

Okinawa Institute of Science and Technology School Corporation

## Fiscal Year 2017 Business Plan



OIST

OKINAWA INSTITUTE OF SCIENCE AND TECHNOLOGY GRADUATE UNIVERSITY  
沖縄科学技術大学院大学

# **Okinawa Institute of Science and Technology School Corporation**

## **FY2017 Business Plan**

### **Introduction**

In November 2011 the Okinawa Institute of Science and Technology School Corporation Act (OIST SC Act) came into effect, with the objectives of contributing to the promotion and sustainable development of Okinawa as well as contributing to the advancement of science and technology in Japan and throughout the world. In connection, and with the prior authorization by the Minister of Education, Culture, Sports, Science and Technology, the Okinawa Institute of Science and Technology School Corporation (OIST SC) was established as a school corporation to operate the Okinawa Institute of Science and Technology Graduate University (OIST Graduate University) which conducts world-class education and research in science and technology.

This Business Plan (BP) has been developed by OIST, 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) 2017, from April 2017 to March 2018.

### **Status of OIST at the end of FY2016**

In FY2014 OIST published the “Okinawa Institute of Science & Technology Graduate University Framework Document II.” This report reviewed the progress OIST had made until that time and outlined the future development toward 300 faculty units with a detailed plan of expanding its size up to 100 faculty units in the 10 years that followed.

In July 2015, an external “Peer Review” was conducted to evaluate OIST’s progress and expansion plan. The focus of the evaluation was to assess whether OIST Graduate University is on track to become a world-class education and research university capable of generating sustainable development for Okinawa.

The Peer Review Panel unambiguously confirmed that progress across all key measures of excellence has been outstanding. In these measures, OIST was judged to be a par with the 25 universities ranked highest by World University Rankings 2014/2015.

As a central recommendation the Panel endorsed the general plan of growth suggested in the Framework Document II, aiming at a goal, by the mid 2020’s, of a) approximately 100 outstanding research groups, with a proper balance among different fields of research, and b) a graduate school of a few hundred students. Further growth of OIST would be deliberated and planned towards the end of the decade of development.

### **Key Elements for the Business Plan FY2017**

The key elements of the Business Plan for FY2017 follow directly from the recommendations of the Framework II document, the Peer Review and the resulting decision of the Japanese Government on the funding of the expansion of OIST. These key elements are directly related to the three core missions of OIST: i) International leadership in basic research, with special emphasis on interdisciplinary opportunities ii) outstanding graduate education while training students in transdisciplinary thinking and research in an international environment, and iii) contribution to the development of Okinawa (and Japan) through the establishment of a strong academia-industry-government partnership linked to highly proactive internal programs in both Technology Transfer and Business Development. In addition, OIST is becoming a role model for the development of world leading research centers in Japan (see 5<sup>th</sup> Science and Technology Basic Plan).

### **Expansion of the university**

The plan for the expansion of OIST has been outlined in the Framework Document II. This plan includes the construction of new laboratory buildings, the hiring of new staff to support and achieve the increase of the faculty units to 100 by the mid-2020s and an expansion of the number of students.

Following the successful Peer Review, the Japanese Government released FY2015 funds for the detailed design of Laboratory 4, committed funds from 2015 for the start of construction, and established an “act incurring liabilities on the treasury” for the entire construction of Laboratory 4 (FY2015 to FY2018) with a total amount of 11.3 billion yen.

The number of faculty units will be increased in FY2017, to 65, further strengthening the University’s areas of research competence while maintaining the highest quality standards in the selection. In FY 2016 the intake of new Graduate students increased to 35, while, yet again, maintaining the highest quality standards in the selection. Expansion of the faculty units will continue in FY2017 and the number of students that enroll in FY2017 is expected to be 40. In both areas, the standards will be maintained as world-leading.

### **Research**

OIST will continue publishing world-leading research in high-impact journals. The expansion into marine science, in particular with strong guidance from the now well-established International Advisory Board, will continue including two new faculty units and the addition of key personnel for the Marine Science Center. Utilization of the OIST Marine Science Station at Seragaki will increase further. The Dean of Research will continue international review of the research support facilities which constitute a key to the research strength of OIST.

### **Education**

The year of 2017 achieves a major milestone with the completion of the first full cycle of the

graduate program. OIST will continue to develop its strong program and innovative graduate program. The enrolment of more students as mentioned above and a strong effort to recruit a larger fraction of Japanese students will be integral part of the “growing university”. The addition of new faculty members in FY2016 significantly increases the research opportunities for students and will allow a yet further strengthening of the curriculum.

### **Okinawa Development**

Okinawa Development is the third core element of the OIST mission. The expansion of OIST will further strengthen the interaction of OIST with academic and research institutions and industry in Okinawa and beyond, including the University of the Ryukyus, as well as the governmental sector such as Okinawa Prefecture Government and Onna Village. The main focus areas are business development, technology transfer, the “Proof of Concept” (POC) approach to bridge the gap between academia and the introduction of a product to the market, and R&D cluster development. The early success of the POC program is reflected in an expansion in FY2017, including the introduction of a second phase for those first-phase programs that have been successful. OIST will continue to invite world-leading experts to the campus to share their expertise with the research community and to specifically expand and strengthen the technology-transfer and business-development skills of the OIST staff. In addition, OIST continues to make important contributions to the elementary and secondary education in Okinawa by collaborating with local schools to inspire young people with scientific activities.

### **Budget related issues**

The total *approved budget* for FY2017 is the same as for FY2016 (16.7 billion yen). This budget contains 1.2 billion yen for facilities, including construction of Laboratory 4, and 15.5 billion yen for operations.

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. 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, OIST is developing its Fundraising Office following the model of North American universities where private and corporate donations are sought to support the mission of the university.

Concerning the construction of Laboratory 4, OIST is strengthening the project and budget management in order to assure that the project will be completed on time and within budget.

### **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.

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. This aim has also been stated in the fifth Science and Technology Basic Plan

### **Planning framework and evaluation approach**

This Business Plan states the goals of FY2017 and the action items to achieve the next step in the growth of the Graduate University, described above. 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, 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 SC 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. The final judgement of achievements has to come through the process of a Peer review similar to the one in 2015, which laid the groundwork for the current stage of expansion of OIST.

## **Chapter 1 Education & Research**

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

#### **Goal:**

Using feedback from 2016, refine and improve measures to ensure that student recruitment, admissions, and enrolment proceed smoothly.

