

May 22, 2020

To: Board of Governors and Board of Councilors,
Okinawa Institute of Science and Technology School Corporation

From: 
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FY 2019 Audit Report

This document is to report the results of our periodical independent audit, regarding the business and financial operation during the fiscal year of 2019, at the Okinawa Institute of Science and Technology School Corporation. The audit was conducted in accordance with Section 3, Article 15 of the Okinawa Institute of Science and Technology School Corporation Bylaw.

1. Methods of Audit

- (1) For the operational audit, we attended the Board of Governors and Board of Councilors meetings, and conducted interviews with the President and other executive members regarding the School Corporation's business execution. We also reviewed important kessai (decision-making) documents and examined the adequacy of the business, in cooperation with the Internal Audit Section.
- (2) For the audit of financial status, we confirmed the accuracy of the statements with the accounting firm, Ernst & Young Shin Nihon LLC.

2. Conclusion

- (1) We did not find any significant violation of laws and regulations, or bylaws, nor any act of misconduct or fraud pertaining to the School Corporation's business administration and its assets.
- (2) We verify that the business report accurately reflects the condition of the School Corporation's business operation.
- (3) We also verify that the financial statements match the contents of the accounting records, and that the School Corporation's status of assets, gain and loss, are properly shown in compliance with laws and the Okinawa Institute of Science and Technology Accounting Standard. The Financial Closing Report was prepared according to the budget classification and properly reflected the status of closing.

Please find attached FY 2019 Auditors' Audit results with our written opinions, which we recognize as necessary for improvement, for the further advancement of the University.

FY 2019 Auditors' Audit Result and Opinion

1. Main Focus Points of the Auditors' Audit

In fiscal year (FY) 2019, in advance of the 10th year review, both the Cabinet Office and the Okinawa Institute of Science and Technology Graduate University (OIST) continued preparatory works in accordance with the enforcement of the Supplementary Provision Article 14 of the Okinawa Institute of Science and Technology Graduate School Corporation Act (enforced on November 1, 2011). Meanwhile, due to a ranking by Springer Nature in June 2019, OIST garnered acclaim by placing first in Japan and ninth in the world for the rate of high quality papers compared to the number of papers published by research institutes in the field of natural science. FY 2019 was also the year in which OIST Strategic Plan 2020-2030 was formulated. In addition, due to the partial revision of the Private School Law (enforced on April 1, 2020) in May 2019, further stipulations were needed regarding the clarification of duties and responsibilities of school officers, formulation of budget and business plan, mid-term plan for business, and preparation on disclosure of financial documents. In response, OIST conducted the revision of OIST bylaws and management regulations of the Board of Governors, and formulation of the OIST mid-term plan 2020-2030.

The following two are the major focal points of the Auditors' Audit Report in FY 2019.

- 1) Based on the Guidelines for Auditors' Audit (see the attachment) prepared in September 2017, we focused on the implementation status of OIST's disaster prevention as well as safety and health management, etc., which are considered to be high-risk areas in the immediate future.
- 2) We also paid attention to how efforts were being made to strengthen governance and management foundations, to create a respectful workplace, to improve business efficiency, and to disseminate OIST's achievement externally, etc.

2. Disaster Prevention, Safety and Health Management/BCP Operation and Risk Management

In response to the President's message to all OIST members entitled, "OIST Diving Incident - the Way Forward" (dated July 10, 2017 and published the next day on the official OIST website), the FY 2019 Auditors' Audit inspected how vigorously specific efforts initiated in FY 2017 have built a university culture for disaster prevention as well as health and safety management. In addition, the operation of the Business Continuity Plan (BCP) and the handling of risk management were inspected. Confirmed details are summarized below.

【Disaster Prevention, Safety and Health Management】

- Efforts are continuously being made to establish a safety culture lead by the Office of the Research Support Division (RSD).
- Since FY 2019, a monitoring and review process has been introduced to verify the effectiveness of the trainings conducted by faculty and students, and a workplace tour by the Health and Safety Committee is being conducted. These procedures are to ensure the capabilities of all the faculty members and students in not only complying with laws and regulations, but also recognizing and dealing appropriately with potential emergencies such as fires, earthquakes, and tsunamis, and securing safety before and during the duration of any laboratory experiment by perceiving potential accidents that may occur in the laboratory. This process has been in operation since September 2019 and is completed for the Lab 1 building as of March 31, 2020. Inspection results indicate that 13 out of 20 Units/Sections have improved in all items designated by the Emergency Response Coordinator (ERC). According to the ERC, a follow-up inspection is currently underway to improve the status of the remaining Units/Sections.
- In the report on the earthquake countermeasure survey conducted April 21-24, 2014 (issued in March 2015), there was a total of 1,113 locations where additional work was needed to fix equipment to the floors or walls, including large research equipment (such as refrigerators and freezers), machine tools, large office equipment, large shelves, etc. Out of these locations, 90 were fixed in FY 2016, 267 in FY 2017, 410 in FY 2018, and the remaining 346 locations were all addressed in FY 2019. Measures have been taken as needed for the same type of items that have been added since the time of the 2014 survey. But for 16 unprocessed items that still remain, appropriate measures are to be taken in the future.
- Fire drills were held at the OIST Marine Science Station (OMSS) on December 4, 2019 and at the Village Center on December 11, 2019. A comprehensive drill was held on December 12, 2019 on campus and also at the Seaside House on March 10, 2020. In addition, the OIST Child Development Center (CDC) provides fire and earthquake response drills alternately every month.
- In July 2019 at the Graduate School (GS), all the staff members confirmed the evacuation drill routes, and in September 2019, each staff member's role was determined for disaster prevention/earthquake countermeasures with the specialized roles/duties, including how to properly use a fire extinguisher.
- The implementation of Safety Improvement Month, provisions of the Research Safety Grant based on the Suzuki Shohei Research Safety Fund, and efforts to improve safety trainings were carried out.

- OIST has multiple internet lines to prepare for failures and disasters, and since the network consists of a number of network devices and multiple wiring routes, OIST has a policy to conduct disaster recovery tests at each major network connection point. On June 18, 2019, assuming a suspension of the main Internet line, a switch-over test between the internet line and the core business system (HEART) was carried out. In addition, on October 19, 2019, a test to switch to the backup firewall was conducted assuming a case where the main firewall is suspended. On February 15, 2020, a redundancy test was conducted on the network at newly constructed Lab 4. On February 22, a redundancy test was conducted on the core part of the campus and the newly constructed wireless LAN. The findings from these disaster recovery tests were: a) monitoring the soundness of the network is an important factor in quick disaster recovery, b) it is necessary to pay attention to the status of the external Internet line, and c) many disaster recovery switches are automatic; therefore, periodic switch-over tests are important as the technicians need to know how switch-overs are implemented.

【Operations of BCP】

- In FY 2019, to address earthquake (including tsunami), one of the seven BCPs formulated in FY 2018, out of the seven mobile task force teams, five teams (facility, health and safety, disaster victim support, information, IT), except for the rescue team that conducted training in FY 2018 and the emergency response team, carried out training to improve their skills. In addition, training for cases of fire and bomb threat were implemented.
- Regarding pandemic measures against novel coronavirus disease (COVID-19), etc., OIST decided on January 23, 2020 to stop any business trip to Wuhan in the Hubei Province of China, where a new coronavirus disease was reported in December 2019, followed by a rapid increase of the number of infected people in China in January 2020. In response to the establishment of the Task Force of the Japanese government on January 30, a pandemic task force was also set up at OIST, and on February 1, 2020, the ban on business trip to China was announced. Subsequently, while collecting information of infection status in Japan and overseas, preventive measures were taken by employees and students against the new coronavirus disease, such as washing hands, avoiding contacts with other people, avoiding the three types of close contacts that could cause clusters (groups of infected people). In addition, due to the fact that infections were spread in foreign countries including Europe and the United States and in Japan excluding Okinawa, business trips abroad and other areas of Japan were prohibited starting March 27, unless special written permission was given.

【Risk Management】

- During FY 2019, Risk Management Committee meetings were held in April and October 2019 and January 2020. The Risk Management Committee is reviewing major risks (25

risks are currently registered along with the diminishing risk measures) affecting the entire OIST campus in light of environmental changes. The Chief Operating Officer (COO) has instructed each Division/Office to consider thoroughly its specific risks to create a risk registry.

Disaster prevention, health and safety management, and the Business Continuity Plan (BCP), etc. can be regarded as OIST's largest short-term risks. In FY 2018, efforts for improvement were acknowledged, including the implementation of disaster prevention drills and comprehensive drills as well as the BCP formulation. In FY 2019, efforts at each Division/Office were promoted based on the overall plan for disaster countermeasures and the BCP, etc., and at present, OIST is at the stage of identifying specific risks and formulation of diminishing measures at the Division/Office level. Going forward, it is important that each Division/Office can conduct education and trainings with appropriate consideration for its unique work environment and be prepared in case of emergency. Also, consideration must be given to visitors as well as neighboring residents who will evacuate to the OIST campus during a disaster, while possible measures against suspicious persons should be considered at the same time.

In another case, after the World Heritage Shuri Castle fire on October 31, 2019, Mr. Takatsune Furugen, the Managing Director of Okinawa Churashima Foundation, who has been entrusted with the management and operation of Shuri Castle, disclosed to reporters at the press conference on December 17, 2019 that he had never conducted any training for a fire at night, and stated, "That was one point we need to reflect on and we should review our fire prevention and extinguishing measures."

On the night of April 17, 2020, there was an incident at OIST in which spontaneously ignited substance due to mishandling of experimental waste had to be extinguished. In this case, the researchers quickly responded with a fire extinguisher, and no fire resulted. It is suggested that, in the future, fire prevention and extinguishing measures at night and on holidays should be inspected again and thorough educational trainings to recognize potential risk hazards prior to any experiment should be conducted to prevent any escalation to a real risk.

