

Okinawa Institute of Science and Technology  
School Corporation

Fiscal Year 2022 Business Plan

OIST



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## **Introduction**

This Business Plan (BP) has been developed by the Okinawa Institute of Science and Technology School Corporation (OIST SC), discussed with the OIST Board of Councilors and approved by the OIST SC Board of Governors. The BP guides the operations of OIST SC by setting goals and providing action items for the fiscal year (FY) 2022, from April 2022 to March 2023.

## **Planning framework and evaluation approach**

In accordance with the Cabinet Office Ordinance for enforcement of the OIST School Corporation Act (Cabinet Office Ordinance No. 59 of 2011)), the plan has the following 5 chapters: 1) Education and research, 2) Governance and administrative transparency and efficiency, 3) Finance - External Funding, 4) Contribution to self-sustainable development of Okinawa, and 5) University campus and community development; safety and environment protection. Each chapter has subchapters consisting of Goals and Actions. Based on the Bylaws of the OIST SC, the draft Business Plan will be submitted to the Board of Councilors (BOC) for their review and to the Board of Governors (BOG) for their final approval. The plan will be submitted to the Prime Minister for approval based on the OIST School Corporation Act. The government will provide financial support to the OIST SC based on the assumption that the OIST SC will implement the approved Business Plan appropriately.

As a corporation established on the basis of special legislation and largely funded by the government, it is our responsibility to implement the Business Plan steadily and to demonstrate accountability for our activities, including status of implementation of the Business Plan, to the general public. A key to achieving these aims effectively is the relationship between the BOG as an overseeing body and the CEO/President executing daily operations. The BOG is responsible for overseeing the CEO/President's implementation of the Business Plan, and the CEO/President is responsible for reporting the status of implementation of the Business Plan to the BOG. In addition, the Auditors of OIST SC will supplement this relation by conducting independent and rigorous auditing on all aspects of operations including the status of implementation of the Business Plan.

After the end of each fiscal year, the organizational performance will be reported to and evaluated by the BOG and the BOC. The evaluation results will be utilized in planning and executing business as a basis for the next step to achieve OIST's objectives. To ensure transparency, the annual report together with the evaluation results will be posted on the OIST web site by the end of June of the following fiscal year.

For a transparent and quantitative monitoring of progress against the plan, metrics will be provided for sub-sections of the Business Plan whenever appropriate. These metrics will also allow for analyses of the growth of OIST Graduate University and international comparison with benchmarked institutions. Most of the metrics should be evaluated in the spirit of achieving the goals described above. Therefore, these metrics themselves are not the objectives.

## **1. Education and Research**

### **Education**

OIST will develop its strong and innovative PhD program. The addition of new faculty members significantly increases the research opportunities for students and will allow a yet further strengthening of the curriculum.

### **Research**

OIST will continue publishing world-leading research in high-impact journals. OIST will continue hiring of outstanding faculty members and also support newly hired faculty members for their swift lab start-up and commencement of research at OIST. OIST will also review appropriate organizational structure, number of research support staff linked with result of international peer review of core facilities, increment of OIST faculty members and expansion of research area at OIST, and make efforts to secure excellent resources.

## **Expansion of the university**

The number of faculty units will be increased to 91, further strengthening the University's areas of research competence while maintaining the highest quality standards in the selection. OIST will maintain the highest quality standards in the selection and elevate qualities of applicants to acquire the best students.

## **Expansion of Educational Reach**

OIST will aim to develop educational offerings including certificates to expand OIST's reach to new groups of learners.

### **1.1 Ph.D. Program**

#### **Goal (1)**

Taking full advantage of world-class science faculty and facilities, OIST will provide exceptional academic program and research training for students.

#### **Actions (1)**

##### **Research Training**

- OIST will facilitate students to receive academic and research training in front-line sciences for their PhD by providing operational support for academic success including courses, mentoring, research supervision and examinations.
- OIST will make available to its students external, world-leading researchers and examiners to improve research opportunities and outcomes from our PhD program.
- OIST will ensure students are provided with adequate and appropriate research facilities and equipment and IT support.

##### **Curriculum**

- OIST aims to increase the selection of courses available to students, including co-curricular instruction, in order to broaden the depth and breadth of the OIST curriculum.
- OIST aims to develop and support diversity of course delivery, including online.
- OIST aims to continue the process of curriculum review to provide the most appropriate courses at the most appropriate time to students and improve efficiency of education.
- OIST will develop pedagogical resources and improve teaching and learning approaches, leading to higher quality learning experiences for students.

##### **Research Internship**

OIST will provide a Research Internship program available to talented students with excellent research potential.

#### **Metrics (1)**

- 1) number of publications by students
- 2) number of external scholarships, etc. our students receive
- 3) Number of examinations for proposal and thesis
- 4) Number of graduates
- 5) Average number of students per faculty member
- 6) Number of electives, independent study and special topics courses offered
- 7) Number of co-curricular courses offered (nano-courses, professional and career development activities)
- 8) Number of credits earned through external courses
- 9) Number of Research Interns

## **Goal (2)**

Understanding the unique needs of each student, OIST will provide them comprehensive support toward academic success and professional and personal development to impact their life broadly.

### **Actions (2)**

#### **Student Support**

- OIST will provide a full range of student-centered and flexible support to students in the areas of relocation, travel, housing, language assistance, emergency care, and financial assistance so that they can concentrate on their study.
- OIST will provide comprehensive support to provide a safe and healthy environment for students, including proactively reaching out to students for early problem detection, increasing communication with students, and seamless coordination of support across campus.

#### **Professional and Career Development**

- OIST will provide a Professional and Career Development Program to prepare students for a wide range of career opportunities.
- The Professional and Career Development Program of Graduate School will collaborate to be part of a broader network of professional development OIST-wide for the betterment of its staff, students, and ultimately Okinawa and Japan.
- To empower students' effectiveness as early-career scientists, OIST will support diverse networking opportunities such as conferences, workshops, visits to other institutions, career events, and inviting external speakers to OIST.
- OIST will seek available funding opportunities for students and support the entire application process by holding information, grant writing and interview practice sessions, and providing clear guidance on the applications.
- OIST will provide relevant skills training to all students to translate discovery into impact and contribute to society within Japan and beyond.
- OIST will provide relevant training to help students develop and refine intellectual skills such as communication.
- OIST will provide opportunities for students to interact with other universities in Okinawa and Japan including student exchange, networking and teaching.

### **Metrics (2)**

- 1) Number and nature of professional and career development activities
- 2) PhD student retention rate, time to graduation

## **Goal (3)**

To enrich the mutual benefits between OIST and Okinawa, Japan, and the World, OIST will further develop communication and collaborations with other educational institutions and communities.

### **Actions (3)**

#### **Student Collaborations**

- OIST will maintain and enhance collaborative relationships with other universities by developing agreements concerning Research Interns, Special Research Students, co-supervision, study-leave, and other exchange opportunities.
- OIST will hold events and workshops to provide students in Okinawa and those of Okinawan ancestry opportunities to get to know OIST and/or apply to the PhD and Research Internship Programs.
- OIST will improve integration of its student activities into the Okinawan environment and community to strengthen each student's ties with Okinawa and to enrich benefit sharing with Okinawa.

#### **Student Recruitment**

- OIST will continue to diversify student recruitment activities to attract a diverse group of world-class students for PhD program and Research Intern program.
- OIST will keep track of participants of GS events and programs.

### **Science Education and Outreach**

- OIST will sharpen its branding and adjust our external communications to increase awareness of OIST programs, and to better appeal to target populations for future student recruitment.
- OIST will offer various science classes, workshops, and other activities to local and nationwide STEM-focused junior high and high school students, independently, and/or in collaboration with external organizations.
- OIST will strengthen engagement with junior and high school students through Science Education Outreach activities, by improving communication and information sharing.

### **Metrics (3)**

- 1) Number of applications for the PhD program (Japanese and International)
- 2) Number of admitted PhD students (Japanese and International)
- 3) Number of applications for the RI program
- 4) Number of admitted RI students
- 5) Number of applications for the RI-PhD Pathway program
- 6) Number admitted through RI-PhD Pathway program
- 7) Number and list of agreements with other universities for situations

### **Goal (4)**

OIST will improve business efficiency of GS functions, curation of records and policies, and communication consistently improving over time as the University grows.

### **Actions (4)**

#### **Policy and Process Management**

- OIST will continue to revise, in collaboration with the Faculty Assembly and the student body, relevant policy, rules and procedures to improve the effectiveness and efficiency of the administration of the OIST academic program.
- OIST will improve the curation and dissemination of policy changes to other stakeholders internal and external.
- OIST will improve student record management system and curation and visualization of longitudinal data.

