

# **PROPOSED FRAMEWORK OF THE UNIVERSITY**

## **(Revised Draft)**

### **1 Reasons for establishing the university in Okinawa**

#### **1.1 The need for a new graduate university**

##### **1.1.1 The need for integrative research**

Today's science and technology is making so rapid a progress that every nation wishing to be at the forefront of science and technology and to remain technologically competitive in the global market, is faced with a need to improve its national educational and research system.

Many of the rapidly emerging areas of science and technology are typically multidisciplinary or transdisciplinary, calling for integrative research of various disciplines. Many of the global problems that mankind face today are also transdisciplinary and integrative approaches are required to solve them.

In these fields of research, the traditional boundaries between basic and applied research tend to be blurred and university research is often more closely linked to industry and the economic prosperity of a region.

One of a number of such multidisciplinary or transdisciplinary problems is to understand the mechanisms of life. It is one of the keys to solving a major health problem of mankind as well as global environment and food problems, and many major universities in the world are making various efforts to accelerate the integration of disciplines in the life sciences.

##### **1.1.2 Need for a larger pool of highly educated people**

In today's world of science and technology, it is increasingly important for a nation to build a larger pool of scientifically and technically educated people who

can flexibly contribute to the rapid progress in science and technology and open up new fields both in research and industry.

It typically requires a doctorate-level education to have this kind of people. There is a growing need in many industrialized countries for a larger pool of Ph.D. holders in science and engineering.

This is especially the case with transdisciplinary areas of science and technology that require a much wider range of knowledge and skills than traditional disciplines.

### **1.1.3 The need for a new graduate university**

In Japan, it is not an easy task for existing universities to meet these challenges because they are usually tightly organized on disciplinary lines and tend to be bound by tradition.

This is not bad in itself because there are many lines of research and education that are indispensable for society and need to remain as they are now. This, however, has often hindered the efforts to conduct transdisciplinary work within the framework of existing universities.

It has been especially hard in life sciences to make such an effort and to create a new entity for integrative work in Japanese universities because life science researchers belong to various faculties with different occupational orientations. As a result, there exist few such centers of integrative research and education in life sciences in Japan.

It is no coincidence that several countries in Asia are creating new graduate universities or new graduate courses to meet these challenges, especially in life sciences.

It, however, requires the creation of a new graduate university of science and technology that strives to be among the “best in the world” to fully meet these challenges.

## **1.2 Reasons for having this university in Okinawa**

This university will be and will have to be international, as will be described below, both in terms of its faculty and its student population.

Okinawa historically has been a station of international exchange, even during the Edo period, when the rest of the country was closed for international trade. It is also located at a geopolitically important place that is close to the major cities of Asia. Because of the existence of U.S. bases in the island, there is an atmosphere and social infrastructure in the island where English-speaking people may settle and feel more at ease than other regions of the country.

Okinawa is regarded as a proper location to host a truly international university which aims to be the research base of the Asia-Pacific region.

On the other hand, thirty years after the reversion from the United States, the socio-economic infrastructure of Okinawa has become almost on a par with the rest of the country. In order for the region's economy to sustain and develop for itself, however, Okinawa needs to promote a new industry of its own. Such an industry in today's world of global competition, by nature, needs to be based on new knowledge coming from scientific and technological research conducted within the region.

To provide a base for such research, there needs to be a new university and research center in Okinawa which produces not only new knowledge but also the pool of highly-educated people required for a knowledge-based economy. In other words, there is a strong demand for a graduate university in Okinawa. And Okinawa remains a region where substantial investment by the central government is called for because of its special situation.

## **2 Major characteristics of the university**

### **2.1 Objective of the university**

The new university in Okinawa will be a graduate university in science and technology that will conduct and provide the "best in the world" quality

research and doctorate education with an emphasis on integrative work.

The university aims to:

- Contribute to the advancement of science and technology in the world
- Make Okinawa into the leading intellectual cluster of the Asia-Pacific region
- Make the university a “success story” and provide a model for the reform of Japanese universities

## 2.2 Key characteristics of the university

For the new university to conduct integrative research and doctorate education, it does not necessarily have to be a big and comprehensive university with undergraduate students, but should rather concentrate on research and graduate education in selected fields.