3. A Respectful Workplace and Controlling Harassment, etc.

The following are examples of efforts to create a respectful work environment. In addition, the Auditors also confirmed work-life balance, harassment control mechanism with some examples of support cases, etc.

【For a Respectful Workplace】

- Communication and Public Relations Division (CPR) stated, “The current Vice President, appointed in September 2019, has adopted an open-door policy to facilitate clearer and more visible communication with all CPR staff. As a result, there is growing awareness of individual priorities, challenges and personal working styles, as well as regular team lunches and social events such as karaoke and quiz event.”
- The University Community Services Division (UCS) stated, “We believe it is important to reach goals effectively rather than spend more time at work. Managers encourage staff members to come up with proposals for solutions that can help alleviate their concerns and improve their work environment. Managers provide regular feedback to staff members to make them feel valued. During the division meeting, we emphasize how our services provided by UCS could be linked with the broader mission of OIST.”
- Information Technology Division (IT) and Chief Information Officer (CIO) Office stated, “We work with two or more members on every task to ensure flexibility so that staff members can be encouraged to take leaves. We also believe that the openness and credibility of the work environment has a significant impact on individual performance, and IT maintains an open environment that enables working with the Scientific Computing and Data Analysis Section (SCDA). In addition, we encourage everyone to express their opinions and concerns.”
- Financial Management Division (FM) stated, “In order to keep the openness in the workplace and in addition to keeping the job rotation practices between the sections, renewed allocation of personnel within the section were carried out.”
- Human Resource Division (HR) stated, “The number of employees decreased from FY 2018 to the first half of FY 2019 and replenishment was initially difficult. On top of that, since the middle of FY 2019, three additional members have taken childcare leave, which raised concerns of the impact on HR workload. Therefore, within HR, a backup system has been established incorporating job rotation considering the individual member’s preference, experience, and skills. In addition, the Vice President (VP) HR conducted one-on-one interviews with all the HR staff members and informed them that she would offer advice regarding their course of career and operation.”
- The Graduate School (GS) stated, “We promote an organizational culture in which each staff member is actively involved, while enhancing support for staff members. At the beginning of FY 2019, a division retreat was held with all the staff members’ participation in order to deepen our mutual understanding of the changes accompanying the reorganization of the division. In addition, in reorganizing the FY 2020 Business Plan based on the OIST Strategic Plan, a management retreat incorporating the SWOT analysis (by

Dean of GS, Vice Dean of GS, section managers, and team leaders) was also held several times. Furthermore, the skip-level meetings were resumed between the Dean/Vice Dean and the staff in each section, not including the line managers.”

- Research Support Division stated, “Previously, one administrative staff member was assigned to each support section so that the work could not be shared. Therefore, all the know-how could be lost when the administrative staff member retires. From FY 2019, ‘the buddy system’ was created with two administrative staff members, and these two staff members are responsible for five sections as the ‘RSD administrative group.’ With these measures, there was an effect on workforce reduction, and staff members are now able to take a long leave without halting any administrative work.”
- In the Faculty Affairs Office (FAO), “By streamlining the weekly internal meetings and utilizing cloud-based tools such as SharePoint, communication with the other sections and the external committee members has become smoother.”
- Leadership and management training in November 2019 and a workshop entitled “Building Nurturing Environments for High Performing Research Teams” in February 2020 were held for faculty. In addition, the FAO also held orientation sessions for new faculty members and provided information on lab management.
- In February 2020, the FAO created “The Guidelines for Units,” describing the best practice for improving research environment. It was uploaded on the FAO website and is available to all researchers including faculty members.

【Work-life Balance】

- Ganjuu Wellbeing Service and the Health Center “held monthly meetings to discuss their care services. They also collaborated on the implementation of the stress check program that OIST started in the fall of 2016. In FY 2019, the scope of service was expanded to students for the first time in addition to employees. The Health Center conducted a stress check, followed up by Ganjuu Wellbeing Service for high-risk students.”
- The Resource Center uses Microsoft Teams to frequently share information regarding housing/off-boarding/returning-home with the Relocation Services Team in the HR Division. This is a new effort to facilitate information sharing in a timely manner.
- Rules and various procedures for the activities of OIST clubs have been established. Throughout this process, continuous support has been provided and exchanges among the clubs has been increased and enhanced.
- A survey on educational needs that sought the opinions from the entire OIST community was conducted March 11-20, 2019. The survey asked questions regarding what kind of effects childcare services and school-age education could have on OIST employment and academic careers. The survey also requested feedback on the current preschool and after

school programs as well as how much childcare and educational needs were fulfilled, what needs were not addressed, and to what degree, etc.

- In FY 2019, a school information website was established on school options for dependent children, and information such as a list of schools in Okinawa, the location of each school, and frequently asked questions (FAQ) were provided.

【Controlling Harassment, etc.】

- At OIST, if an employee or a student considers that they have been subject to sexual harassment, abuse of authority, or any other acts that violate the “Basic Policy for a Respectable Workplace” or if they witness such an act, they may report and/or consult about the matter with the confidential external Respectful Workplace and Anti-Harassment hotline (RWAH hotline), the Vice President for Human Resources, or the Dean of the Graduate School.
- In order to respond promptly while maintaining a neutral position and perspective, the Graduate School has appointed an Academic Affairs Consultation Coordinator in connection with the Dean of the Graduate School and provides consultations with students (as well as with faculty members if needed). At the time of consultation, the existing services (Ganjuu Wellbeing Service, etc.) or relevant PRP paragraphs are presented, and during the course of the consultation, students are encouraged to formulate their thoughts and solve the issue autonomously.
- The FAO stated, “Harassment is a concern we take seriously in the Faculty Affairs Office. Resolving harassment disputes is already too late; it is better to prevent problems from happening in the first place. In FY 2019, a survey on research lab environment was conducted and responded to by students and researchers. Based on the survey results, eight units that had multiple complaints were selected. The Provost and the DFA have been visiting these units to meet with unit members and convey our concerns and inform them of the options available to them in case there are such issues. We believe making researchers aware of options and also educating them this way when they join OIST, including faculty members, is the best approach for prevention. We have also created a document entitled ‘Guidelines for Units’ that all unit members including PIs can use as a reference.”
- On June 1, 2019, the regulation for the University Ombudsperson came into effect, and on November 8 of the same year, through an email by VPCPR to all OIST members, announcement was made regarding the opening of the OIST Ombuds Office and the appointment of Professor Jeff Wickens as the Ombudsperson. The Ombudsperson, in consideration of confidentiality, shall provide neutral, independent support, along with informal hearing of the situation, to provide information and options for solutions to OIST employees and students who have any concerns regarding their work or study at the

University.

- VPHR stated, “We received reports and informal consultations from RWAH, for which we conducted investigation of the division to implement solutions. As for formal complaints, we conducted the fact-finding investigation by which we reached the solution.”
- Regarding PRP 23, “Investigation and Determination of Misconduct & Whistleblower Protection”, OIST intends to continuously evaluate and improve this mechanism.

Regarding the situation at OIST, the official website article, “Response to claims of discontent and harassment at OIST as reported in the press” (dated April 2, 2019), stated that “OIST intends to initiate an independent survey of workplace environment,” and the said survey was conducted in February 2020 in the form of “OIST Staff Engagement Survey”(Described later). According to VPHR, based on this survey result and analysis, necessary countermeasures will be considered. Further efforts to develop respectful workplace and harassment prevention, etc., are expected to be promoted in the future.

4. Reinforcing Top Executive Governance and Management Foundation

At OIST, since FY 2018, the Chief Operating Officer (COO) and the Provost have been set up to integrate and realign the operation of each administrative division and research/education division. A survey was conducted on all VPs and Deans regarding their acceptance, evaluation, and comments on this organizational reform. In addition, the acquisition of external funding was also confirmed. Confirmed details are summarized below.

【Reinforcing Top Executive Governance, Correcting Vertical Structure, and Ensuring Timeliness】

- There are regular meetings i.e. Upper Management Meeting (UMM) that include the President, the Executive Vice President, the Provost, and COO. These allow information about the current state of OIST and any potential issues to be shared more effectively, thus providing a mechanism that enables solutions to be considered; accordingly, OIST top executive governance has been strengthened.
- The Executive Vice President stated, “Coordination of information flow is improved. Both COO and the Provost handle many topics that no longer need to go to the Executive Committee meeting, which improves efficiency.”
- The Provost stated, “Decision-making has become more prompt. It would be desirable to be able to review the responsibilities and, the regulation of decision-making authorization, and transfer the authorization so that the decision-making process can be further improved by holding UMM.”

- COO stated, “In a sense, one layer has been added to the decision-making process, which reduces the direct communication between each executive and the President, but it became possible to arrange in advance to seek the decision of the President/CEO after the overall coordination, and as a result, the overall efficiency seems to be improved.”
- VPCPR stated, “Responsibilities between academic leadership and administrative leadership have been clarified, and the creation of these positions will enable the President to deliver high-level externally focused operations, thus allocating more time for the President to manage and focus on issues that are critical for OIST's long-term success. The Provost has a more clearly defined jurisdiction of ownership on areas of research and education at the Graduate University, managing science-related resources and academic services supported by a team of highly qualified professional staff. COO successfully delegates to the Vice President, who is responsible for basic professional services such as HR and Financial Management, to improve organizational structure and quality of service, by which significant improvements have been made possible.”
- The CIO stated, “The establishment of this layer in the organization allowed for a more hierarchical and streamlined structure. This has made the development of automated systems and processes easier.”
- VPFM stated, “One of the points improved is that the Provost has a system to control the research budget as a lump sum, which enables flexible budget allocation that meets the needs of researchers.”
- VPHR stated regarding improved points, “it is helpful in solving problems that require coordination throughout OIST, such as PEREX management and engagement survey.” Regarding points which need further improvement, “Currently, the PEREX increase is mainly allocated for recruiting faculty and researchers under the jurisdiction of the Provost, but the personnel increase of researchers directly and indirectly affects various aspects such as the administration of human resources (recruitment, contract renewal, transfer support, labor management, etc.) and CDC belonging to UCS, etc. Sharing such risks and restrictions in advance and working closely together will prevent rework and labor problems in advance.”
- The Dean of GS stated, “With the establishment of the Provost, coordination among the three Deans (Dean of GS, Dean of Research, Dean of Faculty Affairs) has been successful, including cooperation with RIKEN, etc.”
- The Dean of Research stated, “Integration and consistency are being secured in academic activities.”

