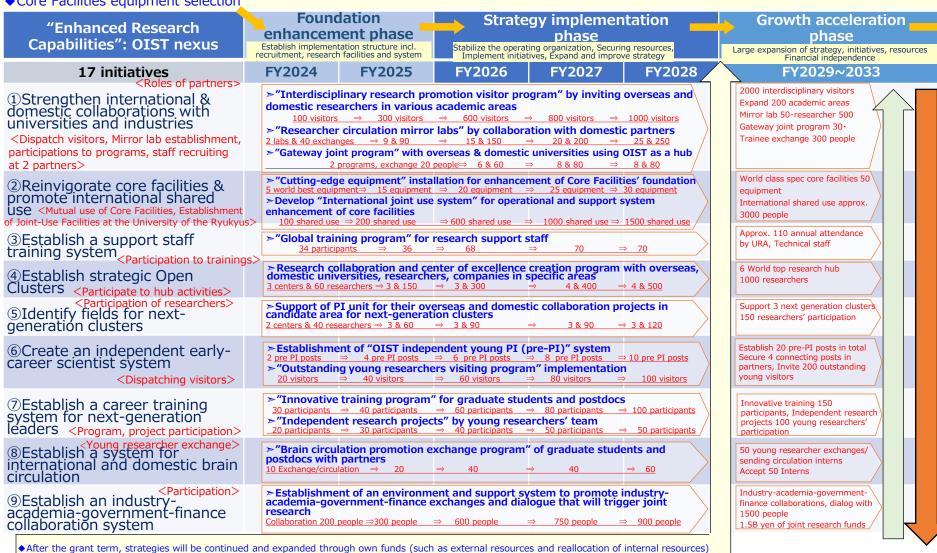
Global Network

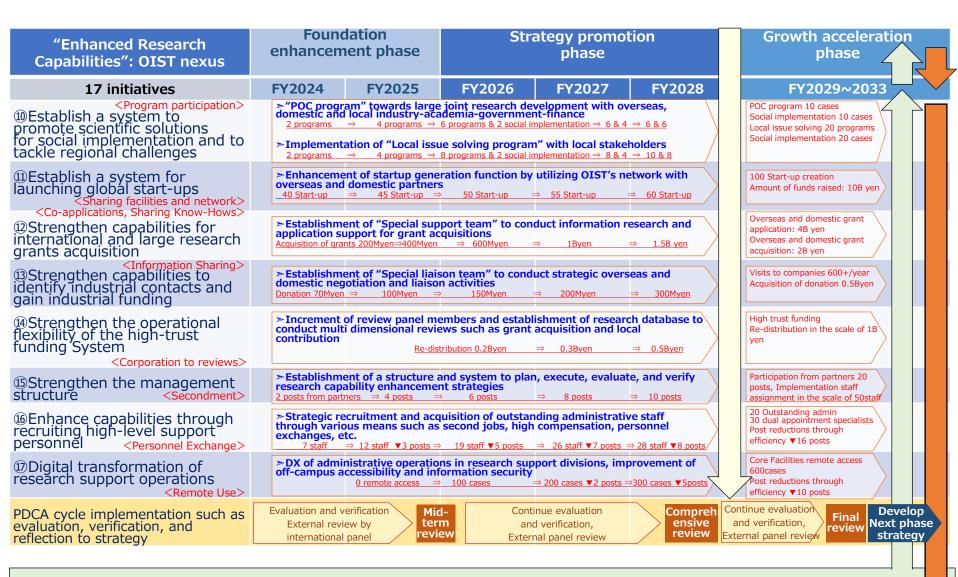
Whole OIST organization (PI units, sections, divisions)

Timeline

FY2023: Preparation and approach run phase

- ◆MEXT Open Innovation Facility construction ◆METI Incubation Facility construction ◆CAO Incubation Facility construction
- ◆System design, conducting surveys (Revision of organizations, establishment of rules, MOUs, survey of international and domestic universities, questionnaires)
- ◆Securing staff (Advanced advertisement, recruiting process) ◆Discussion with partners (staff exchanges and collaborations, cost bearing)
- ◆Core Facilities equipment selection





© Research Excellence···Go beyond the world's best in citations, Top 1% & 10% papers, international co-authorship rate, best researchers' ratio

⊚ Innovation···Largely enhance; Number of collaborative research, collaborative research income, start-up establishment, amount of funds raised, number of social implementations

© Contribution to Okinawa···Generate; New sales in start-up companies, Employment creation, Economic ripple effects in Okinawa and through exchange of people

"Enhanced Research Capabilities"
OIST nexus