It should also strive to be among the “best in the world” institution that will serve as a model for other universities.

Key characteristics or basic concepts of the university will be summarized as follows:

- Best in the world
- International
- Flexible
- Global networking
- Collaboration with industry

The most important of the five is to be among the “best in the world.” For the university to have an impact on the world research communities and on the Japanese society, including universities and industry, it has to make every effort to be the best. It is no exaggeration to say that the *raison d’être* of this university hinges on being the best.

To be among the “best in the world,” a university needs to have a culture where creativity, uniqueness and diversity are respected. It naturally needs to become international in terms of the people, culture, norms, and the language. English will be the “official” language of the university.

To be the “best in the world,” flexibility is absolutely necessary. Rules will be applied flexibly in order not to suffocate individual researchers’ creativity which will be respected above all.

The last two are rather obvious. For the university in Okinawa to be the best, it needs to build a global network with prestigious institutions of the world. Collaboration with industry will be indispensable for its research results to contribute to the transformation of the region’s economy.

These concepts will constitute the basic guiding principles of the design and operation of the university.

## **2.3 Name of the institution**

The name of the university will be:

Okinawa Institute of Science and Technology (OIST)  
for both the research institute stage and university stage.

“Okinawa” is included for an easy identification of the institution. Many of the prestigious universities in Japan also have the name of the located region in its name. “International” was avoided since many universities in Japan, especially those set up in the last 10-15 years, have the word in its name, including Okinawa International University in Ginowan, which was set up in 1972 as the second "international" university. “Institute” was chosen to reflect the fact that it is not going to be a full university complete with humanities and social sciences and that it will remain rather small to medium in size. “Graduate” is omitted for brevity. “Science and Technology” is preferred to “Technology” to indicate the university’s dedication to basic research.

## **3 Research and education**

### **3.1 Basic ideas and principles**

This university will strive to offer the “best in the world” research and

doctorate education in selected areas in a number of core disciplines and in integrative work on most challenging scientific themes.

## 3.2 Research and education fields

The following description is to provide a general view of the research and education of the university and should not be taken to restrict the direction of its future development.

### 3.2.1 Core disciplines

In order to be among the best, it is advised to concentrate its resources and efforts on selected areas. But at the same time, in order to flexibly meet the most important and challenging questions of the present and the future, it will need to have world-class research and education in a range of disciplines.

So as to meet these two seemingly conflicting requirements, it will aim to be among the best in the world in selected areas in the following “core disciplines”: (1) physics, (2) computer and information sciences and mathematics, (3) chemistry, (4) materials and systems engineering, and (5) bioscience. In terms of education of graduate students, these disciplines will deal with such subfields as follows:

Discipline	Examples of subfields
Physics	basic physics, interface physics, condensed matter physics, biophysics, astrophysics (theoretical)
Computer and information sciences and mathematics	mathematics, parallel and distributed computing, media and interface computing, computation for biology
Chemistry	advanced basic chemistry, surface and interface chemistry, chemical biology
Materials and systems engineering	materials designing and devices, materials processing, systems engineering
Bioscience	molecular network, cellular network, integrative biosciences and systems, neuroscience, biometrics and bioengineering

### 3.2.2 Integrative research and education

Since many of the most challenging and important questions facing mankind are multidisciplinary or transdisciplinary, the university will aim to be of a new kind that will foster “integrative” work. As is mentioned below, every effort will be made in the university’s design and operation to encourage integrative research activities.

While creativity of individual scientists will be respected above all, they will be encouraged to access needed disciplines in order to tackle intellectually exciting opportunities.

When the university is set up, a major emphasis will be placed on integrative research and education in biosystems. A living cell or organism is a very complex system involving countless series of physico-chemical interactions. To understand the functions of its components and describe it as a system is a major academic challenge that may lead to many clinical and industrial applications.