#### **Business Efficiency Re-engineering**

- OIST will re-engineer workflow and processes of the Graduate School and employ relevant software to improve our business effectiveness and efficiency. OIST will support Graduate School staff by creating individual development plans and providing training and other opportunities for professional skills development and personal growth.

#### **Communications**

- To enhance mutual understanding and improve our quality of service, OIST will continuously adapt our communications with students, faculty, and relevant administrative divisions.
- OIST will improve the Graduate School website to enhance online communication to the public including prospective students.

### **Metrics (4)**

- 1) Number and nature of GS meetings with students and faculty

## **1.2 Scientific Research**

### **Goal**

OIST Graduate University will conduct world-class research in cross-disciplinary fields of science. OIST Graduate University is committed to the pursuit of new knowledge through basic science. We are committed to the training of an international community of students. OIST Graduate University will encourage, motivate and support its talented faculty, students and scientists by promoting a collaborative cross-disciplinary research environment, providing excellent facilities, equipment and research support, and by conducting regular and rigorous peer review. OIST Graduate University aspires to be responsive and relevant to the needs of society. We believe that the most significant contributions will result from the discoveries made through basic science.

## Actions

### Promotion of cross-disciplinary research

- We will support start-up of new research units.
- We will hire female faculty in order to improve the gender balance in the faculty.
- Our Faculty Lunch Talks will be continued to promote inter-unit conversations and trust that this will result in interdisciplinary research.
- The Library actively collects electronic resources so that necessary content can be accessed via remote access and provides infrastructure to retrieve academic information efficiently.
- We will implement the Research Tags Project to attract more collaborators within OIST and with external institutions.
- We will have External Faculty who will teach at OIST and collaborate with our faculty. This is also to fulfil the gap that OIST faculty cannot provide to our students.

### Research Support

- To enable researchers to conduct world-class research in cross-disciplinary fields of science, we will promote use of Core Facilities by focusing on efficient operation of the facilities and development of specialized staff.
- We will start equipping Core Facility in Lab 5.
- We will continue to promote research ethics, by organizing research ethics training and seminars.
- Provide better support on application and management of external research funding for faculties, researchers and student and continue proactive actions to collect grants information and delivery of the information. They will run our KICKS and JUMPS funding programs to promote collaboration.
- We will promote external use of Core Facilities to diversify the external incomes and also enhance domestic and international Core Facility network.

### Publication and communication

- Whenever we hear of an important new result from a faculty member, we encourage them to communicate this to our Communications and Public Relations Division. Queries from government sources such as MEXT have led us to compile lists of our top publications. These are also used by Nature Communications Index and other such comparative studies. We publicize journal publication results in our website and make sure that these are available in the OIST Institutional Repository.
- We will provide accessible information about OIST to the scientific community and general public in Japan and overseas, through OIST web articles, press releases, press conferences, print publications, social media, thought leadership, including high-profile speaking opportunities.
  - OIST will implement proactive media relations strategies to generate coverage by. This will include press releases and articles about new scientific directions and outcomes, and other activities of interest to diverse audiences. These will be disseminated to local, national, and international media through established channels such as press clubs and press release distribution services.
  - OIST will work with other Japanese academic institutions and will maintain a global network of science communicators, to enhance the institution's contribution and contribute to innovation and capacity-building in Japanese and international science communication.
  - OIST will continue to strengthen social media and other digital channels.
- OIST will enhance internal communication channels to help ensure that all faculty, staff, and students within the institution can contribute to OIST's successful promotion and engagement, and are well-briefed on progress, challenges and achievement.
- To sustain academic quality and collaboration, OIST will provide technical support, relevant documentation and training to OIST staff, researchers and students to support smooth delivery of remote meetings and seminars.

## Metrics

- 1) Number of researchers (faculty, postdocs, technicians, and students)
- 2) Evaluation of research results by internal quality control standards in accordance with DORA
- 3) Number of joint publications between different faculty members
- 4) Number of research honors
- 5) Number of awarded research grants (number and amount)
- 6) Number of fee for use of core facilities by external users (number and amount)
- 7) Number of scientific meetings hosted by Research Support Division, Office of the Provost and Office of the Dean of Research (number and number of participants)
- 8) Number of joint researches hosted at Core Facilities of Research Support Division (number and number of visitors)
- 9) Number of training courses hosted at Core Facilities of Research Support Division for external researchers and students (number and number of participants)

## 1.3 Faculty Affairs

### Goal

and an interest in interdisciplinary research. The office also facilitates faculty evaluations, faculty meetings, space allocation for units, researcher hiring and retention, faculty and postdoctoral career development, including visitor programs and programs for promoting excellence. Additionally, we support the university library, and other miscellaneous faculty and researcher matters. Further, we will provide Career Development Programs for all personnel at OIST and enforce archiving of research data of all OIST publications.

### Actions

#### Appointment

We will continue to recruit faculty members strategically considering budget and research space available.

#### Faculty/Research Evaluation

- We will conduct tenure reviews to faculty who negotiated their contracts or appointed at the internationally highest standards.
- We will conduct tenure reviews of 5 faculty and promotion review of 2 faculty.
- We will conduct unit reviews for 7 research units led by tenured and adjunct faculty members.
- We will continue faculty appraisals. The appraisals will be conducted by the Dean of Faculty Affairs (and if necessary, the Provost) based on individual faculty research, teaching, university service, and external grants received. The appraisal will be reflected in the salary and other resources granted. Faculty will be assured that individual (as opposed to aggregated) information will not be made available outside of OIST. In addition, we will check whether faculty members have published Annual Reports on their websites by encouraging them to do so.

#### Research Productivity Report

We will continue to increase the number of research items registered and enhance the support system for Open Access university wide.

#### Senior Appointment and Post retirees

A faculty member who has reached the retirement age, but his/her research is deemed to be suitable for extension and is invited by the President will be considered for continuation of research after conducting a rigorous review.

#### Faculty Development

We are establishing a new centralized professional development and career support center, called the C-Hub. C-Hub will provide faculty with programs, workshops, resources, and individual consultations to enhance their leadership & management, mentorship, communication, collaboration and writing skills, and provide orientation programs.

## Students, Research, and Admin Staff Development

C-Hub provides students, research staff, and admin staff in addition to faculty, with programs for developing their leadership, management, and several other skills.

### Alumni Network (OAAN)

By developing and launching the OIST Alumni and Association Network, we will establish an efficient, sustainable system to maintain close, active contact with OIST's alumni and associates. Further, the creation of an interactive online platform will enable the OAAN to engage with the OIST community through career networking, professional development, and mentoring through regional and global events.

### Metrics

- 1) Number of research units evaluated
- 2) Number of tenure reviews and promotion reviews
- 3) The number of papers registered in the Institutional Repository

## 1.4 Global Networking

### Goal

OIST will continue to create strong networks with the international and domestic science communities. It will do this, for example, by hosting joint academic and research symposia/workshops with universities and institutions, and by receiving interns. OIST will increase its reputation as an International Graduate Research University committed to the betterment of society through conducting leading basic research and training the best scientists.

### Actions

- OIST will provide opportunities for students to interact with other universities in Okinawa and Japan including student exchange, networking and teaching.
- OIST will focus on activities towards enhancing networking.
- We will host international courses and workshops of world-leading quality, providing students and young researchers with the opportunity of learning forefront science and interacting with outstanding peers.
- OIST will provide a Research Internship program available to talented students with excellent research potential.
- OIST will provide a full range of student-centered and flexible support to students in the areas of relocation, travel, housing, language assistance, emergency care, and financial assistance so that they can concentrate on their study.

### Metrics

- 1) Number of international courses and workshops organized by OIST (14)
- 2) Impressions and feedbacks from the participants of international courses and workshops.
- 3) Number of new partnership programs and extension of existing programs with globally leading universities and institutions.

RIKEN	Conducting one symposium and appointing an External Professor from RIKEN
The University of Tokyo	Conducting two seminars/workshops hybrid style (online/onsite)
Tohoku University	Conducting one seminar/workshop hybrid style (online/onsite)
Osaka University	Conducting one seminar/workshop hybrid style (online/onsite)

## 2. Governance & Administrative Transparency and Efficiency

### Governance and Administration

Successful operations of an international graduate university in science and technology require flexible, efficient, and effective administrative management, which will enable it to adjust to the rapid changes in academic and business environment as well as global competitions. Administrative procedures should provide appropriate support for creativity and innovation. A high level of transparency is one of the requirements, as are compliance with the laws and regulations, and accountability to the Japanese taxpayer.