#### **Actions:**

(Courses)

- Continue to develop the curricula including courses taught by newly recruited faculty, and submit an application of new faculty teaching to MEXT as needed. Establish OIST course approval system for new courses.
- Continue to provide the customized Ph.D. program, including pre-thesis research training and laboratory rotations and assignment of an Academic Mentor for each student.
- Continue to provide the programs for Professional Development for students including training that focuses on group activities and presentation skills, research conduct, career development, teaching experience and a program of student-invited visiting speakers.
- Continue to provide the examination for progression to thesis research based on oral examination by prominent external examiner.
- Conduct the final thesis examination, confer degrees on completing students, finalize degree certificate, and arrange graduation clothing and ceremony.
- Continue to provide the Gap period training in language and research experience for incoming students, especially those who graduate from Japanese universities in March.

(Educational Environment)

- Continue to enhance collaborative relationships with other universities by developing exchange agreements concerning interns, course credits, TA opportunities, and other exchange opportunities.
- Continue to maintain and enhance student record systems for monitoring of student progress, grades and completions.
- Continue to enhance teaching support systems to manage laboratory classes, teaching

materials, lecture and tutorial rooms, AV support, computer labs, and liaison between teaching faculty and academic services section.

- Increase opportunities for OIST PhD students to learn essential research skills by organizing short courses in identified topics (such as mathematics, computer programming) and special topic courses by visiting researchers.

(Student Support)

- Continue to refine and improve the orientation programs for the incoming students providing information on the educational program, available laboratories for thesis research, and life in Japan.
- Enhance international student understanding of Japanese culture by organizing cultural visits and provide opportunities for interaction with students in other Japanese universities.
- Continue to provide an environment for the students entering our Ph.D. program in which they will be able to concentrate in their research activities under the living standard comparable to that of the students of the best universities in the world that we are competing with. Commission a survey of comparative levels of support internationally at benchmark universities as a basis for future adjustment to financial support.
- Continue to track the occurrence, response and outcome of incidents involving students.
- Continue to collect and provide information of external scholarship opportunities to the students.
- Continue to support career development of students by professional development activities including arranging of TA opportunities at OIST (short courses and OIST undergraduate workshops), appointment of senior research assistants, , promotion of networking with leaders of universities and research institutions in Japan and around the world, active provision of the information concerning post-doctoral and other job opportunities, including a program of visiting speakers and individual career advice. Provide guidance and financial support for company visits to assist job hunting in Japan.
- The Resource Center has been reorganized with a new website and an expanded set of functions which will further enhance its direct support to the students and their family members as part of the University's welcome, integration into the University and support for welfare and fulfillment in Okinawa.
- Bilingual support for the physical well-being of the students and their families will continue through the clinic, which has a fulltime doctor, three nurses and an administrator. Ganjuu Wellbeing Service, with two internationally-trained psychologists and a Japanese-trained counsellor, will continue its activities to support psychological wellbeing and mental health. This will include proactive seminars on topics of direct relevance to a healthy student experience. The clinic and Ganjuu staff will continue to work together to coordinate programs that support the students and their families.

**Goal:**

Continue to attract and select the graduate students for our Ph.D. program from amongst the best available worldwide in science and technology. At least half of the students will be non-Japanese.

**Actions:**

- Review previous student recruitment and admission activities. Reflect the results of the analysis in the updated procedures and implement them effectively in a planned manner. Also, effectively convey the appeal of OIST's unique educational program both in and out of Japan.
- Continue to carry out student recruitment activities globally to attract the highest caliber graduate student candidates for the next intake of students arriving in September 2017 as follows:
  - The number recruited: About 40 students
  - Major recruitment activities:
    - Continue to develop the graduate school website as a recruiting tool. In addition, print a concise and well-edited student recruitment brochure.
    - Continue holding OIST Café in major Japanese cities by providing OIST recruiting information and English training.
    - Hold the Science Challenge Workshop for undergraduate Japanese students, and the International Collaborative Workshop for undergraduate Japanese and other students to provide experience of cutting edge research and OIST graduate school educational experience.
    - Print specially targeted brochures to recruit applicants from disciplines that have fewer students at OIST such as Chemistry and Marine Sciences.

\*Particular attention and effort will continuously be made to advertise OIST's unique educational opportunities to Japanese undergraduates. Increase participation by Japanese students through a range of targeted approaches, via holding briefing sessions in some universities and events such as graduate school experience workshop in FY2016.

**Metrics:**

- Number of A excellent applicants for the Ph.D. program (Japanese and non-Japanese)
- Number of admitted students (Japanese and non-Japanese)
- Caliber of incoming students (list of institutes from which the students received degrees, etc.)
- Increase of students receiving external scholarships, etc.
  
- Career destination of the students after graduation



## 1.2 Scientific Research

### Goal:

OIST Graduate University will continue to 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. Following “Basic Policies for Economic and Fiscal Management and Reform” by the Cabinet, we will continue applying our science and technology to the needs of society and industry in Okinawa.

### Actions:

(Promotion of cross-disciplinary research)

- Success in cross-disciplinary research depends on the strength of the Research Unit, led by our faculty members. To this end, we will continue to recruit the best people to our Faculty. We will actively develop the Research Support Division that supports the common instruments and services for the researchers and students at OIST. Completion of OIST Marine Science Station in Seragaki, together with the dedicated research space for marine science in Lab 3, has created a basic foundation for international collaboration on marine science research. Together with the recruiting of new faculty members, a Director for the Okinawa marine Science Centre, and support staff, OIST will continue its endeavor to establish a center of excellence in marine science. In July 2017, OIST will discuss about the development plan with the International Advisory Board for Okinawa Marine Science Center. This will enhance our mission to support the development of Okinawa.
- The architecture of our buildings, the rotation of each new class of graduate students through disciplines outside of their areas of interest and social activities all contribute to promoting joint projects across disciplines. Attachment #1-1 lists the Research Units at OIST as of February 2017. Attachment #1-2 lists the major scientific areas of research.

(Research Support)

- In Research Support Division (RSD), new Instrumental Analysis and Grant Support Section Leaders will be embedded and trained and recruitment of two further new section leaders (Imaging, Marine Support) will be completed. Each RSD Section will continue recruitment of excellent professional staff and enhance staff training. At least 2 further RSD sections will go through external peer review to further enhance its service level and technique.

