

Pay it Forward



NO POVERTY
ZERO HUNGER
GOOD HEALTH AND WELL-BEING
QUALITY EDUCATION
GENDER EQUALITY
CLEAN WATER AND SANITATION
AFFORDABLE AND CLEAN ENERGY
DECENT WORK AND ECONOMIC GROWTH
INDUSTRY, INNOVATION AND INFRASTRUCTURE
REDUCED INEQUALITIES
SUSTAINABLE CITIES AND COMMUNITIES
RESPONSIBLE CONSUMPTION AND PRODUCTION
CLIMATE ACTION
LIFE BELOW WATER
LIFE ON LAND
PEACE, JUSTICE AND STRONG INSTITUTIONS
PARTNERSHIPS FOR THE GOALS

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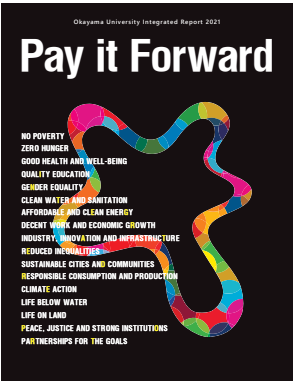
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Cover Design Concept



The "pergola" exchange plaza

Located on the north side of the Tsushima Campus University Union, the "pergola" plaza serves as a place for students, teachers, and residents from throughout the region to rest, relax and engage in interpersonal exchanges. We used the design form of pergola as our front-cover visual motif to express our "Pay it Forward" approach (which is also the report's title) with its outline expanding out toward the local region and the rest of the world. Moreover, our endeavors in pursuit of the Sustainable Development Goals (SDGs) are shown alongside the 17 different colors which represent them.

■ Society 5.0

Society 5.0 is the latest "version" of our society, characterized as a "super smart society" and "creative society," which was preceded by a hunting and gathering society, agrarian society, industrial society and information-centered society. Here in Japan, we make full use of digital technology advances and various innovations in pursuit of a human-centric Society 5.0 where each and every person can lead a comfortable, invigorating, high-quality life.

■ SDGs

Sustainable Development Goals. Adopted in 2015 by the United Nations, these future-oriented, globally shared goals were created with the aim of realizing a sustainable future both for the natural environment and human society, leaving no one behind. In order to facilitate the achievement of all 17 SDGs by 2030, these larger goals are divided into 169 specific targets.



Pay it Forward

We desire to create a comprehensive national university in Okayama on par with Japan's former Imperial Universities. During our nation's tumultuous post–World War II period, Okayama University was founded thanks to generous support and efforts by local citizens, and we hope to repay the good deeds of these contributors over the years, from founding to the present, by passing on the benefits to future generations. This sums up our "Pay it Forward" approach, in which we utilize education, research and social contributions to create new value for the local region and wider world.

History of Okayama University

Innate Skills and Traditions that Enable Solving of Society's Problems, Passed Down as Part of Local History

The historical roots of Okayama education can be traced back to Shizutani School, an institution created by the lord of Okayama Domain IKEDA Mitsumasa that served as Japan's first school for the common people.

Okayama has a long history of cultivating innovation for purposes of solving society's contemporary problems in each era, with past examples including Tsuyama Western Learning which played a major role in Japan's modernization, the financial and educational reforms implemented by YAMADA Hokoku in the Bitchu-Matsuyama Domain, the Ohara Institute for Agricultural Research established by OHARA Magosaburo, the Takahashi River Valley League organized by OHARA Soichiro, and the Setouchi Triennale created by FUKUTAKE Soichiro as a sea restoration project, among others.

The fruits of these efforts have been passed down through the generations as innate Okayama-region skills and traditions that enable solving of society's problems, and today we at Okayama University consider it our mission to cherish and pass these on again to future generations.

1670



Shizutani School for the general public founded by IKEDA Mitsumasa.

The school made its education, which is centered on Confucian principles, available to a wide variety of people and laid the foundations for Okayama-region education.

1850

Financial and educational reforms implemented by YAMADA Hokoku in the Bitchu-Matsuyama Domain.

1870

Medical Training Place Sponsored by the Lord of Okayama founded.

1900

The Sixth Higher School founded.

It promoted free-and-open, independent academic traditions and the pursuit of cultural refinement, and its young graduates went on to study specialized subjects at Imperial Universities and other prominent institutions before becoming leaders in their fields.

1914

Ohara Institute for Agricultural Research founded.

1922

Okayama Medical College founded.

It has achieved numerous successes as a medical school and is often considered the most prominent such university in western Japan on par with The University of Tokyo in eastern Japan.

2004



Okayama University incorporated as National University Corporation Okayama University.

1960

Faculty of Engineering established.

This faculty was established in response to local aspirations for transformation of Okayama from an agricultural to an industrial prefecture.

1994

Faculty of Environmental Science and Technology established.

This faculty was the first environment-focused department at a national university in Japan.

1949



Okayama University founded.

The University was founded through generous local-citizen support and efforts toward university establishment in Okayama.

2005

Okayama region certified as a Regional Centre of Expertise (RCE) on ESD, making it one of the seven RCEs worldwide.

2007

UNESCO Chair (first in Asia) established at the University.

2008

Academic capital concept established.

2016

Okayama Round-Table Conference established.

Representatives from industry, government, academia, finance and the media serving as members began efforts to solve regional problems.

2017

University receives Special Award at the first Japan SDGs Award.

2020



150th anniversary of the Medical School's establishment.



60th anniversary of the Faculty of Engineering's establishment.

2019

First year of SDG University Management.

70th anniversary of University founding.



Okayama Global Academic Capital Headquarters established.

Pursues new innovations and societal transformations together with the local region.

2018

Graduate School of Interdisciplinary Science and Engineering in Health Systems established.

Employing medical-engineering collaboration and integrating the arts and sciences, this graduate school strives to identify and solve society's problems from a wide variety of angles.

-2050

Long-term Vision 2050

A Research University that Cocreates the Future for the Region and the Earth and Contributes to Global Innovation

2022-2027

Okayama University Vision 3.0

A Research University that Together Create and Nurture a Bright Future

2021



New Faculty of Engineering established.

The Faculty of Engineering and Faculty of Environmental Science and Technology were merged and reorganized to create the new Faculty of Engineering, which boasts the strengths of both former faculties.

Co-Creation Rooted in History to Realize Our Future Vision for the Local Region and World

Okayama University has continued to develop and grow as a comprehensive national university thanks to the generous support of people throughout the local region since our founding. The Okayama University Medical School, which started out as the Medical Training Place Sponsored by the Lord of Okayama, celebrated its 150th anniversary in FY 2020. In addition, the Faculty of Engineering, which was originally established in response to demand from local industries, financial circles and Okayama Prefecture citizens, celebrated its 60th anniversary. In FY 2021, the Faculty of Engineering and Faculty of Environmental Science and Technology were merged and reorganized to create the new Faculty of Engineering, which is the largest-scale engineering faculty in the entire Chugoku-Shikoku region.

Today, our world is faced with a range of large-scale disasters and challenges, including the COVID-19 (2019 novel coronavirus) pandemic, record-breaking heat waves, and torrential rains that bring about large-scale floods. Half a century ago, Dr. MANABE Syukuro (winner of the Nobel Prize in Physics) predicted the effects of global warming and sounded an alarm bell for all of humanity to hear.

During these tumultuous times, Okayama University has continued moving forward based on the mission of "building up a new paradigm for a sustainable world." Working with members of the local region and a wide range of other stakeholders toward the goal of planetary health—the health of the planet and its ecosystems—which is vital for humanity and all other living things on earth—we are making contributions toward the achievement of our future vision for the local region and the planet.

Fourth Mid-term Target Period :
Okayama University Vision 3.0
A Research University that Together Create and Nurture
a Bright Future

More than 120 countries and regions throughout the world, Japan included, are pursuing the goal of carbon neutrality by 2050 in order to avoid a climate crisis. Operating under the new long-term vision of becoming "A Research University that Cocreates the Future for the Region and the Earth and Contributes to Global Innovation" Okayama University is engaged in efforts aimed at the achievement of planetary health, based on a new 2050 target year.

Furthermore, the University has established Okayama University Vision 3.0 ("A Research University that Together Create and Nurture a Bright Future") with an eye toward fourth mid-term target period from 2022 onward. As a research university, we plan to further accelerate SDG University Management endeavors in pursuit of co-creation aimed at realization of our future vision for the local region and the world.



"Hyakumanben Juzumawashi" known as praying with an extra-large Buddhist rosary at Omido Hall in Yubara, Maniwa City

2019-2021
Okayama
University
Vision 2.0

2022-2027
**Okayama University
Vision 3.0**
A Research University that Together
Create and Nurture a Bright Future

-2050
Long-term Vision
A Research University
that Cocreates the Future
for the Region and the
Earth and Contributes
to Global Innovation

Global Engagement Strategy

Strengthening global engagement through collaborative efforts
with the United Nations and various international organizations

Okayama University DX Promotion Plan

Digital transformation (DX) in pursuit of the SDGs

Education

Fostering pioneers capable
of independently pursuing
change on a continual basis

- Graduate school education reforms
- Strengthen bachelor degree programs and links between high school and university education
- Enhancement of recurrent education

Research / Industry-
Academia Co-Creation

Solving societal problems via
promotion of research-result
utilization in society

- Offer environments that help young researchers to take on new challenges based on free, open-minded thinking
- Concentrate and strengthen innovation creation functions within the University

University
Management

Toward a resilient
organization that is
highly adaptable to change

- Promote diversity & inclusion (D&I)
- Ensure stability and soundness of education, research, and social contribution activities
- Strengthen internal branding
- Achieve more sound University Hospital management, diversify fiscal resources and carry out autonomous incorporated management operations

As a Research University for the Advancement of SDGs, Okayama University will establish its Carbon Neutral Strategy Headquarters under the president's supervision with the goal of achieving carbon neutrality by 2050, and is making organizational-level preparations to establish the Green Innovation Center which will serve as a central organ for fostering human resources and developing technologies that can help with the local region's green growth strategy. Together with Maniwa City, which has been designated as an SDGs Future City, the University has established the Exploratory Committee for Educational Research and In-Service Training Zone for Forestry, Timber, and Wooden Architecture.

Moreover, architect KUMA Kengo has been brought on as a special invited professor at the University, and with his help we are establishing fields of study relevant to industry-academia-government co-education and co-creation activities, while also pursuing new education and research endeavors aimed at achieving a decarbonized society, creating a Regional Circular and Ecological Sphere, and realizing local community creation.

Message from the President

A Research University that Together Creates and Nurtures a Bright Future

1. Realizing the Limits of the Earth

The year 2022 will be a turning point in the drive to achieve the United Nations' Sustainable Development Goals (SDGs) by 2030. It will also be the 50th anniversary of the United Nations Conference on the Human Environment (Stockholm Conference). As we head toward this milestone year for our future, developments are forcing us to realize the limits of our irreplaceable planet.

Over its almost two years, the COVID-19 pandemic has not only directly harmed the health and lives of people everywhere but has also hampered political, economic, and cultural activities. On top of that, summer 2021 saw Japan and many other countries suffer record heatwaves, torrential rains, floods, and other major disasters owing to climate change associated with global warming. We must now realize that we are crossing planetary boundaries^{*1}.

In making socioeconomic growth their top priority, human social systems have themselves threatened the survival of humanity and ecosystems. In fact, for the first time the *Global Risks Report 2020* of the World Economic Forum (the Davos Forum) placed environmental risks in the top five of the top 10 risks by likelihood over the next 10 years.

Universities and other international institutions, governments, companies, and organizations will once again have to change their human-centered social systems, think differently, and act to achieve planetary health^{*2} by respecting the connections between the Earth and living things.

***1 Planetary boundaries**

In 2009, Johan Rockström, director of the Stockholm Resilience Centre, and his colleagues proposed the concept of nine "planetary boundaries", which scientifically define and quantify the extent to which humanity can safely operate on a stable planet. Of the nine "planetary boundaries", four ("Climate Change", "Biosphere Integrity", "Land-System-Change", and "Biogeochemical Flows") are pointed out as being beyond the limits and heading towards the danger zone.

2. Okayama University's Mission and Vision Story

When we reorganized as a National University Corporation in 2004, we defined our mission as *Creating and fostering higher knowledge and wisdom* and our purpose as *Building up a new paradigm for a sustainable world*.

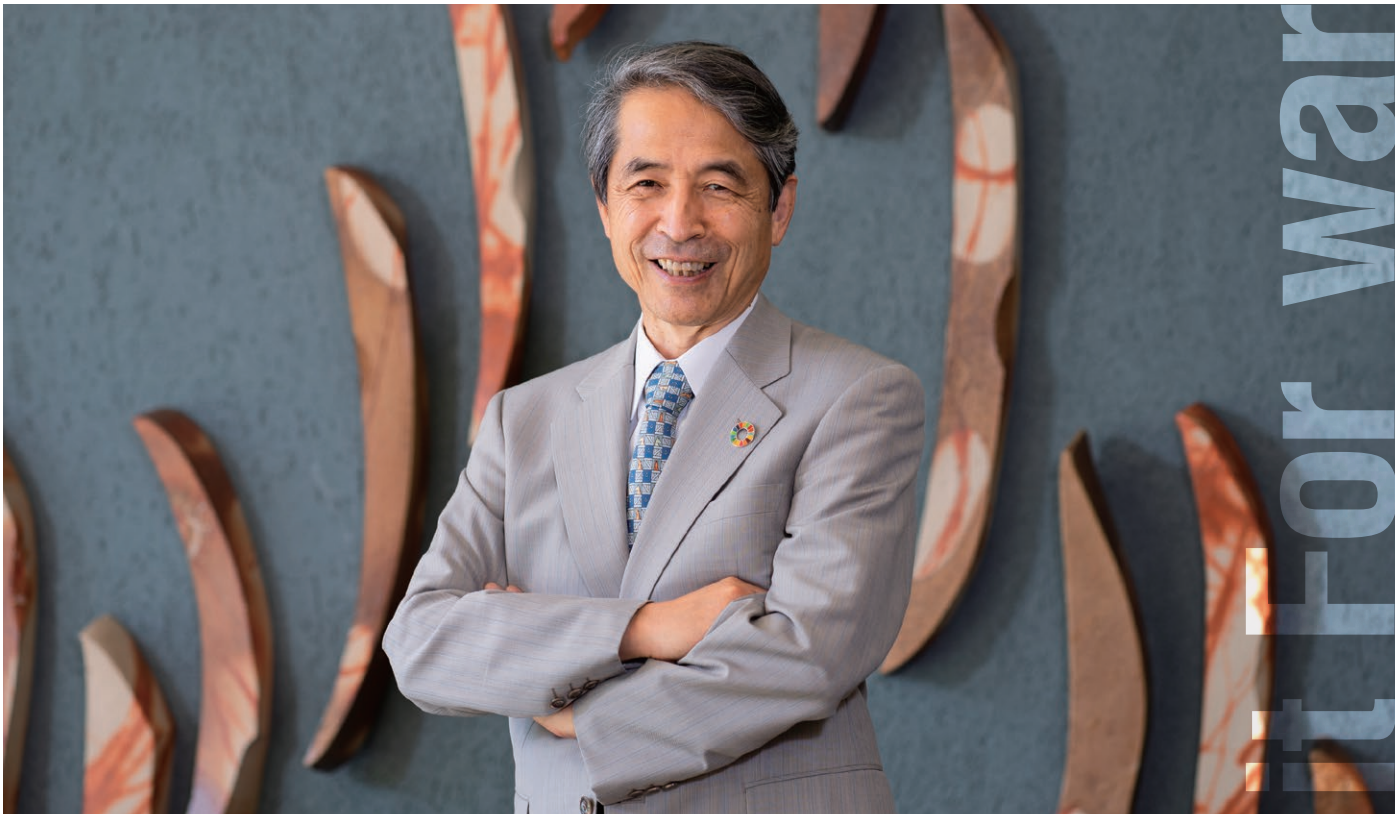
The university has contributed to achieving SDGs since I became president in 2017. I believe that we can fulfill our purpose by collaborating with diverse regional and international stakeholders to attain SDGs, which are shared global objectives. During our third mid-term target period, we formulated the Okayama University Vision, which was to pursue full-scale, cross-departmental reforms. In 2019, the university's 70th anniversary, we formulated the Okayama University Long-term Vision 2030 and Okayama University Vision 2.0 (extending from 2019 through 2021) to more clearly connect our Mission and Vision.

Under Okayama University Long-term Vision 2030, as a research university that pursues sustainability and well-being we aim to create a sustainable and inclusive Okayama Global Academic Capital Headquarters. We will work together with diverse stakeholders to train human resources and foster innovations for society to create new value for the local region and the wider world.

At the same time, under Okayama University Vision 2.0, we seek to become a research university for the advancement of SDGs and well-being that continues to create and deliver new value from Okayama to the world and to emphasize SDGs in university

***2 Planetary Health**

In 2015, when the SDGs were adopted, "Rockefeller Foundation-Lancet Commission on Planetary Health" was established by The Rockefeller Foundation and The Lancet, a world-renowned medical journal, to advocate this concept. In 2016, with the support of the Rockefeller Foundation, Harvard University established "Planetary Health Alliance (PHA)", which is playing a central role in the development of a global platform for education, research, and policy.



management. We accordingly initiated SDG University Management in all of this institution's functions. What we have learned thus far from SDG University Management is that cocreation processes are important for materializing the future we want in turbulent times. We will draw on our lessons to embed a collaborative cultivation and cocreation framework in the overall educational setup of our university to foster learning and creating together and remove barriers between the university and society.

3. Toward the Fourth Mid-term Target Period

We are stepping up efforts to prepare for our fourth mid-term target period, which begins in 2022 and will be turning point for achieving SDGs. It is in keeping with its mission and purpose that Okayama University decided that it will contribute to cocreating the desired future for the region and the Earth by connecting the region and the world and striving to achieve planetary health. To transition away from human-centered social systems, we will need to culturally refine behavioral norms and base them on ethical principles, or aspirations, that are more conducive to planetary health. It will therefore be vital for our university as a global knowledge gateway in the cocreation process to engage more with local and global stakeholders to share our aspirations. We accordingly formulated Okayama University Long-term Vision 2050: A Research University that Cocreates the Future for the Region and the Earth and Contributes to Global Innovation. In preparation for our fourth mid-term target period, we also put

together Okayama University Vision 3.0: A Research University that Together Create and Nurture a Bright Future. Through all of our educational, research, and social contributions, we seek to materialize the future we want at a global level and leverage digital transformation to foster a transition to a decarbonized and decentralized society and a circular economy. We are thereby conceiving and undertaking new collaborative initiatives that help create a Regional Circular and Ecological Sphere (local SDGs), which is also a growth strategy for us as a regional comprehensive national university. We will materialize our vision by cultivating proactive pioneers of ongoing change who will contribute to new value and global innovation. As a comprehensive knowledge institution, we will endeavor to create research environments that foster free inquiry among young researchers into challenging new fields. We will also reinforce research capabilities and Industry-academia co-creation by building an innovation ecosystem underpinned by a virtuous cycle of talent, knowledge, and funds. At the same time, we will digitize university processes underpinning these activities and build a governance structure that is both robust and flexible. We will strive to remain a research university that contributes to global innovation by continuing to share the above vision with internal and external stakeholders and while seeking their understanding and support for our efforts.

Hiroyuki Nakas
President, Okayama University



Executive Director for Hospital
and Medical Service, Director of
Okayama University Hospital
MAEDA Yoshinobu

Director of Research Institute
for the Dynamics of Civilizations,
Professor
**MATSUMOTO
Naoko**

President
MAKINO Hirofumi

Executive Director for
Promotion of Digital
Transformation, Vice President
ABE Masanobu

Special
—
Round Table
Discussion

Thriving Despite the COVID-19 Pandemic While and Building a Bright Future and Pursuing Co-Creation

President Makino, together with new Executive Directors Maeda and Abe appointed for FY 2021 and Director Matsumoto of the Research Institute for the Dynamics of Civilizations, which was established as the university's fourth research institute, discussed the role that Okayama University should play in response to the COVID-19 pandemic and beyond.

Impacts of the COVID-19 Pandemic on Okayama University

Makino Have you heard of the movie "Shin Godzilla"? I went with a colleague to see the movie a few years ago. In the movie, Godzilla is born after ingesting radioactive waste that was illegally dumped in the sea area where he lives and he brings disaster to Japan. In a similar way to Godzilla, I felt that the COVID-19 pandemic was the ecosystem fighting back against human beings, who although account for only 0.01% of the earth's biomass, are destroying the environment and causing global warming. Today, I would like to look back on the impact of COVID-19 on our university. Mr. Maeda as Director of the

Okayama University Hospital you have worked hard to protect the health of residents of the prefecture with cutting edge medical care. What have impacts have you seen from the pandemic?

Maeda COVID-19 is difficult for hospitals because causes Intensive Care Units (ICU) to fill up. Okayama University Hospital and other official advanced treatment facilities provide cutting-edge medical care, but if they accept patients with severe COVID-19 to the ICU, they will not be able to perform surgeries for life-threatening diseases such as heart disease and cancer. During the fourth wave, the number of infected people rose sharply in Osaka, and at the same time, ICUs in Okayama Prefecture filled up, creating a true medical crisis.

Makino The biggest concern is that people who should have been able to receive treatment at Okayama University Hospital lose the opportunity to do so. This appears to be a problem that needs to be solved in cooperation with other affiliated hospitals, acute care hospitals in the prefecture, and the government. Executive Director Abe, until last year, you were the head of the Faculty of Engineering. What are your thoughts on the impact of the pandemic on the students at Okayama University?

Abe I think that online learning and videos on demand (VOD) worked well for lectures and it was good that new ways of learning and teaching gained awareness. However, many activities, such as experiments, can only be done face-to-face and teachers struggled to adjust. In addition, as a result of not being able to hold seminars anymore, students lost opportunities to interact with other students and teachers, even though they could still conduct research and discuss papers

online. In this one year I realized to what degree we fostered camaraderie and learned from each other at seminar camps and drinking parties.

Makino In university life, learning from lectures is important, but it is also essential to learn from extracurricular activities and interaction with others. Director Matsumoto, you were the Japanese representative for the "BE-ARCHAEO*" international project in Europe. I understand that you faced various restrictions on your research activities. What impacts have you faced?

Matsumoto The institute is still in a state of just starting up and the COVID-19 pandemic is causing hardships that have paused most international research. The main purpose of the project was to think up new research methods while conducting fieldwork with people from various countries in the field of archaeological excavation. None of this could be done last year, and it looks like it will be difficult this year as well, causing us some major headaches.

*Joint project centered around the University of Turin, Italy with other European research institutions and companies. Through the excavation of ancient burial mounds and the analysis of collected materials, the project aims to develop a new image of history and also develop professional knowledge through the new perspectives created through international and interdisciplinary exchange.



COVID-19 Countermeasures and Digital Transformation (DX)

Makino Next, I want to talk about countermeasures against COVID-19. First, let us hear about what is being done at the hospital?

Maeda As a hospital, our priority is to treat COVID-19 without spreading the disease. To do this, our staff and medical personnel take all possible preventive measures and we also ask families of patients to limit their visits to the hospital. We also check body temperatures at the entrance to the hospital, perform PCR tests on patients for surgery, and take thorough entry control measures.



Abe For our measures against COVID-19, we are placing an emphasis on continuing to offer classes without canceling them. We use "Microsoft Teams" and "Moodle" for lectures, but in fact, we had used these online tools before the COVID-19 pandemic. We focused mainly on how to get the most out of them and I think the transition has been relatively smooth.

Makino Mr. Abe, you became the Executive Director for DX in April. What are your plans for promoting DX at Okayama University?

Abe Currently, there is a lot of talk about DX, which is the use of digital technology to change something. Applying this to universities, I think it is all about making changes so that faculty members and other university staff can work more efficiently to provide better education to students. To do this, we asked people throughout the university about what was not being done digitally. We found that Okayama University is a much more vertically integrated organization than we expected. We rarely pay attention to what is going on in other departments so it is difficult to notice that we are actually doing the same thing. By exchanging opinions across the university, the DX Promotion division will share the concerns and issues facing each department and look into how to solve them through digitization. The project is moving forward and we have already started identifying and discussing issues. This is not a temporary activity and we are determined to change our fundamentals and work culture.

