

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

May 27, 2019

To:

Board of Governors and Board of Councilors,

Okinawa Institute of Science and Technology School Corporation

From:

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FY 2018 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 2018, 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.
- Conclusion 2.
- (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 2018 Auditors' Audit results with our written opinions, which we recognize as necessary for improvement, for the further advancement of the University.

FY 2018 Auditors' Audit Result and Opinion

1. Main Focus Points of the Auditors' Audit

Fiscal year (FY) 2018 was marked as a year in which the Okinawa Institute of Science and Technology Graduate University (OIST) made steps toward the next phase in its development. During this year, the Japan Institution for Higher Education Evaluation (JIHEE), a public interest incorporated foundation, carried out the university-level Institutional Evaluation and Accreditation for OIST. Additionally, in advance of the 10th year review, both the Cabinet Office and OIST began initial 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). The following two are the major focal points of the Auditors' Report in FY 2018.

- 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, and safety and health management, which are considered to be high-risk areas in the immediate future.
- 2) We also focused on OIST's effort to strengthen governance and management foundations, to create a respectful workplace, and to improve business efficiency as well as on how OIST's achievement has been disseminated externally.

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

In response to the President's message to all OIST members—titled, "OIST Diving Incident - the Way Forward," dated July 10, 2017 and published on July 11, 2017 on the official OIST website the FY 2018 Auditors' Audit inspected how vigorously specific efforts have been made to build a university culture of disaster prevention, and health and safety management, which was initiated in FY 2017. In addition to this, the development of the Business Continuity Plan (BCP) and risk management were inspected, and the following are the points that have been confirmed.

(Disaster Prevention, Safety and Health Management)

- Efforts are continuously being made to establish a safety culture mainly under the Office of the Dean of Research (DOR).
- From September 11 to 14, 2018, the Emergency Response Coordinator and Occupational Health and Safety Section cooperated to conduct a health and safety audit on the entire University to check for potential danger and harm at work in addition to legal compliance

status, etc. Furthermore, each division/section/unit checked the "Action Sheet at the time of Fire Detection" and also conducted an educational training program on "How to Respond to Fire, Earthquakes, and Tsunamis" based on procedure manual documents.

- In the report on the earthquake countermeasure survey conducted from April 21 to 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 (including refrigerators and freezers), machine tools, large office equipment, large shelves, etc. Out of these, 90 locations were fixed in FY 2016, 267 in FY 2017, and 410 in FY 2018.
- A disaster drill was held at the main campus on May 18, 2018 and at the Seaside House (SH) and Marine Science Station (MSS) on June 1, 2018. On September 10, a tsunami evacuation drill was held at the SH, the Seaside Faculty Houses, the MSS. In addition, on December 4, 2018, comprehensive disaster training was held on the main campus.
- A new industrial physician was hired, and 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.
- To prepare for disaster, OIST has more than one internet connection, and in December 2018, a switch-over test was implemented to prepare for the possibility of a suspended main internet connection and/or the failure of the OIST data center network device.

(Formulation of the BCP)

Seven Business Continuity Plans (BCPs) were prepared to include the following disaster/accident scenarios: 1) earthquake (including a tsunami), 2) a new type of influenza etc., 3) fire, 4) a mega typhoon, 5) an accident resulting in deaths and injuries, 6) bombing notices, and 7) a military plane crash. The BCPs were approved by the Risk Management Committee.

[Risk Management]

 During FY 2018, Risk Management Committee meetings were held in April, October, and January, and some progress was made including the listing and categorization of serious risks at OIST, the evaluation and analysis of these risks (the preparation of the OIST RISK MATRIX), and the consideration of countermeasures (preparing and approving, etc. the regulations of the BCPs and risk-management). Regarding individual risk management and risk-mitigation measures, the Chief Operating Officer (COO) instructed each Division/Office to make specific considerations for these risks.

Regarding disaster prevention, health and safety management, and the formulation of the Business Continuity Plan (BCP), all of which can be regarded as OIST's largest short-term risks, efforts for improvement have been acknowledged. These efforts include the implementation of disaster prevention drills and comprehensive drills as well as the BCP formulation, which were previously been raised as issues by the Auditors. On the other hand, although the formulation of a comprehensive plan including disaster countermeasures and the BCP is regarded as a big step forward, in order to realize this plan, efforts at each site will be required. Currently, preparing specific risk management and disaster mitigation measures are underway in each Division/Office. Going forward, in order to carry out these measures more effectively, it is important that each Division/Office can conduct education and trainings with appropriate consideration for their 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.

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)

- The Graduate School (GS) aims to enhance transparency through discussion at regular meetings, sharing information, evaluating performance, etc. With the newly assigned Vice Dean, it is now possible to better understand the situation in GS. In addition, from FY 2019, GS plans to hold regular staff meetings with the Dean and vice Dean, not including the line managers.
- In the weekly internal meeting at the Office of Faculty Affairs, the main tasks and events and the accompanying workload during the upcoming week are shared in the office so that staff members can temporarily support other teams with their workload when necessary. In addition, by utilizing SharePoint to visually share information, the team can see which staff members are able to give support and how much, particularly for the tasks of hiring and evaluating faculty members.
- In the Finance Division, in order to keep openness in the workplace and in addition to keeping the job rotation practices among the sections, renewed allocation of personnel within the section and all-division birthday parties (luncheon meetings), etc., were carried out.

