

# **Report on Operational Performance for the Third Medium-term Target Period**

June 2022

National University Corporation

Hiroshima University

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<ul style="list-style-type: none"> <li>○ University overview</li> </ul>
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## (1) Current profile (as of the end of AY 2021)

- ① Name: National University Corporation Hiroshima University
- ② Location
  - Headquarters: Kagamiyama, Higashi-Hiroshima City, Hiroshima Prefecture
  - Campuses: Higashi-Hiroshima Campus: Kagamiyama, Higashi-Hiroshima City, Hiroshima Prefecture  
Kasumi Campus: Kasumi, Minami Ward, Hiroshima City, Hiroshima Prefecture  
Higashi-Senda Campus: Higashi-Senda Town, Naka Ward, Hiroshima City, Hiroshima Prefecture
- ③ Officers
  - President: Mitsuo Ochi (since April 1, 2015)
  - Executive Directors: 8 (including two part-time executive directors)
  - Auditors: 2 (including one part-time auditor)
- ④ Schools, departments and other institutions
  - Academy
  - Headquarters for Education
  - Schools: 12  
School of Integrated Arts and Sciences, School of Letters, School of Education, School of Law, School of Economics, School of Science, School of Medicine, School of Dentistry, School of Pharmaceutical Sciences, School of Engineering, School of Applied Biological Science, School of Informatics and Data Science
    - Training and Research Vessel TOYOSHIO MARU\* (School of Applied Biological Science)
  - Graduate Schools: 4  
Graduate School of Humanities and Social Sciences, Graduate School of Advanced Science and Engineering, Graduate School of Integrated Sciences for Life, Graduate School of Biomedical and Health Sciences
    - Marine Biological Laboratory\* (Graduate School of Integrated Sciences for Life)
    - Setouchi Field Science Center (Graduate School of Integrated Sciences for Life) Saijo Station (farm)\*
    - Setouchi Field Science Center (Graduate School of Integrated Sciences for Life) Takehara Station (Fisheries Research Station)\*
  - Advanced Courses: 1  
Special Course of Special Support Education
  - Attached Research Institutes: 1  
Research Institute for Radiation Biology and Medicine\*
  - Hospital

- Library
- National Joint Usage Facilities: 1  
Hiroshima Synchrotron Radiation Center\*
- Joint Usage Facilities for National Universities in the Chugoku/Shikoku Area: 1  
Saijo Seminar House
- Joint Education and Research Facilities on Campus: 26  
Research Institute for Nanodevice and Bio Systems\*, Research Institute for Higher Education, Information Media Center, Natural Science Center for Basic Research and Development, Morito Institute of Global Higher Education, Center for the Study of International Cooperation in Education, Health Service Center, the Center for Peace, Environmental Research and Management Center, Hiroshima University Museum, Beijing Research Center, Hiroshima Astrophysical Science Center, Institute for Foreign Language Research and Education, Hiroshima University Archives, Institute of Sport, HiSIM Research Center, the Center for Contemporary India Studies at Hiroshima University, Research Center for Diversity and Inclusion, Amphibian Research Center, Translational Research Center, Resilience Research Center, Center for Brain, Mind and KANSEI Sciences Research, Hiroshima University Genome Editing Innovation Center, Hiroshima University Digital Monozukuri (Manufacturing) Education and Research Center, Education and Research Center for Artificial Intelligence and Data Innovation, Harassment Consultation Office
- Attached Schools : 11  
Hiroshima University Kindergarten; Hiroshima University Kindergarten, Mihara; Hiroshima University Elementary School; Hiroshima University Elementary School, Shinonome; Hiroshima University Elementary School, Mihara; Hiroshima University Junior High School; Hiroshima University Junior High School, Shinonome; Hiroshima University Junior High School, Mihara; Hiroshima University Junior High School, Fukuyama; Hiroshima University Senior High School; Hiroshima University Senior High School, Fukuyama
- Note: The asterisk denotes that the indicated facility has been certified as a base for either joint use, joint research, or joint educational use.
- ⑤ Students and school staff (as of May 1, 2021)
  - Students: Undergraduate students: 10,605 (including 105 international students)  
Graduate students: 4,435 (including 1,268 international students)  
(Including Hiroshima University Law School and Professional Development Program for Teachers and School Leaders)  
Advanced Course students: 16  
Attached school students: 3,761
  - Teachers and administrative staff: Teachers: 2,122 (including 218 at attached schools)  
Administrative staff: 1,853

## (2) Basic Objectives of Hiroshima University

## 1. Principles

To fulfill its mission as a national university that upholds its founding principle of existing as “a single unified university, free and pursuing peace,” Hiroshima University is guided by the following principles: 1) the pursuit of peace, 2) the creation of new forms of knowledge, 3) the nurturing of well-rounded human beings, 4) collaboration with the local, regional, and international community, and 5) continuous self-development.

## 2. Basic policy

Located in Hiroshima—the world’s first A-bombed city, known as the International Peace Culture City—Hiroshima University aims to become a comprehensive research university that provides quality education and research opportunities at a level that will enable it to join the ranks of the world’s top 100 universities within the next decade. The University plans to achieve this by reforming itself thoroughly and promoting internationalization through steady implementation of the Hiroshima University Reform Plan, which includes the Research University Enhancement Promotion Project and Super Global University Creation Support Project (with the type-A aim of becoming globally competitive).

In addition, in continuing to respond to the social needs of the times and thereby shine globally over the next century, the University aims to improve its capabilities and strengths so that it can serve as Japan’s national center and Chugoku-Shikoku’s regional center and help the country to continue functioning as a world leader. Furthermore, Hiroshima University aims to cultivate peace-pursuing, internationally cultured people able to work both globally and domestically by maximizing its traditional liberal arts expertise and providing specialized, internationally competitive education programs based on global cutting-edge research.

Regarding research, the University will promote free and highly original research with the aim of conducting world-class research by advancing priority support, such as continuing to build research bases and improve research environments, as it has been doing since the second medium-term target period, and the University will do so by using the Ministry of Education, Culture, Sports, Science and Technology’s Research University Enhancement Promotion Project. The University aims to further conduct high-quality cutting-edge research in such fields as the following, which are its strengths: 1) pedagogy, 2) condensed matter physics, 3) space science, 4) creation of functional materials, 5) semiconductor/nanotechnology, and 6) biotechnology. In addition, being a university that has supported reconstruction from the devastation of the atomic bomb, the University will develop a research base for medical treatment related to radiation disasters, and it will also conduct high-quality cutting-edge research in the fields of regenerative medicine, liver disease, and brain science research.

Regarding education, the University will cultivate peace-seeking, cultured global human resources with specialized knowledge and the ability needed to resolve various unpredictable issues facing humankind. To do so, the University will provide education with high international applicability by using the Super Global University Creation Support Project to concretely implement the Hiroshima University Reform Plan, formulated in the second medium-term target period. In addition, to improve its education to meet international standards and improve the quality of its education, the University will enhance its internal system for evaluating education, and based on evaluations, it will improve its education. Furthermore, the University will receive external evaluation by the Student Experience in the Research University (SERU), an international consortium of research universities.

Regarding social contributions, to help increase international competitiveness and develop innovation, the University will continue putting effort into promoting initiatives aimed at advancing collaboration with communities, the foremost of which is Hiroshima Prefecture, and industries, including transportation equipment and machinery industries clustered in the region, as it has been doing since the second medium-term target period, and to do so, it will use an innovative innovation creation program and a project for the Building of Consortia for the

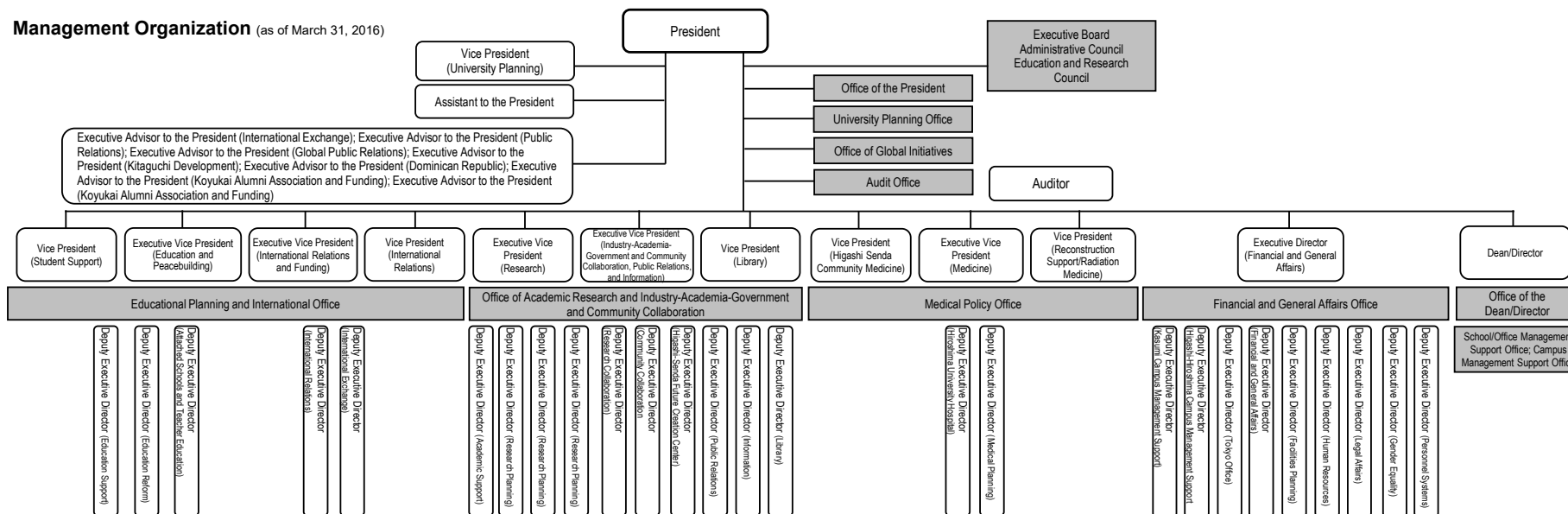
Development of Human Resources in Science and Technology. In addition, to help regional development and revitalization, in response to the demands of the Hiroshima prefecture region, which has a strong global orientation, the University will promote community-oriented education and research to cultivate human resources able to compete globally, and to do so, it will use a local (intellectual) base development project and the University’s community contribution project.

Regarding university management, to enable itself to maximize its functions of education, research and social contribution, the University will constantly review its governance system, strengthen the management foundation under the leadership of the President, and perform strategic management in ways that will optimize its strengths and features, based on an analysis using its Achievement-motivated Key Performance Indicators (AKPIs®) for monitoring the University’s performance in education and research and its IR (Institutional Research: Collection and analysis of information on various activities at the university) function.

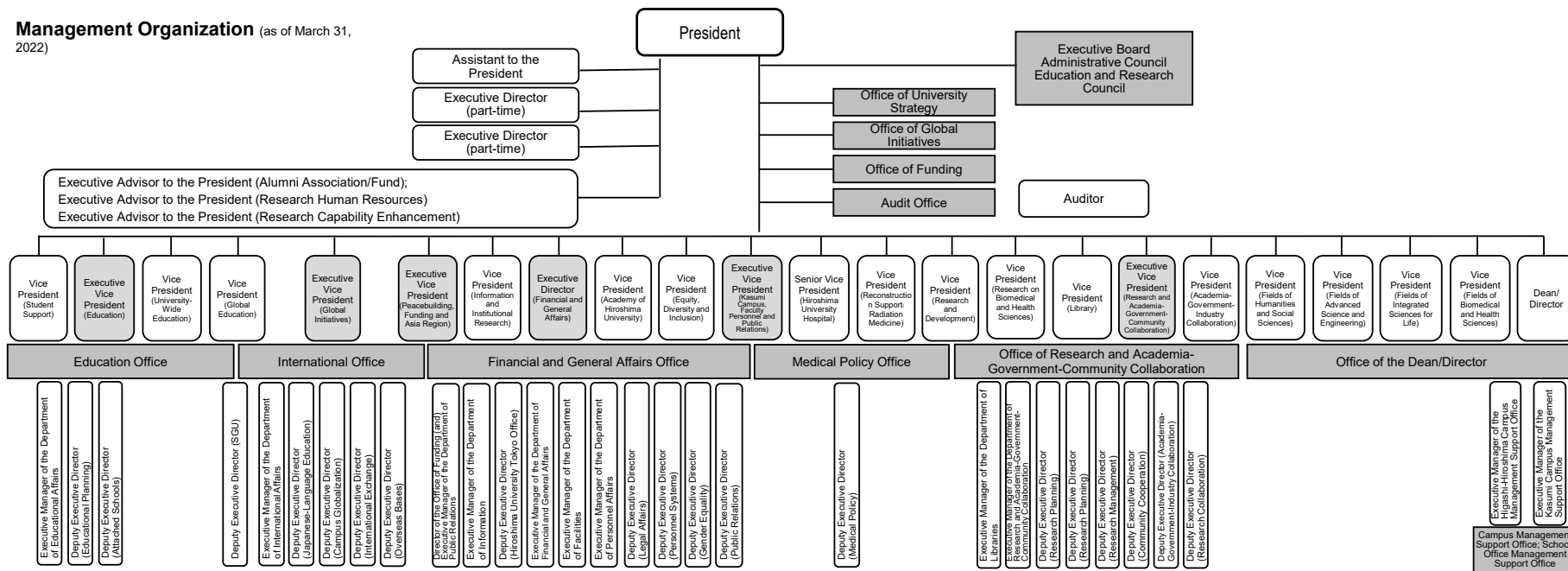
## (3) University structure diagram

See pages 4 and 5.

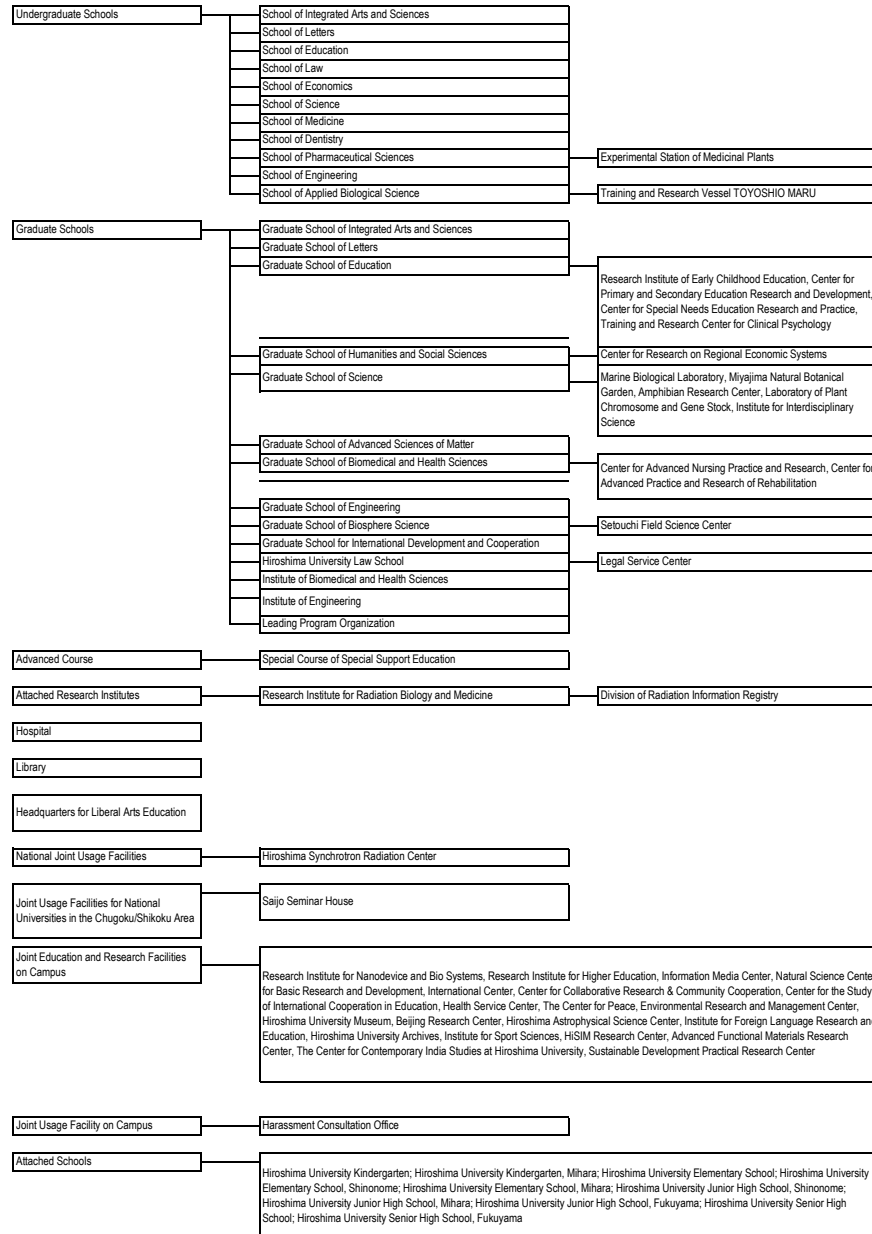
**Management Organization** (as of March 31, 2016)



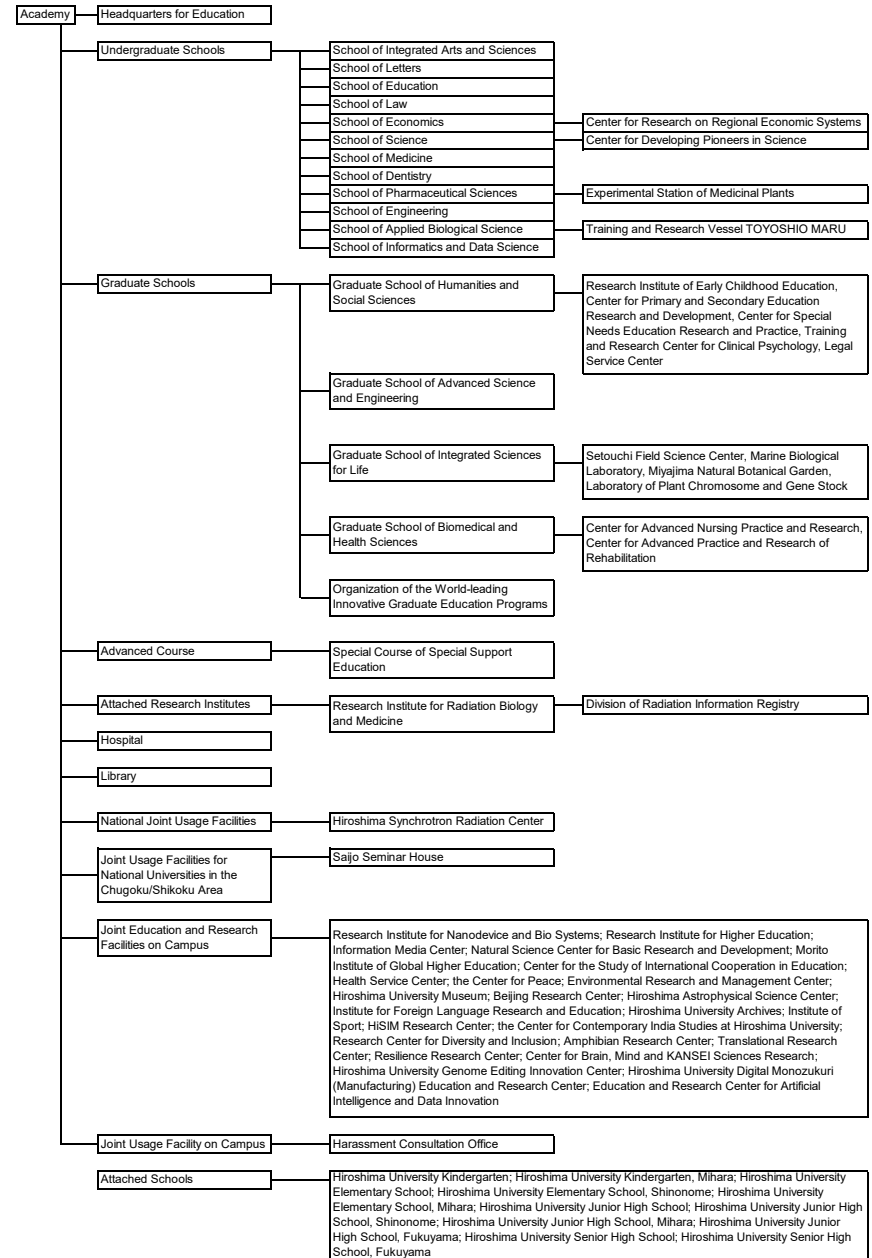
**Management Organization** (as of March 31, 2022)



## Education and Research Organizations (as of March 31, 2016)



## Education and Research Organizations (as of March 31, 2022)



## ○ Overview

Under the five guiding principles of “the pursuit of peace,” “the creation of new forms of knowledge,” “the nurturing of well-rounded human beings,” “collaboration with the local, regional and international community,” and “continuous self-development” and based on the University’s basic objectives, Hiroshima University has steadily implemented the medium-term plan for business operations, etc. In AY 2020 and AY 2021, the University made thorough efforts to reform business operations as follows toward the final year of the third medium-term target period, and it was able to achieve significant results in realization of its goals and plans.

### <Countermeasures against COVID-19>

In AY 2020 and AY 2021, the world was hit by the COVID-19 pandemic, but the University implemented its operations with the first priority on preventing any students from being infected with the disease and on ensuring that students can continue their study. On April 2, 2020, the University set up the HU Task Force for Risk Management, with the President as its Director, and held more than 100 meetings on a regular weekly basis over two years to establish a system that enables prompt university-wide decisions on countermeasures, such as how classes should be conducted, how to support students, and measures to prevent the spread of infection.

In order not to stop classes, the University lent Wi-Fi routers to students free of charge and started online classes on April 8, 2020 without delay from the regular schedule to start classes. From October 2020, the University has started offering lectures in a hybrid format where students can choose between face-to-face and online, and it has developed a system that allows classes to be conducted flexibly according to the wishes of students and the infection status. From May to August 2020, when many people were forced to stay at home due to the impact of the COVID-19 pandemic, the University made available to the public on YouTube lectures by faculty members on their classes and research, under the title “Enhance your knowledge -Hiroshima University 100 special lectures-.” Some popular lectures have been viewed more than 1.3 million times, providing opportunities for people to become interested in learning through the knowledge of the University.

For needy students, the University received donations of 66,310,000 yen (1,162 donations) with the support of local communities and graduates, began providing Emergency Aid (continuously offering 30,000 yen per person per month) to students from April 23, 2020, and continued to support the lives of students for about two years.

Regarding measures to prevent the spread of infection, the University worked with Higashi-Hiroshima City to start, ahead of other national universities in Japan, workplace vaccination against COVID-19 on the Higashi-Hiroshima and Kasumi Campuses from June 21, 2021, targeting not only the University’s students, faculty and staff but also members of the Higashi-Hiroshima City Chamber of Commerce and Industry and the Higashi-Hiroshima City Board of Education and students of neighboring universities, which resulted in a total of over 78,000 people vaccinated in the first and second rounds. The third round of workplace vaccination was also promptly implemented from February 21, 2022, contributing to the prevention of the spread of COVID-19.

Thanks to these university-wide measures, the University has been able to continue smooth operation for two years without causing an increase in dropout rates or large-scale cluster outbreaks.

### <Reconstruction of education and research organization>

From the perspective of strengthening the functions of the University and promoting education and research, the University has focused on organizational reform.

In April 2020, the Graduate School of Humanities and Social Sciences and the Graduate School of Advanced Science and Engineering were established, which completed the integration and reorganization from 11 graduate schools to 4 graduate schools. In addition, the University has considered the establishment of a new education and research organization, and in AY 2021, it has decided to apply for the establishment of the Graduate School of Innovation and Practice for Smart Society (tentative name) as a base organization responsible for implementing collaborative programs between graduate schools that provides an interdisciplinary curriculum through enhanced cooperation of all the graduate schools.

As a new internationalization strategy, in October 2020, Hiroshima University became the first national university in Japan to jointly establish with Arizona State University (ASU), which is ranked the “most innovative university” in the U.S., the Arizona State University/Thunderbird Graduate School of Global Management-Hiroshima University Global Initiative (“Global Initiative”), which offers an undergraduate degree program focusing on global management and sustainable business, on the campus of the University under an inter-university agreement with ASU. In April 2022, as the Arizona State University Thunderbird Graduate School of Global Management Japan Campus, the Global Initiative was designated as a location in Japan of a foreign university by the Minister of Education, Culture, Sports, Science and Technology. In addition, the University established the Hiroshima University Morito Institute of Global Higher Education in Beijing on April 1, 2021 under a memorandum of understanding with Capital Normal University in China, and in December of the same year, it launched the Japanese Language and Culture Online Program, where 10 students have started studying for the first period of the program.

With reference to the case of Arizona State University and Tempe, the Town & Gown Preparation Office (Town & Gown Office from October 2021; staffed by four people from private companies and two people from Higashi-Hiroshima City on a full-time basis) was set up in April 2020 with the participation of companies. Hiroshima University and Higashi-Hiroshima City, which share the vision of a sustainable future, have been promoting the “Town & Gown concept” to solve social issues through social implementation of the University’s science, technology and innovation, and they have started demonstration projects and demonstration research to realize carbon neutrality and a smart campus. In order to realize these goals, the Town & Gown Office took the lead in launching the “Hiroshima University Smart City Co-Creation Consortium” in March 2022, together with Higashi-Hiroshima City and eight private companies from different industries, to develop a framework for raising funds (260 million yen in AY 2022) using the corporate version of the hometown tax donation program in collaboration with Higashi-Hiroshima City. The University has also decided to establish the Town & Gown Institute of Innovation for the Future as a joint education and research facility on campus to realize the Town & Gown concept to promote demonstration research and the development of human resources with entrepreneurship.

In October 2020, the Education and Research Center for Artificial Intelligence and Data Innovation was established to supervise mathematics, data science, and AI education, and a system was developed to provide consistent education on DX, from literacy and application basics to expert level, across multiple undergraduate and graduate schools. The University started a compulsory literacy level program for all undergraduate schools in AY 2021 and an application basic level program in AY 2022.

To meet the important need to secure digital human resources in all fields, including the manufacturing industry, which is the core industry in Hiroshima Prefecture, the University decided at the Executive Board meeting in March 2022 to apply for the program “Increase in the capacity of local national universities that can contribute to the realization of attractive local universities for 2023” to increase the capacity of the School of Informatics and Data Science by 50. In light of social needs and the future demand for human resources, it has also decided to transfer the capacity of 20 students of the School of Education to the School of Informatics and Data Science. This application was selected by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) on June 10, 2022, making Hiroshima University the first university in Japan to be selected for the program.

Furthermore, in an effort to reinforce the university-wide research management system, the University has decided in AY 2021 to establish the Headquarters for Research in Collaborative Sciences Enabling the Future, which will be the control tower for strengthening research capabilities, and The IDEC Institute to form a global base for practical research and human resource development that can contribute to the international community. The University has also been working to enhance its functions, through such efforts as setting up in March 2021 the Hiroshima

Office of the West Japan Branch of the National Institute of Special Needs Education (NISE), which is the only branch office of the institute in Japan, for the purpose of promoting special needs education.

#### <Enhancement and strengthening of financial base>

Regarding the increase in the amount of external funding acquired, as a result of revising the External Funding Acquisition Plan for AY 2020/2021 based on the results of surveys and analysis on the actual acquisition results of external funding and trends in competitive funding and implementing the action plan for each type of funding to increase the acquisition of external funding, the following have been achieved: (1) a 48% increase in commissioned research, (2) a 150% increase in joint research, (3) a 131% increase in commissioned/joint projects, (4) a 6% increase in the Grants-in-Aid for Scientific Research, and (5) a 22% increase in donations, compared to those at the end of the second medium-term target period. The amount of external funding received per full-time faculty member increased by about 1.2 times from 7.44 million yen in AY 2019 to 8.88 million yen in AY 2021, which was about 1.5 times the amount at the end of the second medium-term target period.

In AY 2020, a new fundraising strategy was formulated for the Hiroshima University Fund, and efforts were made according to each level of donors: (1) potential donors, (2) first-time donors, (3) multiple-time donors, and (4) high-value donors. As a result, the cumulative income of the Hiroshima University Fund increased from about 3.5 billion yen to about 4.7 billion yen (up about 34%), and the number of donors doubled from 2,009 to 4,468, out of which the number of multiple-time donors increased from 769 to 1,310, over the two years.

The University has newly promoted solicitation of donations from local governments, and it decided to receive donations of 500 million yen from Higashi-Hiroshima City in AY2020 and 1 billion yen from Hiroshima City in AY 2021 to support the improvement of facilities.

In addition, the University developed a framework for raising funds (250 million yen in AY 2022) using the corporate version of the hometown tax donation program, and it launched the Hiroshima LOVE it Consortium (participated by 38 companies) in October 2021 to promote the participation of local small and medium-sized enterprises to expand the base for joint research. It also decided to proportionally allocate the income from the joint establishment of the Arizona State University/Thunderbird Graduate School of Global Management-Hiroshima University Global Initiative according to the number of students. Through these efforts, the University has been promoting the diversification of income sources.

#### <Evaluation of teachers>

Regarding the evaluation of teachers, the University formulated the P-I (Professional Indicator) criteria, a uniform evaluation criteria for the entire university, and introduced a new system for evaluation of individual teachers in AY 2021, with the aim of maintaining and enhancing the high motivation of teachers. In the new evaluation system, the University set items and points to be distributed uniformly throughout the University so that it can understand the characteristics of each teacher's activities (degrees of contribution). In addition, the University has the Academy Council centrally manage teachers' performance throughout the University for evaluation.

Evaluations based on the university-wide uniform criteria will be reflected in salaries starting from those who wish to be evaluated under the new evaluation system. Evaluations will be conducted based on the actual activities in AY 2022 and reflected in salaries from AY 2023. After the review based on the results of verification during the period above, the new system will be applied to all teachers from AY 2024 and is scheduled to be reflected in salaries from AY 2025.

#### <Development of PR activities>

As for PR activities, the University has been working to improve its name recognition and reputation by actively utilizing SNS, such as YouTube and Twitter. "Enhance your knowledge - Hiroshima University 100 special lectures-", "The latest research in 2 minutes," and Hiroshima University's promotional video "Welcome to Hiroshima University" have been released on YouTube, and the number of followers on SNS, etc. increased by 65.5% from AY 2019 to 54,626, and the number of views on YouTube increased by 12.4 times from AY2019 to about 1.9 million, showing a significant

increase. In addition, the University has proactively conducted international public relations activities by newly placing an International Communications Manager and increasing the number of media releases of research results, etc. to overseas media by 9.1 times from AY 2019 to 1,005. From AY 2020, the University introduced a naming rights program and signed business agreements for nine facilities.

Participating in "THE University Impact Rankings" published by "Times Higher Education (THE)", a British magazine specializing in higher education, the University ranked 100-200th among 766 universities in the world (4th in Japan) in 2020, 100-200th among 1,240 universities in the world (1st in Japan) in 2021, and 100-200th among 1,406 universities in the world (3rd in Japan) in 2022. What is more, the shortlist for "THE Awards Asia 2022" was announced, and the University was the only Japanese university to be selected as one of the eight finalists in the "International Strategy of the Year" category from among more than 500 universities, in recognition of its international efforts to achieve the SDGs.

#### <Comprehensive facility management>

In order to maintain and improve the education and research environment, the University has been proceeding with facility maintenance by utilizing various funding sources, including donations from local governments (Higashi-Hiroshima City and Hiroshima City) and companies, subsidies from the Ministry of Economy, Trade and Industry (METI), MEXT, and the Ministry of the Environment (MOE), and the University's reserve for a specific purpose.

With a donation of 500 million yen from Higashi-Hiroshima City, the Hiroshima University Phoenix International Center MIRAI CREA (7 stories, 3,955 m<sup>2</sup>) was completed in September 2021 as a facility with multiple functions, such as (1) creating innovation, (2) facilitating interaction and exchange of knowledge among diverse people from Japan and overseas, and (3) providing accommodation for international students and others.

In March 2022, the Radiation Disaster Medical Training Building (4 stories, 2,303 m<sup>2</sup>) was completed.

An animal experiment facility (5 stories, 1,503 m<sup>2</sup>), a center for fostering medical professionals (5 stories, 3,859 m<sup>2</sup>), and a center for humanities and social sciences with a focus on legal profession training (6 stories, 5,632 m<sup>2</sup>) are scheduled to be completed in AY 2022. In March 2022, the J-Innovation HUB Building (3 stories, 1,517 m<sup>2</sup>), a base for industry-academia collaboration in the region, was adopted for the subsidy from METI, and using also the donations from companies, its construction is scheduled to start in AY 2022. As above, the University has been engaging in facility maintenance by constructing six new buildings.

In order to enable everyone to use the University's campus as a place for engaging in creative activities in an integrated manner, the University has been working to turn the campus into an innovation commons, from the perspective of (1) creating an innovation hub through co-creation with companies, (2) opening the campus to citizens in collaboration with local governments, and (3) effectively utilizing the campus based on proposals from students.

As a base for innovation, "MIRAI CREA" is crowded with students and business persons, and demonstration projects, such as the operation of an autonomous shuttle, have been conducted since AY 2020. Under the Town & Gown concept, a number of demonstration projects have been started on the campus to turn it into an innovation commons, including the planned installation of large-scale solar panels through the PPA project and introduction of a geothermal air conditioning system in AY 2022.

A part of the campus will be opened to the public as a transportation node for public buses used by citizens. The public works for (1) arrival and departure points for public buses, (2) waiting areas, and (3) development of parking lots started in AY 2021, and operation as a base for Park & Ride will begin from AY 2022. The campus has been used by citizens more widely. For example, a gymnasium on campus was used as a venue for vaccinations, and a parking lot was offered as a venue for PCR testing by Hiroshima Prefecture.

Furthermore, the campus has been increasingly utilized through student research projects. An outdoor public space where food trucks can be placed was created based on a student design so that students can gather, eat and interact with each other. Also, a student-initiated project ("Reuse-



Chari-Share”) to repair and reuse abandoned bicycles started in November 2021, and drop-off stations have been set up at four locations on campus.

#### <Thorough compliance with laws and regulations>

In order to eradicate misconduct in research activities and research funds, e-learning lectures and level of understanding tests have been implemented since AY 2020 to significantly increase the number of participants and ensure their quality, the Financial Concierge, an on-campus consultation desk where anyone can feel free to consult, was established, and an off-campus contact point for reporting was set up at a law firm. Additionally, about 3,000 copies of a handbook for faculty and staff members were prepared and distributed so that they can keep it at hand for reference at all times, and the President himself visited all graduate schools to directly call the attention of faculty members as part of thorough awareness-raising activities aimed at eradicating misconduct.

#### <Promotion of information management and DX (digital transformation)>

Regarding information management, the University is continuously working to strengthen information security measures and formulated the Hiroshima University Basic Plan for DX Promotion to promote DX in January 2021, thereby pursuing (1) utilization of education and learning data and digitalization of educational contents, (2) research data management, (3) digitalization of health management, (4) analysis of the University’s IR data, and (5) business continuity and advancement of administrative operations. Based on this Basic Plan, the University has been making efforts to make it possible to utilize data on education/learning, research, health, and university management in the operation of the University and to improve the efficiency of and rationalize operations using ICT.

#### <Enhancement of a comfortable working environment for faculty and staff members>

Regarding the working environment for faculty and staff members, temporary afterschool childcare services were provided when all elementary schools are closed in response to the COVID-19 outbreak, and a telework system was put in place by improving the information system and establishing regulations, creating an environment that makes it easier to realize a work-life balance.

To improve the research environment, the University has introduced an annual salary system in which bonuses are paid at a higher rate than under the monthly salary system, established a system that allows direct expenses of competitive research funds to be used for labor costs, introduced a fellowship system that provides young researchers with start-up expenses (500,000 yen) and a subsidy for devotion to research in an amount equivalent to living expenses, and given priority in the allocation of the communal space. For female researchers, the employment of female researchers whose careers are interrupted due to childcare and the assignment of research support staff have been promoted to support a balance between childcare and research, and a fellowship system has been established to increase the number of female researchers.

Furthermore, the University has facilitated the improvement of efficiency and rationalization of operations of staff members through the promotion of DX, etc. to reduce the total actual working hours and overtime work. In addition, it developed a system whereby all young staff members up to their sixth year receive training at other institutions, implemented study training at graduate schools, and took other measures to enhance a system for improving the skills of staff members. The University will continue to work on improving the working environment so that the quality of life of faculty and staff members can be enhanced.

As described above, the University has thoroughly reformed its business operations in AY 2020 and AY 2021, and as for the progress of the medium-term plan concerning the business operation and financial status, it was determined that 20 of the 26 items in the medium-term plan had been “implemented, exceeding the targets in the medium-term plan (IV),” and 6 items had been “sufficiently implemented as scheduled in the medium-term plan (III).”

The efforts to strengthen the system to implement the University’s entrance examinations and the status of efforts for industry-academia collaboration are as follows.

#### <Efforts to strengthen the system to implement the University’s entrance examinations>

- i) Prevention of mistakes in entrance examinations and follow-up measures as an organization
 

The Question Creation Committee for the individual academic achievement test prepares a list of examples of mistakes in past entrance examinations and specific measures to avoid them, and it shares such information with the persons responsible for each course or subject. In addition, the University has been continuously making efforts to prevent mistakes from various perspectives, such as reviewing the check sheet used when questions are created by taking also into account the cases of other universities, holding university-wide FD workshops for persons who create questions, and publishing examination questions, examples of correct answers, and intentions behind the questions on its official website. Since the entrance examination for AY 2020, the University has increased the number of people in charge of checking questions on the day of the examination and collected opinions from high school teachers about the content of the questions after the entrance examination to strengthen the system to implement examinations.

#### <Status of efforts for industry-academia-government collaboration>

- i) **Developing a system for supporting organizational large-scale joint research**
  - Since AY 2020, new indirect expenses (basic research promotion costs) based on the degree of contribution, such as academic knowledge of researchers, that could not be appropriated under the conventional cost aggregation method have been allowed to be appropriated to the indirect expenses for joint research. To secure appropriate indirect expenses, the hourly rate system was changed to a fixed rate system (30%) from AY 2021 (an initiative in line with the Guidelines for Strengthening Joint Research through Industry-Academia-Government Collaboration [Supplementary Version]).
  - In AY 2021, the system was reviewed to realize appropriate cost sharing in joint research. The University has improved the system design to make it fair by harmonizing the expenses for accepting teachers for courses, etc. and facility usage fees for collaborative research laboratories with other expenses in the University. The period for appropriating the costs for joint researchers has been changed from an annual basis to a monthly basis, making it possible to appropriate labor costs according to the actual situation. The labor costs of principal investigators and research co-investigators in joint research has become able to be appropriated to direct expenses if efforts are appropriately managed for each joint research. As a new system to enhance research performance by using such funding sources to improve the treatment of researchers themselves and to create an environment that allows them to concentrate on their research (buyouts, labor costs, etc.), a “time charge rate method,” by which labor costs of teachers can be appropriated to direct expenses according to efforts, has been newly established (an initiative in line with the Guidelines for Strengthening Joint Research through Industry-Academia-Government Collaboration [Supplementary Version]). The above new system will be applied to joint research that starts from April 1, 2022 or for which an amendment agreement is concluded on or after that date.
- ii) **Prevention of risks related to industry-academia-government collaboration and strengthening of the management system**
  - On April 1 2020, a Vice President (Academia-Government-Industry Collaboration) specializing in industry-academia collaboration was assigned to the Office of Research and Academia-Government-Community Collaboration, and the Department of Academia-Government-Industry Collaboration was established under the Office. The Vice President (Academia-Government-Industry Collaboration) concurrently serves as the Director of the Open Innovation Platform (OI Business Platform), which is an organization under the direct control of the President, and has therefore strengthened collaboration between the Office of Research and Academia-Government-Community Collaboration and the OI Business Platform. In addition, since the importance of legal checks for joint research contracts, intellectual property management, international exchange agreements, and security export control has increased due to the recent internationalization of universities, the University strengthened its legal system by establishing the Academia-Government-Industry Collaboration Legal Division in the Office

of Research and Academia-Government-Community Collaboration on April 1, 2021 to set up a specialized department and secure specialized personnel.

**iii) Efforts to create University-launched new businesses and foster innovative human resources**

- In October 2021, the University established the Hiroshima LOVE it Consortium as a next-generation, industry-academia-government-finance collaboration platform to utilize DX to promote the participation of local small and medium-sized enterprises, which have not been able to actively participate in industry-academia collaboration with universities. In this consortium, a DX environment is created in which each issue can be solved organically as a win-win mechanism for all of industry, academia, government, and financial institutions. To make a sustainable contribution to the development of the startup ecosystem, the consortium will mainly promote the use of membership fees and donations from companies and the corporate version of the hometown tax donation program so that it can be operated autonomously and over the long term. It will also develop a new framework to quickly match seeds of universities with needs of companies using Slack, solve issues of companies, build an online education platform that can be used for entrepreneurship education and startup education, operate the GAP Fund, which supports the promotion of start-up companies, and support student entrepreneurship (launch of the Student Startup Challenge program, in which funding is granted by the President). In addition to Hiroshima Prefecture and major public universities in Hiroshima Prefecture, the Chugoku and Shikoku regions, including Okayama University, Ehime University, and Shimane University, will work together under the consortium.
- On October 27, 2021, the Hiroshima University Phoenix International Center MIRAI CREA, an international exchange base facility, was opened as a center for community development by the community and the University as well as a place for activities as an innovation hub. On the first floor, an open multi-purpose space, open office areas, and a cafeteria where visitors can drop in casually are provided, and “local 5G” is available to offer a space that can help create innovations. The second floor contains office areas and conference rooms and is occupied by the Town & Gown Office, where Higashi-Hiroshima City and companies gather, and Arizona State University Office. In the multi-purpose space and conference rooms, many events for innovation creation, such as international seminars and workshops, are held. The average utilization rate of conference rooms is 72%. In addition, the multi-purpose space on the first floor is always busy as a co-working space used by business persons as well as students, making MIRAI CREA a center for innovation in the community.

**iv) Building a DX environment that accelerates industry-academia collaboration**

- The University built a seeds database that can be shared among coordinators and URAs involved in industry-academia collaboration and research support in order to construct a mechanism for addressing the lack of human resources and promptly sharing information. A system has been in place to utilize seeds data for sustainable support to researchers by organizing them by researcher, seed, and joint company and by linking them to the “interview

database.” A system to provide phased step-up support has been established in which staging of seeds is carried out to offer support for properly advancing from the stage of idea generation in basic research to the stage of application, as well as for joint research and start-up of businesses. This continuous support has led to an increase in joint research and the number of consultations on entrepreneurship.

As a result of the efforts in i) to iv) above, various performance values for industry-academia-government regional collaboration activities have increased as follows.