Makino Okayama University is blessed with an excellent environment, but due to the COVID-19 pandemic, we can no longer continue as before in terms of funds, time, and people. Since the departments can no longer do what they used to do independently, it is crucial that the entire university improve its efficiency by using DX to cross boundaries. It may take some time, but I hope that you can find opportunity in this time of crisis.

Abe Throughout the COVID-19 pandemic it feels as though the foot has been on the accelerator. I realized how convenient it was to use things that I had in my environment that I did not use before I was forced to use them. I hope to spread this change in awareness to other areas to promote DX.

Makino Last year, the hospital also launched the "Industry-Academia Collaboration Project for Human Resource Development to Accelerate AI Research and Development in the

Health and Medical Field" with Tohoku University and Hokkaido University. What are your thoughts on DX and will it have an impact on human resource development?

Maeda The development of highly skilled medical personnel is a critical role of a university hospital. I want to make effective use of digital content to develop such personnel. In the field of research, genomic medicine, for example, requires handling vast amounts of genomic data, so it is important to develop human resources who can fully utilize AI to handle such data. In addition, hospitals have a massive amount of other work that goes on from the time the receptionist sees a patient to the time that the patient has an examination and pays the bill. We are working on ways to simplify and streamline these processes through digitization.

Makino It seems that for patients, DX may also be effective in lowering barriers to the hospital and making them feel that there is no risk of infection.

Maeda That is correct. Ideally, you would be checked in when you arrive at the hospital in your car, and when it's your turn, you could go directly from the parking lot to the examination room, and after the examination, you could go straight home and pay the bill. This is possible with current smartphone apps. It is also becoming possible for you to store your own diagnostic images and other test data in the cloud with your smartphone. I would like to see this promoted further. If you can manage your own information, you can get medical care at any hospital. If you have a doctor you trust near your home, you can have them examine you with the data taken at a university hospital. The time may come when the facilities that perform tests are separated from the facilities that perform consultations. I want Okayama University Hospital to lead the way to this future.

Makino Since this university was created by members of our community 70 years ago, I often use the phrase "Pay it Forward". It is critical to know what we can do for the community through DX. Executive Director Abe, what is your outlook for this in the future?

Abe We set up the "Okayama IoT/AI/Security Course" as a donation course from Okayama Prefecture. The purpose of the course is to provide recurrent education to local companies to learn the latest digital technologies. However, we are not so naive to think that just what is learned in a class will solve a company's problems. That must begin with collaborative research and incremental efforts towards solving the issues. This is exactly what "Co-Education and Co-Creation" is all about.

Makino The course has attracted a diverse group of teachers and business people from within the prefecture. Students have said that it is really useful, and to share this feeling, I would like

more people to come to the graduate school at Okayama University for further education.

Abe As you said, it would be great if through this course we could entice working adults who are interested in the latest technology to come to the graduate school and then return to their companies as role models who become leaders and spread the technology. I think this would spread the idea that individuals can grow more at Okayama University and we would also contribute to the promotion of DX in the Okayama region. I believe that our goal should be to create a culture that incorporates the latest technology and roots it in the Okayama region.



The COVID-19 Pandemic from the Perspective of Civilization Dynamics

Makino To commemorate the opening of the Research Institute for the Dynamics of Civilizations, Dr. Matsumoto held a wonderful symposium on the theme of "Pandemics and Civilization: Facing Infectious Diseases from the Past to the Future." Over the course of the history of civilization, there have been various epidemics of infectious disease. Using this perspective, what can we say about COVID-19?

Matsumoto I chose pandemic as the theme of the symposium because I thought it was an easy theme for understanding the importance of thinking from the perspective of civilization. Infectious disease pandemics have greatly changed the way humans live. Pandemics frequently occur in a global metropolis, as they did in ancient Rome and ancient China. Today, with a world population of 7.7 billion and major cities connected by airplanes, it is tough to control an outbreak like COVID-19 in one area. Even after the COVID-19 pandemic is over, something similar is likely to occur again in the future. What should our response be? Humans are not that good at thinking in the long term. We tend to think that we'll be fine if we can just get through the present. However, that means that we will have to deal with it all over again next time. We need to take this opportunity to fundamentally change our way of thinking and

our way of life to focus on the long term. By looking at how pandemics have affected civilizations over the span of hundreds to thousands of years, the institute hopes to provide clues about what we should do now and a basis for thinking about a bright future.

The Role of Okayama University in Creating a Bright Future

Makino Japan's population is decreasing due to a declining birthrate and aging population, but the world's population is expected to reach 9.7 billion by 2050, and if things continue at this rate, there would not be enough food and water even if we had two Earths. Additionally, global warming is worsening, and 50 and 100 year floods, such as those caused by heavy rains in western Japan in 2018, are occurring more frequently around the world. I would like to ask you all to share your opinions on what role the university should play when we consider a bright future in light of the current circumstances.

Matsumoto Humans were born in Africa about 200,000 years ago, gradually developed various technologies, intervened in the reproduction of other animals to start farming and herding, and went on to create cities and countries. Some studies have shown that the total amount of objects created by humans is surpassing the total amount of life on earth, which shows the considerable degree to which humans are impacting the planet. Climate change is one such impact. Because of these circumstances, the Anthropocene (human era) has been proposed as a name of this geological era. In this context, it is important to look at the present and consider the future, but I think we also need to think about the mechanics of why things have come to this. As a new type of humanities and social sciences, I would like to promote research that integrates the humanities and sciences to present a vision of what it means to be human, not only from the perspective of humans, but also in relation to other organisms and materials. I believe that Okayama University, as a comprehensive university, should conduct joint research across disciplines that are required to achieve this.



Makino Our university is home to professors across a wide range of fields. I would like to consider how we can solve this problem through knowledge that goes beyond the fusion of the humanities and sciences. Executive Director Abe, what are your thoughts?

Abe As is often said we live in unpredictable times. So, I believe that it is important to learn how to cope with and live with whatever happens in the future, and I believe that the university is the place where we can learn how to manage this. I want Okayama University to be a place where, if you come and study hard, you can acquire the ability to solve problems, no matter what the future holds. As a basic stance, I feel it is important to question the issues around us. For example, do we really need to buy a new phone every two years? Is it truly good enough to think "I will get a new one because the new model is better than the one I have or because I can afford it"? I want us to consider how much we are affecting the next generation by consuming more than we need. The 'S' in SDG means sustainable, which means we shouldn't leave more work for the next generation. To use a more simple example, when I was in elementary school, everyone used to carry shopping bags to the store, but before I knew it, plastic bags became the norm because they were too convenient. We need to consider that to be wrong in and of itself, not in terms of hundreds of thousands of years, but in terms of 10 or 20 years.

Makino So, you are saying that sadly, convenience now is not good for the next generation in the medium to long term. I think we are at a time when we need to rethink what the SDGs are all about. The Medical School is directly concerned with the health of humanity, but in the future, we must also consider the health of the earth and its ecosystems in terms of planetary health. Executive Director Maeda, what are your thoughts?

Maeda It is true that from the perspective of the SDGs, we cannot continue to pursue convenience, and we also know that the earth will not last if we continue in this way. I think we need



to work backwards from what we know lies ahead and think about what we can do now. It has been predicted that Antarctic ice will melt due to global warming, that more unknown viruses will emerge, and that viral epidemics will occur about every decade in the future. We need to think carefully about what we can do now to prepare for these foreseeable circumstances. The same is true for the education of students at the Medical School. It is our mission as educators to ensure that people educated with this knowledge play an active role in society. However, it is not enough to think only about medical care to achieve such goals. For technical challenges, whether relating to AI or cloud computing, we need the wisdom of other fields. For Okayama University this is possible because we have wide range of academic disciplines. We need to embrace the idea of cooperating with people across disciplines to solve problems. I believe that graduating many people who can think in that way will lead to a better future for society and for Okayama University.

Matsumoto In addition to the SDGs, our university is also promoting diversity and inclusion, and these ideas must be pursued in tandem. Diversity has become a slogan chanted out in society, and while some people may think it's just a bunch of hot air, from an academic perspective, diversity leads to strength, both as a species and as a society. In Japan in particular, progress towards gender equality has been stagnant and has also received international attention. However, from a historical perspective, there was little gender disparity in the Jomon period. Society eventually became male-dominated, which led to many problems. It is possible that problems such as war and economic disparity accompanied this change. Listening to everyone here speak has made me feel that it is crucial to demonstrate the importance of protecting diversity in many ways, both for ourselves and to increase the resilience of society itself.

Makino In the past, you suggested that while Okayama University is a comprehensive university, diversity has not yet been sufficiently promoted. What is your outlook for after the pandemic?

Matsumoto As it was discussed at the symposium, we need to consider new ideas about closeness. As DX takes hold, we will see more and more things that can be done digitally and I think many will remain digital even after the pandemic. For example, in a face-to-face class of 100 people, no one raises their hand, but if I ask anyone to write their opinion online in chat, they can write a lot. This new culture is likely to continue developing. On the other hand, it is very difficult to ensure a sense of unity and connection between people. Humans are very rare creatures who share food with non-relatives and have created social relationships by gathering together to eat and drink together. That was the foundation of civilization, and I think the current circumstances where that is no longer possible because of the COVID-19 pandemic is causing stress to society. There is a limit to how much we can continue forcibly containing it, so I think it is important to consider how to create bonds in line with human sensitivities without spreading COVID-19, by devising various

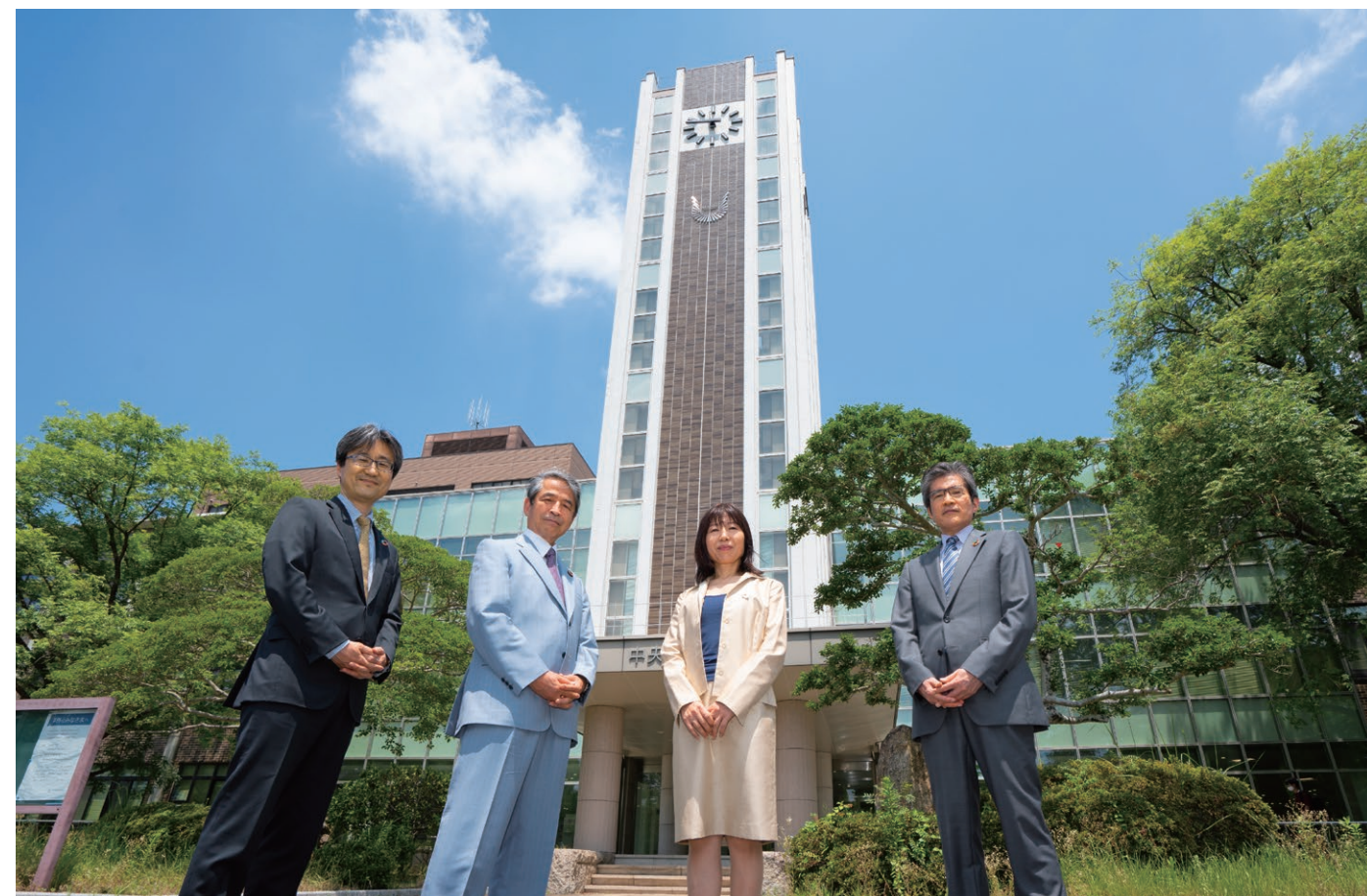
ways to do so across disciplines so that we can create a post-COVID society that will be resilient against the next epidemic.

Makino Since becoming president, I have promoted the SDGs throughout the university. At first, my thinking was narrow, but I have come to think in terms of global issues. Now, I believe that the role of the university should be to develop human resources and create scientific and technological innovations from such a perspective. For that reason, we must create a vision that includes both short and long-term perspectives, and also deepen our partnerships and interactions with local people, while further evolving our SDG activities toward creating a bright future. Thank you very much for sharing your valuable opinions today.

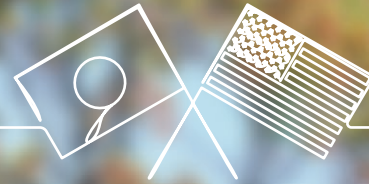
Everyone Thank you.

Location of the Round Table Discussion: Murata Academia (Central Library Floor 2)
[An exchange space created in the image of a forest using cypress from Okayama Prefecture]

The name Murata Academia comes from a naming rights partnership with Okayama Murata Manufacturing Co., Ltd.



"Pay it Forward" +
"Living Together in the Here and Now"
(Part 1 of 3)



Overcoming COVID-19 Challenges to Return to Japan

David Michael Anderson Jr. originally came to study at Okayama University in 2019 under the United States Department of State's Critical Language Scholarship (CLS) Program, which is known for its top-level students. In July 2021, he was able to return to the University again as a Fulbright Research Grant recipient. Now, as a research student at the University, he is energetically pursuing research on the Okayama region's local government.

Explained Anderson, "I've always felt that the 'real' Japan can be found in the countryside, and my exposure to the kindness of Okayama's people and the area's general ambiance really brought that home to me during my previous sojourn. Moreover, I wanted to experience all four seasons in Okayama. I've been deeply impressed by the University's proactive approach to the SDGs. My hope is to tell everyone back in the United States just how great a place this is." Based on these strong impressions, Anderson decided to come and study with us in Okayama once again. The CLS Program provided him with the initial opportunity to experience the area, and Okayama's local charms have brought him back. As a result, all of us feel a strong connection with him.



III. Strategies

Fostering Pioneers through "Co-Education and Co-Creation" and Global Engagement

We will contribute to the realization of a bright future for the region and the earth by fostering pioneers who continue to transform and by promoting a global engagement strategy.



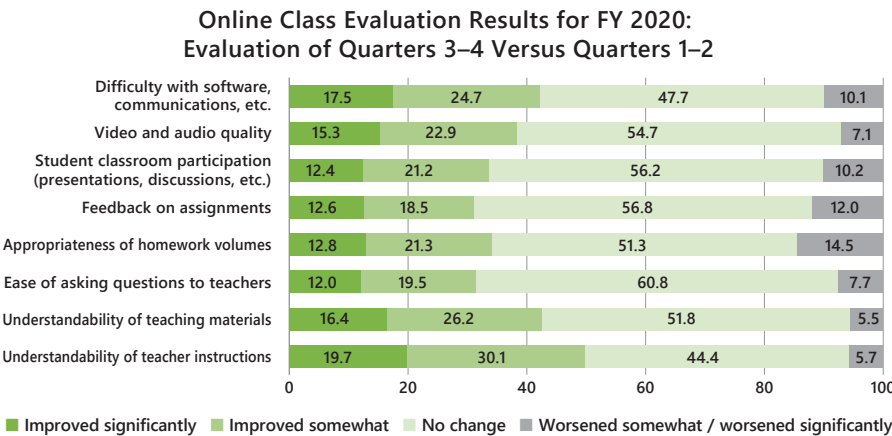
Looking Back: Efforts Thus Far

FY 2020 was a difficult year for Okayama University education overall, as we canceled entrance ceremonies for new students, switched to online classes in place of face-to-face learning, and carried out other changes in response to the spread of COVID-19. Throughout all of this we provided information via the University website related to online classes, extracurricular activities in fields outside students' main areas of focus, mental health, and more in order to provide support for our students. With greater numbers of online classes taking place—numbers of Moodle-based classes increased by 43.5 percent compared with the previous fiscal year—we strengthened our Internet-related infrastructure and services (22 percent more classrooms were equipped with wireless LAN equipment than in the previous fiscal year) while also creating the new EdTech Support Office, providing examples of successful online classes and other useful information, hosting presentations, offering individual consultations, lending out required equipment and devices, and otherwise improving the quality of our online learning operations. Furthermore, we distributed questionnaires to students at the end of the second and fourth academic quarters to obtain feedback on the president's online gathering, online classes and other such operations in pursuit of student-centric future improvements in these areas. For students struggling to get by financially due to the COVID-19 crisis, we offered financial support, extended deadlines for tuition fee payments, provided student meals (thanks to support from volunteers in companies and other organizations), and expanded our student consultation system. Moreover, through Okayama University student support and local restaurant assistance efforts carried out under the "We Aren't Scared of Corona! WIN-WIN Student Project," restaurants from the Tsushima area provided a total of 3,900 free meals to students. We also embarked on graduate school reforms that, through organizational changes, will create new degree programs by FY 2023. COVID-19 has impacted international exchange activities in major ways. The United States Department of State's Critical Language Scholarship (CLS) Program, which was first implemented in FY 2019, as well as a newly created joint-research/training courses for young female scientists in developing countries carried out by the United Nations Conference on Trade and Development (UNCTAD), have not been possible in person and instead been executed as online programs. However, the University has received high praise for these online efforts from counterparts in each program. For new international exchange student applicants who wished to pursue privately funded study abroad programs, we provided information on procedures for

entering Japan, offered travel funding to help them make the journey, and gave other types of support. Similarly, we provided various types of support for international students in Japan who graduated or otherwise completed their study program but were unable to return to their home countries, including permitting them to continue living in student housing for an extended period after completion. In addition, we newly established Okayama University Global Engagement Office (OUGEO) and strongly promoted global engagement and international exchange by concluding a Memorandum of Understanding (MoU) with the University for Peace (UPEACE) and Earth Charter International (ECI), and sending students to the virtual short-term study abroad programs.



Okayama University student support and local restaurant assistance efforts carried out under the "We Aren't Scared of Corona! WIN-WIN Student Project"



Signing an MoU with ECI

Efforts Moving Forward: Goals and Plans



Okayama University will strongly promote global engagement to share the common aspirations ("purpose") with various stakeholders in the region and the world. By strengthening OUGEO as a university-wide central organization under the direct control of the President to plan and implement global engagement strategies, and by incorporating the world-leading UNESCO Chair in Research and Education for Sustainable Development, we will develop educational and social activities under the Berlin Declaration on ESD in 2021 and Implementation Plan for Education for Sustainable Development in Japan (The Second ESD Implementation Plan) formulated by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and Ministry of the Environment (MOE). Through collaboration with overseas UNESCO Chair institutions, the United Nations agencies and international organizations, we will develop global engagement activities that contribute to the achievement of the SDGs based on the promotion of education and research that integrates ESD, Global Citizenship Education (GCED), the Earth Charter (EC). In addition, we will further expand and strengthen the functions of OUGEO by focusing on the regions and themes in which we have built up a track record. Despite class-related reforms including the FY 2016 introduction of 60-minute class times and the four-academic-quarter system, as well as integration of active learning and other improvements, we still observe shortcomings in areas such as sufficiency of independent study and extracurricular activities among students. Starting in FY 2021, we have reduced class times to 50 minutes and embarked on efforts to improve the quality of students' independent study activities. In an effort to identify

student abilities that are usually difficult to discern through scholastic ability tests alone, and to discover human resources who are passionate and potentially proactive about solving global-scale problems (including those related to the SDGs), we plan to increase the numbers of potential students considered through special selection processes (comprehensive assessments, school recommendations, and The International Baccalaureate [IB]). Moreover, for standard applicant screening processes, we utilize scholastic ability assessments which include a free-answer written response section.

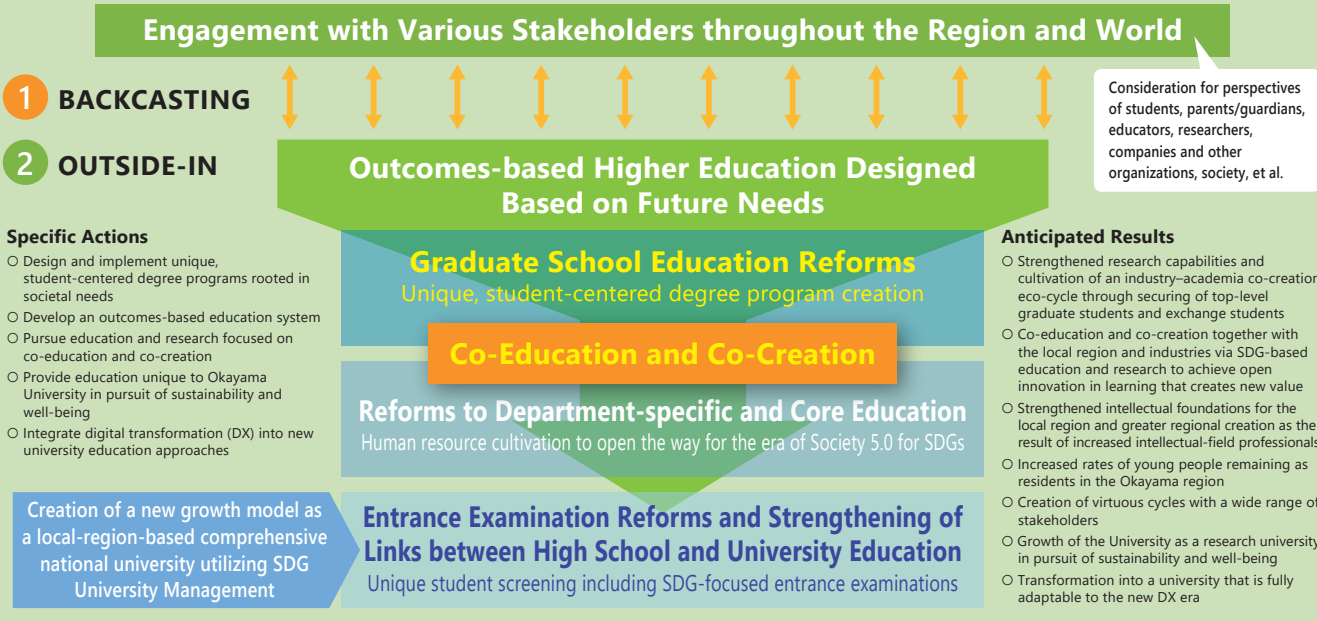
In preparation for the coming Society 5.0 era, we are adding mathematics and data science into education curricula for all students throughout the University starting in FY 2021, and plan to expand and further integrate such endeavors in the future. While pursuing such specialized knowledge and skills, and continually and proactively adapting to the changing times, we have students connect with persons in possession of exceptional dialogue capabilities and theoretical thinking in order to foster new human resources that can serve as leaders in society-wide innovation. To these ends, we are pursuing our Target 2025 plan through which we aim, by FY 2025 for students who enrolled under the new education guidelines, to achieve comprehensive overhauls to bachelor degree programs, stronger links between high school and university education, and improvements to entrance examinations. Moreover, by creating a platform for co-education and co-creation through reforms (encompassing graduate school education reforms) that strive to eliminate barriers separating the University from wider society, we will develop and deploy new



student-centric degree programs directly related to global-scale issues both SDG-related and otherwise, and through these efforts pursue co-creation of new value and foster pioneers capable of realizing innovative change for both the local region and the world.