【Obtaining External Funding】

- Regarding external funding, a gap analysis of existing goals and actual results was

conducted, and a new plan with the defined targets until FY 2021, titled “OIST Medium-Term Strategy for External Funding,” was prepared on April 23, 2018.

- The actual acquisition of external funds is 855 million yen, while the predicted figure for FY 2019 was 974 million yen as stated in “OIST Medium-Term Strategy for External Funding (April 2018).”
- Grants and Research Collaborations Section stated, “To build partnerships with other universities in anticipation of joint applications for future large-scale research grants, excellent points of OIST have been introduced at every opportunity. As a result, in FY 2019, OIST was a collaborating organization when the Kyoto University was selected as the Ministry of Education, Culture, Sports, Science and Technology's, ‘Strategic Professional Development Program for Young Researchers.’ Also, in FY 2019, aiming at applying for Moonshot-type research and development system of the Cabinet Office, OIST conducted discussions with the domestic universities and research institutes to apply for public offering.”

With the introduction of the COO and the Provost in April 2018, a mechanism has been established to deal with issues in areas that have been delayed due to the previous vertically divided structure, and a smoother coordination across the divisions has been achieved. In the future, through utilizing this mechanism to reinforce top management and to clarify the allocation of responsibility etc., actions on specific issues can be more promptly supported.

In addition, OIST needs to continue its efforts for the acquisition of external funds in accordance with the “OIST Medium-Term Strategy for External Funding.”

5. Hiring and Working Hour Management, Human Resource Development and Engagement, etc.

As OIST continues to expand its scale and the volume of business is expected to increase, it is becoming increasingly necessary to secure and retain excellent human resources. In addition, the future expansion of OIST will necessitate the strengthening of management and there is an urgent need to improve middle management capabilities (job sharing, task progress management, subordinates' working hours e.g. overtime management, etc.) Under such circumstances, if the HR relationship (engagement) such as “increasing individual growth and job satisfaction enhances the value of the organization” and “increasing organizational growth enhances individual growth and job satisfaction” are able to be built, the outflow of personnel would be minimized, resulting in the improvement of business performance. Confirmed details are summarized below.

【Hiring and Working Hour Management】

- Visualization and reductions of overtime work were carried out, and overtime work was drastically decreased, especially since January 2018, due to the thorough management of work time. When the Auditors checked whether this initial trend continued or not, they found that overtime work was reduced by 39.8% throughout the entire FY 2018, and the amount of overtime work in FY 2019 leveled off in the course of business expansion while proper work hour management continues to be disseminated.
- In FY 2019, the system was modified so that supervisors can see paid leaves and special leaves in a list. Also, by encouraging the planned provision of leaves throughout the Units/Sections, at least five days of paid vacations may be obtained as obligatory acquisition.
- Regarding “equal pay for equal work” based on the work style reform-related bill that will come into effect in FY 2020, OIST will consider summer leave and sick leave for temporary employees.
- CPR stated, “Discouragement on overtime work (overtime order can be given only when necessary) has prevailed. Also, we worked to limit the amount of work by hiring temporary staff during busy periods. In addition, the team has been reminded to minimize ‘cc’ in emails and to focus work to the specific persons responsible. OIST generates a high quantity of internal email but often this is unnecessary and can reduce efficiency and focus. In addition, we are aware of the concept of ‘core hours’ and are working to prevent constant overwork.”
- Financial Management Division stated, “In each section, we recognize that there are times with unavoidable increase in overtime hours such as to meet a closing date, but there is a tendency of decrease of overtime work in other cases. The managers with heavy duty section adjust their workloads, and we collect opinions and share any issue at an early stage in regular meetings, monitoring workloads through observation on changes of overtime hours to readjust the workloads promptly.”
- Buildings and Facilities Management Division (BFM) stated: “Within our Division, the overtime hour rate is highest among the members in Budget and Contract Team and is the highest during the year end period. Team members are not supposed to work separately; instead, they are instructed to divide their operations by category rather than having different operations with different persons in charge. In addition, members must predict overtime hours and report the overtime schedule early in the day, which are helpful measures in reducing overtime.”
- GS stated, “In addition to verifying appropriateness of the work assignment for each staff member, the staff allocation was changed as necessary to reduce the workload. In addition, a

project management system was introduced to improve work efficiency. Furthermore, we are interviewing employees who often carry out overtime work and discuss the causes and countermeasures. Although there are fluctuation depending on the periods of the year, we try to continue reducing overtime.”

- Although not introduced at OIST yet, there is a flexible way of working called “Telework,” using information and communication technology (ICT), which can be utilized regardless of place or time, making the work style more flexible. When the Auditors examined the possibility of introducing Telework in FY 2018 Auditors’ Audit, it was discovered that there were some tasks that could be completed using Telework in CPR and GS, etc. However, HR was not considering the introduction of Telework at that stage. In the FY 2019 Auditors’ Audit, the need to work from home increased due to the global epidemic of COVID-19, and the Auditors continued to investigate the possibility of introducing telework. Problems arise when defining types of work compatible for working from home, differentiating scopes of duties, improving the environment for working from home such as securing a laptop computer, the mechanism of performance evaluation management, security issues, awareness for reform of the target person and the manager, etc., which were recognized as issues by HR Division for further consideration.

【Human Resource Development and Engagement, etc.】

- As in FY 2018, mandatory trainings were informed and encouraged by managers. As a result, the participation rate of the personal information protection training that was newly added in FY 2019 was 95%, and the participation rate of the information security training added in FY 2018 increased from 85% in the previous year to 95%. The attendance rates for trainings on the proper use of public funds, Japanese law, and sexual harassment prevention improved to 96%.
- The training (OIST Management Forum) that started in FY 2017 to help middle and upper management improve their management skills was not held in FY 2019 due to the absence of the person in charge.
- Regarding the improvement of training, it is said that HR Division plans to revise the required training in cooperation with each division in charge, and if the personnel can be secured, the management training is scheduled to start as early as May 2020.
- Buildings and Facilities Management Division stated, “Positions within the Division such as facility management, construction management, housing management and lab fit-outs are highly specialized and cannot be transferred to different job types within OIST. The focus is on promoting the staff capability and enhancing their professional abilities. With regard to promotion, OIST's current personnel evaluation system based on three categorizations (Excellent, Good, and Needs-Improvement) makes it extremely difficult to promote

qualified staff.”

- GS stated, “In terms of staff development, managers hold individual meetings with staff members in order to understand and support staff member's motivation and needs. We are giving seminars on mental health by Ganjuu Wellbeing Service to support all our staff.”
- Technology Development and Innovation Center (TDIC) stated, “TDIC requires staff to allocate 5% of their working hours for their professional development. Also, middle management (section managers) are encouraged to strengthen their management skills through participation in internal and external seminars/workshops, and a budget for staff professional development is also secured.”
- In February 2020, with the aim of further strengthening OIST’s assets such as its culture and organizational functions, and locating areas for improvement, “OIST Staff Engagement Survey” was conducted by an external consultation company. It is expected that the aggregated results and analysis of the survey will be utilized as materials for shaping the future of OIST.

In previous audits, the Auditors have raised various points and stated their opinions on improving work hour management, reducing overtime work, improving employees' motivation and skill enhancement, etc. The Auditors commend the reduction of overtime work that has continued in FY 2019 through the reinforcement of work time management. At the same time, business will continue to expand in FY 2020 while growth in personnel budget will be limited, and accordingly, further efforts to increase efficiency will be deemed necessary at OIST. As for training, management training was not conducted throughout FY 2019. This training originally started at the end of 2017 when the necessity was recognized, and early resumption is deemed necessary.

In addition, the Auditors would like to make some remarks regarding “work from home” that started at OIST during the spread of the new coronavirus.

In the e-mail entitled “COVID-19 UPDATE FROM THE PRESIDENT” from the President of OIST to all OIST members on April 8, 2020, it was stated, “We will sustain our administrative services through a mix of agreed upon on-campus and ‘home office working,’” announcing that “home office working” was to be implemented extensively for two weeks from Monday, April 13, 2020, and many staff members working from home would strengthen necessary social distance measures. This “home office working” was based on the provisions of OIST's employment regulations Article 72 (Measures in the event of an emergency and disaster), “Efforts to minimize damage through cooperation,” and BCP compliance. The introduction of the telework system at OIST has not yet begun, but the Auditors expect that the introduction of the telework system will proceed in the future by utilizing the experience of “home office” that began as an emergency evacuation.

6. Business Efficiency, etc.

In order to deal with the increase in work volume, it is necessary to review workflow and improve work efficiency. Regarding these, the following good practices have been confirmed.