Administration Review Committee (ARC) appointed internally will deliberate measures to establish the system to promote effectiveness and efficiency of administration.

OIST Graduate University aims to provide a new model for universities in Japan not only in science and education, but also in approaches to the administration and financing of an international university.

## **2.1 Basic Structure for Governance and Business Operations**

### **Goal (1)**

The Board of Governors (BOG), which consists mainly of non-executive members based on the OIST SC Act and the OIST Bylaws unlike the case of most Japanese traditional institutions, takes ultimate responsibility for operation of the OIST SC and OIST Graduate University. The Board of Councilors (BOC) reviews the operations of the corporation with broad views of the society, including those of the local community. These two boards play key roles together in ensuring effective and transparent governance of the OIST SC in accordance with pertinent Japanese laws and the OIST SC Bylaws. The CEO/President will continue to provide the leadership in the execution of the Business Plan and accountable to the BOG. The governance of OIST SC especially features the appropriate relationship between these boards and the CEO/President.

OIST will continue to ensure that the bylaws and Policies, Rules and Procedures (PRP) remain consistent with all relevant laws and regulations.

Auditors of the corporation will conduct rigorous audits to ensure appropriateness and efficiency of the operations of the corporation, including comparison with international best practice.

### **Actions (1)**

#### **Basic Management**

- Regular BOG meetings will be held in May, September/October and February, and regular BOC meetings will be held in May and February. In the BOG meeting in May, the performance and achievements of the previous fiscal year will be reported and evaluated. The results of this assessment are made available to the CAO for public sharing.
- BOG and BOC meetings in May and October will each have about one extra day meeting, in addition to the two-days main meetings, to accommodate more discussions focused on the relevant role of the BOG and BOC. BOG and BOC sub-committees will have the opportunity to pre- discuss important issues. The BOG Steering Committee will its practice of meeting with the Faculty Council during the pre-meetings.
- The CEO/President will exercise leadership in all matters of daily operation of the OIST SC and the OIST Graduate University and ensure steady implementation of the Business Plan.
- The CEO/President will identify serious risks and prepare mitigation/control measures at bi-weekly executive committee meetings and report to the BOG.
- Auditors will conduct rigorous regular audits of all aspects of business operations, including budget execution, tendering and contracts, and the status of compliance, based on the Auditing Plan developed in advance while coordinating with internal audits and accounting audits, and conduct special audits in addition when deemed necessary. Auditors will conduct more thorough audits based on the strengthening of the auditor system and maintain effective communications with the university management while keeping appropriate independence. Auditors will be provided sufficient information and staffing necessary for conducting their duties Plan and result of Auditors' audit will be presented at BOG meetings, etc. for recommendations to reflect on business operations.

#### **Expansion of the University**

Recruitment of new faculty will continue to backfill and increase the number of faculty to 91. Lab 5 construction will continue. Future development of the Incubator Facility will be considered, based on the operational experience and status of the current Facility. Regarding accommodation, discussion will be made for future development of off-campus housing.

Tokyo office will continue to strengthen the capability of information dissemination, outreach, collaborations with universities and research institutes as well as industry.

## Goal (2)

OIST Graduate University will continue to build and maintain internal administrative organization following international best practice for world-class international graduate universities to ensure effective administration. While being autonomous, OIST Graduate University will keep close contact with CAO to ensure accountability to the Japanese Government for its budget execution and business operations.

## Actions (2)

### Development of Administrative Organizations

- The President/CEO, Vice CEO, and other executives will continue to meet regularly to prepare major decisions, share information and review the status of business operations. The Executive and the Faculty Assembly will continue to meet bi-monthly to share and improve the flow of information between senior management and the Faculty. The Salary Review Committee will continue to meet as needed.
- Weekly meetings of the President, Executive Vice President, Secretary General and Provost will facilitate a smooth coordination between the individual executives.
- Maintain close communication with CAO and continue the periodical meeting to share information such as the implementation status of the Business Plan. In addition, prepare business sketch and budget requests for the next fiscal year well in advance through close discussion with CAO.
- Provision state-of-the-art IT tools, services and support, enabling the University in its mission to become a world leading university.
- Continue to ensure that clear, concise and up to date knowledge bases and user education programs exist to enable users to appropriately and timely leverage IT tools, resources and services.
- Identify, evaluate, design, deploy and maintain the enterprise technology platform that supports the university expansion. Ensure that platforms for research and education are as automated and efficient as possible. We will ensure the continuity of a flexible and secure network environment that meets research requirements.
- While taking ongoing discussion on efficiency improvements of administrative tasks into consideration, continue to work on development and endorsement of an IT strategic plan. Ensure the alignment of the plan with the business through continuous interaction and feedback. Track alignment with best practice through external peer review.
- Drive digital transformation to identify, develop and support enterprise systems and services that supports the university's business efficiently.
- Best position the University within relevant local and global IT initiatives to enhance and support the research and administrative activities of the University, and best promote Okinawa.
- While reducing operational costs and increasing safety, contribute to business process and work style innovation through digital transformation with working together with other administrative divisions, and simplify and automate office work and promote standardization and efficiency.
- Reinforce information security governance, and enhance information security control through information security education, multi-factor authentication, and device-based access control. Further enhance existing security threat monitoring, enabling real-time threats detection such as malicious software or hacking that may compromise the integrity of OIST networks or systems as well as implementing appropriate measure for Web site tempering and other threats.
- Provide legal advice in connection with legal issues arising at the relevant divisions at OIST and ensure legally appropriate operation of the OIST SC by providing overall legal support in drafting, negotiation and execution of the agreements handled by relevant divisions at OIST.
- Defend OIST SC from claims in and out of court and avoid financial damage and reputational risk.
- In order to prevent any misconduct in and out of OIST, all employees, faculties and students will be required to take a program on Japanese laws and rules annually (especially on drug restrictions, drinking and driving, carrying weapons, criminal procedure/deportation, OIST discipline).

## 2.2 Budget Allocation and Execution

### Goal

On executing the budget including government subsidies, OIST Graduate University will make appropriate and effective allocation and execution of budget, by reviewing the cost performance, to fulfill its accountability to the government, sponsors, and general public. In particular, under the prevailing severe fiscal circumstances, the university will make efforts to improve cost efficiency to maintain and develop research and education.

### Actions

#### Budget Allocation and Execution

- Strategic Resource Allocation Committee (SRAC), formulate high-level budget allocation and reallocations proposals of the university resources, such as Personnel budget, Operational budget, Equipment budget, and Space. The proposals will be then approved by the President/CEO.
- Have budgetary units, which are the allocation/execution unit, consistent with the organizational structure of the university and allocate the necessary budget to implement the Business Plan to each budgetary unit.
- Reinforce the budget allocation and reporting process by collaboration with the budget analyst assigned in each division. The status of budget execution will be reported monthly to the President/CEO at the monthly Budget Review Meeting in order to ensure appropriate and integrated budget management of all funds including the Subsidy for Facilities. In addition, report the budget execution status to CAO on monthly basis.
- All research-related budgets shall be closely monitored and adjusted through September and January budget reviews.
- Implement the procedures to comply with laws and University policy and rules – the procedure in budget execution includes reviews by the person in charge of compliance when individual budget expenditures exceed a predetermined threshold.
- Conduct internal audit, as well as develop human resources through sending our staff to training courses provided by government agencies, etc. on regular basis, to ensure proper contract, procurement and accounting procedures.
- Exert efforts in ensuring fair and transparent procurement through measures such as establishing a committee including external experts and having their review on specifications of large research tools/equipment as necessary on the University's policy and rules. (modification of description).

## 2.3 Efficiency of Business Operations

### Goal (1)

OIST Graduate University will continue its efforts to improve efficiency in its business operations.

### Actions (1)

- Administration Review Committee will deliberate measures to establish a mechanism to ensure more effective and efficient business operation.
- Support research activities, such as utilizing the methods of unit price contracts, bulk purchase for research materials and reagents, and multi-year contracts.
- Reduce costs of system and research equipment maintenance by reviewing the contracts etc. (modification of description)
- Contracts of the University shall be based on the principle of ensuring sufficient transparency and competitiveness, and in case of making a negotiated contract, thorough information disclosure will be ensured, such as by disclosing the reason for the negotiated contract. Monitor procedure for negotiated contract continuously. At the same time, review procurement policy, rules and procedures continuously from the perspectives of efficiency and simplicity. Continue improving the segregation and procedures related to procurement for the future expansion of the University. (The revision of the criteria has already been done)
- Based on the fruit of the previous investigations on price differences between Japanese and international markets, continue to take actions to decrease the said differences and to promote cost-saving.