Each RSD section will organize users' group meetings for core technologies and research support service to facilitate and plan the better use of common resources.

- Animal Resources Section will strengthen and develop research support services by recruitment of new staff and staff career development. Succession planning for the leader will commence.
- DNA sequencing section will continue to support research activities by (1) providing library preparation and sequencing supports using high throughput sequencers, (2) modifying the existing experimental protocols and developing new protocols for library preparation, and (3) expanding the SQC website to include more information on the support lists and request processes.
- Engineering Section will provide state-of-the-art technical services to researchers and students as new Engineering Building will be commissioned. Safety education on equipment use will be enhanced.
- The Scientific Computing & Data Analysis Section (SCDA) will continue to promote the effective use of High Performance Computing (HPC) in the research environment, and the integration of computing and data analysis research projects with the university centralized IT infrastructure. The SCDA will also continue to provide education and training in the best use of the clusters and scientific tools. Peer review: Discuss per-review report with SCC (scientific computing committee) and HPC users, and propose action plan to address the review. Data archiving: Provide and implement solution for the archiving of (1) research data associated with published papers and (2) data from closing unit or section.
- Improved safety-training strategy. A new safety training strategy (combination of classroom/online and hands-on training) plus a robust system to ensure compliance with safety training will be established.
- To enforce safety in fieldwork including marine research, a fieldwork safety committee will be established and a diving safety officer will be recruited.
- Web presence, external use of facilities. Establish a working group and prepare for migration of the Research Equipment Database to a true enterprise system, including software structure and management organization. Continue to improve the websites of the RSD and its sections to provide information for internal and external users, including partnerships with other academic organizations and OIST R&D Cluster
- Guidelines for data storage have been established and will now be communicated to all researchers and students to enable them to store and disclose research reagents and data. All OIST researchers and students will be required to take research ethics education in order to promote responsible conduct of research.
- With new Leader of Grants Section encourage and support faculty, researchers and students to apply for external research funding.
- Organizational structure of the Office of the Dean of Research will be amended to allow provide support for urgent projects such as new large collaborative grants, external use of

facilities, transparent allocation of funding, implementation of safety improvements.

(Publication and communication)

- Continue to promote publication of research results in best quality international journals and participation in national and international conferences by encouraging researchers through publicity of research results and rigorous research evaluation.
- Continue to provide accessible information about OIST research and its results to the scientific community and to the general public in Japan and overseas through OIST Web articles, press releases, press conferences, OIST newsletter, brochures, and the OIST social media.
  - All OIST website contents were moved to a responsive design and usability for users on mobile devices was greatly enhanced. Continue regular training for group site users and optimize the OIST Website and maintain the high percentage bilingual content.
  - FY2016 saw a series of remarkable outcome of a proactive media strategy that incorporated not only press visits and press briefing sessions in Okinawa and on the mainland, but also various proposal to print, broadcast, and Web media. Continue employing the strategy to further enhance press coverage.
  - Continue disseminating OIST's research results to local, national and international media via electronic clearinghouses such as Alpha Galileo and Eureka! Alert and through Japan's press clubs.
  - OIST led a group of Japanese universities and research institutions to overseas science events through JACST efforts. Continue strengthening OIST's presence in the academia as well as the media in Japan and overseas by creating and maintaining a global network of press officers with other universities and journalists.
  - OIST helped other universities in Japan in their efforts to improve science communication by jointly organizing symposia and seminars. Continue this activity, and streamline the working skills of science writers by regularly providing help, advice, and professional courses in collaboration with other universities.
- Increase the number of meetings with other institutes by improving the technical support.

#### **Metrics:**

- Number of researchers (faculty, postdocs, technicians, and students)
- Number of research publications
- Number of joint publications between different faculty members
- Number of press announcements and/or conferences about research results
- Number of research honors
- Number of awarded research grants (number and amount)
- The number of use of our research facilities by external organizations, etc.

### **1.3 Faculty Affairs**

**Goal:**

The University will continue to recruit international and Japanese scientists, with a mixture of senior scientists with an established record of excellence in research and junior scientists with excellent scholarship and creativity in research, to strengthen leadership in interdisciplinary research and its global presence.

**Actions:****(Faculty Appointment)**

- Using the recent Development Plan created by the Faculty, The University will continue to recruit new faculty consistent with the annual projections summarized in the Framework Document II, towards the goal of reaching 100 Faculty Units by 2023. Specifically in FY2017, OIST will seek to appoint outstanding faculty members in Chemistry, Life Sciences, Physics and Marine Science to increase the number of Faculty Units to 65. Publicize OIST and solicit faculty recruiting to the conference participants by inviting and hosting prestigious international conferences to OIST.

**(Faculty/Research Evaluation)**

- A new approach to Tenure Evaluation will be introduced to provide a flexible timetable for the tenure review and guidance to Assistant Professors. It is planned to develop and implement new guidelines in FY2017.
- Continue the evaluation of research units by external committees consisting of world-class prominent scholars at the internationally highest standard – the committees will rigorously evaluate the achievements, uniqueness, future possibilities, and other elements of the research unit with fair and transparent standards. The evaluation results will be used in judgments of continuation of the research units. Unit evaluation of up to 4 units is planned in FY2017.
- Continue the evaluation for tenure by internal committees and external reviewers who are world-class prominent scholars at the internationally highest standard. The evaluation results will be used in judgments of promotion of the faculty members. Tenure evaluation of up to 5 Assistant Professors is planned in FY2017.
- Continue to publish the summary of research evaluation expeditiously to fulfill the accountability to the public in using public expenses for the research projects.

**(Research Productivity Report)**

- Continue to publish the summary of research productivity expeditiously to fulfill the accountability to the public in using public expenses for the research projects. In FY2017 OIST will institute an Institutional Repository on Jairo Cloud that will also allow open access to the publications from our Faculty (subject to IP protection policies).

**(Senior Appointment & Post retirees)**

- New policies with respect to hiring senior faculty and extending faculty's contract beyond retirement will be considered with a view to continuing to expand the University in new directions and towards our goal of maintaining innovative and productive faculty on

campus.

(Faculty Development)

- We will implement a 'Guidance Committee' for each of the new hires at Assistant Professor level to help with development of the research Units as the beginning of a plan for faculty development as a regular part of OIST's growth.

(Postdoctoral Career Development)

- Our first development officer for postgraduate career development initiated a wide-ranging program for 2016. Continuing the work, we will initiate an OIST wide development program to increase postdoctoral awareness of opportunities for development in their time here and for the future.