Work-life Balance

- In June 2018, the University Community Services (UCS) Division was established and the Vice President (VP) for UCS was appointed.
- In October 2018, the second phase of construction work was completed at the CDC, which

has since been incorporated under UCS. Classrooms capable of accommodating more children have been established to support OIST employees and students who need childcare.

- Ganjuu Wellbeing Service, which supports the mental health of OIST faculty, employees, students, and their families, made plans to maintain and expand the current services.
- Rules and various procedures for the activities of OIST clubs have been established.
- Between March 11 and 20, 2019, a survey on educational needs that sought the opinions from the entire OIST community was conducted. The survey asked questions regarding what kind of effects childcare services and school-age education can 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 their childcare and educational needs are fulfilled, what needs are not addressed and to what degree, etc.

[Controlling Harassment, etc.]

- In 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 VP for Gender Equality and Human Resource Development (GEHR), 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 accepts consultations from students (as well as from 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 consultation students are supported to be able to formulate their thoughts and solve the issue autonomously.
- Regarding PRP 23, "Investigation and Determination of Misconduct & Whistleblower Protection," OIST intends to continuously evaluate and improve this mechanism.

The explanation of "student support" of the university evaluation standard 7 of the Japan University Accreditation Association, accredited by MEXT in 2004 as an Institutional Certification Evaluation Body, it states the following: "As part of supporting student life, besides developing a mechanism to provide proper consultation services for students' physical and mental health and guidance related to health and hygiene, etc., additional support for students' living environment is necessary. For students to lead a comfortable and safe life during their studies, students' human rights need to be guaranteed and sufficient consideration should be made to prevent any harassment." Accordingly, giving sufficient consideration for harassment prevention is regarded as one of the issues Japanese universities should be working on.

In addition, within the "Basic Policy on Labor Measures," approved by the Cabinet on December 28, 2018, and based on the "Comprehensive Promotion Act on Labor Measures, Employment Stability, and Fulfilling Work Life, etc.," the "development of the work environment, including workplace harassment measures and diversity acceptance," is stipulated in association with these labor-related measures. Furthermore, on March 8, 2019, a draft bill on revising a part of the Laws concerning Promotion of Success in Women's Work Life was submitted to the 198th Diet of Japan (ordinary session). The draft bill includes legislation of power harassment prevention measures under the Comprehensive Promotion Act on Labor Measures and reinforcement measures for sexual harassment prevention, etc., under the Equal Employment Opportunity Act for Men and Women, Child Care and Family Care Leave Act, Comprehensive Promotion Act on Labor Measures Promotion Act on Labor Measures, etc.

Regarding the situation at OIST, the official website article, "Response to claims of discontent and harassment at OIST as reported in the press" (date of April 2, 2019), an explanation was made for suppressing harassment at OIST. In addition to the statement, "OIST policy is that all university employees and students can seek a resolution to any harassment incident with confidentiality and privacy," followed by a statement, "OIST intends to initiate an independent survey of the workplace environment."

The Auditors recognize the efforts including the implementation of additional support mechanisms through the creation of the Academic Affairs Consultation Coordinator position within the GS Office to provide support for students' issues and establishment of University Community Services (UCS), which provides support for faculty, staff, students and their families.

Additionally, in the summary report from the faculty to Dean of Faculty Affairs (DFA) for the Faculty Annual Performance Appraisal, which is to be introduced beginning in FY 2019, "the mentoring of research unit personnel, including personnel conduct in the lab" to be included as one of the items to be reported to the DFA. In the future, further efforts to develop respectful workplace and harassment prevention, etc., are expected to be promoted.

4. Reinforcing Top Executive Governance and Management Foundation

At OIST, since FY 2018, the Chief Operating Officer (COO) and the Provost were 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, obtaining external funding was also confirmed. The items are confirmed as follows.

(Enhancing Top Executive Governance, Correcting Vertical Structure, and Ensuring Timeliness)

- There are regular meetings that include the President, the Executive Vice President, the Provost, and the 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 COO stated, "Until the previous fiscal year, there was no position to carry out crossorganizational tasks with authority and responsibility; therefore, it took time to solve issues across multiple divisions and allocate tasks for which ownership was not clear. In FY 2018, these cases were promptly shared among executives and relevant divisions and discussions were held at each level to create solutions."
- The VP for Finance Management stated, "With the COO above the other parallel administrative VPs, coordination among VPs was supported by the COO, and the burden on the President was alleviated to a certain extent." The VP for Gender Equality and Human Resource Development stated, "VPs are less likely to receive direct instructions from the President, and the allocation of tasks has been improved."
- According to the Graduate School, "The newly established Provost position improved the openness of the communication among the three research and education deans, thus enhancing information sharing and cooperative mechanisms. Through this improved communication, we can promptly respond to problems and issues while being able to predict and avoid potential problems and issues in advance."