Such emphasis is called for not only because of the academic challenge and possible practical applications mentioned above. It is also because it provides great opportunities for integrative work. This line of research requires close cooperation between various core disciplines. It also constitutes an important area of life science, where the frontiers in science will lie for the foreseeable future. Life science is one of the four areas where special emphasis is placed in the national science and technology basic plan.

Biosystems are a research area where competition is mounting in the world, but so far, if we look around the world, not so many centers for integrative research and education have been established in this area and few such centers exist in Japan.

Nanoscience and nanoengineering is another field of research and education that is naturally integrative, and it is expected to contribute greatly to the research in biosystems. It is also one of the four areas of research, along with life sciences, where special emphasis is placed in the national science and technology basic plan.

### **3.2.3 Focus within integrative research and education on biosystems**

Integrative research and education on biosystems actually could involve vast array of research and education in life science. When the university identifies some focus within the wide scope, it would be a good idea to utilize the strength of Japanese science and technology as well as the strength of other participating countries.

At the initial stage, the research institute and the university will conduct research in such areas as neuroscience, nanobiology, biomaterials, systems biology, health science, and research on man and environment.

## **3.3 Organization of research and education groups**

The structure discussed in this section is proposed for consideration by the future presidents, who will propose the actual structure to be approved by the Board.

### **3.3.1 Departmental structure**

A university over a certain size will need substructures of faculty members for educational and recruitment purposes. This university will have “groups” instead of “departments” in line with the core disciplines lest they should be interpreted as traditional departments that tend to be closed to each other.

The number and kind of groups will be determined based on the pool of researchers actually recruited by the university. It is expected that in principle, the five core disciplines will have their own groups. These groups will provide doctoral courses in core disciplines.

All faculty members will belong to one or more of the core disciplinary groups. One possible way to prevent these disciplinary groups from developing into narrowly divided independent “departments” is to have three deans who will cover physical sciences, engineering, and bioscience respectively.



With respect to the organizational structure for research, cooperative research centers will be established to stimulate integrative research, and all faculty members, whether or not they are involved in integrative research, conduct research at one of the integrative research centers, so that daily communication will be encouraged between researchers with different background. One of these centers is expected to be for biosystems research and other centers may be one for nanoscience & nanoengineering and one for complex systems. The *raison d'être* of these centers will be reviewed periodically. This arrangement could make the university more dedicated to integrative research and education.

There may be a vice president for research who has the power to allocate research space as well as fund for special research projects organized by the Institute.

In any case, offices and lab spaces will not be determined on disciplinary group basis. They will be allocated in such a manner as to foster exchange of ideas among various disciplines and to encourage interdisciplinary activities. Faculty club and cafeteria will serve as the meeting place of people with different ideas and different disciplinary backgrounds. They will be designed and built in such a manner that people would like to drop by to enjoy the atmosphere and to meet people. This would require, among other things, comfortable seating spaces, bar counters, and small meeting/eating rooms in these facilities.

Symposia and seminars could also provide good opportunities for interaction among people from different disciplines. To hold such events frequently, enough space should be allocated for lecture/seminar rooms.

### **3.3.2 Faculty members at the research institute stage**

The university will be first set up as a research institute so that it can get fully operational in research activities and prepare a good research environment before it is set up as a university.

At the initial recruitment stage, the institute is expected to have around 10 principal investigators who will serve as core faculty of the university. Other than starting research activities at the institute, they will be involved, with the

president, in the search, selection, and recruitment of faculty members.

In the recruitment of faculty at this stage, emphasis will be placed on the research capacity of the candidate as well as on the organization of effective research groups.

As a possible scenario, the university, while making its best efforts to recruit top-level researchers, will open when it has around 50 faculty members, accepting around 25 doctoral students as the first annual intake.

### **3.3.3 Number of researchers**

The university is expected to have several core disciplines along with integrative areas and each field needs to have a critical mass of faculty members to retain high-quality research and education.