Ministry of Education, Culture, Sports, Science and Technology (MEXT) Mathematics, Data Science and AI Smart Higher Education (MDASH) Programs certification

Needs-driven Educational Reform to Achieve Co-Education and Co-Creation Transitioning to Needs-driven, Outcomes-based Education



Creating an Innovation Ecosystem through Mutually Beneficial Cycles for Human Resources, Knowledge and Funding

We are working to improve the University's revenue structures while cultivating an innovation ecosystem through strengthening of research capabilities and acceleration of industry-academia co-creation.



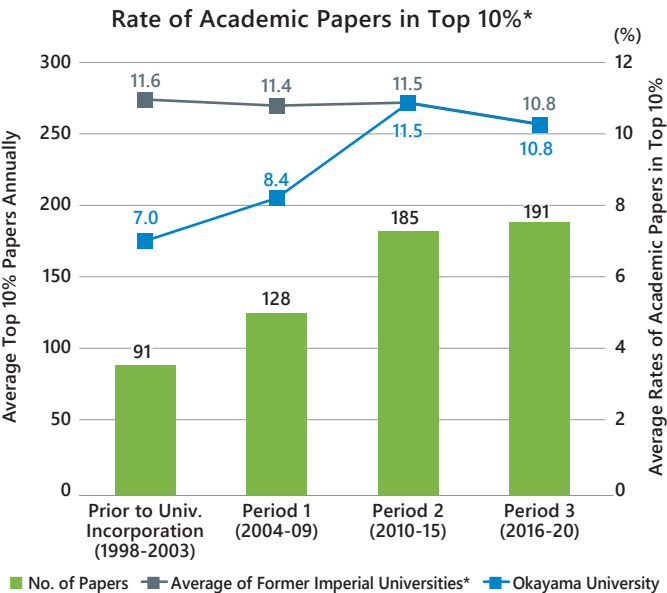
Looking Back: Efforts Thus Far

Okayama University has selected priority research fields—3 major areas with 15 categories in total, which together serve as strengths in endeavors to develop next-generation research—via strategic utilization of research IR, and we are proceeding with the Program to Support the Formation of Next-Generation Research Initiative in order to make use of these priority fields to develop the University as a global research center. Moreover, we invite leading researchers from overseas to the University, and utilize the International Research Center Formation Program to Accelerate Okayama University Reform (RECTOR) for purposes of promoting joint international research with Okayama University researchers, as well as other such programs aimed at strengthening University research capabilities, in order to form a world-leading research hub. Through these efforts, we have been able to increase the percentage of Okayama University-published academic papers considered to be high quality (according to an indicator measuring the Top 10% of cited research papers), achieving a rate of 10.8 percent over the last five years (2016-20). In addition, the University is strengthening its networking efforts through memorandum of understanding (MoU) signings with corporations while simultaneously pursuing inter-organizational, industry-academia co-creation wherein University personnel serve as coordinators in joint and outsourced research activities. As a result of these efforts, we have increased our joint research revenue over the FY 2019-20 period by 54 percent (compared with FY 2011-12) to 994 million yen. In FY 2020, we introduced an intellectual contribution expenses system, which takes consideration of the value of researcher and research-result knowledge, while also increasing indirect-funding expenses. At the same time, we have developed and implemented a

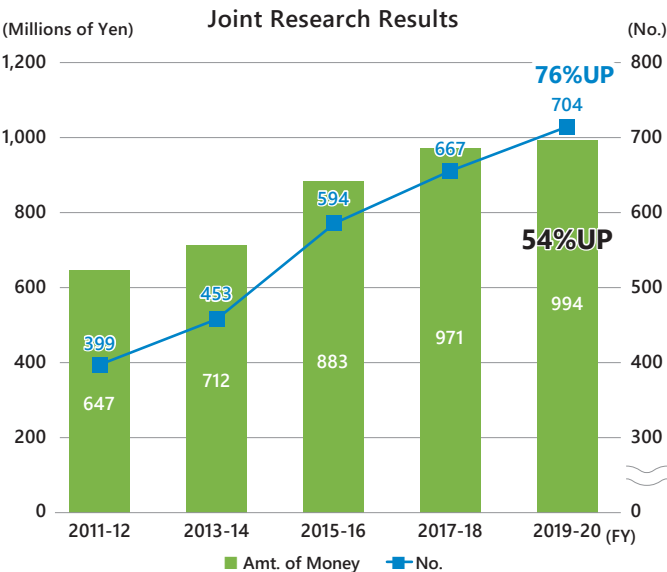
new intellectual property (IP) strategy in collaboration with persons involved in IP management that focuses on IP utilization and takes the management perspective into full consideration. Furthermore, we launched the Okayama University Science, Technology, and Innovation Creation Fellowship (OU Fellowship) framework in FY 2020, and through it are providing support to students in the doctoral degree program.. We established a startup contact point in FY2020 and support faculty and students forming startup companies around new inventions and platform technologies arising from their research. In addition, we also introduced a system that is used to confer the title of "Okayama University Startup" for the startup companies created by Okayama University faculty and students.

Okayama University Priority Research Fields (Fifteen Categories in Three Major Areas)

Fundamental science areas for creating advanced knowledge	Area of Innovation Contributing to SDGs	Area of Medical Research for Clinical Applications
Dynamics of Civilizations/Environment	Advanced Materials Science & Nanotechnology	Strategic Medical Administration Research
Advanced Mathematical & Physical Sciences	Agricultural Science	Advanced Medical Research
Plant Science	ICT for Supporting Society 5.0	Development of Advanced Medical Technology & Welfare Technology
Animal Science	Innovative Materials & Next Generation Device Technology	Platform Supporting Advanced Medicine
Advanced Measurement & Analytics Technologies	Environmental Preservation & Environmental Restoration Technology	
	Regional Research & Policy Research	



*Percentage of papers in the top 10% based on citations by category, year and document type. The larger this number, the higher the percentage of high-quality (or impactful) papers. Numerical values are aggregates of articles and reviews using SciVal benchmarking (Elsevier) as of August 2021.



Efforts Moving Forward: Goals and Plans

In October 2020, Okayama University was selected for funding under the Japanese Cabinet Office's National University Innovation Creation Environment Enhancement Project. The mission of this project is to convert the value created by universities into monetary profit, and efforts to this end are moving steadily forward. At Okayama University, we have established Innovation Management Core (IMaC) and are working to strengthen and expand donation inflows. Through these and other efforts, we have already produced a number of meaningful results. Using the knowledge and results gained through these endeavors, we have been working to improve University revenue structures with the goal of innovation ecosystem building in order to achieve solutions to societal problems through concentration of medical-field resources. In recognition of this, in August 2021 Okayama University was selected by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) for funding under its National University Reform Strengthening Promotion Subsidy (National University Management Reform Promotion Project). All of these efforts serve to greatly bolster the strengths and uniqueness of University research while accelerating industry-academia co-creation, which in turn enable us to diversify fiscal resources and thus strengthen our management foundations.

More specifically, we are stepping up efforts toward academic research promotion and joint-research-based creation, while also working to secure outside funding for our biobank, lending out University equipment for outside use, and undertaking other such projects based on the approach of transforming university resources into monetary profits with the aim of securing increased outside funding. In addition, we have established joint industry-academia-government frameworks for solving regional issues, created the Global Drug Discovery Platform, and undertaken other such efforts which sow the seeds of future profitability. The aforementioned IMaC serves as the basis for all of these efforts, which is why we are deploying it throughout the University as a whole. To this end, we have ensured that IMaC includes Enterprise Risk Management (ERM) functions for purposes of coordinating efforts to direct and control risk in areas necessary for activities aimed at creating value, and based on this we hope to pursue more efficient and effective project operations. By utilizing said systems and projects as catalysts for the University moving forward, we will strengthen University revenue structures while creating an innovation ecosystem rooted in mutually beneficial cycles for human resources, knowledge and funding.

Okayama University Revenue Structure Reform Vision

FY 2020 National University Innovation Creation Environment Enhancement Project

- Measure 1: Establishment of Innovation Management Core (IMaC)
- Measure 2: Adjustment of joint-research cost distribution in order to increase profits
- Measure 3: Establishment and implementation of a new intellectual property strategy
- Measure 4: Strengthening and expanding donation-procurement frameworks
- Measure 5: Creation of local-company participatory organizations via the graduate school reform program
- Measure 6: Support for and collaborative efforts with Okayama University-based startups and other projects
- Measure 7: Provision of common-use equipment to outside organizations both domestically and internationally
- Measure 8: Creation of new value and increasing of profits through University Hospital projects outside of the medical care operations
- Measure 9: Strengthening of the University brand

Changes in Thinking

- Viewing the University as a profit center rather than a cost center
- Unearthing latent ideas that can convert previously-unutilized resources into means of profit (medical information, imaging information, biobank data and samples, unutilized spaces, equipment usages, intellectual property, etc.)
- Stronger enterprise risk management (ERM) management system

FY 2021 National University Management Reform Promotion Project

By greatly bolstering the strengths and uniqueness of University research through large-scale concentration of resources in the field of medicine specifically, we will pursue major joint research projects in this field together with organizations throughout the local region, nation and world

- I. Participation in the "Super City" Initiative
 - 1. Pursue solutions to regional problems and creation of new industry-academia collaboration means through participation in the Super City Initiative
- II. Concentration of resources to further bolster existing medical-field strengths
 - 1. Establish the Lead Discovery Center Japan (LDCJapan) as a new international drug discovery platform
 - 2. Promote greater provision of clinical specimens from hospital-affiliated biobanks and increased efficiency therein
 - 3. Increase procurement of public and private research funds by utilizing the tumor-infiltrating lymphocytes biobank
- III. Further strengthening of innovation management functions
 - 1. Promote greater sharing of University-held equipment
 - 2. Carry out University-wide ERM training

"Defensive DX" and "Offensive DX"

Cross-organizational discussions make learning convenient and effective for students and realize efficient and effective work environments for faculty and staff.



Efforts Moving Forward: Goals and Plans

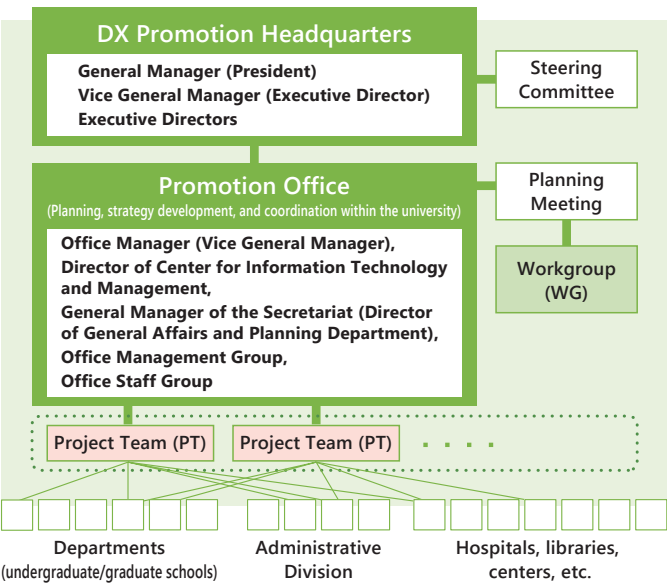
Our university established the DX Promotion Headquarters in January 2021 and appointed an executive director to lead DX promotion in April with the goal of enhancing education, research and university management through the use of digital technology. Prior to this, from February 2020, as a countermeasure for the COVID-19 pandemic, we were quickly accelerating the use of digital technology through on-demand lectures, online seminars, and video conferencing, in order to maintain and continue university functions. These efforts have also revealed the advantages of digital technology. In terms of education, they add flexibility to the time and place for learning and give students the ability to learn at their own pace, and in terms of university administration, they allow staff to watch videos of missed meetings to gain greater understanding of meetings than they would from just reading the minutes. Post-pandemic, we hope to leverage the strengths of face-to-face and digital interactions to create initiatives that complement each other. DX can be thought as "Defensive DX" and "Offensive DX". "Defensive DX" refers to the streamlining of operations, for example by making online versions of various applications and automating data organization, while "Offensive DX" refers to the use of AI and other technologies to provide new services to stakeholders based on the data held by the university. In order to realize these, it is essential to consider the overall optimization of the entire university across organizations, rather than individual optimization in vertically divided organizations. For this reason, members selected from various departments created project

teams to identify issues with original ideas while working on their main duties in the background. At the same time, while learning about the situations in other departments, members discuss DX from a university-wide perspective and work to resolve issues. Prior to promoting DX, comments were collected from faculty and staff throughout the university on items they would like to see realized through DX. As a result, it became clear that there was a high level of interest in DX regardless of the type of work, with the majority of comments related to process-intensive work. In this way, we try to understand needs and start working on the those with the highest priority with quick and flexible development (agile software development) in order to increase user satisfaction. We will continue to work with the goal of changing the university culture through DX.



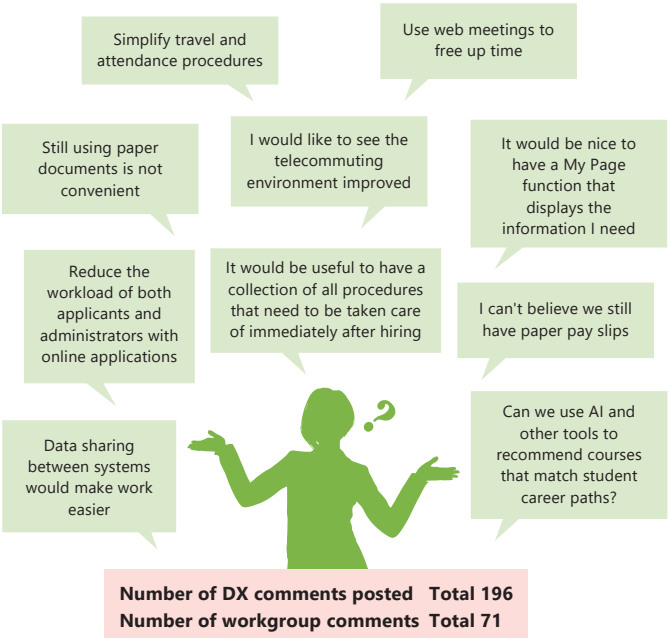
A workgroup led by young to mid-career staff from various departments organizes work tasks and exchanges comments (crossing boundaries to eliminate vertical organizational divisions)

DX Promotion Headquarters Organization Chart



Organizing a cross-departmental system

The promotion office and workgroup identify issues for the entire university, and the promotion headquarters decides on the issues to be tackled. A team of staff selected from relevant departments form a project team to solve the problem!



A "DX Comment Box" was set up to solicit opinions from faculty and staff. A total of 267 comments were gathered, including those of the workgroup.

Realizing an Innovation Commons

In order to transform the entire campus into an Innovation Commons, we are constructing a wooden facility called the Co-learning Co-creation Commons, which will become a new symbol of the university under the supervision of Professor KUMA Kengo.



Efforts Moving Forward: Goals and Plans

In order to further promote SDG university management, the entire campus must be transformed into an Innovation Commons. An Innovation Commons is a campus where players across all fields and situations can co-create by integrating soft and hard initiatives while fusing face-to-face and online communication. In this way, the entire campus, including educational and research facilities as well as cafeterias, dormitories, and outdoor spaces, becomes an organically collaborating co-creation base. By transforming the entire campus into an Innovation Commons, we can contribute to the advancement, diversification, and internationalization of education and research through co-creation by a diverse group of students and researchers across disciplines, and also contribute to local community creation, regional disaster prevention, and the creation of new businesses through co-creation with local communities and industries. To start these efforts, the university has begun construction of the Co-learning Co-creation Commons, a symbol of the university, in conjunction with the launch of the new Faculty of Engineering. This Co-learning Co-creation Commons is a two-story wooden facility that utilizes environmentally friendly CLT^{*1} (Cross Laminated Timber) to contribute to carbon neutrality. The design and construction of the building is being supervised

by Professor KUMA Kengo, a world-renowned architect and special invited professor at the university, and completion is scheduled for November 2022. The concept of the facility is "a place for new exchanges and co-creation for revitalizing local industries". The facility has a large lecture room with a capacity of 300 people that can be used flexibly and a Co-creation Lab that can be used as a joint research base. The building will host a wide range of applications, from open collaborative projects to highly confidential joint research as well as lectures and workshops on the latest digital technologies and hackathons^{*2} where working adults and students compete with their ideas. With the construction of the Co-learning Co-creation Commons, the university aims to become an Innovation Commons where the entire campus collaborates organically and where players across all fields and situations can co-create as a research university committed to building the ideal future and pursuing co-creation.

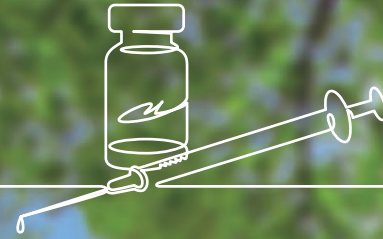
^{*1} CLT: A material made from wood in which ground boards are lined up and then laminated and bonded so that the direction of the grain is perpendicular. This enables larger scale construction compared to conventional wood.
^{*2} Hackathon: A word created from a combination of marathon and hack. An event where engineers, designers, planners, etc., create teams to develop services or systems in a short period of time in response to a given theme, and compete to produce the best results.



Rendering of the Co-learning Co-creation Commons (exterior)

Rendering of the Co-learning Co-creation Commons (lecture hall)

"Pay it Forward" +
"Living Together in the Here and Now"
(Part 2 of 3)



Successful University-based Vaccinations by "Team Okayama University"

In the summer of 2021, Okayama University successfully carried out COVID-19 vaccinations in University facilities. With the goals of reducing the burden of vaccination among community members and speeding up the overall vaccination process, while also giving back to the local community containing a wish for pay it forward as thanks for their various contributions to the University, teaching staff and students came together as "Team Okayama University" to administer COVID-19 vaccinations. The team faced various challenges during the preparatory stages and in health-monitoring efforts following vaccinations, but they overcame these to successfully provide approximately 24,000 doses of the vaccine to University students and teachers who requested them as well as students and teachers at nearby universities and vocational schools, members of local corporations, and others. These efforts were part of the wider "leaving no one behind" philosophy of the Sustainable Development Goals (SDGs). Moving forward, everyone at the University hopes that students, teaching staff and members of the local community will be able to live more safe, worry-free lives moving forward as the result of these vaccination efforts.



IV. Results

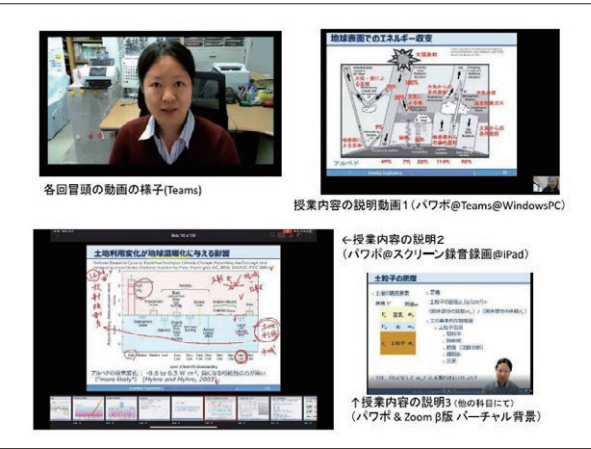
Partnerships Supporting University Education in the COVID-19 Pandemic

In partnerships between students, the community, and the university, digital technology was used to provide education during the COVID-19 pandemic.



Team Okayama University expands online education

When it was difficult to conduct face-to-face classes during the COVID-19 pandemic, the university held classes online. Faculty members received guidance training to introduce online classes. We also conducted a survey on the online environments of students, and found that about 20% of the students had worries about their network environment, sharing comments such as "I don't know what online environment I have". In response, we have taken measures such as lending equipment at the university's expense and improving the network environment on campus. Additionally, we provided training on designing classes from the student's point of view in order to implement high-level, individualized online learning to realize student-centered university education. As a result of these measures, the number of students who answered "satisfied/somewhat satisfied" in the overall satisfaction survey for online classes rose from about 50% in quarters 1 and 2 of FY 2020 to about 60% in quarters 3 and 4.



Online class in progress

<https://www.iess.csv.okayama-u.ac.jp/hedi/edtech-onlinesupport/>

Overcoming the COVID-19 pandemic with the strength of the students, the community, and the university!

"We want to overcome the unprecedented situation of the COVID-19 pandemic ourselves, not just by waiting for help from the university or society." This idea was the starting point of the "WIN-WIN Student Project". The project started with a food support initiative for students. Next, they launched a mosaic art project by collecting photos of smiling students. Under the idea "Living together in the here and now," 10,000

photos were collected from around 5,000 students, faculty members, and famous alumni. With these photos, they completed a mosaic-style art panel made in the motif of photo of the library taken by President MAKINO Hirofumi. The 90 cm by 180 cm panel was also displayed to send off the graduates at the FY 2020 graduation ceremony. https://www.okayama-u.ac.jp/eng/news/index_id10187.html

Mosaic Art Piece "Living Together in the Here and Now"



High School/University Partnerships: Okayama Revitalization High School Power-up Project

Since FY 2016, we have provided support and advice for the promotion of regional studies to improve the attractiveness of prefectural high schools in a project commissioned by the Okayama Prefectural Office of Education. The purpose of this project is to make high schools more attractive as places that contribute to the development of the next generation of leaders and to the revitalization of the local community through educational activities aimed at utilizing local resources and solving local issues. Okayama University has appointed a supervisor and advisor for this project at the Academic and General Okayama University Regional Research Association (AGORA) and provides guidance and advice based on its knowledge of practical socially collaborative education as well as lectures for students and faculty. In FY 2020, activities in the community were greatly restricted to prevent the spread of COVID-19. However, the program used methods that had not been tried before, such as ICT. In addition, although a forum on making high school more attractive with the local community was held on a smaller scale this fiscal year with a limited number of participants, we were able to ensure that more people had the

opportunity to view it through video streaming. The event provides an opportunity for schools with strong regional studies initiatives to showcase their efforts.



Okayama Revitalization High School Power-up Project

<https://www.pref.okayama.jp/site/182/687267.html>

Non-traditional student programs

In order to move forward with Society 5.0, it is becoming increasingly important for workers to acquire knowledge and skills that promote secure use of IoT and AI, especially for people working in small and medium-sized enterprises. In response to these demands from society, Okayama University launched the "Okayama IoT/AI/Security Course" on August 17, 2020. The course consisted of more than 20 videos on demand (VOD) and project-based learning (PBL) exercises on IoT, AI, and security. The number of participants exceeded the originally planned capacity of 30, eventually reaching 45 from within the prefecture and 4 from outside the prefecture (49 in total). Due to the effects of COVID-19, equipment for the exercises was sent to the participants so that they could use the VODs and the PBL exercises online. For the PBL exercises in particular, remote distribution was provided with Cisco Webex and multiple TA students were assigned to assist with question-and-answer sessions via Slack chat so that the students could better understand the material.



Online class in progress

<https://isec.ec.okayama-u.ac.jp/oias/>

Don't Lose to Corona! Protect Campus Together Project by the Okayama University Cheer Team

The Okayama University Cheer Team is taking the initiative by calling on students to take measures against COVID-19. The cheer team believe that it is precisely at times like these that students need to hear, "Don't Lose to Corona!" The Protect Campus Together Project by the Okayama University Cheer Team was set up to encourage students to take thorough measures to prevent infection and also to use the university's official YouTube site to share information on club activities that have implemented strict measures against COVID-19. The team wanted to do what they could with their specialty of cheering, so they introduced unique activities from various clubs and subtitled videos to attract the attention of the viewers.



Protect Campus Together Project by the Okayama University Cheer Team (Okayama University channel)



SDG Ambassadors Connect their Studies on the SDGs to Voluntary Initiatives

Students are taking what they learned about SDGs to work on them as their own problems (jibungoto) and seeking to further deepen their knowledge.



Tackling the SDGs as "Jibungoto"

Okayama University SDG Ambassadors are students who take what they learn about SDGs at the university, share their knowledge with others, and work on the SDGs as their own problems, or "jibungoto". They deepen their own studies about food, education, environmental issues, gender equality, and other topics of interest, and work to solve a variety of issues as "jibungoto".

In collaboration with the university Co-op, a group of ambassadors that was working with TABLE FOR TWO (TFT), which provides healthy school meals and donates 20 yen of the price to school lunch expenses in developing countries, started offering takeout TFT lunch boxes when the school cafeteria had to close due to the COVID-19 pandemic.