- Based on the collected reference data comparing prices of supplies and equipment etc. in Japan and abroad, provide information for internal users on how to negotiate prices effectively with manufactures/agents/vendors to improve cost efficiency of purchasing.
- Support those efforts for administrative internationalization made by national universities and other institutions through conducting a training program at OIST to their staff members and enhance administrative efficiency by absorbing their knowledge and experience on university operation and management.

### **Metrics (1)**

- 1) Number of unit-price contracts : more than 32 (based on fixed value in FY2020)
- 2) Ratio of the number of purchase contracts concluded through tendering or other competitive processes : more than 62%
- 3) Successful bid rate for those excluding research related purchases.

### **Goal (2)**

OIST Graduate University makes the best use of its facilities and equipment.

### **Actions (2)**

#### **Effective Use of Facilities**

- Continue efforts for optimization of use of academic and administration spaces, and research equipment through regular survey of current spaces in the existing buildings, close coordination among Facility Management Division, Space Allocation Committee and Research Support Division, and meeting and interviews with the research units to understand their needs.
- Continue studies for optimization of use of Seaside Campus and Seaside House Building in relation with future expansion of OIST based on OIST strategic plans.

## **2.4 Personnel Management**

### **Goal**

To attract, retain and develop talent, we actively hear employees' voice. We continue improving HR policies and systems in more sustainable and effective way with full legal-compliance, so that we can realize even more diverse and inclusive workplace. We, as an enterprise strong supported by national fund, will continue making efforts to control overall people-related operating costs.

### **Actions**

#### **Recruitment**

- We will establish a strategic resource plan in order to compete in the global talent acquisition market while ensuring a sustainable talent cost model for OIST. Based on the approved resource allocation plan and position requisitions, we will implement a fair and timely talent acquisition process, proactively searching qualified, competitive pool of candidates. HR and CPR will collaborate to leverage social media for proactive communication to the external market, reaching out to potential candidates who are not yet actively looking for jobs. We will improve recruitment processes to hire strong talent much faster and more effectively, thereby increasing new hire experience and ultimately OIST's employer branding. We will strive to recruit excellent Okinawans.
- We will plan a talent acquisition mechanism, both external and internal, that is fair, open and the one that will help bring the best out of the individual through standardized job description and a career framework with clarified competencies, skills/expertise and experiences in a transparent/visible manner.
- Take steps to build and maintain a work environment that is equitable and welcoming to all employees and students.
  - Offer unconscious bias training and other appropriate diversity related programming to all members of the university.
  - University Community Services and Buildings and Facilities Management Division will collaborate to plan, design and outfit appropriate facilities for pregnant women and working parents at OIST.
  - Offer networking opportunities for all employees, regardless gender, nationality,

organizational hierarchy etc.

- Promote diversity, equity and inclusiveness through presentations and networking opportunities for OIST and the Okinawan community.
- We will inform and train OIST staff on various mediums for harassment incident reporting and resolutions such as external hotlines and others. We will provide trainings on harassment prevention and handling sensitive cases to managers and professionals who need to deal with the cases on a regular basis.
- Develop and implement policies to promote the health and safety of persons with disabilities at OIST by the revision of Act on Employment Promotion etc. of Persons with Disabilities scheduled for 2018. Provide counsel and input on removing barriers for providing equal working opportunities, as appropriate.
- The OIST Health Center will provide reliable health care services such as health checkups for staff/students and support for hospital visits to OIST community.
- The OIST clinic will provide first aid and other services such as hospital referral to OIST community.

### **Compensation**

- Referring to salary levels of national government employees and those of academic institutions in and outside of Japan, embody and implement actions following "On the Salary of Officers and Employees of Special Public Corporations, etc. (by Administrative Management Bureau, Ministry of Internal Affairs and Communications on November 17, 2017).

### **Talent Development and Management**

- Based on results of organization diagnosis and involvement of selected management staffs, reinforce following systems, in order to improve productivity and develop next generation employees in line with OIST strategies;
  - Management by Objective
  - Recruiting system
  - Performance evaluation system
  - Job grading system
  - Assignment planning system
- Restructure capability development mechanism for Management staff and further activate self-learning environment (including on-line training) with individual learning hour target (40 hours).

### **Metrics**

- 1) Number of employees (by job categories, nationalities and gender)
- 2) Ratio of staff in administrative divisions to the total headcounts
- 3) Ratio of labor costs to the total operational budget
- 4) Salary level of employees (average salary by job category)
- 5) Number of employees taking training programs
- 6) Annual learning hours for administration staff (40 hours)

## **2.5 Compliance**

### **Goal**

OIST Graduate University will ensure compliance in all aspects of the university operations.

### **Actions**

- Review the budget execution status and contracts exceeding a predetermined threshold as well as new and revised policies, rules and procedures from a viewpoint of compliance.
- Continue to establish and revise policies, rules and procedures appropriately in cooperation with the General Counsel Office at the right time in response to revision of relevant laws and regulations or changing situation and hold the PRP review committee as needed to maintain consistency in policies, rules and procedures as a whole. Provide legal advice to each policy owner division in drafting and revising the policies, rules and procedures.
- Continue to ensure appropriate creation, management and retention of documents concerning decision making and its processes in the operation, based on the Act concerning the Management of Public Documents (Act No. 66 of 2009) and University Policy and rules that are developed accordingly.

- Handle personal information properly based on the Act on the Protection of Personal Information held by Incorporated Administrative Agencies etc. (Act No. 59 of 2003), the Act on the Use of Numbers to Identify a Specific Individual in the Administrative Procedure (Act No. 27 of 2013) and the University policy and rules that are developed accordingly. In addition, awareness on personal information is to be improved through obligation for faculty and employees to observe the University policy and rules including maintenance of a ledger or etc. that manages retained personal information.
- Through Auditors' audit and internal audit, provide rigorous review of the status of compliance including the implementation of the policies and rules, and reflect the result as necessary.
- To facilitate evaluation of situations that may give rise to conflicts of interest, formal written disclosure of external activities and commitments is required of all University officers and employees each year, based on the PRP Section 22.3.1 in "Avoiding Conflicts of Interest & Commitment".
- Review of research protocols by review boards and professional staff will ensure that our research activities are compliant with pertinent regulations and laws.
- For proper management of competitive research funds including KAKENHI (Grants-in-Aid for Scientific Research), we will continuously and thoroughly implement proper management to the researchers through posting Misconduct prevention plan.
- In addition, to prevent misconduct of research funds, various measures will be taken, including initiatives for ensuring thorough familiarization of all faculty members and researchers with rules of use of research funds, and increasing the awareness of thereof from the time they decided to join OIST. We will explain about our rules of use of research funds to new faculty members at the preliminary meeting before their start. Also, after their arrival, we will explain the rules in more details.
- We will provide online training for Responsible Conduct of Research to all researchers and continue to improve our efforts to prevent research misconduct by providing lecture and discussion training to faculty, students, and research staff.
- Additionally, since an OIST investigative committee determined in 2021 that research misconduct had occurred in one case, we will ensure that every employee is informed about procedures and contact point for reporting an allegation and proper research data archiving.
- The Field Work Safety Committee will continue to conduct strict review of field work plans and the Safety and Health Committee will ensure safety and health at labs through workplace inspections. In addition, we will enhance safety on research and educational activities at sea and the labs in accordance with established Safety Management System.

## 2.6 Information Disclosure and Public Relations

### Goal

The fast growth of the Graduate University requires OIST to guarantee transparency of academic and administrative operations, and accountability to the general public. In order to obtain broad support for OIST both from Japan and overseas, and to enhance worldwide recognition of the Graduate University, we will communicate actively with various stakeholders and promote OIST.

### Actions

- Disclose the information appropriately on the OIST website etc. to comply with the School Education Act (Act No. 26 of 1947) and the Act on Access to Information held by IAIs (Act No. 140 of 2001).
- OIST will continue to improve its websites, including the News Center, to ensure that design, layout and user experience are consistent with best practices.
- Organize press events, which share information with journalists in Okinawa and on the mainland in order to secure positive press coverage.
- Continually improve and grow social media and digital channels (including Facebook, Twitter, Instagram, LinkedIn, Flickr, YouTube, Vimeo).
- Maintain and improve the library of OIST Policies, Rules and Procedures on the website.
- In case of any incident, CPR will consult, where necessary with the General Counsel Office other executive members and release timely information in consideration of reputation risk. To protect websites from zero-day attacks that leverage software vulnerabilities, OIST websites are hosted with support to ensure that security updates are applied promptly.