- Revenue from industry-academia collaboration: 6,814 million yen in AY 2019; 8,370 million yen in AY 2021
- Number of collaborative research laboratories: 23 in AY 2019; 30 in AY 2021
- Number of comprehensive agreements: 89 in AY 2019; 96 in AY 2021

○ Details of individual items

I. Business operation and financial status  
 (1) Business operation improvement and optimization goals  
 ① Organizational management improvement goals

Medium-term goals	[19] Maximize the strengths and features of the University to develop an effective and transparent administrative system that will maximize its education and research functions. [20] Make organizational changes that strengthen the President's leadership to enable the University to strategically distribute its resources by using its IR indicators. [21] Improve the faculty and administrative members' international competitiveness to levels that will raise the quality of the University's education and research efforts to internationally competitive levels. [22] Have staff members develop expertise that will enable them to provide faculty members with greater help for their education and research efforts. [23] Promote a better work-life balance for faculty and staff, and actively promote women to decision-making positions in University management.
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Medium-term plan	Progress	Descriptions and explanations (of plan implementation)
[44] Gain a broad perspective from which to autonomously improve business operations, and to do so, seek help from external members of the Administrative Council, including international council members, by asking them to share their ideas on the University's operations; subsequently, before incorporating council members' ideas into the University's operations, present them to the President and the University's Deans/Directors for screening.	IV	<p><b>(Implementation status in AY 2020 and AY 2021)</b>                  Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, an organizational evaluation of schools/offices was conducted by an external party, and the status of response to the evaluation results was confirmed through interviews with the Deans/Directors, thereby enhancing the effectiveness of the PDCA cycle. In AY 2020, education in undergraduate schools were evaluated and eight improvements were made. In AY 2021, education and research in six medical schools/offices were evaluated and eight improvements were made. In addition, a meeting for exchanging views was held between students, etc. and external members of the Administrative Council to incorporate productive opinions into the University's operations.</p> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b>                  In addition to the above efforts, the University introduced a new system for students to participate in corporate operations from AY 2020, took measures against COVID-19, taking into account the opinions of students, and implemented the following efforts.</p> <p><b>[Participation of students in corporate operations]</b></p> <ul style="list-style-type: none"> <li>• In order to support the creation of a university environment that generates meaningful learning experiences, <u>the Center for Academic Practice and Resources was established</u> in April 2020, where social gatherings for students are held, a consultation desk is available for student staff to offer advice to other students regarding their learning issues, and a newsletter containing articles about matters student staff want to convey to other students is published. <u>By building a system in which students support other students</u>, the University implemented learner-oriented education and its support. Also, the University examined ways to improve the learning environment, created a matching platform that provides opportunities to match students who want to work as TAs and teachers who want to hire TAs, and increased the unit price of TAs.</li> <li>• <u>A meeting of the Steering Committee for the Management of the International Exchange Base Facility</u>, which examines the usage policy of the international exchange base facility (currently "MIRAI CREA"), was held with <u>the participation of one student committee member</u>. The facility was designed in light of the opinion that "it is desirable to make it a place where students can gather and to have a cafeteria on the premises." Today, it has become a place where many people, including students, gather and interact on a daily basis, either to study, have discussions, or relax in the cafeteria. <u>The name of the facility, "MIRAI CREA," was selected from student proposals submitted in response to an open call for proposals within the University.</u></li> <li>• <u>A meeting of the Hiroshima University Campus Master Plan 2022 Study Subcommittee</u> was held with <u>the participation of two student committee members</u>. The plan to divide the campus into pedestrian areas and bicycle lanes was <u>reflected in the Campus Master Plan 2022 as a maintenance policy to ensure the safety of students</u>. Regarding the <u>repair of the campus roads</u> that are public bus routes and that have deteriorated and have been pointed out as dangerous by students, a policy was decided in AY 2021 to <u>certify the relevant roads as municipal roads</u>, and <u>a complete repair by Higashi-Hiroshima City</u> (construction cost: about 80 million yen) and continuous management by an administrative authority were realized. Based on the results of these efforts, the University will expand the participation of students in corporate operations and provide an environment where diverse students can study with peace of mind.</li> </ul> <p><b>[Implementation of countermeasures against COVID-19 based on students' opinions]</b>                  The following countermeasures against COVID-19 were taken based on students' opinions, with the first priority on preventing any students from being infected with the disease and on ensuring that students can continue their study.</p>

	<ul style="list-style-type: none"> <li>○ <b>Smooth implementation of classes</b> <ul style="list-style-type: none"> <li>• In light of the spread of infection, the University promptly set up an online environment for all classes, <u>except for experiments and practical training, from April 8, 2020, without delay from the regular schedule to start classes</u>, and started offering lectures in a <u>hybrid format</u> where students can choose between face-to-face and online <u>from October</u> of the same year. Through these measures, the University has developed a system that allows classes to be conducted flexibly according to the infection status.</li> <li>• In AY 2020, the University <u>introduced the e-START/e-START+ programs, international exchange education programs</u>, to enable students to study abroad online without travel (7 courses, 61 participants in AY 2020; 21 courses, 143 participants in AY 2021).</li> <li>• From May to August 2020, when many people were forced to stay at home due to the impact of the COVID-19 pandemic, the University <u>made available to the public</u>, including citizens, <u>on YouTube lectures by faculty members</u> on their classes and research, under the title <u>“Enhance your knowledge - Hiroshima University 100 special lectures-”</u> with the aim of stimulating interest toward learning through the “knowledge” of Hiroshima University.</li> </ul> </li> <li>○ <b>Support for needy students, etc.</b> <ul style="list-style-type: none"> <li>• The University <u>launched the Emergency Aid Scheme</u>, received donations of 66.31 million yen (1,162 donations), and continued to provide a total of 1,820 students with 30,000 yen per month to support their lives for two years from April 2020 to March 2022.</li> <li>• Regarding the money international students need while waiting to be allowed back into the country after returning to Japan from abroad, the University received support of 100,000 yen per student from Higashi-Hiroshima City in AY 2020 and provided support for the re-entry of 278 international students.</li> <li>• In AY 2021, based on student proposals, <u>the 50 Yen breakfast project</u> to support students was implemented in October and December 2021 by raising 4.365 million yen through crowdfunding.</li> </ul> </li> <li>○ <b>Preventing the spread of COVID-19</b> <ul style="list-style-type: none"> <li>• <u>Implementation of workplace vaccination ahead of other regions in Japan</u></li> <li>• <u>Establishment of a PCR center operated by Hiroshima Prefecture on campus</u> for free PCR testing</li> </ul> <p>These efforts enabled the University to prevent delay in classes, an increase in dropout rates, and large-scale cluster outbreaks even during the COVID-19 pandemic.</p> <p>As described above, in addition to an organizational evaluation of schools/offices by an external party and an opinion exchange meeting between students, etc. and external members of the Administrative Council, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has newly implemented in AY 2020 and AY 2021 <u>the introduction of students’ participation in corporate operations and the enhancement of student support during the COVID-19 pandemic based on student opinions, resulting in successful operational improvements from a broad perspective</u>. Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</p> <p>The University was ranked 8th in Japan in the 2021 ranking of “Universities with good care” published by DAIGAKUTSUSHIN.</p> </li> </ul>
<p>[45]</p> <p>Take the following actions to strengthen the University’s governance system: 1) Review and revise the University’s decision-making process and 2) have the President and auditors regularly hold meetings to enhance communication between themselves and thereby ensure the independence of auditors, investigate the reliability of the auditor support system, and strengthen the functions of auditors.</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b></p> <p>Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has implemented the following initiatives.</p> <ul style="list-style-type: none"> <li>• To optimize its operations and strengthen its governance functions, the University made a number of revisions to its rules, etc. in relation to the establishment of a new graduate school and reorganization of the operational organization in AY 2020 and AY 2021.</li> <li>• To enhance communication between themselves, the President and auditors held meetings generally every week to share their thoughts. In addition, to verify the independence of auditors, the Chairperson of the Evaluation Committee met with the auditors.</li> <li>• The results of audits by auditors were reflected in corporate operations.</li> </ul> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b></p> <p>In addition to the above efforts, the University has newly implemented the following efforts since AY2020 to strengthen its governance system.</p> <ul style="list-style-type: none"> <li>• In AY 2020 and AY 2021, it was judged that the University complied with all the principles and supplementary principles of the “Governance Code for National Universities,” and the compliance status was published. In AY 2021, the report on the status of compliance with the Governance Code was updated. Upon updating, the report was reviewed at the Round-table Meeting of the Executive Board, deliberated based on prior explanations to and seeking of opinions from external members of the Administrative Council, and confirmed by auditors. In addition, after <u>conducting an examination for a more appropriate governance system and review from the perspective of whether there were any points that needed to be continuously improved</u>, the University <u>formulated the Policy for Development of Human Resources for Corporate Management at National University Corporation Hiroshima University</u> in AY 2021 and <u>set up an off-campus contact point for reporting at a law firm</u> as a system for reporting violations of compliance. Moreover, the University <u>revised the contents</u> of the explanation regarding the status of compliance with the Governance Code to <u>make it clearer</u> in order to enhance the transparency of the University’s management and fulfill its accountability to society through inspection and publication of matters relating to the Governance Code. The University worked to further improve governance through confirmation of the status of compliance every year.</li> <li>• On April 2, 2020, as a countermeasure against COVID-19, the University set up the HU Task Force for Risk Management with the President as its Director to enable prompt decision-making, and it <u>held more than 100 meetings on a regular weekly basis over two years</u>. Prompt decision-making has</li> </ul>

		<p>made it possible to take flexible countermeasures against the infectious disease according to the infection status, such as how classes should be conducted, how to support students and measures to prevent the spread of infection. A system was put in place to promptly check the physical condition of all faculty and staff members and students by utilizing the Emergency Contact System used in the safety confirmation drills. Regarding travel to the areas under a declaration of state of emergency or priority measures to prevent the spread of disease or the countries categorized as high levels under the Travel Advice and Warning on Infectious Diseases issued by the Ministry of Foreign Affairs (MOFA), a system was developed to approve and report the cases where it is unavoidable to travel to such areas or countries, and thorough infection prevention measures were implemented through prompt decision-making.</p> <ul style="list-style-type: none"> <li>To support the independence of the auditors who audit the operations of the University and to enable the auditors to perform their auditing duties fully and appropriately, in April 2021, the University established the Auditing Support Office and assigned staff as necessary to improve its support system for auditors (one full-time auditor and one part-time auditor).</li> </ul> <p>As described above, in addition to the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has newly implemented since AY 2020 <b><u>the inspection and publication of matters relating to the Governance Code, development of a prompt decision-making system in the COVID-19 pandemic, and improvement of a system to support the independence of auditors, resulting in successful strengthening of the governance system.</u></b> Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</p>
<p>[46] Assign personnel strategically in ways that will strengthen the University's education and research efforts, and to do so, develop a system that can centralize the management of instructor labor costs – currently managed by individual schools/offices—by using the University's IR indicators, including the Achievement-motivated Key Performance Indicators (AKPIs®), which show the faculty members' levels of performance as instructors and researchers. [◆]</p>	<p>IV</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, requests for personnel assignment from schools/offices were deliberated by the Academy Council and the Personnel Committee to assign personnel strategically and systematically based on a university-wide perspective beyond the framework of educational and research organizations by using IR data, such as the University's unique Achievement-motivated Key Performance Indicators (AKPIs®) for monitoring the faculty members' performance in terms of education and research and Basic Effort Key Performance Indicators (BKPIs®), and the University assigned personnel in response to 211 requests in AY 2020 and 86 requests in AY 2021.</p> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b> In addition to the above efforts, the University has newly implemented the following efforts since AY 2020 for further strategic personnel assignment.</p> <p><b>[Increase in young, female and international instructors, etc.]</b></p> <ul style="list-style-type: none"> <li>To secure and cultivate talented faculty members and attract diverse human resources, the University enhanced personnel assignment particularly by increasing young, female, and international instructors, and it also <u>improved the balance of its academic ranks across different age groups</u> particularly by appointing younger instructors as associate professors, lecturers, and assistant professors. Consequently, <u>the percentage of young instructors (under the age of 40), female instructors, and international instructors</u> among all instructors who have been on the faculty since before the incorporation of national universities (instructors to whom the accumulation of subsidies for operation costs for severance pay applies) increased to <u>26.4%</u> (as of March 1, 2022) (up 1.3 points from the previous academic year and up 3.9 points from the academic year before last), <u>21.6%</u> (as of March 1, 2022) (up 0.9 points from the previous academic year and up 3.6 points from the academic year before last), and <u>45.1%</u> (as of March 1, 2022) (up 2.6 points from the previous academic year and up 3.5 points from the academic year before last), respectively.</li> </ul> <p><b>[Development of a long-term plan for faculty personnel affairs]</b></p> <ul style="list-style-type: none"> <li>To promote personnel policies that will steadily achieve the University's long-term vision and future plans, the University <u>formulated the Basic Policy on Personnel Cost Management and Personnel Allocation for the Fourth Medium-term Target Period</u> (approved by the Executive Board on July 28, 2020) from a long-term perspective, and it <u>created the Faculty Placement Plan for the Fourth Medium-term Target Period</u> for each of the 11 academic disciplines.</li> <li>As regards the replacement of retired faculty members, a system has been established in which the activities of a retired faculty member are evaluated based on the “viewpoints and indicators” set by the Academy for each academic discipline, and <u>for an academic discipline of a retired faculty member that has not received a high evaluation, the replacement is not made, but instead the labor cost points are used for building new disciplines or strengthening disciplines that have already produced results.</u> This system has been partially put into operation. In the academic discipline of agricultural and biological sciences, the University plans to allocate 2 of the 13 new faculty recruits for the launch of new disciplines over the 6 years from AY 2022 to AY 2027.</li> </ul> <p><b>[Introduction of the Hiroshima University Activity Monitoring System]</b></p> <ul style="list-style-type: none"> <li>The Hiroshima University Activity Monitoring System was introduced in July 2021 to make it possible to visualize and objectively evaluate the activities of the University's faculty members, such as publications and external funding. The system was utilized in setting the above “viewpoints and indicators” and in creating and updating the Faculty Placement Plan for the Fourth Medium-term Target Period to strategically assign personnel from multiple perspectives through combination use of conventional IR data.</li> </ul> <p>As described above, in addition to the assignment of faculty members using IR data, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, <b><u>personnel assignment according to the Faculty Placement Plan</u></b> for the Fourth Medium-term Target Period, the</p>

		establishment of <b>a system to use the labor cost points for new disciplines or strengthening important disciplines</b> by evaluating the activities of retired <u>faculty members</u> , and <b>the introduction of the Hiroshima University Activity Monitoring System have enabled further strategic personnel assignment</b> . Therefore, it was determined that this item had been implemented, exceeding the target in the plan.
[47] Improve the University's chances of attracting more talented instructors from regions throughout Japan and around the world, and to do so, increase the percentage of instructors paid under the annual salary system to about 21% by promoting the elasticity of the human resources and salary systems (e.g., the annual salary and cross-appointment systems). [◆]	IV	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University introduced in October 2021 a <u>new annual salary system (II)</u>, in which the salary standard is the same as that of the monthly salary system, but the bonuses for faculty members with higher performance are paid at a higher rate than under the monthly salary system, in addition to the new annual salary system (annual salary system (I)) introduced in April 2020, in response to the opinions of faculty members. With the introduction of the annual salary system (II), the faculty members paid under the monthly salary system as well as those paid under the old annual salary system and annual salary system (I) are allowed to shift to the annual salary system (II), <u>and the percentage of faculty members paid under the annual salary system reached 31.6% as of March 1, 2022 (up 5.6 points from the previous academic year and up 11.2 points from the academic year before last), which is significantly higher than the target of 21.0%.</u></p> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b> In addition to the above efforts, the University has promoted the elasticity of the human resources and salary systems to secure talented instructors since AY 2020 as follows. <b>[Review of the cross-appointment system]</b></p> <ul style="list-style-type: none"> <li>• The University has promoted the application of the cross-appointment system to organizations at home and abroad, and <u>as of March 1, 2022, it was applied to a total of 82 organizations (65 foreign and 17 Japanese organizations), which is greatly higher than 78 organizations (58 foreign and 20 Japanese organizations) in AY 2020 and 22 organizations (6 foreign and 16 Japanese organizations) in AY 2019.</u></li> <li>• To promote the application of the cross-appointment system, including private companies, the University <u>added applicable positions (e.g., academic research staff, research manager (special appointment))</u> in AY 2021, and it decided to apply the change from AY 2022.</li> <li>• To promote the application of the cross-appointment system with private companies, in AY 2021, the University revised its regulations so that when workers' total salaries at the University and the counterpart institution, based on work efforts, is greater than their total normal salary at the University, the University could <u>pay the difference as a cross-appointment allowance.</u></li> </ul> <p><b>[Establishment of a system that allows part of direct expenses of research funds to be used to pay for labor costs, etc. for researchers]</b></p> <ul style="list-style-type: none"> <li>• Since AY 2021, <u>direct expenses of competitive research funds have been allowed to be used to pay for labor costs for principal investigators (PIs) and research co-investigators, and a system was developed to allow the secured funding sources to be used to improve the research environment, such as raising the salary level of PIs (special allowance for competitive research funds), according to the request of PIs or other personnel. (AY 2021: Used for 9 people)</u></li> <li>• Since AY 2021, the University has established a system that allows direct expenses of competitive research funds to be used to pay for expenses for outsourcing non-research operations (<u>buyout system</u>). (AY 2021: Approved for 1 person)</li> <li>• <u>Direct expenses of joint research, collaborative research laboratories, commissioned research, and commissioned projects have been allowed to be used to pay for labor costs for PIs or other personnel, and in AY 2021, a system was developed to allow the secured funding sources to be used to improve the research environment, such as raising the salary level of PIs (special allowance for joint research, etc.), according to the request of PIs or other personnel. (As of May 20, 2022: Expected to be used for 8 people)</u></li> </ul> <p>As described above, <b>the percentage of faculty members paid under the annual salary system substantially exceeded the target value (21.0% → 31.6%)</b> through such measures as <b>the introduction of a new annual salary system (II)</b> in October 2021, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance. In addition, the promotion of <b>more elastic human resources and salary systems</b>, including <b>the cross-appointment system and the use of direct expenses of research funds for labor costs</b>, produced successful results. Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</p>
[48] Invigorate the University's education and research efforts by offering more positions, strategically including tenure-track ones reserved for talented young instructors (under the age of 40), and by doing so, increase the percentage of such instructors to 34% (or 23.4% for those to whom the	III	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the increase in the percentage of young instructors, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, the performance value as of AY 2019 was low. Accordingly, the University focused on the following efforts to achieve the goal, such as <u>systematic employment of assistant professor trainees, use of the cross-appointment system, and creation of an environment where young instructors can concentrate on their research</u> with peace of mind.</p> <p><b>[Systematic employment of young instructors]</b></p> <ul style="list-style-type: none"> <li>• To invigorate its education and research efforts, as well as the academic world in general, by employing young instructors and helping them grow, the University has a number of positions reserved under the job title "Assistant Professor Trainee" (35 years of age and younger), and it employed 43 assistant</li> </ul>

<p>accumulation of subsidies for operation costs for severance pay applies). [◆]</p>	<p>professor trainees in AY 2020 and 48 in AY 2021.</p> <ul style="list-style-type: none"> <li>• To strengthen research capabilities and promote the diversity environment, the University decided to set up 62 posts for Assistant Professors (Special Appointment) (who must be, in principle, young, female, or non-Japanese) under the cross-appointment system in November 2020, and it employed 51 people.</li> <li>• As part of MEXT's project "Building of Consortia for the Development of Human Resources in Science and Technology," the University employed six young instructors in AY 2020 and six in AY 2021. (Application of the tenure track system)</li> <li>• In AY 2020, the University used MEXT's Leading Initiative for Excellent Young Researchers (LEADER) program to hire two young instructors. (Application of the tenure track system)</li> </ul> <p><b>[Development of a research environment for young researchers]</b></p> <ul style="list-style-type: none"> <li>• In AY 2020, the University <u>introduced a system to allocate start-up expenses of 500,000 yen</u> to young researchers hired by the University, in addition to the basic research funds allocated to researchers.</li> <li>• To enhance the support system for young researchers, including doctoral students, the University has developed an environment where researchers can concentrate on their research since AY 2021 by establishing the <u>Hiroshima University Graduate School Research Fellowship</u> (support started in April 2021, 53 people), the Program for Developing and Supporting the Next-Generation of Innovative Researchers at Hiroshima University (support started in October 2021, 199 people), and the <u>Hiroshima University Fellowship for Female Graduate Students in Science and Technology</u> (support started in December 2021, 8 people) to provide a subsidy for devotion to research in an amount equivalent to living expenses.</li> <li>• For young instructors selected for the Fusion Oriented REsearch for disruptive Science and Technology program, the University has decided to <u>enhance support by giving them priority in the allocation of the communal space and allowing them to use facilities free of charge</u>, and in AY 2021, eight young instructors were selected for the program.</li> </ul> <p>Through the efforts above, <u>the percentage of young instructors among all instructors to whom the accumulation of subsidies for operation costs for severance pay applies increased by 3.6 points from 22.8% in AY 2019 to 26.4%, exceeding the target value of 23.4%</u>. On the other hand, <u>the percentage of young instructors among all full-time instructors was 29.5%</u>, which was an <u>increase of 4.8 points from 24.7%</u> in AY2019, but did not reach the target value of about 34%.</p> <p>In AY 2020 and AY 2021, efforts to achieve the target, such as <u>systematic employment of young instructors</u> and <u>strengthening of the development of the research environment for young researchers</u>, led to <u>an increase in the percentage of young instructors by 4.8 points from AY 2019</u> and <u>produced a certain level of results, although the target was not achieved</u>. Given this and the fact that <u>this plan has been approved as a "highly strategic and ambitious objective/plan," it was determined that this item had been "sufficiently implemented as scheduled in the medium-term plan" (III)</u>.</p>
<p>[49] Improve human resources by employing, transferring, promoting, and training personnel based on a staff cultivation plan designed with the aim of achieving the following goals: 1) increase the University's potential to carry out work by clarifying the knowledge and skills required at each of its offices and training staff members based on that information, 2) motivate workers by clarifying career paths and promotion criteria, and 3) increase the staff's productivity potential by providing members with opportunities to experience the handling of difficult work.</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b></p> <p>Regarding the efforts based on a staff cultivation plan, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has implemented the following initiatives.</p> <ul style="list-style-type: none"> <li>• To identify and employ people who truly want to work at Hiroshima University and who have diverse perspectives, since AY 2013, the University has been administering an original staff employment examination, in addition to the Standardized National-University-Staff Employment Examination. The University revised its interview evaluation form so that it could evaluate whether applicants had the aptitude needed to join the University's staff and were adaptable, and consequently, the University hired six diverse personnel in AY 2020 and nine in AY 2021, including former teachers. This has led to the diversification of personnel, such as those who make use of their work experience to make proposals for improving operations.</li> <li>• To improve the international competitiveness of staff members, the University offered skill development training programs (online English conversation) and foreign language training programs (TOEIC preparation), and it increased the percentage of staff members with a TOEIC® score of 800 or higher to <u>18.4%</u> (15.8% in AY 2019, 17.1% in AY 2020).</li> </ul> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b></p> <p>In addition to the above efforts, the University has newly implemented the following initiatives to develop staff members since AY 2021.</p> <ul style="list-style-type: none"> <li>• In AY 2021, the University <u>formulated the Policy for Development of Human Resources for Corporate Management at National University Corporation Hiroshima University</u>, and it decided to position the first six years after employment of staff members as the training period and to require all staff members under the training period to work at higher education institutions overseas, MEXT, local governments, or other <u>related organizations</u>. In this way, the University will help them to acquire the knowledge, skills, and wide-ranging experience necessary for management from a young age and will thereby systematically develop human resources with motivation and creativity. The University formulated a draft training plan to dispatch about 10 people each year during the fourth medium-term target period, and it <u>decided to dispatch eight people to Higashi-Hiroshima City or Arizona State University</u> in AY 2022 for such purposes as personnel exchanges.</li> <li>• The University <u>promoted the use of study training at graduate schools</u> to develop human resources with advanced expertise, and in AY 2022, it decided to have one staff member study in the Graduate School of International Studies (master's program), J. F. Oberlin University, which can foster specialists in university management. The University has also started to review plans for continuous employment and development of human resources to become</li> </ul>

		<p>URAs.</p> <ul style="list-style-type: none"> <li>In AY 2021, the University <u>formulated a staff employment plan for the fourth medium-term target period from a long-term perspective</u>. Regarding the employment of staff members after AY 2023, it was decided that the average number of retired personnel during the fourth medium-term target period will be used to equalize the number of personnel hired for each academic year, regardless of the number of retired personnel in each academic year, to prevent extreme bias in the age structure.</li> </ul> <p>As described above, in addition to the efforts based on a staff cultivation plan, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University formulated a policy for the development of human resources for management, established and started to operate a system to have all staff members work at other organizations during their six-year training period after being hired, enhanced systems to improve the skills of staff members, such as the implementation of a study training at graduate schools to develop human resources with expertise, and formulated a long-term staff employment plan, <b>resulting in successful development of staff members</b>. Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</p>
<p>[50] Create a workplace environment that promotes a good work-life balance by making it easier for the faculty/staff to use the University's support systems by making such systems widely known among them and by providing seminars, and also seek approval by the end of AY 2019 for the conformity of the University's (third-term) General Business Owner Action Plan under the Act on Advancement of Measures to Support Raising Next-Generation Children.</p>	<p>III</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b></p> <p>Regarding the creation of an environment that facilitates the use of a system that enables a work-life balance and the introduction of a telework system, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has implemented the following efforts, and as a result, <b>the initial plan was fully achieved</b>.</p> <ul style="list-style-type: none"> <li>As for the telework system, a telecommuting system in the event of disasters, such as heavy rains, and a telework system for the prevention of the spread of COVID-19 had been in place as a special exception. However, in light of the utilization status of the system and from the perspective of ensuring flexible work styles for faculty and staff members, including balancing work with childcare or nursing care, and of business continuity planning (BCP) while ensuring safety in the event of disasters or other emergencies, it was introduced as a regular system as of November 4, 2020.</li> <li>In AY 2021, the University set up the Personnel Affairs Concierge, a consultation desk that anyone can consult at any time, such as when they have problems or questions about the procedures for the personnel system and do not know whom to ask. It decided to start the operation from AY 2022.</li> <li>To promote the work-life balance of faculty and staff members, the Gender Equality Promotion Office and the Initiative for Realizing Diversity in the Research Environment (Collaboration Type) (CAPWR) co-organized online seminars as follows.       <ul style="list-style-type: none"> <li>In AY 2020, participants deepened their awareness of the need for a reform of work style, a comfortable work environment, and changing their mindset, under the theme of "Thinking about Work-life Balance." (49 participants)</li> <li>In AY 2021, participants deepened their understanding of diversity and organizational management, under the theme of "What is an organization that can make the most of diversity?" (48 participants)</li> </ul> </li> <li>The University submitted a General Business Owner Action Plan (for the third term) for approval of its conformity ("Kurumin" certification) under the Act on Advancement of Measures to Support Raising Next-Generation Children. In addition, the General Business Owner Action Plan (for the fifth term: April 1, 2022 to March 31, 2025) under the Act on Advancement of Measures to Support Raising Next-Generation Children and the General Business Owner Action Plan (for the second term: April 1, 2022 to March 31, 2026) under the Act on Promotion of Women's Participation and Advancement in the Workplace were submitted to and accepted by the Labour Bureau.</li> <li>Since elementary schools were all closed at once due to the need to prevent the spread of COVID-19, the University <u>offered temporary afterschool childcare services for schoolchildren</u> in the Higashi-Hiroshima area (welcoming 17 children between April 16 and April 21, 2020) and the Hiroshima area (welcoming 208 children between April 15 and June 5, 2020). The University's staff members (total of 84 people) worked as support staff for the implementation of the service. In the Hiroshima area, the service was mainly offered to healthcare workers, thus contributing to securing the local medical care system. The University also offered afterschool childcare services during the summer, winter, and spring holidays of elementary schools and at the time of the Common Test for University Admissions (Higashi-Hiroshima area/AY 2020: used by 161 children in total, AY 2021: used by 346 children in total; Hiroshima area/AY 2020: used by 248 children in total, AY 2021: used by 443 children in total).</li> <li>Children of faculty and staff members were accepted at on-campus childcare facilities as follows.       <ul style="list-style-type: none"> <li>Himawari Nursery School (Higashi-Hiroshima area)           <ul style="list-style-type: none"> <li>* 33 children in AY 2020 (29 children under full-time childcare, 4 children under temporary childcare (including 10 children of applicants who are foreign researchers or international students))</li> <li>* 40 children in AY 2021 (36 children under full-time childcare, 4 children under temporary childcare (including 8 children of applicants who are foreign researchers or international students))</li> </ul> </li> <li>Cosmos Nursery Room (Hiroshima area)           <ul style="list-style-type: none"> <li>* 11 children in AY 2020 (5 children under full-time childcare, 6 children under temporary childcare)</li> <li>* 17 children in AY 2021 (9 children under full-time childcare, 8 children under temporary childcare)</li> </ul> </li> </ul> </li> <li>To prevent the spread of COVID-19, the University started to have contractors managing the on-campus childcare facilities (Himawari Nursery School and Cosmos Nursery Room) implement monthly PCR testing of employees from February 2021. In introducing the testing, the University created a flow chart showing how to respond in the event of a positive result and notified guardians of it. A list of emergency contact information of guardians and a</li> </ul>



		<p>system for contacting related parties were also developed.</p> <ul style="list-style-type: none"> <li>• The University continued to appoint research support staff to help its researchers balance research with life events, and this system was used by 10 people in AY 2020 and 13 people in AY 2021.</li> <li>• The University implemented a financial support program for childcare fees for post-sick children, and this program was used a total of 104 times in AY 2020 and a total of 173 times in AY 2021.</li> <li>• The University applied for the babysitter user support project implemented by the Cabinet Office, and it started childcare support by issuing usage discount coupons.</li> </ul>
<p>[51] Increase the percentage of female teachers and managers to about 20% each by employing measures to promote active female faculty/staff workforce participation. [◆]</p>	<p>IV</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the increase in the percentage of female teachers and managers, which was stated as being scheduled to be implemented in the reports on operational performance up to AY 2019, the University has implemented the following efforts, <b>bringing the percentage of female teachers to 21.6% (up 3.6% from AY 2019) and the percentage of female managers to 20.0% (up 2.7% from AY 2019)</b>, which exceeded the target of 20.0%.</p> <p><b>[Systematic employment of female teachers]</b></p> <ul style="list-style-type: none"> <li>• To promote the employment of female teachers, the percentage of female teachers employed by each school/office and the percentage of female teachers in each school/office on a quarterly basis were shared with executives and Deans/Directors on the Education and Research Council and disseminated throughout the University to raise awareness among members of the University about the employment of female teachers.</li> <li>• Under the university-wide centralized management of personnel affairs of teachers, the University has <u>set a quota for female teachers</u> with the aim of securing diverse human resources, and it decided to <u>systematically employ female teachers such that they constituted at least 30% of those employed in each academic year</u>. In AY 2020, it <u>employed 51 Assistant Professors (Special Appointment), all of whom are female teachers, under the cross-appointment system</u> to strengthen research capabilities and promote a diverse environment.</li> <li>• As of March 1, 2022, the percentage of female teachers among all full-time teachers in the University accounted for 21.6%.</li> </ul> <p><b>[Systematic promotion of female managers]</b></p> <ul style="list-style-type: none"> <li>• Regarding female managers, the University decided to <u>systematically promote women to managerial positions</u>, and the percentage of female managers was <u>17.3% in AY 2019, 18.2% in AY 2020, and 20.0% in AY 2021</u>. For the development of future female managers, the University <u>systematically increased the number of female teachers on the Board of Representatives of each graduate school</u> and raised the percentage of female teachers on the Board of Representatives <u>from 7.3% to 14.4%</u>.</li> </ul> <p><b>(Efforts exceeding the plan stated in the reports on operational performance up to AY 2019)</b> <b>[Improvement of the research environment and expansion of the base of female researchers]</b></p> <ul style="list-style-type: none"> <li>• To facilitate the resumption of research activities and career development of female researchers who gave up continuing research due to childcare or other reasons, the University employed one <u>female researcher during her career interruption</u> as a Researcher in AY 2020 and three in AY 2021.</li> <li>• To <u>assist research of female researchers</u> who have difficulty finding time for research due to childcare or other reasons, the University assigned nine <u>research support staff members</u> to female researchers in AY 2020 and 12 in AY 2021.</li> <li>• To expand the base of female researchers, <u>a hands-on science lecture was held for female high school students</u> (AY 2020: Informatics and data science (30 participants); AY 2021: Education (22 participants)).</li> <li>• Aiming to increase the number of female students in science and engineering who aspire to become researchers, the University has developed an environment where researchers can concentrate on their research since AY 2021 through such measures as <u>the establishment of the Hiroshima University Fellowship for Female Graduate Students in Science and Technology</u> (support started in December 2021, eight people) for female graduate students (M2 to D3) in science and engineering to provide a subsidy for devotion to research in an amount equivalent to living expenses.</li> </ul> <p><b>[Raising awareness about career development of female researchers]</b></p> <ul style="list-style-type: none"> <li>• The Executive Director in charge provided advice on career development and conducted awareness-raising activities concerning promotion to higher positions and improving research capabilities: (AY 2020: 38 people (22 women, 16 men); AY 2021: 12 people (8 women, 4 men)).</li> <li>• The University posted information on role models of female researchers and female managers on its website to raise awareness and to serve as a reference about career paths for students and faculty and staff members.</li> </ul> <p>As described above, as a result of proactive employment of female teachers in AY 2020 and AY 2021, <b>the percentage of female teachers increased by 3.6% from AY 2019 to 21.6%</b> (as of March 1, 2022), which <b>exceeded the target of 20%</b>, and the University has worked to <b>improve the research environment for female researchers</b>. The <u>average percentage of female teachers at comprehensive universities among all national universities</u> was 18.2%, and the percentage of the University was <b>much higher than the national average</b>. Given this and the fact that <u>this plan has been approved as a “highly strategic and ambitious objective/plan,”</u> it was determined that this item had been implemented, exceeding the target in the plan.</p>

<p>I. Business operation and financial status                  (1) Business operation improvement and optimization goals                  ② Education and research organization improvement goals</p>
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Medium-term goals	[24] Identify the trends and social needs of 18-year-olds and then, based on these, reorganize the University's education and research organizations in ways that will make them flexible and optimal, strengthen the University's functions, and enable it to maximize its capabilities and strengths.
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Medium-term plan	Progress	Descriptions and explanations (of plan implementation)
<p>[52]                      Identify social needs and then, based on them and the University's redefined mission statement, promote education and research in ways that maximize the University's capabilities and strengths, reorganize its education and research organizations, and reset its enrollment limits by detaching teachers' organizations from education and research organizations so as to reorganize them into a flexible association that will enable strategic assignment of teachers to areas that the University has decided to prioritize.</p>	IV	<p><b>(Implementation status in AY 2020 and AY 2021)</b>                      Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the Graduate School of Humanities and Social Sciences and the Graduate School of Advanced Science and Engineering were established in April 2020, <u>which completed the integration and reorganization from 11 graduate schools to 4 graduate schools</u>. To cultivate human resources able to help achieve the SDGs by conducting research and practical work that will help regions and the world resolve urgent issues, in October 2020, the University established the following programs, <u>which became the University's first joint degree programs: 1) the Graduate School of Humanities and Social Sciences Joint International Master's Programme in Sustainable Development (Hiroshima University - University of Graz) and 2) the Graduate School of Advanced Science and Engineering Joint International Master's Programme in Sustainable Development (Hiroshima University - Leipzig University)</u>. Also, to continuously review the reform of its education and research organizations, the University created a document titled "Development of the Graduate School Organization of Hiroshima University in the Fourth Medium-term Target Period" and reported it in the meeting of the Education and Research Council held on September 15, 2020. Based on this, the University has reviewed the establishment of a new education and research organization, and in light of future social needs, it has decided to apply in AY 2022 for <u>the establishment of the Graduate School of Innovation and Practice for Smart Society (tentative name) as a base organization responsible for implementing collaborative programs between graduate schools to foster human resources in the field of practical science to realize a smart society, which is an interdisciplinary field that spans all graduate schools</u>. The University also set up the "Educational New Degree Program Concept Review Committee" to discuss the reorganization of educational undergraduate and graduate degree programs in AY 2024.</p> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b>                      In addition to the above reorganization of graduate schools, the University has newly implemented the following efforts with a focus on organizational reform since AY 2020 to promote globalization, the Town &amp; Gown concept, strengthening of research capabilities, education on AI/data innovation, development of human resources to promote advanced industrial DX (increase in the capacity of the School of Informatics and Data Science), the international development of Society 5.0, and special needs education.</p> <p><b>[Promotion of globalization]</b> (Joint establishment of the Arizona State University/Thunderbird Graduate School of Global Management-Hiroshima University Global Initiative, which is the first of its kind among national universities in Japan, and establishment of the Hiroshima University Morito Institute of Global Higher Education in Beijing)                      As a new globalization strategy of Hiroshima University, it was decided to promote in both directions (1) the establishment of a campus of an overseas university at the University and (2) the establishment of an overseas campus of Hiroshima University, which were established in October 2020 and April 2021, respectively.</p> <ul style="list-style-type: none"> <li>• Under an inter-university agreement with Arizona State University (ASU) in the U.S., the University <u>jointly established with ASU the Arizona State University/Thunderbird Graduate School of Global Management-Hiroshima University Global Initiative ("Global Initiative")</u>, which offers an undergraduate degree program focusing on global management and sustainable business, <u>on the campus of the University in October 2020. This was the first case where a Japanese national university established a campus of an overseas university</u>. In AY 2021, five online joint subjects that students of both the University and ASU can take were conducted, and a memorandum of understanding was concluded regarding a detailed plan for the curriculum, etc. of the Global Initiative. <u>On April 28, 2022, as the Arizona State University Thunderbird Graduate School of Global Management Japan Campus</u>, the Global Initiative was <u>designated as a location in Japan of a foreign university</u> by the Minister of Education, Culture, Sports, Science and Technology. In addition to the development of a global campus, the University has also been working to promote the Town &amp; Gown concept, with reference to Arizona State University.</li> <li>• The University established the Hiroshima University Morito Institute of Global Higher Education in Beijing on April 1, 2021 under a memorandum of</li> </ul>

understanding concluded with Capital Normal University in China in December 2020, and on December 1 2021, it launched the Japanese Language and Culture Online Program, where 10 students have started studying. These are efforts to provide Chinese university students with education that will help them acquire practical Japanese language skills and understand Japanese culture so that they can improve their Japanese language and other skills to a level sufficient to study in Japan before coming to Japan, thereby attracting excellent international students.

**[Promotion of the Town & Gown concept]** (Establishment of the Town & Gown Office and the Town & Gown Institute of Innovation for the Future)

With reference to the case of Arizona State University and Tempe, Hiroshima University and Higashi-Hiroshima City, which share the vision of a sustainable future, decided to promote the Town & Gown concept to solve social issues through social implementation of the University's science, technology and innovation with the participation of companies, and they have worked on the development of organizations as follows since AY 2020.

o **Establishment of the Town & Gown Office**

- In April 2020, the Town & Gown Office Preparation Office was established to promote the Town & Gown concept.
- In January 2021, Hiroshima University, Higashi-Hiroshima City, and Sumitomo Corporation concluded a comprehensive collaboration agreement and made the Carbon Neutral x Smart Campus 5.0 Declaration with a target year of 2030. In July 2021, the University concluded three-party comprehensive collaboration agreements with Higashi-Hiroshima City and SoftBank Corp. and with Higashi-Hiroshima City and Fujita Corporation and developed a system in which the Preparation Office is staffed by staff members of the University, four people from private companies and two city officials on a full-time basis to promote the concept.
- In October 2021, the office was relocated to the Hiroshima University Phoenix International Center MIRAI CREA, an international exchange base facility for creating innovation, which was developed through a joint project with Higashi-Hiroshima City, and it was officially established as the Town & Gown Office. The Town & Gown Office, whose Director is assumed by an Executive Director of Hiroshima University and Deputy Director by the Deputy Mayor of Higashi-Hiroshima City, serves as the secretariat for the Higashi-Hiroshima City & Hiroshima University Town & Gown Concept Promotion Council, and it has been working with Higashi-Hiroshima City and participating companies on demonstration projects and demonstration research to realize carbon neutrality and a smart campus.
- In order to promote demonstration research with local governments, companies, etc. using the Higashi-Hiroshima Campus to realize the “Carbon Neutral x Smart Campus 5.0 Declaration,” the Town & Gown Office took the lead in launching the Hiroshima University Smart City Co-Creation Consortium in March 2022, together with Higashi-Hiroshima City and eight private companies from different industries, and developed a framework for raising funds (260 million yen in AY 2022) using the corporate version of the hometown tax donation program, with the participation of companies and in collaboration with local governments.
- Regarding the Town & Gown concept, the University has been considering the plan of establishing a National Town & Gown Council in order to spread the concept nationwide as a model for local universities to contribute to regional revitalization, and in May 2022, it formed a preparation group involving six universities, aiming to establish the council by the end of AY 2022.

o **Establishment of the Town & Gown Institute of Innovation for the Future**

- In AY 2021, it was decided to establish the Town & Gown Institute of Innovation for the Future as a joint education and research facility on campus to implement the Town & Gown concept. The institute consists of the (1) Innovation Creation Department (solving technical issues, etc.), (2) EBPM/DX Research Department (governance research based on DX technology and data, etc.), and (3) Regional Revitalization Research Department (behavior change of students and local residents, etc.), promotes demonstration research and develops human resources with entrepreneurship. The Carbon Recycling Demonstration Project/Development of a Gas-to-Lipids Bioprocess (external funding of a total of 530 million yen was obtained), a project adopted by the New Energy and Industrial Technology Development Organization (NEDO), is a core activity of the Innovation Creation Department and was started from AY 2020.

**[Strengthening of research capabilities]** (Establishment of the Headquarters for Research in Collaborative Sciences Enabling the Future)

- To further reinforce the research management system of the entire university, the University reviewed the establishment of the Headquarters for Research in Collaborative Sciences Enabling the Future, a university-wide organization directly under the President, as a control tower for strengthening research capabilities, and it decided to establish it in AY 2021. In this organization, the Executive Director in charge of research acts as the Director and 11 URAs are assigned.
- The Headquarters for Research in Collaborative Sciences Enabling the Future visualizes research capabilities throughout the university, selects centers for priority support, provides selective and intensive support to these centers, creates innovative research areas by consolidating and abolishing existing organizations, strengthens fundamental research support organizations, and strategically assigns highly specialized personnel, such as URAs and technical staff members, to form world-class research centers and further strengthen research capabilities. As part of the consolidation and abolition of existing organizations, the University decided to consolidate the existing centers of excellence “Advanced Core for Energetics, Hiroshima University” and the “Research Center for Nitrogen Recycling Energy Carrier” and the promising research initiative “Next Generation Photovoltaics” and to establish the “Academic-Environment Social Governance Science and Technology Research Center” in AY 2021. To contribute to the achievement of the SDGs and the realization of Society 5.0, this center makes full use of the University's unique science and technology in a university-wide effort to solve environmental and energy issues that need to be resolved on a global scale in order to address global warming caused by greenhouse gas emissions, which has become an issue in recent years, and to create sustainable energy sources.

**[Development of education on AI/data innovation]** (Establishment of the Education and Research Center for Artificial Intelligence and Data Innovation)

- For mathematics, data science and AI, which are required in various areas of society, the Education and Research Center for Artificial Intelligence and Data Innovation was established (with the participation of 57 faculty members from the entire university) in October 2020 as an on-campus center that supervises mathematics, data science, and AI education across the University, and a system was developed to provide consistent education on DX, from literacy level and application basic level to expert level, across multiple undergraduate and graduate schools.
- In AY 2021, the “Information, Data Science and AI Package” (certified by MEXT as an “Approved Program for Mathematics, Data science and AI Smart Higher Education” (Literacy)) was made compulsory for all schools to develop human resources with the ability to utilize the knowledge of data science and information science. Furthermore, the “AI and Data Science Applied Basic Specific Program” (under application for certification by MEXT as an Approved Program for Mathematics, Data science and AI Smart Higher Education (Advanced Literacy)) was established in AY 2022 to provide more advanced education on information and data for all undergraduate students. The Education and Research Center for Artificial Intelligence and Data Innovation has been expanding its system for conducting joint research with companies and its function of providing reskilling education for working adults through the employment of practitioner teachers.

**[Development of human resources to promote advanced industrial DX (increase in the capacity of the School of Informatics and Data Science)]**

- The University decided at the Executive Board meeting in March 2022 to apply for the program “Increase in the capacity of local national universities that can contribute to the realization of attractive local universities for 2023” to increase the capacity of the School of Informatics and Data Science by 50. Through this application, the University will meet the important need to secure digital human resources in all fields, including the manufacturing industry, which is the core industry in Hiroshima Prefecture, and develop human resources to promote advanced industrial DX, who will be necessary for industries in Hiroshima in anticipation of possible change of business in the future, to produce personnel who will contribute to regional revitalization of Hiroshima. In light of social needs and the future demand for human resources, it has also decided to transfer the capacity of 20 students of the School of Education to the School of Informatics and Data Science.
- To develop human resources to promote advanced industrial DX required in Hiroshima Prefecture, the curriculum has been reorganized into a three-program system, including the field of intelligence science, since AY 2022 based on the needs of the region. Additionally, the University has introduced study models (“basic study model,” “integrated study model,” and “practical study model”) that enable students to choose their careers from an earlier stage. With the introduction of the study models, the University will develop, in addition to the human resources conventionally developed, human resources who have an academic background in information science but have the ability to work in a wide range of fields, not necessarily limited to ICT, such as education DX and agriculture DX, through education provided not only by the School of Informatics and Data Science but also in collaboration with teachers from 11 other schools (integrated study model), as well as human resources who have the practical ability to be ready for work in society after graduation through a long-term paid internship for 8 months at a local company, which is the first of its kind at a national university in Japan, instead of a graduation thesis (practical study model).
- Through the Hiroshima Industry-Academia Council for Development and Securing of Human Resources to Promote DX consisting of Hiroshima Prefecture, local industries, and universities in the prefecture, the University will promote educational collaboration with neighboring public and private universities to contribute to the development of human resources to promote DX at other universities in the prefecture.
- This application was selected by MEXT on June 10, 2022, making Hiroshima University the first university in Japan to be selected for the program.

**[international development of Society 5.0]** (Establishment of The IDEC Institute, etc.)

- In April 2020, the IDEC Institute was established for the purpose of driving the internationalization of the University while succeeding to the assets and brand of education and research on international cooperation and international development built up by the Graduate School for International Development and Cooperation.
- The role of the IDEC Institute includes leading the globalization of the entire university through the implementation and development of interdisciplinary and practical programs across graduate schools and the implementation and promotion of international joint degrees.
- In AY 2021, the University decided to dissolve the IDEC Institute for the formation of a better organization and establish The IDEC Institute as a joint education and research facility on campus to strengthen the functions of the IDEC Institute, lead the globalization of the entire university, and form a global center for practical research and human resource development that contribute to the international community through the international development of Society 5.0.

**[Promotion of special needs education]** (Establishment of the Hiroshima Office of the West Japan Branch of the National Institute of Special Needs Education (NISE), the only branch office of the institute in Japan)

- In March 2021, the University concluded an agreement with NISE and established on the Higashi-Hiroshima Campus the Hiroshima Office of the West Japan Branch of NISE, which is staffed by researchers on a full-time basis, as the only branch office of the institute in Japan in order to promote the development of special needs education and inclusive education systems in Japan and to reinforce education, research, and training related to special needs education in western Japan. Both the University and NISE organizationally conduct (1) joint research, (2) quality improvement of school teachers, (3) exchanges among researchers, and (4) regional support, and in AY 2021, one researcher was assigned to develop VR teaching materials for learning

		<p>how to support children with developmental disabilities, develop a certificate program for teachers in charge of special needs education, and hold a seminar for promotion of special needs education for a wide range of people interested in special needs education. In the future, the University will consider the establishment of a new university-wide organization, and it will work to promote research in collaboration with fields other than pedagogy at the University and develop online-based cultivation/training programs for special needs education teachers by strengthening cooperation with the boards of education, companies promoting special needs education, and universities in Japan and overseas.</p> <p>As described above, in addition to <b><u>the completion of the integration and reorganization of 11 graduate schools into four graduate schools and efforts to establish the Graduate School of Innovation and Practice for Smart Society (tentative name) (a base organization responsible for implementing collaborative programs between graduate schools)</u></b>, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has newly implemented since AY 2020 focused efforts on <b><u>organizational reform</u></b> from the perspective of <b><u>the promotion of a globalization strategy, the Town &amp; Gown concept, strengthening of research capabilities, education on AI/data innovation, the development of human resources to promote advanced industrial DX (increase in the capacity of the School of Informatics and Data Science), the international development of Society 5.0, and special needs education, resulting in successful strengthening of the University's functions.</u></b> Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</p>
<p>[53] Establish education and research organizations that maximize the University's proven, unique life and biological education and research resources.</p>	III	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has implemented the following initiatives, and as a result, <b><u>the initial plan was fully achieved.</u></b></p> <ul style="list-style-type: none"> <li>• In AY 2020, a system was established and evaluation items were set to verify the Graduate School of Integrated Sciences for Life and the Graduate School of Biomedical and Health Sciences.</li> <li>• In AY 2021, as the grade progression of students of the master's courses of both graduate schools has been completed, a verification was conducted in light of their initial purpose of establishment, such as what type of human resources to be developed. As a result, it was confirmed that graduates of the Graduate School of Integrated Sciences for Life have improved their logical thinking, foreign language skills, and ability to present research results in an easy-to-understand manner, while graduates of the Graduate School of Biomedical and Health Sciences have improved their ability of written expression, applied skills, ability to think, logicity, and analytical skills, and that both graduate schools have produced the type of human resources that they aim to develop.</li> </ul>
<p>[54] Reorganize the Graduate School of Education by the end of AY 2016 to include a new program titled the "Professional Development Program for Teachers and School Leaders" (i.e., Graduate School of Education) to respond to present-day educational issues, including those underlying teacher training programs and the demand for various workers. In addition, after the completion of the grade progression, evaluate it by comparing students' achievements with the program's originally set objective criteria, including the goals described in its curriculum, the type of people it promises to cultivate, and the graduate employment rate.</p>	III	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the establishment of the Graduate School of Education and the maintenance and improvement of the level of educational activities, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University increased the enrollment capacity in April 2020, <b><u>established the Professional Development Program for Teachers and School Leaders, Graduate School of Humanities and Social Sciences (Graduate School of Education), and implemented the following efforts.</u></b> As a result, <b><u>the initial plan was fully achieved.</u></b></p> <p>As strategic measures to maintain and improve the level of educational activities and contribute to the unique development of the Professional Development Program for Teachers and School Leaders (Graduate School of Education), the University has formulated and partially implemented the following measures: (1) new public relations activities using online systems, (2) the "Practical Skills Improvement Project," (3) improvement of educational activities based on a follow-up survey of graduates, and (4) "School Leader Development Training" based on cooperation with educational administrative organizations.</p> <p><b>(1) <u>New public relations activities using online systems</u></b> To deepen the understanding of the human resources to be developed in the Program and its educational activities, a public relations video of the Professional Development Program for Teachers and School Leaders is posted on the Program's website at all times. In addition, entrance examination briefings (for the entire Program) have been held six times each year using an online system (video conference system/on-demand), and individual information sessions have been held according to the requests of applicants, resulting in attracting more applicants than the enrollment capacity of the Program.</p> <p><b>(2) <u>"Practical Skills Improvement Project"</u></b> The University organizationally and systematically implemented a Practical Skills Improvement Project aimed at enhancing the practical educational skills of graduate students and helping undergraduate students understand the educational activities of the Graduate School of Education. In AY 2020, the project was held five times in the first semester and six times in the second semester, with a total of 88 participants (10 graduate students and 78 undergraduate students). In AY 2021, it was held 22 times in the first semester (face-to-face/online) and five times in the second semester, with a total of 350 participants (57 graduate students and 293 undergraduate students), an increase of about four times the total number of participants from AY 2020.</p> <p><b>(3) <u>Improvement of educational activities based on a follow-up survey of graduates</u></b> In addition to the visits to the schools and workplaces of the graduates and interviews and questionnaire surveys, which have been conducted every year with the aim of verifying the results of and improving the educational activities of the Graduate School of Education, a follow-up survey (for graduates who have completed the program three years ago) was carried out in AY 2020, and the survey results were reported to and shared with the Program</p>

		<p>Council and the Graduate School of Education Steering Committee. The same survey was also conducted in AY 2021, and the survey results were reported at the four-party liaison council with the Program Council, the Graduate School of Education Steering Committee, and the boards of education of Hiroshima Prefecture, Hiroshima City, and Higashi-Hiroshima City to share highly evaluated points and problems.</p> <p><b>(4) <u>“School Leader Development Training” based on cooperation with educational administrative organizations</u></b></p> <p>To contribute to the development of school leaders in Hiroshima Prefecture and further improve the education and research activities of the Graduate School of Education, in AY 2020, the University reviewed the holding of “School Leader Development Training,” a new project based on cooperation with municipal boards of education, including the Hiroshima Prefectural Board of Education and the Higashi-Hiroshima City Board of Education (held in AY 2021). It was decided to apply for support for this initiative under the “Project for Development and Support of Training Programs to Improve the Quality of Teachers” of the National Institute for School Teachers and Staff Development (NITS). In AY 2021, the University, in cooperation with the Higashi-Hiroshima City Board of Education and the Takehara City Board of Education, applied for the AY 2021 Project for Support of NITS/Graduate School of Education Collaboration Training Program, and this initiative was adopted for the project. The training sessions were held ten times to contribute to the development of school leaders in Hiroshima Prefecture and further improve the education and research activities of the Graduate School of Education.</p>
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I. Business operation and financial status  
 (1) Business operation improvement and optimization goals  
 ③ Office work optimization and rationalization goals

Medium-term goals	[25] Optimize and rationalize office work by reexamining organizations and business systems, and also help staff members improve their skills.
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Medium-term plan	Progress	Descriptions and explanations (of plan implementation)
[55] Take the following actions to optimize and rationalize office work: 1) regularly reexamine organizations and business systems; 2) perform maintenance of ICT systems, including gathering data stored in multiple systems in one place and improving the University's online application system; and 3) help staff members improve their skills by providing them with work-related training and role-based training.	IV	<p><b>(Implementation status in AY 2020 and AY 2021)</b>          Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, <u>the Hiroshima University Academy Intelligence (HUAD) system was released in September 2021</u> as a system for visualizing various kinds of information about the University to respond to the new teacher evaluation, allowing teachers to check their own AKPI® values and BKPI® values, as well as the simulation results (evaluation points, rankings, etc.) under the new university-wide unified system for evaluation of individual teachers introduced from AY 2021. <u>In AY 2020, the University reexamined the need for 45% of committees/councils</u> (by abolishing or integrating them and/or reducing members) <u>of the Administration Bureau compared to the previous academic year.</u> The number of meetings held has been continuously kept to the minimum necessary, and online meetings have been actively used. With regard to training of staff members, role-based training and work-based training that combine lectures, group work and exercises have continued to be conducted using an online system as well in order to expand opportunities for staff members to receive training and to improve their practical skills.</p> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b>          Regarding the reduction of overtime work, which had been implemented since AY 2017 to optimize and rationalize operations, it was decided to reduce it by 10% in AY 2020 compared to the previous academic year. To achieve this, <u>an adjustment of work assignment for staff members</u> who frequently work long hours was carried out, <u>no overtime days were thoroughly implemented</u>, and <u>the situation was shared at the Round-table Meeting of the Executive Board once a month to ensure implementation of these efforts.</u> In AY 2021, in consideration of the perspective of work style reform, it was also decided to <u>manage the total actual working hours</u>, including the promotion of taking leave, in addition to the reduction of overtime work.</p> <p>In addition, <u>improvements were made in operations by promoting the following efforts using ICT.</u></p> <ul style="list-style-type: none"> <li>• The office information systems upgraded in AY 2019 have been in full-scale operation since AY 2020, and all work environments where critical information is handled have been separated from the Internet environment to create a secure virtual environment, which has <u>enabled telework from home or other locations via the Internet. The telework system was put in place in November 2020</u>, making it possible to carry out operations more efficiently.</li> <li>• <u>In July 2020</u>, the University decided to <u>abolish the use of seals in principle</u> after reviewing (1) operations requiring a private seal for internal application procedures and (2) operations requiring an official seal for internal and external application and submission procedures.</li> <li>• For corporate documents created or obtained in or after AY 2021, it was decided to treat the electronic media as the original and to <u>store such documents on electronic media in principle.</u> In December 2021, an electronic approval system was introduced, and 1,124 corporate document files were stored electronically.</li> <li>• By <u>utilizing the RPA tool</u> introduced in April 2021 to mechanize and automate 17 operations, the University has achieved optimization and rationalization of operations and <u>reduced the annual hours of operations by about 727 hours.</u></li> <li>• The University has proceeded with <u>the development of a web system for personnel-related procedures</u> since April 2021 and implemented the electronic year-end tax adjustment, the electronic retirement procedures, and the electronic applications for various allowances since October 2021, February 2022, and March 2022, respectively, realizing the optimization and rationalization of operations through the use of ICT. The University started trial implementation of <u>electronic payroll statements</u> and <u>electronic applications for various allowances</u> from August 2021 and November 2021, respectively, and introduced them at the Administration Bureau in advance. For other departments, they are scheduled to be introduced sequentially through AY 2022. With the consent obtained within the University in AY 2021, from AY 2022, <u>the salary payment date was changed from the 17th to the 21st of each month</u> to secure time for payroll calculation and thereby improve the efficiency of operations of staff members.</li> <li>• <u>Paperless operations</u> have been promoted through such measures as paperless meetings and electronic approval and document storage, resulting in an about 25% reduction in the number of printed pages compared to AY 2019 (AY 2020: <u>25.2% reduction</u> from AY 2019; AY 2021: <u>23.2% reduction</u> from AY 2019).</li> </ul>

		<p>As described above, in addition to <u>the modification of the education and research information system</u> and <u>rationalization of committees/councils</u>, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has newly implemented since AY 2020 the optimization and rationalization of operations, such as <b><u>thorough reduction of overtime work</u></b>, <b><u>promotion of DX</u></b>, and <b><u>promotion of paperless operations</u></b>, which has enabled the total actual working hours per person to be <b>reduced to 1,915 hours</b> in AY 2020 and <b>1,913 hours</b> in AY 2021 <b>from 1,928 hours in AY 2019</b>. These efforts have also allowed <b><u>overtime work</u></b>, which had been steadily increasing, to be <b>reduced by about 20%</b> in AY 2020 and AY 2021 compared to <u>AY 2019</u>, <b>resulting in successful optimization and rationalization of operations</b>. Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</p>
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**(1) Points to note regarding efforts put into improving and optimizing business operations****1. Points to note****o Reviewing education and research organizations**

i) Education and research organization improvement efforts [Project No. 52]  
[Reviewing schools and graduate schools]

To construct a world-class center of education and research that embraces to an unprecedented level all the existing disciplines related to the sustainability of humans, society, culture, food, the environment, and nature and that puts into practice the new principle of peace science, “Science for Sustainable Development,” by unlimitedly challenging and working on building peace, the graduate schools of Hiroshima University have set the missions of “creating new knowledge and value that will contribute to the realization of a sustainable, peaceful and inclusive society” and “developing human resources who will lead the creation of innovation,” and they are designed to be a graduate education body where different disciplines are consolidated into larger units and thus interdisciplinary or field-fusion-type research and education can progress freely.