【Business Efficiency, etc.】

- CPR Digital Services Section stated, “In FY 2018, we migrated the OIST website from Amaze to Pantheon. Using Pantheon management renewal services, security patches and updates will be delivered at the same time as the release, which enabled CPR to test changes to implement them. This saves web developers time and keeps OIST’s major websites secure and up to date.”
- The travel payment rules for OIST workshop participants were revised to simplify administrative procedures and reduce costs.
- The Resource Center stated, “We now provide ‘Lunch and Learning Sessions’ for OIST employees/students and their families with information on applying for a Japanese driver’s license. We also asked other OIST members who have successfully obtained the license for their cooperation. Resource Center staff typically spends an average of 45 minutes per person to explain the information individually, so this lunch session significantly saves the staff’s working time. We will continue this group-presentation approach, as it is more efficient than providing information individually, and this effort increases support among community members by sharing learning opportunities, which is also regarded as useful.”
- COO Office stated, “We are using SharePoint for minutes of various meetings, meeting materials, etc. to make them paperless and convenient to use as shared materials.”
- Due to the increase of faculty and employees, the Information Technology Division (IT) service desk used to be overloaded beyond its capacity, so the system was revamped, and the IT ticket management system, ServiceNow, is in full operation. The system streamlines the workflow by providing automated workflows based on user demand, significantly reducing the workload on support team members.
- As for Robotic Process Automation (RPA) at OIST, it has been introduced as a part of some regular business operations, including the automation of collaborative work related to the ID issuance process of CIO Office and the monthly operations related to collecting security scan results.
- At IT, in order to digitize on-campus work as much as possible, a various initiatives such as holding a working group to discuss further changes in enterprise applications, cooperating with a plan to introduce an Admission Management System and Student Information System into the Graduate School, deploying ServiceNow to other departments as a request

management tool, as well as plans to introduce several HR systems in collaboration with HR are promoted.

- Financial Management Division stated, “In order to manage the progress of procurement, a group software (Kintone) was introduced in May 2019, and efficiency has been improved, for example, by automatically creating purchase order emails using Kintone. In addition, the authorization of purchase order by Division/Office has been expanded since January 2020 from the range of less than 500,000 yen to less than 1.5 million yen. Through this expansion of authority, the number of procurement processing by Procurement Section is expected to decrease by approximately 900 cases each year.”
- The introduction of the asset management system, Radio Frequency Identifier (RFID), has streamlined the management of fixed assets.
- HR Division stated, “Through creating a web form for relocation information, there is no more omissions, erroneous input and/or missed attachment, and the number of mail exchange has been reduced to one time from two or three times. In addition, the use of video conferencing is encouraged, and the average number of invitations per month has already been decreased. Furthermore, interview evaluations starting from December 2019 were digitized so that the evaluation contents can be centrally managed.” Also stated that “Since September 2019, as a result of implementing job rotation beyond the boundaries of recruiting, relocation and training teams, by switching teams within the Division without transfer to other Divisions, thus the staff members are seeing new and unconventional perspectives and ideas, which we believe would lead to further business improvement and motivation.”
- In FY 2019, the Graduate School in collaboration with IT Division introduced Slate, a cloud-based application management software service specialized for higher education institutions in order to support pre-admission students (inquiries, events, application reception, selection, etc.). Now that they are centrally managed, systematic maintenance of submitted application documents and replies to inquiries can be carried out semi-automatically. At present, the system is actively utilized for application management of both doctoral programs and research internship programs.
- A number of staff members from the Graduate School participated in the training for visualizing business process and improving skills at the Japan Management Association (JIMA) hosted by IT Division. Following this training, all sections of the Graduate School have begun their efforts to visualize workflows in some of the business processes, and this effort has led to the clarification of responsibilities and information transmission procedures.
- Faculty Affairs Office (FAO) stated, “Through streamlining the weekly internal meeting and utilizing cloud-based tools such as SharePoint, communication between FAO and other

divisions and external committee members became smoother. FAO also created and shared a comprehensive database of new faculty members with other divisions. This has reduced the number of inquiries to FAO-HR and allowed other divisions to work directly with newly hired faculty members in terms of research budget, equipment, unit space, student arrangements and relocation. The FAO-HR team also organizes an information session about details regarding the needs of new faculty members for other divisions. Additionally, FAO-HR and central HR have a weekly meeting that includes DFA and VPHR. This allows both parties to share the latest information and work on common issues in a timely manner.”

- Through FAO’s introduction of the Interfolio system in the recruitment of professors, it became possible to grasp the information of applicants and selection status as accurate numerical values, thereby it was able to significantly automate and streamline the screening process.
- Technology Development and Innovation Center (TDIC) stated, “Three sections within the TDIC used to work almost independently and their operations rarely overlapped. But newly developed efforts such as Proof-of-Concept (POC) programs, start-up accelerator programs, and incubator facility, etc. are interrelated and require expertise and information from multiple sections. In FY 2017, TDIC formed ad hoc teams among sections within the Division to improve work efficiency. Until FY 2019, many TDIC projects and events were run by an ad hoc team from different section members within TDIC, as were some projects also from other Divisions. For example, through ad hoc teaming within TDIC sections and with staff from other sections such as Buildings and Facilities Management Division, Financial Management Division, Health and Safety Section, and staff of the General Counsellor’s Office, TDIC was able to support the design, building, and open operations of the Innovation Square Incubator, a new facility on the OIST campus, in FY 2019 without adding new personnel in the Division. TDIC intends to explore ways to promote the formation of ad hoc multi-functional teams regardless of the section affiliations of members in order to bring in the capabilities required for the main activities in the future.”

The Auditors recognize that further active efforts to improve business efficiency have been implemented in various forms in comparison to the previous fiscal year. In particular, other Divisions could also benefit from the movement by Information Technology Division to digitize promoted work on campus as much as possible, and TDIC's exploration of ways to promote ad hoc, multifunctional teams that consist of different section members inside and outside the Division for each project or event.

7. Compliance and Budget Execution Management, etc.

OIST is a private school corporation, which is operated by the Japanese government's financial support (mostly the subsidies funded by Japanese people's tax money). Accordingly, various laws and regulations should be applied to the execution of the budget since the subsidies are being granted. Concerning compliance with these regulations, etc., the following items were confirmed regarding the status of the internal audit and budget execution management, etc.

【Compliance】

- In FY 2019, the internal audit was conducted on competitive funding, monitoring of misconduct, safety management in research (use and control of chemical substances), operation of OIST Child Development Center (CDC), and information security (follow-up points from FY 2018 internal audit).
- Regarding the monitoring of misconducts (small-amount purchase), in the FY 2018 internal audit, an improvement in the process of attaching RFID (Radio Frequency Identifier) for fixed asset management was proposed. In the FY 2019 internal audit, the implementation of the improvement plan and improvement of the operational process were confirmed
- Regarding the use and management of chemical substances, a) registration to Chemical Management System (CMS) on any use/management/disposal/registration of chemical substances (dangerous substances and high-pressure gas), b) risk assessment of chemical substances, c) notification to supervisory agency, d) education and training for faculty/students, and e) disaster response measures, the General Manager of the Environment and Safety Management Office of the University of Tsukuba was invited as an outside expert. As a result of conducting a written survey, interviews, and an on-site audit, it was confirmed that they were properly maintained and operated.
- Regarding the operation of the CDC, the government has started the provision of free grants for non-licensed childcare facilities in October 2019, and OIST/CDC should meet the need to obtain a certificate for “Okinawa Prefecture non-licensed childcare facility guidance and supervision standard” within the 5-year grace period. An internal audit was carried out within this context, and instructions were made in March 2020 on necessary improvements to be made such as the quality of information made available to parents. In response to this, CDC stated that it would make an improvement plan in March of the same year to make the necessary improvements accordingly.
- With regard to information security, the FY 2018 internal audit proposed the documentation of ID management procedures, the establishment of lockout policies, and the implementation of security assessments by external experts. The FY 2019 internal audit

confirmed that these proposals for improvement had been implemented, except for the documentation of Office365 ID management procedures.

- In FY 2020, internal audits will continue to focus on competitive funds, the monitoring of misconduct, and security export control, etc.

【Management of Budget Execution】

- Responding to the fact that the amount of unused subsidies from the Cabinet Office was 391 million yen in FY 2017 and 638 million yen in FY 2018, Financial Management Division conducted a detailed hearing in FY 2019 on budget execution plan from each Division/Office during the mid-term review in September and the year-end review in December, and the amount of the unclear execution plan was asked to be returned to the central OIST budgetary body. As a result of further strengthening budget execution management, the unused budget for FY 2019 was 88 million yen.

【Management of Research Budget Execution】

- Regarding competitive funds, during the internal audit in FY 2018, an improvement proposal was made on the business workflow of applications for the Kakenhi donation, and an improvement proposal was submitted by the Accounting Section. As a result, FY 2019 Internal Audit confirmed the improvement plan was carried out and workflow of the donation application procedure was improved.

【Management of Corporate Document】

- Regarding corporate document management, there are problems/issues such as defects in the document management system (DMS) along with insufficient understanding of document management by staff members. Regarding updating the document management system, it was stated that preparations are underway for the system update in cooperation with IT division. In addition, preparation is underway in FY 2020 for implementation of staff training on document management in response to the government guideline etc. and the overall lack of awareness of document management by staff members.

It is necessary to make appropriate improvements as early as possible regarding the points raised in the internal audit that need improvement, as well as the management of corporate documents.

8. Information Security, etc. and Personal Information Protection

The Auditor's Office conducted a survey by the Personal Information Protection Checklist in FY 2019, and the following items have been confirmed including information security, etc.

【Information Security, etc.】

- Regarding the real-time detection of information security threats, it was stated, “Security Information and Event Management (SIEM) system was introduced in January 2018, and a coordination was made with threat information such as external network attacks against OIST, email attacks, hijacking of user accounts, and abnormal access to an important system. Thus, a comprehensive analysis is being made using AI to detect threats in real time operations. This effort has been getting attention both internally and externally, having been presented at seminars, etc.”
- From November 2019 to February 2020, the Chief Information Security Officer (CISO) conducted an information security risk assessment for the entire university. As a result, in each Division/Office, PRPs on information security, document management, and the personal information were found to be difficult to understand. In addition, a feedback stating that the inconsistency of the above leads to difficulty in deciding what kind of measures should be taken. Accordingly, through the coordination with Compliance Section, a decision was made to revise the PRP Chapter 12 “Document and Record Management” and Chapter 17 “Information Technology and Security,” and work is being carried forward. Besides this, as part of the information security risk assessment, CISO evaluated the configuration and setting status of all the networks.
- To be consistent with the OIST Risk Management Committee, CISO identified the top 10 information security risks and reported their status and updates to the OIST Risk Management Committee.
- The CIO regards the OIST system failure recovery readiness as an important element of IT strategy, and therefore, a redundant system has been implemented.
- The Information Technology Division conducted a satellite-based internet backup circuit test on December 19, 2019.