In terms of research, the necessary number of researchers will differ depending on the actual research themes pursued and members of the faculty recruited. The education of students, on the other hand, requires a certain number of courses and teaching staff in each relevant subject area. Thus, one way to estimate the needed faculty size of a university is to add up such numbers. Through such an exercise, it is concluded as follows:

- That of 200 full-time faculty members will allow the university to provide a backbone of courses that constitute quality doctoral education in each core discipline.
- That of 230 will allow it to offer balanced quality doctoral education with unique features, and
- Ideally, that of 300, equivalent to California Institute of Technology, will allow plenty of flexibility to adapt to future changes in society and academia.

On the other hand, if the university as a whole is to aim for integrative research, a small size is not a handicap but rather can be an advantage: other conditions being equal, integration among faculty is easier in a small faculty than in a large one. The campus is another factor: it is easier for a small faculty than for a large one to fit in the campus without causing damage to the natural environment. The optimal size of the faculty requires a further study.

### **3.3.4 Distribution of faculty members among various fields**

Since faculty members are encouraged to belong to more than one “group” and to join integrative work, the proportion of the number of faculty members in each core disciplinary group will differ depending on the way they are categorized and counted. It will also fluctuate over time; especially at the first stage of the university, it may differ significantly depending on the actual research themes pursued and faculty members recruited.

However, their allocation is expected to be in principle equal among core disciplinary groups except the bioscience group which will have more faculty members; for example, when its size reaches 200 faculty members, each core disciplinary group other than the bioscience group will have around 35, whereas the bioscience group will have around 60.

### **3.3.5 Number of postdocs**

For the laboratories to function properly from the start, the university will need to hire some postdocs with its own resources. Their initial number will be an important part of the start-up package of newly recruited faculty members, and will be negotiated on a case-by-case basis. Later on, many of them are expected to be hired with outside research funds such as competitive research funds from the government and funds for contracted research projects.

On average, the number of postdocs per each newly recruited faculty member is estimated to be around 3. When the university grows to have 200 faculty members, there will be 600-1000 postdocs (3-5 per faculty member) including those hired with outside research funds. In the case of 300 faculty members, there will be 900-1500 postdocs. Since the necessary number of postdocs depends on the need of each research project, these figures are mere estimates and should not be taken to set a limit on their number.

### **3.3.6 Number of graduate students**

Since this is a research-oriented graduate university, the number of

students is set rather small—500 in total or 100 for annual intake, as a target figure. When the university opens, the annual intake will be around 25.

### **3.3.7 Number of support staff**

The number of technical support staff is one of the key factors that determine the research conditions of faculty members. At least one or two technical support staff will be secured for each faculty member plus technical staff to operate central facilities. For example, with 200 faculty members, the total number of technical support staff will be around 400. In the case of 300 faculty members, there will be 600 of them.

### **3.3.8 Administrative and clerical staff**

The number of administrative/clerical staff employed by the university will be about one half of the number of faculty, i.e., around 100 (50 for the headquarters, 30 for disciplinary groups, 20 for various facilities including the library) for 200 faculty members. Each faculty member will be able to hire his/her own secretary as long as his research fund permits. When those secretaries are counted, the number of administrative and clerical staff might be around 300, for 200 faculty members.

### **3.3.9 Estimated current cost**

The annual operating cost will be around 100 million yen\* to \$1 million per faculty member for research, plus other expenditures such as centrally administered research equipment, administration, and operation and management of facilities. Although the proportion of the “other expenditures” tends to lower when the faculty size grows, the total operating cost per faculty member amounts around \$1.5 million at MIT and Stanford University, whose size is 957\*\* and 1,233\*\*\*, respectively. Further examination will be necessary for a more detailed estimate.

\*\$1 ≙ 110 yen in November 2003

\*\*Tenure-track faculty as of October 2001

\*\*\*Tenure-track faculty in 2003

### 3.4 Curriculum of the graduate school

As a research-oriented university, it will accept graduate students well qualified in one or more of its core disciplines. The students are required to pass a qualifying examination before they start concentrating on research activities as Ph.D. candidate.