In reorganization of graduate schools, after reviewing in April 2020 graduate-school functions and enrollment limits and assigning teachers strategically, under its unified decision-making system for the employment and assignment of teachers, to areas that it had decided to prioritize based on diverse social needs and the University’s unique Achievement-motivated Key Performance Indicators (AKPIs®) for monitoring the level of performance of faculty members as teachers and researchers, as well as an IR-indicator-based analysis, the University established the following graduate schools for the following reasons: the Graduate School of Humanities and Social Sciences, to strengthen its functions of offering humanities and social sciences programs, as well as interdisciplinary programs; and the Graduate School of Advanced Science and Engineering, to do the same with its science and engineering programs.

The Graduate School of Humanities and Social Sciences has the two missions of pursuing various sciences for people and society and building a sustainable and peaceful world through education. It fosters human resources who can create the human world of the future in collaboration with specialists in other fields, including natural and life sciences, with a deep insight into people and society and a strong interest in fields other than their own.

The Graduate School of Advanced Science and Engineering fosters human resources who not only have a vast and deep knowledge but also the ability to understand and integrate multiple fields in science, engineering, information science, and related research areas with a high level of expertise at the core as leaders of the next generation able to responsibly promote world-class academic research and create innovation.

In April 2020, the IDEC Institute was established for the purpose of driving the internationalization of the University while succeeding to the assets and brand of education and research on international cooperation and international development built up by the Graduate School for International Development and Cooperation. The role of the IDEC Institute is to lead the globalization of the entire university, such as the implementation and development of interdisciplinary and practical programs across graduate schools and the implementation and promotion of international joint degrees, and in October 2020, the Graduate School of Humanities and Social Sciences Joint International Master’s Programme in Sustainable Development (Hiroshima University - University of Graz) and the Graduate School of Advanced Science and Engineering Joint International Master’s Programme in Sustainable Development (Hiroshima University - Leipzig University) were established as the University’s first international joint degree programs.

The Graduate School of Humanities and Social Sciences Joint International Master’s Programme in Sustainable Development (Hiroshima University - University of Graz) aims to cultivate human resources of the following type: 1) has the ability to conduct research and practical work on urgent regional and global issues to help achieve the SDGs, especially poverty reduction, by taking social science approaches based on the theory of international cooperation in development studies; 2) has high communication skills to collaborate with others at universities, research institutes,

governments and international organizations, private companies, and NGOs; and 3) has high employability in the international labor market.

The Graduate School of Advanced Science and Engineering Joint International Master’s Programme in Sustainable Development (Hiroshima University - Leipzig University) aims to cultivate human resources of the following type: 1) has the ability to conduct research and practical work on urgent regional and global issues to help achieve the SDGs, especially development issues centering on environmental issues associated with rapid urbanization in developing countries, by taking science and engineering approaches based on sustainable development theory in environmental studies; 2) has high communication skills to collaborate with others at universities, research institutes, governments and international organizations, private companies, and NGOs; and 3) has high employability in the international labor market.

In addition, in preparation for the fourth medium-term target period, the University prepared a document titled “Development of the Graduate School Educational Organization of Hiroshima University in the Fourth Medium-term Target Period,” and on September 15, 2020, Deans/Directors held a meeting to exchange opinions on the document. Based on the preceding meeting, at another meeting held on the same day by the Education and Research Council, council members decided to establish an Educational New Degree Program Concept Review Committee.

Since the Graduate School of Integrated Sciences for Life and the Graduate School of Biomedical and Health Sciences, which were established in April 2019, will be graduating their master’s course students in March 2021, to monitor whether students developed into the targeted types of people and whether the graduate schools’ three policies were met, the Graduate School of Integrated Sciences for Life and the Graduate School of Biomedical and Health Sciences set evaluation items in the Self-Inspection and Evaluation Committee and the Dean’s Office Meeting and Board of Education, respectively.

Furthermore, the University decided at the Executive Board meeting in March 2022 to apply for the program “Increase in the capacity of local national universities that can contribute to the realization of attractive local universities for 2023” to increase the capacity of the School of Informatics and Data Science by 50. Through this application, the University will develop human resources to promote advanced industrial DX to produce personnel who will contribute to regional revitalization of Hiroshima. In light of social needs and the future demand for human resources, it has also decided to transfer the capacity of 20 students of the School of Education to the School of Informatics and Data Science.

To develop human resources to promote advanced industrial DX required in Hiroshima Prefecture, the curriculum has been reorganized into a three-program system, including the intelligence science program, since AY 2022 based on the needs of the region. Additionally, the University has introduced study models (“basic study model,” “integrated study model,” and “practical study model”) that enable students to choose their careers from an earlier stage. With the introduction of the study models, the University will develop, in addition to human resources conventionally developed, human resources who have an academic background in information science but have the ability to work in a wide range of fields, not necessarily limited to ICT (integrated study model), as well as the human resources who have the practical ability to be ready for work in society after graduation (practical study model).

Through the “Hiroshima Industry-Academia Council for Development and Securing of Human Resources to Promote DX” consisting of Hiroshima Prefecture, local industries, and universities in the prefecture, the University will promote educational collaboration with neighboring public and private universities to contribute to the development of human resources to promote DX at other universities in the prefecture.

This application was selected by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) on June 10, 2022, making Hiroshima University the first university in Japan to be selected for the program.

As a result of reviewing the establishment of an educational and research organization that fosters

“human resources who can internationally develop transdisciplinary practical science related to Society 5.0” and holding discussions with MEXT, it was decided to establish the Graduate School of Innovation and Practice for Smart Society (tentative name) as a base organization responsible for implementing collaborative programs between graduate schools that provides an interdisciplinary curriculum through enhanced cooperation of all the graduate schools. This graduate school is an unprecedented initiative in the world to attract motivated students interested in Society 5.0 from all over the world and to foster human resources who will lead the international development of Society 5.0 by providing a flexible curriculum that goes beyond the fusion of existing specialized fields and enables the implementation of practical science for a smart society that responds to the changing demands of society.

Since the School of Informatics and Data Science and the Department of Integrated Global Studies of the School of Integrated Arts and Sciences, which were established in March 2018, and the master’s courses of the Graduate School of Humanities and Social Sciences and the Graduate School of Advanced Science and Engineering, which were established in April 2020, will be graduating their students in March 2022, the School of Informatics and Data Science, the Department of Integrated Global Studies of the School of Integrated Arts and Sciences, the Graduate School of Humanities and Social Sciences, and the Graduate School of Advanced Science and Engineering set the evaluation items regarding whether they developed the type of human resources that they aim to develop and whether the graduate schools’ three policies were met in the Administration Meeting, Evaluation Committee, the Self-Inspection and Evaluation Committee, and the Self-Inspection and Evaluation Committee, respectively.

On the other hand, the University has also been working to strengthen mathematics, data science and AI education, which is required in various areas of society. In AY 2021, the Information, Data Science and AI Package was formulated as a compulsory subject and was certified by MEXT as an Approved Program for Mathematics, Data science and AI Smart Higher Education (Literacy). Through such efforts, the program has been expanded to university-wide education.

[Promotion of globalization]

In October 2020, the University jointly established with Arizona State University (ASU) in the U.S. the Arizona State University/Thunderbird Graduate School of Global Management-Hiroshima University Global Initiative (“Global Initiative”), which offers an undergraduate degree program focusing on global management and sustainable business, on the campus of the University. This was the first initiative by a Japanese national university to establish a campus of an overseas university. In AY 2021, five online joint subjects that students of both the University and ASU can take were conducted (57 students from ASU and 84 students from the University participated), and a memorandum of understanding was concluded regarding a detailed plan for the curriculum, etc. of the Global Initiative. In this way, the University has been working to contribute to the development of a global campus and management reform (the strengthening of the financial base and management capabilities).

Furthermore, the University concluded a memorandum of understanding with Capital Normal University in China in December 2020 and established the Hiroshima University Morito Institute of Global Higher Education in Beijing on April 1, 2021. On December 1 2021, it launched the Japanese Language and Culture Online Program for undergraduate students enrolled in its partner universities in China. These are efforts to provide Chinese university students with education that will help them acquire practical Japanese language skills and understand Japanese culture so that they can improve their Japanese language and other skills to a level sufficient to study in Japan before coming to Japan, thereby attracting excellent international students.

[Promotion of the Town & Gown concept]

With reference to the case of Arizona State University and Tempe, Hiroshima University and Higashi-Hiroshima City, which share the vision of a sustainable future, decided to promote, from AY 2020, the Town & Gown concept to solve social issues through social implementation of the University’s science, technology and innovation with the participation of companies, and they

established the Town & Gown Office Preparation Office in April 2020.

In January 2021, Hiroshima University, Higashi-Hiroshima City, and Sumitomo Corporation concluded a comprehensive collaboration agreement and made the Carbon Neutral x Smart Campus 5.0 Declaration with a target year of 2030. In October 2021, the Town & Gown Office was officially established at the Hiroshima University Phoenix International Center MIRAI CREA, an international exchange base facility for creating innovation, which was developed through a joint project with Higashi-Hiroshima City.

In order to promote demonstration research with local governments, companies, etc. using the Higashi-Hiroshima Campus, the Town & Gown Office took the lead in launching the Hiroshima University Smart City Co-Creation Consortium in March 2022, together with Higashi-Hiroshima City and eight private companies from different industries, and developed a framework for raising funds (260 million yen in AY 2022) using the corporate version of the hometown tax donation program, with the participation of companies and in collaboration with local governments.

To build a new regional revitalization model that will lead social change toward the realization of a sustainable society, the University decided to establish the Town & Gown Institute of Innovation for the Future as a joint education and research facility on campus.

[Strengthening of research capabilities]

To further reinforce the research management system of the entire university, the University decided to establish the “Headquarters for Research in Collaborative Sciences Enabling the Future.” a university-wide organization directly under the President, as a control tower for strengthening research capabilities. The Headquarters for Research in Collaborative Sciences Enabling the Future selects centers for priority support, provides selective and intensive support to these centers, creates innovative research areas by integrating and abolishing existing organizations, strategically and systematically assigns and develops human resources, and secures research resources for highly specialized personnel, such as URAs and technical staff members, to build a system to form world-class research centers and further strengthen research capabilities.

[Promotion of special needs education]

In March 2021, the University concluded an agreement with the National Institute of Special Needs Education (NISE) and established on the Higashi-Hiroshima Campus the Hiroshima Office of the West Japan Branch of NISE, which is staffed by researchers on a full-time basis, as the only branch office of the institute in Japan in order to promote the development of special needs education and inclusive education systems in Japan and to reinforce education, research, and training related to special needs education in western Japan. In the future, the University will consider the establishment of a new university-wide organization, and it will work to promote research in collaboration with fields other than pedagogy at the University and develop online-based cultivation/training programs for special needs education teachers by strengthening cooperation with the boards of education, companies promoting special needs education, and universities in Japan and overseas.

As described above, the University is promoting a review of its education and research organizations to maximize its capabilities and strengths.

ii) Organizational management improvement efforts [Project No. 44]

[Organizational evaluation of schools/offices]

- To help schools/offices identify and resolve underlying issues and thereby enhance the quality of their education and research efforts in ways that will strengthen their features and characteristics, as it has been doing every year since AY 2008, the University asked external stakeholders (including at least one external member of the Administrative Council) to assess its schools/offices. Based on the external party’s assessment results, the University’s Evaluation Committee performed a follow-up third-party evaluation of progress made by schools/offices in resolving underlying matters, helping the University increase the effectiveness of its PDCA cycles.

- In AY 2020, the University had its undergraduate education evaluated and received advice on how it could develop its features and characteristics and also resolve its issues (89 suggestions). Subsequently, the University had its schools/offices consider how it should respond to the advice and suggestions it received and made eight improvements. In AY 2021, the University had education and research in six medical schools/offices (School of Medicine, School of Dentistry, School of Pharmaceutical Sciences, Graduate School of Biomedical and Health Sciences, Research Institute for Radiation Biology and Medicine, and Hospital) evaluated and received 68 suggestions. Subsequently, the University had its schools/offices consider how it should respond to the suggestions it received and made eight improvements.

[Meeting for exchanging views between external members of the Administrative Council and students]

- With the aim of incorporating particularly productive ideas contributed by students into its operations, the University asked its students and external members of the Administrative Council to come together to share ideas with it, and each school/office examined what actions should be taken based on the ideas proposed by students.
- Here is an example of how opinions proposed in the opinion exchange meeting in AY 2020 were reflected in the management of the University. Regarding the University's study abroad system, in the second semester of AY 2020, the University introduced the e-START/e-START+ programs, online international exchange education programs that do not involve travel. In addition, the University created an environment for offering online orientation camps hosted by its undergraduate schools. Regarding the method of conducting classes during the COVID-19 pandemic, experiments and practical training involving practical work were required to be conducted online in principle, except for those that were permitted to be conducted face-to-face, until the second term of AY 2020. However, in response to students' opinions on the benefits of both online and face-to-face formats, the University has started offering lectures in a hybrid format from the third term, allowing students to choose how they take classes according to their wishes.
- In AY 2021, after receiving requests from graduate students for support on how to fill out application forms related to Special Postdoctoral Researcher of the Japan Society for the Promotion of Science (JSPS) (DC1, DC2) and research funds, the University conducted a questionnaire on support for the activities of graduate students and surveyed the needs throughout the University. As a result, in order to support the activities of graduate students, the University decided in AY 2021 to hold a briefing session for graduate students on the recruitment of Special Postdoctoral Researcher of the JSPS (DC1, DC2) for AY 2023 and a seminar by a person who has experience of being selected or by a URA on how to fill out application forms. The briefing session held on April 8, 2022 was attended by 102 people, and the seminar held on April 19 was attended by 115 people. Also, after receiving a suggestion that there was a risk of falling due to deteriorated pavement on campus roads, the University promptly decided to repair the roads. Furthermore, it was decided through discussions with Higashi-Hiroshima City that the relevant roads would be certified as municipal roads and that complete repair would be carried out after certification under the management of Higashi-Hiroshima City. As the opinions for response to COVID-19, the University received a request to enhance the PCR testing system for members of the University, and in response, it held discussions with Hiroshima Prefecture and established a PCR center operated by Hiroshima Prefecture on campus (Higashi-Hiroshima Campus) for free PCR testing.

[Participation of students in the university operation]

- To put students at the center of learning and help them see their own progress, on April 1, 2020, the University established the Center for Academic Practice and Resources, thereby improving the University's educational environment, which creates meaningful learning experiences. At this center, planning and management of the University's three-level TA system "Hirodai TA" are implemented, social gatherings for students are held (three times in AY 2020 and three times in AY 2021), a consultation desk is available for student staff to offer advice to other students

regarding their learning issues (used by 15 students in AY 2020 and 127 students in AY 2021), and a newsletter containing articles about matters student staff want to convey to other students is published (4 issues were published in total). By building a system in which students support other students and letting student staff at this center participate in these efforts, the University implemented learner-oriented education and its support.

- To improve the learning environment, a meeting for exchanging opinions was held multiple times between the student staff and the Executive Vice President (Education) to collect opinions from students regarding learning, such as what the center should work on in the future. Based on these opinions from students and the results of the questionnaire survey for improving treatment at graduate schools (conducted in December 2020; response rate: 23.1%) for graduate students of the University, the University examined improvement of the learning environment, and as a result, it created the "Hirodai TA Matching Platform," which provides opportunities to match students who want to work as TAs and teachers who want to hire TAs and increased the unit price of TAs.
- The Steering Committee for the Management of the International Exchange Base Facility, which examines the usage policy of the international exchange base facility (currently "MIRAI CREA"), designed the facility in light of the opinion of one student committee member that "it is desirable to make it a place where students can gather and to have a cafeteria on the premises." Today, it has become a place where many people, including students, gather on a daily basis, either to study, have discussions, or relax in the cafeteria. The name of the facility, "MIRAI CREA," was selected from student proposals submitted in response to an open call for proposals within the University.
- The Hiroshima University Campus Master Plan 2022 Study Subcommittee decided a maintenance policy to divide the campus into pedestrian areas and bicycle lanes to ensure the safety of students, reflecting the opinions of two student committee members. Regarding the repair of the campus roads that are public bus routes and that have deteriorated and have been pointed out as dangerous by students, a policy was decided in AY 2021 to certify the relevant roads as municipal roads, and complete repair by Higashi-Hiroshima City (construction cost: about 80 million yen) and continuous management by an administrative authority were realized.

iii) Governance reform efforts [Project No. 45]

[Review of the operation system, establishment of a new research institute and reorganization of the operational organization]

To strengthen its educational and research capabilities and corporate management under the leadership of the President, the University reviewed its operation system as follows in AY 2020.

- Two external people with outside experience in industries and at other educational and research institutions were appointed as part-time Executive Directors.
- To improve university-wide common education and foreign language education, stably operate the Academy, enhance IR functions, and promote diversity, the University newly appointed people to the following positions: 1) Vice Presidents each in charge of "University-Wide Education," "Foreign Language Education" (changed to "Global Education" in AY 2021), "Academia-Government-Industry Collaboration," the "Academy of Hiroshima University," "Institutional Research," "Equity, Diversity and Inclusion," "Fields of Humanities and Social Sciences," and "Fields of Advanced Science and Engineering" and 2) a Senior Vice President in charge of "Hiroshima University Hospital."
- To promote globalization in education and research, the University appointed an international faculty member as Vice President.
- To promote female participation in the decision-making process of the University's administration, the University appointed one female Executive Vice President and two female Vice Presidents (one of whom is the aforementioned international faculty member).
- The University appointed all Deans as Vice Presidents to enable them to share the President's visions and the University's policies and engage in the operation of the University.

[Inspection and publication of the status of compliance with the Governance Code]

In AY 2020 and AY 2021, it was judged that the University complied with all the principles and

supplementary principles, and the compliance status was published. In AY 2021, the report on the status of compliance with the Governance Code was updated. Upon updating, the report was reviewed at the Round-table Meeting of the Executive Board, deliberated based on prior explanations to and seeking of opinions from external members of the Administrative Council, and confirmed by auditors. In addition, after conducting an examination for a more appropriate governance system and review from the perspective of whether there were any points that needed to be continuously improved, the University formulated the Policy for Development of Human Resources for Corporate Management at National University Corporation Hiroshima University in AY 2021 and set up an off-campus contact point for reporting at a law firm as a system for reporting violations of compliance. Moreover, the University revised the contents of the explanation regarding the status of compliance with the Governance Code to make it clearer in order to enhance the transparency of the University's management and fulfill its accountability to society through inspection and publication of matters relating to the Governance Code. The University worked to further improve governance through confirmation of the status of compliance every year.

[Strengthening the University's IR functions]

On June 1, 2020, the University established the Headquarters for Institutional Research for the following purposes: 1) gather, analyze, and visualize a variety of internal and external data and 2) strengthen functions that support efficient university management and decision-making.

[Selection of external members of the Administrative Council]

The selection of external members of the Administrative Council is performed according to the "Policy for Selection of External Members of the Administrative Council of the National University Corporation Hiroshima University" formulated in December 2020, and they are selected from a wide range of fields, such as industry, medicine, and education. Additionally, from a global perspective, members with foreign nationality are also selected.

[Performance evaluation of the President]

The President Selection Committee conducted its annual evaluation of the status of the execution of duties by the President. In AY 2021, the Committee conducted the performance evaluation of the President, and it determined that the President's leadership was fully exercised and his performance was excellent.

[Reviewing the President's term of office]

The President Selection Committee revised the term of office of the President to a maximum of three terms of 12 years for the continuous development of the organization, as the leadership of the President is extremely important amid the dramatically changing environment surrounding Japanese institutions of higher education and significantly growing expectations and demands of the society for universities. Following this review, the University revised the Hiroshima University Regulations for Officers on January 27, 2022.

[Reflecting audit results by auditors in corporate management and developing an auditor support system]

To support the independence of the auditors who audit the operations of the University and to enable the auditors to perform their auditing duties fully and appropriately, on April 1, 2021, the University established the Auditing Support Office and assigned staff as necessary to improve its support system for auditors (one full-time auditor and one part-time auditor).

[Establishing an off-campus contact point for reporting]

The University established the following contact points not only within the University but also at a law firm outside the University on February 1, 2021, as a mechanism for reporting facts that violate compliance or may lead to such violations: 1) whistleblowing in the public interest, 2) reporting misuse of research funds, and 3) whistleblowing misconduct relating to research activities.

iv) Organization and business system reexamination efforts [Project No. 55]

As a result of improving operations by promoting the following efforts using ICT, the overtime work of administrative and technical staff, which had been steadily increasing, was reduced by 20.2% in AY2020 compared to AY 2019. In AY 2021, overtime work hours were maintained at the level of AY 2020.

In AY 2020, the University reexamined the need for 45% of committees/councils (by abolishing or integrating them and/or reducing members) of the Administration Bureau compared to the previous academic year. Also, the number of meetings held has been continuously kept to the minimum necessary and online meetings have been actively used. In July 2020, the University decided to abolish the use of seals in principle after reviewing (1) operations requiring a private seal for internal application procedures and (2) operations requiring an official seal for internal and external application and submission procedures.

For corporate documents created or obtained in or after AY 2021, it was decided to treat the electronic media as the original and to store such documents on electronic media in principle. In December 2021, an electronic approval system was introduced, and 1,124 corporate document files were stored electronically.

By utilizing the RPA tool introduced in April 2021 to mechanize and automate 17 operations, the University has achieved optimization and rationalization of operations and reduced the annual hours of operations by about 727 hours.

The University has proceeded with the development of a web system for personnel-related procedures since April 2021 and implemented the electronic year-end tax adjustment, the electronic retirement procedures, and the electronic applications for various allowances since October 2021, February 2022, and March 2022, respectively, realizing the optimization and rationalization of operations through the use of ICT. The University started the trial implementation of electronic payroll statements and electronic applications for various allowances from August 2021 and November 2021, respectively, aiming to put them into full operation by the end of AY 2022.

Paperless operations have been promoted through such measures as paperless meetings and electronic approval and document storage, resulting in an about 25% reduction in the number of printed pages compared to AY 2019 (AY 2020: 25.2% reduction from AY 2019; AY 2021: 23.2% reduction from AY 2019).

In addition, the HUI system was released in September 2021 as a system for visualizing various kinds of information about the University. This system allowed teachers to check their own AKPI® values and BKPI® values, as well as the simulation results under the new university-wide unified system for evaluation of individual teachers, which was introduced from AY 2021. A data analysis menu was provided for executives and Deans/Directors, and the Deans of each graduate school presented at university-wide meetings the details of the initiatives (improvement measures) they have implemented for the University's members based on the information analyzed using this system. The University will continue to use this system to conduct multifaceted analysis based on IR data, thereby leading to decision-making based on high-quality evidence.

o **Efforts to deal with COVID-19**

i) Measures to resume classes [Project No. 44]

- To ensure that students can continue their study, the Task Force for Reviewing the Implementation of Classes to Respond to COVID-19, which was established under the Review Team for the Implementation System of Classes to Respond to Outbreaks of Infectious Diseases and Disasters, reviewed and held workshops for the method for smoothly implementing online classes, and on April 8, 2020, the University began offering online classes using the online learning management system (LMS) and video distribution system (VOD) without delay from the regular schedule to start classes. In addition, to allow students to take online classes on campus, the University secured classrooms that students can use freely, and it also lent Wi-Fi routers free of charge to students who did not have Internet access at home.

- While paying attention to actions being taken by the national and prefectural governments and demands from students, etc., after taking sufficient infection prevention measures, the University gradually resumed face-to-face classes.

The University conducted classes, taking advantage of the features of face-to-face and online classes according to the characteristics of each subject and the content of each lecture by taking the following measures:

- ① Allow students from off-campus to attend face-to-face classes online (in real time);
- ② Distribute face-to-face classes online to other classrooms or places in real time;
- ③ Record video and audio of face-to-face classes and distribute them on demand;
- ④ Divide students into two groups and conduct face-to-face classes every other week;
- ⑤ Conduct experiments and practical training using an online system;
- ⑥ Proactively conduct face-to-face classes for specialized subjects for first-year undergraduates who have fewer opportunities to come to campus and feel uneasy about their student life.

- In conducting classes, the University took measures to prevent infection, such as by distributing face shields to those who said they wanted to use them and installing carbon-dioxide concentration measuring devices in lecture rooms used by many people.

○ **Response to issues in the evaluation at the end of the fourth year of the third medium-term target period**

i) Unfulfilled enrollment capacity for the professional degree program of the graduate school (Hiroshima University Law School)

In AY 2019, 18 students were enrolled in the Hiroshima University Law School, but in AY 2020, 15 students were enrolled in the Division of Law School, the Graduate School of Humanities and Social Sciences, showing a decrease in the number of enrolled students. The enrollment capacity fulfillment rate was 90% in AY 2019, but it was 75% in AY 2020 and less than 90% as of May 1, 2021. The reasons may include the following.

- ① The reason why the enrollment capacity fulfillment rate in AY 2020 was 75% was that the number of students enrolled in law schools nationwide was almost the same as that in the previous academic year, but the University had to reduce the number of times of entrance examination briefings due to the spread of COVID-19, and thus it was not able to carry out sufficient public relations activities.
- ② The bar-exam pass rate, which had risen to 35.9% in AY 2019, fell to 19.4%, lower than 25.0%, which was in the year before that (AY 2018), resulting in a decrease in both applicants (from 85 to 61) and examinees (from 75 to 52), and the enrollment rate of successful applicants was only 60%.

In AY 2021, the number of applicants increased from 61 in the previous academic year to 93, and the number of examinees increased from 52 to 89. One of the reasons for this is that the Graduate School's efforts to improve its education capabilities were appreciated due to the fact that the bar-exam pass rate for AY 2021 increased from 19.4% in AY 2020 to 25.0% and in particular, the bar-exam pass rate within one year after completion of the course, despite having been low in the past years, increased to 50% for both courses for those who have studied law before enrollment and those who have not, even though the number of students was small.

The Graduate School will continue to work on improving its education capabilities, enhancing the student support system, and public relations activities for those who wish to enter the Graduate School in order to secure the number of students enrolled and improve the capacity fulfillment rate. As a result of efforts over the past years, the number of students enrolled in April 2022 for the graduate school entrance examination conducted in AY 2021 reached 20, which fulfilled the enrollment capacity.

Specific measures are as follows.

- ① To increase its bar-exam pass rate and improve the quality of its education through education reform, with help from Kobe University's Law School, the Graduate School will integrally introduce the following three reforms to its education system: 1) an integrated education program designed to provide students with opportunities to put what they learned into practice;

2) individual study coaching that takes advantage of the small number of students; and 3) three-year follow-up seminars for reviewing previous lessons with help from young attorneys as instructors. In addition, to help its students develop a proactive attitude and thereby shift from inward-looking thinking common to law schools in rural regions, the Graduate School will create a confident study atmosphere, modeled after Kobe University's Law School, to provide a more effective educational program.

- ② In AY 2017 and AY 2019, the Law School (then) established its own scholarship program. Surveys conducted at entrance examination briefings also suggested that this program was of high interest to those wishing to proceed to the Hiroshima University Law School. In order to continue to secure funds for the program, the Graduate School will strive to make internal coordination and strengthen cooperation with donors.
- ③ Prior guidance for prospective students was held in which explanations were provided about the course at the Hiroshima University Law School, advice was given by attorneys who have graduated from the Law School, and the Dean held an interview with those who wished it. In AY 2021, nine of the ten students who participated in the prior guidance were enrolled in the Graduate School.
- ④ A legal profession training collaboration agreement concluded between the Division of Law School of the Graduate School of Humanities and Social Sciences and the School of Law of the University was certified by the Minister of Education, Culture, Sports, Science and Technology in March 2021, and the legal profession course started in April 2021. In July 2021, there was a press report on the improvement of the Higashi Senda Campus, where the Division is located, including the relocation of the School of Law from the Higashi-Hiroshima Campus to develop a new center for humanities and social sciences with a focus on legal profession training, attracting greater interest in the Division from outside the University. Under these circumstances, the Graduate School will continue to strive to further improve its education capabilities and enhance support measures while regularly holding meetings of the Legal Profession Training Collaboration Council with faculty members of the School of Law to strengthen the cooperative relationship. In addition, the Graduate School will proceed with efforts to encourage undergraduate students in the legal profession course to choose the Division instead of other law schools outside the University as their academic destination through such measures as providing such undergraduate students with opportunities to have interviews with the faculty members of the Division and holding academic guidance seminars for undergraduate students so that they can experience the course at the School of Law.

## 2. University-wide efforts

### (Governance reform)

#### ○ Strategic and effective corporate management and resource distribution and their effects

[Assignment of faculty members]

As has been the general practice since AY 2016, in accordance with the Basic Policy for Managing Instructor Labor Costs in the Third Medium-term Target Period, the University used its labor cost point system, which is converted from average instructor labor costs by individual job titles, in assigning faculty members. In addition, to strategically assign faculty members from a university-wide perspective, the University centralized the management of labor cost points to the University-wide Personnel Committee, established under the President's authority, instead of having schools/offices manage them individually. In strategically assigning faculty members from a university-wide perspective, the University allocated labor cost points in ways that allowed it to assign necessary faculty members to newly established education and research organizations and also promote the employment of female, non-Japanese, and young teachers in accordance with the University's annually revised Teacher Deployment Policy.

From AY 2020, the governance system was shifted to one in which the President makes decisions after deliberations by the Academy Council chaired by the Academy's Deputy Director (Vice President (Academy of Hiroshima University)) and the University-wide Personnel Committee.

In AY 2021, the University formulated the Faculty Placement Plan for the Fourth Medium-term

Target Period from a long-term perspective.

The University also developed a system in which “viewpoints and indicators” are set for each academic discipline of the Academy for applications for personnel appointments or promotions, and whether or not to approve an application for personnel appointments or promotions is determined based on the activities of individual faculty members or the activities of the field division to which the faculty members belong. The Hiroshima University Activity Monitoring System was introduced to make it possible to visualize and objectively evaluate these activities (e.g., publications and external funding). The system was utilized in setting the above “viewpoints and indicators” and in creating and updating the Faculty Placement Plan for the Fourth Medium-term Target Period to strategically assign personnel from multiple perspectives through combination use of conventional IR data.

[Staff assignment]

To optimally manage labor costs and strategically assign staff from a university-wide perspective, in AY 2013, the University began managing staff assignments based on cost, instead of headcounts. Consequently, it reduced annual costs at rates ranging from 1.3% to 3.0% depending on the year and reallocated them to cover reductions in labor costs and as university-wide adjustments.

The University has formulated the personnel plan for each Director Office, etc. since AY 2017, and after coordination by the Executive Director (Financial and General Affairs), a draft of the university-wide personnel assignment plan has been decided through deliberations by the Executive Board. To reflect labor costs more accurately, in AY 2019, the University recalculated labor costs per point. The money that came from university-wide adjustments were strategically invested in efforts to strengthen governance functions, including measures to strengthen project development functions, establish new schools, reorganize graduate schools, fund research, and promote globalization.

In AY 2021, the University formulated a staff employment plan for the fourth medium-term target period from a long-term perspective. Regarding the number of newly employed staff members from AY 2023 onwards, it was decided to systematically hire the average number of staff members who can be newly employed during the relevant period in each academic year so that there will be no extreme bias in the age structure.

○ **Timely decisions to ask external experts for help**

In AY 2020 and AY 2021, the Administrative Council meetings were held 11 times to discuss important matters concerning the management of the University, such as medium-term goals, medium-term plans, annual plans, budgets and financial statements. After each meeting of the Administrative Council, an opinion exchange meeting was held on a specific theme to obtain opinions from external council members that will contribute to the improvement of the university management. Measures that were taken in response to opinions from external council members on corporate management were sorted by academic year in which they were deemed to have been taken and posted on the University’s official website along with the Summary of Administrative Council Meeting Minutes.

○ **Reflecting the results of internal audits and audits by auditors in corporate management**

- To fairly and objectively investigate and verify the status of execution of activities of the University from the viewpoint of legality, rationality, and efficiency and provide information and offer advice and proposals for improvement based on the results, the University takes the following actions: 1) conducting internal audits (of the status of revising and enforcing rules, and the status of management of personal information and corporate documents); 2) reporting to the President; and 3) having schools/offices make improvements if there are any matters that require correction or improvement.
- To ensure that the University’s accounts are kept properly and thereby continue to fulfill its philosophy and objectives by maintaining the rationality and efficiency of its operations, annual audits were conducted by auditors in collaboration with accounting auditors and the Audit Office, and subsequently audit reports were posted on the University’s official website.

- The University has the President and auditors meet regularly to apply the results of audits by auditors to its operations, ensures the independence of auditors, investigates the reliability of its auditor support system, and makes improvements as necessary. In addition, from AY 2018, the University has strengthened its verification system by having the Chairperson of the University-wide Evaluation Committee regularly meet with auditors.

○ Details of individual items

- I. Business operation and financial status  
 (2) Financial status improvement goals  
 ① External research funding, donation collection, and other goals for increasing income

Medium-term goals	[26] Strengthen the University's financial base so that it can maintain the quality of its education and research at a level internationally expected of comprehensive research universities.
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Medium-term plan	Progress	Descriptions and explanations (of plan implementation)
<p>[56]                      Increase the average amount of external funding secured by each instructor to about 1.5 times that secured at the end of the second medium-term target period, and to do so, examine domestic and international trends of competitive funding and then develop a more effective strategy for securing external funding.</p>	<p>IV</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b>                      Regarding the review of the funding acquisition plan, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University <u>formulated in AY 2020 the External Funding Acquisition Plan for AY 2020/2021</u> based on the results of surveys and analysis on the actual acquisition results of external funding for the previous year and trends in competitive funding. In AY 2021, the University analyzed the acquisition status of external funding (including prospects) up to AY 2021 and <u>revised the External Funding Acquisition Plan for AY 2020/2021</u> to ensure the achievement of the medium-term plan.</p> <p>It <u>implemented the action plan</u> for each type of funding to increase the acquisition of external funding as stipulated in the External Funding Acquisition Plan for AY 2020/2021 and steadily carried out the following efforts to <u>change the systems and develop new ways of acquiring funding</u>.</p> <p><b>[Promotion of joint research]</b>                      As for joint research, the number of funding acquired and the amount of funding acquired have been steadily increasing, and as a type of funding that will continue to largely grow in the future, <u>the structure of the Hiroshima University Open Innovation Platform was strengthened</u> to expand the scale of joint research, <u>the research environment was improved by changing the indirect expense system</u>, and <u>basic research promotion costs were introduced</u> to enhance <u>motivation of researchers</u>. These efforts produced effective results, leading to a <u>150% increase</u> in the amount of income from joint research compared to the end of the second medium-term target period. In AY 2021, the University established a system that allows direct expenses of joint research, etc. (joint research, collaborative research laboratories, commissioned research, and commissioned projects) to be used to pay for labor costs for PIs or other personnel. This system will be applied from AY 2022.</p> <ul style="list-style-type: none"> <li>• At the Hiroshima University Open Innovation Platform, <u>persons with experience in private companies</u> have been <u>appointed as technical advisors</u> and <u>persons with experience at companies overseas</u> have been appointed as global creative advisors to <u>reinforce</u> the organization since AY 2020, thereby creating a system that can deal with global companies.</li> <li>• In AY 2020, the University <u>built a seeds database</u> to accumulate research seeds collected by coordinators for industry-academia collaboration and creative managers through meetings with researchers, and from AY 2021, it has <u>participated in the Industry-University Collaboration Platform</u> to match the needs of companies in order to create an environment that can connect research seeds to joint research.</li> <li>• To motivate researchers to collaborate on joint research and thereby promote such efforts, the University introduced in AY 2020 basic research promotion costs, which <u>estimate the value</u> that a given researcher's academic knowledge contributed <u>to his/her joint research</u> and incorporates that value into the joint research costs (AY 2020: 74 cases, 44.675 million yen; AY 2021: 147 cases, 126.207 million yen).</li> <li>• From AY 2021, <u>the method of calculating indirect expenses for joint research was changed from the hourly rate system to 30% of direct expenses</u>.</li> </ul> <p>Additionally, the University worked to acquire larger amounts of external funding in general by <u>acquiring funding for large-scale research</u> on countermeasures against COVID-19 (AY 2020: 15.359 million yen of research grants from companies, 524.400 million yen for the AMED technology development project for countermeasures against infectious diseases, including viruses; AY 2021: 11.615 million yen of crowdfunding), by <u>using Hiroshima University crowdfunding</u>, and by <u>increasing the number of research categories eligible for the Support Program for Step-up in the Grants-in-Aid for Scientific Research (KAKENHI)</u>, which encourages researchers to engage in higher-level research categories of KAKENHI.</p> <p>As a result of these efforts, the amount acquired for each type of funding compared to that at the end of the second medium-term target period was as</p>

follows.

- ① Commissioned research: 48% increase
- ② Joint research: 150% increase
- ③ Commissioned/joint projects: 131% increase
- ④ Grants-in-Aid for Scientific Research: 6% increase
- ⑤ Donations: 22% increase

Consequently, the amount of external funding acquired per full-time faculty member at the end of the third medium-term target period increased from 5.95 million yen at the end of the second medium-term target period to 8.88 million yen, which achieved the target of increasing the amount by about 1.5 times.

**(Efforts exceeding the plan stated in the reports on operational performance up to AY 2019)**

In addition to the above initiatives, the University developed the following new framework for raising funds in AY 2020 and AY 2021.

- For the purpose of creating innovation through social implementation of activities that contribute to the formation of a smart city using the Higashi-Hiroshima Campus as a place for the advanced realization of Society 5.0 with the University playing a coordinating role and implementation of the results of such activities, the University, with the participation of Higashi-Hiroshima City and eight private companies from different industries, established in March 2022 the Hiroshima University Smart City Co-Creation Consortium, for which the University served as the representative institution. By doing so, the University developed a framework for raising funds using the corporate version of the hometown tax donation program, and in AY 2022, it was decided to accept 260 million yen.
- In October 2021, the University established the Hiroshima LOVE it Consortium (participation by 38 companies) to promote the participation of local small and medium-sized enterprises, which have not been able to actively participate in industry-academia collaboration with universities, thereby building a system for expanding the base of joint research.
- Through the partnership with Arizona State University in the U.S., it became possible to obtain new funding in the form of income allocated proportionately according to the number of students at the Arizona State University/Thunderbird Graduate School of Global Management-Hiroshima University Global Initiative, jointly established on the campus of the University in October 2020.
- The Fund for Uplifting Hiroshima University and Energizing the Local Communities of Hiroshima, which was launched in AY 2017 in preparation for the 75th anniversary of the University, has newly promoted solicitation of donations from local governments, and it was decided at the Hiroshima City Council meeting held in March 2022 that Hiroshima City would grant 1 billion yen to the University to support the development of a new center for humanities and social sciences with a focus on legal profession training and a center for recurrent education on the Higashi Senda Campus.
- In April 2020, the University introduced a naming rights program to create a new mechanism for acquiring funding, through which it gained 2.512 million yen for three facilities in AY 2020 and 7.939 million yen for six facilities in AY 2021.
- For the use of the multi-purpose space and accommodation area in the interaction area of the Hiroshima University Phoenix International Center MIRAI CREA, which was established in AY 2021 using donations and self-funding and functions as a base for innovation and interaction and an accommodation facility, a system was adopted to charge usage fees.

As described above, due to the **review of the funding acquisition plan for AY 2020 and AY 2021**, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, the amount of external funding received per full-time faculty member significantly increased from 7.44 million yen (about 1.25 times the amount at the end of the second medium-term target period) in AY 2019 to 8.88 million yen, which achieved the target of increasing the amount of external funding acquired per full-time faculty member by about 1.5 times the amount at the end of the second medium-term target period. In addition, the University has developed a number of new mechanisms for raising funds through industry-academia-government collaboration and cooperation with overseas partner schools, **resulting in successful enhancement of its financial base (1.26 billion yen in AY 2022).** Therefore, it was determined that this item had been implemented, exceeding the target in the plan.