【Personal Information Protection】

- On March 5, 2019, a series of teaching materials for handling personal information was released, which became a mandatory training in FY 2019. The attendance rate for this training in FY 2019 was 95%.
- The Personal Information Registration Site was created on April 27, 2018 to register personal information owned by each Division/Office in order to capture personal information retained at OIST.
- OIST requires all personal information files to be registered at the Personal Information Registration Site within two weeks after acquisition. Of the 54 Divisions/Offices/Sections (Divisions, etc.) surveyed by the Personal Information Protection Checklist conducted by the Auditors’ Office in FY 2019, 31 Divisions, etc. owned personal information files,

accounting for 57.41%. Of these, five Divisions, etc. had registered all of said files on the Personal Information Registration Site, five Divisions, etc. registered a majority, five Divisions, etc. had some registered, and 14 Divisions, etc. had not registered at all. In other words, it can be said that about half of the owned personal information files held by Divisions, etc. have not been registered yet.

- Thirty Divisions, etc. (73.17%) regularly check and update the access status to personal information files, and 11 Divisions, etc. (26.83%) did not. As reasons for not doing so, eight Divisions, etc. answered “Others” and three Divisions, etc. answered, “We did not know how.” “Because the person in charge of managing the access rights to personal information was not clearly assigned, regular reviews were not conducted” and “We did not know where the personal information was stored” each responded by two Divisions, etc.
- Forty-seven Divisions, etc. (87.04%) have carried out appropriate encryption (including the selection of appropriate password, measures to prevent its leakage, etc.) for the retained personal information in accordance with the confidentiality of the retained personal information, seven Divisions, etc. (12.96%) did not. As for reasons for not doing so, five Divisions, etc. answered “Others” and three Divisions, etc. answered, “We did not know how.”
- At OIST, regardless of the media types, retained personal information should not be left on the desk to avoid being viewed or copied by anyone other than the faculty/employees in charge related to the purpose of use. Instead, it should be stored in a cabinet that can be locked. 49 Divisions, etc. (90.74%) were implementing such management and five Divisions, etc. (9.26%) did not. Regarding reasons for non-implementation, three Divisions, etc. answered “Others.” “Because of a heavy workload or the complexity of the operation, we have set criteria within the division and carry out the operation according to it” and “Because of a heavy workload or the complexity of the operation, we leave it to the person in charge as appropriate” each answered by one Division, etc.
- At OIST, when disposing of retained personal information, if it is written on a paper medium, it must be disposed of by a method such as incineration or shredding, which makes the data restoration or deciphering the retained personal information impossible. Further, if it is retained as data, it is necessary to delete the data by destroying the storage medium in a manner which makes impossible restoration or deciphering of the retained personal information. (PRP Chapter 12 3.8.3.5, Guideline Article 16). In accordance with this, when disposing of retained personal information, 42 Divisions, etc. (77.78%) had properly disposed data according to the retention status, five Divisions, etc. (9.26%) had not done so, and seven Divisions, etc. (12.96%) answered, “Not Applicable.” As for the reasons for not doing so, four Divisions, etc. responded, “Because the data is stored on

servers such as SharePoint/OneDrive, it cannot physically be deleted.” One answer was received for both “We do not know the disposal procedures or method.” and “Because we do not know the disposal procedures or method, we keep everything.”

- In the past 12 months (November 2018 to October 2019), 19 Divisions, etc. (35.19%) responded that personal information protection managers or/and division managers had checked and instructed the staff regarding information protection while those of 35 (64.81%) Divisions, etc. did not. As for reasons for not doing so, 22 Divisions, etc. (62.86%) stated, “Because there was no problem.”; eight Divisions, etc. (22.86%) stated, “Others”; three Divisions, etc. (8.57%) answered, “We did not know how to deal with it”; and one Divisions, etc. (2.86%) answered, “It was put off because we got busy.”

A single mistake in any area such as Information Security, etc. and personal information protection would seriously damage OIST's reputation. Accordingly, in order to implement thorough compliance and risk management, the Auditors deem it as absolutely necessary for applicable employees to take mandatory training at 100% execution rate, and for all OIST members to make the utmost efforts to establish and maintain the internal checking systems.

In addition, regarding the findings that there are only half of all Divisions, etc. that have registered personal information, the Auditors' recommendation is as follows.

- Although OIST demands all personal information files owned by Divisions, etc. or the person in charge to be registered on the Personal Information Registration Site, it turned out that only half of all Divisions, etc. have registered personal information. Accordingly, it is necessary to urge all Divisions, etc. that own personal information to promptly register this information.

9. Enhancement of Public Relations, Community Relations, etc.

Due to the organizational reform in April 2018, CPR was placed under the direct control of the President. The following points have been confirmed regarding public relations and community relations, etc. which play an important role in disseminating research and educational achievements.

【Enhancement of Public Relations】

- In FY 2019, top three instances of domestic media coverage on research results were as follows: 1) decoding the whole genome of sea grapes (Sato Unit), 2) the discovery of a new species of bobtail squid named “Euprymna Brenneri” (Roxar Unit) and 3) Wave Energy Converter (Shintake Unit). The top three instances of international media coverage were: 1) perovskite solar cells (Qi Unit), 2) the discovery of a new species of bobtail squid named

“Euprymna Brenneri” (Roxar Unit), and 3) rigidity and importance of foot lateral arch (Bandy Unit).

- A press conference was held on January 14, 2020 in Tokyo by the President of OIST for editorial and commentary members of the press and other reporters. In addition to this, three press events were held in Tokyo and Okinawa.
- Structural reforms within the CPR Division was planned and implemented to consolidate and enhance digital multimedia productions. The conference workshop was relocated to the Provost Office (April 2020). In addition, CPR functions (reputation management, community/staff/stakeholder engagement, content creation and digital) will be prioritized. In FY 2020, the digital channel will be simplified, and the website will be redesigned.
- Since September 2019, video and multimedia content (social media) has been maintained consistently to support major events and OIST core activities. Notable examples include the video of the OIST Foundation's launch in Washington DC in November 2019, a video of sustainable energy research at OIST in December 2019, and a video of the OIST-Hitachi symposium in Tokyo in February 2020. Such dissemination will be further strengthened with the increased volume through the creation of Digital Content, Brand and Design Sections in FY 2020.

【Community Relations, etc.】

- Records of school visits at OIST were as followed: Regarding the number of elementary, junior and senior high school students, 5,133 from 72 schools in FY 2017, 4,378 from 73 schools in FY 2018, 3,132 from 58 schools in FY 2019, and a cumulative total of 34,762 students from 477 schools since FY 2011. Of these, high school student visits consisted of 2,806 students from 35 schools in FY 2017, 2,163 from 38 schools in FY 2018, and 1,422 from 28 schools in FY 2019. Nine Super Science High School (SSH) with 608 total students visited in FY 2017, five schools with 313 total students in FY 2018, and four schools with 97 total students in FY 2019.
- The 10th Science Festival 2019 (Open Campus) on the main campus was held on November 16, 2019 with approximately 5,200 visitors.
- The 10th Onna-OIST Children's School of Science was held in cooperation with Onna Village for five days, August 19-23, 2019, for 138 children who participated in seven classes.
- One art exhibition, three music concerts, and one Ryukyu traditional performing art performance were held in collaboration with the Okinawa Prefectural University of Art, etc., and many local residents attended.

- Regarding a joint SDGs effort between Onna Village Office and OIST for sustainable marine conservation, a beekeeping project “PROJECT Bee” was launched with OIST installing bee keeping boxes in the site of Onna Village Office on October 4, 2019.
- On August 1, 2019, “Agreement on the Use of Designated Emergency Evacuation Shelter at the Time of Disaster” was concluded between OIST and Onna Village, with the closing ceremony held on September 5. With this agreement, Onna Village will be able to use some of the facilities managed by OIST (Conference Center, Auditorium, etc.) as a designated emergency evacuation shelter in the event of a disaster.

In the FY 2017 Auditors' Audit report, the need for strategic public relations was explained and some good examples from the California Institute of Technology (Caltech) were introduced. Caltech is one of OIST's benchmark schools, which actively utilizes video and media formats leading to the acquisition of huge donations. In FY 2018, specialized human resources were recruited, and a video series called OISTer Pearls was launched. In FY 2019, video and multimedia contents (social media) have been actively produced. Further advancement needs to be made in this area.

Accordingly, the following are the opinions of the Auditors.

- Strategic communication with the general public is deemed necessary through the active use of media, including videos and SNSs, through which the President's ideas and future visions, and research outcomes would be further disseminated. In addition, good public relations would lead to potential donations.

Also, in connection with the community relations, the Auditors mentioned in the FY 2018 Auditors' Audit Report that the Okinawa Prefecture had a plan to create a University Town (Monzen-machi), etc., at the time of OIST's establishment, but a University Town had not been formed yet. The report also pointed out that in order to form an Innovation Ecosystem in the future, by attracting corporations in partnership with OIST research achievements to the area surrounding OIST, it would be essential to keep close dialogues with the Okinawa Prefecture, Onna Village, Uruma City and the other surrounding municipalities.

As related to the above, the following points have been confirmed as being implemented in FY 2019.

- In order to strengthen OIST's contribution to the Okinawa Prefecture and the collaborative relationship that contributes to OIST's further growth and development, the “Okinawa Prefecture/OIST Liaison Meeting” was established with the Okinawa Prefecture to exchange opinions and information on a regular basis. The committee members are the Okinawa Prefecture's Deputy Director General in charge of Planning Promotion and Director of Science and Technology Promotion Division, and OIST COO and Vice

President for Financial Management. The agenda items are issues related to cooperation between the Okinawa Prefecture and OIST and the next-term Okinawa Promotion Plan, which is supposed to deal with OIST's contributions, campus development plans, off-campus housing, and education issues for faculty members and children. The first meeting was held on November 5, 2019 and the second meeting was held on January 15, 2020. The liaison meeting will be held quarterly in the future.