“Best in the world” quality education leading to a Ph.D. degree will be provided in the “core disciplines” as well as in the integrative fields. The “core disciplines” will also provide basic knowledge and skills required for the education in integrative fields. Each core disciplinary group will be responsible for education of graduate students enrolled in the corresponding program (or programs).

It should be noted here that for the university to provide quality courses in core disciplines to first year and second year students, especially at the initial stage, it will require many visiting professors, adjunct professors, and instructors, and/or educational cooperation with other graduate institutions.

Integrative education may be categorized into horizontally integrative and vertically integrative. Horizontally integrative or interdisciplinary education, which refers to studies that utilize more than one disciplinary approach, will be provided for students in “core discipline” programs who are interested in such areas, by combining the instructions by faculty of two or more core disciplinary groups.

Research centers or their program committees will provide vertically integrative or multi-layer systems education, which refers to studies that try to combine and organize the understandings of different levels of systems with various methodologies. Such education will be developed into a Ph.D. program as soon as systematic education in such a field becomes possible.

The actual courses will be decided by the faculty who will be recruited, reflecting the principle set by the president. An example of list of courses is shown in Appendix 1 for reference.

When the university is opened, it is expected to have such programs as follows:

Science and engineering (理工学専攻)  
Bioscience (生物科学専攻)

These programs will be put together under one Graduate School of Integrative Science and Engineering (日本名 : 融合科学研究科).

Although the university has only Ph.D. programs, it will confer master's degrees to those students who decide to leave after two years.

All lectures and guidance will be given in English. New educational technologies will be introduced as much as possible.

### **3.5 Network with other institutions**

As written in 2.2, one of the key characteristics of this university is global networking. It will accept many visiting researchers and students, regardless of their nationality and length of stay. Offices and lab spaces will be prepared to accommodate visiting researchers with some research fund. It will also dispatch its faculty and students to other institutions inside or outside Japan either for a short period or for a long period. Travel expenses will be offered to selected faculty members.

Collaborative research activities are encouraged with faculty members of internationally renowned universities.

The university will also host international symposia and workshops to increase the exchange of information, researchers, and students with these institutions.

The possibility of providing joint degree programs and transfer of credits with top-class universities will be explored. Distance learning and other educational collaboration with these universities that utilize information and communication technology, will also be explored.

### **3.6 Collaboration with industry**

The university will have a cooperative relationship with industry from the early stage of its founding through such means as inviting board members from industry and setting up university-industry roundtable organizations.

Cooperative research with industry, as well as sponsored research from industry, is encouraged. Donations are solicited for research fund, student fellowships, new buildings and other purposes through various activities. For the faculty involved in collaborative activities with industry, the university will have clear-cut rules for conflict of interest management, patenting and licensing.

An office will be created for an overall liaison with industry, which will include such functions as holding seminars on university's research activities for industry people, soliciting sponsoring companies, matching research results with specific companies, technology licensing, and providing other support for commercialization of research results. Some expertise needed for technology licensing may be sought from appropriate organizations outside the university. A branch office in the United States might be advisable.

The university will also support new ventures spun off from its research activities through various means including the leasing of incubation facilities.

A research park will be developed near the site of the university. The park is expected to attract research institutes and offices of various companies from all over the world as well as research-based new ventures.

## **4 Recruitment of faculty and students**

### **4.1 Recruitment of faculty**

To make this university among the best, the most important thing is to recruit top-class researchers at the outset.

#### **4.1.1 Principles of recruitment and promotion**

Faculty members are recruited through open competition and strict review. Age balance will be sought, but in the decisions on faculty members to be recruited, research capabilities of candidates will be more emphasized.

Young faculty will be employed with a fixed term during which they will have their own research projects and independent resources. Prominent senior faculty will be employed with tenure. Promotion and tenure will be given after strict review that will involve outside researchers.

#### **4.1.2 Strategies for recruiting top-class researchers**

To attract top-of-the-class researchers from all over the world, the university will recruit senior faculty with high reputations as well as provide an excellent research environment. It will also offer salaries, travel expenses, and other benefits that are competitive with top universities in other countries. Such benefits will include high-quality university housing offered at a low rent to faculty members.