(Obtaining External Funding)

- With regard to 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 769 million yen, while the predicted figure for FY 2018 had been 827 million yen as stated in "OIST Medium-Term Strategy for External Funding (April 2018)."

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 vertical 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 are able to be more promptly supported.

In addition, regarding the acquisition of external funds, 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, Working Hour Management, and Human Resource Development

As OIST continues to expand, securing excellent human resources will increasingly be deemed necessary as business volume is expected to increase. In addition, the future expansion of OIST will necessitate the strengthening of management and there is an urgent need to improve the mid-class management capabilities (job sharing, task progress management, subordinates' working hours (overtime management), etc.) The items confirmed are as follows.

[Hiring, Working Hour Management, and Human Resource Development, etc.]

- 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 overtime work was reduced by 39.8% throughout the entire FY 2018.
- Regarding mandatory training, it was announced that April and May 2018 would be the months for taking mandatory training courses, and encouragement from the management was also provided. As a result, the attendance rates for the proper use of public funds training has improved as a whole. However, in connection with the Faculty Affairs Office (FAO), of the five mandatory training courses, the attendance rates for two courses were 78% and the other three were 79%, which were all below 80%.
- It was the second year since the management skill improvement training for mid-class managers (OIST Management Forum) was started. Although this training is generally well received, it took long hours and required some preparation time for the presentation. As a result, the mid-managers' burden has been high as they participate while conducting normal operations, and there were opinions on whether it would be possible to do something about the duration of training hours, etc.
- Regarding training in general, Human Resource (HR) trainings and trainings that are provided by other Divisions/Offices, some are not uniform and do not adequately address the needs of everyday practices. There were opinions like "the significance of the training was missing" and "the training created a feeling of undue burden."
- Other opinions and suggestions on the improvement of training include the following. 1) Clarification is needed for the annual plan, contents of training, target trainees, clarification of needs for prior preparation, required prior knowledge level, period of commitment, etc. 2a) A hearing with target employees is needed to create better training programs, and 2b) a survey to evaluate current training is needed to appropriately fill the

needs of OIST employees and students. 3) Coordination among training providers is necessary to use resources more effectively and avoid duplicate training. 4a) The promotion of training programs specific to the work content of each division and section is necessary, and 4b) there is a need for more practical training (for both general and professional matters). 5) The reinforcement of general training for junior staff and the formation of peer groups are needed. 6) There is a need to train young staff who may become future manager candidates, instead of providing training courses only for experienced managers. 7) Considering the diversity of work within OIST, imposing training on managers themselves for the sake of improving the effectiveness of the training itself may be an issue. 8) It is better not to expand the training programs; though provision of training courses is good and should be continued with an improved degree of perfection. 9) The volume of annual online training should be reduced.

- The Technology Development and Innovation Center (TDIC) requires its employees to allocate 5% of their workload for vocational skill development through participating in seminars and building up their networks.
- 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, it was discovered that there were some tasks that could be completed using Telework in Communication and Public Relations Division (CPR) and GS, etc. However, for HR, currently it would be difficult to shorten the core time (5 hours) of flextime; accordingly, HR is not considering the introduction of Telework at this stage.

In the 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 2018 through the reinforcement of work time management. At the same time, business will continue to expand in FY 2019 while growth in personnel budget will be limited, and accordingly, further efforts to increase efficiency will be deemed necessary at OIST.

In regard to training, there are opinions pointing out the current training's lack of uniformity and content required for practical use, etc. Based on this feedback, HR as the main division responsible for training, after grasping the entire scope of the training, should listen to the needs of employees and students from each Division/Office and unit and review the respective training program. This will guide efforts to reduce the trainees' burden while raising the effectiveness and efficiency of the training and improving the training quality through more schematization and coverage of the overall

training session.

6. Business Efficiency

In order to cope with the workload increase, workflow review and improvements of operational efficiency will be deemed necessary. Regarding these, several good practices have been confirmed as follows.

[Business Efficiency]

- In addition to the systematization and consolidation of the materials related to the estimation request, the e-bidding system was replaced. By replacing this system, the number of hours of labor for the person in charge has decreased by about 0.9 days per bid.
- The introduction of the asset management system, Radio Frequency Identifier (RFID), has streamlined the management of fixed assets.
- 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.
- The travel payment rules for OIST workshop participants were revised to simplify administrative procedures and reduce costs.
- Due to the increase of faculty and employees, the Information Technology Division (IT) service desk used to be overloaded beyond its capacity, so a renewed system was introduced to automate some of the workflows and to reinforce search functions. As a result, the number of inquiries has been reduced and the average solution time has been cut down by approximately one third compared to the previous system.
- As for Robotic Process Automation (RPA) at OIST, it has been introduced experimentally as a part of some regular business operations, including the automation of collaborative work related to the ID issuance process of the Chief Information Officer (CIO) Office and the monthly operations related to collecting security scan results.
- In the Graduate School, in addition to holding management meetings every week, having frequent individual meetings has enabled them to detect the problems and issues that each section faces at an early stage, and they are able to solve these problems twice as fast as they could before. Also, the communication among the sections has been improved, which enabled the active opinion exchanges necessary to carry out their work in an efficient manner.
- Many projects and events in TDIC are run by ad hoc teams of different section members within TDIC, and some projects involve staff members from other divisions. Searching for

efficient sharing of expertise within and between divisions as necessary in a matrix-like operation structure could be a breakthrough under the tightening PEREX.