<p>[57] Regularly examine whether donation methods and public relations efforts are producing the desired effects, and based on that examination, improve strategies for attracting funding to continue the expansion of the Hiroshima University Fund.</p>	<p>IV</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the expansion of the Fund based on the new fundraising strategy, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University <u>formulated a new fundraising strategy in AY 2020</u>, which showed the donor acquisition process in the form of a pyramid, and made efforts according to each level of the pyramid (potential donors, first-time donors, multiple-time donors, and high-value donors). The University also implemented the following efforts to promote student support during the COVID-19 pandemic, create a highly convenient environment for donation, and facilitate dialogue with donors. As a result, <u>the cumulative income of the Hiroshima University Fund increased from about 3.5 billion yen to about 4.7 billion yen (up about 34%), and the number of individuals and organizations that have made donations (the number of donors) doubled from 2,009 to 4,468</u>, out of which the number of <u>multiple-time donors increased from 769 to 1,310</u>, over the two years from the end of AY 2019 to the end of AY 2021, enabling the University to strengthen its financial base based on the fundraising strategy and expand its important stakeholders.</p> <ul style="list-style-type: none"> <li>• In AY 2021, the University introduced a new donation payment system that allows donors to automatically and regularly make continuous donations once they make a setting to create a highly convenient environment for donation, and it has also provided an English version of the Fund's website.</li> <li>• To win understanding of donors about how funds were used and thereby motivate them to make new donations, the University has started to compile a booklet of reports on the Fund's activities and send it to all donors every year since AY 2020.</li> </ul> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b> The Fund for Uplifting Hiroshima University and Energizing the Local Communities of Hiroshima, which was launched in AY 2017 in preparation for the 75th anniversary of the University, has newly promoted solicitation of donations from local governments, and it was able to secure donations of 1.5 billion yen from local governments in AY 2020 and AY 2021 as follows.</p> <ul style="list-style-type: none"> <li>• In AY 2020, the University received <u>a donation of 500 million yen from Higashi-Hiroshima City</u>, and in October 2021, it established the Hiroshima University Phoenix International Center MIRAI CREA.</li> <li>• It was decided at the Hiroshima City Council meeting held in March 2022 that <u>Hiroshima City would grant 1 billion yen to the University</u> to support the development of a new center for humanities and social sciences with a focus on legal profession training and a center for recurrent education on the Higashi Senda Campus.</li> <li>• In AY 2020, the University raised funds for the Emergency Aid to support students in financial need due to the spread of COVID-19, <u>collected 1,162 donations worth 66.306 million yen</u> from faculty, staff, graduates, and the general public, and <u>continuously provided financial aid of 30,000 yen per month to a total of 1,820 students for about two years</u> (total amount of support provided: 54.6 million yen). In AY 2021, the University also <u>carried out a project to send food packs to 200 students</u> at the request of donors. For <u>the 50 Yen breakfast project</u>, which was implemented in AY 2021 to support students, the University adopted the method of crowdfunding and collected 4.365 million yen, about three times the target amount of 1.5 million yen, thereby promoting student support projects during the COVID-19 pandemic.</li> </ul> <p>As described above, <u>the efforts based on the new fundraising strategy</u>, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, led to an increase in the cumulative income of the Hiroshima University Fund from about 3.5 billion yen to about 4.7 billion yen (up about 34%) and a doubling of the number of individuals and organizations that have made donations (the number of donors) from 2,009 to 4,468, including an increase in the number of multiple-time donors from 769 to 1,310, over the two years from the end of AY 2019 to the end of AY 2021. In addition, the University newly promoted solicitation of donations from local governments, and it was able to secure donations of 1.5 billion yen from local governments in AY 2020 and AY 2021, resulting in successful enhancement and strengthening of its financial base through the expansion of the Fund. Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</p>
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I. Business operation and financial status  
 (2) Financial status improvement goals  
 ② Cost control goals

Medium-term goals	[27] Visualize financial indicators to efficiently reduce administrative expenses.
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Medium-term plan	Progress	Descriptions and explanations (of plan implementation)
<p>[58]                      Perform financial analyses of individual segments, and based on those analyses, set the reduction goal of the budget for back-office consumables costs at about -2% of those incurred last academic year to encourage staff to regularly put effort into reducing the general and administrative expense ratio.</p>	IV	<p><b>(Implementation status in AY 2020 and AY 2021)</b>                      Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University decided to set a <u>budget reduction target</u> of about 2% compared to the previous academic year <u>for consumables and other items related to administrative departments</u>. It worked to achieve a <u>2% reduction from the previous academic year in AY 2020</u> and a <u>2.5% reduction from the previous academic year in AY 2021</u> as follows.</p> <ul style="list-style-type: none"> <li>• Based on its financial statements for AY 2019 and AY 2020, the University calculated its general and administrative expense ratio by individual segment (or accounting unit) and analyzed financial fluctuations. The results were explained to all accounting staff members of the University, and accounting staff members were also thoroughly informed of the need to select appropriate classification categories based on the purpose when executing the budget.</li> <li>• In addition, to reduce general and administrative expenses, the University set a budget reduction target of 2% for AY 2020 and 2.5% for AY 2021 for consumables and other items related to administrative departments, and it specified such targets in the basic policy for internal budgeting, thereby establishing awareness of the need for budget allocation and budget execution to reduce the general and administrative expense ratio.</li> <li>• Consequently, the University <u>achieved a general and administrative expense ratio of 1.8% in AY 2020</u>, which was <u>considerably lower than the national average of 2.9%</u>. In addition, this figure was <u>the lowest among the 16 universities in the group</u> seeking support for the priority area (3) (promoting outstanding education and research on par with the world's top universities) under a "framework of support for three priority areas" established by MEXT and <u>the sixth lowest among all national universities in Japan</u>. The budget reduced as a result of this was allocated to education and research expenses.</li> </ul> <p>As shown above, regarding the setting of a budget reduction target of about 2% compared to the previous academic year for consumables and other items related to administrative departments, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University worked to achieve a 2% reduction from the previous academic year in AY 2020 and a 2.5% reduction from the previous academic year in AY 2021, and it was able to <b>control the general and administrative expense ratio to 1.8% in AY 2020</b>. This was <b>significantly lower than the national average of 2.9%, the sixth lowest among national universities in Japan</b> and <b>the lowest among the 16 universities</b> in the group seeking support for the priority area (3). Therefore, it was determined that this item was implemented, exceeding the target in the plan.</p>

I. Business operation and financial status  
 (2) Financial status improvement goals  
 ③ Asset management goals

Medium-term goals	[28] Maximize the use of assets (i.e., facilities, equipment) from a university-wide perspective and regularly reexamine whether assets are used to the full.
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Medium-term plan	Progress	Descriptions and explanations (of plan implementation)
<p>[59]            Regularly keep track of the usage status of the University's assets (i.e., facilities, equipment), verify the accuracy of such data, promote shared use, and maximize the use of assets by making them available to the public.</p>	IV	<p><b>(Implementation status in AY 2020 and AY 2021)</b>            Regarding the collection and verification of information on the usage status of assets (facilities and equipment) and the promotion of shared use, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has implemented the following efforts.</p> <p><b>[Temporary lending of the University's assets, etc.]</b></p> <ul style="list-style-type: none"> <li>• In April 2020, the University <u>introduced a naming rights program</u> with the aim of improving the education and research environment and making effective use of facilities, and it signed business agreements for three facilities on the Higashi-Hiroshima Campus in AY 2020 and four facilities on the Higashi-Hiroshima Campus and two facilities on the Kasumi Campus in AY 2021, resulting in an income of 10.451 million yen in two years.</li> <li>• In AY 2018, in accordance with Article 34-2 of the National University Corporation Act, the University received approval from the Minister of Education, Culture, Sports, Science and Technology to lease its land, <u>formerly staff accommodation</u> (Amamizuyama housing estate), to a third party. Subsequently, it <u>started leasing the land as a parking lot</u> from March 2020 and earned an income of 5.28 million yen in the two years from AY 2020 through AY 2021. Although income did not increase for two years due to amendments to the agreement caused by COVID-19, the University expects to gain an income of about 33 million yen in ten years.</li> </ul> <p><b>[Reinforcement and review of research equipment management system]</b></p> <ul style="list-style-type: none"> <li>• In November 2019, the University reorganized <u>the Natural Science Center for Basic Research and Development (N-BARD)</u>, a joint education and research facility on campus for supporting education, research and development of advanced natural science, to reinforce the research equipment management system, thereby restructuring the equipment management system, developing a technical support system based on the characteristics of the equipment, improving the system for comprehensively promoting research compliance, and strengthening the research and development functions. In this way, the center became <u>capable of further centralized management and effective use of shared equipment</u> as an organization that plays a fundamental role in strengthening the research capabilities of the University.</li> <li>• In June 2021, the University was selected for the project for promoting public utilization of advanced research infrastructure (program for supporting construction of core facilities) and upgraded shared equipment. In addition, it proceeded with strengthening of the system for shared use of engineering infrastructure equipment and registration of shared equipment on the Inter-University Network for Common Utilization of Research Equipment and <u>systematically trained and secured technical personnel indispensable for the support and maintenance of research equipment and devices</u>.</li> <li>• The University revised the usage fees of the research equipment shared across the entire university and set the fees so that young researchers can also use such equipment.</li> </ul> <p>Through these efforts, <u>the number of times of shared use of equipment increased significantly (up 22%) from 18,144 in AY 2019 to 22,166 in AY 2021.</u></p> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b>            To facilitate the elucidation of the pathology and development of treatments for diseases, such as rare intractable diseases and emerging infectious diseases, the University <u>started the extension work of an animal experiment facility (5 stories, 1,503 m<sup>2</sup>) in December 2021.</u> The work is scheduled to be completed in November 2022. To strengthen the university-wide research support system for animal experiments, which is the foundation of research in the field of life science, the University <u>plans to newly establish the Center for Disease Model Animals, which will develop disease model animals, in AY 2022.</u></p> <p>As described above, regarding the promotion of shared use of assets, which was stated as being scheduled to be implemented in the report on AY 2019</p>

		<p>operational performance, <b>the introduction of the naming rights program and the start of leasing land for parking lots</b> generated a certain amount of income, and the reinforcement of the research equipment management system resulted in <b>a significant increase (up 22%) in the number of times of shared use to 22,166, compared to 18,144 in AY 2019</b>. In addition, <b>the extension work of the animal experiment facility was started</b> in AY 2021, and <b>the system for promoting shared use of research equipment was strengthened, resulting in more effective use of assets</b>. Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</p>
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**(2) Points to note regarding efforts put into improving the University's financial status****1. Points to note****o Donation solicitation efforts**

i) Promoting the fundraising efforts based on the new fundraising strategy [Project No. 57]

Based on the fundraising strategy formulated in AY 2020, the University made efforts according to each level of the pyramid that shows the donor acquisition process (potential donors, first-time donors, multiple-time donors, and high-value donors).

To reach out to potential donors, the University launched a limited-time fundraising campaign. Specifically, the University worked to attract first-time donors by implementing the fundraising campaign for the following initiatives: Emergency Aid to support students in financial need due to the spread of COVID-19 (1,162 donations worth 66.306 million yen in AY 2020); a student support project (102 donations worth 3.11 million yen in AY 2020) and the 50 Yen breakfast project (271 donations worth 4.365 million yen in AY 2021) using crowdfunding; and a grant for research on COVID-19 in collaboration with Sumitomo Mitsui Trust Bank (558 donations worth 15.359 million yen in AY 2020).

To turn first-time donors into multiple-time donors, the University has issued a report on the actual use of the funds in the form of a booklet and sent it to all donors who agreed to receive public relations materials by mail every year since AY 2020 (3,639 donors in AY 2020 and 3,868 donors in AY 2021) to win understanding of donors about how funds were used and thereby motivate them to make new donations. Consequently, the University was able to receive new donations from the recipients of the booklet (83 donations worth 19.194 million yen in AY 2020 and 110 donations worth 12.248 million yen in AY 2021). In AY 2021, the University introduced a new donation payment system that allows donors to automatically and regularly make continuous donations once they make a setting to create a highly convenient environment for donation.

As an effort to turn multiple-time donors into high-value donors, the University strengthened the development of need for bequests. In cooperation with Sumitomo Mitsui Trust Bank, the University has launched a medical support donation trust, which allows donors to regularly make donations, and a testamentary donation trust, which requires less complicated procedures, since AY 2021. Also, the University once again disseminated the function of consultation services for bequests set up at collaborating banks and other institutions and called on professionals in the prefecture (lawyers, judicial scriveners, administrative scriveners, etc.) who provide consultations on wills and inheritance to cooperate on bequests.

As a result of these efforts, the cumulative income of the Hiroshima University Fund increased from about 3.5 billion yen to about 4.7 billion yen, and the number of individuals and organizations that have made donations (the number of donors) doubled from 2,009 to 4,468, out of which the number of multiple-time donors increased from 769 to 1,310, over the two years from the end of AY 2019 to the end of AY 2021, enabling the University to strengthen its financial base based on the fundraising strategy and expand its important stakeholders.

ii) Promoting the fundraising activities of the Fund for Uplifting Hiroshima University and Energizing the Local Communities of Hiroshima and the anniversary project plan [Project No. 57]

In preparation for the 75th anniversary of the University in AY 2024, the Hiroshima University Fund has been promoting fundraising activities of its Fund for Uplifting Hiroshima University and Energizing the Local Communities of Hiroshima since AY 2017. In addition to the student support programs and other projects that have been implemented to date, the anniversary project aims to conduct programs on each campus that will create an environment where Hiroshima University can play a more dynamic role and strengthen cooperation with local communities and businesses, thereby realizing the development of Hiroshima University.

The Fund Promotion Committee (comprising about 300 members), organized in AY 2018 in collaboration with the local Chamber of Commerce and Industry and other organizations, holds a general meeting and exchange meeting every year, where it carefully explains the purpose of the

Fund and calls for support. Building on the collaborative foundation in the Fund Promotion Committee, the University has enhanced the momentum for donations in local communities, and the donations from local companies and other donors have steadily increased (42 donations worth 95.317 million yen in AY 2020 and 57 donations worth 187.209 million yen in AY 2021).

The University has also obtained cooperation from the local governments in areas where its campuses are located. In AY 2020, it received a donation of 500 million yen from Higashi-Hiroshima City, and in October 2021, it established on the Higashi-Hiroshima Campus the Hiroshima University Phoenix International Center MIRAI CREA, an international exchange base facility to facilitate interaction between leading overseas researchers, international students, and students of the University and to provide a function for creating innovation. Additionally, it was decided to receive a donation of 1 billion yen from Hiroshima City in AY2021 in order to support the development of a new center for humanities and social sciences with a focus on legal profession training on the Higashi Senda Campus.

Consequently, the improvement of the campus, which has been implemented as an anniversary project, has made great progress from AY 2020 to AY 2021.

iii) Promotion of fundraising through crowdfunding [Project Nos. 56, 57]

As a new means of collecting donations, the University formed a business alliance with READYFOR Inc. in AY 2019 to promote the Hiroshima University crowdfunding projects. In the three years from AY 2019 to AY 2021, the University solicited funds for 10 projects, 9 of which were successfully funded, and collected 54.914 million yen in donations from a total of 1,842 people. The University has begun to take approaches to reach out to stakeholders, such as regularly sending the University's PR magazines and reports on the Fund's activities to donors across Japan who have been newly acquired through crowdfunding.

In the project to provide breakfast for 50 yen to students, which was implemented in AY 2021, the student team of the Alumni Association, which supports the activities of the Hiroshima University Alumni Association, participated in the planning, created the concept and developed the menu from the students' perspective, and it raised 4.365 million yen, about three times the target amount of 1.5 million yen. Using this as a source of funds, the Hiroshima University co-op provided students with 14,700 breakfast meals for 50 yen each, instead of the usual price of 350 yen, to provide financial and health support to students and also to contribute to the promotion of communication among students during the COVID-19 pandemic. For the results of crowdfunding in the two years from AY 2020 to AY 2021, the number of projects was 7, and 48.46 million yen was raised from 1,666 supporters.

**o Efforts to increase external research funding and other self-income**

i) Cost control [Project No. 58]

The University compared its electricity supply contract with those of other universities, and based on that comparison, it concluded long-term five-year contracts in the Higashi-Hiroshima and Kasumi areas. The new contracts came with increased long-term and quantity discount rates, which generated annual savings of 43.341 million yen in AY 2020 and 44.354 million yen in AY 2021, compared to those before the conclusion of the new contracts.

Regarding the management-included ESCO service the University decided to begin using throughout the Kasumi area in AY 2017, the University switched to a more energy-efficient air conditioning and heating system developed in AY 2018 and saved 75.648 million yen per year on utilities in AY 2020 compared to the average between AY 2014 and AY 2016, which was before the system was put into operation.

Based on its financial statements for AY 2020, the University calculated its general and administrative expense ratio by individual segment (or accounting unit) and analyzed financial fluctuations. The results were explained to all accounting staff members of the University, and accounting staff members were also thoroughly informed of the need to select appropriate classification categories based on the purpose when executing the budget. In addition, the University set a budget reduction target of 2.5% compared to the previous academic year for consumables and

other items related to administrative departments in the initial budget for AY 2021 in an effort to establish awareness of the need for budget allocation and budget execution to reduce the general and administrative expense ratio.

○ **Efforts to deal with COVID-19**

i) Providing student support [Project No. 56]

- To help Japanese and international students who are in need of financial help due to a drastic decrease in their income from part-time jobs and other sources, the University has begun implementing its own Emergency Aid Scheme. With support from the local community and alumni, the University received 66.31 million yen in donations (1,162 donations), and on April 23, 2020, it began providing Emergency Aid (30,000 yen per person, paid out continuously every month) and continued to support the lives of students for about two years. As of March 9, 2022, a total of 1,820 students have received support.
- Regarding the money international students need while waiting to be allowed back into the country after returning to Japan from abroad, the University received support of up to 100,000 yen per student from Higashi-Hiroshima City in AY 2020, and together with the City, it provided support for the re-entry of 278 international students.
- On November 26, 2020, the University concluded the Agreement on the Cooperation in the Delivery of Emergency Supplies with Izumi Co., Ltd., and before other national universities in Japan, it established a system for delivering emergency supplies, such as food, from the nearest Izumi store to minimize the trouble that students, faculty members, and staff members may have in their daily lives while staying at home after having come into contact with infected people.

**2. University-wide efforts**

**(Improving the University's financial status)**

○ **Reexamining efforts put into increasing income from conventional sources and finding new income sources**

i) Attracting more external research funding, soliciting more donations, and increasing earned income [Project No. 56]

[Developing and reviewing the external funding acquisition plan]

In AY 2020, the University reviewed the funding acquisition plan developed in AY 2019, and based on the results of the external funding acquisition in AY 2019 and under the policy of the External Funding Acquisition Strategy formulated in AY 2016, it conducted research and analysis of trends of domestic and international competitive funds. Subsequently, based on those results, it formulated the External Funding Acquisition Plan for AY 2020/2021. In AY 2021, the University analyzed the acquisition status of external funding (including prospects) up to AY 2021 and revised the External Funding Acquisition Plan for AY 2020/2021 to ensure the achievement of the medium-term plan.

[Promotion of joint research]

- At the Hiroshima University Open Innovation Platform, persons with experience at private companies have been appointed as technical advisors and persons with experience at companies overseas have been appointed as global creative advisors to reinforce the organization since AY 2020, thereby creating a system that can deal with global companies.
- In AY 2020, the University built a seeds database to accumulate research seeds collected by coordinators for industry-academia collaboration and creative managers through meetings with researchers, and from AY 2021, it has participated in the Industry-University Collaboration Platform to match the needs of companies in order to create an environment that can connect research seeds to joint research.
- To estimate the value that a given researcher's academic knowledge contributed to his/her joint research and incorporate that value into the joint research costs, thereby motivating researchers to collaborate on joint research and promote such efforts, the University introduced in AY 2020 basic research promotion costs, which led to a significant increase in income from indirect expenses (AY 2020: 74 cases, 44.675 million yen; AY 2021: 147 cases, 126.207 million yen).

- From AY 2021, the method of calculating indirect expenses for joint research was changed from the hourly rate system to 30% of direct expenses.

[Introduction of a system that allows direct expenses to be used to pay for labor costs]

From AY 2021, the University has introduced a system that allows direct expenses for competitive research funds to be used to pay for labor costs for principal investigators (PIs). Simultaneously, the funding sources secured through this system have been used for research environment improvement costs (e.g., employment of young researchers, RA expenses, start-up support for young researchers, and improvement of research equipment and devices). At the end of AY 2021, the University decided to expand the scope of the system to include joint research, etc. (joint research, collaborative research laboratories, commissioned research, and commissioned projects) from AY 2022 onwards in an effort to enhance the system for strengthening its research capabilities.

[Other efforts]

The University adopted a system that charges usage fees for the use of the multi-purpose space and accommodation area in the interaction area of the Hiroshima University Phoenix International Center MIRAI CREA, which was established in AY 2021 using donations and self-funding and functions as a base for innovation and interaction and an accommodation facility. It also introduced a naming rights program. Additionally, the University worked on acquiring larger amounts of external funding in general by acquiring funding for large-scale research on countermeasures against COVID-19, using Hiroshima University crowdfunding, further enhancing and developing the Fund for Uplifting Hiroshima University and Energizing the Local Communities of Hiroshima, and increasing the number of research categories eligible for the Support Program for Step-up in the Grants-in-Aid for Scientific Research (KAKENHI), which encourages researchers to engage in higher-level research categories of KAKENHI. (If all categories applied for are not accepted, the applicant will receive about 1-5 million yen per project as preparation for an application for the next year's KAKENHI, based on the results of the review, in order to promote applications for higher-level categories (such as Scientific Research (S) or (A)) or larger-scale categories of KAKENHI.)

[Results of efforts]

As a result of these efforts, the amount of external funding received per full-time faculty member increased by 640,000 yen from 8.24 million yen in the previous academic year to 8.88 million yen, which was about 1.5 times the amount at the end of the second medium-term target period and thus achieved the target (external funding received per full-time faculty member at the end of the second medium-term target period: 5.95 million yen).

[Establishment of a mechanism for continuously acquiring external funding]

For the purpose of creating innovation through social implementation of activities that contribute to the formation of a smart city using the Higashi-Hiroshima Campus as a place for the advanced realization of Society 5.0 with the University playing a coordinating role and the implementation of the results of such activities, the University, with the participation of Higashi-Hiroshima City and eight private companies from different industries, established in March 2022 the Hiroshima University Smart City Co-Creation Consortium, for which the University served as the representative institution, as an initiative under the Town & Gown concept promoted with Higashi-Hiroshima City. The University established a mechanism to develop infrastructure for demonstration research on campus for the formation of a smart city using funding contributed by companies participating in this consortium through the use of the corporate version of the hometown tax donation program, and it developed a new method of obtaining funding sources for the creation of an innovation commons on the University's campus through industry-academia-government collaboration. The University will promote expansion of the base of joint research through the Hiroshima LOVE it Consortium, a next-generation, industry-academia-government-finance collaboration support consortium organized in October 2021, as well as diversification of self-income sources and acquisition of external funding in the fourth medium-term target period to build a stable

financial base.

ii) Promoting effective asset management [Project No. 59]  
[Temporary lending of the University's assets, etc.]

To maximize the use of its assets and thereby increase its income, after keeping track of external users' purposes and usage patterns of its rental facilities/equipment, as well as verifying the accuracy of such data, in AY 2017, the University promised to share 60% of the income from facility/equipment rental fees as incentive allocations to motivate schools/offices in charge of managing the rented facilities. Consequently, income from facility rental fees in AY 2017 increased by 2.7 million yen from the previous academic year. Subsequently, sharing incentive allocations became a regular practice.

In AY 2017, the University began collaborating with Hiroshima Toyo Carp to produce and sell products featuring the team, and in a year and a half, sales totaled more than 10 million yen. The University sells the products through direct selling—a practice rarely employed by national universities—and sales amounted to 1.596 million yen in AY 2020 and 1.892 million yen in AY 2021, enabling it to maintain a gross margin rate of at least 20%.

The University's land in Ushita-shinmachi, Higashi Ward, Hiroshima City, formerly staff accommodation (Amamizuyama housing estate), was approved for leasing property, including land, to a third party in March 2019 in accordance with Article 34-2 of the National University Corporation Act. Subsequently, the University started leasing the land from March 2020 and earned an income of 3.74 million yen in AY 2020 and 1.54 million yen in AY 2021.

In April 2020, to improve the education and research environment and effectively use its facilities, the University introduced a naming rights program and earned an income of 2.512 million yen in AY 2020 and 7.939 million yen in AY 2021.

[Reinforcement and review of research equipment management system]

In November 2019, the University reorganized the Natural Science Center for Basic Research and Development (N-BARD), a joint education and research facility on campus for supporting education, research and development of advanced natural science, to reinforce the research equipment management system, thereby restructuring the equipment management system, developing a technical support system based on the characteristics of the equipment, improving the system for comprehensively promoting research compliance, and strengthening the research and development functions. In this way, the center became capable of further centralized management and effective use of shared equipment as an organization that plays a fundamental role in strengthening the research capabilities of the University. In June 2021, the University was selected for a project promoting public utilization of advanced research infrastructure (program for supporting construction of core facilities) and upgraded shared equipment. In addition, it proceeded with strengthening of the system for shared use of engineering infrastructure equipment and registration of shared equipment on the Inter-University Network for Common Utilization of Research Equipment and systematically trained and secured technical personnel indispensable for the support and maintenance of research equipment and devices. Through these efforts, the number of times of shared use of equipment increased significantly (up 22%) from 18,144 in AY 2019 to 22,166 in AY 2021. Furthermore, to strengthen the university-wide research support system for animal experiments, which is the foundation of research in the field of life science, the University plans to newly establish the Center for Disease Model Animals, which will develop disease model animals, in AY 2022.

o **Maximizing the use of financial analyses based on financial information**

i) Cost control [Project No. 58]

Based on its financial statements for each year of the second medium-term target period, as well as each year between AY 2016 and AY 2020, the University calculated its general and administrative expense ratio by individual segments (or accounting units) and analyzed financial fluctuations. The results were reported to all accounting staff members of the University in an effort to establish awareness of the need for budget execution to reduce the general and administrative expense ratio. As a result of these efforts, general and administrative expenses decreased by about 400 million yen, while operating costs increased by about 5.5 billion yen from the average of the second period due to a rise in physician expenditures, commissioned research expenses, project costs, and other expenses. The general and administrative expense ratio was 1.8% in AY 2020, which was lower than the national average of 2.8% to 3.0%, the lowest among the 16 universities seeking support for the priority area (3) and the sixth lowest among all national universities in Japan.

In addition, in allocating initial budgets for AY 2021, the University set a budget reduction target of 2.5% compared to the previous academic year for consumables and other items related to administrative departments to encourage staff to put effort into reducing the general and administrative expense ratio.

○ **Details of individual items**

- I. **Business operation and financial status**  
 (3) **Goals for self-inspection/evaluation and information disclosure about their status**  
 ① **Evaluation quality improvement goals**

Medium-term goals	[29] Self-inspect/evaluate whether the quality of the University’s education and research meets the level expected of a comprehensive university; subsequently, ask external parties to perform an organizational evaluation based on self-inspection/evaluation results to stimulate the University’s education and research efforts.
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Medium-term plan	Progress	Descriptions and explanations (of plan implementation)
<p>[60]                      Take the following actions to maintain and improve the quality of the University’s education and research: 1) first, develop cross-departmental evaluation criteria and also have schools/offices define their own evaluation criteria according to their characteristics; 2) then, have schools/offices perform self-inspections/evaluations every year; and 3) subsequently, ask external non-Japanese and Japanese members of the Administrative Council to assess the schools/offices. In addition, ask the Student Experience in the Research University (SERU), an international consortium of research universities of which the University is a member, to conduct a screening as to whether the University’s educational quality meets international standards.</p>	<p>IV</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b>  <b>[Organizational evaluation of schools/offices]</b>                      Regarding the organizational evaluation of schools/offices, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, each school/office conducted self-inspections/evaluations every year, and an external evaluation (organizational evaluation of schools/offices) was performed by external parties. The details were reviewed by the President and the University’s Evaluation Committee, who provided schools/offices with feedback on improving their efforts and resolving any underlying issues. In response to the results of the evaluation on education and research, according to schools/offices’ characteristics, schools/offices examined and implemented improvement measures. Here is an example of how the University made improvements based on the advice and suggestions it received. The School of Law, which received a suggestion that it should offer classes taught by business representatives of private companies as well as legal professionals to enable students to learn a broader perspective, began offering the following courses: 1) Fukushima Reconstruction and 2) NHK Theory.                      Since AY 2021, the University has conducted evaluations using forms and evaluation items compatible with the standards for corporate evaluation and institutional certified evaluation and accreditation of universities, and it has linked them to the organizational evaluation required by law, thereby ensuring objectivity of the evaluations and enhancing the effectiveness and efficiency of self-inspections/evaluations.                      Based on suggestions from SERU to the University, the University has continuously verified the internal quality assurance system of the University’s education, created new forms and standards for the annual reports on education of undergraduate and graduate programs in AY 2020, and put them into operation from AY 2021.</p> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b>  <b>[Evaluation of teachers]</b>                      Regarding the self-inspections/evaluations conducted for each teacher, the University <u>formulated the P-I (Professional Indicator) criteria, a uniform evaluation criteria for the entire university, and introduced a new system for evaluation of individual teachers</u> in AY 2021, with the aim of maintaining and enhancing the high motivation of teachers to reinforce the functions of the University. In the new evaluation system, the University set items and points to be distributed uniformly throughout the University so that it can understand the characteristics of each teacher’s activities (degrees of contribution). In addition, in evaluating teachers, the University uses IR data and has the Academy Council centrally manage teachers’ performance throughout the University for evaluation.                      Although the University was planning to start to reflect the evaluations based on the university-wide uniform criteria in salaries in AY 2024, it defined the two years from AY 2021 to AY 2022 as the period of verification and review after the introduction, and in order to more precisely assess the effects of this verification, it decided to bring forward the timing for reflecting the evaluations based on the new evaluation system in salaries by one year for <u>those who wish to be evaluated under the new evaluation system (applications have been accepted from February 2022), evaluate them based on their activity performance in AY 2022, and reflect the results in their salaries starting from AY 2023</u>. In AY 2022, both evaluations by schools/offices and evaluations based on the new university-wide uniform criteria will be conducted. <u>The new evaluation system will be applied to all teachers from AY 2024</u> after the examination and review based on the results of verification, and it is scheduled to be <u>reflected in salaries from AY 2025</u>.                      In verifying the new evaluation system, the University has built a mechanism that allows individual teachers to check the simulation evaluation results (evaluation points, rankings, etc.) under the new evaluation system using the HUAI system, which visualizes various kinds of information about the University.</p>



		<p>As described above, in addition to the implementation of the organizational evaluation of schools/offices by external parties, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University <b>formulated the university-wide uniform evaluation criteria</b> and <b>introduced a new system for evaluation of individual teachers</b> in AY 2021, and it decided to <b>bring forward the timing for reflecting the evaluations based on the new evaluation system in salaries by one year</b> to AY 2023 <b>for those who wish to be evaluated under the new system</b> and to apply the new evaluation system to all teachers from AY 2024. Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</p>
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I. Business operation and financial status  
 (3) Goals for self-inspection/evaluation and information disclosure about their status  
 ② Information disclosure and self-promotion goals

Medium-term goals	[30] Actively release self-inspection/evaluation results in an accurate manner and at a steady pace to fulfill the University's role as a responsible corporate citizen. [31] Promote the University to make it more widely recognized as a reputable school both within Japan and overseas.
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Medium-term plan	Progress	Descriptions and explanations (of plan implementation)
[61] Actively release self-inspection/evaluation results in easy-to-understand formats online via the University website and the Japanese College and University Portraits website to fulfill the University's role as a responsible corporate citizen.	III	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the strategic public relations activities using external public relations monitors and the public relations advisor system, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has implemented the following efforts, and as a result, <b>the initial plan was fully achieved.</b></p> <ul style="list-style-type: none"> <li>• The University has continuously held meetings with public relations advisors consisting of external experts (experts in the media, web, and advertising industries). The University provided information to the public relations advisors as needed, in addition to at meetings, and conducted public relations activities while referring to suggestions and advice from each advisor based on their advanced knowledge and know-how in their respective specialized fields.</li> <li>• Meanwhile, a questionnaire survey was conducted three times in each academic year for external public relations monitors (38 people in AY 2020 and 28 people in AY 2021) in order to continuously verify the effect of information dissemination.</li> <li>• The University set up a special website to provide information related to responses to COVID-19 in a timely manner and promptly disseminated such information both inside and outside the University. In addition, the University has created and enhanced an independent website where it posts relevant information for guardians in an effort to disseminate information related to student life (class implementation, extracurricular activities, health management guidance, etc.).</li> </ul>
[62] Promote the University's educational, research, and medical achievements, as well as community service participation, through its website and social media accounts, and in doing so, present information in viewer-friendly ways to increase the University's domestic and international recognition as a reputable school.	IV	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the information dissemination by making effective use of social media (SNS), etc., which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has implemented the following efforts.</p> <ul style="list-style-type: none"> <li>• From May to August 2020, when many people were forced to stay at home due to the impact of the COVID-19 pandemic, the University made available to the public on YouTube lectures by faculty members on their classes and research under the title "Enhance your knowledge -Hiroshima University 100 special lectures-." Some popular lectures have been viewed more than 1.3 million times, providing opportunities for people to become interested in learning through the knowledge of Hiroshima University.</li> <li>• In September 2020, the University <u>launched Twitter (English version) and LinkedIn accounts</u> as part of its efforts to strengthen the system for information dissemination in English.</li> <li>• <u>Hiroshima University's promotional video</u> titled "Welcome to Hiroshima University" was produced in Japanese, English, and Chinese and released on YouTube at the end of January 2021. Its Japanese version has been viewed 11,310 times, English version 3,630 times, and Chinese version 224 times. On Facebook, there were 7,503 views, 650 likes, and 122 shares for the Japanese version, and there were 3,278 views, 253 likes, and 45 shares for the English version.</li> <li>• The University produced public relations videos, including "<u>The latest research in 2 minutes</u>" (21 videos), which summarize the University's latest research in a compact way, and campus PR videos (5 videos), which were co-produced with students.</li> <li>• The researcher search system <u>Researcher Directory</u> (Japanese and English versions) has been in operation since July 2021. This system has promoted media exposure of researchers by expediting the matching of 1,900 researchers in the position of Assistant Professor or above at the University with the media, facilitated the connection between researchers in Japan and abroad, and helped the public access the University's educational and research results. <u>The number of accesses</u> in AY 2021 reached about 140,000 (the number of accesses to the English version is about 12% of this figure).</li> <li>• The University created highlight videos summarizing the entrance ceremony, degree conferment ceremony, and homecoming day for those who could not come to the University due to the COVID-19 pandemic and posted them on the University's website as well as on SNS. While the usual postings are viewed by about 3,000 people, a highlight video was viewed by about 5,700 people, showing that its content was interesting to many followers.</li> </ul>

		<p>In addition, the number of press releases issued by the University has increased even during the COVID-19 pandemic. In particular, <u>the number of releases of research results has remarkably increased (64 in 2019, 109 in 2020, and 133 in 2021)</u>, although the number of face-to-face events held has decreased. For disseminating information on research results, the University has set up a system for holding press briefings that are also distributed via Zoom, thereby reducing the need for travel for joint researchers, enabling the participation of journalists from the Kanto and Kansai regions and leading to a broad dissemination of research results to the media.</p> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b>  <b>[Improvement of reputation]</b></p> <ul style="list-style-type: none"> <li>• For disseminating its efforts on the SDGs, the University participated in <u>“THE University Impact Rankings” published by “Times Higher Education (THE),” a British magazine specializing in higher education, and ranked 100-200th among 766 universities in the world (4th in Japan) in 2020, 100-200th among 1,240 universities in the world (1st in Japan) in 2021, and 100-200th among 1,406 universities in the world (3rd in Japan) in 2022.</u></li> <li>• What is more, the shortlist for <u>“THE Awards Asia 2022” were announced, and the University was the only Japanese university to be selected as one of the eight finalists in the “International Strategy of the Year” category from among more than 500 universities, in recognition of its international efforts to achieve the SDGs.</u></li> <li>• In April 2020, to improve the education and research environment and effectively use its facilities, the University <u>introduced a naming rights program.</u> The University signed agreements on the implementation of the naming rights program for 2.512 million yen for three facilities on the Higashi-Hiroshima Campus in AY 2020 and for 7.939 million yen for four facilities on the Higashi-Hiroshima Campus and two facilities on the Kasumi Campus in AY 2021.</li> </ul> <p>As described above, <u>the information dissemination through effective use of SNS, etc.,</u> which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, led to a significant increase in the number of page views of <u>the official website to 27.7 million</u> (23.7 million in AY 2019, <u>up 16.8%</u>), <u>the number of followers on SNS, etc. to 54,626</u> (33,002 in AY 2019, <u>up 65.5%</u>), and the number of views on <u>YouTube to 1,918,406</u> (154,607 in AY 2019, <u>up 12.4 times</u>) in AY 2021. In addition, the University newly <u>introduced a naming rights program</u> from AY 2020 and signed agreements on the implementation of the naming rights program for 10.451 million yen for nine facilities. For disseminating its <u>efforts on the SDGs, the University also participated in the “THE University Impact Rankings” published by “Times Higher Education (THE)” and ranked 1st in Japan and became the only Japanese university to be selected as one of the finalists.</u> <u>These efforts resulted in successful improvement of the University’s name recognition and reputation both in Japan and overseas.</u> Therefore, it was determined that this item had been implemented, exceeding the target in the plan..</p>
<p>[63]  Publish more papers in international academic journals and more articles in educational and research information magazines and issue more news releases directed at international media sources, thereby enhancing the University’s excellent reputation.</p>	<p>IV</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b></p> <p>Regarding the expansion of the information dissemination system by assigning personnel in charge of international public relations, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, <u>one new International Communications Manager was appointed in addition to the one staff member hired in AY 2019, and the University has implemented the following efforts to carry out international public relations with enhanced ability to deliver messages.</u></p> <ul style="list-style-type: none"> <li>• As a result of hiring an International Communications Manager who is a native English speaker and has experience working for Japanese and overseas media organizations, it has become possible to strategically disseminate research results to overseas media, and <u>the number of postings on the English version of the University’s official website in AY 2021 reached 44,</u> which greatly exceeded and was almost twice the 23 postings in AY 2019.</li> <li>• The University has conducted strategic posting of articles through promotion to overseas media by the International Communications Manager and posting of articles on platforms, such as EurekAlert! and Asia Research News, and started measurement of the Domain Authority scores on the English version of its official website, which showed high scores of <u>66 and 70 in AY 2020 and AY 2021,</u> respectively.</li> <li>• By leveraging the International Communications Manager’s network with overseas journalists, the number of news releases in English on research results and other topics covered by overseas media <u>greatly increased by about 9.1 times</u> from 110 in AY 2019 <u>to 1,005 in AY 2021.</u> Among them, the number of news releases covered by <u>Newsweek, the New York Post, Psychology Today, Smithsonian Magazine, and other overseas media</u> was 14 in AY 2020 and 12 in AY 2021.</li> </ul> <p>In addition, the University has decided to newly appoint a Vice President (Global Communications) from AY 2022 in order to further strengthen international public relations.</p> <p>As described above, <u>active information dissemination by the newly hired staff member in charge of international public relations,</u> which was stated as being scheduled to be implemented in the reports on operational performance up to AY 2019, led to <u>an increase in the number of articles posted on the English version of the University’s official website (23 in AY 2019 → 44 in AY 2021), a high score on Domain Authority,</u> which quantifies the reliability of a website, and <u>a great increase in the number of news releases in English on research results and other topics covered by overseas media (110 in AY 2019 → 1,005 in AY 2021), resulting in successful enhancement of the University’s reputation.</u> Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</p>

**(3) Goals for self-inspection/evaluation and information disclosure about their status****1. Points to note****o Self-inspection/evaluation**

- i) The University's initiatives for inspection and evaluation from a university-wide perspective by external parties [Project No. 60]
  - Schools/offices self-inspected/evaluated their efforts and then asked external stakeholders (including at least one external member of the Administrative Council) to assess their practice based on self-inspection/evaluation results (i.e., received school/office organization evaluations)– a practice that has been continued every academic year since AY 2008. The details of the evaluation were reviewed by the President and the University's Evaluation Committee, who provided schools/offices with feedback on improving their efforts and resolving any underlying issues (89 cases in AY 2020 and 68 cases in AY 2021). In response to the results of the evaluation on education and research, according to schools/offices' characteristics, schools/offices examined and implemented improvement measures. Here is an example of how the University made improvements based on the advice and suggestions it received. The School of Law, which received a suggestion that it should offer classes taught by business representatives of private companies as well as legal professionals to enable students to learn a broader perspective, began offering the following courses: 1) Fukushima Reconstruction and 2) NHK Theory.
  - The details on the items below were shared at the thought-sharing session with external members of the Administrative Council, where all officers and Deans/Directors attend: 1) school/office self-inspection/evaluation results; 2) external evaluation results (i.e., school/office organization evaluations); and 3) actions that were taken based on the evaluations.
- ii) Conducting continuous evaluation of teachers' education and research activities [Project No. 60]
  - In accordance with the Basic Policy on Personal Evaluation of Teachers, the University continuously implemented evaluations of individual teachers by scoring their activities.
  - By referring to the Guidelines for Personnel and Salary Management Reform issued by MEXT (February 25, 2019), as a system that is consistent with previous personnel system reforms, the University considered a new annual salary system and a method of reflecting performance evaluations in benefits, and it decided to introduce a new university-wide unified teacher evaluation system in AY 2021, verify it and review it as necessary by AY 2022, and implement it from AY 2023. Regarding the reflection of performance evaluations in salaries and benefits other than salaries, the University decided to first sufficiently explain the details to the University's faculty and staff members to deepen their understanding and then begin reflecting performance evaluations from AY 2024.
  - In the new evaluation system, the University formulated the P-I (Professional Indicator) criteria, uniform evaluation criteria for the entire university, and set items and points to be distributed uniformly throughout the University so that it can understand the characteristics of each teacher's activities (degrees of contribution). In addition, in evaluating teachers, the University used IR data and built a system for having the Academy Council centrally manage teachers' performance throughout the University.
  - In AY 2021, the University decided to examine the verification method of the new evaluation system and verify the impact of the new evaluation system on education and research performance. Since the results of the verification are scheduled to be obtained in AY 2023, and considering the period required for the subsequent examination and for informing the University's members, the University has decided to change the timing of application of the new evaluation system from the originally scheduled year of AY 2023 to AY 2024 and to reflect the performance evaluations in salaries and other benefits starting from AY 2025.
  - In verifying the new system, the University explained the verification method and other details to its members at the university-wide briefing session, and it has built a mechanism that allows individual teachers to check the simulation evaluation results (evaluation points, rankings, etc.) under the new evaluation system using the HUI system, which visualizes various kinds of

information about the University.

**o Providing information**

- i) Producing a promotional video [Project Nos. 61, 62]
  - Hiroshima University's promotional video titled "Welcome to Hiroshima University" was produced in Japanese, English, and Chinese and released on YouTube at the end of January 2021. The promotional video became the first of its kind, conveying the appeal of not only Hiroshima University but also Hiroshima City and Higashi-Hiroshima City, where the University is located. Since the video was released on YouTube, the Japanese version has been viewed 11,310 times, the English version 3,630 times, and the Chinese version 224 times. On Facebook, there were 7,503 views, 650 likes, and 122 shares for the Japanese version, and there were 3,278 views, 253 likes, and 45 shares for the English version. The promotional video likely helped many viewers feel closer to the University.
- ii) Active dissemination of information on research results [Project No. 62]
 

The number of press releases issued by the University has increased even during the COVID-19 pandemic (230 in 2019, 230 in 2020, and 261 in 2021). In particular, the number of releases of research results has remarkably increased (64 in 2019, 109 in 2020, and 133 in 2021), although the number of face-to-face events held has decreased. By holding press briefings on research results both onsite and online (hybrid format) or fully online, it has become possible to conduct publicity to journalists outside Hiroshima Prefecture as well as to take countermeasures against COVID-19 (the number of press briefings held in hybrid and fully online formats: 12 in 2021).
- ii) Updating the website with relevant information for guardians [Project No. 61]
 

In December 2020, the University updated the website for guardians. As a result of modifications to the website to make it easier to be browsed on smartphones, including iconizing the menu, the number of accesses from smartphones increased to about half of the total number of accesses.
- iv) Using external public relations monitors [Project Nos. 61, 62]
 

To fulfill its accountability to society and proactively disclose and disseminate information in an easy-to-understand manner, the University used its external public relations monitors recruited by public call to gather external opinions regarding its PR magazines and official website. Regarding the researcher search system Researcher Directory, there was an opinion that it would be helpful to know more about the faculty members if there was a link to Hiroshima University 100 special lectures in Faculty Information Details. Accordingly, the University made functional improvements to the system.
- v) Promoting the University through its naming rights program [Project Nos. 61, 62]
 

In April 2020, to improve the education and research environment and effectively use its facilities, the University introduced a naming rights program. The University signed agreements on the implementation of the naming rights program for 2.512 million yen for three facilities on the Higashi-Hiroshima Campus in AY 2020 and for 7.939 million yen for four facilities on the Higashi-Hiroshima Campus and two facilities on the Kasumi Campus in AY 2021.
- vi) Actively using SNS for public relations activities [Project No. 62]
 

To visualize public relations, the University produced public relations videos, including "The latest research in 2 minutes" (21 videos), which introduce research results, and campus PR videos (5 videos), which were co-produced with students, and effectively disseminated them through active promotion using SNS. Among the videos of lectures titled "Enhance your knowledge -Hiroshima University 100 special lectures-" the video released on YouTube under the title "[School of Science] Particle Physics Gateway to the Quantum Universe" was viewed 1,320,794 times, the largest number among the videos posted by the University as of the end of AY 2021.

As part of its initiatives during the COVID-19 pandemic, the University created highlight videos

summarizing the entrance ceremony, degree conferment ceremony, and homecoming day, and it posted them on the University's website as well as on SNS. While the usual postings are viewed by about 3,000 people, the highlight video of the degree conferment ceremony was viewed by about 5,700 people, showing that its content was interesting to many followers. The video was viewed about 2,600 times (367 likes, 29 shares) in AY 2021 and about 2,200 times (234 likes, 12 shares) in AY 2020.

vii) Dissemination of efforts on the SDGs [Project No. 62]

From July 2021, the University has launched Researcher Directory, a researcher search system constructed on its official website to promote media exposure of researchers by expediting the matching of about 1,900 researchers in the position of Assistant Professor or above who belong to the University with the media, to facilitate the connection between researchers in Japan and abroad and to help the public access the University's educational and research results.

Researcher Directory is available in Japanese and English versions and can be searched in various ways, such as by genre, SDG, discipline, or Japanese syllabary order, to make it easier for users to find researchers. It also includes an Interview Request Form for the media so that it can be widely used by guardians, high school students, companies, or other parties. For the SDGs in particular, explanations of the SDGs are also included on the search page, and icons for each goal are provided to make it visually easier to search. By having the researchers themselves enter information into this system, they have increased their awareness of the SDGs. The access to the English version is about 12% of the total access, contributing to the promotion to overseas. The number of accesses to this Directory was about 140,000 in AY 2021.

After the launch, the University added a function to link YouTube videos to the Researcher (Faculty) Information Details page in the Directory, in response to an opinion of a user. When posting research results on its official website, the University added a link to Researcher (Faculty) Information Details to make the researchers' information available and well-known to the public.

For disseminating its efforts on the SDGs, the University participated in "THE University Impact Rankings" published by "Times Higher Education (THE)," a British magazine specializing in higher education, and ranked 100-200th among 766 universities in the world (4th in Japan) in 2020, 100-200th among 1,240 universities in the world (1st in Japan) in 2021, and 100-200th among 1,406 universities in the world (3rd in Japan) in 2022.

What is more, the shortlist for "THE Awards Asia 2022" was announced, and the University was the only Japanese university to be selected as one of the eight finalists in the "International Strategy of the Year" category from among more than 500 universities, in recognition of its international efforts to achieve the SDGs.

viii) Efforts to disseminate information using mass media [Project No. 62]

The University actively promoted students' activities and scholars' education and research efforts through continuous use of radio programs. In a program mainly listened to by high school and junior high school students, the University has a section called "Hiroshima University Radio Campus" (which airs twice a month for about 10 minutes), in which students and faculty members make an appearance to provide information on their everyday activities, such as extracurricular activities and research results.

ix) Proactive international public relations efforts [Project Nos. 62, 63]

To actively promote its research findings and other activities, the University continuously published articles in international newsletters. The University continually submitted articles to QS News-2-Wow-U Newsletter (which was renamed "QS Global Education News" [QS-GEN] in August 2020) and the Japan Society for the Promotion of Science San Francisco Office's Newsletter. <Results in AY 2020> (QS: 7 submissions, 4 accepted/JSPS: 1 submission, 1 accepted), <Results in AY 2021> (QS: 8 submissions, 4 accepted/JSPS: 3 submissions, 4 accepted). On the portal site operated by Quacquarelli Symonds, the University posted seven articles in AY 2020 and three articles in AY 2021 for making them public.

• As a result of hiring an International Communications Manager who is a native English speaker

and has experience working for Japanese and overseas media organizations, it has become possible to strategically disseminate research results to overseas media, and the number of postings on the English version of the University's official website in AY 2021 reached 44, which greatly exceeded and was almost twice the 23 postings in AY 2019.

To introduce the University's research results and latest topics in English, HU UPDATE was sent out three times a year. To improve its reputation, the University actively conducted public relations activities, including sending HU UPDATE to about 310 overseas inter-university partner universities and about 40 presidents of overseas universities. In addition, the University also asked its faculty members to send HU UPDATE to their fellow researchers overseas.

To improve its international reputation by strengthening its ability to disseminate information internationally, the University published English press releases of its research results on "EurekAlert!," "AlphaGalileo," and "Asia Research News." The University started the measurement of the Domain Authority scores on the English version of its official website, which showed scores of 66 and 70 in AY 2020 and AY 2021, respectively.