New faculty members will be provided with a start-up package for the first three to five years, according to the agreement with them. The package may include most advanced research equipment that is not in the catalog but will have to be developed by the new faculty member. Although faculty members are expected to obtain competitive research fund after the start-up period, the university will have its own research fund to finance various academic activities.

As support for the family life of the faculty, the university will also administer such matters as English schooling for the children of faculty members, employment opportunities for faculty spouses, associated hospitals where English is spoken, and access to urban facilities.

#### **4.1.3 Evaluation of faculty members**

Evaluation of a faculty member will be conducted by the relevant dean through a committee of experts in the research field including outside researchers as well as through the group that the member belongs to.



The evaluation will be based on the member's performance in research, education and service to the university. For the regular review and the review for promotion, the expert committee will evaluate the research aspect of the faculty member. Relevant personnel of the university may be asked as to his/her evaluation of the said member's performance in university service. Industrial collaboration activities such as patent and licensing can be one of the criteria included in the research performance evaluation to supplement academic publications.

#### **4.1.4 Tenure and term appointment**

Tenure will be granted only to full professors.

Associate and assistant professors will be appointed on a fixed term of five years, which may be extended for up to two years based on evaluation. An associate or assistant professor will leave the university when the term is over unless he/she is given a promotion. A grace period may be granted for the leaving faculty to find a new post.

#### **4.1.5 Retirement**

The retirement age of faculty members will be 70. After retirement, the university will not pay salaries to the faculty member but he/she may continue research activities within the university premises as long as outside research grants are awarded.

### **4.2 Recruitment of Students**

As in the case of the faculty, the university will seek top-class students from all over the world who would like to study with the renowned faculty. As financial support for them, the university will have a fellowship program and give them a chance to work as research assistant or teaching assistant. Such support is essential if the university is to recruit bright students from all over the world, especially from North American colleges and universities. It will also offer them dormitories at a low rent.

The selection of students will be based on the scores of standardized tests, transcripts from the college (and graduate school, if applicable) that the applicant attended, statement of purpose, and letters of recommendation from professors or other people who know the applicant. Applicants whose native language is not English should take a test such as TOEFL and TOEIC and take an English course after being admitted if necessary.

The academic calendar starts in September, but the university will accept students both in September and in April to facilitate the application by Japanese students. (In Japan, the school year starts in April.)

## **5 Facilities and equipment**

### **5.1 Campus design**

The campus will be built to make use of the rich natural environment as far as possible. Subtropical trees and flowers will be found everywhere and many of the buildings will be almost buried among them. Paved roads for cars and trails for pedestrians will connect various facilities of the campus that will be developed with minimum change of the natural landscape. From the top of the buildings and vista points along the trails, one can command a view of the beautiful beach of Okinawa.

A major challenge for the architect is to design the campus and facilities in such a way that interactions among researchers are encouraged to the maximum extent while the surrounding nature of the campus site are preserved as far as possible.

A science park that will accommodate corporate research institutes and venture companies around the campus will be constructed in the future.

### **5.2 Kind and size of needed facilities (to be revised later)**

Examples of major facilities built on campus will be the following:

- Laboratories
  - Dry labs and wet labs may be set in different buildings to save the cost of building maintenance.
- Central facility for major research equipment
- Computing center
- Machine shop
- Other facilities to house the equipment listed in the next section
- Botanical garden/aquaculture facility
- Central and disciplinary libraries
- Office spaces for researchers
- Lecture & seminar rooms/auditorium
- Faculty club/student service facility
- Administration building
- Faculty housing/dormitory
- Guesthouse
- Facilities for training courses, workshops, and symposia
- Athletic field/gymnasium
- Restaurants and shopping facility that are open to the public (open because it would contribute to the quality and variety of foods and goods)

As far as possible, these facilities will be connected with roofed corridors to facilitate human traffic during the rainy season and typhoon season in Okinawa. Each common facility for research (except central facilities) will be managed by a relevant disciplinary group though it is open to all researchers of the university.