Another group that was planning a student-led class on the SDGs was considering inviting companies for face-to-face talks on their initiatives, but when classes went online due to the COVID-19 pandemic, they took the opportunity to reach out to companies not only in Okayama but also outside of the prefecture to provide opportunities to hear about diverse initiatives online.

Students from the Faculty of Health Sciences took issue with the fact that the nursing uniforms they had used for training were being tossed out as medical waste and used the COVID-19 pandemic as an opportunity to work with companies to recycle them.



TFT lunchboxes born in the COVID-19 pandemic



Products remade from nursing uniforms



Online class in progress

Okayama University SDGs President Award

In FY 2020, Okayama University established the Okayama University SDGs President Award to recognize efforts by faculty, staff and student groups to realize the SDGs. One award for excellence was given in each of the education and research fields, and two awards were given in the student group field and 12 awards were given for encouragement. In the student group field, Okayama University TABLE FOR TWO, which was mentioned above, and SHARE&CHILL!!, which supports Vietnamese technical trainees with Japanese language learning and cultural exchange activities, won the Excellence Award. Most of the entries were from students. We found that students, inspired by the activities of the SDG Ambassadors, are promoting a wide range of initiatives. Going forward, we hope that activities to achieve the SDGs will continue to expand and we will continue to award those efforts.



Commemorative photo

Student receiving an award

Interview with SDG ambassador KUBO Shunki creator of ABABA Inc.

What motivated you to become an SDG ambassador?

The year I transferred to Okayama University to do research on meteorology was the year the SDGs Ambassadors program started. I had the impression that SDG Ambassadors were active and aware of social issues, so I wanted to connect with them and ended up becoming one. I am grateful for the university's depth of support for SDG Ambassadors.

What kind of activities did you do as an SDG ambassador?

We planned a student-led class on the SDGs. Together with the supervising faculty, we did everything from planning to management. It was a strange feeling to take a class that we created ourselves, but many other students took the class, and I felt that it was worth the effort to create it.

How do you apply your experience as an SDG ambassador to your current business?

I think my awareness of social issues has changed dramatically. My current business was initially inspired by my friend's employment problems, but I am now working to solve problems with the employment system, which is a larger social issue in the background.

Do you have anything to say to Okayama University students?

With the right mindset, students can make time to try many things. It may be difficult to suddenly solve a major social issue, so start by solving the problems close to you and the people around you. Eventually you will find the path to solving major social issues. I believe that every student at Okayama University has this potential. Take a chance without worrying about failure or what others say.



KUBO Shunki

Okadai students with up-to-date info on the university!

Okadai Media (OTD), a university approved information sharing app created with No-code development, was released in March 2021. It provides students with up-to-date information from students about Okayama University, including information on club activities and circles, seminars and laboratories, and restaurants in the university area. OTD was developed by KUBO Shunki on request. Mr. Kubo is a graduate student at Okayama University and CEO of ABABA Inc. and won the Minister of Economy, Trade and Industry Award at the Campus Venture Grand Prix National Tournament, known as a gateway to success for student entrepreneurs. SDG Ambassadors are involved in the management of OTD, and following the release of the app, a web version has been released to share the appeal of Okayama University to a wider audience.



Promoting Online International Exchange with Students from Countries Around the World and Global Engagement

We are actively making contributions toward the achievement of SDGs through online international exchange with students from countries around the world and developing strong connections with international organizations.



A CLS Program Connected by SDGs

Our university was the first national university to be chosen as a destination for students of U.S. Department of State's Critical Language Scholarship (CLS) Program. From FY 2019, we have been providing an intensive Japanese language and culture learning program to the leading undergraduate and graduate students from across the United States selected by the U.S. Department of State. Although we were unable to provide an actual study in Japan experience in our second year of the program in FY 2020, due to effects of the global COVID-19 pandemic, we could conduct a 7-week online program from October through November that was attended by 13 undergraduate and graduate students selected from across the United States. In addition to holding Japanese classes as part of the program, Okayama University students had conversations held in Japanese with their student conversation partners in the CLS program. Other SDG themed live educational sessions that were provided included a virtual experience of a biotope managed by the Faculty of Environmental Science and Technology, student interactions with students from Yakage High School, and extramural cultural activities including the opportunity to attend a tea ceremony. In the final evaluation, we were awarded the highest marks among the 15 language programs that were conducted across the globe as part of the CLS Program.

https://www.okayama-u.ac.jp/eng/news/index_id9751.html



Scenes of a virtual tour of a biotope at our university



Online interaction with local high school students

Engagement with international organizations using SDGs as a common language

We are strengthening our ties with the United Nations and other international organizations. Based on a Memorandum of Understanding (MoU) with the United Nations Conference on Trade and Development (UNCTAD), we are conducting "The Young Female Scientist Programme in Japan," and held an online kick-off ceremony in November 2020. Seven young female researchers from Africa and ASEAN countries attended the course. In 2021, we launched a doctoral degree program together with UNCTAD to promote the training of human resources for Science, Technology and Innovation for Sustainable Development Goals (STI for SDGs). In addition, Okayama University concluded a MoU with Earth Charter International (ECI) in June 2020 to promote the Earth Charter (EC), which is recommended by UNESCO as an ethical framework for ESD for 2030. We introduced an online education program provided by the EC and was being used for education to cultivate global leaders in Japan. Later that year in September, UNESCO Chairholder from our university took the stage at a seminar commemorating the 20th anniversary of the EC's enactment to share with the world our efforts toward the achievement of SDGs.

https://www.okayama-u.ac.jp/eng/news/index_id9923.html

https://www.okayama-u.ac.jp/eng/news/index_id9532.html



Commemorative photo with young female scientists and UNCTAD representatives



Scene from the conclusion of a Memorandum of Understanding (MoU) with Earth Charter International (ECI)

Placing in the Top 200 Universities Globally in THE Impact Rankings and the Top Level in Japan

"THE Impact Rankings 2021" were announced in the "Times Higher Education (THE)" British higher education professional magazine. We ranked in all of the 5 goals where Okayama University had made an entry (SDG3: GOOD HEALTH AND WELL-BEING, SDG9: INDUSTRY, INNOVATION AND INFRASTRUCTURE, SDG11: SUSTAINABLE CITIES AND COMMUNITIES, SDG16: PEACE, JUSTICE AND STRONG INSTITUTIONS, and SDG17: PARTNERSHIPS FOR THE GOALS). Our medical care and welfare service activities provided in collaboration with local communities were awarded a particularly high ranking (tied for the top 90 in the world for SDG3). In the overall rankings, we placed within the top 200 (101-200 rank grouping) globally along with six universities in Japan (Hiroshima University, Hokkaido University, Kyoto University, Tohoku University, the University of Tokyo, and the University of Tsukuba) to rank at the top level in Japan. The fact that we were able to steadily improve from our 201-300

ranking last year despite a sharp increase in the number of participating universities from 768 universities last year to 1,115 universities (and from 63 universities to 73 universities in Japan) shows that our successes in SDG University Management have been highly recognized.



THE Impact Rankings 2021 logo (Okayama University)

https://www.timeshighereducation.com/rankings/impact/2021/overall#!/page/0/length/25/sort_by/rank/sort_order/asc/cols/undefined

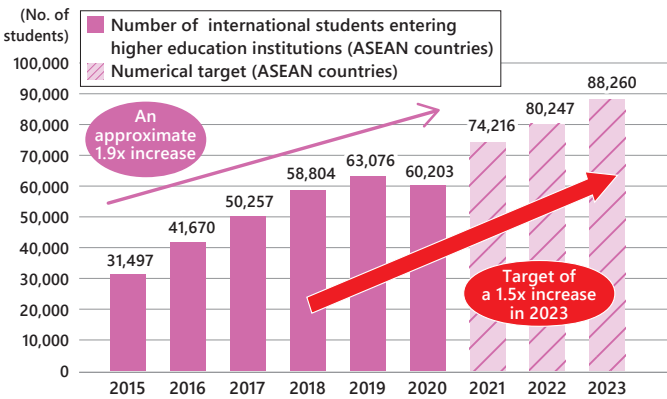
Online Study in Japan Fairs and Seminars in ASEAN Countries

Our university oversees Study in Japan Global Network Project in ASEAN commissioned by Ministry of Education, Culture, Sports, Science and Technology (MEXT) in coordination with Japanese and local universities and education institutions including Six National Universities in Japan (Chiba, Niigata, Kanazawa, Nagasaki, Kumamoto, and Okayama) to recruit top-level international students from ASEAN countries. In FY 2020, we held 43 online seminars of various types including academic seminars and career seminars, looking ahead towards employment in Japan, and 3 online Study in Japan fairs that had a total of 3,900 participants from 9 ASEAN countries.

<https://studyin-japan-asean.jp/index.php?lg=en&page=>

These events were full of information such as university introductions, mock lectures from faculty members, experience talks by international students and question & answer sessions as well as explanations on scholarships and admissions that are of high interest for those who wish to study in Japan. Conducting these online events resulted in an increase in students that wanted to casually gather information on studying in Japan and to participate in such events from regional cities, and were able to attract more potential students than in the past.

Number of International Students Entering Institutions of Higher Education in Japan from ASEAN Countries



Source: The Japan Student Services Organization (JASSO) Survey Results of the Foreign International Student Enrollment Status



Online seminar for ASEAN countries

Research Strengthening by Supporting Young Researchers and Building a Research Support System Across the University

Aiming to become a research university that ranks among the best in the world, we are building a university-wide research support system while fostering young researchers to strengthen research.



Establishing and implementing a university-wide support system for young researchers

We are certifying associate professors with outstanding research achievements as research professors. In FY 2020 we established an Associate Research Professor Program that was expanded to be provided to lecturers and assistant professors. We are providing support including the offering of research funds to research professors and associate research professors and providing research support staff.

In addition, we have established and are implementing the following Incentive and Support Package for Young Researchers from FY 2020 that expands upon the previous initiatives.

(1) The Tenure Track Junior System to recruit outstanding young researchers and the Sci-tech Coordinator System to recruit young highly specialized engineers, (2) employment support of science and technology research support staff and research scholarship grants for young research professors, and (3) the Young Scientists Academy (a gathering of like-minded individuals to establish of a young researcher network and promote of human resource development). We are providing support as part of the Incentive and Support Package for Young Researchers in ways such as recruiting

12 assistant professors based on the Tenure Track Junior System in FY 2020, assisting young researchers with research expenses, and strengthening the network among young researchers by holding discussions.

Moreover, we held special lectures and discussions with the 2019 Nobel Prize in Chemistry winner and Asahi Kasei Corp. honorary fellow YOSHINO Akira for young researchers where they received words of encouragement and advice.



Honorary fellow YOSHINO Akira providing a lecture

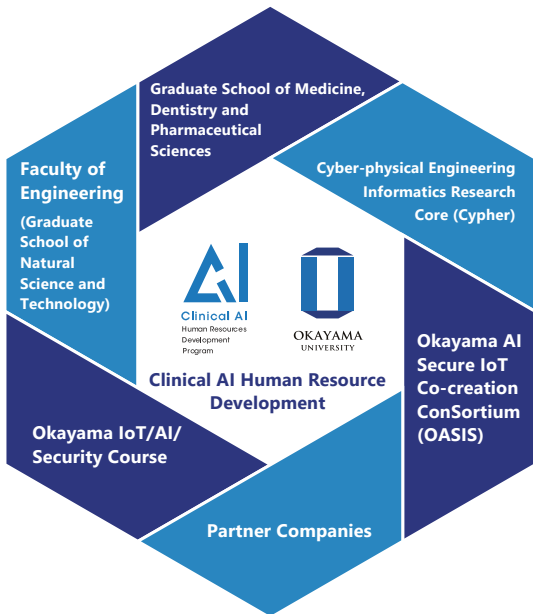
Training of human resources to conduct cutting-edge AI research and development across the university through interdisciplinary collaboration and collaboration between industry and academia

We established the following initiatives as an organization associated with field of AI and data science from FY 2019 to FY 2020.

- An endowed course to foster human resource development among working adults who are capable of utilizing AI and data science called the Okayama IoT/AI/Security Course
- The Okayama AI Secure IoT Co-creation ConSortium (OASIS) that gathers together companies that want to conduct joint research in the field of AI and data science and university researchers to promote joint research based on multifaceted collaboration.
- Cyber-physical Engineering Informatics Research Core (Cypher) transcends beyond assigned departments to gather researchers across the university to work together on AI and data science applied research and real-life societal applications. In addition, after our application was accepted to the Ministry of Education, Culture, Sports, Science and Technology (MEXT)'s Industry-Academia Collaboration Project for Human Resource Development to Accelerate AI Research and Development in the Health and Medical Field in FY 2020, we established a base for the training of human resources at Okayama University for the Cutting-Edge AI Research and Development to Achieve Solutions for Global & Local Medical Issues in collaboration with Tohoku University and Hokkaido University. This base collaborates across disciplines with the three organizations mentioned above and the Medical School (Graduate School of Medicine, Dentistry and Pharmaceutical Sciences) and the new Faculty of Engineering to produce enhanced human resources in the clinical AI field. Furthermore, we are developing real-life societal applications of

AI by collaborating with private companies that are working in AI development to cultivate human resources that can solve medical issues using AI.

Okayama University Human Resources Training Base System



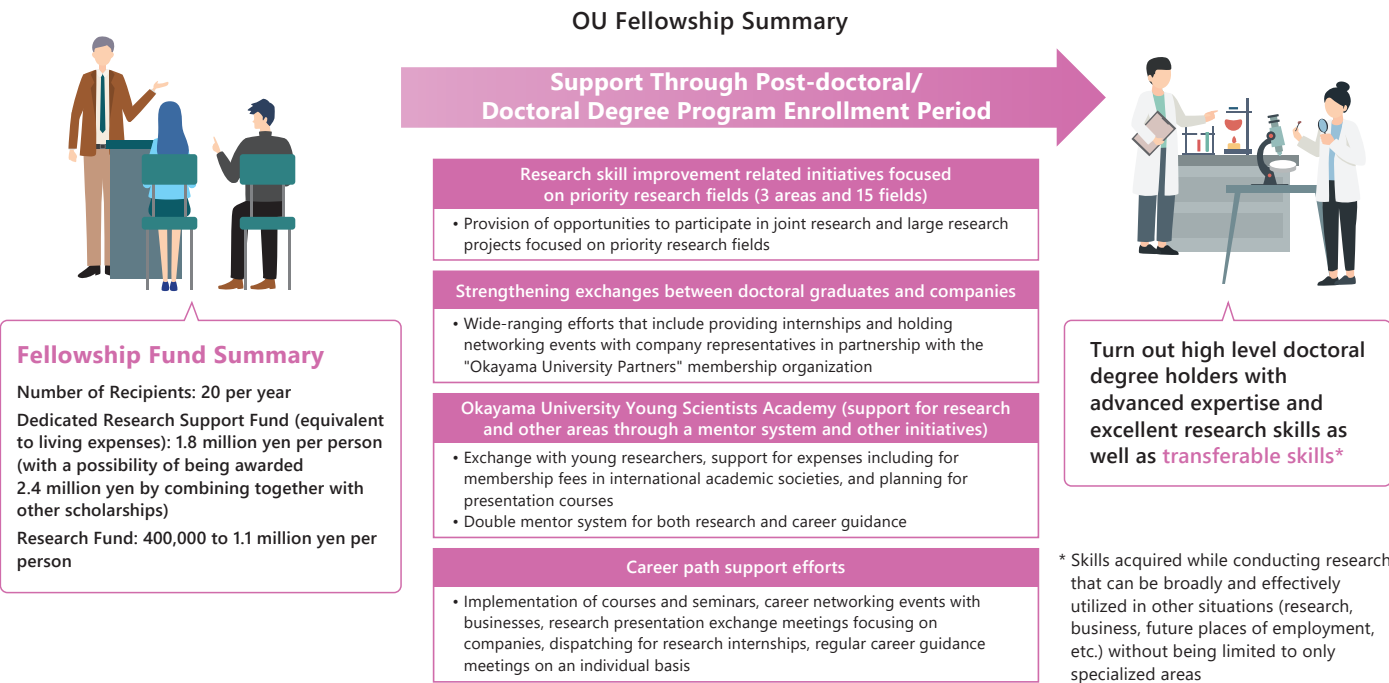
Establishment of the OU Fellowship to Support Students Pursuing Entering the Post-doctoral/Doctoral Degree Programs

In support of the training of young researchers, we established the Okayama University Science, Technology, and Innovation Creation Fellowship (OU Fellowship) that supports those pursuing entering the graduate school post-doctoral program and doctoral degree programs.

Individuals certified in the program receive research funding (from 400,000 yen to 1.1 million yen) as a fellowship (research scholarship) and dedicated research support funding (an equivalent amount to living expenses for a year of 1.8 million yen) and are also receive support provided under various initiatives for research skill improvement and the securing of a career path.

In FY 2020, ten individuals were selected as the inaugural class among those planning to enter the university in April 2021. At the certificate award ceremony held on April 21, 2021, President MAKINO Hirofumi presented the certificates to the awardees, offering his words of encouragement saying "Please put your best effort forward so that you can be role model for those who follow."

The OU Fellowship will continue into FY 2022 to turn out high level doctoral degree holders with advanced expertise and excellent research skills as well as transferable skills (convertible and practically applicable skills).



Promotion of Sharing and External Use of Research Facilities and Devices

In addition to promoting the sharing of research facilities and devices through university-wide management, we are promoting external use including for industry.

Specifically, we are working (1) to establish a facility sharing portal (a system that can integrate the searching of shared facilities/devices across the university, reservation application, and usage fee collection), and (2) to expand the industrial use of CASTEM 24 Remote* (Institute for Planetary Materials). The research facilities and devices at our university are a shared university resource that improve our research capabilities as well as realize outstanding results in research by being utilized their fullest potential.

*CASTEM is a comprehensive analytical system for terrestrial and extraterrestrial materials that organically coordinates 22 main analysis equipment so that this equipment can be operated in the same manner as if operating a single device. Currently CASTEM is being employed to perform higher order curation analysis of asteroid surface layer material brought back to earth by Hayabusa2. CASTEM began to be operated as CASTEM 24 Remote by incorporating a system that makes this possible through remote access, expanding its industrial uses.



Director and Vice-President of Research NASU Yasutomo views a sample of the asteroid Ryugu under the guidance Specially-Appointed Professor NAKAMURA Eizo

“Research Institute for Interdisciplinary Science (RIIS)” takes on the challenge of Interdisciplinary Basic Science

We proceed new approaches to basic science research by promoting the fusion of physics and biological science, Okayama University's two areas of strength, to solve problems of modern society



Overview of the Research Institute for Interdisciplinary Science

In this research institute, we promote the interdisciplinary research of the quantum universe and neutrino research, photosynthesis and structural biology, and superconducting materials and device science, by deepening and fusing two different areas of research, i.e., physics and basic biological science, which represent the strengths of this university.

Activities to incentivize and support young researchers utilizing the human and material resources of this research institute are being progressed. In FY 2018, the Division of Interdisciplinary Science was set up in the second semester of the doctoral course in the Graduate School of Natural Science and Technology. In this division, full-time teachers of this research institute are in charge of coursework and research guidance. We are also making efforts to internationalize research, e.g., forming research groups by employing two world class special-appointment professors from overseas through international open recruitment.

In March 2021, the Research Institute for Interdisciplinary Science building was completed. Interdisciplinary science research, nurturing of young researchers, and globalization of research activities will be promoted in this new environment for further development of RIIS as a center for basic research at this university.



Research Institute for Interdisciplinary Science Building (completed in March 2021)

Research at the Research Institute for Interdisciplinary Science

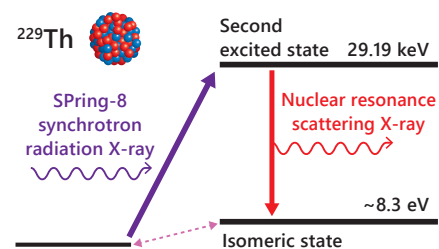
The RIIS consists of three divisions: Division of Quantum Universe, Division of Photosynthesis and Structural Biology, and Division of Superconducting and Functional Materials. Even from before the foundation of this research institute in 2016, these research areas have been given intensive support through the Ministry of Education, Culture, Sports, Science and Technology (MEXT) program for promoting the enhancement of research universities, and intensification of research capability is currently underway by means of the International Research Center Formation Program to Accelerate Okayama University Reform (RECTOR) and other activities.

Our research results are favorably represented with many published reports, comprising 47 of the top 1% most cited documents and

230 of the top 10% most cited documents during the 5-year period from 2016 to 2020. The percentages of top 1% and top 10% most cited documents were extremely high, 4.3% and 21%, respectively, during this period. A total of 294 competitive external funds (including ongoing funds) were acquired by our researchers as research representatives during the 6 years between 2016 and 2021, and the total amount of the funds was about 1.6 billion yen. In particular, our research has been adopted for large-scale projects such as specially promoted research, basic research (S), basic research (A), innovative areas supported by Grants-in-Aid for Scientific Research and strategic basic research programs such as Core Research for Evolutional Science and Technology (CREST) and PRESTO sakigake, and the Human Frontier Science Program (HFSP).

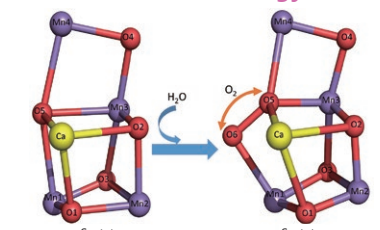
Noteworthy research achievements

Division of Quantum Universe



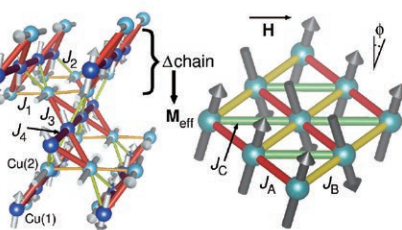
Active production of nuclear state with the lowest energy in nature
We were the first in the world to succeed in active production of the excited state (isomeric state) of thorium-229 with the lowest energy of all nuclei. This marks a major step toward the realization of a nuclear clock.

Division of Photosynthesis and Structural Biology



Mechanism of photosynthetic water-splitting reaction
We clarified how the catalytic Mn₄CaO₅ cluster with its “distorted chair” shape degrades water into oxygen and hydrogen using light energy through the mechanism of photosynthesis. We accurately determined the three-dimensional structure of S₁ (state at initiation of reaction) and S₃ (state just before generation of oxygen). This is expected to be an important finding for the development of artificial photosynthesis technology.

Division of Superconducting and Functional Materials



Magnetic structure of magnetic substances elucidated by the density functional method
We built a magnetic model that produces the characteristic magnetic properties of the copper ore atacamite. We clarified that a serrated spin configuration, which has long been studied from theoretical interest, lies in the background of the magnetic properties. This finding allows us to link various experimental facts to theoretical models, promising further development of both theories and experiments.

Researchers Fighting COVID-19

Various researchers in our university are conducting studies on COVID-19. Some of these frontline activities are introduced below.



Development of Portable Aerosol Shield for Emergency Transport

Professor NAKAO Atsunori, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences (Medical Corporation)

Assistant Professor TSUKAHARA Kouhei, Department of Emergency and Critical Care Medicine, Okayama University Hospital

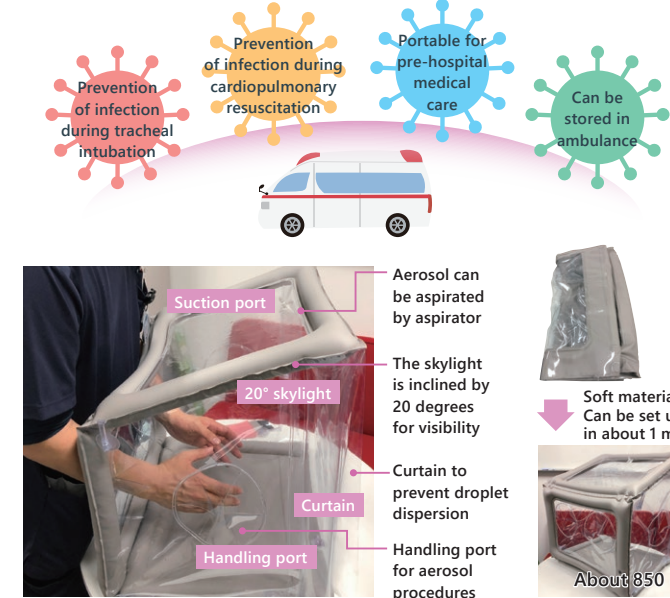


COVID-19 is causing an enormous impact on the world. Ambulance attendants are at the forefront of dealing with the transport of COVID-19 patients with moderate and severe illness. They may be exposed to viral droplets and aerosols when a patient coughs severely or undergoes resuscitation for cardiac arrest in the ambulance. As such, through an industry-academia-government collaboration with the Senshuminamikoiki Fire Department, Okayama Fire Department, and HIVIX CO., LTD., we developed the foldable and easy to handle “Portable Aerosol Shield” protection tool that can be equipped as standard in every ambulance. The developed product is made of inflatable balloon material and can be assembled easily in an ambulance. Its structure enables treatment suitable for the patient's condition and state of health and it is equipped with a suction mechanism. Simulated aerosol visualization experiments confirmed that this product achieves a decrease in droplet dispersion by about 70% compared with no shield.