(EurekAlert!: 19 releases in AY 2020, 31 releases in AY2021)

(AlphaGalileo: 24 releases in AY 2020, 38 releases in AY 2021)

(Asia Research News: 25 releases in AY 2020, 38 releases in AY 2021)

In addition, the University strategically disseminated timely topics, such as the results of research on COVID-19, written in English. • By leveraging the network of the International Communications Manager, who was hired in June 2020, with overseas journalists, the University carried out international public relations with enhanced ability to deliver messages, and the number of news releases in English covered by overseas media greatly increased from 110 in AY 2019 to 1,005 in AY 2021. Due to regular dissemination of information, such as research results on COVID-19 in English, the New York Post, Psychology Today, The Weather Channel, SyFy, Science Alert, Physics World, Discover Magazine, and other overseas media introduced 14 and 12 releases on Hiroshima University's research in AY 2020 and AY 2021, respectively, allowing the University to promote its research capabilities to the world. Even after releases are published, the University continues proactive approaches and follow-ups to help them to be featured in new articles, through such efforts as providing information directly to journalists in charge of the relevant fields in each medium.

○ Details of individual items
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I. Business operation and financial status
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(4) Other business management goals
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① Facility/equipment maintenance and usage goals
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Medium-term goals	[32] Manage facilities comprehensively, based on the Campus Master Plan for Maintaining Facilities, and thereby maintain the appeal of the University's campuses.
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Medium-term plan	Progress	Descriptions and explanations (of plan implementation)
[64] Prepare venues for student-instructor interactions, including active-learning lessons. In addition, find out the amount of funding the central government will be providing, and with that amount in mind, renovate old facilities, implement measures to make facilities more energy-efficient, and conduct appropriate maintenance work to ensure safe and worry-free education and research environments.	IV	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the improvement of the educational environment, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University conducted maintenance work to improve its education and research environment, including <u>renovating Biology Research Buildings A and B</u>, and also <u>prepared venues for student-instructor interaction, including active-learning lessons, based on the action plan for executing the Campus Master Plan 2016 for Maintaining Facilities</u> in AY 2020 and AY 2021. In addition, it <u>renovated old facilities, implemented measures to make facilities more energy-efficient, and conducted appropriate maintenance of facilities</u> based on the annual plan for managing facilities to ensure safe and worry-free education and research environment.</p> <p>Regarding an international exchange base facility that was scheduled to be completed on the Higashi-Hiroshima Campus in September 2021, <u>the Hiroshima University Phoenix International Center MIRAI CREA (7 stories, 3,955 m<sup>2</sup>)</u>, a facility with multiple functions such as (1) creating innovation, (2) facilitating interaction and exchange of knowledge among diverse people from Japan and overseas, and (3) providing safe and comfortable accommodation for international researchers and students, was <u>completed using a donation of 500 million yen from Higashi-Hiroshima City</u> and the University's reserve for a specific purpose.</p> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b> In addition to the efforts stated in the reports on operational performance up to AY 2019, the University has worked on the following efforts for facility maintenance since AY 2020 in order to maintain and improve the education and research environment, utilizing various funding sources, including donations from <u>a local government (Hiroshima City)</u> and companies, subsidies from METI, MEXT, and the MOE, and the University's reserve for a specific purpose.</p> <p><b>[Facility maintenance utilizing various funding sources]</b></p> <ul style="list-style-type: none"> <li>• Using <u>donations and the University's reserve for a specific purpose</u>, the University decided in June 2021 to establish <u>a new center for humanities and social sciences with a focus on legal profession training (6 stories, 5,632 m<sup>2</sup>) on the Higashi Senda Campus and a center for fostering medical professionals (5 stories, 3,859 m<sup>2</sup>) on the Kasumi Campus, and their construction started in September 2021</u>. Classes will be offered from April 2023 at the new facility on the Higashi Senda Campus and from December 2022 at the new facility on the Kasumi Campus.</li> <li>• Utilizing <u>the facility maintenance subsidy from MEXT</u>, the University started the extension work of <u>an animal experiment facility (5 stories, 1,503 m<sup>2</sup>) on the Kasumi Campus in December 2021 to accelerate the elucidation of the pathology and development of treatments for diseases, such as rare intractable diseases and emerging infectious diseases. The facility will be completed in November 2022</u>. In addition, with the aim of turning the campus into an innovation commons and realizing carbon neutrality, <u>the budget has been prepared for renovating Biology Research Building A and Science Research Building A to achieve ZEB</u>, and their construction will start in July 2022.</li> <li>• Utilizing <u>the subsidy from the MOE</u>, the University constructed <u>the Radiation Disaster Medical Training Building (4 stories, 2,303 m<sup>2</sup>) on the Kasumi Campus in March 2022 in order to develop core human resources and provide skills retention training for nuclear disaster medical care</u>.</li> <li>• In March 2022, the University was selected for <u>the subsidy from METI</u>, and using both this subsidy and <u>donations from companies</u>, it will establish on the Higashi-Hiroshima Campus the <u>J-Innovation HUB Building (3 stories, 1,517 m<sup>2</sup>) as a base for industry-academia collaboration in the local community by the end of AY 2022 to strengthen its functions as a hub for corporate networks</u>.</li> <li>• Using the funding granted by the President, the University renovated the toilets and installed air conditioning equipment at the attached schools on the</li> </ul>

		<p>three housing estates to improve the learning environment for students in AY 2021.</p> <p>As described above, in addition to the improvement of the educational environment, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has newly <u>proceeded with facility maintenance by constructing six new buildings, utilizing donations from Hiroshima City and companies as well as various funding sources from MEXT, the MOE, METI and the University since AY 2020, resulting in successful maintenance and improvement of the educational and research environment. Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</u></p>
<p>[65] Maximize the use of existing facilities, and to do so, reallocate space currently assigned to education and research purposes, and secure about 1.5 times more space for communal use.</p>	<p>IV</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the expansion of the communal space, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, the following efforts made it possible for the University to <u>expand the space by 1.8 times, far exceeding the target of expanding the space about 1.5 times from that at the end of the second medium-term target period.</u></p> <p><b>[Expanding communal space]</b></p> <ul style="list-style-type: none"> <li>• Considering the initial and running costs, the University <u>visualized the space using its own system, which was built at no cost</u>, for about 9,000 rooms in AY 2021. The University has worked to <u>optimize the allocation of space to education and research purposes, expand space for communal use, and secure space to be needed in accordance with the reorganization of education and research organizations</u>, through the visualization of space, surveys on users' purposes and usage patterns of facilities, and use of the space charge system. In addition, the University <u>secured a space of 13,835 m<sup>2</sup>, about 1.8 times larger than the 7,689 m<sup>2</sup> at the end of the second medium-term target period, by setting a rule to contribute 10% of research space to the communal space at the time of large-scale renovation and by consolidating and abolishing RI facilities.</u></li> <li>• Due to the relocation of the School of Law following the construction of a new building on the Higashi Senda Campus, <u>a space of about 5,000 m<sup>2</sup> of the building of the School of Law on the Higashi-Hiroshima Campus will be secured as a communal space in AY 2023. In AY 2021, the space charge system was revised to increase the area subject to charging, and thus a space of about 1,000 m<sup>2</sup> in total is expected to be secured in AY 2022.</u></li> </ul> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b> In addition to the efforts that were stated in the reports on operational performance up to AY 2019, the University has newly implemented the following initiatives since AY 2020 to <u>turn the campus into an innovation commons</u> from the perspective of (1) <u>creating an innovation hub through co-creation with companies</u>, (2) <u>opening the campus to citizens in collaboration with local governments</u>, and (3) <u>effectively utilizing the campus based on proposals from students</u> so that everyone can use the University's campus as a place for engaging in creative activities in an integrated manner.</p> <p><b>[Promoting innovation commons]</b></p> <p><b>① Creating an innovation hub through industry-academia-government co-creation</b></p> <ul style="list-style-type: none"> <li>• In October 2021, the <u>Hiroshima University Phoenix International Center MIRAI CREA, an international exchange base facility, was established on the Higashi-Hiroshima Campus for the purpose of creating innovation. On the first floor, an open multi-purpose space, open office areas, and a cafeteria where visitors can drop in casually are provided, and "local 5G" is available to offer a space that can help people in different positions and occupations generate ideas and create innovation. The second floor contains office areas and conference rooms and is occupied by the Town &amp; Gown Office, where the University, Higashi-Hiroshima City and companies gather, and Arizona State University Office. In a multi-purpose space and conference rooms, many events for innovation creation, such as international seminars and workshops, are held to promote international collaboration. The average utilization rate of conference rooms is 72%. In addition, the multi-purpose space on the first floor is always busy as a co-working space used by business persons as well as students, making MIRAI CREA an innovation hub in the community.</u></li> <li>• At the Higashi-Hiroshima Campus, <u>an autonomous shuttle was operated</u> by the Higashi-Hiroshima City Autono-Maas Promotion Committee for about a year from AY 2020, and <u>verification projects for the introduction of workcation and light mobility</u> were conducted in AY 2021. According to the plans of the Town &amp; Gown Office and the Hiroshima University Smart City Co-Creation Consortium, <u>a number of demonstration projects have been started on the campus to turn it into an innovation commons, including the planned installation of large-scale solar panels (building roofs and parking lots; planned capacity of about 5MW) through the PPA project and introduction of a geothermal air conditioning system in AY 2022.</u></li> </ul> <p><b>② Opening the campus to citizens in collaboration with local governments</b></p> <ul style="list-style-type: none"> <li>• In March 2020, the University signed an agreement with Higashi-Hiroshima City to <u>open a part of the Higashi-Hiroshima Campus as a transportation node for public buses used by citizens. Higashi-Hiroshima City started the public works for (1) arrival and departure points for public buses, (2) establishment of waiting areas based on student ideas, and (3) development of parking lots (6,968 m<sup>2</sup>; total construction cost: 250 million yen) from AY 2021, and the operation as a base for Park &amp; Ride will begin from AY 2022.</u></li> <li>• In cooperation with Higashi-Hiroshima City, the first to third rounds of vaccination against COVID-19 were implemented for 55,346 students, faculty, and staff of the University and 41,772 citizens, including members of the Higashi-Hiroshima City Chamber of Commerce and Industry, using the West Gymnasium on the Higashi-Hiroshima Campus as a venue between AY 2020 and AY 2022. In addition, a part of a parking lot on the campus was <u>offered as a venue for PCR testing</u> conducted by Hiroshima Prefecture. In this way, the campus has been utilized to help prevent the spread of COVID-19. As for the West Gymnasium, which has a capacity of 1,000 people, the air conditioning system was installed in AY 2021 so that it can be used as a base for disaster prevention.</li> </ul>

	<p>③ <b>Effectively utilizing the campus based on proposals from students</b></p> <ul style="list-style-type: none"> <li>• In AY 2021, <u>an outdoor public space with a roof and benches was created based on a student proposal</u> so that students can gather, eat, and interact with each other. This space provides an area for food trucks, and since May 2022, food trucks have regularly come into the space and have been made available to students, faculty, and staff as well as to the public.</li> <li>• From November 2021, a student-initiated project (“<u>Reuse-Chari-Share</u>”) started to repair bicycles no longer used or abandoned due to students’ graduation or other reasons and to reuse them as shared bicycles. Stations where bicycles can be rented or dropped off 24 hours a day using smartphones have been set up at four locations on campus and have been <u>used as part of a student research project</u>.</li> </ul> <p>As described above, regarding <b>the expansion of the communal space</b>, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University was able to <b>expand the space by about 1.8 times, which was much higher than the target of expanding the space about 1.5 times</b> from that at the end of the second medium-term target period. In addition, the University has <b>actively worked to turn the campus into an innovation commons in AY 2020 and AY 2021</b>, including demonstration projects using the University as a field, the development of a public transportation network by Higashi-Hiroshima City, vaccination against COVID-19, and student research projects, through (1) co-creation with companies, (2) <b>collaboration with local governments</b>, and (3) <b>student proposals, resulting in successful and effective utilization of facilities</b>. Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</p>
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I. Business operation and financial status  
 (4) Other business management goals  
 ② Safety management goals

Medium-term goals	[33] Create a safety culture, and to do so, strengthen the University's safety management system and help faculty and staff increase their awareness of risk management, as well as safety and health.
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Medium-term plan	Progress	Descriptions and explanations (of plan implementation)
<p>[66]                      Help faculty and staff increase their awareness of risk management, as well as safety and health, and to do so, inspect and evaluate the University's safety management system and also provide all faculty and staff members with training and lectures on safety and health periodically every year.</p>	IV	<p><b>(Implementation status in AY 2020 and AY 2021)</b>                      Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University inspected and evaluated its safety and health management practices, including their legality, and examined what adaptations would need to be made to its safety and health management system to accommodate changes due to the reorganization of its graduate schools. The University also distributed videos of training for its members to increase the number of participants, made the training available in multiple languages (English), and enhanced safety training for faculty, staff, and students, thereby raising their awareness of risk management as well as safety and health.                      On January 25, 2019, the University issued the Hiroshima University No-smoking Declaration and announced internally and externally a roadmap that outlines actions to be taken until a no-smoking environment can be achieved. In accordance with the roadmap, it prohibited smoking on the entire campus from January 2020.</p> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b>                      In addition to the efforts stated in the reports on operational performance up to AY 2019, the University has newly implemented the following efforts as measures against COVID-19 since AY 2020.</p> <ul style="list-style-type: none"> <li>• In April 2020, the University <u>set up the HU Task Force for Risk Management</u> with the President as its Director and <u>held more than 100 meetings on a regular weekly basis over two years</u> to decide and implement workplace vaccination against COVID-19 and other measures to prevent the spread of infection according to the infection status.</li> <li>• In AY 2020, the University <u>established a system to promptly check a person's physical condition</u> by <u>utilizing</u> its own <u>Emergency Contact System</u>, <u>developed a system to approve and report cases</u> where it is necessary to travel to areas under declaration of a state of emergency or priority measures to prevent the spread of disease or to other countries, <u>established the COVID-19 Countermeasures Office</u> in preparation for cluster outbreaks, and introduced a <u>telework system</u>.</li> <li>• In AY 2021, the University worked with Higashi-Hiroshima City to start, <u>ahead of other national universities in Japan, workplace vaccination against COVID-19</u> on the Higashi-Hiroshima and Kasumi Campuses from June 21, 2021, targeting not only <u>the University's students, faculty and staff</u> but also members of the <u>Higashi-Hiroshima City Chamber of Commerce and Industry</u> and the <u>Higashi-Hiroshima City Board of Education</u> and students of <u>neighboring universities</u>. A total of 41,315 students, faculty, staff, and their family members, as well as 37,153 citizens, including members of the Higashi-Hiroshima City Chamber of Commerce and Industry, were vaccinated. The vaccination rate (two rounds) was 76.5% for students and 86.7% for faculty and staff. In response to the central government's policy of moving up the third round of workplace vaccination, the University promptly began offering the third round in cooperation with Higashi-Hiroshima City from February 21, 2022. As a result, 14,031 students, faculty, staff, and their family members, as well as 4,619 citizens, including members of the Higashi-Hiroshima City Chamber of Commerce and Industry, were vaccinated. Based on opinions of students who are concerned about the spread of infection, the University <u>established a PCR center</u> operated by Hiroshima Prefecture <u>on campus (Higashi-Hiroshima Campus)</u> in February 2022, where members of the University as well as local residents can receive free PCR testing.</li> </ul> <p>As described above, in addition to the establishment of a safety and health management system, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has newly implemented since AY 2020 <u>active and prompt measures to prevent the spread of COVID-19 under a university-wide system, workplace vaccination ahead of other national universities in Japan, and establishment of a PCR center to contribute to</u> the members of the University as well as <u>local residents</u>, which allowed its <u>classes and research to be carried out continuously without large-scale cluster outbreaks</u> and <u>resulted in successful safety management of the University</u>. Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</p>

I. Business operation and financial status  
 (4) Other business management goals  
 ③ Legal compliance goals

Medium-term goals	[34] Ensure reliable, transparent, healthy, and proper administration of the University with full compliance with the law, and thereby fulfill the University's role as a responsible corporate citizen.
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Medium-term plan	Progress	Descriptions and explanations (of plan implementation)
<p>[67]                      Take the following measures to prevent scientific misconduct and the misuse of research funds: 1) provide those who intend to conduct research at the University and those who want to use its research funds with education on research ethics, laws related to research, and prevention of the misuse of research funds; and 2) require those who use its research funds to submit a fund-use statement each relevant year.</p>	IV	<p><b>(Implementation status in AY 2020 and AY 2021)</b>                      Regarding the establishment of a system to prevent misconduct related to research activities and the collection of a statement of confirmation for compliance with regulations from those who use research funds, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has implemented the following efforts.</p> <ul style="list-style-type: none"> <li>• As for the establishment of a system to prevent misconduct related to research activities, <u>the Academia-Government-Industry Collaboration Legal Division of the Department of Academia-Government-Industry Collaboration</u>, which is responsible for raising awareness of research ethics, <u>and the Department of Research and Academia-Government-Community Collaboration</u> have collaborated since April 2021 to strengthen the system for disseminating information on research ethics to the entire university from a more multifaceted viewpoint.</li> <li>• As for the collection of a statement of confirmation for compliance with regulations, conduct subject to disciplinary action, and the existence of legal liability, persons who use research funds are required to submit a “statement of confirmation for the use of research funds,” which includes a statement that the University’s regulations must be observed and that research funds must be used appropriately, and in AY 2020 and AY 2021, it was confirmed that all persons who use research funds submitted it.</li> <li>• As for the President’s visit to graduate schools to raise awareness, <u>the President himself visited all graduate schools</u> in AY 2020 and AY 2021 to directly call attention to the prevention of misconduct, as part of awareness-raising activities aimed at eradicating misconduct.</li> </ul> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b>                      Regarding education on compliance and research ethics related to the prevention of misuse of research funds, in addition to the efforts stated in the reports on operational performance up to AY 2019, the University has newly implemented since AY 2020 <u>the provision of e-learning programs in combination with level-of-understanding tests</u> aiming to increase the number of participants and ensure their quality, <u>setting up of a consultation desk and a contact point for reporting</u>, and <u>preparation of a handbook, etc.</u> that can be kept at hand for reference at all times to carry out thorough measures to prevent misconduct.</p> <p><b>[Providing education on the prevention of misconduct in research activities and research funds through e-learning]</b></p> <ul style="list-style-type: none"> <li>• Regarding <u>education on research ethics for faculty and staff</u>, the University has revised the interval of participation from once every five years to once every three years since AY 2020 to <u>increase the frequency of participation</u>, in an effort to continuously raise awareness of the code of ethics education. In addition, the University has started to offer the education through <u>e-learning</u> since AY 2020 to enable participants to take the course without being restricted by time or place, thereby improving the convenience, and it has also <u>conducted a level-of-understanding test after the course</u> to ensure its quality.</li> <li>• Regarding <u>education on research ethics for students</u>, the University has made “Research Ethics Education (Graduate Student Basic),” a subject to be taken at the time of entering a graduate school, and the chapter on research ethics in “Introduction to University Education,” a liberal arts education subject for new undergraduate students, available through <u>e-learning</u> since AY 2020, and it has also <u>conducted a level-of-understanding test after the courses</u> to ensure their quality.</li> <li>• Education on compliance for the <u>prevention of misuse of research funds</u> had been provided to participants in the training for newly hired faculty and staff members until AY 2019. However, it has been conducted through <u>e-learning</u> since AY 2020 to expand the subject of education to faculty and staff members who use research funds (<u>262</u> participants in AY 2019 → <u>2,942</u> participants in AY 2020).</li> <li>• After the education on compliance, the participants are required to take a level-of-understanding test, and the budget execution will be suspended until they pass the test. This system was implemented for 2,942 subject persons in AY 2020 and 2,763 in AY 2021, and as a result, <u>all subject persons took the courses and passed the level-of-understanding test</u>.</li> </ul>

		<ul style="list-style-type: none"> <li>• The status of participation in education on compliance and the percentage of correct answers in the level-of-understanding test were calculated and analyzed, and the results were reported at a meeting attended by officers and Deans/Directors. For the items for which the percentage of correct answers was particularly low, opinions were exchanged on what actions should be taken to address them.</li> <li>• The items for which the percentage of correct answers was particularly low in the level-of-understanding test and the questions asked by multiple people in the questionnaire survey were additionally posted in the accounting Q&amp;A section of the portal site for faculty and staff to communicate information about them.</li> </ul> <p><b>[Setting up a consultation desk and a contact point for reporting]</b></p> <ul style="list-style-type: none"> <li>• In April 2020, the University <u>set up the Financial Concierge, a consultation desk anyone can consult at any time</u>, such as when they do not know whom to ask about the procedures for the budget execution and account processing, to build a framework that allows people to feel free to ask for advice (Number of consultations: 71 in AY 2020 and 46 in AY 2021).</li> <li>• In February 2021, the University <u>set up a new off-campus contact point at a law firm</u>, in addition to the existing on-campus contact points at the Office of Research and Academia-Government-Community Collaboration and the Audit Office, for reporting or whistleblowing misconduct in research activities and misuse of research funds to build a framework for reporting both inside and outside of the University.</li> </ul> <p><b>[Preparing a handbook, etc.]</b></p> <ul style="list-style-type: none"> <li>• In AY 2020, the University reviewed teaching materials for faculty and staff members and students, prepared a booklet of case studies of misconduct that have occurred in the past, and distributed it as a research ethics education material to further call for attention to and raise awareness of the need to prevent misconduct.</li> <li>• In July 2021, the University <u>prepared and distributed about 3,000 copies of the Handbook for Prevention of Misuse of Research Funds and Misconduct in Research Activities</u> (Japanese and English versions) for faculty and staff members so that they can keep it at hand for reference at all times. The University also prepared and distributed the <u>Leaflet for Prevention of Misuse of Research Funds and the Leaflet for Prevention of Misconduct in Research Activities</u> (Japanese, English, and Chinese versions) for students, etc. in an effort to further raise awareness and permeate understanding of the need to prevent misconduct in research activities and misuse of research funds.</li> <li>• In February 2022, the University prepared a new work flow chart for students, etc. who receive rewards and travel expenses that outlines the points to note when receiving rewards, etc. in an easy-to-understand manner, from the perspective of students rather than that of faculty and staff, to ensure that they are thoroughly aware of the rules.</li> </ul> <p>As described above, in addition to the establishment of a system to prevent misconduct related to research activities and the collection of a statement of confirmation, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has implemented since AY 2020 <u>e-learning</u> programs in combination with level-of-understanding tests to <u>increase the number of participants</u> in education on compliance and research ethics and <u>ensure their quality</u>. Additionally, the University <u>set up the Financial Concierge</u>, an on-campus consultation desk anyone can feel free to consult, and <u>an off-campus contact point for reporting at a law firm</u>, and it <u>prepared a handbook for faculty and staff members so that they can keep it at hand for reference at all times</u> to ensure thorough prevention of misconduct related to research funds and research activities among faculty and staff members and students, <b>resulting in successful implementation of measures to prevent misconduct</b>. Therefore, it was determined that this item had been implemented, exceeding the target in the plan.</p>
<p>[68] Take the following actions to maintain the legality, integrity, and reliability of the University's operations: 1) provide faculty and staff with training on personal information protection to maintain excellent information protection standards and 2) provide students and faculty and staff members with periodic seminars on legal compliance.</p>	<p>III</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b></p> <p>Regarding internal audits and training for faculty and staff for proper management of personal information, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has implemented the following efforts, and as a result, <b>the initial plan was fully achieved</b>.</p> <ul style="list-style-type: none"> <li>• Each year, the University provided the following training for faculty and staff: 1) training on personal information protection (training for new faculty and staff members [AY 2020/April and October; AY 2021/April]) and 2) training on personal information protection (online training) (for existing faculty and staff members and healthcare workers). All training sessions included questionnaire surveys, based on which both the content and methods of future training programs were determined.</li> <li>• For students, lecture videos on personal information protection were distributed on demand at the QTA (Qualified Teaching Assistant) qualification test preparation seminar.</li> <li>• To examine whether schools/offices properly handled personal information and corporate documents, the Audit Office collaborated with stakeholders in auditing (16 schools/offices in AY 2020; 19 schools/offices in AY 2021). Schools/offices found not to be properly handling personal information and corporate documents (e.g., continuing to store documents even after the end of their retention period or designating an official seal assistant manager) were instructed to immediately improve their practices. After the audits, feedback on the results was provided to the entire university through audit reports, and subsequently it was confirmed what measures were taken to improve practices.</li> </ul>

<p>[69] Take the following actions to reduce system vulnerability in normal times and ensure business continuity in the event of a disaster: 1) complete cloud migration of main office servers and 2) manage information security, and to do so, follow the information security policy and its implementation procedures that were revised in the second medium-term target period, as well as the University's cloud service use guidelines.</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the <u>measures to strengthen information security</u>, which were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University has continuously worked on the following efforts.</p> <p><b>[Management of information security]</b></p> <ul style="list-style-type: none"> <li>○ <u>Improvement of a system and procedures to respond to information security incidents</u> <ul style="list-style-type: none"> <li>• The University has constantly reviewed the information security policy and related regulations to strengthen the information security system (updating the basic plan (1 case), adding/revising the policy (2 cases), adding/revising procedures (5 cases)).</li> </ul> </li> <li>○ <u>Penetration of the information security policy and related regulations within the organization</u> <ul style="list-style-type: none"> <li>• To strengthen measures against theft or loss of important information on and off campus, the University has clarified that important information should not be stored on a computer or USB memory stick and that if it is to be stored, the cloud storage service designated by the University should be used (December 2021).</li> </ul> </li> <li>○ <u>Training and awareness-raising activities on information security</u> <ul style="list-style-type: none"> <li>• The University continued to provide all faculty, staff, and students with a series of information security compliance training programs administered since AY 2011.</li> </ul> </li> <li>○ <u>Self-inspecting and auditing information security measures</u> <ul style="list-style-type: none"> <li>• The University has continuously implemented self-inspections, evaluations and internal audits, and passed the review for renewal of the Information Security Management System (ISMS) certification and ISMS cloud security certification (February 2022).</li> </ul> </li> <li>○ <u>Collaboration/cooperation with other organizations</u> <ul style="list-style-type: none"> <li>• The University responded to all notifications from the National Institute of Informatics' NII Security Operation Collaboration Services (NII-SOCS), in which the University has participated since AY 2017, and thereby prevented the occurrence of serious information security incidents.</li> </ul> </li> <li>○ <u>Keeping track of the management status of information equipment and necessary measures</u> <ul style="list-style-type: none"> <li>• The office information systems upgraded in AY 2019 have been in full-scale operation since AY 2020, and all work environments where critical information is handled have been separated from the Internet environment to create a secure virtual environment, which has <u>enabled telework from home or other locations via the Internet</u> and thus contributed to the promotion of telework.</li> </ul> </li> <li>• <u>Multi-factor authentication was made mandatory</u> for access from off-campus to cloud mail services, etc. and VPN connection to the campus network (March 2022).</li> <li>• As an information system operation continuity plan (IT-BCP), the University formulated the Manual for Business Continuity Planning of Hiroshima University's Critical Information Systems to define critical information systems (July 2021).</li> <li>• The University has worked to make a critical information system compatible with the Academic Access Management Federation in Japan, GakuNin (1 case) (August 2021).</li> <li>• The University completed cloud migration of its student information system, which had been the last of its critical information systems yet to have had switched to the cloud environment (October 2020).</li> </ul> <p><b>(Efforts exceeding the plan stated in the report on AY 2019 operational performance)</b> <b>[Formulating a Hiroshima University Basic Plan for DX Promotion]</b> In addition to the efforts stated in the reports on operational performance up to AY 2019, the University formulated in January 2021 the Hiroshima University Basic Plan for DX Promotion to promote digital transformation that creates new value and has proceeded with its initiatives according to the following critical matters concerning the entire university that need to be implemented with priority by AY 2022: ① use of education/learning data and digitization of educational contents; ② research data management; ③ digitization of health management of the University's members; ④ analysis of the University's IR data; and ⑤ business continuity and upgrading of administrative operations.</p> <p><b>① Use of education/learning data and digitization of educational contents</b></p> <ul style="list-style-type: none"> <li>• To improve education and support the learning of students, etc., by analyzing education and learning data, the University <u>formulated policies for utilization and management</u> to effectively utilize data containing personal information accumulated in information and other systems in education and learning activities (November 2021). Also, the University <u>developed excellent educational contents</u> that take advantage of the characteristics of digitization and <u>shared 14 initiatives by seven schools with Shimane University, Ehime University, and the Prefectural University of Kumamoto</u>.</li> <li>• In March 2022, the University upgraded some of the terminals at the Information Media Center to high-performance ones equipped with VR goggles for the purpose of creating and utilizing excellent educational contents that take advantage of the characteristics of digitization, such as interactive teaching materials and teaching materials that utilize VR (Virtual Reality).</li> </ul> <p><b>② Research data management</b></p> <ul style="list-style-type: none"> <li>• Aiming to build a digital platform for the management of research data used by researchers, the University held meetings of the Working Group for Reviewing Research Data Management Methods four times to discuss the Policy for the Management, Publication, and Utilization of Research Data (tentative name), the scope of research data to be managed, how to add metadata to managed data, and how to provide cloud storage for storing research</li> </ul>
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data.

③ **Digitization of health management of the University's members**

- In March 2022, the University formulated the Policy for the Health Data Utilization and the Policy for the Management of Health Data to effectively utilize data, aiming to improve the physical and mental health of students, faculty and staff. In addition, the University issued the Healthy Campus Declaration, and as a new way of utilizing health data, it plans to provide the medical checkup results in digital format and to use digital data for mental checks from AY 2022.

④ **Analysis of the University's IR data**

- The Hiroshima University Academy Intelligence (HUA) system was released in September 2021 as a system for visualizing various kinds of information about the University. This allowed teachers to check their own AKPI® values and BKPI® values, as well as the simulation results under the new university-wide unified system for evaluation of individual teachers, which was introduced in AY 2021. A data analysis menu has been provided for executives and Deans/Directors to conduct multifaceted analysis based on IR data, thereby establishing a mechanism that enables decision-making based on high-quality evidence. For example, the Deans of each graduate school have already begun to utilize this system to present at university-wide meetings the initiatives (improvement measures) they have implemented based on the information analyzed using this system, such as the number of papers and the number of times of receiving external funding.

⑤ **Business continuity and upgrading of administrative operations**

- In AY 2021, an electronic approval system was introduced. For corporate documents, it was decided to treat the electronic media as the original. In addition, by utilizing the RPA tool introduced in April 2021 to mechanize and automate 17 operations, the University has achieved optimization and rationalization of operations and reduced the annual hours of operations by about 727 hours. Furthermore, the University proceeded with the development of a web system for personnel-related procedures in AY 2021 and implemented the electronic year-end tax adjustment, the electronic retirement procedures, and the electronic applications for various allowances, realizing the optimization and rationalization of operations through the use of ICT.

As described above, in addition to the continuous implementation of thorough information security measures, which was stated as being scheduled to be implemented in the report on AY 2019 operational performance, the University newly formulated the Basic Plan for DX Promotion in January 2021 and put into practice many of the items therein in a short period of time, **resulting in successful strengthening of information security and promotion of digital transformation**. Therefore, it was determined that this item had been implemented, exceeding the target in the plan.

**(4) Other points to note about business operations****1. Points to note****o Safety management efforts**

- i) Improving the University's safety and health management system [Project No. 66]
  - In accordance with the Hiroshima University No-smoking Declaration issued on January 25, 2019 and the roadmap up to the achievement of the no-smoking environment, the University prohibited smoking on the entire campus from January 2020. After AY 2020, relevant schools/offices have conducted no-smoking patrols based on the patrol calendar in key areas on the Higashi-Hiroshima Campus (School of Engineering, School of Education, and in front of the University Hall) as a follow-up to the promotion of a no-smoking policy. In key areas, a total of seven no smoking signs (written in both Japanese and English) were placed.
  - Regarding safety and health education, which previously was conducted mainly in person, the University posted contents in Japanese and English on its online learning management system (Bb9) to expand the number of participants and made it available in multiple languages ① For students/common edition (Japanese/English), ② For students/experiment edition (Japanese/English), and ③ For faculty and staff members (Japanese)).

**o Safety confirmation of the University's members**

- i) Improving the University's risk management system [Project No. 66]
  - In AY 2018 and AY 2019, safety confirmation drills using the safety confirmation system were conducted twice a year for students, faculty and staff.
  - In AY 2020, the Emergency Contact System used in the safety confirmation drill in April was used to check the physical condition of students, faculty and staff in relation to COVID-19, and the HU Task Force for Risk Management promptly shared information and discussed specific measures.

**o Information security improvement efforts**

The following is based on MEXT's notice about Tightening University and Other Institutional Cyber Security Measures (published on May 24, 2019, in Vol. 59 of the former *Ministry of Education, Culture, Sports, Science and Technology, Higher Education Bureau Chief's Notice*).

**i) Establishing an effective incident response system [Project No. 69]**

- ① The University provided its Computer Security Incident Response Team (CSIRT) with education and training on what procedures to follow when notified of unauthorized access attempts or in the event of an information security incident (attendance: [AY 2020] 100%; [AY 2021] 92.5%).

**ii) Education, training and awareness-raising activities on cybersecurity [Project No. 69]**

- ① The University regularly provided faculty, staff, and students with information security compliance training; consequently, no serious information security incidents occurred. Freshman training (online lecture): (only new students) [number of participants/attendance rate: 3,163/86.0% in AY 2020; 3,449/97.0% in AY 2021]  
Follow-up training: [number of participants/attendance rate: 16,664/87.7% in AY 2020; 16,892/88.2% in AY 2021]  
In addition, faculty and staff were provided with 12 information security seminars designed to help increase participants' knowledge and awareness of information security (participants: 909 in AY 2019 → 1,397 in AY 2020, 1,649 in AY 2021). The seminars were followed by a satisfaction survey, according to which 97.1% (AY 2020) and 96.7% (AY 2021) of respondents found them participant-friendly.
- ② The University regularly provided officers, faculty, and staff (excluding part-timers and those on leave) and students (excluding part-timers, those on leave, and those studying abroad) with information security incident response training. Consequently, no serious information security incidents occurred (participants: 20,287 in AY 2020; 20,389 in AY2021).

Unlike most training programs of this sort, which send users suspicious email and count

the number of recipients who open them (with the aim being the achievement of 0%), the University aims to help users become able to quickly and appropriately respond to information security incidents themselves. Accordingly, the focus of its training programs has been to ensure that users conduct a thorough initial response, and the University will continue to provide such training, aiming to achieve a 100% implementation rate of initial response.

**[Pre-drill education]**

- Faculty and staff (number of participants/implementation rate): 4,263/76.7% in AY 2019 → 4,812/83.9% in AY 2020; 4,910/82.3% in AY 2021
- Students (number of participants/implementation rate): 5,864/40.2% in AY 2019 → 9,035/62.1% in AY 2020; 7,698/53.4% in AY 2021

**[Drill]**

- Faculty and staff (number of participants/implementation rate): 4,234/76.2% in AY 2019 → 4,906/85.5% in AY 2020; 5,038/84.5% in AY 2021
- Students (number of participants/implementation rate): 5,825/39.9% in AY 2019 → 9,889/68.0% in AY 2020; 7,976/ 55.3% in AY 2021

- ③ To strengthen measures against theft or loss of important information on and off campus, the University has clarified that important information should not be stored on a computer or USB memory stick and that if it is to be stored, the cloud storage service designated by the University should be used.

**iii) Self-inspecting and auditing information security measures [Project No. 69]**

- ① The University self-inspected/evaluated its information security practices (number of participants/implementation rate: 16,821/84.9% in AY 2020; 17,111/87.8% in AY 2021).
- ② The University conducted an internal audit of its hospital's information system (December 2020, February 2022). The internal audit confirmed that the hospital's information system has been continuously operated properly in accordance with the hospital's rules.
- ③ The University also conducted an internal audit of its financial accounting system (November 2020, March 2022). The internal audit confirmed that the University's financial accounting system has been continuously operated properly in accordance with the University's rules.
- ④ In addition, internal/external audits were conducted in accordance with the Information Security Management System (ISMS) certification and the ISMS cloud security certification. The internal audit confirmed that the University's ISMS measures were implemented without delay. The external audit also confirmed that the University's committees, including its ISMS office committee, were properly and effectively implementing ISMS measures in accordance with the ISMS manual and other documents that were revised in AY 2018. Accordingly, the University passed the renewal review (March 2021). In the following academic year, it underwent and passed the surveillance audit (March 2022).

**iv) Collaboration/cooperation with other organizations**

- ① The University responded to all notifications from the National Institute of Informatics' NII Security Operation Collaboration Services (NII-SOCS), in which the University has participated since AY 2017, and thereby prevented the occurrence of serious information security incidents [number of notifications: 291 in AY 2020; 276 in AY 2021].
- ② The University welcomed trainees from the Hiroshima Prefectural Police, and both shared their knowledge through daily CSIRT operations (February and July in 2021).

**v) Necessary technical measures**

- ① In AY 2019, the University upgraded its office information systems, disconnected its critical office information systems from the Internet, and equipped all office terminals (1,420 units) with terminal virtualization technology to separate the work environments where critical information is handled from the Internet environment, and it also used VPN technology to enable access to the work environments without location restrictions. This initiative has enabled telework from home or other locations via the Internet. Full-scale operation started in AY 2020, and all operations that handle critical information are now performed in a secure

virtual environment. In addition, the University made telework from home or other locations via the Internet possible, contributing to the promotion of telework (implemented by 443 (83.4%) out of 531 general employees).

- ② The University completed cloud migration of its student information system, which had been the last of its critical business systems yet to have had switched to the cloud environment (October 2020). In addition, the University identified the usage status of systems migrated to the cloud and implemented single sign-on (SSO) for the university-wide information sharing infrastructure system, Iroha, among critical information systems that are not compatible with the Academic Access Management Federation in Japan, GakuNin (August 2021).
  - ③ Multi-factor authentication was made mandatory for access from off-campus to cloud mail services, etc. and VPN connection to the campus network (number of applicable persons: 27,605, number of persons who have set up multifactor authentication: (Hirodai ID): 20,325; (IMC account): 20,262) (March 2021). For those who have not set up multi-factor authentication, the University will continue examination and implementation of measures so that it can check their usage status and place restrictions according to their usage status.
- vi) Implementing security measures in disaster recovery plans and business continuity plans
- As an information system operation continuity plan (IT-BCP), the University formulated a Manual for Business Continuity Planning of Hiroshima University's Critical Information Systems (July 2021). It also conducted training based on the manual (March 2022).

#### ○ **Formulating a Hiroshima University Basic Plan for DX Promotion**

With an eye on the development of the information environment and digital technology a decade from now, to promote digital transformation that will transform education, research, and support operations and create new value, the University formulated in January 2021 the Hiroshima University Basic Plan for DX Promotion, which comprises basic policies and matters concerning the entire university that need to be implemented with priority. The University proceeded with its initiatives according to critical matters concerning the entire university that need to be implemented with priority by AY 2022 (use of education data, research data management, health management, IR data analysis, and administrative operations).

To improve education and support the learning of students, etc., by analyzing education and learning data, the University formulated policies for utilization and management to effectively utilize data containing personal information accumulated in information and other systems in education and learning activities (November 2021). In addition, with regard to the use of education/learning data and digitization of educational contents, the University developed excellent educational contents that take advantage of the characteristics of digitization and shared 14 initiatives by seven schools with Shimane University, Ehime University, and the Prefectural University of Kumamoto.

Aiming to build a digital platform for the management of research data, the University held meetings of the Working Group for Reviewing Research Data Management Methods to discuss the Policy for the Management, Publication, and Utilization of Research Data (tentative name), the scope of research data to be managed, how to add metadata to managed data, and how to provide cloud storage for storing research data.

The University formulated the Policy for the Health Data Utilization and the Policy for the Management of Health Data to effectively utilize data, aiming to improve the physical and mental health of students, faculty and staff (March 2022). As a new way of utilizing health data, the University plans to digitize the notification of medical checkup results and use the smartphone app "Mirai Health Handbook" jointly developed by the University and OKEIOS Inc. from AY 2022.

Regarding IR data analysis, a data analysis menu has been provided for executives and Deans/Directors through the HUAI system, which was released in September 2021 as a system for visualizing various kinds of information about the University, to conduct multifaceted analysis based on IR data, thereby establishing a mechanism that enables decision-making based on high-quality evidence. This allowed teachers to check their own AKPI® values and BKPI® values, as well as the simulation results under the new university-wide unified system for evaluation of

individual teachers, which was introduced in AY 2021.

As for administrative operations, the University has promoted electronic approval of procedures and examined the RPA of operations. Consequently, it introduced the RPA for personnel operations (September 2021) and started to operate the online application process for various allowances (commuting, housing, etc.) throughout the University.

#### ○ **Efforts to deal with COVID-19**

- i) Establishing a system, led by the President, for responding to COVID-19
  - On February 4, 2020, the University established the Conference on Measures against Novel Coronavirus Infection, directed by the Executive Director (Financial and General Affairs), and the Conference held meetings to prepare a University Policy on the Novel Coronavirus Infection and to decide how to confirm the travel history and safety of the University's members and how to handle visitors, and it implemented the decided actions (eight meetings were held). (The Conference on Measures against Novel Coronavirus Infection was dissolved due to the establishment of the following HU Task Force for Risk Management.)
  - On April 2, 2020, the University set up the HU Task Force for Risk Management with the President as its Director and held more than 100 meetings on a regular weekly basis over two years to establish a system that enables prompt university-wide decisions on countermeasures, such as how classes should be conducted, how to support students and measures to prevent the spread of infection.
  - After recognizing that the number of PCR test takers had increased, in anticipation of a cluster outbreak on campus, on August 24, 2020, the University established the COVID-19 Countermeasures Office.

#### ii) Efforts to resume classes

- To ensure that students can continue their study, the Task Force for Reviewing the Implementation of Classes to Respond to COVID-19, which was established under the Review Team for the Implementation System of Classes to Respond to Outbreaks of Infectious Diseases and Disasters, reviewed and held workshops for the method for smoothly implementing online classes, and on April 8, 2020, the University began offering online classes using the online learning management system (LMS) and video distribution system (VOD) without delay from the regular schedule to start classes. In addition, to allow students to take online classes on campus, the University secured classrooms that students can use freely, and it also lent Wi-Fi routers free of charge to students who did not have Internet access at home.
- While paying attention to actions being taken by the national and prefectural governments and demands from students, etc., after taking sufficient infection prevention measures, the University gradually resumed face-to-face classes.

The University conducted classes, taking advantage of the features of face-to-face and online classes according to the characteristics of each subject and the content of each lecture by taking the following measures:

- ① Allow students from off-campus to attend face-to-face classes online (in real time);
  - ② Distribute face-to-face classes online to other classrooms or places in real time;
  - ③ Record video and audio of face-to-face classes and distribute them on demand;
  - ④ Divide students into two groups and conduct face-to-face classes every other week;
  - ⑤ Conduct experiments and practical training using an online system;
  - ⑥ Proactively conduct face-to-face classes for specialized subjects for first-year undergraduates who have fewer opportunities to come to campus and feel uneasy about their student life.
- In conducting classes, the University took measures to prevent infection, such as by distributing face shields to those who said they wanted to use them and installing carbon-dioxide concentration measuring devices in lecture rooms used by many people.

#### iii) Providing student support

- To help Japanese and international students who are in need of financial help due to a drastic decrease in their income from part-time jobs and other sources, the University has begun its

own Emergency Aid Scheme. With support from the local community and alumni, the University received a donation of 66.31 million yen (1,162 donations), and on April 23, 2020, it began providing Emergency Aid (30,000 yen per person, paid out continuously every month) and continued to support the lives of students for about two years. As of March 9, 2022, a total of 1,820 students have received support.

- Regarding the money international students need while waiting to be allowed back into the country after returning to Japan from abroad, the University received support of up to 100,000 yen per student from Higashi-Hiroshima City, and together with the City, it provided support for the re-entry of international students.
  - On November 26, 2020, the University concluded the Agreement on the Cooperation in the Delivery of Emergency Supplies with Izumi Co., Ltd., and before other national universities in Japan, it established a system for delivering emergency supplies, such as food, from the nearest Izumi store to minimize the trouble that students, faculty members, and staff members may have in their daily lives while staying at home after having come into contact with infected people.
- iv) Measures to prevent the spread of COVID-19 infection
- By using the University's Emergency Contact System, which is used in safety confirmation drills implemented every year to raise awareness of risk management, the University built a system that allows for prompt checking of physical condition, checked the physical condition of all students, faculty members, and staff members, identified people who were not feeling well at early stages, and helped them.
  - The University actively promoted telework in response to the central government's declaration of a state of emergency to help avoid the three Cs (closed spaces, crowded places, and close-contact settings) in the workplace. In addition, based on the results of the telecommuting system in response to the July 2018 Japan floods and the telework system in response to the need to prevent the spread of COVID-19, to support flexible work styles of staff members and business continuity planning (BCP) in emergencies, in November 2020, the University introduced the Hiroshima University Telework System. To transform the organization into one that can adapt to the new normal world, the University notified its faculty members, staff members, and students that it encourages the systematic implementation of telework, in addition to reviewing various work processes.
  - Regarding travel to the areas under declaration of a state of emergency or priority measures to prevent the spread of disease or countries categorized as high levels under the Travel Advice and Warning on Infectious Diseases issued by the Ministry of Foreign Affairs (MOFA), although such travel is prohibited in principle, a system was developed to approve and report the cases where it is unavoidable to travel to such areas or countries, and thorough infection prevention measures were implemented through prompt decision-making.
  - In March 2021, to detect people who are not feeling well due to fever, the University installed an infrared thermography camera for screening people with fever at the entrance of each undergraduate school building.
  - Since elementary schools were all closed at once due to the need to prevent the spread of COVID-19, the University offered temporary afterschool childcare services for schoolchildren in the Higashi-Hiroshima area (welcoming 17 children in total between April 16 and April 21, 2020) and the Hiroshima area (welcoming 208 children in total between April 15 and June 5, 2020). To have the contractors managing the on-campus childcare facilities (Himawari Nursery School and Cosmos Nursery Room) implement monthly PCR testing of employees, the University developed a flow chart showing how to respond if any employees test positive and began implementation in February 2021.
  - The University worked with Higashi-Hiroshima City to start, ahead of other national universities in Japan, workplace vaccination against COVID-19 from June 21, 2021, targeting not only the University's students, faculty and staff but also members of the Higashi-Hiroshima City Chamber of Commerce and Industry and the Higashi-Hiroshima City Board of Education and students of neighboring universities, and conducted two rounds of vaccination. In response

to the central government's policy of moving up the third round of workplace vaccination, the University also promptly began offering the third round on February 21, 2022. A total of 41,315 students, faculty, staff, etc. of the University were vaccinated in two rounds of vaccination, and a total of 14,031 students, faculty, staff, etc. were vaccinated in the third round of vaccination. The vaccination rate (two rounds) was 76.5% for students and 86.7% for faculty and staff. Furthermore, at the request of Hiroshima Prefecture and companies (such as Hiroshima Toyo Carp and Sanfrece Hiroshima), the University dispatched medical staff and others to vaccination sites to actively contribute to the prevention of the spread of COVID-19.

- v) Providing medical support
- Establishing a cooperative system within the University for the implementation of PCR testing
    - In response to the fact that Hiroshima Prefecture was designated as an infection spread alert area on April 13, 2020 due to the spread of COVID-19, as part of the University's crisis management, the Kasumi School/Office Liaison Council requested all laboratories on the Kasumi Campus to cooperate in establishing an organization that can conduct COVID 19-PCR testing in preparation for future outbreaks. With cooperation from 27 laboratories (71 people), the University created an on-campus cooperative system for PCR testing of COVID-19, and on April 17, 2020, it established the system as the Hiroshima University COV-PEACE-PROJECT 2020. Subsequently, the University signed a consignment contract with Hiroshima Prefecture and conducted an administrative inspection. In addition, the main laboratories of the Hiroshima University COV-PEACE-PROJECT 2020 were commissioned by Hiroshima Prefecture with 100 million yen to conduct tests for the Project for the Establishment of a COVID-19 Testing and Research System through Government-Academia Collaboration, which is a unique project in Japan. Under the on-campus cooperative system centered on the Hiroshima University COV-PEACE-PROJECT 2020, the University's medical laboratories relating to the development of prophylactic vaccines and therapeutic agents against COVID-19, epidemiological investigations to understand the status of infection, genetic analyses, and genomic analyses collaborated in promoting diagnoses, drug discovery, countermeasures, and virological research.
    - After discussions with Hiroshima Prefecture, the University established a PCR center operated by Hiroshima Prefecture on campus (Higashi-Hiroshima Campus) in February 2022, where members of the University as well as local residents can receive free PCR testing.
  - Creating a response manual
    - Based on a university-wide policy, the University created the Manual for Responding to the Novel Coronavirus Infection (COVID-19) for faculty and staff members working at the University Hospital and updated it as necessary.
  - Handling of critically ill patients
    - Being a priority medical institution, the Hospital secured four to eight beds for critically ill patients and 28 beds for moderate patients. In addition, it used subsidies related to COVID-19 to upgrade its bronchoscope and CT imaging equipment.
  - Providing afterschool childcare services for schoolchildren in response to temporary school closures
    - In response to the temporary closure of elementary schools due to COVID-19, the University opened an emergency afterschool childcare center on campus to help medical staff raising children to continue to work. In addition, to make up for the shortage of afterschool childcare instructors, the administrative staff of the University took turns working as instructors to maintain a system that allows the continued provision of afterschool childcare services during the school closure period.
  - Holding a workshop on artificial respiration management and ECMO therapy
    - To cultivate personnel who can provide artificial respiration management and ECMO therapy to critically ill patients infected by COVID-19, on June 27, 2020, in collaboration with the Ministry of Health, Labour and Welfare (MHLW) and related academic societies, the University held a workshop for doctors, nurses, and clinical engineers working at medical institutions in Hiroshima Prefecture. About 40 people, including doctors, nurses, and clinical engineers



working at medical institutions in Hiroshima, Fukuyama, Miyoshi, and other cities, participated in the workshop.