**Metrics:**

- Number of research units evaluated

## **1.4 Global Networking**

**Goal:**

OIST Graduate University will continue to create strong networks with the international science community. It will do this, for example, by increasing collaborative agreements with universities and institutions, and by hosting academic workshop. 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:**

- Develop Visiting Research Student category to foster collaboration with other universities involving students; Develop exchange agreements concerning reciprocal student visits- Continue to expand collaborative relationships with other universities and institutes domestically and internationally for improving quality of research support sections.
- Continue to host international courses and workshops at the highest level in the world and provide students and young researchers with the opportunities of learning forefront science and interacting with outstanding peers. In addition, invite world-class international conferences to OIST venue to increase opportunities for the OIST researchers and students to establish networks with other researchers through academic and social events. Maintain flexible and efficient operation of each workshops by keep ensuring a reduction of cost for each workshop by reducing the travel support for the workshop participants, obtaining funding support from other institutes and more efficient travel and accommodation procedures.
- Continue to host top undergraduate students in residential courses and laboratory placements as research interns in research units.

- Continue to implement special research student programs, and through those programs, accept students from universities in Japan and around the world for practical trainings in research units.

**Metrics:**

- Number of collaboration agreements with universities and research institutions
- Number of international courses and workshops
- Number of participants of international courses and workshops
- Number of students accepted from domestic and international universities

## **Chapter 2 Governance & Administrative Transparency and Efficiency**

### **2.1 Basic structures for governance and business operations**

**Goal:**

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. Auditors of the corporation will conduct rigorous audits to ensure appropriateness and efficiency of the operations of the corporation.

**Actions:**

(Basic Management)

- Commences the sixth year since the School Corporation began. Regular BOG meetings will be held in May, September and February, and regular BOC meetings will be held in May and February 2018. In the BOG meeting in May, the performance and achievements of FY2016 will be reported and evaluated. The results of this assessment are made available to the CAO for public sharing. The three-year terms of a large number of current BOG members will conclude in November. Memberships must either be renewed or new members must be found to replace the retiring BOG members. OIST will start to consider selecting graduates of the University as member of BOC.
- The BOG will continue utilizing its full administrative capability, including extensive use of

the BOG Office and its Secretariat. BOG and BOC meetings will be augmented by two-three days of meetings that immediately precede the May and October meetings, to allow the BOG Steering Committee and the BOG and BOC sub-committees the opportunity to pre-discuss important issues. The BOG Steering Committee will continue its non-standard practice of meeting with the Faculty Council during the pre-meetings.

- The CEO/President will continue to 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.
- Auditors will continue to 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. While keeping appropriate independence, Auditors will continue to maintain effective communications with the university management through the Vice Presidents in charge and 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.

(Commence Expansion)

- In July 2015 an external "Peer Review" was conducted to evaluate OIST's progress and expansion plan. The focus of the evaluation was to assess whether OIST Graduate University is on track to become a world-class education and research university capable of generating sustainable development for Okinawa.
- The Peer Review Panel unambiguously confirmed that progress across all key measures of excellence has been outstanding. In these measures, OIST was judged to be on a par with the 25 universities ranked highest by World University Rankings 2014/2015. As a central recommendation the Panel endorsed the general plan of growth suggested in the Framework Document II, aiming at a goal of approximately 100 outstanding research groups, with a proper balance among different fields of research, and a graduate school of a few hundred students, one decade from now, by the mid 2020's. Toward the end of this decade of development, further growth of OIST should be deliberated and planned. Recruitment of new faculty will continue, under the guidance of the Faculty Development Working Group. Laboratory 4 construction will continue.

**Goal:**

OIST Graduate University will continue to build and maintain the administrative organizations by which a world-class international graduate university will be effectively administered. While being autonomous, OIST Graduate University will keep close contact with the Cabinet Office (CAO) to be accountable for its budget execution and business

operations to the Japanese Government.

**Actions:**

- Continue to hold regular meetings with the President/CEO, Vice CEO, and other executives to prepare major decisions, to share information and review the status of business operations. Continue to hold the bi-monthly information-sharing meeting between the Executive and the Faculty Assembly to improve the flow of information between senior management and the Faculty. Continue to hold meetings of the Salary Review Committee as needed.
- Maintain close communication with CAO through the Vice President in charge of governmental relations. Specifically, continue the Quarterly Meeting to share information such as the status of implementation of the Business Plan. In addition, prepare business sketch and budget requests for FY2018 well in advance through close discussion with CAO.
- Continue necessary preparation for university accreditation conducted in 2018 by a MEXT-certified independent accreditation organization.
- Continue to provide a high level of IT service, in alignment with the missions of the University. Specifically, ensure that support processes critical to research and educational productivity are as automated and efficient as possible.
- Continue to ensure that clear and concise documentation and education programs exist to allow users to capitalize on IT resources and services
- Continue to identify, evaluate, design, deploy and maintain infrastructure to support the business of the University, ensuring that infrastructure deployed can scale with the growth of OIST. In particular, work to create a more flexible and secure network environment, in response to growing demand for isolated research networks.
- Continue the replacement of the HR and Finance systems of OIST Graduate University, with the HR portion of the system to commence operation April 1<sup>st</sup> 2017.
- Replace the identity management system of the University, providing more accurate and readily consumable identity and organizational data, enabling increased automation, and enhancing security and access control.
- Continue to develop, or assist in the specification of enterprise systems and services that support the research and administrative activities of the University.
- 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.
- Further standardize the operating environment provided to the administration, simplifying operation while reducing operating costs and increasing security.
- Increase information security through the development of more robust policy, an information security education program, multiple factor authentication and device based access control. Further, enhance existing monitoring capabilities, allowing for the



detection of malicious software or activity which may reduce the integrity of OIST networks or systems.

- 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.