The Auditors recognize that further active efforts to improve business efficiency have been implemented in various forms in comparison with the previous fiscal year. Especially at TDIC, for their projects and events, the ad-hoc teams comprised of different section members were carrying out their operations based on a matrix structure that may be useful for other divisions.

In addition, with the aim of improving productivity through the automation of tasks using robots, Robotic Process Automation (RPA) has been introduced as a trial in some administrative work at OIST. Though RPA has been getting attention in Japan only recently, in the current social and economic situation that needs to reform the work style and labor shortage, RPA has been rapidly disseminated mainly among companies. According to an article in Nikkei Computer dated January 15, 2018, the predicted number of companies to introduce RPA would exceed more than five thousand in 2018. Furthermore, RPA has also been disseminated among small and medium companies, local public organizations, etc., and the government of Japan decided to promote work reform utilizing AI and RPA as one of the concrete measures for realizing the so-called digital government stipulated in "Future Investment Strategy 2018," which was approved by the Cabinet on June 15, 2018. More attention is also being paid to RPA among university officials. Waseda University, which has been working on structural operation reforms since FY 2011, has introduced RPA on a trial base, and as a result they found approximately 30% of the operation can be reduced through introducing RPA that annually handles approximately 220,000 cases of checking invoice contents and registering them to the system. Based on this outcome, Waseda University decided to promote the use of RPA across the university, expanding the scope of its application. RPA can be effectively applied to operations that are routine and repetitive with a certain volume of data processing. At OIST as well, while promoting business reform including the advanced use of IT, it would be useful to analyze the current operation and even "to visualize the current operations," so that consideration can be made on whether there is any area where RPA can be used.

7. Compliance and Budget Management, etc.

OIST is a private school corporation, which is operated by 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.

[Compliance]

In FY 2018, internal audits were conducted on competitive funds, the monitoring of misconduct, business continuity management, research safety and health management, and information security (following up on issues pointed out in the FY 2017 internal audit). Based on the results of these internal audits, improvements are being made to asset management operations. In FY 2019, internal audits will focus on competitive funds, the monitoring of misconduct, research safety and health management, etc.

[Management of Budget Execution]

• In FY 2017, the unused amount of the Cabinet Office subsidy reached 391 million yen. In response to this, budget execution management was reinforced during FY 2018, but the unused amount of the FY 2018 subsidy increased to 639 million yen.

[Management of Research Budget Execution]

• The internal audit of the Compliance Section monitored whether the purpose of research operation expenditures (PRP 28.2.4) have been observed, whether goods with high-monetary values as defined in the PRP have been properly managed in accordance with OIST rules, and whether there have been no occurrences of misconduct with any pooled funds. According to the internal audit results, though no serious violation was found, minor points were identified, including: (1) minor deficiencies in asset management procedures for goods with high-monetary values and (2) inconsistent dates on accounting vouchers in some reagent-ordering procedures. Regarding the former case, measures to improve operations have already been submitted from the Accounting Section, and regarding the latter, improvements to the ordering procedure are currently under consideration.

Though reinforced budget execution management was conducted in response to the FY 2017 unused amount of 391 million yen subsidized by the Cabinet Office, the FY 2018 unused amount reached 639 million yen, which is 1.6 times more than the amount in FY 2017. Accordingly, it is deemed necessary to carry out a detailed analysis for the causes of this result so that the budget execution management can be drastically reinforced. In addition, immediate improvement measures need to be conducted for minor deficiencies identified in the internal audits.

8. Construction Delay on Lab 4 and its Impact/Measures

According to the OIST Business Plan, the completion of the Lab 4 building, which is indispensable for the expansion of OIST, was supposed to be within FY 2018, but the completion during FY 2018 was not possible. The factors causing the delay in construction include contract procedures (unsuccessful bidding), a lack of workers, complications at the construction sites, etc., in

addition to abnormal weather such as typhoons. In the FY 2018 Auditors' Audit, the consequences due to the delay of the completion of Lab 4 construction and strategies to handle the delay were studied. The following are points that have been confirmed.

