

Host Institution's Commitment

To MEXT

Osaka University
Shojiro NISHIO, President

I confirm that the measures listed below will be carried out faithfully and concretely as follows regarding "Premium Research Institute for Human Metaverse Medicine (PRIME)" if it is adopted under the World Premier International Research Center Initiative.

Concrete Measures

• Describe the concrete measures that the host institution will take to satisfy the following requirements.

1) For the center to become a truly "world premier international research center" and independent by the time WPI support ends, the host institution must clearly define the center's role within its own mid-to-long-term strategy and provide its comprehensive support from the time that the funded project starts, while showing that the center contributes to achieving the host institution's missions, etc.

※ Describe how the center will contribute to achieving the host institution's missions, enhance the founding spirit/philosophy of the host institution, and contribute to realizing the objectives of its operation, etc.

※ Describe the center's role within host institution's own mid-to-long-term strategy.

Under the motto "Live Locally, Grow Globally," Osaka University has consistently pursued its educational and research activities in line with its "Osaka University Charter" to contribute to the well-being and welfare of society, world peace, and harmony between humankind and the natural environment. In particular, as stated in the "OU Master Plan 2027"¹ (established on January 19, 2022), the University's mid-to-long-term management vision, the University is currently developing the OU (Osaka University) Ecosystem, which embodies systematic co-creation with society, to solve social issues as a world's most innovative university aiming to create "a society where each member leads a meaningful and fulfilling life". The world that PRIME aims to create, "a world that overcomes diseases and where everyone can live a long and healthy life," concurs with "a society where each member leads a meaningful and fulfilling life".

The center will be established as the world premier international research center that is promoted in accordance with the university's mid-term goals, mid-term plan, and the OU Master Plan 2027. Also, to achieve the above-mentioned mission, the OU Master Plan will be specifically positioned in the mid-to-long-term plan of the University when it is adopted. In addition, as one of the world's leading research centers in new academic fields, the University will provide full support for necessary institutional reforms and the development of research implementation systems to realize a world-class research environment and to ensure that such activities can be sustained even after this support ends.

2) Provide a mid-to-long-term policy on the direction of the host institution's operating organization, one that includes the reform of the institution's existing organization in ways that will achieve the center's independence and create a permanent place for it within the organization. A concrete plan must be established and a schedule set for carrying out the restructuring of the host institution's organization.

※Describe your mid-to-long-term policy on the direction of the host institution's operating organization and provide a concrete plan and schedule.

As described in 1) above, when the project is adopted, the University will position the center in a concrete manner in its mid-to-long-term plan and give a permanent position as one of the centers of the International Advanced Research Institute. By providing supports described below, the University will establish its position as an international research center and make the center permanent.

1. To ensure the implementation of the proposed research plan, the University will secure resources (including competitive research funds obtained by the center's researchers, in-kind contributions from the University (e.g., provision of research space), and donations from external sources) equal to or greater than the amount of support from the WPI Program from the first year.
2. Gradually increase the amount of external funds acquired from the third year onward to cope with the expansion of the research system and the reduction in the amount of support from the WPI program from the sixth year onward. In addition, this center will be treated as an internal organization with the same rights to request budget and personnel as existing departments, enabling the organization to become self-supporting.
3. In acquiring external funding, the URA at this center will support the application by research groups consisting mainly of researchers at the center for large-scale external fundings (such as large-scale projects under Grant-in-Aid for Scientific Research, AMED, JST, etc.), by quickly identifying information on external funding, organizing research projects, and providing support for their application. In addition, to enable foreign researchers to apply for external funding in Japan from the same starting point as Japanese researchers, information necessary for obtaining external funding will be provided in English. Furthermore, we will aim to obtain grants from overseas by foreign researchers in this center. This support will be ensured by utilizing the knowledge of the university's IR/URA organization, the Office of Management and Planning, and the URA of the Immunology Frontier Research Center (IFReC), the WPI Academy center.
4. Aim to stabilize the research system by carefully selecting excellent researchers at the center for tenure positions within a few years after the start of the program.
5. Secure the resources necessary for this center to become self-sustaining, by utilizing the knowledge of the Co-Creation Bureau, an industry-academia collaboration organization of the University, which has achieved large-scale industry-academia collaboration to make IFReC self-sustaining. (Reference: Industry-university collaboration-related income of IFReC in FY2020: 1.81 billion yen/61.8% of total project cost.) The Co-Creation Bureau will cooperate in the promotion of industry-academia collaboration at PRIME from the first year, and strengthen it especially from the sixth year onward.

Through the above efforts, the ratio of support provided by this program will be gradually reduced, especially after the 6th year, and at the end of the 10th year of the support period, it will smoothly transition to a permanent organization within the University.