## **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:**

- By holding Resource Allocation Committee, formulate high-level budget allocation and reallocations proposals of the university resources, such as Personnel budget, Operational budget, Equipment budget, and Space. For the purpose of appropriate allocation of the university resources, the proposals will be reviewed by the Executive Committee and then approved by the President/CEO.
- Continue to 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.
- Continue to 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.
- The system of Research Plans has been implemented. All faculty members have been asked to fill out the Research Plans that contain plans for the science, with appropriate summaries as well as requests for resources. Resource requests will cover human, operational expense and instruments and other capital needs. The Research Plan covers five years. Together with the peer reviews, as appropriate, decisions about budget allocations will be made.
- Mid-year review in September and another review in January, at the beginning of the

fourth quarter will be conducted. These are the time when all the research-related budgets are reviewed and adjusted when needed. This fine-tunes the expenditures to optimize spending. The reviews provide opportunities to check and to ensure capital purchases are in line for delivery and acceptance by the end of the Fiscal Year. Continue to properly manage competitive research funds including KAKENHI (Grants-in-Aid for Scientific Research) in accordance with the rules provided to each grant under the Dean of Research while coordinating with the Budget and Accounting Sections.

- Continue to implement the procedures to comply with laws and University policy and rules – the procedure in budget execution includes reviews by the Vice President in charge of compliance when individual budget expenditures exceed a predetermined threshold.
- Conduct internal audit under the Vice President in charge of compliance, 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.
- A committee consisting of external experts will review of contracts concluded by the University in order to ensure proper implementation of tendering. At the same time, the University will seek comments from the committee concerning measures for improvement of procurement procedures. In addition, 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 for each purchase based on the University's policy and rules.
- The RSD Section Leaders organize users' group meeting to discuss with users to consider proposals of common research resources including Research CAPEX.

## **2.3 Efficiency of business operations**

### **Goal:**

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

### **Actions:**

- Support research activities, such as promoting common/shared use of research equipment and tools (See 1.2) and utilizing the methods of unit price contracts, bulk purchase for research materials and reagents, and multi-year contracts.
- Reduce costs by introducing new competitive methods in addition to the existing competitive methods.
- Reduce costs of research equipment maintenance by reviewing the methods of maintenance etc.,
- Increase the number of the available items at the Internal Supply Store for supporting research activities efficiently and effectively.

- 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 regularly from the perspectives of efficiency and simplicity. Continue streamlining the segregation and procedures related to procurement for the future expansion of the University.
- Continue studies on cost reduction through direct purchasing from abroad and the other measures, in order to decrease price differences between Japanese and international markets.
- Collect reference data comparing prices of supplies and equipment etc. in Japan and abroad and use such data in direct negotiation with manufacturers/agents/vendors to improve cost efficiency of purchasing. In addition, mitigate price increases caused by exchange fluctuations.
- 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:**

- Reduction of costs by unit-price contracts and bulk purchase
- Increase of use of the internal supply store
- Ratio of purchase contracts concluded through tendering or other competitive processes (number of contracts and amount)

**Goal:**

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

**Actions:**

- Continue efforts for optimization of use of academic and administration spaces, and research equipment through the regular survey of current spaces in the existing buildings, the close coordination with Research Support Division, and meeting and interviews with the research units to understand their needs.
- Conduct survey of Seaside House Building and optimize the use of space in that facility.
- Optimize efficiency of use of space in the new Marine Station facility.

## **2.4 Personnel management**

**Goal:**

OIST Graduate University will continue to attract, hire and retain qualified employees, who

are essential for the university to achieve its goals sustainably, by providing globally competitive compensation and benefits as well as training opportunities. At the same time, as a corporation operated largely with a subsidy from the Japanese Government, OIST Graduate University will continue to make further efforts to contain overall personnel costs, with strong efforts to keep the employees' salary at a reasonable level consistent with expectations of taxpayers, as well as ensuring accountability in such aspects, by implementing continuous 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 December 24, 2015)" and embodying actions following "On the Salary of Officers and Employees of Special Public Corporations, etc. (by Administrative Reform Promotion Taskforce Secretariats in Cabinet Secretariat on October 7, 2014)."

**Actions:**

(Recruitment)

- Continue to consider the recruiting and hiring of qualified persons for those key positions to administer an international university. In this regards, the optimum number of personnel, the personnel allocation across the organization will be discussed at the Personnel Budget Sub-Committee in order to ensure a highly transparent process. In addition, new EPR system will be used for personnel management.
- Continue to recruit qualified staff necessary to support new or expanded functions as well as research support positions while recognizing and utilizing internal human resources.
- At the same time, manage the headcount within ranges decided in budget and with the use of external funds to prevent the organization from expanding excessively the use of subsidy funds. Take account of the trend among universities and similar institutions in Japan and abroad in order to achieve an efficient and streamlined administrative sector. Smoothly implement the revision of the employee contract, converting fixed-term employees to a new category of non-fixed term employment, in accordance with the revised employment contract laws.
- Continue to enforce the equal opportunity policy to promote diversity at the workplace and to improve the gender balance among all job levels and categories.
- Continue to promote gender equality in all aspects of university management, especially to identify professional development opportunities for female researchers and to support career advancement opportunities for female administrative staff. Start collecting data in order to develop evidence-based strategies to accomplish the goal of the Taskforce. Continue working with Okinawa Prefecture and universities in Okinawa on projects designed to inspire middle/high schoolgirls to study science and consider science-based careers.
- Promote hiring people with disabilities by removing barriers for providing equal working opportunities. Prepare rules on the revision of Act on Employment Promotion etc. of Persons with Disabilities scheduled for 2018.
- Continue to grow the employee service-related function, both for new and current

employees as well as students, such as child-care services, family support, food services, health/medical services and living needs support on basis of feedback from users and changing needs as the campus population grows. Continue to network with schools to increase the opportunities for children's education, especially for middle and high school.

(Compensation)

- Referring to competitiveness factors such as salary levels of national government employees and those of academic institutions in and outside of Japan, especially competitive salary levels of the faculty, 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 October 14, 2016)."
- The Registration Desk, which is now managed by the Director of the Resource Center, will continue to support visiting researchers and invited guests.

(Career development, training and evaluation)

- Continue to develop a career development plan for administrative staff, including provisions for training opportunities, securing replacements, and succession planning.
- Develop new guidelines for training and learning, continue to build on-campus training programs and provide skills-based training necessary for each job class. As appropriate, surveys and interviews will be used to determine training needs.
- Continue to promote preventive measures against sexual harassment, power harassment and other harassment. Proceed with measures to prevent harassment of employees who take childcare and nursing care leave as well. Other stress related matters will also be addressed by implementing "stress check". HR Training will support OIST's focus on wellness and other work-related issues with external and internal offerings.
- In line with OIST's PRP directive, continue to provide a monthly orientation to new incoming staff. Orientation will consist of general orientation about the university, its procedures and Japanese laws along with practical orientation on OIST administrative systems/rules for administrative staff.
- In FY2017 OIST will maintain the number of language courses given to staff and family members. There is a very strong demand for language training and the ability to communicate in English and Japanese is a foundation of the success of the University.
- Continue to manage the annual performance evaluation system with job grade and salary ranges. Enhance annual performance evaluation system as well as ensure fairness and transparency appropriate to the nature of each job category through quarterly review, self-assessment and reviewers' evaluations. Also, reflect the evaluation results in employee salaries, while continuing to ensure quality in evaluation and a reliable process with advice- from the Salary Review Committee. In addition, implement training on a regular basis to provide newly promoted managers as well as newly hired employees, with necessary updates to the process.