- The President visited the Onna Village Office and introduced OIST's efforts and future plans to the Onna Village Council, followed by a visit by the Mayor and the Village Council to OIST in March 2019. Also, as of October 17, 2019, a memorandum of understanding was concluded to establish a cooperative relationship for conducting a study and investigation regarding future campus development and land use leased from Onna Village. In addition, an aforementioned agreement regarding the provision and utilization of OIST facilities as a shelter in the event of a disaster for local residents, “Agreement on the Use of Designated Emergency Evacuation Shelter at the time of Disaster” was concluded between Onna Village and OIST in August 2019.
- OIST Strategic Plan 2020-2030 demonstrated the concept of building the OIST Innovation Park in North Campus, which will serve as a high-tech base that will bring breakthrough innovations and corporate vitality generated from the world's top-notch research base.

Regarding the dialogue between OIST and related local municipalities in Okinawa, such as the Okinawa Prefecture and Onna Village, etc., Article 13 of the Okinawa Institute of Science and Technology Graduate University School Corporation Law stipulates, “In the operation of the Okinawa Institute of Science and Technology, the School Corporation shall seek close collaboration with the national government and with related local municipalities in Okinawa.” Accordingly, dialogues between OIST and local municipalities have been a requisite matter since the establishment of OIST.

In order to realize the OIST Innovation Park concept, the Auditors expect that active dialogue will be held between OIST and neighboring local municipalities such as the Okinawa Prefecture, Onna Village, and Uruma City, etc. The Auditors also believe that it is useful to learn from other advanced cases in Japan in order to consider the path to realize the OIST Innovation Park concept. For example, in Tsuruoka City, Yamagata Prefecture, university-initiated ventures are concentrated around Keio University Institute for Advanced Biosciences as the core institution. Another example is Tonomachi International Strategic Hub King Skyfront in Kawasaki City, Kanagawa Prefecture, where Keio University, Tokyo Institute of Technology, research institutes, and companies, etc. are concentrated on the opposite shore of Haneda Airport, etc. These developments can serve as case studies of science parks formed by utilizing the national special zone system.

10. Building Industry-Academia Collaborations and Creating an Environment for Entrepreneurship

Partnerships between industry-academia and the development of an entrepreneurial environment both directly impact the promotion of Okinawa, which is the initial aim of the establishment of OIST. The following are the related points confirmed in the FY 2019 Auditors' Audit.

【Building Industry-Academia Collaborations and Creating an Environment for Entrepreneurship】

- A total of 16 Proof-of-Concept research projects were conducted in FY 2019 (including nine new projects in FY 2019).
- As a new startup company from OIST, BioAlchemy Co., Ltd. was established in May 2019 based on the research results of Biosystems Unit. The company intends to contribute to the realization of a sustainable society by manufacturing, selling, and licensing low-cost wastewater treatment systems that use microorganisms which generate electricity while decomposing organic substances.
- The first incubation facility was commenced on the OIST campus.
- “The Startup Accelerator Program,” an OIST science and technology entrepreneurship program, was launched in FY 2018, and a project proposed by a group of four entrepreneurs from the U.S., UK and Italy was selected through an open selection process. The founding team conducted their research and product development in this program to launch a nutrition-tech company. On December 19, 2018, a new venture called Shoreditch-son Co., Ltd was established with a CEO and three employees. In addition, the entrepreneurial team from India, EF Polymer, and the entrepreneurial team from Russia, Medical Microwave Radiometry (MMR), were selected in the 2019 (second) public offering. EF Polymer won the championship with the prize of € 5,000 at the Carbon Technology Category of ClimateLaunchpad, the prestigious green technology competition in Amsterdam in November 2019.
- A total of 16 trainings, seminars, workshops and events were held to promote innovation and entrepreneurship development.

The Auditors have been paying special attention to the types of achievements to come out of the “Startup Accelerator Program” and the launch of the Incubator Facility, which would attract both domestic and overseas research seeds to OIST. Through this program, the Auditors have a high expectation for the positive impact on the development of the Okinawan economy.

11. Improvement of PhD Course, and Recruitment of Japanese and Female Students

Regarding the Graduate University, the following items have been confirmed.

【Improvement of PhD Course】

- A system has been established to approve credits for online courses, off-campus workshops, and summer schools, in which students can significantly expand their education repertoire by actively using the system.
- In order to respond to the needs of society and students, a review on the existing curriculum is underway and in FY 2019, the contents to be taught in the fields of engineering, applied science, and neuroscience have been decided and the restructuring of the curriculum was completed. The contents that should be learned by students is offered as compulsory subjects.
- Reviewing of all courses every five years has begun, and faculty members are required to periodically review course content and relevance to the research at OIST.
- In order to meet the demands of students, a more detailed syllabus will be introduced with comprehensive information on course contents and expectations for students.

【Recruitment of Japanese Students】

- The number of Japanese students enrolled was five in FY 2012, five in FY 2013, six in FY 2014, two in FY 2015, six in FY 2016, five in FY 2017, one in FY 2018, and nine in FY 2019. The total number of Japanese enrolled is 39, compared with the total number of enrolled students of 263 so far, which is 14.8%. Looking at this by enrollment year, 14.7% in FY 2012, 25% in FY 2013, 22.2% in FY 2014, 8.3% in FY 2015, 17.1% in FY 2016, 13.5% in FY 2017, 2.9% in FY 2018, and 17.3% in FY 2019. When calculating the ratio of the total enrollment of Japanese students to the total enrollment for each year, 18.5% in FY 2013, 19.7% in FY 2014, 17.1% in FY 2015, 17.1% in FY 2016, 16.4% in FY 2017, 14.2% in FY 2018, and 14.8% in FY 2019. As a whole, it has remained less than 20% since the OIST inauguration.
- Since recruiting excellent Japanese students is especially important, recruitment activities on a national scale have been continued. Domestic activities in FY 2019 include a series of OIST Café (Science Cafe that also combines English training for science students in Tokyo on August 5 and December 14, and at the University of the Ryukyus on November 6.) In addition, Skill Pills +, which will be described later, were held November 8-10 and the QS-APPLE Event was held November 26-29. The OIST Science Challenge, which was scheduled to be held March 21-28, was canceled, but a webinar session was held on March 24 for prospective Science Challenge participants and 29 people (26 of which were Japanese) participated.

- Given that the number of Japanese students enrolled is small and it is difficult to obtain Japanese students, a new Skill Pills + Workshop has been held since FY 2017. This workshop is held on weekends, and this is a program where useful research technologies are taught by OIST research units to participants, who are undergraduate and master's degree students selected from Japanese universities. During the workshop period, which provides opportunities to interact with OIST students, researchers, and faculty members, attendees also participate in campus tours and laboratory tours in addition to lectures. The number of Japanese students accepted by this program was seven in FY 2017, 13 in FY 2018, and 18 in FY 2019.
- Collaborations are underway with the University of Tokyo, Osaka University, Hokkaido University, and Keio University to introduce OIST PhD programs to more Japanese students. As one way to attract students from these institutions, the Graduate School offers opportunities for research internships. The program aims to invite selected students from each institution, place them in a research unit of their interest, and expose them to the unique international research environment of OIST. The total number of Japanese students accepted under this framework has been 12 with four students each year during the three-year period from FY 2017 to FY 2019.
- The Research Internship Pathway (RI Pathway) has made it possible to set up a fairly flexible acceptance system for when to enter the OIST PhD program, which is especially beneficial for Japanese students. Out of the 14 RI pathway applications submitted in FY 2019, 12 were successful (five of them were Japanese students) and the remaining two chose to apply through the regular PhD admission process.
- By making a better use of the newly introduced application management system (Slate), it is easier to contact students who are interested in OIST and track their paths. According to the analysis results of the data obtained from Slate, it is expected that recruitment activities for Japanese students can be made in a more targeted manner.

【Recruitment of Female Students】

- Female students account for 37.3%, or 98 out of 263 total students enrolled. The female ratio for each fiscal year is 29.4% (FY 2012), 25% (FY 2013), 44.4% (FY 2014), 29.2% (FY 2015), 48.6% (FY 2016), 35.1% (FY 2017), 41.2% (FY 2018), and 38.5% (FY 2019). Since these numbers are above average compared to other science and technology graduate schools in Japan, OIST Graduate School considers itself successful in acquiring female students so far and is determined to make efforts to ensure this success continues in the future.

In FY 2019, OIST continued its efforts to improve its PhD programs. The number of Japanese

students enrolled in FY 2019 hit a record high of nine student. However, when looking at the proportion of Japanese students in the total number of new students in chronological order, it has remained below 20% since OIST's inauguration. The Auditors deem it necessary for OIST to conduct further recruitment activities with Japanese students in mind.

12. Networking between Domestic/Overseas Universities and Institutes

Regarding the Networking between Domestic/Overseas Universities and Institutes, the following items have been confirmed.