- Helping prevent the spread of COVID-19 in cooperation with Hiroshima Prefecture

At the time of a cluster outbreak, a professor at the University's Hospital provided help as the leader of the Medical Support Team for Infectious Diseases, a unique medical team dispatched by Hiroshima Prefecture to welfare facilities and hospitals, which comprised 17 members. The University also helped the DMAT establish accommodation facilities for patients with mild COVID-19. In December 2020, when COVID-19 was spreading rapidly across the prefecture, the University dispatched doctors, nurses, and radiologists to the triage outpatient clinic set up by the prefecture, contributing to the prevention of the spread of the infection in the midst of tight medical conditions.

- Acceptance of medical supplies and other support

As COVID-19 continued to spread, the University Hospital received many medical supplies, such as masks and protective clothing, as well as beverages and food for doctors, nurses, and staff members. To thank service organizations, companies, and individuals who supported the University Hospital, the University Hospital posted on its website the names of the service organizations, companies, and individuals who agreed to be acknowledged publicly.

vi) Taking up challenges posed by the world coexisting with COVID-19 and post-COVID-19 world <Education>

- Providing "learning" opportunities to society as a whole ahead of other universities in Japan: "Enhance your knowledge -Hiroshima University 100 special lectures-"

Online lectures by leading faculty members of the University were made available internally and externally in both Japanese and English via the official YouTube site of Hiroshima University.

- Fostering international exchange online

In the second semester of AY 2020, the University established the e-START/START+ programs, online international exchange education programs that do not involve travel. The programs started on a trial basis from the second semester of AY 2020, and 61 students of the University participated in seven courses. In the programs, the University held five lectures (common core lectures) related to international exchange and study abroad before having students participate in course-based study with overseas universities. The lectures were combined with the programs to constitute a two-credit course. In AY 2021, the programs were officially implemented on a permanent basis, and 60 students of the University participated in seven courses in the first semester, and 83 students of the University participated in 14 courses in the second semester.

- Introducing COIL-type education

The University introduced COIL (Collaborative Online Inter-national Learning)-type education, providing its students with opportunities for discussion and exchange with overseas students.

<Research>

- AMED technology development project for countermeasures against infectious diseases, including viruses

The University was the only entity in the nation to be selected to undertake projects in all four research support areas (of demonstration, improvement, validation, and basic research).

- The University received a donation of 10 million yen from Sumitomo Mitsui Trust Bank as a subsidy for research on COVID-19.

It aims to develop vaccines and therapeutic agents, establish treatment methods to prevent aggravation, and establish a testing system.

- Making COVID-19 pneumonia a survivable disease

The University provided intensive extracorporeal membrane oxygenation (ECMO) therapy for acute respiratory failure, including cases related to COVID-19, and pursued more effective and safer ways to apply ECMO.

- Developing an inexpensive 3D printable ventilator model  
To solve the shortage of ventilators, the University aims to develop inexpensive ventilators to meet the needs of clinical practice.
- Applying small molecule RNA analysis technology to the diagnosis and drug discovery of COVID-19

The University will work on the development of diagnostic technology that takes into account the sensitivity, specificity, and simplicity of diagnosis by the qRT-PCR method and also work on the construction of a genetic analysis database that can be applied to drug discovery.

- Aiming to acquire antibodies to develop vaccines and discover drugs

The University is working on the development of technology to extract from the body antibody genes that bind strongly to viruses and also the development of technology to artificially generate immune responses outside the body.

- Project to establish a testing and research system for COVID-19 through government-academia collaboration

The Graduate School of Biomedical and Health Sciences will primarily collaborate with Hiroshima Prefecture in ① expanding the testing system for the prevention of the spread of COVID-19, ② improving the epidemiological investigation system by understanding the infection situation in a timely manner, and ③ understanding the actual situation of the infection by genome analysis.

<Others>

- Healthy Campus Declaration

As it is becoming increasingly important for the University to protect the mental and physical health of its members, the University issued the Hiroshima University Healthy Campus Declaration on March 24, 2022 with the aim of protecting the "mental and physical health" of students and other members of the University. In line with the declaration, the University will work on the Healthy Campus Project by actively utilizing digital technology for health management and individual counseling of its members. It will also protect the mental and physical health of its members to improve the performance of the organization as a whole and further promote education and research. Also, the University will return the results to society to make a contribution.

- Surveying the impact on people with dementia and raising awareness of how to respond to COVID-19

In collaboration with the Japan Geriatrics Society and the Hiroshima Branch of the Alzheimer's Association Japan, the University conducted a survey on the impact of COVID-19 on people with dementia, and in December 2020, it prepared a brochure and raised awareness about how to respond to COVID-19.

vii) Developing information systems

- Telework support for office terminals

In AY 2019, the University upgraded its office information systems, disconnected its critical office information systems from the Internet, and equipped all office terminals (1,420 units) with terminal virtualization technology to separate the work environments where critical information is handled from the Internet environment, and it also used VPN technology to enable access to the work environments without location restrictions. Full-scale operation started in AY 2020, and all operations that handle critical information are now performed in a secure virtual environment. In addition, the University made telework from home or other locations via the Internet possible, contributing to the promotion of telework (implemented by 443 (83.4%) out of 531 general employees).

- Enhancing the online learning management system (LMS)

The LMS (Bb9) was enhanced for stable and continuous operation in response to the rapid increase in use due to the university-wide promotion of remote classes and active learning as countermeasures against COVID-19.

[Number of faculty members, staff members, and students using LMS]

97.1% (at the time of confirmation of use and annual renewal: 22,719 accounts/23,243 accounts)  
(March 2021)  
96.6% (at the time of confirmation of use and annual renewal: 22,591 accounts/23,396 accounts)  
(March 2022)

[Number of courses offered by LMS]  
25,738 (including 19,857 new courses) (March 2021)  
39,814 (including 14,257 new courses) (March 2022)  
[Reference: Number of courses in AY 2019: 6,183 (including 1,219 new courses)]

viii) Risk management and initiatives against the spread of COVID-19

- To dispel the concerns of the University's various stakeholders and to establish a system that will allow the University to carry out its essential duties, the University sent out messages in a timely manner through the President's Message for students, faculty members, and staff members and through the Hiroshima University Community Meetings with guardians to share information on the direction in which the University is aiming to advance and the current status of its efforts against COVID-19.

## 2. University-wide efforts

### o Facility management efforts

As a system for addressing facility management, the University has a Facility Management Council, which comprises faculty members selected from various research fields throughout the University, established under the direction of the responsible Executive Director (Financial and General Affairs), to formulate and promote specific measures for facility maintenance and effective use and maintenance management of facilities from a university-wide perspective.

In preparation for the 75th anniversary of Hiroshima University, the Fund for Uplifting Hiroshima University and Energizing the Local Communities of Hiroshima has solicited donations and conducted programs that help create an environment where Hiroshima University can play a more dynamic role and strengthen co-creation with local communities and businesses, thereby realizing the development of Hiroshima University. On the Higashi-Senda Campus, the University will develop a new center for humanities and social sciences with a focus on legal profession training, a center for recurrent education and adult education, and a center for disaster prevention and mitigation research in collaboration with local governments, establish laboratories that can be used by corporate engineers as a base for industry-academia collaboration, and create a forum for interaction between Japanese/international students and companies/administrative agencies. On the Kasumi Campus, the University will expand the environment for clinical trials and clinical research and a place for fostering medical professionals. On the Higashi-Hiroshima Campus, the University will invite world-class researchers and create an environment that attracts globally competitive students and young researchers.

On January 26, 2021, the University made the Carbon Neutral x Smart Campus 5.0 Declaration. It also established the Town & Gown Office to realize carbon neutrality on campus and turn the campus into an innovation commons by 2030, and it has been promoting the improvement of the campus in a new direction through industry-academia-government collaboration and demonstration experiments on campus.

- i) Matters concerning facility/equipment maintenance and usage [Project Nos. 64, 65]
- o Visualization of education and research space

To improve the imbalance in the areas used by faculty members in education and research space, secure communal space for the entire university to meet new needs, and effectively share and resolve issues related to space, the University expanded its facility information, which it had only partially disclosed before, and visualized about 9,000 rooms so that the usage status can be shared among all faculty members and the space can be effectively used. Considering the initial and running costs, this visualization system was independently built at no cost using Microsoft's PowerApps without using a commercially available space management system.

- ② Keeping track of users' purposes and usage patterns of facilities

In AY 2020, the University conducted a survey on users' purposes and usage patterns of facilities relating to the Graduate School of Biomedical and Health Sciences and subsequently reported to the Dean the issues concerning the effective use of space and requested improvements of such issues. Consequently, the problem of imbalanced student space among laboratories was improved by securing space exclusively reserved for students in the Graduate School, resulting in more effective use of space.

In AY 2021, the University conducted a survey on users' purposes and usage patterns of facilities relating to the Graduate School of Advanced Science and Engineering and subsequently reported to the Dean the issues concerning the effective use of space and requested improvements of such issues. Consequently, a layout plan was formulated to create larger rooms and shared space at the time of upcoming large-scale renovation of buildings of the School of Science.

- ③ The University's space-charge system

The University implemented its space charge system, as it did last academic year, and secured 71.796 million yen as funds for renovations needed to maintain facilities. In addition, charging for the University's space charge system was changed from a per-graduate school basis to a per-program basis. This will increase the area subject to charging by about 3,200 m<sup>2</sup> (30%), which will facilitate the securing of funds for renovations and of space.

- ④ Expanding communal space

The University set a rule to contribute 20% of a new building and 10% of a renovated building to the communal space, and it expanded the space by about 1.75 times from 7,689 m<sup>2</sup> at the end of AY 2015 to 13,500 m<sup>2</sup> at the end of AY 2020. In AY 2021, by securing 335 m<sup>2</sup> of the Integrated Radiation Experiment Building (F3) and the Common-use Building 3, the University further expanded its communal space area by about 1.8 times compared to that of AY 2015 to 13,835 m<sup>2</sup>, far surpassing its medium-term plan goal of expanding communal space area by 1.5 times that compared to AY 2015. Although the University has secured the communal space to contribute to turning the campus into an innovation commons and strengthening research abilities, it has also secured, in addition to the communal space, space for industry-university-government collaboration by establishing facilities, including the Hiroshima University Phoenix International Center MIRAI CREA, an international exchange base facility, on the Higashi-Hiroshima Campus, a new building on the Higashi Senda Campus, and a new lecture building on the Kasumi Campus.

- ⑤ Efforts relating to the Hiroshima University Infrastructure Life Extension Plan

In accordance with the "Hiroshima University Infrastructure Life Extension Plan (individual facility plan)" formulated in AY 2019, the University conducted waterproofing work on a total of 4,957 m<sup>2</sup> of the rooftops of the Satake Memorial Hall (Higashi-Hiroshima), North Gymnasium (Higashi-Hiroshima), Lecture Building L (Higashi-Hiroshima), Technology Building D (Higashi-Hiroshima), and Art Building E (Higashi-Hiroshima), using the facility maintenance grant and its own funding. The University also implemented life extension measures, including repair of elevators in Research Building A (Higashi-Hiroshima), repair of the air conditioning system in the Advanced Science General Research Building (Higashi-Hiroshima), replacement of 246 air conditioners, and replacement of 3,723 lighting fixtures. In addition, the University took the following energy efficiency measures on the Higashi-Hiroshima Campus: 1) replaced 42 200 W outdoor light bulbs with LED bulbs; 2) replaced 356 air-conditioners with more energy-efficient ones; 3) replaced 4,005 fluorescent lamps, including those in the School of Applied Biological Science's Research Building A, with LED bulbs; 4) replaced transformers, including those used in the School of Applied Biological Science, with more energy-efficient ones; and 5) changed window glass to multi-layered glass as part of building renovations. Through these efforts, the University was able to reduce electricity consumption by about 264,106 kWh per year.

The management-included ESCO service provided to all areas of the Kasumi Campus enabled the reduction of energy (in terms of heat) by 73,000 GJ in AY 2021 compared to that of AY 2020, which allowed reducing CO<sub>2</sub> emissions by 3,800 tons. The University as a whole reduced CO<sub>2</sub> emissions by 7,027 tons from 55,489 tons in AY 2019 to 48,462 tons in AY 2020.

- ⑥ Efforts using various funding sources

In AY 2021, the University established the Radiation Emergency Medicine Promotion Center with a subsidy of 620 million yen from the MOE and the Hiroshima University Phoenix International Center MIRAI CREA, an international exchange base facility for accepting world-class international researchers and international students, with a donation of 500 million yen from Higashi-Hiroshima City (completed in September 2021). With a subsidy of 1 billion yen from METI, the University started the construction of the J-Innovation HUB Building as a base for industry-academia fusion at a core university in the region. The University received a donation of 1 billion yen from Satake Corporation for the renovation of the Satake Memorial Hall, where local organizations can hold lectures and workshops, and has sequentially conducted renovation work since AY 2020. Using the Fund for Uplifting Hiroshima University and Energizing the Local Communities of Hiroshima, which received a donation of 1 billion yen from Hiroshima City, the University has been working on the establishment of a new center for humanities and social sciences with a focus on legal profession training, a new building (Higashi Senda) to create a center for recurrent education and adult education, and a new lecture building (Kasumi) to create a place for fostering medical professionals. As a result of the above efforts, the University has created about 2,800 m<sup>2</sup> of communal space.

㊦ Responding to COVID-19, opening the campus to the community

To respond to emerging infectious diseases, such as COVID-19, at an early stage, the University extended the Animal Experiment Building (Kasumi) using the facility maintenance subsidy from MEXT and built a disease model library. This will facilitate the creation and analysis of disease model mice for rare and intractable diseases, opening the way to elucidation of the pathology and development of treatments of these diseases. Using its unique genome editing technology, the University developed exon-humanized mice for research on emerging infectious diseases, which will accelerate the elucidation of infection mechanisms. The University also cooperated in preventing the spread of COVID-19 by setting up a vaccination site for COVID-19 and a venue for PCR testing conducted by Hiroshima Prefecture on the campus. As part of these efforts, the University installed an air conditioning system in a gymnasium so that it can be used as a vaccination site or a local evacuation shelter.

㊧ Turning the campus into an innovation commons and realizing carbon neutrality

The University developed transportation nodes on the north and south sides of the Higashi-Hiroshima Campus to contribute to the construction of a transportation network linked to the community development of Higashi-Hiroshima City. On campus, the University conducted demonstration experiments of an autonomous shuttle and Local 5G in an effort to enhance collaboration for social implementation. In a lecture at a graduate school, students gave a presentation on their ideas for an innovation commons, and their proposals were included in the Campus Master Plan. In addition, through the implementation of the Reuse-Chari-Share project (reuse and rental of bicycles) proposed by students, the University has been working to raise the awareness of faculty, staff, and students toward carbon neutrality while reducing the use of cars and motorcycles.

㊨ Development based on the Campus Master Plan

In accordance with its Hiroshima University Campus Master Plan 2016, the University renovated Biology Research Building B and Research Building A (Higashi-Hiroshima) and thereby secured an area of 435 m<sup>2</sup> as a space for active-learning lessons. Following the abolition of RI facilities and other facilities, their sites were converted to communal spaces, and an area of 690 m<sup>2</sup> was secured as a space for the start-up of joint research and new projects. In addition, the University established a new Animal Experiment Building (Kasumi).

Consequently, the University maintained a safe and secure education and research environment, and it inspected and evaluated the implementation of its action plan of the Hiroshima University Campus Master Plan 2016 during the relevant period, confirming that the implementation rate was 95.2% (79 items out of 83 items).

In addition, under the leadership of the Executive Director (Financial and General Affairs) in charge of Facilities Management, the Campus Master Plan 2022 Study Subcommittee was established under the Facility Management Council to prepare the next Campus Master Plan under a system of faculty-staff cooperation that will allow the following types of people of both

genders to exchange opinions: 1) faculty members and students in the diverse fields of architecture, urbanism, environment, transportation, community, and medicine and 2) staff members in charge of facilities. As a result, the Hiroshima University Campus Master Plan 2022 was formulated.

**(Legal compliance and ethically responsible research)**

○ **Establishing and implementing the University's legal compliance system and rules**

i) Efforts to develop a system to prevent scientific misconduct [Project No. 67]

The University revised the By-Laws on Research Ethics Education Related to Research Activities at Hiroshima University, reviewed its operation, and changed the deadline for faculty and staff members to participate in the training from five years to three years from AY 2020 to shorten the interval of participation (attendance: 97.55% in AY 2020, 99.29% in AY 2021). Furthermore, the University has started to deliver research ethics education through e-learning since AY 2020 so that participants can take the course without being restricted by time and place, thereby improving the convenience.

Regarding research ethics education for students, the University has required students to take a standard program of research ethics education immediately after their enrollment and before writing their undergraduate/graduate degree thesis since AY 2017 to help them increase their awareness of ethical standards (attendance: 95.48% in AY 2020, 97.97% in AY 2021). To teach new students the basics of research ethics in conducting research activities, the University included a chapter on research ethics in a compulsory liberal arts education course developed in AY 2018 for freshmen students, titled "Introduction to University Education." In addition, the University has made "Research Ethics Education (Graduate Student Basic)," a course to be taken at the time of entering a graduate school, and the chapter on research ethics in "Introduction to University Education," a liberal arts education course for new undergraduate students, available through e-learning, and it has also conducted a level-of-understanding test to ensure their quality.

The University reviewed teaching materials for faculty and staff members and students, prepared a booklet of case studies of misconduct that have occurred in the past, and distributed it as a research ethics education material to further call for attention to and raise awareness of the need to prevent misconduct.

Furthermore, in addition to the existing on-campus contact point for reporting misconduct related to research activities, the University established an off-campus contact point at a law firm.

ii) Efforts to prevent the misuse of research funds [Project No. 67]

To assess faculty members' awareness of different types of misuse of research funds, based on the Plan for Prevention of Misuse of Research Funds at Hiroshima University (fifth action plan), formulated on October 3, 2016, the University administered an awareness survey on the prevention of misuse of research funds in AY 2016 and AY 2017. Subsequently, the University announced the results to faculty, staff, and students through school/office compliance promotion managers with emphasis on the matters with lower levels of awareness.

To help those who will be participating in the University's new teacher and staff training program (in April and October) and/or the Chugoku and Shikoku area's national university financial accounting training program (entry level), the University offered a seminar on accounting standards, which included a lecture on the proper use of research funds.

The University offered another seminar on accounting standards in AY 2019, which also included a lecture on the proper use of research funds to help those who will be participating in its new teacher and staff training program (in April and October) and/or the Chugoku and Shikoku area's national university financial accounting training program (entry level).

In addition, to ensure that travel expenses are not doubly reimbursed by two institutions, the University revised its travel report and dual employment request/permission application forms in ways that will clearly indicate whether travel expenses have already been reimbursed by another institution. Regarding the payment of travel expenses and rewards to students, the University redesigned its travel report and reward execution plan/report forms. In addition, it revised its office procedures for accepting travel reports and reward execution plans/reports as follows: 1) the student himself/herself will need to submit travel reports and reward execution plans/reports to the staff

member in charge, who is a third party, in person; 2) the relevant staff member will need to confirm that the student submitting such documents is the person whose name is provided on the documents and that the information contained is true; and 3) after accepting the documents, the relevant staff member will keep a record of the fact that he/she confirmed the student's identity and the truthfulness of the documents.

Regarding compliance education to prevent misuse of research funds, in AY 2020, the University reviewed its educational materials, created a new level-of-understanding test, and began implementing compliance education and a level-of-understanding test through e-learning.

To prevent duplicate receipt of travel expenses from the University and another institution, the University revised its dual employment request/permission application form to confirm whether travel expenses have been paid by another institution. In addition, the University revised its travel report form to require providing example descriptions of duties so that details regarding business trips can be verified afterwards. Subsequently, on April 1, 2020, the University switched to using the new forms.

In November 2020, taking into account an analysis and understanding of the causes of misuse of research funds based on incidents of misuse of research funds that had occurred in the past, level-of-understanding test results, and internal audit results, the University revised its Plan for the Prevention of Misuse of Research Funds at Hiroshima University and thoroughly informed faculty members, staff members, and students of its revised plan.

In addition to the existing on-campus contact point for reporting misuse of research funds at the Audit Office, the University established an off-campus contact point at a law firm in February 2021.

In AY 2021, to raise awareness and permeate understanding of the need to prevent misuse, the University prepared the Handbook for Prevention of Misuse of Research Funds and Misconduct in Research Activities for faculty and staff members and the Leaflet for Prevention of Misuse of Research Funds for students as of July 1, 2021 as part of awareness-raising activities for its members.

Following the revision of the Guidelines for Management and Audit of Public Research Funds at Research Institutions (Implementation Standards) stipulated by MEXT on February 1, 2021, the University revised the Regulations for Prevention of Misuse of Research Funds at Hiroshima University and the Plan for Prevention of Misuse of Research Funds at Hiroshima University as of July 28, 2021 to clearly specify the periodic implementation of awareness-raising activities, the role of the chief administrative officer, clarification of the basic policy for measures to prevent misconduct, the formulation of an implementation plan for compliance education and periodic awareness-raising activities, and cooperation with auditors.

### iii) Personal information protection efforts [Project No. 68]

The University provided its faculty and staff members with training on the protection of personal information each year and conducted ongoing educational activities.

- AY 2020: training for newly hired faculty and staff members (April and October), personal information protection training (for general faculty and staff members/141 participants; for healthcare workers/105 participants)
- AY 2021: training for newly hired faculty and staff members (April), personal information protection training (for general faculty and staff members/133 participants; for healthcare workers/85 participants)

In addition, the University reviewed whether the contents of its portal site for faculty and staff members regarding the protection of personal information were accurate and timely, and it renewed its portal site so that users will have an easier time searching for information and reading information.

For students, lecture videos on personal information protection were distributed on demand at the QTA (Qualified Teaching Assistant) qualification test preparation seminar.

### iv) Personal information / corporate document audit [Project No. 68]

Regarding the status of personal information and corporate documents in schools/offices, the Audit Office and related organizations collaborated to conduct audits. Schools/offices found not to be

properly handling personal information and corporate documents were instructed to immediately improve their practices, and whether schools/offices improved their practices as instructed was subsequently confirmed. After the audits, feedback on the results was provided to all schools/offices by the audit reporter, and subsequently it was confirmed what measures were taken to improve their practices.

- AY 2020: Conducted in October-November, target: 16 schools/offices
- AY 2021: Conducted in November-December, target: 19 schools/offices

### v) Confirming the actual status of outsourcing contracts related to the handling of retained personal information [Project No. 68]

Regarding outsourcing of operations involving the handling of personal information, the University conducted on-site inspections to check the management system, etc. at the outsourced party and confirmed that proper management was in place.

(Contracts subject to on-site inspection)

- AY 2020: 10 contracts in the Kasumi area (October to November 2020)
- AY 2021: 31 contracts in the Higashi-Hiroshima area (conducted from January to February 2022)

II. Improving the quality of the University's education and research  
 (4) Other goals  
 ① Hiroshima University Hospital's goals

Medium-term goals	[13] Strengthen the Hospital's safety management system to provide safe and high-quality medical care.
	[14] Help improve the quality of medical care in the local community as a national policy-based hospital, and fulfill the Hospital's role as a core medical institution with the aim of becoming one of Asia's medical hubs.
	[15] Provide students and graduates with better medical education, training, and lifelong learning programs and thereby cultivate excellent medical personnel.
	[16] Improve the Hospital's education and clinical research systems to continue to provide new types of advanced medical care, conduct original research, and develop more core medical centers.
	[17] Strengthen the Hospital's management base and thereby optimize its management to ensure continuous and stable operation of the Hospital.

Medium-term plan	Progress	Descriptions and explanations (of plan implementation)
[35] Take the following actions to improve and strengthen the Hospital's capacity for providing highly advanced medical care with the use of medical technology that requires special skills, thereby fulfilling the Hospital's role as a special functioning hospital that offers advanced medical care: 1) regularly examine the medical safety management system, including the procedures for incorporating new medical technology that helps provide highly specialized treatments; and 2) reorganize medical organizations in ways that will put patients at the center of clinical care.	III	<p><b>(Implementation status in AY 2020 and AY 2021)</b></p> <p>Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the initial plan was fully achieved. Specifically, the following efforts were implemented.</p> <ul style="list-style-type: none"> <li>• <u>To comply with relevant laws and regulations, the Hospital has revised the medical safety management manual multiple times each year and continued to make improvements to strengthen medical safety measures.</u></li> <li>• In April 2020, the Palliative Care Division of the Cancer Treatment Center was reorganized as the Palliative Care Center. The Center also established a system to provide seamless palliative care in collaboration with palliative care wards, clinics that provide home palliative care, and insurance pharmacies in the prefecture.</li> <li>• <u>In April 2020, a new professor was assigned to the Medical Informatics &amp; Systems Management of the Hiroshima University Hospital to improve the medical process using medical information.</u></li> <li>• <u>In May 2020, the Division of International Medical Support was established as a central clinical facility to reinforce the medical treatment functions by building a system for cooperation with internal and external parties to accept non-Japanese patients, improving the hospital environment, developing a system for providing medical care that allows patients to have a medical examination with peace of mind, and enhancing the support system for hospital staff so as to provide safe and high-quality medical care.</u></li> <li>• In May 2020, the Hospital launched the Endoscopy Training Center, which is equipped with a variety of equipment that helps undergraduate students, medical interns, and young doctors improve their endoscope operation skills, to provide an environment where experienced specialists can instruct students and medical interns. In this way, a system was established in cooperation with Hiroshima Prefecture to contribute to improving the level of endoscopic care in the local community.</li> <li>• In September 2020, the Hospital established the Crisis Medical Center for the purpose of building a medical care system for crisis situations, such as disasters and infectious disease outbreaks, and developing medical personnel who can respond to such situations. By concentrating the medical care functions of the University Hospital in emergencies, the Center is expected to be able to provide comprehensive acute care and improve patients' life prognosis or functional prognosis.</li> <li>• In November 2020, the Allergy Center of the University Hospital, which is an allergic disease medical center hospital, was certified as a WAO Center of Excellence by the World Allergy Organization (WAO), making it the third facility of its kind in Japan.</li> <li>• Medical Excellence Japan (MEJ), a core organization for promoting international medical development with support from METI, examined whether the Hospital met the standards to be awarded Japan International Hospitals (JIH) certification, and on January 19, 2021, the Hospital received recommendation. The recommendation enabled the Hospital to demonstrate that it has a system in place to provide state-of-the-art medical services both domestically and internationally, and the Hospital has raised the level of awareness of its staff regarding the acceptance of foreigners and the improvement of services.</li> <li>• In April 2021, the Sleep Disorders Center was established as the first specialized medical institution (Type A) certified by the Japanese Society of Sleep Research in Hiroshima Prefecture, and it provides examinations, diagnoses, and treatments for sleep disorders in general.</li> <li>• <u>In April 2021, the Genetic Counselor Training Course (Master's Course) was launched in the Graduate School of Biomedical and Health Sciences for the purpose of training human resources to become certified genetic counselors, of whom there are only two (both belonging to the University) in Hiroshima Prefecture.</u></li> <li>• With the start of operation of the dedicated COVID-19 ward in May 2021, the Hospital prepared a manual and provided related staff members with training for dressing and undressing PPE. To date, no infections have occurred among staff members in charge. In addition, the Hospital has called</li> </ul>

		<p>attention of staff members according to the status of the outbreak, strengthened the testing system, promptly conducted epidemiological investigations when staff members reported infection, and safely and smoothly implemented vaccinations. Consequently, no outbreak of clusters requiring restrictions on medical treatment has occurred. As for countermeasures against resistant bacteria, the Hospital has continued to monitor the trends of the occurrence, analyzed the transmission route in departments where the infection cases are on the increase, and called for attention. As a result, no outbreaks have been observed.</p> <ul style="list-style-type: none"> <li>• <u>In November 2021, the Cancer Genomic Medicine Center was established with the aim of contributing to the improvement of the quality of cancer genomic medicine.</u></li> <li>• In March 2021, storage equipment, which is necessary for a biobank, was installed.</li> </ul>
<p>[36] Take the following actions to fulfill the Hospital's role as a designated childhood cancer hospital – the only institution of its kind in the Chugoku-Shikoku area and its affiliated radiological emergency medical institution network: 1) coordinate collaboration between key hospitals in Hiroshima Prefecture and 2) foster collaboration with international exchange partner institutions with the aim of becoming one of Asia's leading medical centers.</p>	<p>III</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the initial plan was fully achieved. Specifically, the following efforts were implemented.</p> <ul style="list-style-type: none"> <li>• When Yokozuna Hakuho, a sumo wrestler, who learned about the exchange between the National Cancer Center of Mongolia (with which the University Hospital signed an inter-departmental exchange agreement on March 28, 2018) and Hiroshima University, which provided the Center with support for radiological medicine, attended the exchange agreement signing ceremony, he donated to the University Hospital a championship plaque he won to encourage patients, and the plaque was subsequently displayed in the Hospital's clinic building in July 2020.</li> <li>• Due to the effects of COVID-19, the Hospital voluntarily suspended the acceptance of overseas delegations and the dispatch of doctors and nurses overseas, which it had continued until AY 2019.</li> <li>• Because of COVID-19, the Hospital had to suspend the mutual exchange of staff with its international exchange partner schools. However, the Hospital made preparations for exchange after AY 2021, including dispatching staff to the health science symposium scheduled to be held at Taichung Veterans General Hospital (with which the University Hospital signed an inter-departmental exchange agreement on March 15, 2015).</li> <li>• In September 2020, for the first time in Hiroshima Prefecture, a multi-departmental/multi-professional treatment team, comprising cardiologists, cardiovascular surgeons, neurologists, anesthesiologists, and emergency intensivists, performed two surgeries using a left-atrial-appendage closure device (WATCHMAN) on patients with atrial fibrillation. Performing this surgery reduced patients' physical and economic burden.</li> <li>• The Hospital held a meeting of the pediatric cancer Chugoku-Shikoku network to share information regarding the survey results on the actual status of pediatric brain tumor treatment and implementation of cancer genome panel testing at participating medical institutions, the current status of transitions to adult health care, and the holding of various training sessions, as well as to discuss case studies. The Hospital also examined the pediatric cancer regional plan for the next academic year.</li> <li>• The Hospital has continuously provided medical support to Fukushima Prefecture for more than 10 years since the Great East Japan Earthquake by dispatching the Radiation Emergency Medical Assistance Team from immediately after the disaster and by establishing the Fukushima Medical Support Center in the University Hospital and sending doctors from October 2016 in response to a request for cooperation with the Futaba Emergency and General Medicine Support Center founded by Fukushima Medical University. The Hospital has also continuously cooperated in the reconstruction of Fukushima over a long period of time. Since April 2018, young internists and emergency physicians have been dispatched in three-month shifts and one week a month, respectively, from the University Hospital to the Futaba Medical Center, located near the site of the nuclear power plant accident, to help maintain 24-hour medical care.</li> <li>• To establish a system for nuclear disaster medicine as an Advanced Radiation Emergency Medical Support Center and Nuclear Emergency Medical Support Center, the Hospital used web conferences in the midst of the COVID-19 pandemic and also dispatched lecturers and provided advice and guidance at nuclear emergency drills conducted by prefectures where nuclear power plants are located. In addition, to raise people's awareness of and familiarize them with nuclear disaster medicine, the Hospital held workshops and conducted decontamination drills. In addition, as an organization registered with the International Atomic Energy Agency (IAEA)'s Response and Assistance Network (RANET), the Hospital continually implemented projects to promote collaboration.</li> <li>• <u>The Hospital has launched endowed laboratories (Graduate School of Biomedical and Health Sciences: three laboratories; Hospital: seven laboratories), primarily on clinical care, with help from local medical institutions to improve the level of medical care and achieve the same high standard throughout Hiroshima Prefecture.</u></li> </ul>

<p>[37] Provide students and graduates with high-quality systematic clinical training, and to do so, improve and strengthen the functions of the Hiroshima Postgraduate Clinical Training Network. In addition, establish a base that can consistently offer inter-professional undergraduate and graduate school education and research programs, taking advantage of the benefits of consolidation of medicine, dentistry, pharmacy, and health science to cultivate medical personnel in the Chugoku-Shikoku area. Furthermore, cultivate the following types of medical personnel: 1) professionals able to use advanced medical technology with a high level of expertise to provide comprehensive medical care; and 2) healthcare workers able to provide next-generation medical care that can respond to future medical needs, including those expected to arise in relation to the super-aging population.</p>	III	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the initial plan was fully achieved. Specifically, the following efforts were implemented.</p> <ul style="list-style-type: none"> <li>• <u>The Hospital improved its training programs by taking the following actions: 1) sharing information on the efforts of departments that are providing advanced and distinctive guidance at the Working Group for Improvement of Post-graduate Clinical Training and the Post-graduate Clinical Training Management Committee and 2) holding discussions to implement measures to improve training programs being implemented in the University Hospital's departments based on requests from medical interns.</u></li> <li>• In April 2021, the Postgraduate Clinical Training and Educational Center was renamed the Medical Field Clinical Educational Center, and the Dental Clinical Training Center was renamed the Dental Field Clinical Educational Center. The Medical Field Clinical Educational Center is responsible not only for post-graduate clinical training in the medical field but also for specialized training (some programs) and entrusted practice and training for healthcare workers (nurses, pharmacists, radiologists, physical therapists, etc.), and it has been reorganized and changed for better clarity for both inside and outside the University.</li> <li>• The Hospital promoted a project for developing the world's highest level radiation therapy team to train staff and working adults who can provide radiation therapy to become globally competitive medical personnel, and it built a program to develop tangible and intangible factors of radiation therapy through industry-government-academia collaboration to expand them to the region and neighboring Asian countries.</li> <li>• <u>To develop futuristic global medical professionals who can seamlessly apply next-generation medical care to local medical care, the Center for the Education of Futuristic Global Medical Professionals took the initiative in holding open seminars for the University Hospital's medical interns. Doctors from Hiroshima University Hospital gave lectures based on their own experiences of studying abroad and giving presentations at academic conferences, creating an opportunity to integrate advanced medical care with local medical care.</u></li> <li>• To cultivate human resources able to provide radiological emergency response and thereby fulfill its role as an Advanced Radiation Emergency Medical Support Center and Nuclear Emergency Medical Support Center, the Hospital had healthcare workers, including doctors, nurses, and radiological technologists, participate in training and specialized seminars in Japan. Due to the need to prevent the spread of COVID-19, the Hospital switched to providing training online and limited the number of participants for on-site training to the minimum.</li> <li>• To establish an education and practical training system for medical students, etc. to develop more advanced awareness and skills regarding infectious diseases, the Hospital created original contents and VR materials under an infectious disease medical personnel training program selected to receive a subsidy from MEXT.</li> </ul>
<p>[38] Promote Hiroshima University Hospital's distinctive cutting-edge medicine and highly advanced medical care that can appeal to the world, and to do so, establish an international radiological emergency response base by using the University's experience in helping the reconstruction of Hiroshima after the atomic bomb. In addition, establish bases for clinical technology development, and to do so, conduct advanced interdisciplinary research by integrating medicine with not only dentistry, pharmacy, and health science but also other disciplines and do so in ways that will maximize the Hospital's experience in research in the following fields: 1) regenerative medicine, including cartilage regeneration; 2) preclinical medicine, including liver disease research and brain science; and 3) clinical medicine.</p>	III	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the initial plan was fully achieved. Specifically, the following efforts were implemented.</p> <ul style="list-style-type: none"> <li>• <u>In July 2020, the Hospital established the CPC Division as an organization to support regenerative medicine, following the reorganization of the Center for Integrated Medical Research into the Clinical Research Center in Hiroshima.</u></li> <li>• <u>In conjunction with the launch of the Clinical Research Center in Hiroshima, the Translational Research Center, a joint education and research facility on campus, was reorganized in July 2020 to strengthen the collaboration between the two centers, thereby developing a support system to promote medical research.</u></li> <li>• In AY 2021, the new graduate school course "Lecture on Translational Research A" was started for students in the master's course to help them systematically learn the concept of translational research, which aims at bridging basic research and clinical research and then at social implementation.</li> <li>• To specifically promote specified clinical research conducted at Hiroshima University by reducing the burden on the University's principal investigator of specific clinical research conducted at the University Hospital, the Hospital continually implemented a reduction measure whereby it pays an amount equivalent to the ethics review fee.</li> <li>• <u>In November 2020 and November 2021, the Hospital held the "ALL HIROSHIMA SPORTS SUMMIT," led by the Sports Medical Center, where opinions were exchanged from the viewpoint of many different professions on how to protect one's body from not only sports injuries and disorders but also internal diseases.</u></li> <li>• Based on the Agreement on Collaboration and Cooperation in the Field of Sports for the Disabled, concluded in October 2016, Hiroshima University, the Hiroshima Para Sports Association, the NPO STAND, and Hiroshima Prefecture collaborated with AEON Co., Ltd. in holding a hands-on para-sports event in November 2020, and through exchange events, the University built momentum toward the creation of a community that respects diversity.</li> <li>• As support for the Tokyo 2020 Paralympic Games, the Hospital dispatched one doctor and two physical therapists as trainers and conducted medical checks for 22 athletes selected for their high performance by the Hiroshima Para Sports Association.</li> <li>• A system for providing radiation disaster medical care was established through collaboration between the Hospital's departments, the ARO, and the Research Institute for Radiation Biology and Medicine.</li> </ul>

<p>[39] Take the following actions to manage the Hospital strategically: 1) continue to calculate earnings and analyze income from the cost-accounting perspective that was adopted during the second medium-term target period and 2) analyze income and expenses by using the management support system that was also adopted during the second medium-term target period.</p>	<p>III</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the initial plan was fully achieved. Specifically, the following efforts were implemented.</p> <ul style="list-style-type: none"> <li>• By using the University Hospital Management Accounting System (HOMAS2), the Hospital performed a quarterly cost-accounting analysis of each of its departments, compared the results with those of the same period of the previous year, and conducted factor analyses of profit fluctuations. In addition, the Hospital conducted an analysis of calculations of monthly department medical fees that patients already discharged were billed for under the Diagnosis Procedure Combination (DPC)/Per-Diem Payment System (PDPS).</li> <li>• The Hospital analyzed the following items of each department and calculated the cost of the top five departments by DPC for patients discharged who were billed under the DPC/PDPS method, and also analyzed the revenue structure of outpatients and notified each department: 1) patient composition, 2) management indicators, 3) income and expenditure calculation, 4) average length of hospital stay for DPC billing, 5) stage II discharge rate and medical unit price per day, 6) the top five medical groups' distribution of income and expenditure by DPC, 7) departmental usage ratio by expense, and 8) top-10 ranking of quantity and money spent by each department on pharmaceutical materials.</li> <li>• A review meeting led by the Hospital's Director was held once a month to urgently repair or replace medical equipment. In addition, based on a survey of equipment to be replaced, conducted in AY 2017, various financial resources were used to systematically replace old large medical machinery and equipment.</li> <li>• The Hospital analyzes its inventory management status of medicines and medical materials based on the results of physical inventory, notifies staff of which materials are about to expire to promote their use before expiration and thereby prevent the use of expired materials, and notifies relevant departments of the need to have expired materials collected every month and then collects such materials. In addition, the Hospital also surveyed the use of materials, including those that were about to expire, and instructed departments to ask for permission to use materials stocked in other departments if any were available. The Hospital also examined whether it was purchasing the right amount of materials by proposing to departments having materials about to expire to review the fixed amount of materials they were ordering.</li> <li>• Being a priority medical institution, the Hospital secured four to eight beds for critically ill patients and 28 beds for moderate patients. In addition, it used subsidies related to COVID-19 to upgrade its bronchoscope and CT imaging equipment.</li> <li>• The Hospital reports its assessment of medical fee claims at monthly meetings. In addition, it conducts assessment analyses and discusses with doctors in each of its departments the assessment measures and symptom details for re-examination requests. The Hospital has also been working to improve the accuracy of receipts by utilizing receipt inspection software and coding support software.</li> <li>• Regarding medical materials, the Hospital conducted joint negotiations and joint procurement for medical materials selected by the secretariat of the National University Hospital Council of Japan.</li> </ul>
<p>[40] Take the following actions to develop comprehensive community care systems, i.e., efficient systems for providing high-quality medical care, to respond to medical needs that will increase in the near future: 1) collaborate more closely with Hiroshima Prefecture, Hiroshima City, and medical associations to improve the efficiency of and advance currently existing systems for providing medical care in cities in Hiroshima Prefecture; 2) maximize the use of medical personnel; and 3) promote functional differentiation and collaboration with other core hospitals in cities in Hiroshima Prefecture.</p>	<p>III</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the initial plan was fully achieved. Specifically, the following efforts were implemented.</p> <ul style="list-style-type: none"> <li>• <u>To establish an effective and efficient system for core hospitals, including the University, to jointly provide high-quality medical care to cities in Hiroshima Prefecture, the Hospital has helped core hospitals maintain their functions while promoting functional differentiation and enhancing collaboration and has accumulated various cases to provide better medical care.</u></li> <li>• As for the operation of the cancer treatment collaborative clinical pass, the number of collaborating hospitals and clinics has been increasing every year through efforts to expand collaborating medical institutions.</li> <li>• <u>As a designated hospital for epilepsy treatment in Hiroshima Prefecture, the Hospital held monthly case review meetings with partner medical institutions to share information and promote collaboration.</u></li> <li>• <u>In June 2020, the Hiroshima University Hospital Epilepsy Center started telemedicine using the telemedicine system "CLINICS," making it possible to provide appropriate medical care to remote patients and doctors at remote medical institutions.</u></li> <li>• <u>In April 2021, the University Hospital was certified as a comprehensive epilepsy center by the Japan Epilepsy Society, and the Epilepsy Center (tertiary care) has formed the Regional Epilepsy Medical Cooperation Council in collaboration with local secondary and primary care medical institutions and an administrative body (Hiroshima Prefecture) to promote a project for the development of a regional epilepsy medical cooperation system.</u></li> <li>• The Hospital's participation in the Regional Health Care Council of Hiroshima to help ensure effective operation of regional medical systems was as follows: 24 faculty members of the University served as officers (comprising one vice president, four permanent executive directors, 18 executive directors, and one secretary), and other faculty members served as chairpersons of 10 of the Council's 17 committees and leaders of three of the committees' seven working groups.</li> </ul>



II. Improving the quality of the University's education and research  
 (4) Other goals  
 ② Goals of attached schools

Medium-term goals	[18] Incorporate international perspectives into education and research activities and teaching practice programs in ways that will help students of all ages, from kindergarten- to senior high school-age, to help the University fulfill its goal that it set when applying for the Ministry of Education, Culture, Sports, Science and Technology's Super Global University Creation Support Project. In addition, fulfill attached-school roles as designated teacher training bases that welcome teachers from various regions to help improve the quality of education throughout western Japan.
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Medium-term plan	Progress	Descriptions and explanations (of plan implementation)
[41] Develop by AY 2018 elementary and junior high school curricula and evaluation criteria (e.g., rubrics) with a focus on helping develop global competence – e.g., foreign-language, critical-thinking, and logical-thinking skills, the ability to work as a team, and leadership. Subsequently, implement and evaluate the curricula and also assess whether they produce the desired effects.	III	<p><b>(Implementation status in AY 2020 and AY 2021)</b>          Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the initial plan was fully achieved. Specifically, the following efforts were implemented.</p> <p>The Attached School Research Promotion Committee took the lead in verifying the teaching methods for developing global competencies required for internationally competitive personnel and the rubric-based evaluation that have been implemented at all attached schools, from kindergarten to high school, based on the viewpoint of whether they can be used at other public schools (AY 2021).</p> <p>As a result of verification, <u>it was determined that they could be used at other public schools, and they were widely promoted through educational and research conferences held at each school and research bulletins. (The research bulletin was published twice in AY 2020 and AY 2021; educational and research conferences were held ten times in AY 2020 and AY 2021.)</u></p> <p>Due to the spread of COVID-19, a joint research forum in which all teachers from attached schools attend could not be held in AY 2020 or AY 2021. However, as a substitute, teachers were encouraged to participate in workshops organized by the Hiroshima Prefectural Board of Education, the Hiroshima University SDGs Consortium, or Hiroshima University's Educational Vision Research Institute (EVRI).</p>
[42] In accordance with the School of Education and Graduate School of Education's policy of cultivating teachers with global competence, help students in the following ways: 1) help those who come to the University's attached schools for teaching practice become able to help their own students develop global competence, teach classes in English, and teach in an active learning classroom; and 2) provide graduate school students with internship programs at the University's attached schools so that they can acquire practical teaching skills.	III	<p><b>(Implementation status in AY 2020 and AY 2021)</b>          Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the initial plan was fully achieved. Specifically, the following efforts were implemented.</p> <p>The University helped teacher trainee students acquire methods for the following purposes and also share them between themselves: 1) helping their own students develop global competence, 2) teaching classes in English, and 3) incorporating new teaching methods into the classroom.</p> <p>The University also verified the results of acceptance of graduate school students as interns at its attached schools up to AY 2019. Based on the verification, it designed a program for accepting interns in the next medium-term target period.</p> <p>In AY 2020 and AY 2021, teaching practice programs were implemented in an irregular way amid the spread of COVID-19, and graduate school students on their internship were not allowed to visit the attached schools since access to the attached schools was prohibited to anyone other than the trainee students. However, most of them are employed at attached schools as fixed-term employees or part-time lecturers, and therefore the University is considering linking this initiative to the guidance of these graduate students.</p> <p><u>To foster internationally competent teachers, two teachers from the attached schools were recommended to MEXT as teachers to be dispatched to overseas educational facilities, and it was informally decided to dispatch them (AY 2021).</u></p> <p>Research on a teaching material (complete translation) was implemented using the textbook "Oxford IB Diploma Programme 2014 Edition Physics," which can be used to cultivate a global mindset and develop the basic qualities and abilities for it (AY 2021).</p> <p>In order to cultivate a global mindset in high school students and thereby help globalize the teachers who teach them, the University held the "World Wide Learning (WWL) IDEC (Graduate School for International Development and Cooperation, Hiroshima University)-IGS (Department of Integrated Global Studies, School of Integrated Arts and Sciences, Hiroshima University) Collaboration Program," in which international students of the University and high school students of its attached schools engaged in discussions, and each group set a research theme, conducted research on the theme, and presented its research in English [twice (AY 2021)].</p>

<p>[43] Fulfill the University's role as western Japan's base for teacher training, and to do so, develop systematic teacher training programs and also negotiate more exchange agreements through enhanced cooperation with boards of education in western Japan.</p>	<p>III</p>	<p><b>(Implementation status in AY 2020 and AY 2021)</b> Regarding the efforts that were stated as being scheduled to be implemented in the report on AY 2019 operational performance, the initial plan was fully achieved. Specifically, the following efforts were implemented.</p> <p>To verify the teacher training program, the University conducted a survey of teachers dispatched under exchange agreements and the boards of education that dispatched them regarding training at its attached schools. (Interviews were conducted regarding the results of training at its attached schools during the meetings on personnel exchange with the Hiroshima City Board of Education and with respective prefectural boards of education of Hiroshima, Fukuoka, Saga, and Nagasaki Prefectures (five times)). Subsequently, the University conducted an evaluation based on the survey results (March). The University also evaluated the teacher training program (twice: AY 2020 and AY 2021). From AY 2022 onwards, the University will implement a teacher training program based on these evaluation results. Based on the evaluation results of teacher training in AY 2020, the University comprehensively examined the teacher training system and improved the program.</p> <p>In addition, the University has planned teacher training according to the need, and it has conducted training on the handling of personal information in December 2021 and training on the use of SNS in February with the cooperation of the Division of Law School, Graduate School of Humanities and Social Sciences. <u>Training on the handling of personal information was attended by all teachers of attached schools, and training on the use of SNS was attended by 50 teachers of the attached junior and senior high schools. The training contents were made into DVDs and utilized at all attached schools.</u></p> <p>From August 2021 to January 2022, the University held discussions on personnel exchanges for AY 2022 with prefectural boards of education in western Japan with which the University has concluded personnel exchange agreements, and it decided to continue personnel exchanges with several prefectural and city boards of education for AY 2022. Also, the University proposed to revise the exchange agreements to strengthen cooperation with prefectures in western Japan, and after discussion, it <u>concluded revised agreements with Saga and Nagasaki Prefectures, which were updated to allow interactive exchange between each prefecture and the University</u> (two agreements).</p> <p>To function as a base for teacher training in western Japan, attached schools accepted teachers from various prefectures and cities through personnel exchanges and dispatch training, and they implemented a systematic teacher training program tailored to teachers' abilities and skills depending on which stage of their career they are at (AY 2020 and AY 2021).</p> <p>Attached schools sent teachers to local schools to participate in their training programs as lecturers to strengthen their capacities for providing teacher-training programs, and they also provided teacher training in cooperation with the community (AY 2020 and AY 2021).</p>
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## II. Special improvements made in the quality of the University's education and research

### o Hiroshima University Hospital

#### 1. Efforts relating to cross-national university hospital evaluation criteria

##### (1) Efforts to improve education and research functions, including cultivating professional medical personnel and promoting high-quality clinical research (Education and research)

##### i) Promoting international exchange with overseas organizations [Project No. 36]

- When Yokozuna Hakuho, a sumo wrestler, who learned about the exchange between the National Cancer Center of Mongolia (with which the University Hospital signed an inter-departmental exchange agreement on March 28, 2018) and Hiroshima University, which provided the Center with support for radiological medicine, attended the exchange agreement signing ceremony, he donated to the University Hospital a championship plaque he won to encourage patients, and the plaque was subsequently displayed in the Hospital's clinic building in July 2020.
- Because of COVID-19, the Hospital had to suspend the mutual exchange of staff with its international exchange partner schools. However, the Hospital made preparations for exchange after AY 2021, including dispatching staff to the health science symposium scheduled to be held at Taichung Veterans General Hospital (with which the University Hospital signed an inter-departmental exchange agreement on March 15, 2015).