Currently, demonstration experiments are underway with the aim of its implementation in society within FY 2021. In these demonstration experiments, the operability, durability, and safety of this product are examined by using it during the actual transport of patients. Envisaging the handling unknown infections diseases, verification of the product is being continued to promote infection control with a view to living with COVID-19 (“with corona”) and after the COVID-19 pandemic is over (“after corona”).

Protecting ambulance attendants!! Portable Aerosol Shield

Supporting rapid transport, life-saving procedures, etc.!!
For rescuing injured and sick people!



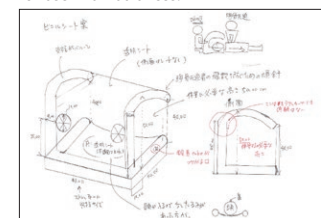
Introduction to the research and development phases

Phase 1: Fundamental research

The development concept was formulated from problems in emergency transport.



Problem: Acrylic sheets are not suitable for use in ambulances.



Development concept

This research was supported by Grant-in-Aid for COVID-19 Research from the Okayama University Academic Capital Foundation and FY 2021 contract research funds from the System to Promote Fire and Disaster Science and Technology Research of the Fire and Disaster Management Agency.

Phase 2: Base/application research

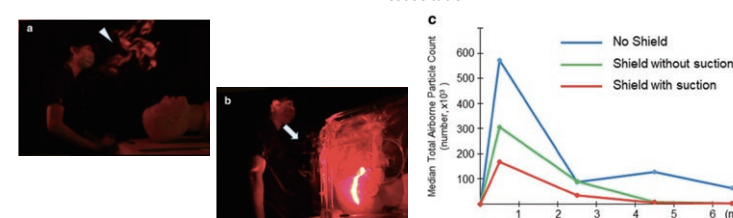
The prototype was created, and its application in emergency and rescue procedures was investigated. The shielding performance was examined using simulated aerosol.



Airway confirmation

Cardiopulmonary resuscitation

Back raising



Verification of shielding performance

Tsukahara et al. Critical Care (2020) 24:651

Phase 3: Social implementation research

A feeling of reassurance was reported by users in demonstration experiments. Demonstration experiments: July to the end of August 2021 Okayama Fire Department, Senshuminamikoiki Fire Department



Video manual (setting up)



Video manual (suction)

Creating Innovations Through "Organization-to-Organization" Collaboration

Making efforts in "organization-to-organization" collaboration with various stakeholders including companies, research institutions, and local governments to strengthen industry-academia co-creation.



Making contributions to industry-academia co-creation and local societies through the formation of "places for co-creation"

We established the Innovation Management Core (IMaC) in October 2021 to build an innovation ecosystem that serves as a center to promote new innovation across the university with an integrated function for academic research, collaboration between industry and academia, and intermediary support. IMaC's aim is to continue to provide new value for society together with university reform by contributing to the acceleration of the strengthening our financial base, the diversification of our revenue sources, the strengthening of our academic and research capabilities, the development of human resources, and the creation of corporate business and new business. IMaC accomplishes this through the building of an innovation ecosystem that works between disciplines with a university-wide organization to collaborate between industry and academia and accelerate co-creation from the strengthening basic research.

IMaC conducts "Organization-to-Organization" co-creation activities while applying project management with a project team formed by faculty, administrative staff, and URA that transcends beyond the assigned organizations at the university.

In addition to fields responsible for the strengthening of research capabilities, industry-academia-government collaboration, and venture support, an Intellectual Property Strategy Unit that formulates and implements the intellectual property strategy and a Unit for Enterprise Risk Management (ERM) on the Creation of

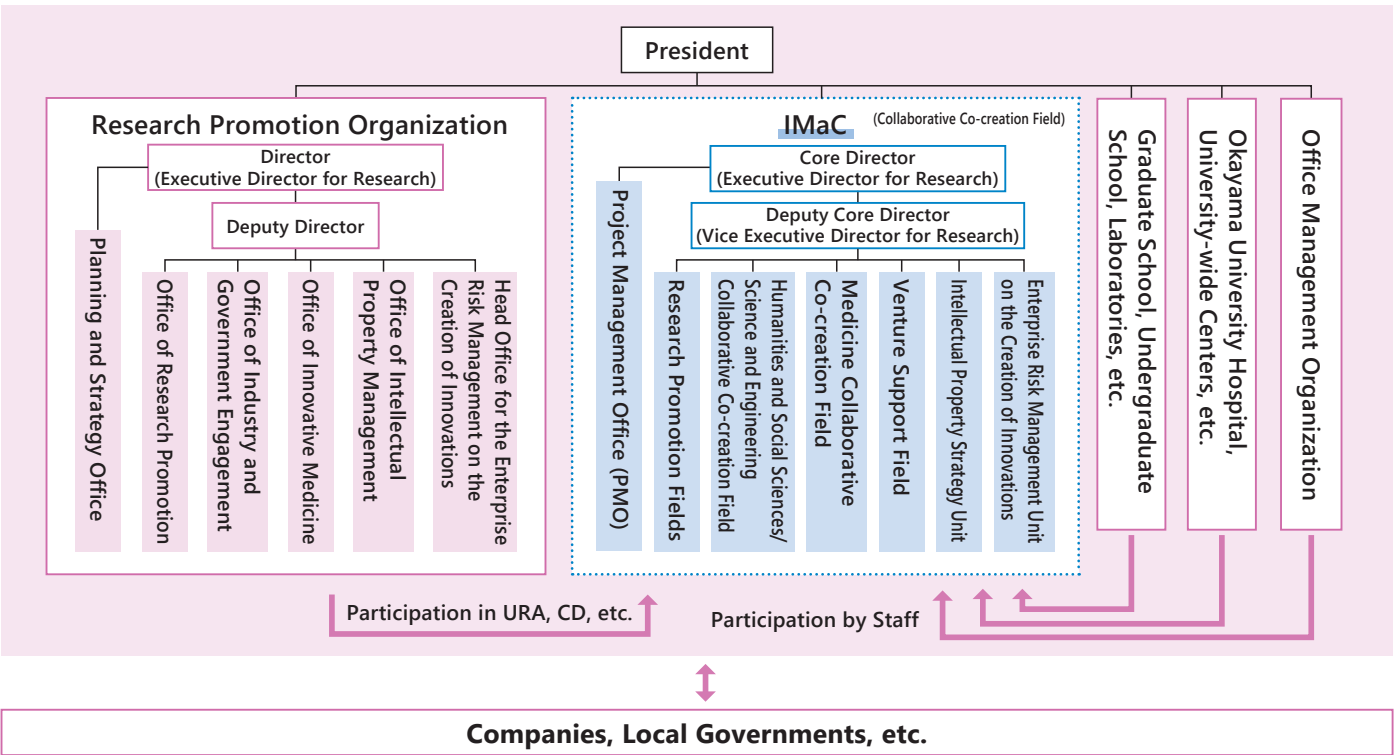
Innovations that conducts risk management where supervision and adjustment is required to create value were established in order to create innovation more effectively and at a more accelerated pace by supporting the efforts of the above fields.

We are also focusing on cultivating university-originated venture business as potential source of revenue along with increasing the revenue secured from outside funds through co-creation with various stakeholders including participating local company Okayama University Partners established in FY 2020 and local governments. These efforts make contributions towards diversification of our revenue sources and the strengthening of our financial base.

Cooperation Agreements Concluded in FY 2020

Conclusion Date	Organization/Institution Name
Jun. 18, 2020	Earth Charter International (ECI)
Aug. 18, 2020	HAYASHIBARA CO., LTD.
Aug. 25, 2020	Wakunaga Pharmaceutical Co., Ltd.
Dec. 2, 2020	The Graduate School of Project Design (Foundation for Advanced Education at Incorporated Institutions)
Dec. 15, 2020	DAIKEN CORPORATION
Jan. 21, 2021	Minamoto Kitchoan Co., Ltd.
Feb. 3, 2021	THE CHUGOKU BANK, LTD.

Research / Industry-Academia Co-creation Promotion System



Constructing a new collaboration model for local national universities and regional banks

In 2020, we mutually shared regional information and know-how together with THE CHUGOKU BANK, LTD., and concluded the Okayama Future Co-creation Alliance that is an agreement related to cooperation with the aim of contributing to regional development and realizing co-creation in the future by achieving SDGs while working in collaboration with the region. Based on this agreement, we will work in collaboration with THE CHUGOKU BANK, LTD. in efforts towards (1) developing real-life societal applications for successes in research firmly rooted in regional industry, (2) industrial development and local community creation based on cultivating venture companies, (3) acceleration of the digital transformation (DX) of local companies that is an urgent problem for the period during and after the COVID-19 pandemic based on a new Faculty of Engineering, (4) development of human resources with advanced expertise through non-traditional student programs, and (5) improving the well-being of people in the region including the external provision of advanced medical care services of Okayama University Hospital. In addition, we will work together in close cooperation on efforts for future business that are part of the Cabinet Office's National University Innovation Creation Environment Enhancement Project. Okayama University President MAKINO Hirofumi accompanied by President and Representative Director KATO Sadanori attended the signing ceremony of the agreement. In their greetings after signing, President Makino stated, "We would like to create a new collaboration model for local national

universities and local banks working firmly together with THE CHUGOKU BANK, LTD." and President Kato stated, "Cultivating our alliance with Okayama University, we seek to increase our number of partners and contribute to regional revitalization." Okayama Prefecture Governor IBARAGI Ryuta also provided a statement saying, "We have great hopes that this agreement will contribute to development in Okayama Prefecture by accelerating digital transformation (DX) in the region and sustaining industrial development while keeping young people in Okayama Prefecture based on collaboration with the Okayama Prefecture Company-University Joint Research Center."



Cooperation agreement signing ceremony with THE CHUGOKU BANK, LTD.

Collaborative Measures of the Okayama Future Co-creation Alliance



Actions for handling COVID-19 in Okayama University Hospital

We are engaged in preventing the spread of infection and providing up close healthcare services to patients by accepting infected patients, implementing infection control in the hospital and opening an outpatient clinic for COVID-19 sequelae, etc.



COVID-19 measures

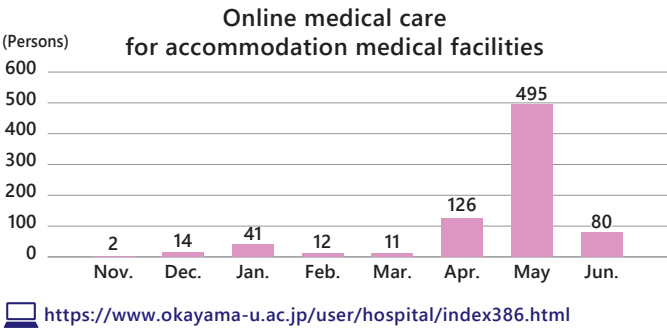
- Online medical care for patients in accommodation medical facilities -

An increasing number of patients across the country were experiencing an abrupt change in their condition while staying at home or in accommodation facilities such as hotels after being confirmed as infected with COVID-19, and action was required to handle this issue. On July 26, 2020, Okayama Prefecture began to provide accommodation medical facilities to patients with mild COVID-19 symptoms to secure an adequate number of hospital beds for patients who required hospitalization. At first, only a telephone consultation service for health checks was available, and the Advanced Critical Care and Emergency Medical Center of our hospital participated in this activity on a round-the-clock basis. However, on November 19 of the same year, we initiated online medical care for the purpose of early detection of worsening condition and prevention of unnecessary visits to medical facilities. The online medical care service is provided by connecting the Center and the consultation room set up on each floor of the accommodation facility utilizing the video conferencing system "Zoom". A total of 781 patients received online medical care between November 2020 and the end of June 2021. Up to more than 30 patients per day needed online medical care. Although there have been some difficulties in finding where to hospitalize patients, fortunately the number of deaths remains zero. The use of accommodation medical facilities is promoted nationwide, but their safe operation is not guaranteed, and there is no other case in this Japan where a single medical facility is comprehensively in charge of the health management of

patients in accommodation medical facilities. The approach of our Center is noteworthy in this sense.



A physician examining the patient through the screen



Maintaining Clinical Practice in the COVID-19 Pandemic_Nurses

KIGUCHI Takashi, Sub-Head Nurse, Inpatient Ward West 3rd Floor, Emergency Intensive Care Unit



The voice of a nurse working in Red Area, saying "Is there anyone in Green Area?", is heard from the transceiver placed in Green Area. A nurse in Green Area promptly responds to this call. Then, nurses in Yellow Area and Green Area wait ready, and blood gas measurement is performed without any obstructions in the same manner as before the COVID-19 pandemic. This is one slice of the everyday practice in the Emergency Intensive Care Unit (EICU). We were not able to be this way at first. This became possible only after we made a lot of preparations for accepting patients through repeated simulations of the admission route to the EICU, blood test and radiography methods, and how to communicate with Red Area, etc. We experienced many issues that required improvement during daily nursing care. At these times, solutions to such issues were considered not only by the nurse in charge of the patient, but by all nurses to analyze the present state and develop improvement plans. We called out to one another more often than usual, and this helped us overcome difficulties. Patients admitted to the EICU are in a severe state and are

connected to medical equipment such as a mechanical ventilator or extracorporeal membrane oxygenation (ECMO) machine. Nurses visually check that the medical equipment is operating normally every hour. Patients are under analgesia and sedation management as part of their treatment, and therefore cannot move as they want or express their intention, requiring delicate nursing care and treatment. We should always search for how to deal with difficulties without using COVID-19 as an excuse not to. We intend to provide up close nursing care to individual patients by integrating the infection control measures we have so far learned into the practicing of our nursing care.



Scene of training

Contributing to COVID-19 Measures Using PCR Tests_Clinical Laboratory Technicians

IIO Koji, Chief Clinical Laboratory Technician, Laboratory of Microbiology, Division of Medical Support



The COVID-19 pandemic has made the term "PCR test" widely known. PCR tests are mostly performed by clinical laboratory technicians. At Okayama University Hospital, COVID-19-related tests were incorporated into the conventional sample testing in March 2020. In particular, PCR tests were made available in the Laboratory of Microbiology and Laboratory of Genetic Testing, where technicians are skilled in handling of pathogenic microorganisms and the equipment necessary for PCR testing is already in place. Clinical laboratory technicians who have not been involved in sample testing were mobilized to reinforce the testing system, and efforts are being made to reduce the burden on patients by taking measures to prevent the spread of infection in the hospital and facilitate early diagnosis and early treatment. As part of the treatment team comprised of doctors, nurses, and other healthcare staff, going forward we will provide state-of-the-art laboratory techniques to patients that will earn us recognition by society as a professional of clinical laboratory testing.



Engineers of Life Fighting COVID-19_Clinical Engineers

OCHIBA Yusuke, Chief Clinical Engineer, Intensive Care Unit (ICU), Medical Support



Clinical engineers (CEs) are healthcare professionals who work as specialists of medical devices. Okayama University Hospital has been accepting patients with severe COVID-19 since the initial stage of the COVID-19 pandemic. Patients with severe symptoms require the use of various medical devices such as ECMO machines, mechanical ventilators, and blood purification devices. These medical devices must be used after being set appropriately for the patient's condition. Misuse of devices or patient management using inappropriate settings may lead to the occurrence of device-related complications. As "engineers of life" with knowledge of medical science and engineering, we clinical engineers check the operating status of medical devices around the clock so that safe medical care can be provided. Clinical engineers are increasingly engaging in out-of-hospital activities including home care, disaster medicine, development of medical devices, and international support. A large emergency transport vehicle "Doctor Car" that enables an ECMO machine to be transported over a wide area was introduced in 2021, and preparations are underway to start its operation in FY 2022. Going forward, we will cultivate our clinical engineers with the broad knowledge and skills in respiration, circulation, metabolism, etc., required for wide area transport of an ECMO machine to contribute to regional medical care.

<https://www.okayama-u-ce.jp/>



Leading-Edge Activities of Okayama University Hospital

We are making efforts to carry out leading-edge activities in Japan in the fields of COVID-19 countermeasures, development of new technologies, and progress in advanced medicine.



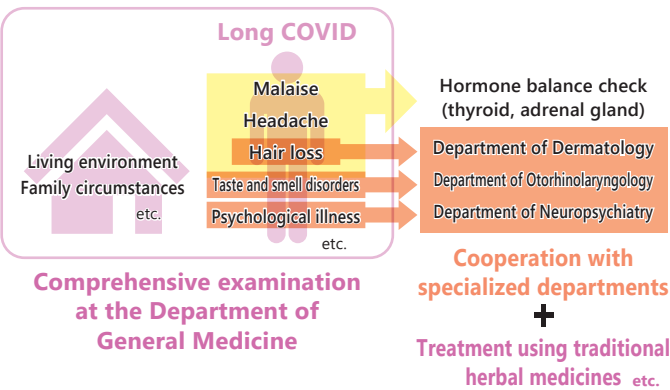
"COVID-19 After Care Clinic" - setting up an outpatient clinic specialized in the long COVID (post-COVID-19 condition)

It became apparent during treatment of patients with COVID-19 that many of them suffered from aftereffects such as malaise and taste or smell disorders after they recovered from the infection. In view of the importance of following up after the disease, we set up the COVID-19 After Care Clinic as a specialized outpatient clinic in the Department of General Medicine on February 15, 2021. Utilizing the advantage of the characteristics of the Department of General Medicine where a broad range of symptoms are handled without being restricted to specific organs, we perform a detailed medical interview that takes about 30 minutes to 1 hour for each patient. Treatments and medications vary between different patients according to whether they had severe, moderate, or mild COVID-19, so we take the time to carefully learn about the environment at the time of treatment and the social background of the patient. We prescribe traditional herbal medicines to treat malaise, and cooperate with specialized treatment divisions in our hospital to treat patients with severe taste or smell disorders, hair loss, or psychological illness etc. About 195 patients had referred to the COVID-19 After Care Clinic by the end of December 2021. The number of medical facilities that deal with the aftereffects of COVID-19 is still insufficient. While the definite cause and treatments of such aftereffects remain unclear, it is possible that being mentally and physically worn out may also play a role in such aftereffects because patients suffering from after effects tend to be isolated from their surroundings and keep secret the fact that they are infected, all while feeling lonely during a prolonged struggle with the disease in a treatment environment such as during isolation in an accommodation facility. Aiming to

<https://www.okayama-u.ac.jp/user/hospital/index377.html>

relieve symptoms and improve quality of life (QOL), we face the patient's actual state directly, deeply examine the patient's aftereffects and give more appropriate support to patients in trouble.

Overview of the COVID-19 After Care Clinic



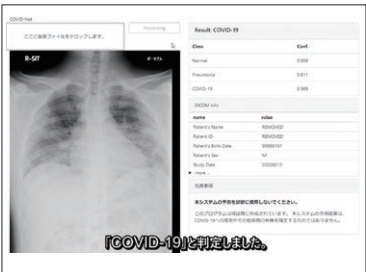
Staff members engaged at the COVID-19 After Care Clinic in the Department of General Medicine

Development of the AI-supported diagnostic imaging system for COVID-19 pneumonia

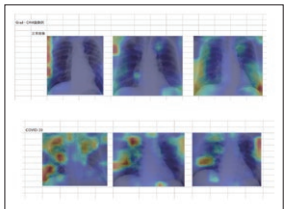
Professor KAWAHARA Yoshiro (Practical Gastrointestinal Endoscopy) at the Department of Practical Gastrointestinal Endoscopy, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University, and the research group of Ryobi Systems Co., Ltd. developed a system that detects COVID-19 pneumonia based on chest X-ray images using an artificial intelligence (AI) program. The usefulness of this system is now under investigation after approval by the ethics committee of Okayama University Hospital. We believe that once the usefulness of this system in the diagnosis of COVID-19 pneumonia is demonstrated, it will greatly contribute to accurately identifying the patients who require further examination, such as CT scans and PCR tests, using conventional chest X-ray examinations. After the pandemic ends, it is expected that COVID-19 pneumonia will become a seasonal community-acquired pneumonia and there will be increased opportunities for

https://www.okayama-u.ac.jp/tp/release/release_id739.html

non-specialized clinics, general hospitals, and nonspecialists to encounter the disease. Under these circumstances, we believe that this system will reduce diagnostic variation between different physicians including nonspecialists and increase the rate of accurate diagnosis, thus facilitating provision of appropriate treatment of patients.



Actual screen of the AI-aided COVID-19 pneumonia diagnosis system



The "GradCAM" function shows what is being focused on in X-ray photographs.

Reporting the analysis results of the status of COVID-19 infections and the medical provision system in Okayama Prefecture

In light of the COVID-19 pandemic in Okayama Prefecture, we regularly report the analysis results of the status of COVID-19 infections and the medical provision system in cooperation with healthcare professional volunteers in the prefecture. Based on data published on Okayama Prefecture's website, we perform level assessment and analysis of the status of infections and the medical provision system (see "Concerning analysis of current monitoring items and overview comments" issued by the Tokyo metropolitan government). The results of analysis are published weekly on Okayama University Hospital's website as the "analysis of the current status of infections and the medical provision system in Okayama Prefecture" and information is also provided

<https://www.okayama-u.ac.jp/user/hospital/news/detail250.html>

via the Okayama Prefectural Medical Association to medical facilities for the treatment and examination of febrile patients, etc. in Okayama Prefecture. A simplified version of this information is also published in the Sunday edition of the Sanyo Shimbun newspaper. In addition, a survey of healthcare professionals, university faculty members, and students on adverse reactions to COVID-19 vaccination was also performed, and the information obtained was provided through various media. This activity will be continued to help people in the prefecture obtain accurate information of COVID-19.

Analysis of the status of infections and the medical provision system

感染状況・医療提供体制の分析(8月25日時点)					【岡山県専門家有志】最新情報はこちら (東京都統計コメントを参照に作成)	
区分	モニタリング項目 ※①～③は過去1週間合計	前回の数値 (8月18日時点)	現在の数値 (8月23日時点)	前回との比較	分析コメント	
感染状況	①新規陽性者数	総数 (人口10万人当たり) 1389人 (73.5人)	1582人 (83.7人)	↑	新規陽性者は人口10万人当たり83.7人と更に増加し、感染拡大に歯止めがきかない。接触歴不明者はやや減少も、市中感染が広がり、爆発的な感染拡大が起きている。	
	60歳以上 (総数に占める割合)	82人 (6%)	105人 (7%)	↑		
	県南東部	701人	877人	↑		
	県南西部	592人	594人	→		
	高梁・新見	25人	19人	↓		
	真庭	9人	14人	↑		
医療提供体制	津山・英田	46人	75人	↑	緊急事態宣言が発令されたが、今後も拡大継続が見込まれる。感染は身近に迫っており、各自が強い危機感を持ち、外出自粛や、マスクを外す場面での行動に注意し、自分の身は自分で守る意識を持つことが求められる。	
	市中感染・潜在感染	③新規陽性者における 接触歴不明者 数 割合 (③/①)	644人 46%	686人 43%	↑	
	④入院患者数 (確保病床における入院割合)	186人 (33%)	240人 (43%)	↑	レベル4。体制が逼迫していると思われる	
	⑤宿泊療養者数	273人	310人	↑		
	⑥自宅療養者数	1026人	1311人	↑	入院患者・重症者数、宿泊・自宅療養者数とも急激に増加し、医療提供体制が逼迫。今後も入院患者・重症者の増加が予想され、医療提供体制逼迫の状況悪化が強く懸念される。	
	⑦重症者数	7人	13人	↑		

Launch of the cancer genomic profiling test completed in Japan

Okayama University Hospital, which is the only hospital in the Chugoku and Shikoku region to be designated as a "Cancer Genomic Medicine Core Hospital" since April 2018 until now, is addressing social implementation of a cancer genomic medicine centering on cancer genomic profiling test, development of genomic medicine human resources and development of new methods of examination.