**Metrics:**

- Number of employees (by job categories, nationalities, and gender), by seniority
- Ratio of staff in administrative divisions to the total headcounts
- Ratio of labor costs to the total operational budget
- Salary Level of employees (average salary by job category)
- Number of employees taking training programs

**2.5 Compliance****Goal:**

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

**Actions:**

- The Vice President for Administrative Compliance will continue to review the budget execution status and contracts exceeding a predetermined threshold as well as new and revised policies, rules and procedures from a view point of compliance.
- Continue to establish and revise policies, rules and procedures appropriately at the right time in response to revision of relevant laws and regulations or changing situation, and hold the PRP review committee periodically 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.
- Through audits by Auditors and internal audits carried out under the Vice President for Administrative Compliance, 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”.
- Continue to ensure that our research activities are compliant with pertinent regulations and laws.
- To prevent misconduct of research funds, various measures will be taken, including

initiatives for ensuring through 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.

- All OIST researchers and students will be required to take research ethics education in order to promote responsible conduct of research. (See1.2)
- Necessary manuals or procedures will be established so that all researchers and students perform appropriate and effective operations over storage and disclosure of research data in compliance with relevant administrative guidelines. (See1.2)
- Following the diving incident occurred in November 2016, a review panel consisted of 6 external members was established. The findings and report will be made in April 2017 as a target. Based on the findings and report, enforcement of measurement for health and safety at OIST will be made.

## **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:**

- Continue to 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 IAs (Act No. 140 of 2001).
- A new section, Digital Services, with 3 staff members, has been set up within the CPR division. Their role is to maintain OIST's internal and external web functions at the highest level.
- Continue organizing press briefing sessions and press conferences in Okinawa and on the mainland, and generate press visits to OIST, in order to maintain consistently positive press coverage of the Graduate University. With the arrival of the new president, the Media Section would like to seek in FY2019 an OIST tour by science editorial writers from major news media outlets.
- Continue improving the OIST Graduate School Website, publication database, and News Center to facilitate retrieval of information about the OIST Ph.D. program and publications by OIST researchers, and to encourage use of OIST photos, videos and other multimedia.
- Increase effective use of social media such as Facebook, Twitter and YouTube to propagate excitement about the OIST Graduate University.
- Continue to maintain and improve the library of OIST Policies, Rules and Procedures on

the website.

## Chapter 3 Finance

### Goal:

OIST Graduate University will continue to broaden its financial basis strategically by proactively increasing the amount of research grants, donations, and other income sources with the aim of becoming more financially independent in the future.

The University will also examine financial arrangement that would enable a new housing project on or off campus.

### Actions:

#### (Grants)

- Based on the findings from the questionnaires made at the end of FY2016 Kakenhi support program, the following actions will be made.
  - a) Make targeted communications for different groups such as new comers, junior researchers and senior researchers to provide more tailored support.
  - b) Encourage researchers to join Japanese academic society and create network with researchers in other universities.
  - c) Increase the number of external grant facilitators and enhance the coverage of research area.
  - d) Bring forward the schedule of grant workshops from autumn to summer to encourage early preparation of application.
  - e) Modify and implement further incentive programs for all researchers.
- With the leadership of a Manager for Grant pre award, the Grants and Collaborative Research Section of the RSD will continue to 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 manager and the section will collect information about any precursory activities leading to announcements of new grants, such as from advisory boards of MEXT.
- Encourage researchers to apply for private sector and industry-related grants and provide proactive application support such as translation, editing, and budgeting.

#### (Donations)

- OIST will establish a Development Office to manage gift and donation solicitation.
- OIST will establish fundraisers in order to start the fundraising for OIST.

#### (Finance for a new housing project)

- Task Force on Future Housing will examine PFI, PPP or other means to finance a new housing project.



**Metrics:**

- Increase of the number of application for external research grants
- Increase of the number of awarded research grants (number and amount)
- Increase of the number of the external funding to OIST (total amount and breakdown)
- A report on a new housing project (financial portion)

**Chapter 4 Contribution to Self-sustainable Development of Okinawa****Goal:**

Japan's "Basic Policy on Economic and Fiscal Management and Reform 2016" includes measures to promote the development of Okinawa into an "innovation powerhouse" and driving force in stimulating the Japanese economy and advocates support for the formation of a global intellectual and intellectual cluster (R&D cluster) centered on OIST.

OIST established the Technology Development and Innovation Center to reflect the university's commitment to national policy and to its founding objective to contribute to the self-sustaining development of Okinawa, as stipulated in the OIST School Corporation Act of 2010.

The Technology Development and Innovation Center (TDIC) fosters innovation at OIST and in Okinawa by promoting the transfer of discoveries made in the research laboratories to industry for societal and economic and benefit. TDIC proactively supports technology development research, inventions and patents, collaborations with industry, entrepreneurship, and partnerships with public and private organizations that promote innovation in Okinawa.

In FY2017, TDIC will continue to implement the following broad measures:

- (a) Identify, patent, and promote research discoveries
- (b) Expand R&D projects with industry collaborators and diversify funding sources through private-sector and government grants for industry-related research
- (c) Foster the creation of entrepreneurial spin-off companies
- (d) Drive inventions towards commercialization through the Proof of Concept Program
- (e) Support research in areas that offer breakthroughs in technology based on advances in basic research through the R&D Cluster Research Program
- (f) Strengthen regional, national, and international partnerships with innovative public and private organizations with the aim of developing an R&D cluster in Okinawa
- (g) Understand the components and indicators of successful innovation in science and technology and measure their socio-economic impact

Self-sustaining development of Okinawa 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 and

educational events. The university also strives to develop its campus as a center for cultural and community activities.