##### ii) Establishment of an Endoscopy Training Center [Project No. 35]

The Endoscopy Training Center was established and started operation in May 2020 to improve the endoscope operation skills of undergraduate students, medical interns, and young doctors. The Center is equipped with a variety of equipment for training, from models that can be handled by beginner students to the latest devices, including electronic endoscope systems to provide an environment where experienced specialists can instruct students and medical interns. Having previously held nationwide live seminars on gastrointestinal endoscopy and hands-on seminars on gastrointestinal endoscopy treatment, the Department of Endoscopy collaborated with Hiroshima Prefecture, which aims to improve the cancer screening uptake rate, in strengthening the education and training of endoscopists to develop a system that can contribute to improving the level of endoscopic care in the region.

##### iii) Fostering futuristic global medical personnel [Project No. 37]

To develop futuristic global medical professionals who can seamlessly apply next-generation medical care to local medical care, the Center for the Education of Futuristic Global Medical Professionals took the initiative in holding open seminars for the University Hospital's medical interns. Doctors from Hiroshima University Hospital gave lectures based on their own experiences of studying abroad and giving presentations at academic conferences, creating an opportunity to integrate advanced medical care with local medical care.

##### iv) Improving post-graduate clinical training programs [Project No. 37]

The Hospital improved its training programs by taking the following actions: 1) sharing information on the efforts of departments that are providing advanced and distinctive guidance at the Working Group for Improvement of Post-graduate Clinical Training and the Post-graduate Clinical Training Management Committee and 2) holding discussions to implement measures to improve training programs being implemented in the University Hospital's departments based on requests from medical interns.

##### v) Cultivating human resources able to provide radiological emergency response [Project No. 37]

To cultivate human resources able to provide radiological emergency response and thereby fulfill its role as an Advanced Radiation Emergency Medical Support Center and Nuclear Emergency Medical Support Center, the Hospital had healthcare workers, including doctors, nurses, and radiological technologists, participate in training and specialized seminars in Japan.

Due to the need to prevent the spread of COVID-19, the Hospital switched to providing training online and limited the number of participants for on-site training to the minimum.

##### vi) Promoting medical research [Project No. 38]

- In July 2020, the University Hospital's Center for Integrated Medical Research was reorganized and renamed the Clinical Research Center in Hiroshima. In conjunction with the launch of the Clinical Research Center in Hiroshima, the Translational Research Center, a joint education and research facility on campus, was reorganized in the same month to strengthen the collaboration between the two centers, thereby developing a support system to promote medical research.
- To specifically promote specified clinical research conducted at Hiroshima University by reducing the burden on the University's principal investigator of specific clinical research conducted at the University Hospital, the Hospital continually implemented a reduction measure whereby it pays an amount equivalent to the ethics review fee.

##### vii) Supporting Paralympic athletes [Project No. 38]

- In November 2020 and November 2021, the Hospital held the "ALL HIROSHIMA SPORTS SUMMIT," led by the Sports Medical Center, where opinions were exchanged from the viewpoint of many different professions on how to protect one's body from not only sports injuries and disorders but also internal diseases.
- Based on the Agreement on Collaboration and Cooperation in the Field of Sports for the Disabled, concluded in October 2016, Hiroshima University, the Hiroshima Para Sports Association, the NPO STAND, and Hiroshima Prefecture collaborated with AEON Co., Ltd. in holding a hands-on para-sports event at AEON Mall Gion in November 2020, and through exchange events, the University built momentum toward the creation of a community that respects diversity.
- As support for the Tokyo 2020 Paralympic Games, the Hospital dispatched one doctor and two physical therapists as trainers and conducted medical checks for 22 athletes selected for their high performance by the Hiroshima Para Sports Association.

##### viii) Establishment of the Genomic Medicine Center [Project No. 35]

From April 2021, the Hospital started collaborating with seven cancer genome medicine cooperative hospitals in the prefecture, and to develop a system for training human resources necessary for new genome medicine, it launched a training course (master's course) for certified genetic counselors, of whom there are only two (both belonging to the University) in Hiroshima Prefecture. In addition, it established the Genomic Medical Center in January 2022 to contribute to the improvement of the quality of genome medicine, especially cancer genome medicine.

##### (2) Efforts to provide high-quality medical care, expected of university hospitals (Medical care)

##### i) Strengthening support for foreign patients by establishing the Division of International Medical Support [Project No. 35]

To enhance medical services for the increasing number of foreign patients and to reduce the burden on the Hospital's staff, the Hospital established in May 2020 the Division of International Medical Support, which comprises two doctors, one nurse, and one administrative staff member, creating a system to ensure that foreign patients can receive medical care safely and smoothly.

##### ii) Japan International Hospitals (JIH) recommendation [Project No. 35]

Medical Excellence Japan (MEJ), a core organization for promoting international medical development, with support from METI, examined whether the Hospital met the standards to be awarded Japan International Hospitals (JIH) certification, and on January 19, 2021, the Hospital received recommendation. The recommendation enabled the Hospital to demonstrate that it has a system in place to provide state-of-the-art medical services both domestically and internationally, and the Hospital has raised the level of awareness of its staff regarding the

acceptance of foreigners and the improvement of services.

iii) Establishing a Palliative Care Center and supporting it with multiple professionals [Project No. 35]

In April 2020, the Palliative Care Division of the Cancer Treatment Center was reorganized as the Palliative Care Center, comprising doctors, nurses, pharmacists, physical and occupational therapists, nutritionists, dental hygienists, and other professionals. Because the necessity to deal with patients' various distresses from earlier stages has been emphasized and the needs for such care have been increasing year by year, the Center has enhanced medical care in accordance with patients' requests, including the treatment of non-cancer diseases as well. The Center also established a system to provide seamless palliative care in collaboration with palliative care wards, clinics that provide home palliative care, and insurance pharmacies in the prefecture.

iv) Acquisition of a certification as a comprehensive epilepsy center from the Japan Epilepsy Society [Project No. 40]

As a designated hospital for epilepsy treatment in Hiroshima Prefecture, the Hospital has been holding monthly case review meetings with partner medical institutions to share information and promote collaboration. In June 2020, the Hiroshima University Hospital Epilepsy Center started telemedicine using the telemedicine system "CLINICS," making it possible to provide appropriate medical care to remote patients and doctors at remote medical institutions. In April 2021, the University Hospital was certified as a comprehensive epilepsy center by the Japan Epilepsy Society, and the Epilepsy Center (tertiary care) has formed the Regional Epilepsy Medical Cooperation Council in collaboration with local secondary and primary care medical institutions and an administrative body (Hiroshima Prefecture) to promote a project for the development of a regional epilepsy medical cooperation system.

v) Certification as a WAO Center of Excellence [Project No. 35]

In recognition of its facilities and human resources being sufficient for carrying out research, training, and education aimed at the academic development of allergy, asthma, and clinical immunology, in November 2020, the Allergy Center at Hiroshima University Hospital, which is an allergic disease medical center hospital, was certified by the World Allergy Organization (WAO) as the third WAO Center of Excellence in Japan.

vi) First WATCHMAN surgery performed in Hiroshima Prefecture [Project No. 36]

In September 2020, for the first time in Hiroshima Prefecture, a multi-departmental/multi-professional treatment team, comprising cardiologists, cardiovascular surgeons, neurologists, anesthesiologists, and emergency intensivists performed two surgeries using a left-atrial-appendage closure device (WATCHMAN) on patients with atrial fibrillation. WATCHMAN closes off the left atrial appendage, where thrombus tends to form, by inserting a catheter through the leg, which is placed in the left atrial appendage. The advantages of using WATCHMAN include prevention of cerebral infarction with a single procedure and allowing discontinuation of anticoagulant therapy in patients at high risk of bleeding. Performing the surgery described above reduced patients' physical and economic burden.

vii) Dedicated COVID-19 ward started operation [Project No. 35]

With the start of operation of the dedicated COVID-19 ward in May 2021, the Hospital prepared a manual and provided related staff members with training for dressing and undressing PPE. To date, no infections have occurred among staff members in charge. In addition, the Hospital has called attention of staff members according to the status of the outbreak, strengthened the testing system, promptly conducted epidemiological investigations when staff members reported infection, and safely and smoothly implemented vaccinations. Consequently, no outbreak of clusters requiring restrictions on medical treatment has occurred.

As for countermeasures against resistant bacteria, the Hospital has continued to monitor the trends of the occurrence, analyzed the transmission route in departments where the infection cases are on the increase, and called for attention. As a result, no outbreaks have been observed.

**(3) Efforts to ensure stable and sustainable hospital operations (Management)**

i) Improving the Hospital's governance system [Project No. 35]

To make appropriate decisions as a hospital, the Hospital reviewed the responsibilities of its Deputy Directors and Assistants to the Director, and on April 1 2020, it made the following changes: 1) the Deputy Director "in charge of medical safety management" and the Assistant to the Director "in charge of disasters" were changed to the Deputy Director "in charge of medical safety management and disasters"; 2) the Deputy Director "in charge of medical education, training, and internationalization" was changed to the Deputy Director "in charge of medical education"; 3) the Assistant to the Director "in charge of medical treatment" was changed to the Assistant to the Director "in charge of medical treatment and training"; 4) the Assistant to the Director "in charge of dental infection" was changed to the Assistant to the Director "in charge of dental safety and infection"; and 5) the Assistant to the Director "in charge of international affairs" was newly assigned. In addition, to strengthen the Hospital's governance, the Deputy Director "in charge of medical education" was changed to the Deputy Director "in charge of medical education and faculty personnel" as of July 1.

ii) Continually providing long-term medical support for the reconstruction of Fukushima [Project No. 36]

The Hospital has continuously provided medical support to Fukushima Prefecture for more than 10 years since the Great East Japan Earthquake by dispatching the Radiation Emergency Medical Assistance Team from immediately after the disaster and by establishing the Fukushima Medical Support Center in the University Hospital and sending doctors from October 2016 in response to a request for cooperation with the Futaba Emergency and General Medicine Support Center founded by Fukushima Medical University. The Hospital has also continuously cooperated in the reconstruction of Fukushima over a long period of time. Since April 2018, young internists and emergency physicians have been dispatched in three-month shifts and one week a month, respectively, from the University Hospital to the Futaba Medical Center, located near the site of the nuclear power plant accident, to help maintain 24-hour medical care.

iii) Establishing a system for nuclear disaster medicine [Project No. 36]

To establish a system for nuclear disaster medicine as an Advanced Radiation Emergency Medical Support Center and Nuclear Emergency Medical Support Center, the Hospital used web conferences in the midst of the COVID-19 pandemic and also dispatched lecturers and provided advice and guidance at nuclear emergency drills conducted by prefectures where nuclear power plants are located. In addition, to raise people's awareness of and familiarize them with nuclear disaster medicine, the Hospital held workshops and conducted decontamination drills. In addition, as an organization registered with the International Atomic Energy Agency (IAEA)'s Response and Assistance Network (RANET), the Hospital continually implemented projects to promote collaboration.

iv) Efforts to improve hospital management [Project No. 39]

- By using the University Hospital Management Accounting System (HOMAS2), the Hospital performed a quarterly cost-accounting analysis of each of its departments, compared the results with those of the same period of the previous year, and conducted factor analyses of profit fluctuations. In addition, the Hospital conducted an analysis of calculations of monthly department medical fees that patients already discharged were billed for under the Diagnosis Procedure Combination (DPC)/Per-Diem Payment System (PDPS).
- The Hospital analyzed the following items of each department and calculated the cost of the top five departments by DPC for patients discharged who were billed under the DPC/DPS method and also analyzed the revenue structure of outpatients and notified each department:

- 1) patient composition, 2) management indicators, 3) income and expenditure calculation, 4) average length of hospital stay for DPC billing, 5) stage II discharge rate and medical unit price per day, 6) the top five medical groups' distribution of income and expenditure by DPC, 7) departmental usage ratio by expense, and 8) top-10 ranking of quantity and money spent by each department on pharmaceutical materials.
- A review meeting led by the Hospital's Director was held once a month to urgently repair or replace medical equipment. In addition, based on a survey of equipment to be replaced, conducted in AY 2017, various financial resources were used to systematically replace old large medical machinery and equipment.
  - The Hospital analyzes its inventory management status of medicines and medical materials based on the results of physical inventory, notifies staff of which materials are about to expire to promote their use before expiration and thereby prevent the use of expired materials, and notifies relevant departments of the need to have expired materials collected every month and then collects such materials. In addition, the Hospital also surveyed the use of materials, including those that were about to expire, and instructed departments to ask for permission to use materials stocked in other departments if any were available. The Hospital also examined whether it was purchasing the right amount of materials by proposing to departments having materials about to expire to review the fixed amount of materials they were ordering.
  - Being a priority medical institution, the Hospital secured four to eight beds for critically ill patients and 28 beds for moderate patients. In addition, it used subsidies related to COVID-19 to upgrade its bronchoscope and CT imaging equipment.
  - The Hospital reports its assessment of medical fee claims at monthly meetings. In addition, it conducts assessment analyses and discusses with doctors in each of its departments the assessment measures and symptom details for re-examination requests. The Hospital has also been working to improve the accuracy of receipts by utilizing receipt inspection software and coding support software.
  - Regarding medical materials, the Hospital conducted joint negotiations and joint procurement for medical materials selected by the secretariat of the National University Hospital Council of Japan.
- v) Participation in the Regional Health Care Council of Hiroshima [Project No. 40]  
The Hospital's participation in the Regional Health Care Council of Hiroshima to help ensure effective operation of regional medical systems was as follows: 24 faculty members of the University served as officers (comprising one vice president, four permanent executive directors, 18 executive directors, and one secretary), and other faculty members served as chairpersons of 10 of the Council's 17 committees and leaders of three of the committees' seven working groups.

## 2. Miscellaneous

### Efforts to identify and resolve issues unique to one's own university hospital

#### i) Efforts to reform work styles of doctors

In preparation for the upper limit of overtime work of doctors and the obligation to objectively grasp working hours, both of which will be applied from April 2024, the Hospital first established the Working Group for Work Style Reform in February 2020 as one of the functions of the PDCA cycle in the management system for improving the working environment of doctors. To ensure proper management of working hours, the Hospital conducted fact-finding surveys, including questionnaires and interviews, for all departments, which led to visualization of the working environment of doctors. In addition to starting to formulate guidelines to ensure that the functions to be fulfilled by the University Hospital, including local medical care, are not impeded, the Hospital has introduced a working hours management system to objectively grasp working hours. The Hospital will form a top-down, multi-professional team led by the Director and formulate a plan for reducing doctors' working hours in cooperation with existing decision-making meetings.

#### ii) Global development to provide holistic medical care

On April 1, 2022, it was decided to establish the Global Collaborative Research Laboratory to further develop its initiatives for medical personnel training and medical support that the University has been working on in collaboration with overseas research institutions.

The Hospital will develop the Division of International Medical Support established in May 2020 [Project No. 35] and operate the Global Collaborative Research Laboratory. In addition, as a core base for advanced medical personnel, the Hospital will work on the modeling of educational programs and the development of human resources, utilizing Hiroshima University's "alumni association" network overseas, as well as on DX in the medical field. As a base in Asia, the Hospital will collaborate and cooperate with various stakeholders, including local alumni associations, government agencies, universities, medical institutions, and medical-related companies, to globally develop joint research, clinical trials, and technical training.

#### iii) Establishment of endowed laboratories that contribute to local medical care

To strengthen cooperation with local medical institutions, including those in neighboring prefectures, regulations were formulated to enable the establishment of endowed laboratories at the University Hospital, and with the cooperation of local hospitals and others, two endowed laboratories were set up in AY 2020 and five in AY 2021. (It was decided to set up another three endowed laboratories in April 2022.) This has helped the Hospital to contribute to local medical care by providing highly specialized medical care in the region and also by developing human resources. In addition, the Hospital will contribute to the establishment of a medical system and the development of advanced and safe medical care by promoting research related to treatment.

#### o Attached schools

##### 1. Points to note

To meet the goals they set for themselves as the third medium-term goals, attached schools incorporated international perspectives into their education and research activities and teaching practice programs. For instance, they provided teachers with overseas training programs designed to help them improve their English language proficiency to levels that will enable them to communicate with people overseas and write papers and create teaching plans in English. In addition, attached schools offered training on incorporating active learning approaches and other new teaching methods into the classroom.

##### 2. Efforts relating to cross-attached school evaluation criteria

###### (1) Efforts to identify and resolve educational issues [Project Nos. 41, 42, 43]

Aiming to become national and regional base schools for research and development related to school education, attached schools have been working on the following.

- Taking advantage of the strength of having all types of schools, from kindergarten to high school, attached schools have engaged in research and development by incorporating international perspectives into their education and research and teaching practice programs targeting students of all ages [Pilot schools for research and development (AY 2018-ongoing); the World Wide Learning Consortium Development Support Project (AY 2021-ongoing); Super Science High School (AY 2003-ongoing)]. As educational achievements, attached school students won a silver medal at the 61st International Mathematical Olympiad (IMO 2020) and a gold medal at the 14th International Geography Olympiad Japan championship (AY 2020).
- Attached schools widely promoted their research findings at educational and research conferences held at each school and in research bulletins.
- Hiroshima University Kindergarten was designated by MEXT as a UNESCO Associated School and kindergarten that implements peace and international cooperation to realize UNESCO's philosophy as stated in the UNESCO Charter, making it the only kindergarten of its kind in the Chugoku and Shikoku regions. It has been working to develop new education programs and methods that will enable young people to address a variety of global issues.
- To incorporate international perspectives into their practices, attached schools proactively sent teachers to overseas training programs and also planned and provided training to help them

acquire new teaching methods, including active learning approaches. Attached schools also encouraged teachers to participate in various other internal and external workshops, including those hosted by the Hiroshima SDGs Consortium. At the 1st Hiroshima SDGs Consortium workshop in AY 2021, teachers and students of the UNESCO group at Hiroshima University Senior High School reported their activities.

- In AY 2021, nine international students from Hiroshima University participated in “SSH Day (Research Presentation)” at Hiroshima University Senior High School, and they conducted a question-and-answer session and provided guidance and advice in English regarding the students’ research.

## **(2) Collaboration between attached schools, the University, and its undergraduate schools** [Project Nos. 41, 42, 43]

The University and its attached schools have a set of Guidelines for Making Requests between the University and Its Attached Schools for Cooperation on Education and Research, based on which they cooperate in teaching classes and conducting research.

Attached schools maintain a partnership with the University’s Graduate School of Education, and based on it, they currently help 27 former and current graduate school students improve their teaching abilities and skills. On the other hand, five attached-school teachers are studying as internal trainees in the University’s graduate schools, including the Professional Development Program for Teachers and School Leaders (Graduate School of Education).

To improve education and research activities in collaboration with the University, the University and its attached schools have a system for joint research conducted by teachers of the University and attached schools titled the Undergraduate School-Attached School Joint Research Project, in which applications are submitted from the entire university each year, and the research projects to be implemented are selected following a screening process. From AY 2017, the research period has been set as two years. Participants are required to present their research findings at academic conferences, organize them into papers in English, and upload them to the Hiroshima University Institutional Repository.

Furthermore, the University’s attached schools and its Graduate School of Humanities and Social Sciences collaborate in the following ways: 1) participate in the Knowledge Co-Creation Program (Country Focus) offered by the Japan International Cooperation Agency (JICA) and 2) coordinate collaboration programs for group discussions between the Graduate School’s international students and attached-school Japanese students.

Attached schools helped teacher-trainee students formulate plans to teach their classes in English, and they also examined how teacher-trainee students can help their own students acquire global competence.

The University’s attached schools and its Graduate School of Humanities and Social Sciences jointly participated in JICA’s Knowledge Co-Creation Programs (Country Focus and Group and Region Focus), where they demonstrated their teaching practices for mathematics classes and offered advice on how they could improve their classes to educators from Uganda, Ghana, Zambia, Malawi, Rwanda, and South Africa.

## **(3) Community collaboration** [Project Nos. 41, 42, 43]

To function as a base for teacher training in western Japan, attached schools accepted teachers from various prefectures and cities through personnel exchanges and dispatch training to provide a systematic teacher training program tailored to teachers’ abilities and skills depending on which stage of their career they are at.

Attached schools sent teachers to local schools to participate in their training programs as lecturers to strengthen their capacities for providing teacher-training programs, and they also provided teacher training in cooperation with the community.

In AY 2016 and AY 2017, attached-school principals held thought-sharing sessions with members of the Hiroshima Prefectural Council of School Superintendents to discuss what they expected from attached schools of public schools and possibilities for collaborating with local communities. In addition, to help cultivate teachers able to serve key roles in their own schools’

efforts to improve classes, in AY 2018, in accordance with a memorandum of understanding on teacher training, the University’s attached schools welcomed one teacher from a private school in the prefecture. Furthermore, the University concluded an agreement with Hiroshima Prefecture on providing preschool teachers with long-term training and welcomed one kindergarten teacher. To strengthen its teacher-training capacity, the University concluded a personnel exchange agreement with Tokyo Gakugei University on March 6 in AY 2019.

In AY 2021, the University’s attached schools reviewed the personnel exchange agreements that stipulate the dispatch of personnel from public schools in each prefecture to the attached schools to strengthen cooperation with each prefecture, and they concluded revised personnel exchange agreements with Saga and Nagasaki Prefectures, which were updated to allow mutual dispatch of personnel between public schools in each prefecture and the attached schools.

To improve its teacher-exchange-based training system, after teachers of other public schools completed their training at the University’s attached schools, returned to their own schools, and worked at least a year, the University asked them and their supervisors to answer a survey on the training program the teachers participated in at the attached schools. Consequently, the survey showed that a large number of participants thought the programs helped them improve their skills and knowledge at not only teaching subjects and guiding students but also conducting educational research and development, such as in developing curricula. On the other hand, many participants also said they thought there were too many participants. Accordingly, to enhance information sharing between participants and attached-school teachers, the University decided to incorporate opportunities for participant-teacher communication into its programs.

The University produced a booklet introducing unique efforts being made at its attached schools.

## **(4) Revising the roles and functions of attached schools** [Project Nos. 41, 42, 43]

In accordance with the High School-University Transition Reform, in AY 2016, the University took the following actions: 1) used high school-university transition systems already being implemented at schools attached to other national universities as models to begin developing its own version of an internal admission system; 2) revised its reorganization plan of attached schools; 3) reconsidered realistic ways in which the roles and functions of its attached schools could be reinforced; and 4) considered possibilities for standardizing examinations that its attached schools of the same school type administer.

In AY 2017, a Working Group for Studying Possibilities for Strengthening the Functions of the University’s Attached Schools was set up to study a wide range of issues, including the following items: 1) what roles assigned to attached schools would lead to them helping the University strengthen its functions; 2) the appropriate size and number of attached schools that would maximize their capacities for providing teacher-training programs; 3) possibilities for strengthening the functions of each attached school; 4) possibilities for collaborating with prefectural and municipal boards of education; 5) possibilities for helping resolve educational issues in local communities; and 6) possibilities for optimizing the administration of schools, including the reform of work styles, and doing so by establishing new school types.

In AY 2018, the University specified in its interim report the policy of further strengthening the functions of attached schools in ways that will enhance the unity between them and the University. The report stated that the University and its attached schools should share the goal of cultivating people able to help achieve the SDGs and Society 5.0 vision through cooperation between attached schools and the University while maintaining an appropriate size of attached schools and that attached schools in each area should be assigned one of the following three functions: 1) cultivating teachers able to teach students the importance of respecting diversity, 2) collaborating with their local community as advanced education and research facilities, and 3) developing next-generation curricula.

In June 2019, the University held a briefing, which included a thought-sharing session, with teachers and staff of its 11 attached schools on its interim report that it had compiled in AY 2018. In addition, over the four months between July and October, the University gave a number of briefing sessions and shared its thoughts with officers of the following types of stakeholder organizations concerned with its 11 attached schools: 1) alumni associations, 2) supporters’

associations, and 3) parent-teacher associations. Feedback from participants included questions/comments on the aims of the roles and functions that will be newly assigned to attached schools, issues that could arise, and the timing with which the revisions are scheduled to take effect.

In October 2019, to help attached schools undertake their original mission and consider more specific measures to strengthen their functions in unique ways, the University welcomed attached-school principals to the Working Group for Studying Possibilities for Strengthening the Functions of the University's Attached Schools to jointly reach a preliminary conclusion by the end of the third medium-term target period so that they could develop a draft of specific measures to strengthen functions and inform internal and external stakeholders of them by the end of the following academic year.

In AY 2020, while focusing on the proposed plans for each area, the University collaborated with the University's Center for Special Needs Education Research and Practice in special needs education and discussed with the boards of education in the Prefecture the roles of special needs classes and how to implement teaching practice programs. Regarding collaboration with the Graduate School of Education, to improve the functions of the University's attached schools as a

place for teaching practice and research, the University considered the idea of establishing a new satellite facility for the Graduate School of Education in the Midori area. The University examined how to use the land and buildings currently existing in each area, and after reviewing their optimal use, it also considered the possibility of constructing new buildings and facilities in the future so that advanced measures to strengthen the functions can be taken in an integrated manner between attached schools, the University, and the local community.

In AY 2021, the University verified the major education and research activities conducted in its attached schools during the third medium-term target period (AY 2016 - AY 2021) and also outlined the plans for the attached schools for the fourth medium-term target period (AY 2022 - AY 2027), based on the results of the studies on the new measures to strengthen the functions in the previous working group meetings and other meetings. Subsequently, the University explained the plans to some internal and external organizations (such as MEXT and the prefectural and municipal boards of education) and exchanged opinions with them.

**III. Budget (includes labor cost estimates); income and expenditure plan and funding plan**

Note: Please also refer to the University's financial statements and account settlement records.

**IV. Short-term borrowing limit**

Medium-term plan attachment	Annual plan based on the medium-term plan attachment	Actual results
1. Short-term borrowing limit 6.222 074 billion yen 2. Possible reason for borrowing Borrowing may become necessary as an emergency measure due to delays in receipt of subsidy for operating costs and/or the occurrence of accidents.	1. Short-term borrowing limit 6.222 074 billion yen 2. Possible reason for borrowing Borrowing may become necessary as an emergency measure due to delays in receipt of subsidy for operating costs and/or the occurrence of accidents.	Not applicable

**V. Plans to transfer valuable assets to other entities or use any as collateral**

Medium-term plan attachment	Annual plan based on the medium-term plan attachment	Actual results
1. Plans to transfer valuable assets (1) Part of the Amamizuyama housing estate (located at 4-226-101 Ushita-shinmachi, Higashi Ward, Hiroshima City, Hiroshima Prefecture [117.63 m <sup>2</sup> ]) (2) The Hatsukaichi housing estate (located at 5-2585-9 Jigozen, Hatsukaichi City, Hiroshima Prefecture [332.73 m <sup>2</sup> ]) (3) Part of the Kasuga housing estate (located at 5-315-1 Kasugacho, Fukuyama City, Hiroshima Prefecture [216 m <sup>2</sup> ]) (4) Part of the Higashi-Hiroshima housing estate (located at 1-312-4 Kagamiyama, Higashi-Hiroshima City, Hiroshima Prefecture [564.42 m <sup>2</sup> ]) 2. Plans to use valuable assets as collateral The University's land/building will be used as collateral to secure a long-term loan to cover costs incurred for maintaining Hiroshima University Hospital's facilities and equipment.	(4) Part of the Higashi-Hiroshima housing estate (located at 1-312-4 Kagamiyama, Higashi-Hiroshima City, Hiroshima Prefecture [564.42 m <sup>2</sup> ])	(4) Part of the Higashi-Hiroshima housing estate (located at 1-312-4 Kagamiyama, Higashi-Hiroshima City, Hiroshima Prefecture [564.42 m <sup>2</sup> ])



<b>VI. Use of surplus</b>
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Medium-term plan attachment	Annual plan based on the medium-term plan attachment	Actual results
<p>If any surplus is calculated at the end of any academic year, seek approval from the Minister of Education, Culture, Sports, Science and Technology for use as funds for improving the quality of the University's education and research and the operation of its organizations.</p>	<p>If any surplus is calculated at the end of the academic year, seek approval from the Minister of Education, Culture, Sports, Science and Technology for the use of surplus as funds for improving the quality of the University's education and research and the operation of its organizations.</p>	<p>Any surplus generated at the end of the academic year was to be used for improvement of the quality of education and research and operation of the organizations, and 310,276,068 yen of the surplus generated in AY 2020 was used for the projects to improve the education and research environment and the clinical environment in AY 2021.</p>



- (Higashi-Hiroshima) The University received a supplementary grant of 741.67 million yen for the Comprehensive Research Building renovation II (biology) project, which was unexpected at the time its annual plan was formulated, and this was incorporated into its AY 2021 budget, with the entire amount being carried over to its AY 2022 budget.
- (Higashi-Hiroshima) The University received a supplementary grant of 919.54 million yen for the Comprehensive Research Building renovation (science) project, which was unexpected at the time its annual plan was formulated, and this was incorporated into its AY 2021 budget, with the entire amount being carried over to its AY 2022 budget.
- (Higashi-Hiroshima) The University received a supplementary grant of 2.972 million yen for the disaster recovery project, which was unexpected at the time its annual plan was formulated, and this was incorporated into its AY 2021 budget, within which the project was funded and completed.
- The small-scale renovation project was implemented and completed as planned.

## VII. Others: 2. Personnel plans

Medium-term plan attachment	Annual plan based on the medium-term plan attachment	Actual results
<p>(1) Strategic allocation of the University's resources Centralize the management of instructor labor costs—currently managed by individual schools/offices—and do so under the leadership of the President and also by using the University's IR indicators, including the Achievement-motivated Key Performance Indicators (AKPIs®), which suggest the level of performance of faculty members as instructors and researchers, to strategically assign personnel and thereby strengthen the University's education and research capacities.</p> <p>(2) Attracting diverse and talented personnel</p> <p>① Improve the University's chances of attracting more talented instructors from regions throughout Japan and the world to strengthen its education and research capacities, and take the following actions to do so: 1) promote the elasticity of the human resources and salary systems, including the annual-salary and cross-appointment systems; and 2) increase the number of instructors who hold international citizenship, have taught or conducted research abroad, and/or are under the age of 40.</p> <p>② Strengthen the University's capacity to support education and research activities, and to do so, implement a staff cultivation plan designed to improve human resources by employing, transferring, promoting, and training personnel, such as to increase the number of staff who hold international citizenship and/or have worked abroad.</p> <p>(3) Promoting gender equality</p> <p>① Receive approval for the conformity of the University's (third-term) General Employer Action Plan under the Act on Advancement of Measures to Support Raising Next-Generation Children by the end of AY 2019, and to do so, promote a good work-life balance for faculty and staff in ways that comply with the basic policy of the Hiroshima University Gender Equality Declaration.</p> <p>② Actively promote female faculty and staff to decision-making positions in the University management, and to do so, increase the number of female instructors and managers.</p>	<p>(1) Strategic allocation of the University's resources Continue to strategically assign personnel by centralizing the management of faculty labor costs under the President and using the University's IR indicators, including the Achievement-motivated Key Performance Indicators (AKPIs®), which suggest faculty members' levels of performance as instructors and researchers, and the Basic Effort Key Performance Indicators (BKPIs®).</p> <p>(2) Attracting diverse and talented personnel</p> <p>① Improve the University's chances of attracting more talented instructors from regions throughout Japan and the world to strengthen its education and research capacities, and take the following actions to do so: 1) promote the elasticity of the human resources and salary systems, including the annual-salary and cross-appointment systems; 2) systematically assign personnel based on the Teacher Deployment Policy; and 3) increase the number of instructors who are paid under the annual-salary system, hold international citizenship, have taught or conducted research abroad, and/or are under the age of 40.</p> <p>② Improve human resources, based on a staff cultivation plan that includes the following measures: 1) employ, transfer, promote, and train personnel; and 2) increase the number of staff members who hold international citizenship and/or have worked abroad, and to do so, employ staff with international citizenship and provide existing staff with overseas training programs.</p> <p>(3) Promoting gender equality</p> <p>① Create a workplace environment that encourages faculty and staff to use the University's system for supporting a good work-life balance, based on the survey results on the use of such system.</p> <p>② Actively promote female faculty and staff to decision-making positions in the University management, and to do so, increase the number of female instructors and managers through personnel assignment based on the Teacher Deployment Policy.</p>	<p>(1) Strategic allocation of the University's resources See "Implementation status in AY 2020 and AY 2021" in the Medium-term plan [46] on page 12.</p> <p>(2) Attracting diverse and talented personnel</p> <p>① See "Implementation status in AY 2020 and AY 2021" in the Medium-term plan [47] and [48] on pages 12 and 13.</p> <p>② See "Implementation status in AY 2020 and AY 2021" in the Medium-term plan [49] on page 14.</p> <p>• To increase the number of staff with overseas work experience, the University sent one staff member to MEXT's Long-term Educational Administrators Program (LEAP) and one staff member to an international academic exchange training program of the Japan Society for the Promotion of Science (JSPS) as part of long-term overseas training programs, and they returned to the University from the programs. Consequently, the percentage of staff members with international citizenship or overseas work experience increased by 0.7 points from the previous academic year to 8.7% as of May 1, 2022, surpassing the target of about 8.0%. (Reference: As of February 1, 2022, the percentage was 7.8% (the same percentage as in May of the previous year).)</p> <p>(3) Promoting gender equality</p> <p>① See "Implementation status in AY 2020 and AY 2021" in the Medium-term plan [50] on page 14.</p> <p>② See "Implementation status in AY 2020 and AY 2021" in the Medium-term plan [51] on page 15.</p>

○ Attachment 1 (enrollment capacity fulfillment rates by

Schools, departments, graduate schools, and programs	Capacity	Enrollees	Enrollment capacity fulfillment rate
[Undergraduate schools]	(a)	(b)	(b)/(a)×100
	(student)	(student)	(%)
School of Integrated Arts and Sciences, Department of Integrated Arts and Sciences	480	551	114.7
Department of Integrated Global Studies	160	168	105.0
Total	640	719	112.3
School of Letters, Department of Humanities	540	597	110.5
School of Education, Cluster 1 (School Education)	628	649	103.3
Cluster 2 (Science, Technology, and Society Education)	328	348	106.0
Cluster 3 (Language and Culture Education)	292	311	106.5
Cluster 4 (Life-long Activities Education)	324	343	105.8
Cluster 5 (Fundamentals for Education and Human Development)	208	226	108.6
Total	1,780	1,877	105.4
School of Law, Department of Law, Daytime Course	580	620	106.8
Evening Course	140	151	107.8
Total	720	771	107.0
School of Economics, Department of Economics, Daytime Course	610	664	108.8
Evening Course	190	200	105.2
Total	800	864	108.0
School of Science, Department of Mathematics	188	203	107.9
Department of Physics	264	290	109.8
Department of Chemistry	236	265	112.2
Department of Biological Science	136	147	108.0
Department of Earth and Planetary Systems Science	96	98	102.0
Third-year school-internal transfer	20	10	50.0
Total	940	1,013	107.7
School of Medicine, Program of Medicine	716	738	103.0
Program of Health Sciences	480	500	104.1
Total	1,196	1,238	103.5
School of Dentistry, Program of Dentistry	318	327	102.8
Program of Oral Health Sciences	160	169	105.6
Total	478	496	103.7

Schools, departments, graduate schools, and programs	Capacity	Enrollees	Enrollment capacity fulfillment rate
	(a)	(b)	(b)/(a)×100
	(student)	(student)	(%)
School of Pharmaceutical Sciences, Program of Pharmaceutical Sciences	228	244	107.0
Program of Medicinal Sciences	88	97	110.2
Total	316	341	107.9
School of Engineering, Cluster 1 (Mechanical Systems, Transportation, Material and Energy)	610	616	100.9
Cluster 2 (Electrical, Electronic and Systems Engineering)	366	380	103.8
Cluster 3 (Applied Chemistry, Biotechnology and Chemical Engineering) (Note 1)	468	488	104.2
Cluster 4 (Civil Engineering and Architecture)	366	392	107.1
Cluster 1 (Mechanical Systems Engineering) (Note 2)		15	
Cluster 2 (Electrical, Electronic and Systems Engineering) (Note 2)		26	
Cluster 4 (Civil Engineering and Architecture) (Note 2)		14	
Total	1,810	1,876	103.6
School of Applied Biological Science, Department of Applied Biological Science	380	412	108.4
School of Informatics and Data Science, Department of Informatics and Data Science	330	346	104.8
<b>Undergraduate school total</b>	<b>9,930</b>	<b>10,550</b>	<b>106.2</b>
[Master's programs]			
Graduate School of Humanities and Social Sciences, Division of Humanities and Social Sciences	514	384	74.7
Division of Educational Sciences	326	335	102.7
Joint International Master's Programme in Sustainable Development (Hiroshima University – University of Graz)	4	2	50.0
Total	844	721	85.4
Graduate School of Advanced Science and Engineering, Division of Advanced Science and Engineering	898	1,003	111.6
Joint International Master's Programme in Sustainable Development (Hiroshima University – Leipzig University)	4	2	50.0
Total	902	1,005	111.4
Graduate School of Integrated Sciences for Life, Department of Integrated Sciences for Life	340	338	99.4
Graduate School of Biomedical and Health Sciences, Division of Integrated Health Sciences	152	162	106.5
Graduate School of Integrated Arts and Sciences, Division of Integrated Arts and Sciences (Note 2)		24	
Graduate School of Letters, Department of Integrated Humanities (Note 2)		47	

Schools, departments, graduate schools, and programs	Capacity	Enrollees	Enrollment capacity fulfillment rate
(a)	(b)	(b)/(a)×100	(%)
(student)	(student)	(%)	
Graduate School of Education, Program in Learning and Curriculum Development (Note 2)		4	
Program in Curriculum and Instruction Sciences (Note 2)		8	
Program in Teaching Japanese as a Second Language (Note 2)		1	
Program in Educational Studies (Note 2)		4	
Program in Psychology (Note 2)		1	
Program in Higher Education (Note 2)		2	
Total		20	
Graduate School of Social Sciences, Department of Law and Politics (Note 2)		18	
Department of Economics (Note 2)		19	
Department of Management Studies (Note 2)		20	
Total		57	
Graduate School of Science, Department of Mathematics (Note 2)		1	
Department of Physical Science (Note 2)		4	
Department of Chemistry (Note 2)		2	
Total		7	
Graduate School of Advanced Sciences of Matter, Department of Quantum Matter (Note 2)		2	
Graduate School of Biomedical & Health Sciences, Health Sciences Major (Note 2)		3	
Graduate School of Engineering, Department of Mechanical Systems Engineering (Note 2)		2	
Department of Mechanical Science and Engineering (Note 2)		5	
Department of System Cybernetics (Note 2)		9	
Department of Information Engineering (Note 2)		8	
Department of Chemical Engineering (Note 2)		5	
Department of Applied Chemistry (Note 2)		1	
Department of Civil and Environmental Engineering (Note 2)		7	
Department of Architecture (Note 2)		8	
Total		45	
Graduate School of Biosphere Science, Department of Bioresource Science (Note 2)		1	
Department of Biofunctional Science and Technology (Note 2)		1	
Total		2	
Graduate School of International Development and Cooperation, Division of Development Science (Note 2)		48	
Division of Educational Development and Cultural and Regional Studies (Note 2)		32	
Total		80	
<b>Master's program total</b>	<b>2,238</b>	<b>2,226</b>	<b>99.4</b>

Schools, departments, graduate schools, and programs	Capacity	Enrollees	Enrollment capacity fulfillment rate
(a)	(b)	(b)/(a)×100	(%)
(student)	(student)	(%)	
<b>[Doctoral programs]</b>			
Graduate School of Humanities and Social Sciences, Division of Humanities and Social Sciences	170	110	64.7
Division of Educational Sciences	100	110	110.0
Total	270	220	81.4
Graduate School of Advanced Science and Engineering, Division of Advanced Science and Engineering	256	166	64.8
Graduate School of Integrated Sciences for Life, Department of Integrated Sciences for Life	210	96	45.7
Graduate School of Biomedical and Health Sciences, Division of Biomedical Sciences	291	312	107.2
Division of Integrated Health Sciences	75	82	109.3
Total	366	394	107.6
Graduate School of Integrated Arts and Sciences, Division of Integrated Arts and Sciences (Note 2)		58	
Graduate School of Letters, Department of Integrated Humanities (Note 2)		80	
Graduate School of Education, Program in Education and Learning Science (Note 2)		151	
Program in Learning and Curriculum Development (Note 2)		2	
Program in Arts and Science Education (Note 2)		8	
Program in Education and Human Science (Note 2)		11	
Total		172	
Graduate School of Social Sciences, Department of Law and Politics (Note 2)		8	
Department of Economics (Note 2)		6	
Department of Management Studies (Note 2)		32	
Total		46	
Graduate School of Science, Department of Mathematics (Note 2)		7	
Department of Physical Science (Note 2)		19	
Department of Chemistry (Note 2)		21	
Department of Biological Science (Note 2)		6	
Department of Earth and Planetary Systems Science (Note 2)		7	
Department of Mathematical and Life Sciences (Note 2)		6	
Total		66	
Graduate School of Advanced Sciences of Matter, Department of Quantum Matter (Note 2)		4	
Department of Molecular Biotechnology (Note 2)		3	
Department of Semiconductor Electronics and Integration Science (Note 2)		4	
Total		11	

Schools, departments, graduate schools, and programs	Capacity	Enrollees	Enrollment capacity fulfillment rate
	(a) (student)	(b) (student)	(b)/(a)×100 (%)
Graduate School of Biomedical & Health Sciences, Biomedical Sciences Major	(Note 2)	227	
Oral Health Sciences Major	(Note 2)	5	
Medicinal Sciences Major	(Note 2)	3	
Health Sciences Major	(Note 2)	59	
Total		294	
Graduate School of Engineering, Department of Mechanical Systems Engineering	(Note 2)	16	
Department of Mechanical Science and Engineering	(Note 2)	20	
Department of System Cybernetics	(Note 2)	22	
Department of Information Engineering	(Note 2)	9	
Department of Chemical Engineering	(Note 2)	11	
Department of Applied Chemistry	(Note 2)	9	
Department of Civil and Environmental Engineering	(Note 2)	15	
Department of Transportation and Environmental Systems	(Note 2)	15	
Department of Architecture	(Note 2)	8	
Total		125	
Graduate School of Biosphere Science, Department of Bioresource Science	(Note 2)	11	
Department of Biofunctional Science and Technology	(Note 2)	3	
Department of Environmental Dynamics and Management	(Note 2)	3	
Total		17	
Graduate School of Biomedical Sciences, Programs for Biomedical Research	(Note 2)	3	
Graduate School of International Development and Cooperation, Division of Development Science	(Note 2)	41	
Division of Educational Development and Cultural and Regional Studies	(Note 2)	31	
Total		72	
<b>Doctoral program total</b>	<b>1,102</b>	<b>876</b>	<b>79.4</b>

Schools, departments, graduate schools, and programs	Capacity	Enrollees	Enrollment capacity fulfillment rate
	(a) (student)	(b) (student)	(b)/(a)×100 (%)
<b>[Professional degree programs]</b>			
Graduate School of Humanities and Social Sciences, Professional Development Program for Teachers and School Leaders	60	53	88.3
Graduate School of Humanities and Social Sciences, Division of Law School	40	31	77.5
Hiroshima University Law School, Program in Law	(Note 2)	18	
<b>Professional degree program total</b>	<b>100</b>	<b>84</b>	<b>84.0</b>
<b>[Advanced Course]</b>			
Special Course of Special Support Education	30	16	53.3
<b>Advanced Course total</b>	<b>30</b>	<b>16</b>	<b>53.3</b>

Schools, departments, graduate schools, and programs	Capacity	Enrollees	Enrollment capacity fulfillment rate
	(a) (student)	(b) (student)	(b)/(a)×100 (%)
<b>[Attached schools]</b>			
Hiroshima University Elementary School; number of classes: 12	384	383	99.7
Hiroshima University Elementary School, Shinonome; number of classes: 18	456	425	93.2
Hiroshima University Elementary School, Mihara; number of classes: 12	384	372	96.8
Hiroshima University Junior High School; number of classes: 9	360	376	104.4
Hiroshima University Junior High School, Shinonome; number of classes: 9	264	253	95.8
Hiroshima University Junior High School, Mihara; number of classes: 6	240	240	100.0
Hiroshima University Junior High School, Fukuyama; number of classes: 9	360	362	100.5
Hiroshima University Senior High School; number of classes: 15	600	607	101.1
Hiroshima University Senior High School, Fukuyama; number of classes: 15	600	599	99.8
Hiroshima University Kindergarten; number of classes: 3	80	64	80.0
Hiroshima University Kindergarten, Mihara; number of classes: 3	80	80	100.0
<b>Attached school total</b>	<b>3,808</b>	<b>3,761</b>	<b>98.7</b>

(Note 1) Cluster 3 (Chemistry, Biotechnology and Process Engineering) in the School of Engineering was renamed Cluster 3 (Applied Chemistry, Biotechnology and Chemical Engineering) in AY 2018.

(Note 2) Departments (of both undergraduate and graduate schools) that do not provide the capacity are no longer accepting applications due to reorganization or other reasons.

**○ Plan implementation status****(1) Enrollment capacity fulfillment rates (as of May 1)**

The overall enrollment capacity fulfillment rate of undergraduate schools was generally satisfactory at 106.2%. The overall enrollment capacity fulfillment rate of master's programs was generally satisfactory at 99.4%. The overall enrollment capacity fulfillment rate of doctoral programs was 79.4%, which is below the capacity. The enrollment capacity fulfillment rate of professional degree programs was 84%, which is below the capacity. The enrollment capacity fulfillment rate of advanced courses was 53.3%, which is below the capacity.