[Impacts Associated with the Delay and Their Measures]

(Office of the DOR)

- Delay in faculty recruitment and the startup of the lab ⇒ (Measures) Start of research in an interim lab and adjustment of the faculty arrival time.
- Delay to reinforced physical space for research support ⇒ (Measures) Postponement of device purchases.
- Change of budget plan \Rightarrow (Measures) Use of a carry-over system

(FAO)

 Due to Lab 4 being incomplete, new faculty members who have been hired cannot come to OIST. When Lab 4 is completed, many faculty members will arrive at one time in the same fiscal year, which will increase the FAO work temporarily and this may impact the smooth arrival of the new faculty and start-up of their labs. It is necessary to consider these impact measures in close coordination with the Dean of Research Office, the Facility Management Office and the Space Allocation Subcommittee (SASC).

(Graduate School)

• Due to the construction delay of Lab 4, it is expected that there will be some impacts to the arrival schedule of professors, the establishment of new courses, lab rotations, and the placement of students. In addition, space problems such as labs and desks (which have already been insufficient) will not be improved for some time. On the other hand, they plan to make full use of existing resources and to be as responsive as possible.

(Finance)

• The procurement of supplies related to researchers moving into Lab 4 is being postponed; because of this increase in carried-over procurement, a more concentrated procurement schedule is expected to occur temporarily during the next fiscal year. While coordinating with the related sections, at an early stage, the Finance Division will identify all the relevant information on the in-service and move-in period to allocate appropriate resources including staff members.

(HR)

• The delay in completing the construction of Lab 4 mainly affected research units, and HR is not involved other than the employment of RUAs. If there is any impact, a significant increase of the workload of incoming Unit faculty and researchers who have been waiting for the completion of Lab 4 construction is expected. Regarding this issue, the team will focus on

staggering on the hiring dates to avoid any single-day schedule overload.

In terms of comments from the divisions in charge of research and education, the delay of Lab 4 construction has been affecting newly hired faculty who cannot be onboarded, etc., yet. In addition, if Lab 4 is completed, many faculty and staff members are expected to arrive in the same fiscal year, which will temporarily boost the workload including HR relocation services, etc. Based on such predictions, sharing information will be necessary to allow related divisions to prepare in advance so that smooth onboarding processes can be carried out.

In addition, regarding Lab 5 construction, sufficient analysis on the causes of the Lab 4 construction delay as well as special consideration for the necessary procedures for the Lab 5 construction contract should be made in order to avoid similar delays in the future.

9. Information Security and Personal Information Protection

The Auditor's Office has consecutively conducted a survey by the Personal Information Protection Checklist in FY 2018. The following items have been confirmed.

(Information Security and Personal Information Protection)

- Teaching materials for information security were registered in the OIST system as mandatory training on April 2, 2018, which was internally disseminated.
- The information security monitoring system was built and began operation, and the system was able to quickly analyze the cause of the incident and preserve the evidence.
- On April 13, 2018, procedures for handling personal information were issued, and then on March 5, 2019, teaching materials for handling personal information were released, which became mandatory training in FY 2019.
- Regarding training on the handling of personal information, the IT Division gave a specific, explanatory meeting followed by a Q&A session for HR and the Finance Division respectively, and gave the same information during the RUA's general meeting.
- Since there was a mishandling of passports and credit card information under travel management, the IT Division instructed outside contractors and related parties inside OIST to improve business processes. After that, a personal information system was introduced to transmit and receive confidential information with external parties in a secure way.
- 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 owned by OIST.
- As a result of the survey on the management status of personal information protection, there have been improvements since the last fiscal year that almost all the divisions have

implemented, improving efforts to ensure that recorded media is stored and locked in the designated place in accordance with the Guidelines for Personal Information Protection (GPIP), Article 15. On the other hand, many divisions are still unable to develop a personal information management ledger to keep a record of how personal information is handled, including its use and storage, etc. (GPIP, Article 17). In addition, there are only a few divisions that have registered on the Personal Information Registration Site.

A single mistake in any area such as personal information protection or risk management 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% executing rate, and for all the OIST members to make the utmost efforts to establish and maintain the internal checking systems.

In addition, regarding the findings that there are only a few sections and units that have registered personal information, the Auditors' recommendation as follows.

 Although OIST demands all personal information files owned by a unit or the person in charge be registered on the Personal Information Registration Site, it turned out that only a small number of registrations have been made. Accordingly, it is necessary to urge all sections that own personal information to promptly register this information.

10. Enhancement of Public Relations and 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]

- The FY 2018 top three instances of domestic media coverage on research results were as follows: 1) Wave Power Converter (Prof. Shintake), 2) Ebola virus core structure (Assistant Professor Wolf), and 3) Bashofu (Dr. Nomura). The top three instances of international media coverage were: 1) Ebola virus core structure (Assistant Professor Wolf), 2) cancer cell target virus structure (Assistant Professor Wolf), and 3) perovskite solar cells (Associate Professor Qi).
- Press conferences and roundtable meetings with reporters (Science Café) have been held seven times in total in Tokyo and Okinawa. To disseminate OIST's activities to the general public, the Science Talk, featuring Okinawan researchers at OIST, has been held six times at Junkudo Bookstore in Naha.
- By introducing a staff member who will focus on multimedia content, including videos in

various formats, it is expected that videos will be used more in the future to address OIST's strategic priority areas.