**Actions:**

(Identify, Patent, and Promote Research Discoveries)

- Continue to foster invention disclosure procedures that complement the basic research mission of OIST.
- Expand international external expert advisors for efficient and strategic management of intellectual property and recommendations on patent filing. Enhance quality of the Invention Evaluation Committee with the expanded pool of external experts.
- Develop standard operating procedures for the implementation and use, including by third parties, of IP management software to administer invention disclosures, patent costs and communications, deadlines, customer relationships, and license negotiations.
- Continue to expand awareness of inventions and protection of intellectual property throughout the university by organizing training courses, seminars, and workshops.

(Expand R&D Projects with Industry Collaborators and Diversify Funding Sources)

- Continue to promote research exchanges and collaborative research with industry by proactively identifying potential partners, building long-term relationships, and hosting company visits and exchanges.
- Continue existing industry-related research projects funded by the Okinawa Prefectural Government (OPG). Proactively pursue new projects that align with the Okinawa Science and Technology Roadmap to support research and diversify funding. In addition, contribute to academic meetings and symposia related to the projects to enhance knowledge and technology transfer.
- Promote technologies and strengthen relationships with industry by participating in well-recognized industrial exhibitions, workshops, and conferences nationally and internationally, such as BIO International Convention, BioJapan, nanotech Japan, and others.
- Expand the diversity of funding sources by encouraging researchers to apply for private-sector and industry-related grants. Provide proactive application support such as translation, editing, and budgeting. Explore new funding sources and maintain a database of opportunities.
- Continue to enhance business development activities by strengthening internal expertise in business and marketing of science and technology.
- Work closely with the General Counsel's Office to develop standard terms and conditions and prepare template agreements for collaborations with industrial partners that promote efficient technology transfer. Build university expertise in negotiating and

administering complex agreements with industry, including non-disclosure agreements, materials transfer agreements, collaborative/sponsored research agreements, licenses, consulting agreements, and MOUs.

(Foster the Creation of Entrepreneurial Spinoff Companies)

- Develop a package of services to support OIST startups, including access to facilities and equipment, assistance with fundraising, and connections to commercialization experts. Develop and implement rules for eligibility, selection, benefits, and review of potential startups.
- Continue the entrepreneurship education workshop, with a focus on supporting the commercialization of technologies in the Proof-of-Concept (POC) Program and other related technology development programs at OIST. Continue to invite students and researchers from other universities in Okinawa to promote entrepreneurship in the prefecture.
- Identify priority industrial sectors where OIST is developing expertise and intellectual property, and strengthen business knowledge of those sectors through analysis of patent portfolio and market research.
- Continue to operate space in Lab 3 Level A as the “Technology Development Labs” (renamed from Technology Transfer Center), to nurture new technologies, proof-of-concept, and R&D cluster research towards commercialization.
- Develop plans, budget, schedule, and operating procedures for an incubator facility proximal to the campus to serve as a Launchpad for OIST startups and a collaboration space for OIST researchers and industry partners. Conduct due diligence on university-based startup incubators around the world to determine best practices.

(Drive Inventions towards Commercialization through the Proof of Concept Program)

- Ensure the advancement of ongoing projects in the Proof of Concept (POC) program by continuing to provide funding, market reports and analysis, hands-on project management, educational courses and events, and access to industry experts. Expand the POC Program to include a Phase II for advanced scale-up of proven technologies.
- Enhance OIST access to expertise in commercialization and technology transfer by expanding the network of industry experts/mentors for the POC Program and related technology development programs. Explore other mechanisms to engage external industry experts to accelerate technology development and commercialization projects.

(Support Research in Areas that Offer Breakthroughs in Technology through the R&D Cluster Research Program)

- The R&D Cluster Research Program will continue to seed the formation of interdisciplinary research teams around technology areas in which OIST is developing expertise and in which being located in Okinawa confers a distinct advantage. Originally established in 7 Research Units, the R&D Cluster Research Program has

evolved to focus on highly innovative research that is designed to develop new concepts, instrumentation, methods, technologies, or ways to produce or analyze data. R&D Cluster Research funding will support current and future projects directed toward the development, application or translation of research. These tightly focused projects will also involve significant interactions with partners outside of OIST, from industry to government to local community groups.

To ensure that the R&D Cluster Research Program is well integrated with other related programs at OIST, it was moved along with the Proof-of-Concept Program, into the R&D Cluster Research Programs Section, a newly created section of the Technology Development and Innovation Center. Mechanisms will continue to be developed to incorporate eligibility, selection, and evaluation procedures into the management and operations of programs in the new section.

(Strengthen Regional, National, and International Partnerships for R&D Cluster Development)

- Coordinate interactions with institutions in Okinawa and nationally that encourage technology transfer and R&D cluster development, such as the Okinawa University Consortium, Science and Technology Promotion Center, Industry Promotion Center, Okinawa Development Finance Corporation, National Institute of Advanced Industrial Science and Technology (AIST), Japan Science and Technology Agency (JST), Regional Economy Vitalization Corporation of Japan (REVIC), related roundtables, and others.
- Align plans for the OIST incubator facility with the broader strategy for R&D cluster development, ensuring that the incubator is equipped and operated to foster collaboration and seed an innovation ecosystem centered around OIST. Host global experts in incubator operations to advise on strategy to accelerate entrepreneurial activity in the region.
- Work closely with the Cabinet Office, Okinawa Prefectural Government, and other key entities on specific actions to establish an R&D cluster in Okinawa, including supporting promotion activities, participating in prefectural strategic planning committees, and connecting with the international community to share and implement best practices.
- Organize international seminars, workshops, and symposia in order to consider the role of innovation in ensuring socio-economic prosperity, to tap into the global community of R&D cluster experts, and to explore technology areas of the future that can be seeded in Okinawa.

(Understand the components of successful innovation and measure their impact)

- Establish the government, academic, and industrial partnerships necessary to advance an analysis of innovation indicators at OIST and in Okinawa. Leverage this analysis to inform OIST strategy for R&D cluster development.

Work to develop methods that produce and aggregate statistical data that can be used

to develop indicators of technological innovation in Okinawa and analyze their socio-economic impact.