3) Describe the host institution's concept for allocating its basic and other budgets and provide sufficient support for carrying out the center's operation and research activities, including necessary human, financial, and system support. In addition, when utilizing external funds other than the WPI grant for the center's operation and research activities toward realizing the missions of the host organization, show the relationship between the center and the other external funds.

* If a prospect exists for utilizing external funds other than the WPI grant for the center's operation and research activities, indicate the application/acquisition status of the relevant external funds and the relationship between them and the center. (If the following programs are included, be sure to describe them. Their relationship to the center can be illustrated if appropriate.)

- WISE Program (Doctoral Program for World-leading Innovative & Smart Education, • Supereminent Program for Activating Regional Collaboration (SPARC), • Open Innovation Platform for Industry-Academia Co-creation (COI-NEXT), • Center of Innovation (COI) Program, • Program for Promoting Regional Revitalization by universities as Center of Community (COC+ Program)

As the host institution of PRIME, the University promises to preferentially allocate resources such as personnel and operating expenses that exceed the amount of support from the WPI program from other financial resources of the University to strengthen its operating base. The center director will be allocated at least 50 million yen per year as discretionary expenses, as well as reallocation of faculty and researcher positions (10 positions in total). The center's operations, especially research expenses, will be funded by external sources other than this program. The PIs of this center will receive about 1.2 billion yen in external funds per year. In addition to the URAs employed by the center, the URAs of the Office of Management and Planning, the University's URA organization, will provide strong support for the acquisition of external funds.

Regarding facilities, the University has already raised the same amount of funds through the 1st National University Corporation Bond (Sustainability Bond, nicknamed "Osaka University Social Creation Bonds that Foster a Purpose of Life") (issue amount: 30 billion yen) on April 28, 2022. The fund raised by the bond issue will be used to implement various projects under the "OU Master Plan 2027" with the aim of realizing "a society where each member leads a meaningful and fulfilling life". A new research building with a total floor area of 20,000m² is scheduled to be constructed in 2026 on the Suita Campus, where this center will be established, using these funds, to provide an environment where center researchers can gather to carry out research activities (under-one-roof), and to secure necessary and sufficient space for the steady implementation of research activities at this center.

4) Provide for the independent operation of the center including after the WPI grant period ends. Provide necessary support to include the long-term provision of human and financial resources, facilities, equipment and other elements needed to retain the center as a "World Premier International Research Center." Also, secure and provide from an early stage of the center's establishment the infrastructure needed for it to carry out its activities (e.g. land, research facilities and equipment, research space), and do so with a commitment to continually maintaining this infrastructure after the WPI grant period ends.

The University will continue to provide various resources necessary for the activities of the center to ensure that it continues to operate independently and remain the "world premier international research center"

even after the end of the support period. This will make the center a permanent organization. In addition, looking ahead to the end of the support period, the University will realize a virtuous cycle of co-creation with society by returning research results to society, and from the early stage of the support period, the University will provide support to enhance the financial base through industry-university co-creation. Specifically, the Co-Creation Bureau will provide strong support for the licensing of intellectual property, joint research contracts with companies, and support for venture startups, in addition to contracting procedures, management, and human resource development for handling such contracts.

Our university, especially Co-Creation Bureau, is leading Japanese universities in industry-academia collaboration, and has a track record of realizing a very large scale (10 billion yen per year x 10 years) "organization to organization" industry-academia collaboration for IFRc and having established an operational foundation after the WPI support ended. This knowledge will be utilized at the center.

Regarding facilities, it is as mentioned in 3), The necessary space will be systematically secured, and the necessary research environment will be secured and maintained after the support period ends.

5) Provide a system that will in practice allow the center director to make decisions in implementing the center project, including personnel and budgets, and that will secure the autonomy of the center's operation.

The host institution will be allowed to operate the center as an independent department of the International Advanced Research Institute (under the direct control of the President) as described above. In other words, the Center Director will have both management and research/education responsibilities, and will manage and operate the center and make decisions centrally within the center. The center director has the same authority as the department heads in terms of personnel matters such as hiring and promoting researchers within the center, and final decisions on budgeting and execution within the center. In addition, to support the decision-making of the center director, particularly excellent administrative staff and URAs will be assigned to provide strong support in terms of office management.

6) Provide support to the center director by coordinating with other departments regarding assigning researchers to the center and creating an effective environment for the center within the host institution. Needed adjustments to do so should be made proactively while giving consideration to their effect on the educational and research activities of those departments.

If the Center Director wishes to have a faculty member of the Graduate School or another research organization of the University participate in the research activities of the center, the Executive Vice President of Research will negotiate with the Dean of the Graduate School or the head of the research organization. At that time, considering the impact on education and research activities, the Executive Vice President of Research will coordinate the assignment of the necessary personnel for education and research activities at the home department of the on-campus researcher who has become full-time at the home institution. The University will also provide support to concurrently appointed intramural researchers to reduce the burden of their educational activities. The University will provide the necessary financial and personnel support for this purpose.