• A video series called OISTer Pearls was launched to share personal stories of staff members working in various areas within OIST.

[Community Relations, etc.]

- The number of school visits to OIST as follows. The total number of elementary, junior high and high school students in Okinawa Prefecture was 59 with a total of 3,305 students in FY 2016, 53 schools with a total of 3,800 students in FY 2017, and 54 schools with a total of 3,554 students in FY 2018. The total number of super science high schools (SSH) was 7 schools with 336 students in FY 2016, 9 schools with 608 students in FY 2017, and 5 schools with 313 students in FY 2018. The total number of elementary, junior high, and high school students who visited OIST was 4,262 from 78 schools in FY 2016, 5,133 from 72 schools in FY 2017, and 4,378 from 73 schools in FY 2018.
- The 9th Science Festa 2018 (Open Campus) on the main campus was held on November 17, 2018, with approximately 4,500 visitors.
- The 9th Onna Village OIST Children's Science Class was held in cooperation with Onna Village for 5 days, from August 20 to 24, 2018, for 142 children who participated in seven classes.
- 4 art exhibitions, 2 music concerts, and 1 Ryukyu traditional performing arts performance were held in collaboration with the Okinawa Prefectural University of Art, etc., and many local residents attended.

In the last fiscal year's 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. Further advancement needs to be made in this area.

Accordingly, the following are the opinion 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.

In addition, regarding community relations, the Auditors would like to touch upon the fact that there was a plan on the Okinawa Prefecture side to create a University Town (Monzen-machi), etc., at the time of OIST's establishment.

According to the "Okinawa Science and Technology Graduate University Surrounding Area Basic Development Plan (The Basic Development Plan)" prepared by Okinawa Prefecture (Planning Department Science and Technology Promotion Section) in August 2007, "The key to the success of this project is how to secure world-class researchers and students, and to this end, we will develop a comfortable living environment including housing facilities, medical care, child education, etc., in conjunction with the development of the University's campus, which will be mainly developed by the government of Japan. The Basic Development Plan is regarded as the guideline to outline the path going forward for the local government administration, private business operators and local residents so they can work together to overcome challenges." The Basic Development Plan also specified the Onna Town Center, the Transportation Center, and the University Town as the developmental hub, also drawing some plans for developing the surrounding areas. For example, regarding the University Town located in Tancha area, it is stipulated: "Considering the continuity and proximity of the Graduate University to the Village Zone, comprehensive development plans are to be made for facilities that would complement current commercial and service functions and for housing areas in view of the proximity between the work place and residence." It was also stipulated, by "utilizing the natural beach area surrounding the Monument in front of Tancha Beach, a new relaxation and recreation resort space, etc. is to be created." Okinawa Prefecture, neighboring local governments, and the private sector, etc., are stated as the main entities responsible for implementing these plans.

Regarding the Basic Development Plan, there were corresponding statements in the document prepared by the Cabinet Office in March 2009 titled, "Effects of Okinawa Promotion Expected by Establishment of a Graduate University" as follows. (1) Formation of an international education and research institute (bridge between nations' cutting-edge knowledge), (2) Formation of intellectual clusters and job creation in advanced industrial areas, (3) Science and technology human resources development, (4) "Maintenance of living environment in the surrounding area and regional development rich in international flavors." It was also stipulated that <u>"O Okinawa Prefecture is</u> supposed to prepare the 'Surrounding Area Development Plan' so that the living infrastructure, traffic system and industrial foundation around the new university campus can be developed to promote a local economy rich in international flavors."

Additionally, in the 5th Onna Village Comprehensive Plan and Basic Concept (planning period from FY 2012 to FY 2021) prepared in March 2012, "Exchange through Okinawa Institute of Science and Technology Graduate University" is described as one of the key measures. It is stipulated that "Okinawa Institute of Science and Technology Graduate University, aiming to be the best in the world, is to be inaugurated, introducing a new history for internationalization in Onna Village. On its inauguration, researchers and their family members will come to Okinawa, which will increase international exchanges. In addition, the business corporations are expected to come to Okinawa in conjunction with OIST research outcomes. Taking advantage of these effects, we will promote connections with the Okinawa Institute of Science and Technology Graduate University to deepen the understanding of different cultures through international exchange, foster the villagers' dreams through contact with a wide range of knowledge, and further promote the attraction of related industries to the village."

OIST has entered into the eighth year since its inauguration and, as it currently stands, there is still no University Town as was planned with Tancha District as its center.

In the future, close dialogues with Okinawa Prefecture, Onna Village, Uruma City and the other surrounding municipalities will be essential in order to form an Innovation Ecosystem by attracting corporations in partnership with OIST research achievements to the area surrounding OIST.