【Networking】

- Initiatives within the Okinawa Prefecture and Japan include the use of OIST common equipment by researchers in Japan under OIST's Jumps Research Collaboration Program, participation in the platform called Basis for Supporting Innovative Drug Discovery and Life Science Research (BINDS) at Japan Agency for Medical Research and Development (AMED) through which protein structure analysis (tomography/single particle analysis) with a Cryo-transmission electron microscope, and a program for monitoring fire ants by the Ministry of the Environment, etc. In FY2019, the Okinawa Marine Science Workshop was held on December 6, 2019, a symposium between OIST and the University of the Ryukyus was held on December 16, 2019, and a symposium between OIST and the Graduate School of Medicine, Osaka University was held on the 20th and 21st of January 2020. In the future, similar efforts will be carried out with Keio University, Tohoku University, Kyoto University, etc.
- On March 31, 2020, a basic agreement on scientific and academic cooperation was concluded between OIST and RIKEN. The objective of this agreement is to contribute to the promotion of science and technology in Japan and the world, and to the development of human resources that will be responsible for them through the collaboration between OIST—a generator of international, interdisciplinary, and advanced research and education activities—and RIKEN—the largest and most comprehensive natural science research institution in Japan. Specifically, based on this agreement, holding workshops and establishing joint laboratories are being considered in the future.
- As for international initiatives, OIST KICKS Program (ongoing since FY 2018), which OIST researchers promote joint research with universities in Japan and overseas, and in June 2019, “BRIDGE (Basic Research Institutions Delivering Graduate Education) Network,” an informal platform between research institutions pursuing the two missions: promoting cutting-edge research and educating PhD students, with participation of OIST, Weizmann Institute for Science (Israel), Austrian Institute of Science and Technology (IST Austria),

and Francis Crick Institute (UK) were established. In the future, they will jointly promote the enhancement of scientific research and educational excellence through the cooperation and exchanges among the members.

- Collaboration with other Asian countries is also regarded as important, with recognition of OIST as a member of the Dragon Gate Program in Taiwan, participation as a founding member of the “East Asia Joint Symposium” (EAJS), and holding a joint symposium with IBS (Institute of Basic Science). The joint symposium was held with the Taiwan Central Research Institute on April 17-18, 2019, and another symposium was held with KAIST (Korea Advanced Institute of Science and Technology) on November 11-12.
- The Dean of Research, as Conference Chair, held the International Conference of Systems Biology (ICSB 2019) at OIST from November 1-5, 2019. In addition, by holding research exchanges on specific research fields, OIST has been promoting exchanges with researchers from top overseas universities including Harvard University and Cambridge University, etc. It can be said that these research exchanges may become the foundation for building networks with the scientific community around the world.

In FY 2019, a dedicated Dean of Research was positioned, and the construction of networks with domestic and overseas universities and research institutes progressed. The Auditors heard that if the support system for the Dean of Research is in place, this movement will proceed further, and they are looking forward to seeing developments in the future.

13. Proactive Dissemination of OIST's Achievements

With the 10th year review coming up, OIST is expected to proactively disseminate its education and research achievements both domestically and internationally. Accordingly, interviews were conducted on the specific contents of activities that were strategically visualized and disseminated in various ways in each Division/Office in FY 2019, as well as on what they would like to do in terms of disseminating information in the future.

The following are the items that have already been implemented and confirmed.

【BCS Awards for Good Architecture】

- Japan Federation of Construction Contractors made a selection on the BCS Award, which is based on a comprehensive evaluation including the construction business plan: planning, designing, implementation, and environment, as well as operation and maintenance of the buildings more than a year after its service. OIST Phase I (Center Building, Lab 1, Lab 2, Lab 3) received this Award in 2019 (60th), an architectural award that honors three entities: the architecture, designer, and the contractor.

【Countermeasures for Cyber Security, etc.】

- At external seminars such as Information Security EXPO, Cisco Academic Forum, and IT + AI Seminar, the Chief Information Security Officer (CISO) explained about advanced cyber security threats at OIST and presented example of OIST's cyber security measures using the latest technologies such as OIST AI. In addition, High Performance VDI Conference 2019 was held at OIST on October 2-4, 2019.

【Asset Management】

- To disseminate fixed asset management methods, an explanatory session was given to the Neurointelligence International Research Organization at the University of Tokyo on November 22, 2019 on RFID (Radio Frequency Identifier) system and FAME (Fixed Asset Management E-system), both having been integrated into OIST operations.

【Diversities】

- On June 15, 2019, OIST held a public lecture on “Development of Comprehensive and Comfortable Environment for LGBTQI + Students and Families.”
- “Kyushu-Okinawa Island Support for Female Researchers Symposium in Fukuoka” was held in Fukuoka City on September 20, 2019; Co-sponsors: Kyushu University, Kyushu-Okinawa Island Support for Female Researchers Network (Q-wea), National Diversity Network Organization-Kyushu/Okinawa Block Conference. In addition, “Diversity Symposium in Okinawa 2019” (hosted by Okinawa Prefecture International Exchange and Human Resource Development Foundation) was held on October 30, 2019 in Naha City, introducing some initiatives and how to accept foreign workers. As a part of OIST Branding, OIST provides a global research and education environment while being in Japan. Information is also shared on Facebook, LinkedIn, News Picks, etc.
- A public symposium was held on September 24, 2019 in Naha, entitled “Learning the world how to work-meet new values-” and organized by the Okinawa Prefectural Management Association Women Leader Section, US Consulate General in Okinawa, and Women of Okinawa Power Alliance Network (WOPAN). OIST dispatched a staff member as a panelist.

【Research Equipment Gallery】

- The Research Support Division introduced OIST's main research equipment under the name of “The Research Equipment Gallery” on its website. A joint research program (Jumps Joint Research Program) with domestic research institutes using this research equipment has also been conducted since FY 2019. OIST equipment became accessible for external use since July 2019.

【Research Units/Faculty Annual Reports】

- Faculty member from each research unit uploads their annual report to the OIST

publications and reports website (<https://www.oist.jp/oist-publications-reports>).

【Academic Repository (OISTIR)】

- An academic repository (OISTIR) <https://oist.repo.nii.ac.jp/> that archives and publishes OIST research papers was established to make OIST intellectual outputs accessible worldwide. The open access rate (the ratio of papers registered in the repository to all papers) of the University is 91% in FY 2017, 96% in FY 2018, and 92% in the first half of FY 2019. In addition, the number of downloads of published papers in FY 2019 exceeded 12,000.

【Technology Development, Innovation】

- Information was disseminated on the activities of status such as EE Polymer adopted in the Startup Accelerator Program and the establishment of a new startup company BioAlchemy Co., Ltd. from OIST. In addition, videos introducing Proof of Concept (POC) projects and research results were created and released.

The Auditors believe that the outstanding achievements of OIST should not be limited to research and educational aspects alone, but also should be acknowledged in many other aspects through wide ranged publication in order to attract broader support for OIST.

The opinions of the Auditors are as followed.

- In order to gain widespread support for OIST, in addition to the results of research and education, it is necessary to make efforts to raise the fame of OIST through actively communicating externally on what OIST is proud of, such as cyber security measures and advanced human resource diversity efforts.

14. Closing Remarks

The University has now entered into the ninth year since its inauguration and is currently in a phase focused on producing results in preparation for the 10th-Year Review, and it has formulated the OIST Strategic Plan 2020-2030 as a future vision for the next step. In the Audit of FY 2019, we have mainly focused on OIST's disaster preparedness; OIST's health, safety and other risk management; the establishment of more solid management, including the executive governance; a respectful workplace; business efficiency; and the dissemination of OIST's achievements outside of the University, etc.

Regarding the overall conclusion, as stated in this Report, there were a number of items that showed progress compared to the previous year. The remaining issues include improving training (especially restarting management training), personal information protection, corporate document management, and further acquisition of Japanese students, etc.

Due to the spread of the new coronavirus, various activities involving travels were affected in the

latter half of the fourth quarter of FY 2019. In addition, even in the beginning of FY 2020, various activities have been suspended or reduced at OIST in response to the government's declaration of state of emergency.

In the midst of the above circumstance, research activities have begun in April 2020 in the Lab 4 building, which has the largest floor area thus far at nearly 20,000 square meters on the OIST campus. Completion of the new research building is one of the major milestones for the OIST Strategic Plan. The Auditors also heard that OIST has been conducting research on the new coronavirus.

The hope is for OIST to lead Japan in the world of science and technology and create epoch-making innovation by building a globally active community of researchers, etc.

Finally, the Auditors would like to touch upon the two bills submitted this year to Japan's 201st Diet Session.

The first bill is “A Bill to Revise Part of the Act on National Strategic Special Zones” (Cabinet Law No. 5). This bill is intended to implement institutional arrangements, etc. toward the realization of the “Super City” concept that will lead to the ideal future society via cutting-edge technologies and bold deregulation in the 4th Industrial Revolution. The Cabinet decision was made on February 4, 2020 and was submitted to the Diet on the same day. The bill also includes the establishment of Sandbox System in the designated areas. This system stems from the “Regulatory Sandbox” which was started in the United Kingdom and other countries as a mechanism for a new business experimental site, such as temporarily stopping the application of regulations to promote innovation. With reference to this, a post-check rule in a Japanese National Strategic Special Zone such as monitoring/evaluation will be prepared, and by reviewing the pre-regulations/procedures related to the demonstration of near-future technology such as automatic driving of cars and drones, a quick and smooth demonstration will be enabled in the System, establishing a mechanism for realizing experiments in limited local areas.

The second bill is “The Bill to Revise Part of the Basic Act on Science and Technology, etc.” (Cabinet Law No. 47). Regarding this bill, given the extreme importance to promote science and technology pertaining to those related only to the humanities and also the promotion of innovation in order to stimulate the development of the Japanese economy and the welfare of the people, the title of “the Basic Act on Science and Technology” will be changed to “the Basic Act on Science and Technology, and Innovation.” The positioning of “Science and Technology” as pertaining only to the humanities was revised, and the new provisions for innovation were added. New measures as part of the bill also include creating an Incorporated Administrative Agency that conducts research and development in the field of the humanities as the National Research and Development Agency. This bill was approved during the Cabinet meeting on March 10, 2020, which was submitted to the Diet on the same day; it is regarded as the basis of the 6th Science and Technology Basic Plan, aiming at

the comprehensive promotion of innovation, which will be launched in FY 2021.