(Networking with local institutions and communities)

- Continue exchange programs by holding science lectures with core medical institutions such as Chubu Hospital and Nanbu Medical Center and Medical Department of the University of the Ryukyus.
- Support large number of visitors (including companies etc.) to the campus.
- Hold the 8th OIST Science Festival (Open Campus Day) at the OIST Campus. Promote the involvement by school students and local residents.
- Continue to invite schoolchildren in Okinawa to the OIST campus to give them the opportunities to see and learn about cutting-edge research facilities, with the aim of increasing their interests in academic and professional careers in science and technology. Continue the campus visit program for all senior high schools in Okinawa in close collaboration with the Okinawa Board of Education and individual schools. Also, invite the elementary and junior high school students.
- Continue and strengthen visits program for mainland Super Science High Schools, which provide advanced science and technology education programs, in collaboration with OPG and tourism organizations.
- OIST will maintain as series of talks to all levels of schoolchildren given by faculty and other well-known scientific figures.
- Organize the 8th Onna/OIST Children's School of Science in collaboration with Onna Village.
- Organize a series of cultural events such as concerts and exhibitions in both the Auditorium and other facilities, to attract the local population to the University.
- Assist local schools to enhance children's English ability and cross-cultural understanding by participating in meetings on English education hosted by local boards of education and facilitating OIST community's contribution to English programs at local schools.

(Other matters concerning Okinawa development)

- Continue to employ talented people from Okinawa wherever possible.
- As we participated such as Okinawa Sangyo Matsuri, Okinawa MICE Contents Trade Show and others, we will continue to have OIST representation at major cultural, industrial or academic events in Okinawa. OIST will continue to work with the U.S. Consulate and the OPG to organize the science event for the high school students' research for enterprise, "SCORE," which is becoming one of the major science education competitions on the island.
- Establish OIST FAN Club and provide the member citizens information of OIST, chance to join the events, and help OIST staff.

- Continue internship program with Univ. of the Ryukyus and other universities in Okinawa, and provide the chance to work at CPR, OIST and promote the exchange with OIST students.
- Continue the science classes in remote islands of Okinawa with the help of OIST young researchers and students.
- Increase the number of externally organized international conferences and workshops at the OIST venue in collaboration with OPG and the Okinawa Convention and Visitors Bureau.

#### **Metrics:**

- Number of official contacts with companies, with the view of future collaborations.
- Number of collaborative projects with companies (collaboration agreements, joint research projects, commercialization of intellectual property, etc.).
- OIST intellectual property (number of invention disclosures, patents filed and awarded, etc.).
- Number of symposiums, meetings, workshops organized or hosted by OIST around topics related to innovation, technology development and R&D cluster development.
- Number of participants in events, courses, symposia, meetings, workshops, and seminars on topics related to innovation, technology development, and R&D cluster development
- Number of technology development research projects supported (Proof-of-Concept, R&D Cluster Research, etc.)
- Number of visits and visitors (including visitors on the Open Campus Day)
- Number of local students who visited the campus
- Number of lectures and talks for local students
- Number of employees from Okinawa (researchers and staff)
- Number of externally organized international conferences and workshops and number of the participants at the OIST venue.

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

### **5.1 Campus Development**

#### **Goal:**

OIST Graduate University will continue to develop the campus as planned.

#### **Actions:**

- Continue study and updating of 2014 Master Plan based on phased expansion of OIST.
- Commence feasibility study and programming of future lab buildings.
- Continue the construction of Lab 4.
- Continue feasibility study and cost analysis of infrastructure and civil work for future on-campus housing and R&D Zone.
- Continue planning and concept studies of future on-campus housing.
- Investigate and finalize budgeting plans for future on-campus housing.
- Continue planning, concept design, and cost studies for development of R&D Zone including the research incubator facilities.
- Operate and maintain the completed campus buildings, facilities.
- Based on the Act for Promoting Proper Tendering and Contracting for Public Works (Act No. 127 of 2000), continue to promote disclosure 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:

Continue to facilitate the development of the University community that includes staff, students, and their families, which is an important factor for the success of the University operation. OIST Graduate University will continue to enhance the education and childcare environment available to OIST employees through the Resource Center and the Child Development Center (CDC).

The University will also discuss and plan new housing on/off campus for increasing number of staff, students, and their families.

### Actions:

(Developing the University Community)

- Continue to take measures to enhance wellbeing of the OIST community including staff and their families, such as by programs through the Resource Center and Ganjuu Wellbeing Service, by enhancing the internal communication site, and by providing increased information regarding the life in Okinawa, The University will continue its strong support for such initiatives and the events.
- As the university grows the number of clubs and activities grow. Stronger oversight is needed to ensure that there are no contraventions of university rules and regulations. In 2017 oversight of club activities will be transferred to the Resource Center.
- The Registration Desk will continue to provide coming in-boarding services for visiting researchers and invited guests by registering and integrating them into the database. This function is now run by the Resource Center, which brings additional administrative and web-based strength.
- The Task Force on Future Housing will discuss and plan new housing on/off campus.

(Education and Childcare Services for OIST Family)

- Continue to provide high quality and fully bilingual Preschool and Afterschool/Holiday program for OIST families with appropriate user fees through the CDC and Afterschool classroom. The CDC Governing Board will continue to meet quarterly with separate meetings of the CDC Finance Committee, which will keep a strict eye on the budget of the school. Enrollment in these programs is anticipated to continue its steady growth. Complete the construction project that is expanding the size of the CDC and incorporating the Afterschool program into the same physical complex.
- Continue the efforts to improve the educational environment for children of employees and students by increasing the opportunities of taking classes in English, in collaboration with OPG, Onna-son and other surrounding communities.
- It offers a very valid educational opportunity to OIST staff members' children such as the international program at the Onna Elementary School.
- In FY2017 OIST will maintain the number of language courses given to staff and family members. There is a very strong demand for language training and the ability to communicate in English and Japanese is a foundation of the success of the University. (Repeated. See 2.4)

(Student Support)

- Establish student support services and general welfare activities to promote a positive social and psychological environment for students. (See 1.1)
- Continue efforts in improvement of opportunities for sport, recreation, and social activities for the students and other members of OIST community.

### **5.3 Safety and Environment Protection**

#### **Goal:**

OIST Graduate University will take necessary measures to control risks, prevent disasters and protect the safety of employees, students and visitors.

#### **Actions:**

- Continue risk management planning.
- Continue safety training for employees and students.
- Enhance the sustainability of the campus under natural disasters in collaboration with Onna-son, and offer the campus to local residents for evacuation under disasters.

#### **Goal:**

OIST Graduate University will conduct its business in an environmentally friendly manner.

#### **Actions:**

- Continue promoting use of recyclable products.



- Continue to 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.