Meanwhile, the OIST official webpage story titled, "OIST President Talks Future in Onna Village" (March 15, 2019) says, "OIST acknowledged it had been some time since the opportunity arose to have a full dialogue with the local community about progress that has taken place and resolved to be more active in its dialogue and engagement with the Assembly and Onna in the future." It also reported that "The meeting adjourned with the agreement to return to more frequent consultation between OIST and the Assembly to discuss how cooperation between Onna and the University could develop into an even more beneficial relationship in the coming years."

Regarding the dialogue between OIST and related local public municipalities in Okinawa, such as 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 public entities in Okinawa." Accordingly, dialogues between OIST and local municipalities have been a requisite matter since the establishment of OIST.

The Auditors expect that active dialogues will be held between OIST and local governments such as Okinawa Prefecture, Onna Village and Uruma City, etc.

11. 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 2018 Auditors' Audit.

[Building Industry-Academia Collaborations and Creating an Environment for Entrepreneurship]

- A total of 17 Proof-of-Concept research projects were conducted in FY 2018.
- The first incubation facility was completed on the OIST campus.
- "The Startup Accelerator Program," an OIST's science and technology entrepreneurship program, was launched, 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 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. The company has been operating in OIST's new incubator facility since April 2019. In February 2019, the final selection interviews for the Startup Accelerator Program 2019 were held, where an Indian team and a Russian team were selected from over 180 domestic and international applications.
- A total of 16 seminars, workshops, and events were held to promote innovation and the development of entrepreneurship.

The Auditors have been paying special attention to what kinds of achievements would 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.

12. 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]

- Japan Institution for Higher Education Evaluation conducted the Institutional Evaluation and Accreditation for OIST and judged OIST as qualified for accreditation.
- In response to the addition of new faculty members, a major revision of the curriculum is underway to provide courses that measure up to OIST PhD course standards. Also, the curriculum is being improved to prevent any duplication with existing courses and to allow all courses to complement one another.
- OIST also offers courses to develop skills important for leadership in scientific research and education. These skills include scientific communication, research ethics, teaching, and business skills.
- OIST is also designing curriculum for which credits acquired through courses provided by other prestigious graduate universities, workshops, summer school programs and science-

training programs can be accepted as OIST PhD course credits.

[Recruitment of Japanese Students]

- Each year, five to six Japanese students are enrolled, with the exception of FY 2015 which had only two. However, the percentage of Japanese students decreased as the total enrollment increased. The total number of Japanese students enrolled to date is 30, compared with the total number of all students, which is 211. Japanese enrollment accounts for 14.2%, with the recent, individual year's rates of 8.3% (FY 2015), 17.1% (FY 2016), 13.5% (FY 2017), and 2.9% (FY 2018) hovering below 20% after reaching 25% in FY 2013 and 22.2% in FY 2014. FY 2018 saw the lowest number and rate (1 out of 34 enrollments).
- Contrary to the trend, in FY 2019 OIST is expecting 5 delayed enrollments of Japanese students who have already been admitted, and another 3 enrollments through the Admissions Workshop and other recruitment channels.

[Recruitment of Female Students]

Female students account for 37%, or 78 out of 211 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), and 41.2% (FY 2018). Since these numbers are above the 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 their efforts to ensure this success continues in the future.

In FY 2018, the Japan Institution for Higher Education Evaluation conducted the Institutional Evaluation and Accreditation of OIST, and OIST continued its efforts to improve its PhD programs. The number of Japanese students enrolled in FY 2018 hit a record low of one student. Going forward, OIST needs to put more focus on the recruitment of Japanese students.

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 2018, 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.

[Gender Equity]

• With regard to gender equality, in FY 2018, OIST was awarded the Diversity and Inclusion

Advocate Recognition Award, a newly created award by The Optical Society (OSA), a venerable Physical Society. With the prize of \$1,500, OIST established the OIST Diversity Impact Fund, which provides subsidies to activities that promote diversity on campus. The fund allows OIST to receive both internal and external donations.

[Asset Management]

At the Research Manager and Administrator Network Japan Annual Conference, OIST's presentation on the verification of cost reduction in procurement won the Poster Award. Also, at the request of the Ministry of Education, Culture, Sports, Science and Technology, OIST provided lectures and demonstrations to their officials in charge of the assetmanagement system (RFID) and the acceptance-inspection system.

[Research Units/Faculty Annual Reports]

• The 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) <u>https://oist.repo.nii.ac.jp</u> that archives and publishes OIST research papers was established to make OIST intellectual outputs accessible worldwide.

[Cyber Security]

• The OIST Chief Information Security Manager (CISM) gave a presentation on OIST's efforts to strengthen cyber security at external seminars including IBM Think 2018 and Cylance Partner.

[Technology Development, Innovation]

• The Startup Accelerator Program, entrepreneurship seminars and workshops, and the Proof of Concept Program's research findings were made public.

[Research Equipment Gallery]

• The Research Support Division introduced OIST's main research equipment under the name of "The Research Equipment Gallery" on its website.

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 wideranged publication in order to attract broader support for OIST.

The opinions of the Auditors are as follows.