Out of these two bills, “A Bill to Revise Part of the Act on National Strategic Special Zones” includes a system for the realization of the “Super City” concept and a sandbox system for regional deregulation, which can serve as reference when considering the OIST Innovation Park concept. In addition, “The Bill to Revise Part of the Basic Act on Science and Technology, etc.” enacts the science and technology policy for five years from FY 2021 to FY 2025, which sets the course for the next 10 years. The Japanese government's stance of strengthening its focus on creation of innovation toward the formulation of the 6th Science and Technology Basic Plan is expressed in this bill.

While keeping in mind that there have been such movements, the Auditors hope for steady progress in the future growth and development of OIST.

The Audit Report is a translation of the Japanese original. In the event of any discrepancy between this translated document and the Japanese original, the latter shall prevail. Ms. Mari Takenouchi, Ms. Akiko Ringdahl, and Ms. Pei Chen King of the CPR division supported with their expertise in editing the English translation. We are grateful to them for their support.

September 2017
Approved by Auditor

Guidelines for Auditors' Audit, Okinawa Institute of Science and Technology

OIST has been in operation for more than five years now, during which a series of internal and auditors' operational audits, and accounting audits by an audit firm, have been undertaken. The findings of these audits show that the basic administration of the University has become increasingly stable, as its fundamental functions have been put in place and are operating effectively.

As described in FY2016 Auditors' Audit Report, it is extremely important to apply the accumulated experiences to envision further expansion of the business and its operation, identify operational challenges while adjusting to the changes surrounding the University, and rigidly tackle each issue with a strong will and enthusiasm.

Under these circumstances, we set these guidelines based on the recognition that the Auditors' Audit should be conducted with a medium-term vision to further support the self-reliable growth and development of the University.

1. Risk Matrix

To conduct Auditors' Audit (hereafter, Audit), a risk matrix is established as in the attachment 1. It is to be adjusted as necessary, depending on the changes surrounding the University.

2. Establish Mid-Term Audit Plan

- (1) To conduct effective Audit with a mid-term vision, and to encourage active implementation of improvement at each division prior to audit, Auditors establish a three-year Audit Plan (hereafter, "Mid-Term Plan") based on the risk matrix described above, and report to the Board of Governors.
- (2) The duration of Mid-Term Plan is three years, which includes the following items:
 - (a) The basic principle and direction of the audit within the Mid-Term Plan
 - (b) The themes and objectives of each year in the Mid-Term Plan

(c) Items regarding “3. Annual Auditors’ Audit”

- (3) Auditors determine a yearly Audit plan based on the targeted Mid-Term Plan.
- (4) Each year the Mid-Term Plan utilizes a “rolling plan” method, based on the outcome of audits and changes surrounding the University. As a result, if a major change is necessary in the Mid-Term Plan, Auditors report to the Board of Governors regarding the changes.

3. Annual Auditors’ Audit

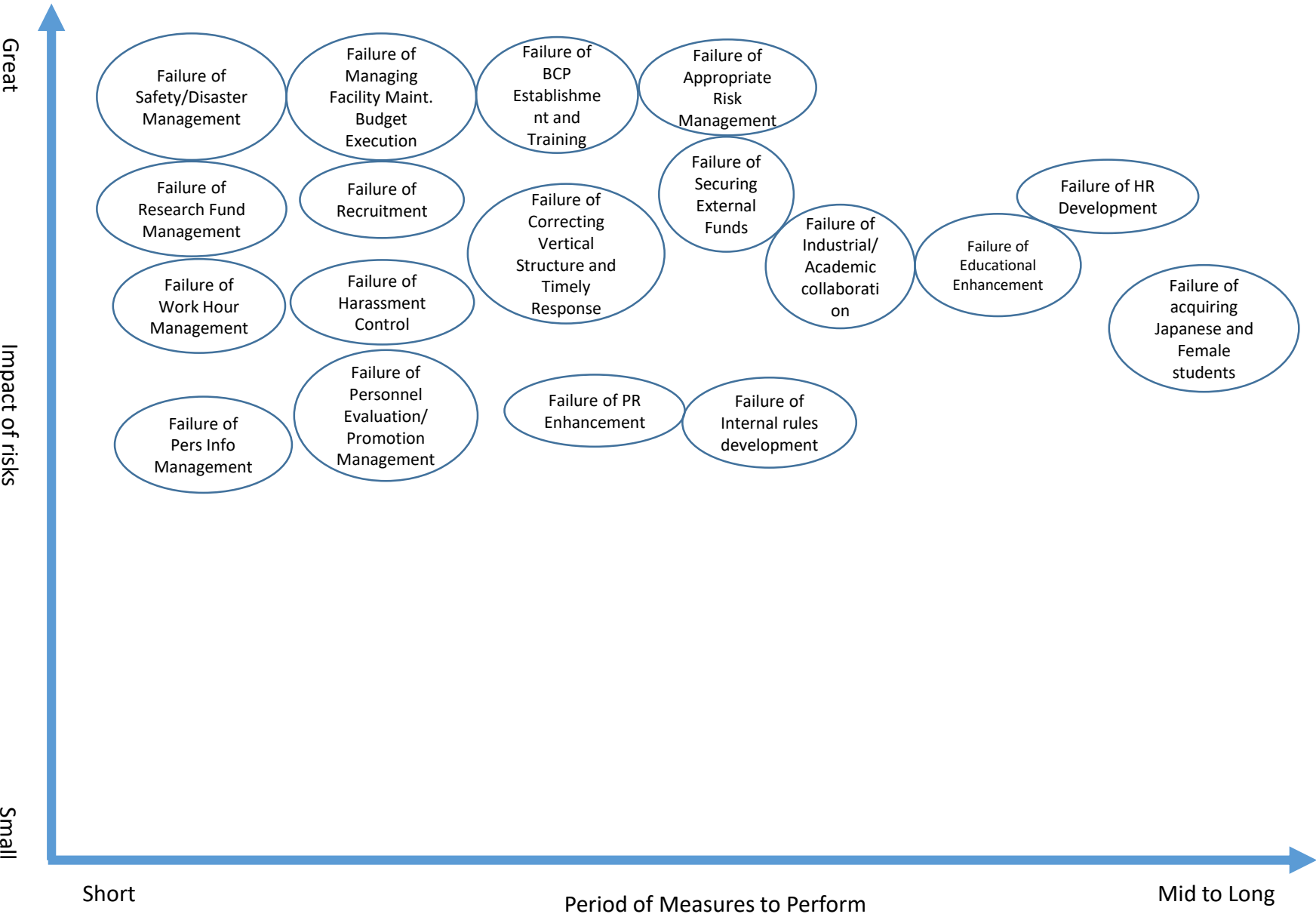
To ensure a steady business operation, Auditors regularly conduct hearings each year, or until sufficient, regarding current status and challenges reported by each division head in charge of following items, and perform site surveys as necessary:

- (1) Management of Facility Maintenance Budget Execution (FM, BFM)
- (2) Personal Information Management (AC)
- (3) Compliance Education (AC)
- (4) BCP Training Including IS (BCP in charge, CIO)
- (5) Work Hour Management, Including Overtime (HRGE)
- (6) Follow-up of Items Mentioned in Auditors’ Audit of Previous FY (related divisions)

4. Others

When guidance is received by outside parties regarding the management of the School Corporation that requires a follow-up, or any special issues that require additional improvement, Auditors should review the Annual Audit Plan and the Mid-Term Plan of the targeted term. Refer to 2. (4) for reporting to the Board of Governors.

Auditors’ Audit Risk Matrix



OIST Risk Matrix (Risk evaluation)(Developed by OIST RMC)

	Minor 1	Major (1 day) 2	Critical (1 to 7days) 3	Catastrophic (7day to 1 m) 4	Calamity (>1 month) 5
Frequent Weekly 5	B	B	A	A	A
Probable Monthly 4	B	B	B	A	A
Occasional Annually 3	<ul style="list-style-type: none"> Failure of personnel evaluation/promotion management 	<ul style="list-style-type: none"> Fire Staff vulnerability/key response person Inappropriate accounting treatments and financial statement disclosure Failure of internal rules development 	<ul style="list-style-type: none"> Accidents at sea Information security Accidents at Lab/SH 	<ul style="list-style-type: none"> Server failure 	A
Remote 10 yearly 2	C	<ul style="list-style-type: none"> Failure of recruitment Work hour management Harassment control Patent/copyright infringement Failure of HR development Sectionalism Academic misconduct 	<ul style="list-style-type: none"> Gas leak Failure of recruitment (total number of students, Japanese students) Failure of educational enhancement 	<ul style="list-style-type: none"> Deviation from the Act on Regulation of Execution of Budget Pertaining to Subsidies 	<ul style="list-style-type: none"> Earthquake/tsunami Pandemic Loss of internet connectivity
Improbable 100 yearly 1	D	<ul style="list-style-type: none"> Failure to recruit female students 	C	B	B

リスクレベル

The level of risk

リスククラス Risk class	リスククラス詳細 Description of the risk class	システムオペレーション System operation
A	許容できないリスクであり、特殊な状況が生じた場合のみに同リスクは受容される。 An intolerable risk, which can only be accepted under extreme circumstances	システムオペレーションは受容されず、使用の制限を宣言しなければならない。 Operation cannot be accepted, limitation in use must be declared
B	許容できるリスクであり、得られる利益が同リスクを大きく上回る。 A tolerable risk, providing the benefit received grossly outweighs the risk	システムオペレーションは、利益がリスクを大きく上回ることを示す証拠があるときに受容される。 Operation can be accepted with evidence of gross benefit received
C	許容できるリスクであり、得られる利益が同リスクを上回る。 A tolerable risk, providing the benefit received outweighs the risk	システムオペレーションは、利益がリスクを上回ることを示す証拠があるときに受容される。 Operation can be accepted with evidence of benefit received
D	広く受容できるリスクであり、無視できるものとして処理する。 A broadly acceptable risk, which may be treated as negligible	システムオペレーションは、低リスクを示す証拠があれば受容される。 Operation can be accepted with evidence of low risk