There are three types of cancer genomic profiling test covered by the national health insurance, but these tests have not been sufficiently useful in examining therapeutic target genes in some types of cancer. In this regard, as advanced medical technology research (advanced medicine B) on new cancer genomic profiling testing supported by the Ministry of Health, Labour and Welfare, on December 1, 2020, we became the first in Japan to start research on a multiplex genomic profiling test for providing individualized medical care wholly within Japan. The cancer

https://www.okayama-u.ac.jp/tp/release/release_id786.html

genomic profiling test (TSO profiling test) covers 523 genes, the greatest number in Japan. It is likely that this may lead to discovery of therapeutic agents or procedures for patients for which existing medical or surgical treatments are no longer suitable.



Staff members in charge of genomic profiling testing at the Center for Comprehensive Genomic Medicine

"Pay it Forward" +
"Living Together in the Here and Now"
(Part 3 of 3)



University-affiliated Elementary and Junior High School Students During the COVID-19 Crisis

Throughout the COVID-19 pandemic, students at the Okayama University Affiliated Elementary School and Affiliated Junior High School have been required to wear masks every day. Even during lunch break, they have to face forward in silence as they eat their meals, and they're unable to take part in classroom group activities, sports days and school trips as in other years. Nevertheless, they always carry out infection-prevention measures and go about their daily routines as usual while at school. Teachers work hard, too, finding the best possible ways to disinfect classroom environments and effectively alter event schedules and operations. Thanks to everyone's hard work, children throughout these schools can be heard laughing and having fun every day.

Improvements to ICT-equipped environments are advancing at a rapid pace in these schools. Each student is given their own computer, and these have been put to increasing use during both study and free time. Moreover, teachers not accustomed to modern-day computing and communication technologies are devoting themselves to learning and getting used to new ways of doing things. Just recently, the junior high school's student council representatives participated in an online exchange with junior high students in Thailand.

Although in-school conditions have changed a lot since the pre-COVID-19 days, the students are, thankfully, still as energetic and happy as ever.



V. Governance

VI. Data Section

Okayama University Governance System

We are deepening the promotion system based on goal management that reflects information integrated through Institutional Research and Effectiveness (IR/IE) to university management, and are reforming university management.



University Management Reform Collaborative governance that incorporates various perspectives

At Okayama University, a system has been established under the leadership of the president that enables the president to make decisions from various perspectives including the appointing external human resources as executive directors, executive advisors, and as special assistants to the President to conduct strategic university management while taking in the opinions of various concerned parties including from industries and local societies.

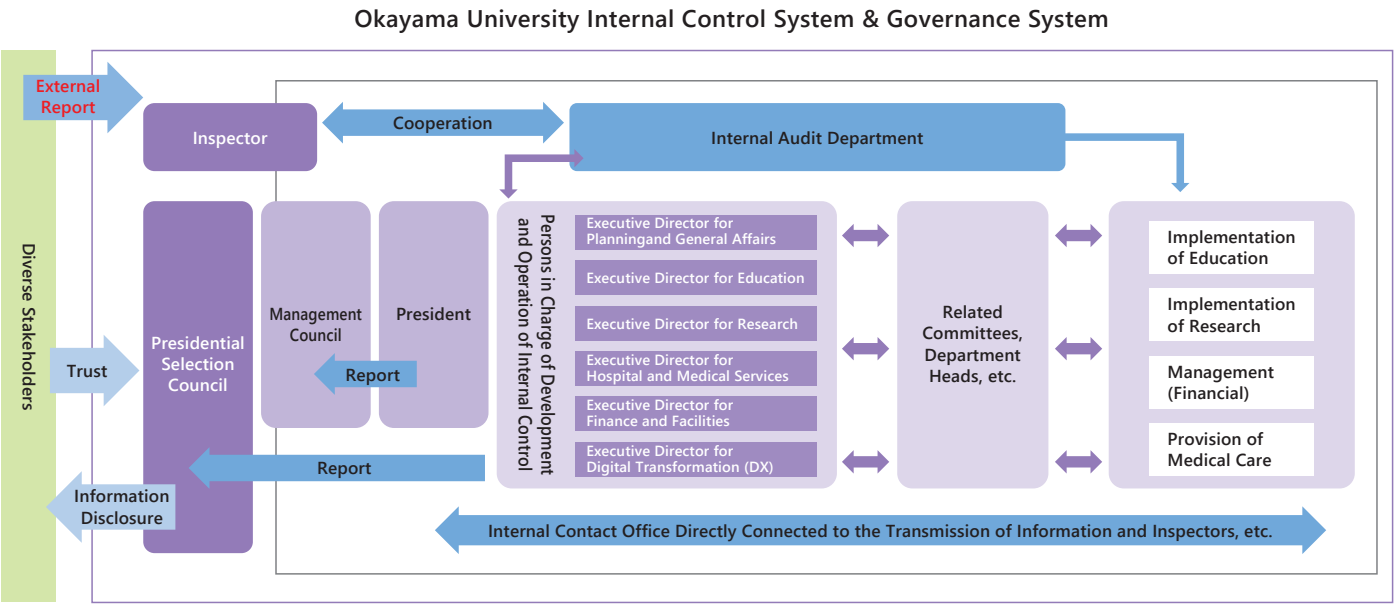
In addition to establishing of a Legal Council as prescribed in the National University Corporation Act, we are promoting collaborative governance by taking steps such as establishing a University Management Strategy Council to conduct flexible decision making among the Board and Okayama University Future Sessions where young faculty, staff and students who will lead the next generation can debate and make suggestions for a sustainable Okayama University.

Okayama University Internal Control and Governance Code

National University Corporations are expected to be highly public and receives various financial support, so it is accountable for the internal control system and governance code that governs itself. Okayama University has established the internal control system and governance system shown in the figure below. The "Governance Code for National Universities" is a code that serves as the basic principles to increase the transparency of the management of National University Corporations, further strengthen the education, research and societal contribution functions, and continue to fulfill our role according to changes in society. This code was formulated by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Cabinet Office, and the National University Corporation Committee. On February 2021, Okayama University announced our first "Report on the Status of Compliance with "Governance Code for National

Universities" (FY 2020)." However, at the time there were 10 points requiring explanation* remaining. In April 2021, we nominated vice executive directors for the internal control and governance code and started the Internal Control and Governance Code Development Project that added special operations personnel with lawyer qualifications as members under the supervision of executive director for planning, evaluation and general affairs. We are now implementing activities aimed at establishing the use of the PDCA Cycle including revising the situation adaptable to the principles of the "Governance Code for National Universities."

*Points Requiring Explanation: Explaining the reason when there are basic principles, rules, principles, and supplementary principles in the "Governance Code for National Universities" that are not implemented in light of the characteristics of the university. Points requiring explanation are not functionally used to judge that a governance system has not been constructed.



Inspector Interviews

We asked Inspector Aoyama and Inspector Ohara who were appointed as inspectors from September 2020 about what they value in their work as inspectors.



Inspector AOYAMA Hajime

Work History
April 1978: Entered THE CHUGOKU BANK, LTD.
June 2015: Took position as Managing Director (Representative Director) at THE CHUGOKU BANK, LTD.
May 2018: Took position as Kibiji Literary Museum Director (Retired in May 2019)
September 2020: Took position as Inspector at National University Corporation Okayama University

The inspector's job is to audit the business of the university as a whole. This includes (1) maintaining and inspecting the operating conditions of the governance system and internal control system, (2) confirming the administration status of business matters of board directors, and (3) inspections to confirm whether business is being performed effectively and efficiently based on targets such as Mid-term targets. Among these areas, the first perspective where I place priority is on whether Okayama University has the intention to meet the expectations of society. The expectations for our university are broadening in scope and becoming larger. Our efforts to achieve SDGs have been evaluated highly as a leading example and we have become the starting point for encouraging activities in the region. I would like for us to listen to our various stakeholders regarding the university vision and the setting of each goal to work towards further advancement. The second perspective where I place priority is the appropriate management of internal control including observing compliance and each form of risk management. I believe that if we fulfill these functions, the name of Okayama University will become synonymous as a university that is loved by and respected in the local region.



Inspector OHARA Akane

Work History
April 2007: Took position as Ohara Syonokai (currently a Public Interest Incorporated Foundation) Inspector
July 2016: Took position as Representative Director/Director at Ohara Museum of Art
April 2017: Took position as member of the Kurashiki City Board of Education
January 2019: Took position as Outside Director at Hagihara Industries Inc.
September 2020: Took position as Inspector at National University Corporation Okayama University

I value the following three points as an inspector.
● The proper public presentation of the circumstances of decision making
I feel that decision making that is made public where appropriate rather than decision making hidden behind a veil of mystery is an important part of sound university management.
● Fair decision making free from bias
I feel that the very fact that university management is supported by a wide range of stakeholders makes decision making free from bias important for the continuous management of the university.
● No overlooking of inequality
For example, even the daily life of those defined as being in the minority may be strained or be at a disadvantage in favor of the daily lives of the majority. A university that is committed to diversity needs to have a strong will to not allow this type of inequality to exist. Maintaining diversity for research, education, and management decision making is the minimum requirement to compete with global standards. For this reason, it is important to not overlook inequality at the university. Although I have a post as a part-time position, I would like to always bear these thoughts in mind to contribute to the development of Okayama University. I appreciate your continued kind cooperation and support.



Message from the Vice Executive Director

SUZUKI Takamoto, Vice Executive Director for Internal Control and the Governance Code

I am the vice executive director in charge of internal control and the governance code. From April, I started the Internal Control and Governance Code Development Project at Okayama University and have been working to promote the following reformation and improvement. (1) Okayama University established a beneficial system that has been used for internal control and governance until now. However, there was a tendency not to systemize. I will work promote visualization of the internal control and governance system at Okayama University, explain this system in easy to

understand way to everyone inside and outside the university, and implement this system at the university. (2) I will work to expand the scope of risks managed by each department in the past and establish the appropriate risk management using the PDCA cycle based on risk evaluation. Through building and operating an internal control and governance system accompanied by tireless reforms and improvement, I would like to earn everyone's trust inside and outside the university, and raise the value of Okayama University as a public property.

Promotion of Diversity & Inclusion (D&I)

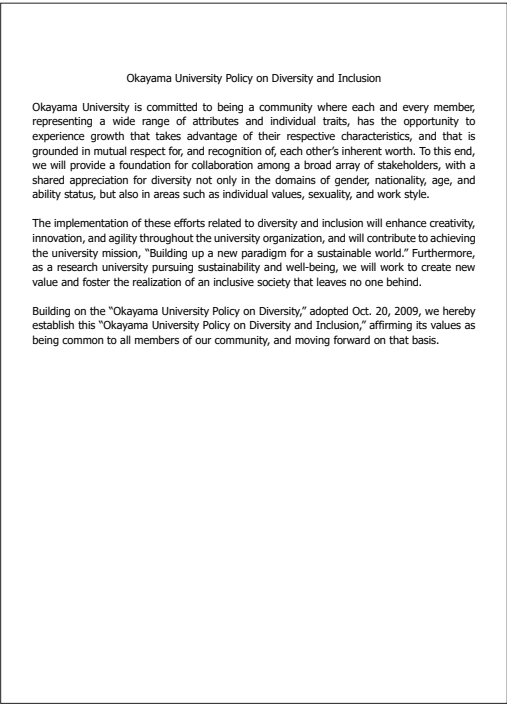
We will bring together and supplement all of our efforts towards Diversity & Inclusion (D&I) up to the present with the aim of becoming a university with a friendly learning and working environment.



Taking Steps to Become a University with a Friendly Learning and Working Environment

We are undertaking various initiatives to increase the diversity among our members in areas such as gender equality including supporting woman researchers, next generation support including for the operation of daycare centers, and employment of persons with disabilities based on the Okayama University Diversity Policy.

In FY 2020, the Diversity & Inclusion Planning Promotion Committee was established with the aim of enabling every member of the university to maximize their individual strengths and creating and institutional culture that can utilize diverse human resources. Various experts at the university involved in Diversity and Inclusion (D&I) inspected the initiatives conducted up until now and studied the vision for the future for the promotion of D&I over approximately 1 year from the main perspectives of gender, persons with disabilities, researchers from foreign countries, international students, and elderly persons. As a result, we finalized the "Current Status and Issues for D&I and Declarations for the 4th Mid-term Target Period at Okayama University", held university-wide discussions that included faculty, students, and outside experts, and established the Okayama University Policy on Diversity and Inclusion in May 2021. The new policy places a high regard on each person with diverse personal qualities and backgrounds at Okayama University mutually understanding each other's value, and declares that the university should be a place where the unique qualities of each person can be put to the best use to enable everyone to grow together. In June 2021, an Okayama University 2021 Diversity and Inclusion Day was held as the kick-off event for faculty, staff, and students. In addition to explaining the circumstances and basic stance in relation to establishment of the new policy, we held talks together with students, faculty, and staff with diverse personal qualities and backgrounds about their thoughts and hopes for promoting D&I. Moving forward, we will steadily implement concrete measures to realize the principles contained in the new policy.



Diversity & Inclusion (D&I) Policy

Holding of Okayama University 2021 Diversity and Inclusion Day



Promotion of the development of women researchers and appointment of female faculty to senior positions

To promote the development of women researchers and appointment of female faculty to senior positions, we established the Woman Tenure Track (WTT) System, a special post-up system for female faculty, the Post-up Plus System based on supporting study abroad experiences, and the Female Faculty Support Subsidy Program. Although we were forced to cancel most of the study abroad experiences and academic conference presentations we previously supported due to effects of the global COVID-19 pandemic in FY 2020, we are continuing to cultivate woman researchers by providing support such as through online research presentations.

<https://en.okayama-u-diversity.jp/>



Presentations being conducted at a research workshop

The Voice of a Researcher

Research Institute for Interdisciplinary Science Associate Professor KOBAYASHI Kaya

Using the Female Faculty Support Subsidy Program established for holding events such as research workshops, I was able to conduct a workshop related to thin film interface and composite crystals together with Assistant Professor EGUCHI Ritsuko of the Okayama University Research Institute for Interdisciplinary Science and Associate Professor HAINDL Silvia of the Tokyo Institute of Technology, World Research Hub Initiative.

Holding the event online allowed us to hold an international workshop where over a third of the lecturers were from overseas institutions. I think that it is remarkable to note that it was a workshop that was rich with diversity with slightly under half of the presenters being women and over 60% being young researchers. The workshop was held online this fiscal year as well and we are working to hold the event every year.

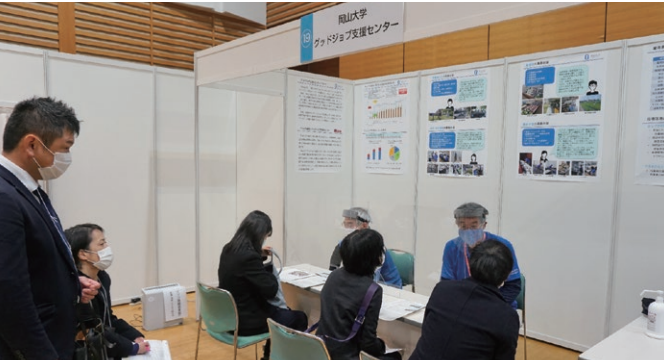
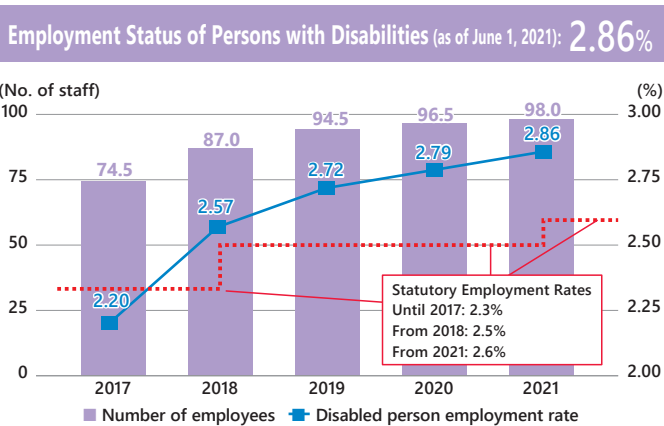


Workshop website created using funds from a grant

Striving to Realize Diversity & Inclusion (D&I) Management

In April 2009, the Good Job Support Center was established based on the Okayama University Diversity Policy, and we now welcome our 13th year in operation. As of June 1, 2021, we have developed into workplace of 75 persons with 56 disabled persons and 19 support staff to ensure work can be smoothly conducted. We are undertaking jobs including the sending of students grade transcripts from multiple departments in the Tsushima and Shikata areas, and cleaning operations in the administration building and the library, and lawn care and other services in the Tsushima area.

In April 2021, we modified our name to the Good Job Center, and are working to expand improved activities and make improvements for the center in addition to our supportive role of operation support at the university as part of the efforts to create a work environment for disabled persons at the university. We also participated in the Okayama Work Forum for People with Disabilities from 2019, which is Okayama Prefecture's first company information sessions for people with disabilities planned by companies providing employment to disabled persons in Okayama Prefecture, where we presented and explained operations and initiatives of the Good Job Center. We will continue to work towards realizing diversity and inclusion management using the total ability and specialization in cooperation with a diverse range of people to create a motivating workplace for each individual.



The site of The Okayama Work Forum for People with Disabilities (December 2020)

Strengthening of Financial Management and Campus Management

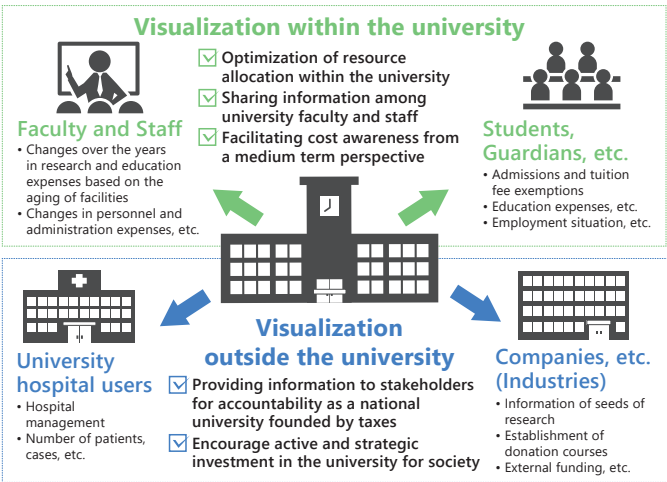
We are working to realize the rebuilding our financial structure that supports SDG University Management and the building a sustainable campus.



Financial management based on a management perspective Shift from visualization to optimization

The main business of a national university corporation is not focused on securing profits, but in providing education and research of a public nature, and making contributions to society. As our objective is not for a financial gain, we are not subject to corporate taxes, and our revenue is expressed by the financial resources for implementing our business. The main sources of revenue of a national university corporation are management expense grants and subsidies for facility improvements from the government, revenue from student payments, scientific research grants and competitive public research funds, revenues of the university hospital, and contracted research revenues and donation revenues. Financial management of a national university corporation is effectively utilizing sources of revenue to improve and develop education and research activities in order to respond to the expectations of society. On the premise that we win the trust of society and conduct corporate management in an appropriate manner, we disseminate the results of our education and research activities including by publishing integrated reports while also working to realize visualization of activities inside and outside the university. This approach is not limited to financial matters and captures the fundamentals of management that responds to changes. Put in more concrete terms, we are conducting financial management reforms for budgeting and account management in order to clearly present the relationship between education and research costs and the results. For example, we are systemizing the main information ranging from financial and non-financial management including our vision, allocation of resources, accomplishments and benefits in relation to our strategic initiatives as well as through disclosing segment information by academic division in our financial statements and trial income statements that are conscious of business accounting standards. In addition, we have made contributions toward SDG achievement a central part of university operations, and working to diversify our financial resources while achieving autonomous university management through

SDG University Management that strengthens engagement with diverse stakeholders. For this reason, the discovering of measures to secure management resources backed by an awareness of the risks and costs, and the efficient use of limited resources is important. For example, we are taking measures to increasing external funding revenue and enhance the Okayama University Academic Capital Foundation based on a new industry-academia-government co-creation business model to realize a regional circular and ecological sphere, and properly allocating resources and utilizing unemployed capital assets. Using visualization as the starting point, we will realize a virtuous cycle that promotes sharing ideas and working together with our stakeholders inside and outside the university that is linked with optimization utilizing management resources based on evidence-based decision making.



Key Supportive Measures for SDG University Management (FY 2020)

Strategy/Initiative Classification	Allocation (in million yen)	Resource Allocation	Implementation Cost	Main Activity Achievements/Success Examples (Output/Outcome)
Strategy: Educational Reforms	496	418		
The Top Global University Projects (The PRIME Program), etc.	386	309		Number of certified advanced all-round achievers in 2017: 127 → 2018: 247 → 2019: 376 → 2020: 554
Realization of "Changing the Structure of Learning" by carrying out more practical education and creation of a foundational structure, etc.	109	109		Improvement in the introduction rate of active learning that promotes personal study habits in 2016: 21% → 2019: 49% → 2020: 52% Improvement in the rate of courses that utilize Information and Communications Technology (ICT) to utilize EdTech (Education + Technology): 2017: 5% → 2019: 20% → 2020: 63%
Strategy: Research Strengthening and Acceleration of Industry-Academia Co-creation	1,397	933		
International Research Center Formation Program to Accelerate Okayama University Reform (RECTOR Program)	48	48		Under the leadership of our president (the University's "Rector"), we invited prominent overseas researchers to train young researchers in Japan to lead research strengthening university reform. 39% increase in number of internationally co-authored publications and 263% increase in number of publications in the Top 10% (comparing 2016-2017 to 2019-2020) Effect of support from University Research Administrators (URA) and other personnel to 40 selected groups made up of next-generation research and development groups, and research center creation groups. 47% increase in securing of competitive funds when comparing the period before providing support (FY 2015-2017) to the period when support was provided (FY 2018-2020). Intensification of research activities in physics and molecular biology fields, and an increase in rankings for papers published by Okayama University
Incentive and Support Package for Young Researchers (Cultivation of young leaders who will guide the next generation, etc.)	175	156		Past results for cost allocation improvement in joint research for indirect expense revenue from private enterprises: 110 million yen (134% increase from FY 2019)
Development of Research Center Organization (Rapid development of fundamental scientific research through the establishment of the Research Institute for Interdisciplinary Science, etc.)	339	339		
Management Reform as a Research University (Promoting the enhancement of research universities and strengthening of the environment for creating innovation)	835	391		
Strategy: University Management Reforms	174	153		
Advancement of Global Engagement (Creation of Okayama University Global Engagement Office (OUGE), etc.)	37	17		Development of short-term foreign researcher programs and other programs based on the United Nations Conference on Trade and Development (UNCTAD) Creation of a work environment including Woman Tenure Track (WTT) System Woman researchers appointed to senior positions based on post-up systems for the ratio of female faculty among 14 persons: Comparison at end of 2nd mid-term target period: 9.1% increase
Promotion of Diversity & Inclusion (D&I) (System reform for a university that helps women to thrive, etc.)	46	45		Conference with participation of industry, government, academia, finance and the media Received 15 consultations from the region and matched each case with seeds at the university in 2020
Realizing regional revitalization and intentional collaboration, etc.	31	31		Implementation of sustainable campus environment renovations through infrastructure renewal that has become a heavy environmental burden such as due to the effects of aging based on the efficient use of environmental surcharge: CO2 reduced by 118 tons per year and heating and lighting expense were reduced by 4,508,000 yen per year
Building a sustainable campus	60	60		

Supplementary Information 1: Applicable to budgets related to strengthen university-wide functions, including functional enhancement expenses and main institution subsidies and does not include competitive funds such as Grants-in-Aid for Scientific Research
Supplementary Information 2: Based on our achievements in FY 2020, we can confirm a trend from the input data that was significantly impacted by the activity restrictions in response to the COVID-19 pandemic centered on the students and faculty sent abroad and the international students and researchers received by Okayama University.