• In order to obtain wide-ranging support for OIST, in addition to the outcomes of research activities and education, further efforts should be made to actively disseminate its excelled achievements on gender equality, etc. to boost OIST's stature.

14. Closing Remarks

The University has now entered into the eighth year since its inauguration and is currently in a phase focused on producing results in preparation for the 10th Year Review, as well as solidifying the plans for the next stage. In the Audit of FY 2018, 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.

Overall, we can conclude that OIST has made more progress in many efforts when compared to the previous fiscal year as mentioned earlier. However, we would like to point out that it still has challenges to tackle such as the improvement of trainings, the budget execution management, and personal information protection, in addition to the effective management of temporarily increased workloads due to the arrival of many newly hired faculty and staff within a short period of time.

Lastly, we would like to touch upon the recent movement toward the reform of the school corporation system, which is based on the Private Schools Act, the legal framework for private schools including OIST.

The Ministry of Education, Culture, Sports, Science and Technology set up the Subcommittee for Improvement of School Corporation System, which is under the School Corporation Subcommittee for University Establishment and the Council for School Corporation, to discuss how to enhance governance at private universities, etc. The committee completed the Improvement Measures for School Corporation System dated on January 7th, 2019. The policy suggests ideas and measures for private universities and other institutions that assume prominent roles in the nation's education to improve their operations so that they will continue to gain the trust and support of the public and remain prominent players in the field of education improving the school corporations' governance, allowing them to be more autonomous and proactive, strengthening their management, promoting information disclosure, and creating an environment where students can focus on their studies. The policy requires school corporations to improve and reinforce governance by clarifying responsibilities and authority, including clarification of the executives' responsibilities, reinforcement of the role of the Auditors, and reinforcement of the role of the Board of Councilors. Following the committee's recommendations, the national government introduced a bill (Cabinet No. 22) to partially amend the School Education Act into the current Diet session, which started January 28th, 2019. The supplementary provision to Article 19 of the bill, "Execution of Operations by the Board of Governors" has been added to the Article 6 of the Okinawa Institute of Science and Technology School Corporation Act, which stipulates a special provision of the Auditors' duties, as a partial amendment of the Act. The effective date proposed in the bill is April 1st, 2020.

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

This 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. Virginia Houk, Ms. Mari Takenouchi, and Ms. Akiko Ringdahl 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

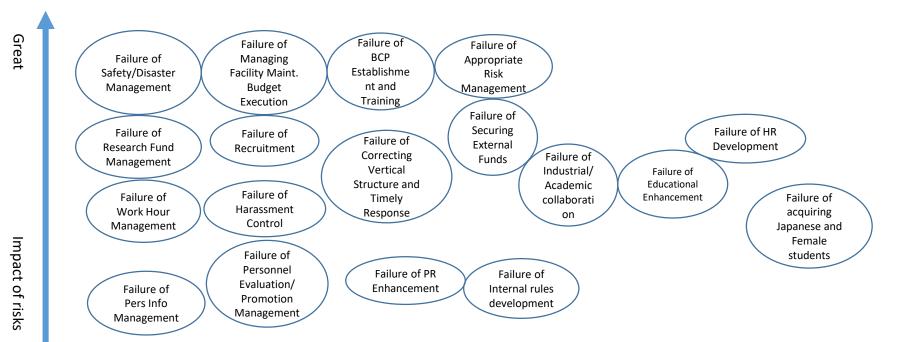
To ensure a steady business operation, Auditors regularly conduct hearings each year, or until sufficient, regarding current status and challenges reported by each division head in charge of following items, and perform site surveys as necessary:

- (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.

Attachment

Auditors' Audit Risk Matrix



Small

(Reference)

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	В	В	А	А	A
Probable Monthly 4	В	В	В	А	A
Occasional Annually 3	• Failure of personnel evaluation/ promotion management	 Fire Staff vulnerability/key response person Inappropriate accounting treatments and financial statement disclosure Failure of internal rules development 	 Accidents at sea Information security Accidents at Lab/SH 	• Server failure	A
Remote 10 yearly 2	С	 Failure of recruitment Work hour management Harassment control Patent/copyright infringement Failure of HR development Sectionalism Academic misconduct 	 Gas leak Failure of recruitment (total number of students, Japanese students) Failure of educational enhancement 	 Deviation from the Act on Regulation of Execution of Budget Pertaining to Subsidies 	 Earthquake/tsunami Pandemic Loss of internet connectivity
Improbable 100 yearly 1	D	Failure to recruit female students	С	В	В

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。	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。
	An intolerable risk, which can only be accepted under extreme circumstances	Operation cannot be accepted, limitation in use must be declared
В	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。	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。
	A tolerable risk, providing the benefit received grossly outweighs the risk	Operation can be accepted with evidence of gross benefit received
С	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。	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。
	A tolerable risk, providing the benefit received outweighs the risk	Operation can be accepted with evidence of benefit received
	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。	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。
	A broadly acceptable risk, which may be treated as negligible	Operation can be accepted with evidence of low risk