### 3. Finance - External Funding

#### Budget related issues

It was expected that OIST would maintain efforts to increase external funds, including incentive measures to apply for and acquire grants. OIST has already taken a number of concrete steps, including grant facilitators program to support young researchers. It will continue to put a major emphasis on this. An additional source of external income is through collaborative research with industry. Here OIST has been very successful and will increase its efforts further. Consistent with becoming a new model for universities in Japan, activities of acquiring donations are to be promoted under the Fund-Raising Office following the model of North American universities where private and corporate donations are sought to support the mission of the university.

#### Goal

Based on the OIST Mid-Term Strategy for External Funding revised again in the previous fiscal year, OIST Graduate University will broaden its financial basis strategically by proactively increasing the amount of research grants, donations, and other income sources for more independent operation in the future.

#### Actions

##### Grants

- Increase opportunities to deliver grant information, available application support, importance of networking etc. to OIST researchers through Grants and Research Collaborations Section's website and visit to their offices.
- Under the leadership of Dean of Research, we strive to strategically prepare applications for the large-scale program with inter-institutional collaboration aided by a domestic and international network.
- Collect information about grant opportunities in Japan and abroad and communicate these on a regular basis to members of our research community. In addition, the section will actively communicate with major funding agencies to collect information about any precursory activities leading to announcements of new grants.
- Encourage and incentivize researchers to collaborate with industry and apply for public and private-sector innovation grants and contracts.
- We anticipate healthy proportional increase of third-party income hoping for added income encouraged through incentive systems.

##### Donations

- OIST manages gift and donation solicitation including representation in the USA. This activity will be strengthened also in Japan with strategic outreach to perspective donors in and outside Okinawa through the new office in Tokyo.
- Donation management process for Furusatonozei will be established.

#### Metrics

- 1) Increase of the number of awarded research grants (number and amount)
- 2) The total amount including academic external funding, collaborative research and commissioned research with industry, donations, tuition and other revenue is targeted to 1,170 million yen (7.06% of the ordinary expenses of the subsidy budget).

## 4. Contribution to Self-Sustainable Development of Okinawa

### Okinawa Development

In establishing OIST, the Japanese government emphasized the sustainable development of Okinawa and the benefits to the local and national economies. To meet this vision, OIST promotes innovation by commercializing breakthrough technologies developed in the research labs through patenting, conducting proof-of-concept research, and working collaboratively with industry. OIST also encourages entrepreneurship, not only by supporting current faculty, researchers and students, but by welcoming external entrepreneurs to campus to access and use OIST technology. Okinawa development also depends on the dynamic, inclusive, and diverse engagement and participation of local citizens. To this end, OIST cares deeply about its social impact on Okinawa and engages with the local community through campus tours, science festivals, and educational outreach. The University also strives to develop its campus as a center for cultural and community activities.

From our beautiful location overlooking Tancha Bay in Onna Village, we will work with local communities to protect and promote the heritage of Okinawa, enhance the health and well-being of the local community, and use our own diversity to contribute to the rich local culture.

Activities to promote Okinawa development are centered in the Technology Development & Innovation Center (TDIC) and the Communications and Public Relations Division (CPR).

### Goal

In order to promote the transfer of discoveries made in the research laboratories to industry for societal and economic benefit, and to foster innovation at OIST and in Okinawa, we will implement the following broad measures:

- (a) Identify, protect, and market research discoveries with the aim of promoting innovation and technology transfer
- (b) Manage the proof-of-concept program to support innovative technology research and drive inventions towards commercialization
- (c) Foster entrepreneurship and the creation and incubation of startup companies with the aim of developing an innovation ecosystem (R&D cluster) in Okinawa
- (d) Expand collaborations with industry as a mechanism to develop new technologies and promote technology transfer
- (e) Strengthen regional, national, and international partnerships with innovative public and private organizations with the aim of developing an innovation ecosystem (R&D cluster) in Okinawa
- (f) Understand the components and indicators of successful innovation in science and technology and their socio-economic impact on Okinawa

### Actions

#### Technology Transfer and Innovation

- (a) Identify, protect, and market research discoveries with the aim of promoting innovation and technology transfer
  - Proactively engage with faculty, researchers and students to capture inventions by holding meetings and educational events.
  - Evaluate market potential and competitive environment of intellectual property to strengthen commercialization strategy.
- (b) Manage the Proof-of-Concept Program to support innovative technology research and to drive inventions towards commercialization
  - Provide hands-on support to POC projects and Technology Pioneer Fellows towards their commercialization targets.
  - Expand and strengthen the panel of industry reviewers, experts, and mentors for the POC Program.
  - Start a discussion on developing new programs that more directly link POC projects to successful commercialization outcomes including startups.
- (c) Foster entrepreneurship and the creation and incubation of startup companies with the aim

- of developing an innovation ecosystem (R&D cluster) in Okinawa
- Operate the Startup Accelerator Program to attract entrepreneurs from around the world to incubate startups in Okinawa.
  - Provide a diverse range of support and educational opportunities in entrepreneurship to meet the needs of faculty, researchers, and students.
  - Operate the Innovation Square Incubator Facility as a launchpad for startups and a collaboration space for researchers and industry partners. Evaluate needs for additional innovation spaces.
  - Promote venture capital support for startups, including the establishment of an OIST Venture Fund.
  - Start a discussion on developing new programs that strengthen the scale and quality of human resources taking risks to create new startups.
- (d) Expand collaborations with industry to facilitate development of new technologies and promotion of technology transfer
- Promote collaborative research with industry through meetings, exhibitions, and networks. Operate an industry affiliates program to expand connections with local, national, and global companies.
  - Pursue grant funding for innovation research from the Okinawa Prefectural Government, national government programs, corporate foundations, and others.
  - Streamline complex industry agreements and advise on commercialization policies.
  - Start a discussion on developing new frameworks to implement the outcomes of collaborative research with industry.
- (e) Strengthen regional, national, and international partnerships with innovative public and private organizations with the aim of developing an innovation ecosystem (R&D cluster) in Okinawa
- Coordinate interactions with local, national, and global industry organizations.
  - Network with government and industry experts to advise on strategy to strengthen the innovation ecosystem in Okinawa.
  - Organize meetings and events to gather stakeholders in innovation such as industry, government, entrepreneurs, and academia.
  - Start a discussion on developing new systems to manage industry-academic-government partnerships that contribute to regional economic development.
- (f) Understand the components and indicators of successful innovation in science and technology and their socio-economic impact on Okinawa
- Establish partnerships and methods necessary to advance analysis of innovation indicators at OIST and in Okinawa.

### **Networking with local institutions and communities**

- OPG (Okinawa Prefecture Government)/OIST Working Group will continue as a regular forum for information/opinion exchanges and coordination. Through this forum, stronger collaborative relationship e.g. in OIST's contribution to the new Okinawa Development Plan and many other specific joint activities will be further strengthened.
- Provide an annual program of campus visits, school and community engagement, community-focused science promotion, open talks and lectures, and education-led outreach. Provide events that highlight Okinawan and other cultures and which help promote community cohesion. Ensure an appropriate breadth of community engagement across the Okinawan Prefecture, including remote islands.

### **Other matters concerning Okinawa development**

We will maintain capacity of COVID-19 PCR tests and genome sequencing of positive samples to co-operate with prevention of spread of the new corona virus in Okinawa Prefecture.

We will provide internship opportunities for local students at Core Facilities, Health Center etc. to help their improvement of job awareness and gain hands-on experience.

## Metrics

- 1) Number of official contacts with companies, with the view of future collaborations and licensing (65).
- 2) Number of collaborative projects with companies (collaboration/sponsored research agreements, MOUs, etc.) (20).
- 3) Intellectual property indicators (number of invention disclosures (15), patents filed (55) and awarded (30), commercialization of intellectual property (2), etc.).
- 4) Number of symposia, meetings, workshops, and seminars organized or hosted by OIST on topics related to innovation, entrepreneurship, and R&D Cluster development (12)
- 5) Number of participants in events, courses, symposia, meetings, workshops, and seminars organized or hosted by OIST on topics related to innovation, entrepreneurship, and R&D Cluster development (375)
- 6) Number of active POC projects and Technology Pioneer fellowships (21)
- 7) Number of OIST and external startups supported by entrepreneurial projects, the Startup Accelerator Program, incubator facility, and other entrepreneurship programs (25)
- 8) Number of companies in the Innovation Network at OIST (INO) (20)
- 9) Number of visits and visitors (including visitors on the day of the Science Festival): 20,000
- 10) Number of local students who visited the campus: 2,000
- 11) Number of lectures and talks for local students.: 30
- 12) Number of employees from Okinawa (researchers and staff)
- 13) % of hiring from Okinawa residences
- 14) Number of externally organized international conferences and workshops and number of participants at the OIST venue.