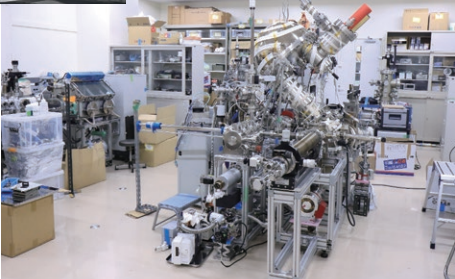
Ensuring safe and secure education and research environments

As a comprehensive university with a large campus filled with natural beauty located within the city, the campus has been systematically developed from the perspectives of ensuring safety, supporting various types of education and research, internationalization, and contributing to local communities and society based on the Okayama University campus master plan. Buildings such as the Junko Fukutake Terrace and Junko Fukutake Hall have been made possible through donations and are in use by many people from both inside and outside the university. We also completed the Research Institute for Interdisciplinary Science in FY 2020 that is used to support various types of research. In order to ensure safe and secure education and research environments, we have almost completed making all of our buildings earthquake-resistant. Moving forward, we will continue to take measures against the effects of aging on buildings and take earthquake-resistant countermeasures for non-structural materials while strengthening measures against the aging lifelines including pipes and wiring, and improving the resilience of the campus as a whole. In order to improve the environment for the realization of Society 5.0 and enhance space for joint research with those outside of the university, we will also secure a facility maintenance budget, which starts with obtaining various financial resources.

http://www.okayama-u.ac.jp/user/shisetsu/files/index/2plan_tsushima_shikata.pdf



Research Institute for Interdisciplinary Science (Tsushima Campus)



Building a sustainable campus

In FY 2018, we established the Okayama University plan for extending service life of infrastructure which outlines the direction of medium-term initiatives for facility maintenance and management, and further revised the plan in more detail in FY 2020. We are aiming to maximize effects and maintain a long life for facilities within a limited budget. We will also utilize various financial resources to develop facilities for the improvement of student learning environments, creation of innovation, internationalization, and the adoption of barrier-free design. We will take steps including actively introducing methods and equipment to reduce the burden on the global environment with the goal of becoming carbon neutral and taking measures to visualize energy consumption in order to build a sustainable campus for the achievement of SDGs based on the Action Guidelines of Okayama University on SDGs and the Okayama University campus master plan.

<http://www.okayama-u.ac.jp/user/shisetsu/files/index/kobetsushisetsukeikakugaiyou2.0>



Okayama University plan for extending service life of infrastructure (Individual Facility Plan) 2.0



Outdoor LED lighting

Data Section

Concept

- This section provides financial and non-financial data in order to provide insights into the various activities conducted by Okayama University to those who support the university. The section includes relative comparisons and analyses using various indicators as well as an overview of financial statements.
- The indicators shown below serve as basic data for comprehensively assessing and analyzing the financial standing, performance, and operational status of national university corporations. These indicators help you compare Okayama University with other universities and gain an understanding of trends at our university. The main objective of this year's analysis is to clarify the relative standing of our university and the challenges we face going forward by examining changes in the indicators over the years and comparing with other regional national universities.*

*This section compares a group of nine universities, including six universities that were medical universities under the former system (Chiba University, Niigata University, Kanazawa University, Nagasaki University, Kumamoto University, and Okayama University) and three universities that are similar in size (University of Tsukuba, Kobe University, and Hiroshima University). Okayama University is compared against the average values for the group that were calculated based on the data published by these universities.

Education Spending per Student

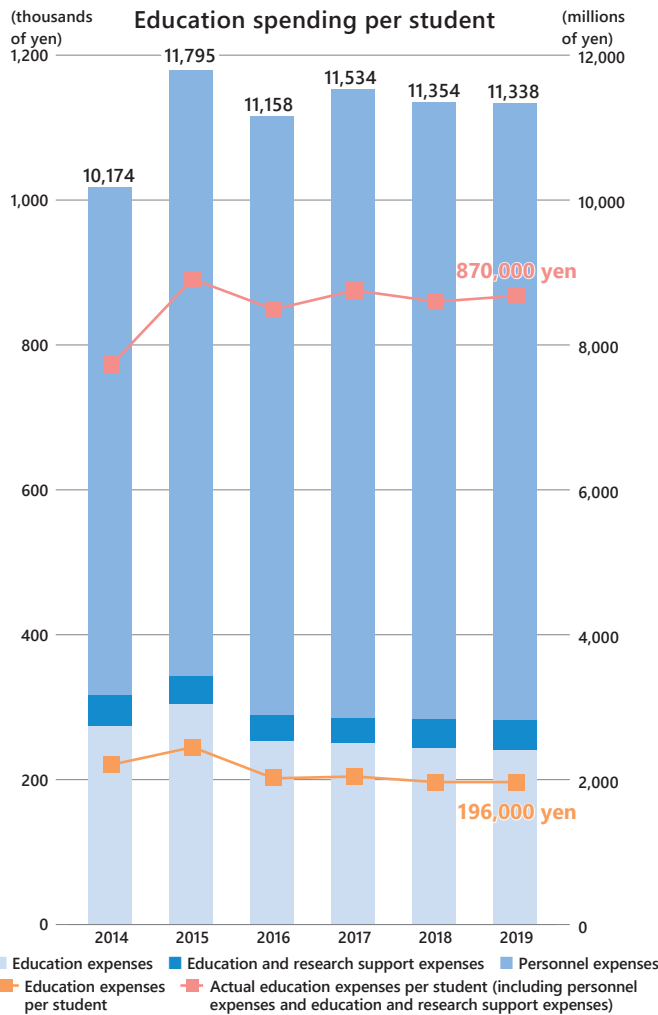
Is the cost of educating one student approximately 200,000 yen per year?

How much a university spends per student, which is calculated by dividing its total education expenses by the number of students, is an indicator of the scale of its educational activities. An overview of the status of Okayama University based on its published financial statements indicates that its education spending hasn't changed much (decreasing only slightly), and in FY 2019 the university spent approximately 200,000 yen per student on education. Is this amount sufficient for a university to provide its students an education? Note that the education expenses amount stated in financial statements only includes expenses directly related to a student's education, such as consumables, equipment expenses, and utilities charges, and does not include faculty and other expenses.



The actual cost of educating one student is approximately 870,000 yen per year.

To more accurately visualize how much we spend on education per student, we deemed the personnel expenses for faculty members who provide education and guidance and the education and research support expenses to support independent study by students, such as library expenses, to be education expenses and added the total to the above-mentioned education expenses amount after multiplying it by a standard ratio. The resulting figure for education spending per student is approximately 870,000 yen per year. This indicates that we spend about 1.6 times the annual tuition of 530,000 yen to educate the next generation of people who are the torch bearers of the future.



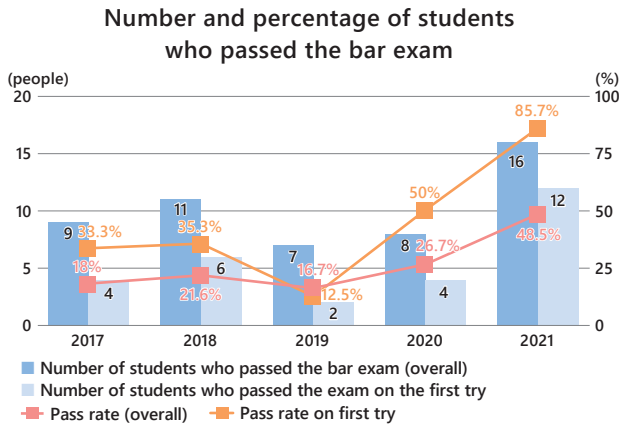
*The above figures exclude expenses incurred by the university hospital and affiliated schools.

Okayama University Students Carving Out Career Paths

Okayama University provides career education and employment assistance to help students lay the groundwork for future success. A full range of career design courses enable students to develop the professional skills they will need beginning from their first year. Our employment assistance services include employment guidance, alumni forums, and seminars for those who wish to become national government employees. In addition, we offer individual support, including advice on job-hunting and studying abroad while in school.

48.5% bar-exam pass rate, with 85.7% passing on the first try Top-level pass rate in Japan made possible by the joint effort of students and faculty!

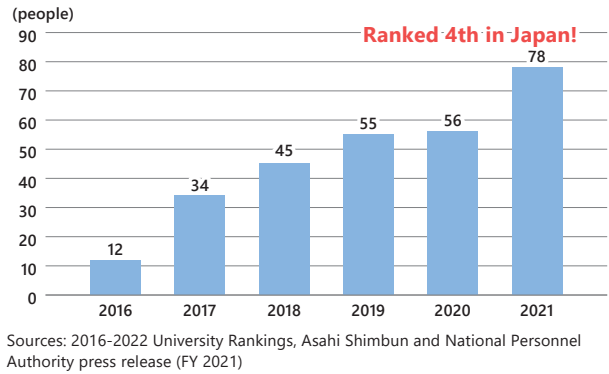
In 2021, 16 out of 33 students who took the bar exam passed it, making the pass rate 48.5%, which was the seventh highest in Japan. Of the 14 FY 2021 School of Law graduates who took the bar exam (7 with a Bachelor of Laws degree and 7 without), 12 (7 with a Bachelor of Laws degree and 5 without) passed the exam (i.e., 85.7% passed the exam on the first try). Here hard working students can concentrate on their studies in a calm and comfortable environment all day long as they nurture friendly relationships with other students and receive support from attentive faculty members. The high exam pass rate is a result of the high quality small-group education tailored to individual student needs that only a regional university can offer.



Number of Okayama University students passing national civil service exams for special service positions climbs to fourth in Japan!

The number of Okayama University students who passed national civil service examinations for special service positions in 2021 was 78, moving Okayama University up to fourth place in the national rankings following the University of Tokyo, Kyoto University, and Hokkaido University. Since 2015 we have been in the top four for the number of students passing national civil service examinations for regular service positions and ranked first nationwide in 2018 and 2019. (Source: 2017-2021 University Rankings, Asahi Shimbun) The Civil Service Examination Preparation Course offered on the Tsushima Campus covers all levels from national special service positions to senior regional positions, and offers the convenience and reliable support that only on-campus courses can provide.

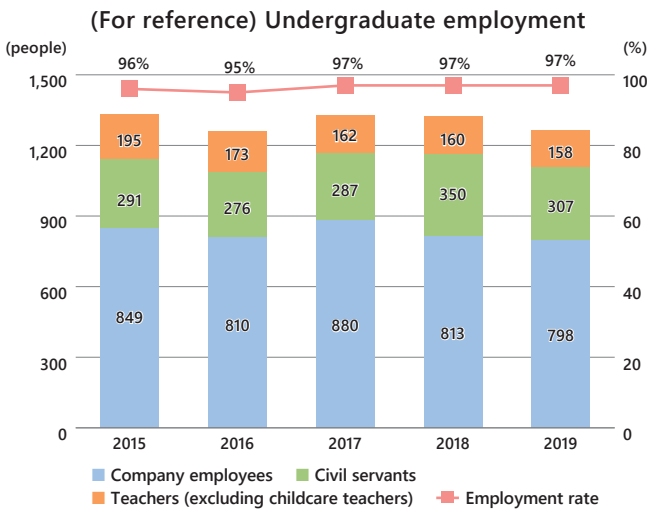
Number of successful applicants taking national civil service examinations for special service positions



Sources: 2016-2022 University Rankings, Asahi Shimbun and National Personnel Authority press release (FY 2021)

Okayama University rated highest by corporate HR personnel in the Chugoku-Shikoku region!

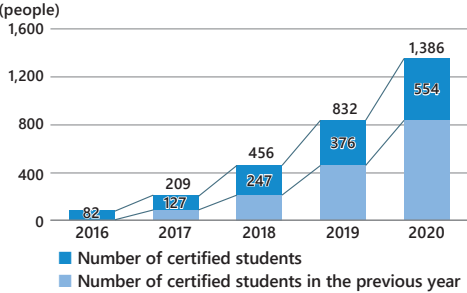
Okayama University ranked first in the Chugoku-Shikoku region in the Corporate Perceptions of Employability of Graduates University Rankings Survey, 2022 Edition conducted by Nikkei HR and Nikkei Inc. Our graduates received high marks for intellectual and academic ability as well as creativity, bringing us way up in the national ranking, as we jumped from 41st place last year to reach 17th place this year. Corporate human resources personnel have praised Okayama University students for being "honest, intelligent, quick learners" who are "diligent and hardworking." The university was also listed among the top-ranked national universities in the categories of graduate employability, initiative in improving the quality of teaching, excellence in research, and contribution to regional revitalization.



Advanced All-round Achievers

Okayama University promotes 3x3 education, in which students acquire the three core powers (liberal arts strength, linguistic ability, and professional knowledge) and put them into practice in the global arena through experience across three areas (i.e., across disciplines, across societies, and across cultures). This educational approach is aimed at turning students into all-round achievers who are capable of making the right decisions in the real world and playing an active role across the globe. In order to visualize the benefits of this education and increase student motivation, in FY 2016 we launched a certification program, in which fourth-year undergraduate students who excel in the three core powers and possess a wealth of experience across the three areas are recognized as advanced all-round achievers. We are steadily fostering and producing all-round achievers with the aim of producing a cumulative total of 1,500 advanced all-round achievers by the end of FY 2021 (end of the third medium-term target period).

Number of students certified as advanced all-round achievers (cumulative total)

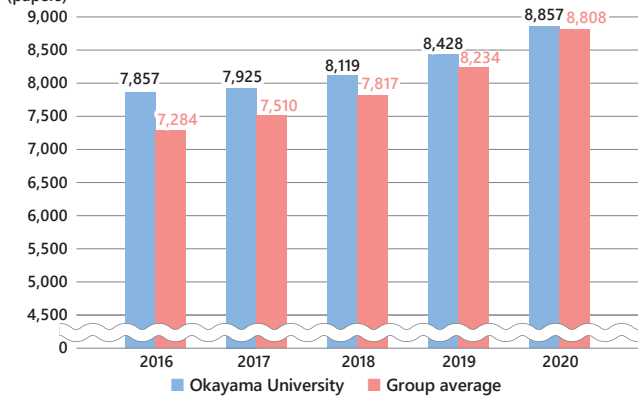


Research Results

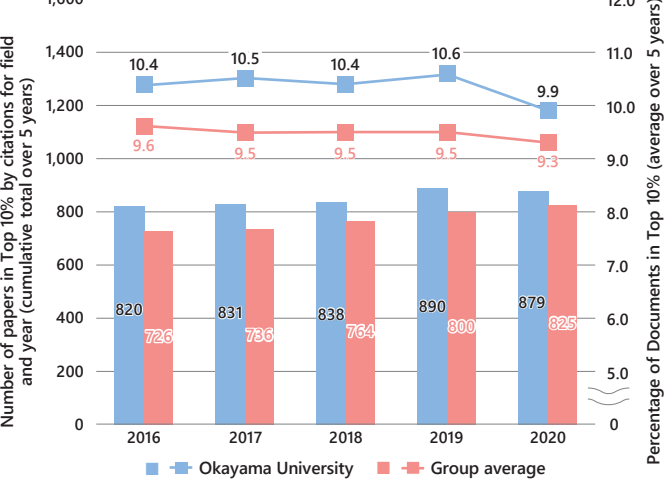
Okayama University is working on initiatives to bolster its strengths, such as building international research centers and providing support for priority research fields, while focusing on expanding and improving its research and innovation environment. These efforts have resulted in increased research productivity, and the number of research products (i.e., articles and reviews) has steadily increased, with a 16% increase in 2020 compared to 2016. Looking at Documents in Top 10%, which is an indicator of the quality (or impact) of papers, and international co-authorship, which is a metric for international research collaboration, we see that the numbers for these indicators have increased by 7% and 18% respectively in 2020 compared to 2016.

*Data is a total for articles and reviews obtained on August 6, 2021 via InCites (Clarivate Analytics) using the InCites Dataset + ESCI and the Web of Science schema.

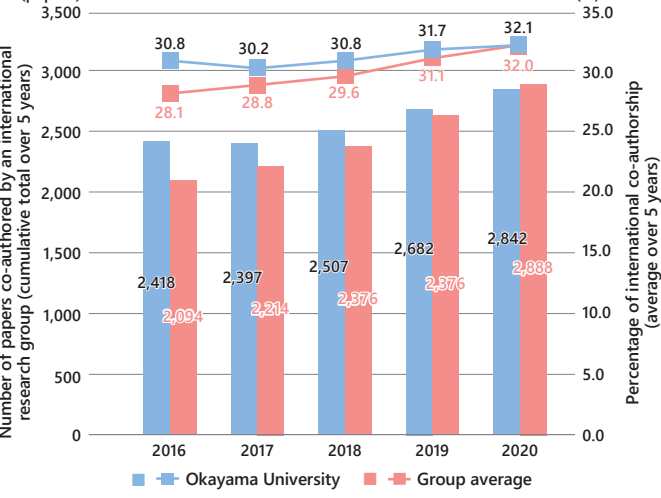
Number of papers (cumulative total over 5 years)



Documents in Top 10%



Number of papers co-authored by an international research group

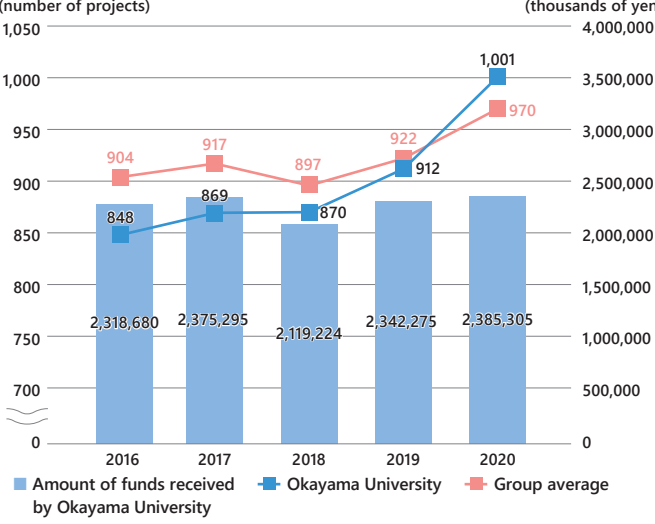


Grants-in-Aid for Scientific Research

The amount of money received from Grants-in-Aid for Scientific Research, the largest competitive funding program in Japan, has been mostly flat for the last five years but has been edging upward since 2018. Although the number of research projects adopted was lower than the group average from 2016 to 2019, the number has continued to grow steadily and reached 1,001 in 2020 to finally exceed the average. The 2020 figure represents an approximately 1.2-fold increase from the 2016 figure.

*Data was compiled based on information published by the Japan Society for the Promotion of Science (KAKENHI data).

Projects funded by Grants-in-Aid for Scientific Research



External Funding Ratio

The corporatization of national universities in 2004 was implemented with the aim of establishing an independent and autonomous management system for universities so that they can demonstrate their capabilities and unique characteristics better than ever before. However, operating grants provided by the government, which are a basic source of funding, have been decreasing due to the efficiency coefficient and other factors (Figure 1). In order to cover this shortfall, Okayama University has been working to overhaul its profit structure. Specifically, we have been concentrating on maximizing hospital operations and diversifying our

financial resources. In recent years, we have also been making efforts to raise funds from external sources. In addition to focusing on priority research fields and helping researchers obtaining major competitive grants, we conduct matching activities through publication of the University's research to companies in the form of company visits, participation in various kinds of exhibitions, etc. Due to these efforts the percentage of external funding has been increasing (Figure 2).

*The external funding ratio is an indicator that shows the status of funding through education and research activities. It is calculated by dividing the sum of revenue from contracted research, revenue from contracted business, and revenue from donations by ordinary revenue.

Figure 1: Budget for operating grants for national university corporations

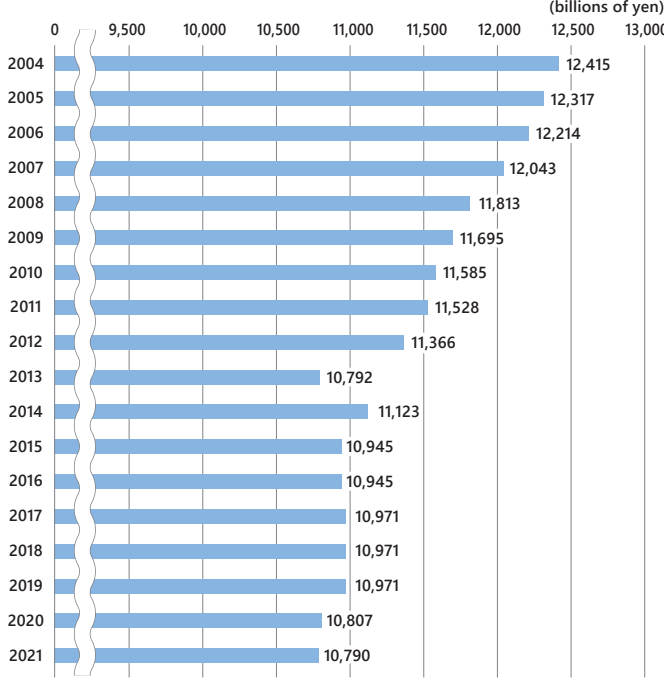
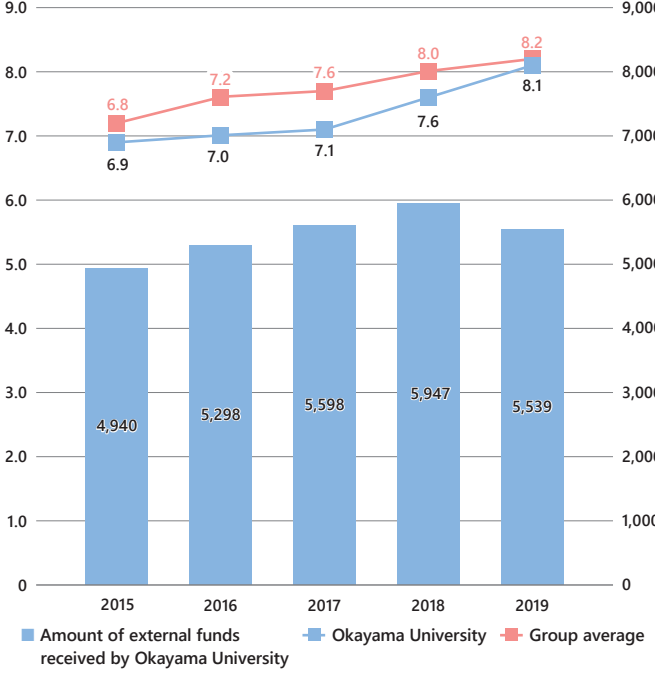


Figure 2: External funding ratio



Overview of Balance Sheet

- Comparable five-year information for the medium-term target period (FY 2016-2020), shown for reference, is based on financial statements and other information.
- Assets increased by 881 million yen year on year, for a total of 131,633 million yen, primarily due to an increase in cash and deposits as a result of an increase in subsidies received. Conversely, the value of machinery, equipment and buildings over the years clearly decreased due to aging.
- Liabilities decreased by 996 million yen year on year, totaling 52,609 million yen. This was mainly attributable to a decrease in loans payable due to repayment.
- Net assets totaled 79,024 million yen, up 1,877 million yen year on year, mainly due to an increase in retained earnings as a result of higher unappropriated retained earnings. A 122-million-yen decrease in capital stock is due to the sale of land.

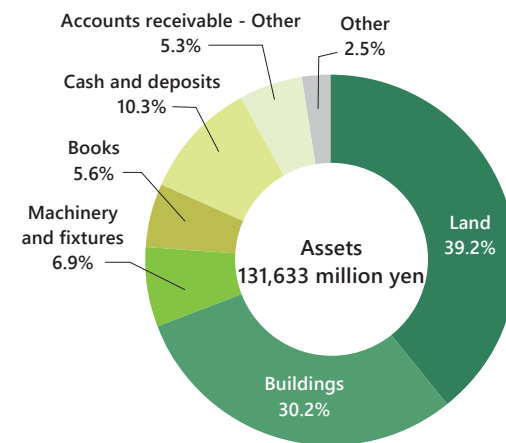
Okayama University's financial statements (balance sheets, income statements, statements of cash flow, documents concerning appropriation of profits or disposition of losses, statements of national university corporation operating costs, and supplementary schedules) are posted on the following website.