**(2) Main reasons for enrollment capacity fulfillment rates not exceeding 90% [Doctoral programs]****Graduate School of Humanities and Social Sciences**

(Reason)

The Graduate School is a new course established in April 2020, and there are three main reasons why the enrollment capacity fulfillment rate as of May 1, 2021 has not reached 90%.

○ The application for AY 2021 was still being accepted as of May 1, 2021. The enrollment capacity fulfillment rate of the Division of Educational Sciences reached 110.0% (108.0% in the same period of the previous year), while that of the Division of Humanities and Social Sciences stood at 64.7% (54.1% in the same period of the previous year). This is because of the fact that three of the four programs in the former had finished accepting applications, while seven of the eight programs in the latter had not completed the entrance examination schedule (conducted in August) for students to be enrolled in October 2021, and that some of the programs of the latter are characterized by a large percentage of students who enroll in October since they mainly target international students.

○ Due to the spread of COVID-19, new entry into Japan has been prohibited in principle, which limited opportunities for international students to take entrance examinations. Furthermore, the acceptance of international research students was also hindered, which had a negative impact on the internal advancement of foreign research students to the Graduate School.

○ The Graduate School could not sufficiently convey the appeal of its educational philosophy and curriculum, which is to foster interdisciplinary and transdisciplinary human resources with great expertise. Therefore, in the case of some potential applicants, the anxiety about the dilution of expertise must have exceeded the expectation of the added benefit of fostering interdisciplinary and transdisciplinary human resources. In addition, being a new graduate school, the Graduate School lacked a track record of post-graduation career paths, which also must have worked to its disadvantage.

(Actions)

The following efforts have improved the Graduate School's enrollment capacity fulfillment rate, including students enrolled in October, and the Graduate School will continue to improve and strengthen these efforts to increase the ratio of applicants and to fulfill the capacity.

○ The Graduate School launched a special site for public relations on its website to publicize its research and educational philosophy, and it also made it possible to access the entrance examination information page from the same website. In particular, to communicate the appeal of the Graduate School to international students and also dispel their concerns about COVID-19, the Graduate School posted on its website a video message from its Dean with English and Chinese subtitles, as it did in the previous academic year.

○ The Graduate School further promoted the shift from on-site to online entrance examinations, which was introduced as a countermeasure against COVID-19 (from three programs in the first half of AY 2021 to seven programs in the second half of the same year). For examinations in the same examination category that are conducted at multiple times, the Graduate School made it possible to take a supplementary examination without additional examination fees. Concurrently, for examinations that require submission of a certificate of qualification, such as an external language test, as a requirement for application, the Graduate School increased the applicable tests and their validity period to ensure the fairness of opportunities to take the examinations among applicants.

○ As a new pillar of the career path for doctoral students, the Graduate School introduced the Hiroshima University Graduate School Research Fellowship (MEXT) and the Program for Developing and Supporting the Next-Generation of Innovative Researchers at Hiroshima University (Japan Science and Technology Agency), and it started to provide a subsidy for devotion to research and research funds for the first three years after enrollment.

As a result of these efforts, the enrollment capacity fulfillment rate of the Division of Humanities and Social Sciences in AY 2021, including students enrolled in October, improved to 80.0%, and the course as a whole achieved a fulfillment rate of 92.5%. Among them, online entrance examinations are indispensable not only as a countermeasure against COVID-19 but also as a global human resource acquisition strategy in the post-COVID-19 era. Based on this, the Graduate School will accelerate consideration of the introduction of the International Admissions Office (IAO) system, which will provide online centralized management of the process from acceptance of international research students to the special selection examination of international students.

**Graduate School of Advanced Science and Engineering**

(Reason)

○ The Graduate School was established in April 2020, and the enrollment capacity fulfillment rate as of May 1, 2021 was 64.8%. However, since the Graduate School has its entrance examination schedule designed for students to enter in October and mainly targets international students, the enrollment capacity fulfillment rate as of November 1, 2021, including students who entered in October, improved to 87.1%. The enrollment capacity fulfillment rate also improved from 82% as of November 1, 2020.

○ The spread of COVID-19 from AY 2020 onward made it difficult for international students to come to Japan, causing enrollment to be sluggish, which was likely one of the reasons the enrollment capacity was not fulfilled.

(Actions)

The following measures were taken to fulfill the enrollment capacity of the doctoral course. The Graduate School will continue to make the following measures widely known to attract talented doctoral students from Japan and abroad.

○ The Graduate School expanded the Research Scholarship for Doctoral Students of the Graduate School of Advanced Science and Engineering to provide students in all of its programs with financial support up to an amount equivalent to their tuition fees, enhancing the fair and continuous learning support system.

○ The Graduate School invited applications for the "Academic Award of Hiroshima University Graduate School of Advanced Science and Engineering" for students in the master's course (those who will proceed to the doctoral course) and students in the doctoral course of the Graduate School of Advanced Science and Engineering, and the Dean awarded a certificate and an extra prize (academic award money) to award winners, with the aim of encouraging and motivating graduate students who are willing to play an active role in the field of science and technology to further their aspirations for the future.

○ The Graduate School disseminated the Hiroshima University Postgraduate Advancement Project (Hiroshima University Graduate School Research Fellowship, Program for Developing and Supporting the Next-Generation of Innovative Researchers at Hiroshima University, and Hiroshima University Fellowship for Female Graduate Students in Science and Technology) in an effort to facilitate students to proceed to the doctoral course in AY

**Graduate School of Integrated Sciences for Life**

(Reason)

The Graduate School is a new course established in April 2019, and there are two main reasons why the enrollment capacity fulfillment rate as of May 1, 2021 has not reached 90%.

○ The number of internal students who proceeded to the doctoral course until AY 2020 included only those who had completed the master's course of the former Graduate School, which is the parent school of the current Graduate School, and thus it was limited to a small number of graduates of the master's course who proceeded to the doctoral course from among the quota granted to divisions of the former Graduate School.



This is likely why the number of internal students who proceeded to the doctoral course was small. On the other hand, in April 2021, when the first-year graduates of the Graduate School proceeded to the doctoral course, the number of internal students who entered the doctoral course increased to 19 (11 in AY 2019 and 8 in AY 2020), but since the enrollment capacity is for three grades, it is considered that the small number of graduates from the master's course of the former Graduate School who entered the doctoral course affected the enrollment capacity fulfillment rate.

◎ The number of international students was 15 in both AY 2019 and AY 2020, accounting for 20% of the capacity. Although it became difficult for international students to enter Japan due to the impact of COVID-19, which made it hard for the Graduate School to recruit new international students, the Graduate School increased its promotion for the special entrance examination for international students, which can be completed online, leading to an increase in the number of enrolled international students by 6 to 21 in AY 2021. As a result, the number of international students in some programs accounts for nearly half of the standard capacity, but it is still necessary to further strengthen the recruitment of international students in all programs of the Graduate School.

#### (Actions)

To increase the number of internal students proceeding to the doctoral course, the Graduate School publicized the Hiroshima University Graduate School Research Fellowship (MEXT), which is a new pillar of the career path for doctoral students, and held graduate school symposiums and entrance examination briefings face-to-face and partly online. As stated in Reason, the number of internal students proceeding to the doctoral course has increased since AY 2021, when the first students who completed the master's course of the Graduate School of Integrated Sciences for Life enrolled, and in AY 2022, the number of students enrolled in April who internally proceeded to the doctoral course was a record high of 25. On the other hand, the Graduate School has decided to hold its graduate school symposiums and briefing sessions for new students from other universities not only face-to-face but also online and through on-demand distribution in AY 2022 (held in June). For working adult students, the Graduate School will establish a short-term completion course in which new students with sufficient research experience and achievements can obtain a doctoral degree in one year. In addition, the Graduate School has been making efforts to attract working adult students to all of its programs by preparing a booklet summarizing research activities conducted by each faculty member and distributing it to joint research institutions. In AY 2021, the Graduate School strengthened measures to attract international students, such as preparing and utilizing the English version of the brochure introducing all of its faculty members.

#### [Professional degree programs]

##### **Graduate School of Humanities and Social Sciences, Professional**

#### (Reason)

This program was transferred from the Graduate School of Education to the Graduate School of Humanities and Social Sciences due to the reorganization of graduate schools in AY 2020. The following facts likely affected the Graduate School's performance: ◎ The enrollment capacity was increased by 10 from 20 to 30. ◎ As was the case in AY 2020, the enrollment capacity of graduate schools of teacher education has increased nationwide, making it difficult to secure students nationwide. (The enrollment capacity increased by 196 students in AY 2020 and by 203 students in AY 2021. In addition, the national average enrollment capacity fulfillment rate was 81.0% in AY 2020 and 78.6% in AY 2021.) ◎ The number of undergraduate students hired as teachers immediately after graduation has been on the rise recently, and an increasing number of students therefore are choosing to work as teachers rather than enter a graduate school of teacher education. ◎ There has been insufficient promotion of the existence of the University's Professional Development Program for Teachers and School Leaders. (Although the number of applicants for the entrance examination for the Graduate School conducted in AY 2020 was 31 and exceeded the enrollment capacity, the number of students enrolled in AY 2021 was 29, which failed to fulfill the capacity.)

#### (Actions)

To inform the public of the type of person the Professional Development Program for Teachers and School Leaders (Graduate School of Education) aims to cultivate and the educational activities it conducts, the Graduate School newly created a publicity video for the Program in AY 2020 and has made it permanently available on the University's website (Professional Development Program for Teachers and School Leaders). To make it easier for people from all over the country to participate in entrance examination briefings, the Graduate School has been systematically holding entrance examination briefings using an online system. (In AY 2021, it held five online entrance examination briefings and set up opportunities to offer individual consultations according to the requests of individual applicants.) The Graduate School also organizationally and systematically implemented a Practical Skills Improvement Project aimed at enhancing the practical educational skills of graduate students and helping undergraduate students understand the educational activities of the Graduate School of Education. (The project was carried out 22 times in the first semester and five times in the second semester, both face-to-face and online, with a total of 172 participants.) The results of in-service teachers' studies are reported to the boards of education, including the Hiroshima Prefectural Board of Education, the Hiroshima City Board of Education, and the Higashi-Hiroshima City Board of Education, and attached schools of Hiroshima University through presentations at the Graduate School of Education and liaison meetings. In addition, as it has been doing in the past, the Graduate School is requesting dispatch of in-service teachers. As a result of these efforts, the number of in-service teacher graduate students dispatched from a board of education increased by one in the Graduate School's entrance examination conducted in AY 2021, and the total number of first-year students of the Professional Development Program for Teachers and School Leaders as a whole in AY 2022 was 32, which surpassed its enrollment capacity.

#### [Advanced Course]

##### **Special Course of Special Support Education**

#### (Reason)

◎ Municipalities currently cannot afford to allow boards of education to dispatch as many in-service teachers to graduate schools as they used to. ◎ Because municipalities have recently hired a larger number of both full-time and part-time teachers than they used to, in preparation for an impending large number of retirees, more opportunities are available for new undergraduate graduates to enter the teaching profession. ◎ The self-promotion efforts of the Special Course of Special Support Education were likely to be not sufficient to reach those interested in obtaining a Special Support Education Teaching License. ◎ The Special Support Education Teaching License (for teaching the mentally handicapped, the physically handicapped, and the sick) has also become obtainable at private universities. The University's Special Course of Special Support Education is not the only one unable to fulfill its enrollment capacity; other national universities with Special Advanced Courses also face this issue.

On the other hand, municipalities have been trying to improve special support education, such as by giving priority to applicants with Special Support Education Teaching Licenses in addition to other teaching licenses for particular subjects and by employing those who are endeavoring to obtain a Special Support Education Teaching License, on the condition that they first obtain the license before they actually begin teaching, in response to the following trends: 1) an increase in the number of children in need of special support education; 2) a sharp increase in the number of special support education classes; 3) a request for increasing the percentage of special support education providers who have a Special Support Education Teaching License; 4) an introduction of a system for special support services in resource rooms in high schools starting from AY 2018; and 5) recommendations made in the report (March 2022) by the review meeting on the fostering of teachers providing special support education that include the following: (i) experience in special support education should be taken into consideration when hiring and (ii) experience in special support education should be taken into consideration when appointing persons to managerial positions.

## (Actions)

As it did last academic year, regarding the field of special support education, the Special Course of Special Support Education will continue to ask boards of education of Hiroshima Prefecture, Hiroshima City, and other municipalities in the Prefecture and western Japan to send in-service teachers to the Course. The Special Course of Special Support Education will also strengthen its self-promotion efforts in the following ways: 1) update its website and 2) produce flyers for introduction/recruitment, post them on bulletin boards, and circulate them both on and off campus. In addition, it will ask special support schools in Hiroshima Prefecture for help in handing out the flyers to students participating in nursing care training programs. Regarding graduates completing the Course in AY 2021, 13 (including four in-service teachers) out of a total of 16 graduates found jobs at special support education schools and elementary and high schools, suggesting that the employment rate of Special Support Education Teaching Licensees is high.

Therefore, the Course is confident that promoting its program for helping participants obtain the Type-One Special Support Education Teaching License in one year will raise its enrollment capacity fulfillment rate to satisfactory levels. In AY 2021, ① at every opportunity, the Course introduced the Special Course to the prefectural board of education and municipal boards of education and requested them to dispatch in-service teachers. In addition, ② the Course prepared a leaflet and sent it to major universities with teacher training courses in western Japan and requested all special support schools in the prefecture offering nursing care training programs to distribute the leaflet to all students participating in the programs, including those from other universities. Furthermore, ③ instructors in this field held a total of three briefing sessions. In AY 2022, the Course plans to hold online briefing sessions twice on Saturdays and once on a weekday to facilitate the participation of in-service teachers, including those who have been temporarily hired. In the future, the Course will also consider delivering some of its courses online to reduce the burden on students.

Students who have enrolled in the Special Course so far have found out about the Course through website searches, leaflets, and referrals from teachers. Therefore, the Course will continue to put effort into updating its website, distributing leaflets, and asking students for promotional help. In addition, the Course recognizes that the number of enrollees from Hiroshima University is increasing, and accordingly it will also distribute leaflets to students taking the Core Curriculum for Teachers' License course "Special Needs Education" (offered officially from AY 2021), which all students pursuing a teaching license must take. The Course will also continue to ask other schools/courses to post posters in corridors and on bulletin boards as well as in study rooms.

**Graduate School of Humanities and Social Sciences, Division of Law**

## (Reason)

The number of students enrolled in the Division decreased from 18 in AY 2019 to 15 in AY 2020. The enrollment capacity fulfillment rate was 90% in AY 2019, but it was 75% in AY 2020 and less than 90% as of May 1, 2021. The reasons may include the following.

① The reason why the enrollment capacity fulfillment rate in AY 2020 was 75% was that the number of students enrolled in law schools nationwide was almost the same as that in the previous academic year, but the University had to reduce the number of times of entrance examination briefings due to the spread of COVID-19, and thus it was not able to carry out sufficient public relations activities.

② The bar-exam pass rate, which had risen to 35.9% in AY 2019, fell to 19.4%, lower than the 25.0% in the year before that (AY 2018), resulting in a decrease in both applicants (from 85 to 61) and examinees (from 75 to 52), and the enrollment rate of successful applicants was only 60%.

## (Actions)

In AY 2021, the number of applicants increased from 61 in the previous academic year to 93, and the number of examinees increased from 52 to 89. One of the reasons for this is that the Graduate School's efforts to improve its education capabilities were appreciated due to the fact that the bar-exam pass rate for AY 2021 increased from 19.4% in AY 2020 to 25.0% and in particular, the bar-exam pass rate within one year after completion of the course, despite having been low in the past years, increased to 50% for both courses for those who have studied law before enrollment and those who have not, even though the number of students was small.

The Graduate School will continue to work on improving its education capabilities, enhancing the student support system and conducting public relations activities for those who wish to enter the Graduate School in order to secure the number of students enrolled and improve the capacity fulfillment rate. As a result of efforts over the past years, the number of students enrolled in April 2022 for the graduate school entrance examination conducted in AY 2021 reached 20, which fulfilled the enrollment capacity.

Specific measures are as follows.

① To increase its bar-exam pass rate and improve the quality of its education through education reform, with help from Kobe University's Law School, the Graduate School will integrally introduce the following three reforms to its education system: 1) an integrated education program designed to provide students with opportunities to put what they learned into practice; 2) individual study coaching that takes advantage of the small number of students; and 3) three-year follow-up seminars for reviewing previous lessons with help from young attorneys as instructors. In addition, to help its students develop a proactive attitude and thereby shift from inward-looking thinking common to law schools in rural regions, the Graduate School will create a confident study atmosphere, modeled after Kobe University's Law School, to provide a more effective educational program.

② In AY 2017 and AY 2019, the Law School (then) established its own scholarship program. Surveys conducted at entrance examination briefings also suggested that this program was of high interest to those wishing to proceed to the Hiroshima University Law School. In order to continue to secure funds for the program, the Graduate School will strive to make internal coordination and strengthen cooperation with donors.

③ Prior guidance for prospective students was held in which explanations were provided about the course at the Hiroshima University Law School, advice was given by attorneys who have graduated from the Law School, and the Dean held an interview with those who wished it. In AY 2021, nine of the ten students who participated in the prior guidance were enrolled in the Graduate School.

④ A legal profession training collaboration agreement concluded between the Division of Law School and the School of Law of the University was certified by the Minister of Education, Culture, Sports, Science and Technology in March 2021, and the legal profession course started in April 2021. In July 2021, there was a press report on the improvement of the Higashi Senda Campus, where the Division is located, including the relocation of the School of Law from the Higashi-Hiroshima Campus to develop a new center for humanities and social sciences with a focus on legal profession training, attracting greater interest in the Division from outside the University. Under these circumstances, the Graduate School will continue to strive to further improve its education capabilities and enhance support measures while regularly holding meetings of the Legal Profession Training Collaboration Council with faculty members of the School of Law to strengthen the cooperative relationship. In addition, the Graduate School will proceed with efforts to encourage undergraduate students in the legal profession course to choose the Division instead of other law schools outside the University as their academic destination through such measures as providing such undergraduate students with opportunities to have interviews with the faculty members of the Division and holding academic guidance seminars for undergraduate students so that they can experience the course at the Law School.

○ Attachment 2 (Enrollment capacities, number of enrollees, and
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(AY 2016)

Schools and graduate schools	Capacity (A)	Enrollees (B)	Breakdown of enrollees								Total on which the following is based: the calculation of whether the number of existing students exceeds the prescribed average- enrollment capacity (L) [(B) - (total of D, E, F, G, I, and K)]	Overcapacity rates (M) (L) / (A) × 100	
			International students (C)	Breakdown of international students			On leave (G)	Repeat (H)	Repeat students within two years of exceedance of the regular course term (I)	Long-term enrollment (J)			Long-term enrollment students receiving deduction (K)
				Japanese government- sponsored (D)	government- sponsored (E)	Interuniversity exchange agreement- based (F)							
(Undergraduate schools)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(%)
School of Integrated Arts and Sciences	520	584				18	28	22	2	0	544	104.6	
School of Letters	580	649	5			22	28	25	5	1	601	103.6	
School of Education	1,960	2,101	1			23	36	24			2,054	104.7	
School of Law	760	834	4			25	42	32			777	102.2	
School of Economics	880	961	6		2	30	55	45			884	100.4	
School of Science	940	1,055	4	3	1	28	55	44			979	104.1	
School of Medicine	1,194	1,253				15	35	33			1,205	100.9	
School of Dentistry	478	501	1			13	20	15			473	98.9	
School of Pharmaceutical Sciences	316	326				2	6	3			321	101.5	
School of Engineering	1,980	2,230	40	16	21	24	94	91			2,078	104.9	
School of Applied Biological Science	380	448				5	10	9			434	114.2	
(Graduate schools)	(Student)	(Student)									(Student)	(%)	
Graduate School of Integrated Arts and Sciences	180	250	78	5	4	27	27	17	26	11	186	103.3	
Graduate School of Letters	224	267	109	5	4	28	30	22	25	11	197	87.9	
Graduate School of Education	476	622	86	8	5	45	70	52	42	19	493	103.5	
Graduate School of Social Sciences	241	229	83	2	3	23	37	21	30	12	167	69.2	
Graduate School of Science	453	428	44	8	5	17	18	16	1	0	382	84.3	
Graduate School of Advanced Sciences of Matter	218	204	19	6	4	6	8	6	0	0	182	83.4	
Graduate School of Biomedical & Health Sciences	606	770	49	14	5	50	67	67	68	26	608	100.3	
Graduate School of Engineering	723	823	160	39	13	30	21	18	0	0	723	100	
Graduate School of Biosphere Science	245	289	51	23	14	8	19	18	6	2	224	91.4	
Graduate School for International Development	250	281	194	33	18	13	15	12	9	4	201	80.4	
Hiroshima University Law School	104	60				18	4	4	0	0	38	36.5	

[Reasons enrollment capacity fulfillment rates averaged 110% or higher]

School of Applied Biological Science

The School recently saw a larger number of enrollment withdrawals than it expected. Accordingly, to accommodate the possibility of a recurrence, it passed more examinees than usual, all the while trying its best to keep within the ranges stipulated in the Ministry of Education, Culture, Sports, Science and Technology's Guidelines for Handling Cases Exceeding the Prescribed Average-enrollment Capacity Rates. However, the number of withdrawals did not reach the expected levels. Nevertheless, despite the exceedance of the prescribed capacity rate, the educational quality the School provides students has been maintained at excellent levels due to its successful efforts in maximizing the use of its facilities and equipment it owns and reorganizing its research support system.

(AY 2017)

Schools and graduate schools	Capacity (A)	Enrollees (B)	Breakdown of enrollees									Total on which the following is based: the calculation of whether the number of existing students exceeds the prescribed average- enrollment capacity (L) [(B) - (total of D, E, F, G, I, and K)]	Overcapacity rates (M) (L) / (A) × 100
			International students (C)	Breakdown of international students			On leave (G)	Repeat (H)	Repeat students within two years of exceedance of the regular course term (I)	Long-term enrollment (J)	Long-term enrollment students receiving deduction (K)		
				Japanese government- sponsored (D)	Foreign government- sponsored (E)	Interuniversity exchange agreement- based (F)							
(Undergraduate schools) School of Integrated Arts and Sciences	(Student) 520	(Student) 581	(Student) 1	(Student)	(Student)	(Student)	(Student) 13	(Student) 26	(Student) 21	(Student) 2	(Student) 0	(Student) 547	(%) 105.1
School of Letters	580	649	7				12	29	23	7	2	612	105.5
School of Education	1,940	2,076					24	40	33			2,019	104
School of Law	760	831	2				26	41	30			775	101.9
School of Economics	880	975	6		1		25	55	42			907	103
School of Science	940	1,037	4	2	2		26	40	29			978	104
School of Medicine	1,197	1,248					19	29	24			1,205	100.6
School of Dentistry	478	500	1				11	24	21			468	97.9
School of Pharmaceutical Sciences	316	334					5	10	9			320	101.2
School of Engineering	1,980	2,204	41	16	23		28	89	87			2,050	103.5
School of Applied Biological Science	380	452					4	14	12	1	0	436	114.7
(Graduate schools) Graduate School of Integrated Arts and Sciences	(Student) 180	(Student) 246	(Student) 73	(Student) 4	(Student) 5	(Student)	(Student) 21	(Student) 31	(Student) 23	(Student) 25	(Student) 10	(Student) 183	(%) 101.6
Graduate School of Letters	224	274	128	7	4		22	30	18	26	11	212	94.6
Graduate School of Education	491	657	115	8	8		58	55	35	53	24	524	106.7
Graduate School of Social Sciences	241	226	104	3	4	1	28	32	21	35	13	156	64.7
Graduate School of Science	453	438	59	7	5		11	9	8	1	0	407	89.8
Graduate School of Advanced Sciences of Matter	218	205	24	7	8		1	8	5	0	0	184	84.4
Graduate School of Biomedical & Health Sciences	606	825	62	12	6		63	90	85	78	30	629	103.7
Graduate School of Engineering	723	933	198	48	23		32	35	30	0	0	800	110.6
Graduate School of Biosphere Science	245	274	56	26	17		11	12	9	6	2	209	85.3
Graduate School for International Development	250	318	230	37	31		12	18	14	13	6	218	87.2
Hiroshima University Law School	76	48	0	0	0		20	5	4	0	0	24	31.5

[Reasons enrollment capacity fulfillment rates averaged 110% or higher]

School of Applied Biological Science

The School recently saw a larger number of enrollment withdrawals than it expected. Accordingly, to accommodate the possibility of a recurrence, it passed more examinees than usual, all the while trying its best to keep within the ranges stipulated in the Ministry of Education, Culture, Sports, Science and Technology's Guidelines for Handling Cases Exceeding the Prescribed Average-enrollment Capacity Rates. However, the number of withdrawals did not reach the expected levels. Nevertheless, despite the exceedance of the prescribed capacity rate, the educational quality the School provides students has been maintained at excellent levels due to its successful efforts in maximizing the use of its facilities and equipment it owns and reorganizing its research support system.

Graduate School of Engineering

The number of enrollees in the master's program exceeds the overcapacity rate, calculated at 110%. This is because the Graduate School of Engineering put effort into securing many talented international students to help implement the following items: 1) global human resources projects, supported by Hiroshima Prefecture and companies in the Prefecture; and 2) national measures. The exceedance is also due to the Graduate School of Engineering's effort to secure enough Japanese students to fulfill its social role of cultivating talented Japanese engineers and researchers able to help promote the development of the nation's industries. Nevertheless, despite the exceedance of the prescribed capacity rate, the educational quality the School provides students has been maintained at excellent levels due to its successful efforts in maximizing the use of its facilities and equipment it owns and reorganizing its research support system.

(AY 2018)

Schools and graduate schools	Capacity (A)	Enrollees (B)	Breakdown of enrollees									Total on which the following is based: the calculation of existing students exceeds the prescribed average- enrollment capacity (L) [(B) - (total of D, E, F, G, I, and K)]	Overcapacity rates (M) (L) / (A) × 100
			International students (C)	Breakdown of international students			On leave (G)	Repeat (H)	Repeat students within two years of exceedance of the regular course term (I)	Long-term enrollment (J)	Long-term enrollment students receiving deduction (K)		
				Japanese government- sponsored (D)	Foreign government- sponsored (E)	Interuniversity exchange agreement- based (F)							
(Undergraduate schools)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(%)
School of Integrated Arts and Sciences	550	611	10		4		14	28	24	2	0	569	103.4
School of Letters	570	642	6				17	25	16	4	1	608	106.6
School of Education	1,890	2,007					32	38	30			1,945	102.9
School of Law	750	814	1				17	28	20			777	103.6
School of Economics	855	947	4		1		31	48	35			880	102.9
School of Science	940	1,050	4	2	2		26	57	51			969	103
School of Medicine	1,200	1,250					29	26	21			1,200	100
School of Dentistry	478	503					12	27	23			468	97.9
School of Pharmaceutical Sciences	316	336					1	12	10			325	102.8
School of Engineering	1,935	2,120	37	13	21		28	78	77			1,981	102.3
School of Applied Biological Science	380	445					6	8	7	1	0	432	113.6
School of Informatics and Data Science	80	85	2		1		1					83	103.7
(Graduate schools)	(Student)	(Student)										(Student)	(%)
Graduate School of Integrated Arts and Sciences	180	220	74	4	2	1	24	21	16	23	10	163	90.5
Graduate School of Letters	224	271	138	6	8		21	26	19	23	10	207	92.4
Graduate School of Education	491	697	123	4	8		57	59	41	64	28	559	113.8
Graduate School of Social Sciences	241	258	147	4	5		21	34	25	37	14	189	78.4
Graduate School of Science	453	420	50	6	4		7	20	18	1	0	385	84.9
Graduate School of Advanced Sciences of Matter	218	203	14	5	5		3	4	4			186	85.3
Graduate School of Biomedical & Health Sciences	606	853	67	14	6		71	99	86	85	32	644	106.2
Graduate School of Engineering	723	955	220	47	33	2	23	29	24			826	114.2
Graduate School of Biosphere Science	245	252	48	25	12		6	13	12	8	3	194	79.1
Graduate School for International Development	250	344	255	40	30	5	12	19	15	17	7	235	94
Hiroshima University Law School	60	38					9	3	2			27	45

[Reasons enrollment capacity fulfillment rates averaged 110% or higher]

#### School of Applied Biological Science

The School recently saw a larger number of enrollment withdrawals than it expected. Accordingly, to accommodate the possibility of a recurrence, it passed more examinees than usual, all the while trying its best to keep within the ranges stipulated in the Ministry of Education, Culture, Sports, Science and Technology's Guidelines for Handling Cases Exceeding the Prescribed Average-enrollment Capacity Rates. However, the number of withdrawals did not reach the expected levels. Nevertheless, despite the exceedance of the prescribed capacity rate, the educational quality the School provides students has been maintained at excellent levels due to its successful efforts in maximizing the use of its facilities and equipment it owns and reorganizing its research support system.

#### Graduate School of Education

The Graduate School of Education welcomed many new enrollees to the following Master's Programs: 1) Program in Learning and Curriculum Development, which awards specialized teaching licenses of the following type: a) Learning Development and b) Curriculum and Instruction Development; and 2) Program in Psychology, which awards the qualification of Clinical Psychologist. The Teaching Japanese as a Second Language major and Educational Studies major of the Master's Program in Learning and Curriculum Development attracted many international applicants and thereby had competitive acceptance rates. All applicants, including senior undergraduate applicants, did well on entrance examinations. Consequently, the pass/fail screening based on the same standards as other years passed more examinees than the capacity able to be accommodated by the Master's Programs. The Doctoral Program in Education and Learning Science attracted talented applicants from all Master's Programs of the Graduate School of Education and also other graduate schools. Many existing students successfully graduated with doctoral degrees, which fact attracted many applicants and also motivated the Graduate School of Education to secure new students with the potential to develop into educational researchers able to help domestic and international higher education institutions respond to social needs. Consequently, it secured more than the capacity limits of its programs. Nevertheless, despite the exceedance of capacity limits, the educational quality, learning environments, and opportunities to receive instructions from instructors provided at the Graduate School of Education have been maintained at excellent levels for all majors comprising both Master's and Doctoral programs.

#### Graduate School of Engineering

The number of enrollees in the master's program exceeds the overcapacity rate, calculated at 110%. This is because the Graduate School of Engineering put effort into securing many talented international students to help implement the following items: 1) global human resources projects, supported by Hiroshima Prefecture and companies in the Prefecture; and 2) national measures. The exceedance is also due to the Graduate School of Engineering's effort to secure enough Japanese students to fulfill its social role of cultivating talented Japanese engineers and researchers able to help promote the development of the nation's industries. Nevertheless, despite the exceedance of the prescribed capacity rate, the educational quality the School provides students has been maintained at excellent levels due to its successful efforts in maximizing the use of its facilities and equipment it owns and reorganizing its research support system.



(AY 2019)

Schools and graduate schools	Capacity (A)	Enrollees (B)	Breakdown of enrollees									Total on which the following is based: the calculation of whether the number of existing students exceeds the prescribed average- enrollment capacity (L) [(B) - (total of D, E, F, G, I, and K)]	Overcapacity rates (M) (L) / (A) × 100
			International students (C)	Breakdown of international students			On leave (G)	Repeat (H)	Repeat students within two years of exceedance of the regular course term (I)	Long-term enrollment (J)	Long-term enrollment students receiving deduction (K)		
				Japanese government- sponsored (D)	Foreign government- sponsored (E)	Interuniversity exchange agreement- based (F)							
(Undergraduate schools)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(Student)	(%)
School of Integrated Arts and Sciences	580	650	19	4			22	28	23	2	0	601	103.6
School of Letters	560	615	5				11	22	17	3	1	586	104.6
School of Education	1,840	1,942					22	40	35			1,885	102.4
School of Law	740	799	3				15	32	23			761	102.8
School of Economics	830	916	3		1		17	43	35			863	103.9
School of Science	940	1,044	2	1			35	50	46			962	102.3
School of Medicine	1,200	1,241					27	28	22			1,192	99.3
School of Dentistry	478	498					13	21	17			468	97.9
School of Pharmaceutical Sciences	316	333					2	7	5			326	103.1
School of Engineering	1,890	2,047	36	12	17		28	74	71			1,919	101.5
School of Applied Biological Science	380	438	1				6	11	10	1	0	422	111
School of Informatics and Data Science	160	172	2		1							171	106.8
(Graduate schools)	(Student)	(Student)										(Student)	(%)
Graduate School of Integrated Arts and Sciences	167	215	97	4			15	30	21	27	12	163	97.6
Graduate School of Letters	224	272	130	7	1	3	27	31	25	26	11	198	88.3
Graduate School of Education	491	742	147	7	8		45	82	60	76	34	588	119.7
Graduate School of Social Sciences	241	286	168	6	5		27	32	21	42	17	210	87.1
Graduate School of Science	383	357	48	7	4		10	18	15	1	0	321	83.8
Graduate School of Advanced Sciences of Matter	183	175	12	4	2		3	2	1			165	90.1
Graduate School of Biomedical & Health Sciences	411	667	63	15	6		93	97	71	80	30	452	109.9
Graduate School of Engineering	723	922	240	46	29	5	24	30	26			792	109.5
Graduate School of Biosphere Science	139	150	45	23	10		3	8	7	9	4	103	74.1
Graduate School for International Development	250	357	267	39	23	3	11	16	13	13	6	262	104.8

Graduate School of Integrated Sciences for Life	240	177	16	4						1	0	173	72
Graduate School of Biomedical and Health	198	188	18	1	2					6	2	183	92.4
Hiroshima University Law School	60	42	1				10	3	3			29	48.3

[Reasons enrollment capacity fulfillment rates averaged 110% or higher]

#### School of Applied Biological Science

The School recently saw a larger number of enrollment withdrawals than it expected. Accordingly, to accommodate the possibility of a recurrence, it passed more examinees than usual, all the while trying its best to keep within the ranges stipulated in the Ministry of Education, Culture, Sports, Science and Technology's Guidelines for Handling Cases Exceeding the Prescribed Average-enrollment Capacity Rates. However, the number of withdrawals did not reach the expected levels. Nevertheless, despite the exceedance of the prescribed capacity rate, the educational quality the School provides students has been maintained at excellent levels due to its successful efforts in maximizing the use of its facilities and equipment it owns and reorganizing its research support system.

#### Graduate School of Education

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(AY 2020)

Schools and graduate schools	Capacity (A)	Enrollees (B)	Breakdown of enrollees								Total on which the following is based: the calculation of whether the number of existing students exceeds the prescribed average-enrollment capacity (L) [(B) - (total of D, E, F, G, I, and K)]	Overcapacity rates (M) (L) / (A) × 100	
			International students (C)	Breakdown of international students			On leave (G)	Repeat (H)	Repeat students within two years of exceedance of the regular course term (I)	Long-term enrollment (J)			Long-term enrollment students receiving deduction (K)
				Japanese-government sponsored (D)	Foreign-government sponsored (E)	Interuniversity-exchange-agreement based (F)							
(Undergraduate schools)	(student)	(student)	(student)	(student)	(student)	(student)	(student)	(student)	(student)	(student)	(student)	(%)	
School of Integrated Arts and Sciences	610	698	21	4			16	39	34	2	1	643	105.4
School of Letters	550	604	4				10	22	18	2	0	576	104.7
School of Education	1,810	1,931					22	46	40			1,869	103.2
School of Law	730	778	5				16	28	23			739	101.2
School of Economics	815	897	1				25	46	39			833	102.2
School of Science	940	1,034	6	2	2		25	57	46			959	102
School of Medicine	1,198	1,232					27	29	24			1,181	98.5
School of Dentistry	478	494					5	20	15			474	99.1
School of Pharmaceutical Sciences	316	338					5	9	8			325	102.8
School of Engineering	1,850	1,983	34	14	13		38	62	61			1,857	100.3
School of Applied Biological Science	380	425	1				7	6	5			413	108.6
School of Informatics and Data Science	245	264	2	1			3					260	106.1
(Graduate schools)	(student)	(student)										(student)	(%)
Graduate School of Humanities and Social Sciences	607	465	163	10			9			18	8	438	72.1
Graduate School of Advanced Science and Engineering	579	529	45	4			6					519	89.6
Graduate School of Integrated Sciences for Life	480	372	52	16	1		7			4	1	347	72.2
Graduate School of Biomedical and Health Sciences	396	391	38	5	2		6			17	7	371	93.6
Graduate School of Integrated Arts and Sciences	87	159	81	3			16	24	18	20	9	113	129.8
Graduate School of Letters	128	212	100	3	1		22	38	30	22	9	147	114.8
Graduate School of Education	270	465	80	8	3		58	90	64	74	34	298	110.3
Graduate School of Social Sciences	134	204	112	3	2		16	39	24	39	16	143	106.7
Graduate School of Science	188	207	40	7	4		11	19	17			168	89.3
Graduate School of Advanced Sciences of Matter	89	84	11	3			4	3	3			74	83.1
Graduate School of Biomedical & Health Sciences	216	454	35	9	3		96	100	74	64	25	247	114.3
Graduate School of Engineering	402	579	190	40	20		24	41	33			462	114.9
Graduate School of Biosphere Science	33	53	26	15	6		6	12	10	8	3	13	39.3

(AY 2020)

Schools and graduate schools	Capacity (A)	Enrollees (B)	Breakdown of enrollees								Total on which the following is based: the calculation of whether the number of existing students exceeds the prescribed average-enrollment capacity (L) [(B) - (total of D, E, F, G, I, and K)]	Overcapacity rates (M) (L) / (A) × 100	
			International students (C)	Breakdown of international students			On leave (G)	Repeat (H)	Repeat students within two years of exceedance of the regular course term (I)	Long-term enrollment (J)			Long-term enrollment students receiving deduction (K)
				Japanese-government sponsored (D)	Foreign-government sponsored (E)	Interuniversity-exchange-agreement based (F)							
Graduate School of International Development and Cooperation	143	306	227	31	18		12	21	18	15	7	220	153.8
Hiroshima University Law School	40	27					7	2	2	1	0	18	45

#### [Reasons for overcapacity rates reaching 110% or higher]

##### Graduate School of Integrated Arts and Sciences

Following the reorganization of graduate schools, the Graduate School of Integrated Arts and Sciences stopped recruiting students from AY 2020 (or from AY 2019 in some fields), and its enrollment capacity decreased with the progression of grades of its students. However, as of May 1, 2020, the students admitted in October 2018 were regularly enrolled in the Graduate School, and thus the overcapacity rate exceeded 110%. With the improvement of the learning environment, academic advisor system, and research support system, there has been no impact on guidance to students, and the quality of education has been maintained.

##### Graduate School of Letters

Following the reorganization of graduate schools in AY 2020, the student capacity of the Graduate School of Letters was transferred to the Graduate School of Humanities and Social Sciences, and its enrollment capacity decreased with the progression of grades of its students. However, as of May 1, 2020, the students admitted in October 2018 were enrolled in the Graduate School, and thus the overcapacity rate exceeded 110%. The learning environment, academic advisor system, and research support system have not been changed, and the quality of education has been maintained.

##### Graduate School of Education

In the master's course of the Graduate School of Education, many students wish to obtain a specialized teaching license (mainly in the Program in Learning and Curriculum Development and Program in Curriculum and Instruction Sciences) or a clinical psychologist license (in the Program in Psychology). There are many international students in the Program in Teaching Japanese as a Second Language and the Program in Educational Studies, for which the competition rate for entrance examination is high and the entrance examination scores are also generally high. Many excellent students from the University's undergraduate schools as well as other universities applied for enrollment (in particular, the number of international students has increased remarkably), and thus as a result of the enrollment screening conducted by each program, it was unavoidable for several programs to admit more students than their enrollment capacity. The Program in Education and Learning Science (doctoral course) attracted talented applicants from respective master's courses of the Graduate School of Education and also other graduate schools. Many existing students successfully graduated with doctoral degrees, which meets social needs toward domestic and international higher education institutions of producing educational researchers. These factors caused the overcapacity rate to exceed 110%. The learning environment, academic advisor system, and research support system have not been changed, and the quality of education has been maintained.

##### Graduate School of Biomedical & Health Sciences

One of the reasons for the overcapacity rate exceeding 110% is that many working adults and privately financed international students were enrolled in the Graduate School. However, the doctoral degree acquisition rate of students in the Graduate School is high, contributing to the production of medical professionals and researchers with doctoral degrees for medical and research institutions at home and abroad. In addition, as a result of responding to the social needs of developing highly skilled medical personnel, the Graduate School attracted more working adult students, leading to an increase in the total number of students. Despite the exceedance of capacity limits, the learning environment and academic advisor system have been maintained at satisfactory levels, and therefore, there have been no educational problems caused by overcapacity.

##### Graduate School of Engineering

In the master's courses, the overcapacity rate exceeded 110%. This is because the Graduate School of Engineering put effort into securing many talented international students to help implement the following items: 1) global human resources projects, supported by Hiroshima Prefecture and companies in the Prefecture; and 2) measures taken by the central government. The exceedance is also due to the Graduate School of Engineering's effort to secure enough Japanese students to fulfill its social role of cultivating talented Japanese engineers and researchers able to help promote the development of the nation's industries. Nevertheless, despite the exceedance of the prescribed capacity rate, the guidance to students has not been affected and the educational quality has been maintained at excellent levels due to the Graduate School's successful efforts in maintaining and maximizing the use of its facilities and equipment it owns and improving its research support system.

Graduate School of International Development and Cooperation

Following the reorganization of graduate schools in AY 2020, the student capacity of the Graduate School for International Development and Cooperation was transferred to the Graduate School of Humanities and Social Sciences and other graduate schools, and its enrollment capacity decreased with the progression of grades of its students. However, as of May 1, 2020, the students admitted in October 2018 were regularly enrolled in the Graduate School, and thus the overcapacity rate exceeded 110%. With the improvement of the learning environment, academic advisor system, and research support system, there has been no impact on guidance to students, and the quality of education has been maintained.

(AY 2021)

Schools and graduate schools	Capacity (A)	Enrollees (B)	Breakdown of enrollees								Total on which the following is based: the calculation of whether the number of existing students exceeds the prescribed average-enrollment capacity (L) [(B) - (total of D, E, F, G, I, and K)]	Overcapacity rates (M) (L) / (A) × 100	
			International students (C)	Breakdown of international students			On leave (G)	Repeat (H)	Repeat students within two years of exceedance of the regular course term (I)	Long-term enrollment (J)			Long-term enrollment students receiving deduction (K)
				Japanese-government sponsored (D)	Foreign-government sponsored (E)	Interuniversity-exchange-agreement based (F)							
(Undergraduate schools)	(student)	(student)	(student)	(student)	(student)	(student)	(student)	(student)	(student)	(student)	(student)	(student)	(%)
School of Integrated Arts and Sciences	640	719	39	10	1		23	24	19	1	0	666	104
School of Letters	540	597	3				12	19	17			568	105.1
School of Education	1,780	1,877					18	32	23			1,836	103.1
School of Law	720	771	5				20	27	23			728	101.1
School of Economics	800	864	1		1		27	32	29			807	100.8
School of Science	940	1,013	6	2	2		28	51	38			943	100.3
School of Medicine	1,196	1,238					28	34	28			1,182	98.8
School of Dentistry	478	496					5	21	18			473	98.9
School of Pharmaceutical Sciences	316	341					3	10	8			330	104.4
School of Engineering	1,810	1,931	37	16	12		33	56	51			1,819	100.4
School of Applied Biological Science	380	412	2				6	4	4	1	0	402	105.7
School of Informatics and Data Science	330	346	3	2			3					341	103.3
(Graduate schools)	(student)	(student)										(student)	(%)
Graduate School of Humanities and Social Sciences	1,214	941	448	27	6		20	0		58	27	861	70.9
Graduate School of Advanced Science and Engineering	1,158	1,171	192	24	5	2	17	0		1	0	1,123	96.9
Graduate School of Integrated Sciences for Life	550	434	83	29	2		9	4	4	6	2	388	70.5
Graduate School of Biomedical and Health Sciences	518	556	58	9	2		14	3	3	25	10	518	100
Graduate School of Integrated Arts and Sciences	17	82	29	3			16	26	20	19	8	35	205.8
Graduate School of Letters	32	127	42	1			20	56	44	18	7	55	171.8
Graduate School of Education	49	192	17	5	1		49	84	54	67	30	53	108.1
Graduate School of Social Sciences	27	103	34				19	42	31	31	12	41	151.8
Graduate School of Science	40	73	25	3	2		6	17	16	1	0	46	115
Graduate School of Advanced Sciences of Matter	19	13	6				1	5	3			9	47.3
Graduate School of Biomedical & Health Sciences	97	297	21	4	2		70	110	73	48	18	130	134
Graduate School of Engineering	81	170	86	23	11		17	41	34			85	104.9
Graduate School of International Development and Cooperation	36	152	97	16	5		14	28	24	14	7	86	238.8
Hiroshima University Law School	20	18					6	4	4	1	0	8	40

## [Reasons for overcapacity rates reaching 110% or higher]

### Graduate School of Integrated Arts and Sciences

Following the reorganization of graduate schools, the Graduate School of Integrated Arts and Sciences stopped recruiting students from AY 2020 (or from AY 2019 in some fields), and its enrollment capacity decreased with the progression of grades of its students. However, as of May 1, 2021, the students admitted in October 2019 (mostly international students) were regularly enrolled in the Graduate School, and thus the overcapacity rate exceeded 110%.

With the improvement of the learning environment, academic advisor system, and research support system, there has been no impact on guidance to students, and the quality of education has been maintained.

### Graduate School of Letters

Following the reorganization of graduate schools in AY 2020, the student capacity of the Graduate School of Letters was transferred to the Graduate School of Humanities and Social Sciences, and its enrollment capacity decreased with the progression of grades of its students. However, as of May 1, 2021, the students admitted in October 2019 (mostly international students) were enrolled in the Graduate School, and thus the overcapacity rate exceeded 110%. The learning environment, academic advisor system, and research support system have not been changed, and the quality of education has been maintained.

### Graduate School of Social Sciences

Following the reorganization of graduate schools in AY 2020, the student capacity of the Graduate School of Social Sciences was transferred to the Graduate School of Humanities and Social Sciences, and its enrollment capacity decreased with the progression of grades of its students. However, as of May 1, 2021, the students admitted in October 2019 (mostly international students) were regularly enrolled in the Graduate School, and thus the overcapacity rate exceeded 110%. The learning environment, academic advisor system, and research support system have not been changed, and the quality of education has been secured.

### Graduate School of Science

Following the reorganization of graduate schools, the student capacity of the Graduate School of Science was transferred to the Graduate School of Advanced Science and Engineering and other graduate schools, and its enrollment capacity decreased with the progression of grades of its students. However, the students admitted in October 2019 (mostly international students) were enrolled in the Graduate School, and thus the overcapacity rate exceeded 110%. With the improvement of the learning environment, academic advisor system, and research support system, there has been no impact on guidance to students, and the quality of education has been maintained.

### Graduate School of Biomedical & Health Sciences

One of the reasons for the overcapacity rate exceeding 110% is that many working adults and privately financed international students were enrolled in the Graduate School. However, the doctoral degree acquisition rate of students in the Graduate School is high, contributing to the production of medical professionals and researchers with doctoral degrees for medical and research institutions at home and abroad. In addition, as a result of responding to the social needs of developing highly skilled medical personnel, the Graduate School attracted more working adult students, leading to an increase in the total number of students. Despite the exceedance of capacity limits, the learning environment and academic advisor system have been maintained at satisfactory levels, and therefore, there have been no educational problems caused by overcapacity.

### Graduate School of International Development and Cooperation

Following the reorganization of graduate schools in AY 2020, the student capacity of the Graduate School for International Development and Cooperation was transferred to the Graduate School of Humanities and Social Sciences and other graduate schools, and its enrollment capacity decreased with the progression of grades of its students. However, as of May 1, 2021, the students admitted in October 2019 (mostly international students) were regularly enrolled in the Graduate School, and thus the overcapacity rate exceeded 110%. With the improvement of the learning environment, academic advisor system, and research support system, there has been no impact on guidance to students, and the quality of education has been maintained.