## **5. University Campus and Community Development; Safety and Environment Protection**

### **5.1 Campus Development**

#### **Goal**

OIST Graduate University will develop the campus as planned.

#### **Actions**

- Closely monitor construction schedule of infrastructure and building works for Lab 5 with tight management and continuous effort to reduce construction costs.
- We will promote facility management by systematically renewing, repairing, and maintaining existing campus buildings, facilities, and equipment from a medium- to long-term perspective, based on an understanding of their current status, in order to extend their service life and make effective use of space.
- Based on the Act for Promoting Proper Tendering and Contracting for Public Works (Act No. 127 of 2000), promote disclose of pre- and post- tendering and contract information such as tendering schedule and result, etc., to ensure transparency.

### **5.2 University Community and Education/Childcare Services**

#### **Goal**

Maintain an inclusive culture that fosters equitable opportunities and services for all members of the OIST community from diverse backgrounds. Provide services, programs, shared experiences, and a unifying identity that contributes to a vibrant OIST community. The services and programs operate across the entire OIST community, in collaboration with administration and academic units to provide meaningful and impactful engagement and services for all the OIST community.

#### **Actions**

##### **Developing the University Community**

- Enhance and implement high-quality programs to support the daily living needs of stakeholders (OIST employees, students, and their families)
  - Enhance the onboarding experience for family members
  - Continue to collaborate with relevant Divisions/Sections within OIST to introduce an early-inclusion program for individuals accepting positions at OIST and their families prior to relocation.
  - Continue to foster a network of family ambassadors. The Family Ambassador Network is formed by spouses of OIST employees. The network's primary purpose is to share information about OIST and its surroundings from the family member's perspective to new employees and their family members. This network was designed to help new employees and their family members obtain helpful information from people familiar with living in Okinawa.
  - Collaborate with HR division to ensure the smooth and effective on-boarding of OIST employees and their families through the provision of accurate information regarding accommodation, child-care services, family support, medical services and daily living needs.
  - Provide support for OIST staff who provide services to visiting researchers and invited guests, such as data registration and maintenance of the database, and provide assistance to visiting researchers and invited guests during their stay at OIST.
- Provide quality and cost-effective food services to the diverse OIST community.
- Continue to develop and oversee the procedures to regulate quality of food vendor services.
- The Ganjuu Service will continue to provide high quality evidence-based services that support the wellbeing of the whole OIST community (students, staff and family members including children) with the aim of helping people thrive and perform at their best. We will work closely with all stake holders to ensure that the range of services provided, meet the needs of the OIST community. We will support members of the OIST community and advocate on their behalf when requested to do so, to raise and address inequalities. We will continue to provide workshops that support the wellbeing of the OIST community and increase individual resilience among OIST community members and continue to support

wellbeing initiatives. Together with other community service, we will try to restore the sense of community that has been hit hard by COVID-19 over the last year.

- Recreation Services will oversee community engagement activities including support and oversight of club activities.
  - Oversee the use of shared community space in the OIST village zone, fitness gym, Seaside House (Lounge, Deck, Patio, Tennis Courts, Soccer field), Clay Factory, Lounge in the new housing.
- Schedule and support recreational activities, events, classes, seminars for the whole OIST community that encourage physical, social and emotional wellbeing.
  - Identify opportunities to partner with local community constituents to host events and share facilities.
  - Identify leisure activities in Okinawa and Okinawan cultural opportunities for OIST community members to participate.
- The University will investigate the availability of and promote access to recreation and sporting facilities on and off campus.
- Informed by survey results, continue to improve the quality of language education services provided to staff, family members and Okinawan community members.
- Explore more flexible teaching schedules and enhanced program offerings.

### **Education and Childcare Services for OIST Family**

- Continue efforts to improve the educational environment of children of OIST employees and students through STEM and SEL programming in the provided childcare services.
- Continue to provide a high quality, fully bilingual (English and Japanese) Pre-school and School-aged (Afterschool/Holiday) programs through Child Development Center (CDC) and School Aged Program (SAP). Enrollment in these programs is expected to continue to grow.
  - Review CDC and SAP staffing models to ensure continuous high-quality childcare services
  - Review CDC and SAP revenue and expenses to support a sustainable funding model through appropriate budgeting and fees
  - Review space needs for the CDC and the SAP
  - Improve the administrative processes and training for staff in the CDC and SAP
  - The CDC Liaison Committee will meet regularly to support the CDC and SAP
  - The CDC Oversight Committee will review CDC and SAP operations and provide advice and recommendations
  - The CDC Parent Teacher Committee will meet regularly with CDC management to offer advice and recommendations
- Continue to provide appropriate educational opportunities in English for the children of OIST staff and students attending Japanese public schools in Okinawa. To support recruitment and retention of the best faculty, staff and students, OIST will support families to access internationally recognized schooling. e.g. providing information on international schools.
  - Continue to assess and review the educational opportunities for international and Japanese families in Okinawa and to make this information readily available to parents.
  - Continue to evaluate the feasibility of an international IB K-12 school for OIST families and the local community.
  - Develop a process to conduct periodic international school parent satisfaction survey and validate school educational and support service accreditation.

### **Student Support**

- OIST will provide comprehensive support to provide a safe and healthy environment for students, including proactively reaching out to students for early problem detection, increasing communication with students, and seamless coordination of support across campus.
- Schedule and support recreational activities, events, classes, seminars for the OIST students that encourage physical, social and emotional wellbeing.

### **5.3 Safety**

#### **Goal**

The Emergency Response and Business Continuity Plans will be operated and rehearsed with training exercises, and safety and emergency response at each department will be ensured through workplace inspections.

#### **Actions**

- The Emergency Response and Business Continuity Plans will be operated and further rehearsed with training exercises.
- Ensure safety and emergency response at each department through workplace inspections.
- Enhance the sustainability of the campus under natural disasters in collaboration with Onnason and offer the campus to local residents for evacuation under disasters.

### **5.4 Environment Protection**

#### **Goal**

OIST Graduate University will conduct its business in an environmentally friendly manner and support sustainability efforts towards the advancement of The Sustainable Development Goals (SDGs) by the United Nations.

#### **Actions**

- Promote use of recycled products
- Monitor and optimize operations to minimize volume of greenhouse gas emission and energy consumption.
- Minimize environmental impact on surrounding waters through providing measures such as enhancing the proper use and management of the water recycling system. In addition, prevent impact to local aquifers.
- For various construction works associated with facility development, provide sufficient measures such as installation of turbid water treatment plants to prevent red soil run off.
- Manage campus facilities and landscaping to preserve natural balance and protect indigenous species.