This university will not have a so-called university hospital. The university will form a partnership with research hospitals within or outside Okinawa to facilitate biomedical research and education.

Incubation facilities for new enterprises may also be built in the campus or in the neighborhood.

The construction cost is provisionally estimated around 80 billion yen (\$727 million\*), but it needs to be examined in cooperation with architects and experts in the research fields of OIST, along with the size of each facility and the total volume of these facilities.

\*\$1 ≙ 110 yen in November 2003

### **5.3 Equipment**

Required equipment for research differs greatly depending on the actual approach employed by the researcher. Therefore, equipment for laboratories will be purchased according to the needs of the faculty. Some devices will be developed in the university. It is, however, possible to estimate what kind of equipment is likely to be needed. Equipment most likely to be used at the university is listed in Appendix 2. Major equipment will be shared by all labs concerned and will be administered by technical staff at the central facilities.

## **6 Governance of the university**

The university will be established as a private institution by a school corporation (学校法人). The organization for governance is presented below as a model for future consideration.

### **6.1 The Board of Trustees**

A Board will be formed as the policy-setting body of the corporation. It will consist of ex officio members and members elected by members.

As the university grows, there will be increasing number of elected members from the business world with some people from academia, and the participation of high profile persons will be sought from inside and outside Japan.

Ex officio members will include representatives of the central and Okinawa governments as well as officers of the corporation.

The following will require the decision by the Board of Trustees:

- Appointment and dismissal of the president
- Budget, long-term borrowing, disposal of important properties
- Change of bylaws

- Merger
- Dissolution of corporation
- Important matters concerning for-profit activities
- Other important matters prescribed in bylaws

The appointment and promotion of faculty members to tenure positions will have to be approved by the Board. The Board determines the principles that need to be followed, including the procedures, but will not actually be involved in the selection of individual faculty members.

The size of the Board will be around 20 at most, which will include the president, the secretary of the corporation, and the treasurer as ex officio members. A small Executive Committee will be formed as a standing committee of the Board to meet more frequently and to make necessary decisions.

## **6.2 Academic advisory board**

An academic board may be formed as a separate entity to give the board advice on academic matters.

## **6.3 Officers of corporation**

The officers of corporation will include the Chair of the Board, the Vice Chair of the Board, the President, the Secretary, and the Treasurer.

The chair of the Board will be elected from among the members of the Board of Trustees, preside all meetings of the Board of Trustees, and will propose the membership of the committee that will propose new members and membership of committees.

The vice chair of the Board will perform the duties of the chair during the absence or disability of the chair of the Board.

In most private universities in the United States, the president is the chief executive officer of the corporation as well as the university. It constitutes a major difference from many Japanese private universities where the chair of the

Board manages the corporation and the president the university. When we follow the U.S. model, the president will have general supervision over the business of the corporation and the university and over the several staff officers subject to the control of the Board of Trustees. He/she will prepare and present the business to be acted upon by the Board, including the budget of the corporation and the university. He/she must have excellent scientific knowledge as well as management skills.

The secretary will give notices to the trustees, take and keep record of the Board meetings, and notify the trustees of elections.

The treasurer will have the custody of the funds, securities, and other properties of the corporation.

There may be other officers designated by the Board of Trustees.

The following persons will not be officers of corporation but may attend the Board meetings in case these officers are created.

The chief academic officer will assist the president in academic affairs. This role may be divided into a few vice presidents.

A vice president will assist the president in administration and external relations of the university.

The deans and the directors of research centers will report to the chief academic officer. The chief academic officer, the vice president(s), the deans, the research center directors, and other people in management positions will form the cabinet of the president.

There will also be two university auditors, who will be responsible for internal audit of the corporation's financial accounts and records.

#### **6.4 Executive committee**

A small Executive Committee will be formed as a standing committee of the Board. It will consist of the president and a few members of the Board who

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are designated by the Board.

The Executive Committee may exercise all the powers of the Board of Trustees except those listed above.