7) Offer cooperation in flexibly applying, revising, or supplementing the host institution's internal systems as needed for the center to effectively implement new management methods unfettered by conventional modes of operation (e.g. English-language environment, merit-based pay, top-down decision making, linkage to graduate school education).

IFReC has implemented many system reforms using non-traditional methods of operation. In addition, the University has promoted system reforms such as a performance-based annual salary system, rules on special measures related to the personnel affairs of world premier international research center departments, and an employment system based on a cross-appointment system. The University will take the lead in incorporating such best practices in the management of this center. Furthermore, in order to support the autonomous and advanced management of this center, the University will proactively consider the necessary environmental improvements, including making the existing system more flexible and revising them.

8) Provide other types of assistance to give the center maximum support in achieving its project and in becoming a world premier international research center in both name and deed.

In order to make PRIME an international research center, we will provide approximately 50 million yen as start-up funds in the first year to PIs from overseas, and will also provide them with research funds to run their laboratories for about three years until they can obtain stable research funds in Japan. In addition, a research space (about 300 m²) will be provided and a Co-PI with extensive experience in research and obtaining research funds in Japan can be appointed to facilitate research during the period of absence in Japan. Also, a total of 10 faculty and researcher positions will be allocated to enable the early launch of research activities in Japan. Furthermore, the Research Support Division for the center and the University-wide Support Office will provide intensive support to foreign researchers, including PIs, to enable them to conduct research efficiently in Japan and to provide them with full support for their daily lives; including their families, so that they can conduct research on a par with Japanese researchers. For foreign researchers on short-term stays, priority will be given to those staying at Kasugaoka House, the University's dedicated accommodation facility for foreign residents.

All researchers and research staffs hired at this center will be recruited internationally, and at least 30% of them will be non-Japanese. The administrative staff and URA of this center will be staffed with people who are fluent in English to provide a research and living environment of an international standard. The University will provide maximum support for the center to become a " world premier international research center " in both name and reality, including the points above.

9) The host institution is to self-evaluate the results of the system reforms achieved by the center and distribute the results that it evaluates highly to all of the departments throughout its organization.

The achievements of IFReC, specifically the globalization of education, improvement of the learning environment including campus life, promotion of international joint research through cross-appointments, and enhancement of URA, have progressed and spread throughout the University.

The University will also position this center as a leader in organizational reform at the University, and will conduct a self-evaluation of the center's performance, and establish an evaluation committee consisting of prominent researchers and businesspeople from Japan and abroad to evaluate the center every one or two years. The results of outstanding system reforms will be horizontally disseminated to

other departments within the university through its executive office.

10) (For host institutions that already have an existing WPI center and/or Academy center) Fully support and sustain the existing WPI and/or Academy center and advance its development as a world premier international research center, while being capable of fully supporting the new center at the same time.

Osaka University has been supporting IFRc, a WPI Academy center, to maintain and develop it as a world premier international research center. Specifically, the University has continued to allocate additional tenure posts (succession posts) to IFRc at the discretion of the President. Furthermore, after the WPI support ended, a new industry-university collaboration scheme was implemented with strong support from the Co-Creation Bureau, a university-wide organization, and comprehensive collaboration contracts totaling over 10 billion yen were initiated with private companies over a 10-year period.

For PRIME, looking ahead to the end of the support period, a virtuous cycle of co-creation with society, such as returning research results to society, will be realized, and support will be provided from the early stage to enhance the financial base through industry-academia co-creation. In addition to contracting procedures, the Co-Creation Bureau will provide strong support for the management of intellectual property licensing, joint research contracts with companies, and support for venture startups, which are necessary for this purpose, as well as for the training of human resources to handle such contracts. By taking advantage of industry-university co-creation, which is one of the strengths of the University, the new center and the existing center will be fully supported and sustained at the same time.

The University is committed to both providing sufficient support for the new center (PRIME) and continuing to support the existing center (IFRc).

11) (For host institutions that already have an existing WPI center and/or Academy center) Take the initiative to spread the existing centers' good system reform results to other departments throughout the host institution and apply them to implementing the host institution's own reforms.

Osaka University has so far voluntarily and proactively spread the excellent results of IFRc throughout the University, leading to the transformation of the institution itself. Specifically, the globalization of education, improvement of the learning environment including campus life, promotion of international joint research through cross-appointments, enhancement of URA, promotion of commercialization of translational research through the medical, dental and pharmaceutical networks in Osaka, promotion of outreach activities, establishment of one-stop acceptance, dispatch and exchange support system, and improvement of multicultural and multilingual global campus environment. As well as IFRc, the University will spread the best practices of PRIME voluntarily and proactively to the entire University, leading to the transformation of the institution itself.