## Attachment 1-1 Research Units (February 1, 2022)

Unit Name	Faculty
1. Algorithms for Ecological and Evolutionary Genomics Unit	Dr. Eugene Myers
2. Analysis on metric spaces Unit	Dr. Xiaodan Zhou
3. Applied Topology Unit	Dr. Dmitry Feichtner-Kozlov
4. Biodiversity and Biocomplexity Unit	Dr. Evan P. Economo
5. Bioinspired Soft Matter Unit	Dr. Ye Zhang
6. Biological Complexity Unit	Dr. Simone Pigolotti
7. Biological Physics Theory Unit	Dr. Greg Stephens
8. Biological Systems Unit	Dr. Igor Goryanin
9. Cell Division Dynamics Unit	Dr. Tomomi Kiyomitsu
10. Cell Proliferation and Gene Editing Unit	Dr. Franz Meitinger
11. Cell Signal Unit	Dr. Tadashi Yamamoto
12. Cellular and Molecular Synaptic Function Unit	Dr. Tomoyuki Takahashi
13. Chemistry and Chemical Bioengineering Unit	Dr. Fujie Tanaka
14. Cognitive Neurorobotics Research Unit	Dr. Jun Tani
15. Complex fluids and flows Unit	Dr. Marco Rosti
16. Complexity Science and Evolution Unit	Dr. Ulf Dieckmann
17. Computational Neuroethology Unit	Dr. Sam Reiter
18. Computational Neuroscience Unit	Dr. Erik De Schutter
19. Continuum Physics Unit	Dr. Gustavo Gioia
20. Coordination Chemistry and Catalysis Unit	Dr. Julia Khusnutdinova
21. Developmental Neurobiology Unit	Dr. Ichiro Masai
22. Electronic and Quantum Magnetism Unit	Dr. Yejun Feng
23. Embodied Cognitive Science Unit	Dr. Tom Froese
24. Energy Materials and Surface Sciences Unit	Dr. Yabing Qi
25. Evolution, Cell Biology, and Symbiosis Unit	Dr. Filip Husnik
26. Evolutionary Genomics Unit	Dr. Thomas Bourguignon
27. Evolutionary Neurobiology Unit	Dr. Hiroshi Watanabe
28. Experimental Quantum Information Physics Unit	Dr. Hiroki Takahashi
29. Femtosecond Spectroscopy Unit	Dr. Keshav Dani
30. Fluid Mechanics Unit	Dr. Pinaki Chakraborty
31. G0 Cell Unit	Dr. Mitsuhiro Yanagida
32. Genomics and Regulatory Systems Unit	Dr. Nicholas M. Luscombe
33. Geometric Partial Differential Equations Unit	Dr. Qing Liu
34. Gravity, Quantum Geometry and Field Theory Unit	Dr. Reiko Toriumi
35. Human Developmental Neurobiology Unit	Dr. Gail Tripp
36. Human Evolutionary Genomics Unit	Dr. Svante Erik Pääbo
37. Immune Signal Unit	Dr. Hiroki Ishikawa
38. Information Processing Biology Unit	Dr. Ichiro Maruyama
39. Integrated Open Systems Unit	Dr. Hiroaki Kitano
40. Integrative Community Ecology Unit	Dr. David Armitage
41. Light-Matter Interactions for Quantum Technologies Unit	Dr. Sile Nic Chormaic
42. Marine Biophysics Unit	Dr. Satoshi Mitarai

Unit Name	Faculty
43. Marine Climate Change Unit	Dr. Timothy Ravasi
44. Marine Eco-Evo-Devo Unit	Dr. Vincent Laudet
45. Marine Genomics Unit	Dr. Noriyuki Satoh
46. Mathematical and Theoretical Physics Unit	Dr. Shinobu Hikami
47. Mechanics and Materials Unit	Dr. Eliot Fried
48. Membrane Cooperativity Unit	Dr. Akihiro Kusumi
49. Membranology Unit	Dr. Keiko Kono
50. Memory Research Unit	Dr. Kazumasa Tanaka
51. Micro/Bio/Nanofluidics Unit	Dr. Amy Shen
52. Molecular Cryo-Electron Microscopy Unit	Dr. Matthias Wolf
53. Molecular Genetics Unit	Dr. Daniel Rokhsar
54. Molecular Neuroscience Unit	Dr. Marco Terenzio
55. Networked Quantum Devices Unit	Dr. David Elkouss
56. Neural Circuit Unit	Dr. Yutaka Yoshida
57. Neural Coding and Brain Computing Unit	Dr. Tomoki Fukai
58. Neural Computation Unit	Dr. Kenji Doya
59. Neurobiology Research Unit	Dr. Jeff Wickens
60. Neuronal Mechanism for Critical Period Unit	Dr. Yoko Yazaki-Sugiyama
61. Neuronal Rhythms in Movement Unit	Dr. Marylka Yoe Uusisaari
62. Nonlinear and Non-equilibrium Physics Unit	Dr. Mahesh Bandi
63. Nucleic Acid Chemistry and Engineering Unit	Dr. Yohei Yokobayashi
64. Optical Neuroimaging Unit	Dr. Bernd Kuhn
65. Organic and Carbon Nanomaterials Unit	Dr. Akimitsu Narita
66. Organic Optoelectronics Unit	Dr. Ryota Kabe
67. Physics and Biology Unit	Dr. Jonathan Miller
68. pi-Conjugated Polymers Unit	Dr. Christine Luscombe
69. Plant Epigenetics Unit	Dr. Hidetoshi Saze
70. Protein Engineering and Evolution Unit	Dr. Paola Laurino
71. Quantum Dynamics Unit	Dr. Denis Konstantinov
72. Quantum Gravity Unit	Dr. Yasha Neiman
73. Quantum Information Science and Technology Unit	Dr. Kae Nemoto
74. Quantum Information Security Unit	Dr. Artur Ekert
75. Quantum Machines Unit	Dr. Jason Mark Twamley
76. Quantum Materials Science Unit	Dr. Yoshinori Okada
77. Quantum Systems Unit	Dr. Thomas Busch
78. Quantum Wave Microscopy Unit	Dr. Tsumoru Shintake
79. Qubits and Spacetime Unit	Dr. Philipp Hoehn
80. Representation Theory and Algebraic Combinatorics Unit	Dr. Liron Speyer
81. Sensory and Behavioural Neuroscience Unit	Dr. Izumi Fukunaga
82. Shocks, Solitons and Turbulence Unit	Dr. Emile Toubert
83. Structural Cellular Biology Unit	Dr. Ulf Skoglund
84. Synapse Biology Unit	Dr. Yukiko Goda
85. Theory of Quantum Matter Unit	Dr. Nic Shannon
86. Biological Nonlinear Dynamics Data Science Unit	Dr. Gerald Pao

## **Attachment 1-2 Overview of Scientific Research at the OIST Graduate University**

The OIST graduate education and research program is cross-disciplinary and aims to be at the leading edge of research in science and technology, including the Life Sciences, the Physical Sciences, and Mathematics. 86 Research Units (as of February 2022) have been launched so far, with research in the following 8 major areas:

1. Physics
2. Chemistry
3. Neuroscience
4. Marine Science
5. Environmental and Ecological Sciences
6. Mathematical and Computational Sciences
7. Molecular, Cellular, and Developmental Biology
8. Engineering and Applied Science

**Attachment 2-1 FY2022 Income and expenditure budget statement**

**FY2022 Income and expenditure budget statement**

(Unit : K yen)

Revenues		Expenses	
Items	Budget Amounts	Items	Budget Amounts
Subsidy for Operations	17,524,460	PEREX	7,472,010
Subsidy for Facilities	1,795,385	CAPEX	843,516
Other Revenues	1,098,852	OPEX	9,208,934
		Other	1,098,852
		Construction Expense	1,795,385
<b>Total</b>	<b>20,418,697</b>	<b>Total</b>	<b>20,418,697</b>

Note: Subsidy amounts in Revenues might have to be modified later when a request for budget carry-over

## Attachment 2-2 Balance Sheets and Projected income statement

### Balance Sheets

As of March 31, 2022

(Unit : K Yen)

(1)	Assets			
(2)	I Noncurrent assets			
(3)	1 Properties, plants, and equipment			
(4)	Land		1,659,667	
(5)	Buildings	56,107,784		
(6)	Accumulated depreciation	<u>-18,209,158</u>	37,898,626	
(7)	Structures	9,284,480		
(8)	Accumulated depreciation	<u>-2,732,024</u>	6,552,455	
(9)	Machineries	234,057		
(10)	Accumulated depreciation	<u>-218,430</u>	15,626	
(11)	Equipment	27,782,899		
(12)	Accumulated depreciation	<u>-23,015,077</u>	4,767,822	
(13)	Books		9,629	
(14)	Vehicles and transportation equipment	27,426		
(15)	Accumulated depreciation	<u>-27,403</u>	23	
(16)	Lease assets	1,308,806		
(17)	Accumulated depreciation	<u>-1,308,634</u>	173	
(18)	Construction in progress		6,602,376	
(19)	Total properties, plants, and equipment		<u>57,506,397</u>	
(20)				
(21)	2 Intangible assets net of amortization			
(22)	Patents		99,459	
(23)	Trademark rights		128	
(24)	Softwares		43,966	
(25)	Patents (in the process of filing)		99,192	
(26)	Others		<u>22,536</u>	
(27)	Total intangible assets, net		<u>265,281</u>	
(28)				
(29)	3 Investments and other assets			
(30)	Investments in securities		5	
(31)	Security deposits		1,200	
(32)	Long-term prepaid expenses		1,000	
(33)	Lease investment assets (Long-term)		<u>5,056,927</u>	
(34)	Total investments and other assets		<u>5,059,132</u>	
(35)	Total noncurrent assets			62,830,809
(36)				
(37)	II Current assets			
(38)	Cash and cash equivalents		3,143,820	
(39)	Accounts receivable		687,858	
(40)	Supplies		60,000	
(41)	Prepaid expenses		40,000	
(42)	Lease investment assets (Short-term)		<u>156,970</u>	
(43)	Total current assets			<u>4,088,648</u>
(44)	Total assets			<u><u>66,919,458</u></u>
(45)				
(46)	Liabilities			
(47)	I Noncurrent liabilities			
(48)	Encumbrance for assets - subsidy for operation		11,698,235	
(49)	Encumbrance for assets - donation		101,588	
(50)	Encumbrance for assets - donated by Japan government		678	
(51)	Allowance-retirement benefits		174,263	
(52)	Long-term accrued amounts payable		<u>5,080,596</u>	
(53)	Total noncurrent liabilities			17,055,359
(54)				
(55)	II Current liabilities			
(56)	Advance received		450,000	
(57)	Deposits received - subsidy for operation			
(58)	Deposits received - subsidy for operation	451,491		
(59)	Deposits received-subsidy for facility	<u>6,250,079</u>	6,701,571	
(60)	Deposits received - donation		80,000	
(61)	Deposits received - Kakenhi		160,000	
(62)	Deposits received - others		100,000	
(63)	Accounts payable		1,934,770	
(64)	Short-term lease obligations		115	
(65)	Accrued expenses		<u>80,000</u>	
(66)	Total current liabilities			<u>9,506,456</u>
(67)	Total liabilities			<u><u>26,561,815</u></u>
(68)				
(69)	Equities			
(70)	I Contributions			
(71)	Contributions from government		<u>24,317,681</u>	
(72)	Total contributions			24,317,681
(73)				
(74)	II Additional paid-in contributions			
(75)	Additional paid-in contributions		32,885,543	
(76)	Accumulated depreciation - directly deducted from equity		<u>-18,114,644</u>	
(77)	Total additional paid-in contributions			14,770,899
(78)				
(79)	III Retained earnings			
(80)	Voluntary reserve funds			
(81)	Special reserve funds		80,533	
(82)	Accumulated net income		<u>1,188,529</u>	
(83)	(Net income/△loss for FY21)		<u>(-2,148)</u>	
(84)	Total retained earnings			<u>1,269,062</u>
(85)	Total equities			<u><u>40,357,642</u></u>
(86)	Total liabilities and equities			<u><u>66,919,458</u></u>