<https://www.okayama-u.ac.jp/tp/profile/zaimusyohyou.html>

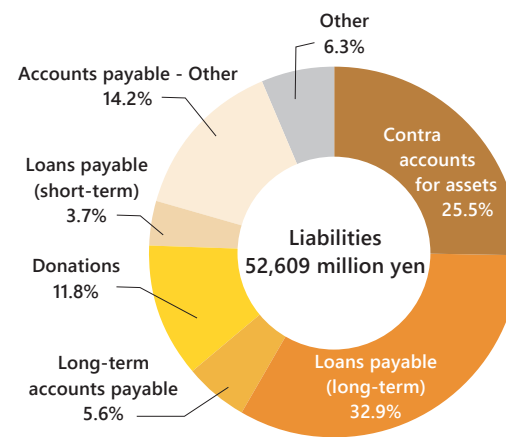
Balance Sheet

(millions of yen, rounded down to the nearest million)

Assets	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	YoY change
Noncurrent assets	122,644	118,708	113,558	112,793	110,553	△ 2,239
Land	51,964	51,963	51,904	51,835	51,593	△ 241
Buildings	50,028	47,434	43,586	40,445	39,781	△ 664
Machinery and fixtures	10,308	9,307	8,097	9,404	9,018	△ 386
Books	7,618	7,594	7,513	7,461	7,401	△ 60
Construction in progress	346	93	143	903	394	△ 508
Other properties, plants and equipment	153	156	154	153	155	1
Intangible fixed assets	582	520	420	363	294	△ 69
Investments and other assets	1,642	1,637	1,737	2,224	1,913	△ 311
Current assets	16,342	17,753	17,491	17,959	21,080	3,121
Cash and deposits	9,554	11,130	10,739	11,179	13,582	2,403
Accounts receivable - Other	6,099	6,342	6,429	6,434	7,018	584
Securities	400	-	-	-	100	100
Other	287	280	322	345	378	33
Total assets	138,987	136,461	131,049	130,752	131,633	881



Liabilities	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	YoY change
Fixed liabilities	41,640	39,163	36,036	36,788	34,241	△ 2,546
Contra accounts for assets	14,944	13,988	13,273	13,699	13,404	△ 294
Loans payable	23,877	23,123	21,137	19,204	17,287	△ 1,916
Long-term accounts payable	2,408	1,611	1,148	3,298	2,970	△ 327
Other	410	440	477	586	578	△ 7
Current liabilities	15,561	16,662	16,123	16,816	18,367	1,550
Operating grants	106	63	148	19	74	55
Donations	4,439	4,886	5,673	5,824	6,210	385
Loans payable	2,247	2,065	1,986	1,933	1,926	△ 6
Accounts payable - Other	6,642	7,274	5,742	6,584	7,487	902
Other	2,125	2,372	2,572	2,454	2,667	213
Total liabilities	57,202	55,825	52,160	53,605	52,609	△ 996



Net Assets	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	YoY change
Capital stock	69,804	69,804	69,798	69,764	69,642	△ 122
Capital surplus	5,634	4,473	2,870	1,213	1,325	111
Retained earnings	6,346	6,357	6,219	6,168	8,057	1,888
Total net assets	81,785	80,636	78,888	77,146	79,024	1,877
Total liabilities and net assets	138,987	136,461	131,049	130,752	131,633	881

Overview of Income Statement

- Ordinary expenses decreased 393 million yen year on year, for a total of 67,929 million yen. The primary factors for this decrease include lower contracted research expenses as a result of a decrease in the amount of research contracts received as well as lower research expenses due to a decrease in travel and transportation expenses because of the impact of COVID-19.
- Ordinary revenue totaled 69,965 million yen, up 1,431 million yen year on year, due primarily to higher revenue from subsidies as a result of an increase in subsidies received. However, university hospital revenue dropped due to COVID-19.
- A comparison over time shows a significant change between FY 2019 and FY 2020, i.e. before and after the start of the COVID-19 pandemic. The exceptionally large decrease in contracted research expenses and revenue as well as the significant decrease in university hospital revenue, in particular, bring to light the magnitude of the pandemic's impact, not to mention the curtailment of activities.

Income Statement

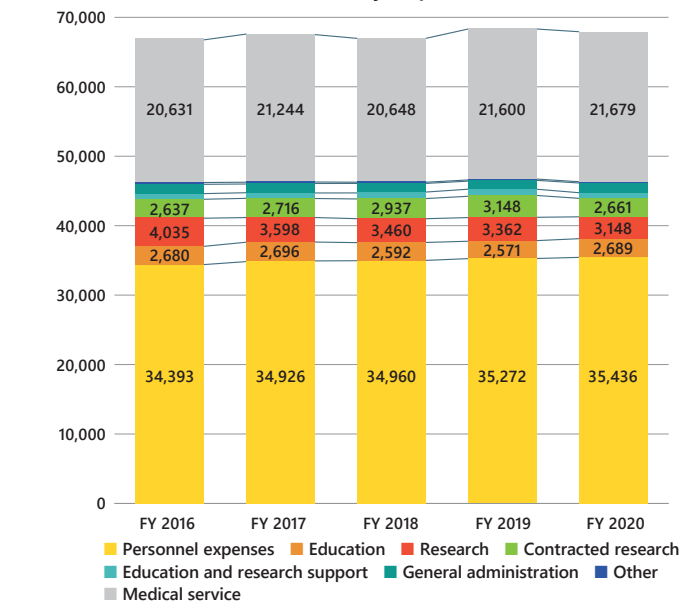
(millions of yen, rounded down to the nearest million)

Income Statement	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	YoY change
Ordinary expenses	66,930	67,598	66,966	68,322	67,929	△ 393
Education	2,680	2,696	2,592	2,571	2,689	118
Research	4,035	3,598	3,460	3,362	3,148	△ 214
Medical service	20,631	21,244	20,648	21,600	21,679	79
Education and research support	839	776	867	898	810	△ 88
Contracted research	2,637	2,716	2,937	3,148	2,661	△ 486
Personnel expenses	34,393	34,926	34,960	35,272	35,436	164
General administration	1,392	1,424	1,329	1,299	1,345	46
Other	318	215	170	170	157	△ 13
Ordinary revenue	67,671	68,304	67,178	68,534	69,965	1,431
Operating grants	17,863	18,671	18,022	18,156	18,077	△ 79
Tuition, admission and examination fees	7,964	7,713	7,638	7,601	7,492	△ 109
University hospital	32,405	32,707	32,572	33,585	32,287	△ 1,298
Contracted research	3,090	3,288	3,400	3,726	3,269	△ 456
Donations	1,620	1,591	1,727	1,845	1,652	△ 193
Other	4,726	4,331	3,816	3,618	7,187	3,568
Ordinary profit	741	705	211	211	2,036	1,825
Extraordinary losses	120	48	165	190	67	△ 123
Nonrecurring income	32	19	126	156	107	△ 48
Profit	653	676	172	176	2,077	1,900
Reversal of reserve for special purpose	368	150	50	46	48	2
Gross profit	1,022	827	223	223	2,125	1,902

Note: Due to rounding, numbers presented in this document may not add up precisely to the totals provided. Note: When there is no number, it is indicated by "-", and numbers less than the unit shown are indicated by 0.

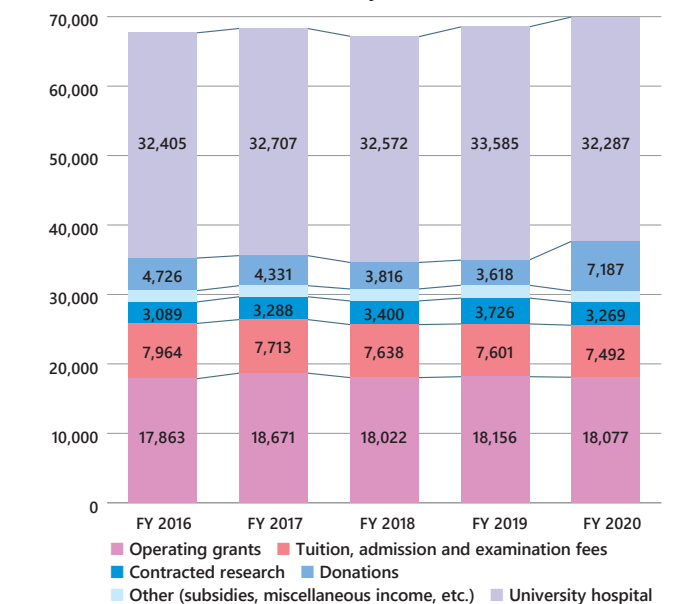
(millions of yen)

Ordinary Expenses



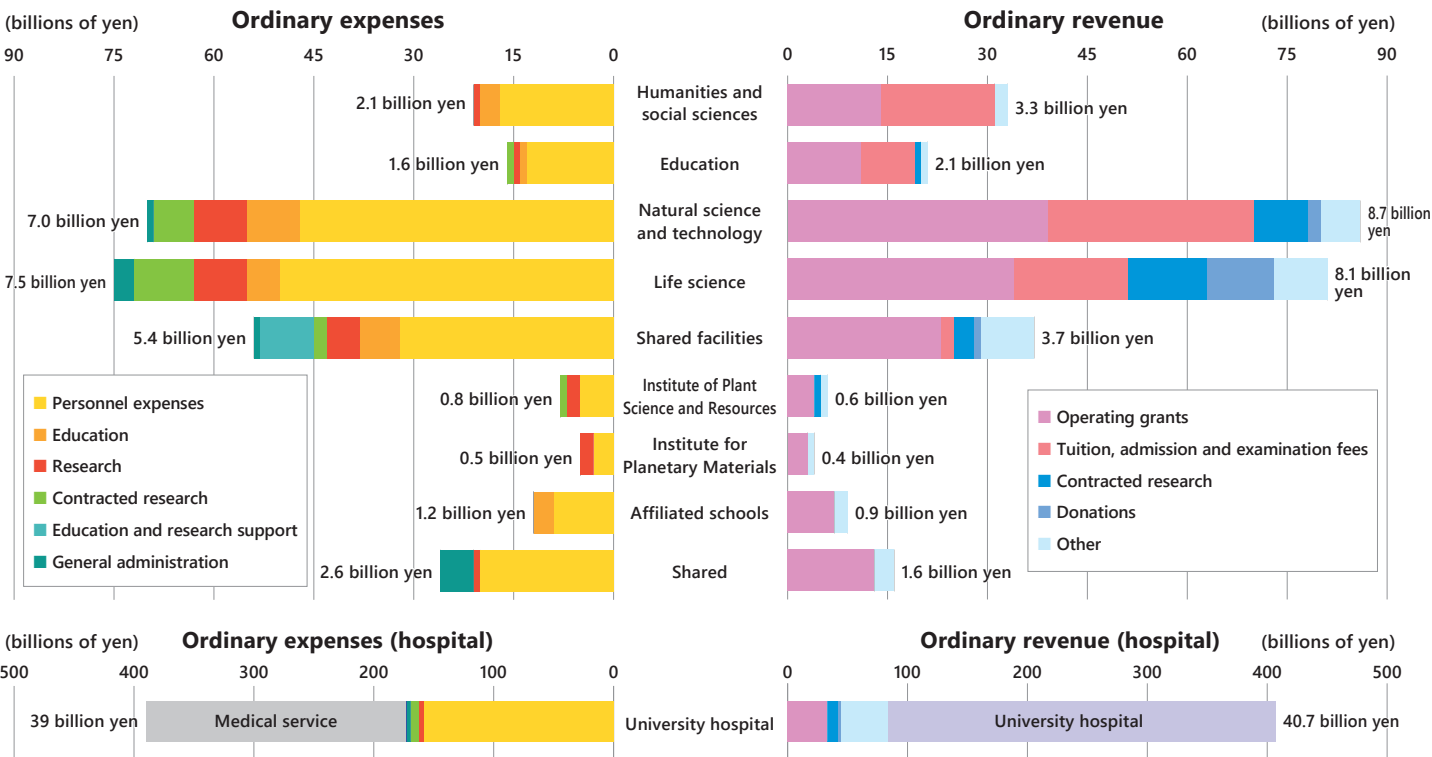
(millions of yen)

Ordinary Revenue



Disclosure of Segment Information

Okayama University discloses segment information by academic division in its financial statements (supplementary schedule) when disclosing detailed financial information. This enables us to provide information on the size of each academic division and differences in their financial structures.



Looking At Our Finances in Terms of Corporate Accounting

As part of our efforts to visualize our operations, we prepared an income statement using corporate accounting principles, as shown below, to illustrate how it would look if we did not take into consideration the break-even mechanism that is unique to national university corporations. We will continue to make various efforts to be as transparent as possible about the national university's financial status by recategorizing gains and losses due to revenue and expenses related to our core operations, i.e., education and research.

FY 2020 (millions of yen)		
Operating revenue (revenue from core operations)	43,235	
Tuition, admission, and examination fees	7,602	Revenue from tuition, admission fees, examination fees, etc.
Contracted research	3,269	Revenue from contracted research, joint research, contracted projects, etc.
Sales and service revenue	32,360	Revenue from university hospital, dormitories, extension courses, etc.
Other operating revenue	2	Recovery of written off receivables
Operating expenses (expenses incurred for core operations)	67,771	
Wages and salaries	34,340	Salaries, bonuses, legal and other welfare expenses, etc.
Retirement allowance	1,620	
Scholarships	1,059	Tuition waivers, scholarships, etc.
Utilities	1,214	Utilities and fuel expenses
Supplies and materials	17,016	Consumables, equipment, books, materials, etc.
Depreciation	4,601	
Other operating expenses	7,918	Outsourcing, processing fees, maintenance, repair, travel expenses, etc.
Operating profit (loss)	△ 24,536	
Non-operating income or expenses (income or expenses other than the above)	26,374	
Non-operating income	26,531	
Operating grants	18,421	Revenue from operating grants (including reversal of contra accounts for assets)
Subsidies	4,671	Revenue from subsidies (including reversal of contra accounts for assets)
Donations	2,107	Revenue from donations (including reversal of contra accounts for assets)
Research-related income (income from indirect Grants-in-aid for Scientific Research expenses, etc.)	545	Income from indirect Grants-in-aid for Scientific Research expenses, indirect subsidy costs
Income from for-profit operations (rent income, etc.)	692	Rent income, financial revenue (such as interest on deposits), etc.
Other non-operating income	93	Reversal of encumbrance for assets donated by the government, compensation and penalty income
Non-operating expenses	△ 157	
Interest expenses	△ 127	
Other non-operating expenses	△ 29	Miscellaneous losses
Ordinary profit	1,837	Difference between ordinary profit and revenue from facility improvement grants in the income statement
Extraordinary gains or losses	239	
Facility improvement grants	198	Revenue from facility improvement grants, etc.
Other extraordinary gains	107	Gains on the sale of noncurrent assets, insurance claims, etc.
Extraordinary losses	△ 67	Disaster losses, loss on retirement of noncurrent assets
Profit	2,077	
Amount equivalent to depreciation not included in the income statement	2,191	Depreciation for period not recorded in the income statement
Profit (loss) after taking into account the amount equivalent to depreciation not included in the income statement	△ 114	

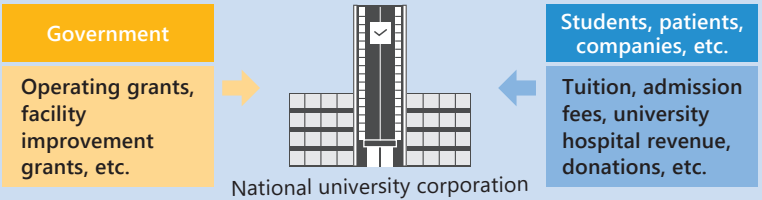
When rearranged as shown above, our income statement shows that the operating loss is 24,536 million yen. It highlights our financial structure in which the operating expenses are covered by non-operating income, including revenue from government funds such as operating grants. This structure is used not only by our university but also by all national universities. Moving forward, we need to strengthen our operational foundation and work toward acquiring external funding, including private funding, and increasing non-operating income (especially miscellaneous income). At first glance, profit appears to be positive (2,077 million yen), but when the amount equivalent to depreciation (the effect of aging buildings and other infrastructure, etc.), which is not included in the standard income statement of a national university corporation, is accounted for the total is actually negative.

Unique Accounting Procedures for National University Corporations Explained

National university corporations use a unique accounting system that can be described as a hybrid of public sector accounting and corporate accounting. It typically includes the following accounting procedures.

<Accounting by Revenue Source>

The revenue of a national university corporation is made up of operating grants, payments made by students (such as tuition), and revenue from an affiliated hospital. A national university corporation performs accounting based on the nature of these revenue (or funding) sources.



<Accounting Based on Profit-loss Balance>

Since a national university corporation is not intended to earn profits, it will break even as long as it carries out normal operations (i.e., education and research activities) using funds from operating grants, tuition payments, and other sources.

When a national university corporation receives operating grants, tuition payments, or other funds, it records them as liabilities (debts) with the assumption that it will fulfill its obligation to carry out its operations. Once its operations have been carried out, this obligation is deemed to have been fulfilled, and those funds are reclassified from liabilities to revenue.

If a national university corporation successfully increases in its revenue, such as by revenue from an affiliated hospital, or successfully curbs expenses through cost-reduction and other management efforts, it will generate a profit. The portion of the profit approved by the Minister of Education, Culture, Sports, Science and Technology can be carried forward to the next fiscal year and onward.



Okayama University Academic Capital Foundation COVID-19 Support Project

Thank you for all of the support you've provided!

COVID-19 Support Project Results for FY 2020

No. of Donations: **1,052** Total Donation Amt.: **¥62,395,860**

As a means of emergency support funding in response to the COVID-19 pandemic, Okayama University sent out calls for donations to be utilized primarily for study, the University Hospital, and research activities. Generous donations were received from University alumni as well as current students and their families, citizens of the local region, corporations, and many others. We are deeply grateful for this support, and because we expect the COVID-19 pandemic to continue for some time we will continue to provide our own support in any way possible. Let's move forward together and overcome this crisis!

— Okayama University Urgent Financial Support Fund —

As an urgent relief measure for students in dire need who have lost any source of income, receive no support from family or funding such as scholarships, and face difficulty in simply buying food to eat every day, Okayama University provided 30,000 yen per student for 225 students, 104 of whom were international exchange students.

— Financial Support for Travel to Japan by Privately-Financed International Students —

Due to COVID-19 infection-control measures, privately-financed international students are prohibited from using public transportation for 14 days after arriving in Japan and must also reside in a quarantine facility during that period in order to have their health status monitored. In order to reduce the financial burden brought about by these measures, Okayama University supplied 88 such international students with financial support for travel costs to Japan (100,000 yen per person), part of which was procured from the Okayama University Academic Capital Foundation.

— Support for the Okayama University Hospital —

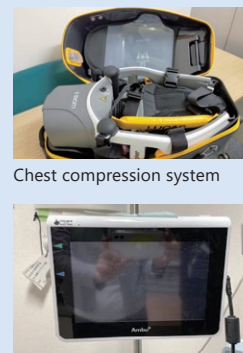
Amid the worldwide COVID-19 pandemic, the Okayama University Hospital faced shortages of medical-use masks, gowns and other medical supplies as well as medical examination equipment. They requested financial support to overcome these issues, in response to which donations to the Okayama University Academic Capital Foundation earmarked for University Hospital support were collected and used as additional support.



Thermal imaging system



Portable ventilator systems



Monitor for bronchoscope

- Introducing thermal imaging systems has enabled quicker, more seamless measurement of outpatient body temperatures, reduced staff-number requirements for temperature-taking tasks, and helped ensure a safer work environment for hospital personnel.
- Using portable ventilator equipment has made it possible to safely transfer patients from other medical facilities to the University Hospital.
- Adding chest compression system and flight helmets to the University Hospital's equipment lineup has made intensive care safer and more effective than before while enabling utilization of greater staff numbers for treating seriously ill patients with COVID-19 and other highly infectious diseases and increasing said patients' chances of survival.

— We Aren't Scared of Corona! WIN-WIN Student Project —

Okayama University Student Support and Local Restaurant Assistance

Starting on Monday, June 1, 2020, Okayama University collaborated with nine nearby restaurants for a two-week period (ten weekdays) to provide dinners for students. On average, 400 take-out meals were distributed daily during the project period. The Okayama University Academic Capital Foundation was used as a source of funding to cover meal costs for this student-planned and -implemented project.

Forging Bonds and Bringing Together Okayama University Students through Laughter and Smiles

In order to help students enjoy their time more and encourage those struggling during the COVID-19 pandemic, the Okayama University Academic Capital Foundation was used to fund this student-planned and -executed art project in which photographs of students smiling and laughing were collected and arranged to create mosaic-image artwork.

Other Support Received by Hospitals, Students and Others

— Major Donations from Corporations, Organizations and Individuals to The Okayama University Hospital —

We received 44,000 masks, 6,000 face shields, 12,000 gowns, 3 thermal imaging devices with stands, and 1 portable-type negative pressure box.

In addition, we also received medical gloves, arm covers, goggles, functional undergarment shorts, nonwoven-fabric body suits, wet wipes, duct tape, food products and many other items.

The kind support and encouragement provided by people throughout the local region has helped medical staff, who have been under prolonged strain throughout the COVID-19 crisis. We will continue making every possible effort to ensure that all personnel are able to continue working together as a team to provide safe, reliable patient care.

— Medical Student Study and Financial Support Project —

We appreciate everyone's understanding and support regarding the Medical Student Study and Financial Support Project initiated by medical-division heads.

1. Donation applications (for FY 2020):

546 applications totaling ¥17,633,500

2. State of support efforts for students:

Okayama University has enacted temporary support measures for students who have refrained from engaging in part-time jobs and are thus struggling financially, while also living under various other University restrictions (on the medical school campus), during the COVID-19 crisis. Each applicant has been provided with 50,000 yen, and the University has also covered purchases of consumables necessary for infection prevention and clinical training while helping to pay the costs of PCR tests and assisting in other ways.

Message to All Stakeholders

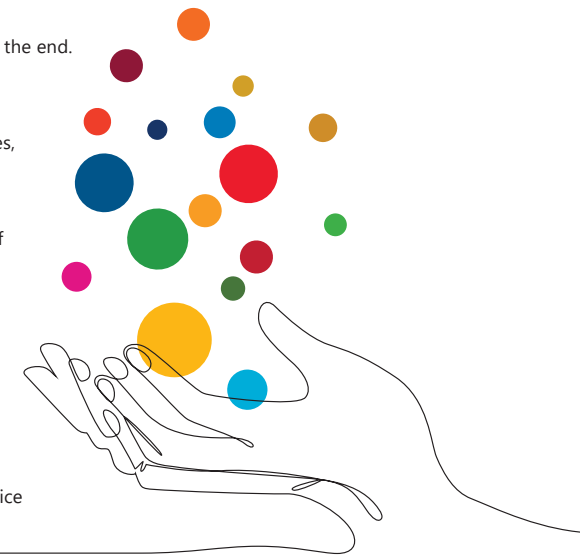
Thank you for taking the time to read "Okayama University Integrated Report 2021 -Pay it Forward-" through to the end.

We have published this integrated report since FY 2019 as a means of helping all stakeholders to better understand Okayama University as it stands at present. Building on the previous two reports, we have centered the focus of this latest edition on our vision as a university while providing detailed explanations of our strategies, all with the aim of realizing our fourth mid-term target period objectives from FY 2022 onward.

Moreover, we have used this report to convey the University's response measures to the COVID-19 pandemic. For both financial and other topics covered, our Institutional Research and Effectiveness Office (IR/IE Office) staff have made every possible effort to ensure that information is conveyed using easy-to-understand language. While creating this report, we referred to the International Integrated Reporting Framework established by the International Integrated Reporting Council (IIRC) and strove to achieve the best integrated report possible for Okayama University.

Through this report, we hope to promote greater interest in Okayama University among readers everywhere. In order to help us make improvements in future editions, we encourage you to contact us with any comments and suggestions you may have.

Okayama University Institutional Research and Effectiveness Office



Okayama University supports the Sustainable Development Goals (SDGs)



Okayama University SDGs website:
"Okayama UNIVERSITY x SDGs"
<https://sdgs.okayama-u.ac.jp/en/>

Okayama University Integrated Report 2021 Pay it Forward

Published November 30, 2021

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This integrated report is made from FSC®-certified and other controlled materials.



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