**Projected income statement**  
 FY2021

(Unit : K Yen)

(A)	(B)
Items	Amount
(1) Ordinary Revenues	20,676,624
(2) Revenue from Tuition etc.	117,180
(3) Revenue from Subsidy for Operations etc.	16,326,531
(4) Revenue from Subsidy for facility	560
(5) Revenue from Sponsored Research	425,995
(6) Revenue from Sponsored Business	285,494
(7) Revenue from Joint Research	96,978
(8) Revenue from Donation etc.	21,268
(9) Revenue from Subsidy for other	40,774
(10) Revenue from Property Rent for Dormitory etc.	8,211
(11) Land and Building Rent Revenue	14,279
(12) Reversal of Assets Offsetting Subsidy for Operations etc.	3,021,729
(13) Reversals of Assets Offsetting Donated Assets	16,348
(14) Financial Income	106,990
(15) Miscellaneous gains	194,286
(16)	
(17) Ordinary Expenses	20,679,904
(18) Personnel Expenses	8,097,676
(19) Operating Expenses	8,420,455
(20) General Administrative Expenses	916,280
(21) Depreciation	3,125,361
(22) Financial Charges	120,132
(23) Miscellaneous loss	
(24)	
(25) Ordinary Loss	-3,280
(26)	
(27) Extraordinary Profit	4,788
(28) Extraordinary Loss	3,655
(29)	
(30) Net Loss for the year	-2,148

## Balance Sheets

As of March 31, 2023

(Unit : K Yen)

(1)	Assets			
(2)	I Noncurrent assets			
(3)	1 Properties, plants, and equipment			
(4)	Land		1,659,667	
(5)	Buildings	56,107,784		
(6)	Accumulated depreciation	<u>-20,645,041</u>	35,462,743	
(7)	Structures	9,291,254		
(8)	Accumulated depreciation	<u>-3,036,205</u>	6,255,048	
(9)	Machineries	234,057		
(10)	Accumulated depreciation	<u>-228,125</u>	5,931	
(11)	Equipment	27,947,265		
(12)	Accumulated depreciation	<u>-25,106,007</u>	2,841,257	
(13)	Books		10,829	
(14)	Vehicles and transportation equipment	27,426		
(15)	Accumulated depreciation	<u>-27,602</u>	-176	
(16)	Lease assets	1,308,806		
(17)	Accumulated depreciation	<u>-1,308,749</u>	58	
(18)	Construction in progress		8,390,987	
(19)	Total properties, plants, and equipment		54,626,344	
(20)				
(21)	2 Intangible assets net of amortization			
(22)	Patents		110,973	
(23)	Trademark rights		7	
(24)	Softwares		-65,942	
(25)	Patents (in the process of filing)		123,966	
(26)	Others		17,718	
(27)	Total intangible assets, net		186,721	
(28)				
(29)	3 Investments and other assets			
(30)	Investments in securities		5	
(31)	Security deposits		1,200	
(32)	Long-term prepaid expenses		1,000	
(33)	Lease investment assets (Long-term)		4,906,927	
(34)	Total investments and other assets		4,909,132	
(35)	Total noncurrent assets			59,722,197
(36)				
(37)	II Current assets			
(38)	Cash and cash equivalents		3,143,820	
(39)	Accounts receivable		1,162,852	
(40)	Supplies		60,000	
(41)	Prepaid expenses		40,000	
(42)	Lease investment assets (Short-term)		160,470	
(43)	Total current assets			4,567,143
(44)	Total assets			<u>64,289,340</u>
(45)				
(46)	Liabilities			
(47)	I Noncurrent liabilities			
(48)	Encumbrance for assets - subsidy for operation		9,450,877	
(49)	Encumbrance for assets - donation		63,280	
(50)	Encumbrance for assets - donated by Japan government		678	
(51)	Allowance-retirement benefits		192,263	
(52)	Long-term accrued amounts payable		4,930,596	
(53)	Total noncurrent liabilities			14,637,694
(54)				
(55)	II Current liabilities			
(56)	Advance received		450,000	
(57)	Deposits received - subsidy for operation			
(58)	Deposits received - subsidy for operation	264,428		
(59)	Deposits received-subsidy for facility	<u>6,422,841</u>	6,687,269	
(60)	Deposits received - donation		88,000	
(61)	Deposits received - Kakenhi		190,000	
(62)	Deposits received - others		100,000	
(63)	Accounts payable		3,934,833	
(64)	Accrued expenses		80,000	
(65)	Total current liabilities			11,530,103
(66)	Total liabilities			<u>26,167,796</u>
(67)				
(68)	Equities			
(69)	I Contributions			
(70)	Contributions from government		24,317,681	
(71)	Total contributions			24,317,681
(72)				
(73)	II Additional paid-in contributions			
(74)	Additional paid-in contributions		32,892,317	
(75)	Accumulated depreciation - directly deducted from equity		<u>-20,366,767</u>	
(76)	Total additional paid-in contributions			12,525,549
(77)				
(78)	III Retained earnings			
(79)	Voluntary reserve funds			
(80)	Special reserve funds		80,533	
(81)	Accumulated net income		1,197,781	
(82)	(Net income/△loss for FY22)		<u>(-9,251)</u>	
(83)	Total retained earnings			1,278,313
(84)	Total equities			<u>38,121,544</u>
(85)	Total liabilities and equities			<u>64,289,340</u>

**Projected income statement**  
 FY2022

(Unit : K Yen)

	(A)	(B)
	Items	Amount
(1)	Ordinary Revenues	20,581,892
(2)	Revenue from Tuition etc.	137,025
(3)	Revenue from Subsidy for Operations etc.	16,662,081
(4)	Revenue from Sponsored Research	660,657
(5)	Revenue from Joint Research	90,050
(6)	Revenue from Donation etc.	29,917
(7)	Revenue from Subsidy for other	40,774
(8)	Revenue from Property Rent for Dormitory etc.	9,960
(9)	Land and Building Rent Revenue	12,630
(10)	Reversal of Assets Offsetting Subsidy for Operations etc.	2,632,945
(11)	Reversals of Assets Offsetting Donated Assets	38,308
(12)	Financial Income	103,482
(13)	Miscellaneous gains	164,064
(14)		
(15)	Ordinary Expenses	20,591,143
(16)	Personnel Expenses	8,610,140
(17)	Operating Expenses	8,457,577
(18)	General Administrative Expenses	691,507
(19)	Depreciation	2,720,937
(20)	Financial Charges	110,983
(21)		
(22)	Ordinary Profit	-9,251
(23)		
(24)	Net Loss for the year	-9,251