FY2022

RESEARCH INSTITUTE of SCIENCE and TECNOLOGY for SOCIETY (RISTEX)

Solution-Driven Co-creative R&D Program for SDGs (SOLVE for SDGs)
Scenario Creation Phase, Solution Creation Phase

Call for R&D Proposals
[Application Guidelines]

Application Call Period

April 5 (Tue.) ~

Noon (12:00, Japan Standard Time) on June 8 (Wed.), 2022

Note: This translation is provided as a reference material. If there is any discrepancy between this translated version and the original Japanese one, the original Japanese version prevails.

Japan Science and Technology Agency

Research Institute of Science and Technology for Society (RISTEX)

and

Department for Promotion of Science in Society

Japan Science and Technology Agency

Overview of Call for Proposals of Research Institute of Science and Technology for Society (RISTEX)

The R&D program soliciting proposals in this call is the "Solution-Driven Co-creative R&D Program for SDGs (Scenario Creation Phase, Solution Creation Phase)" (the "Program"). Please refer to the next page for the main selection schedule. Applications will be made through the Cross-ministerial R&D Management System (Please refer to “4.6 Application Method”). Please note that applications using paper media (postal email, express parcel delivery, hand delivery, etc.) or made by email will not be accepted.

The overview and features of the Program are as follows. Please prepare your application after confirming the details in “Chapter 3 Summary of Research and Development Program.”

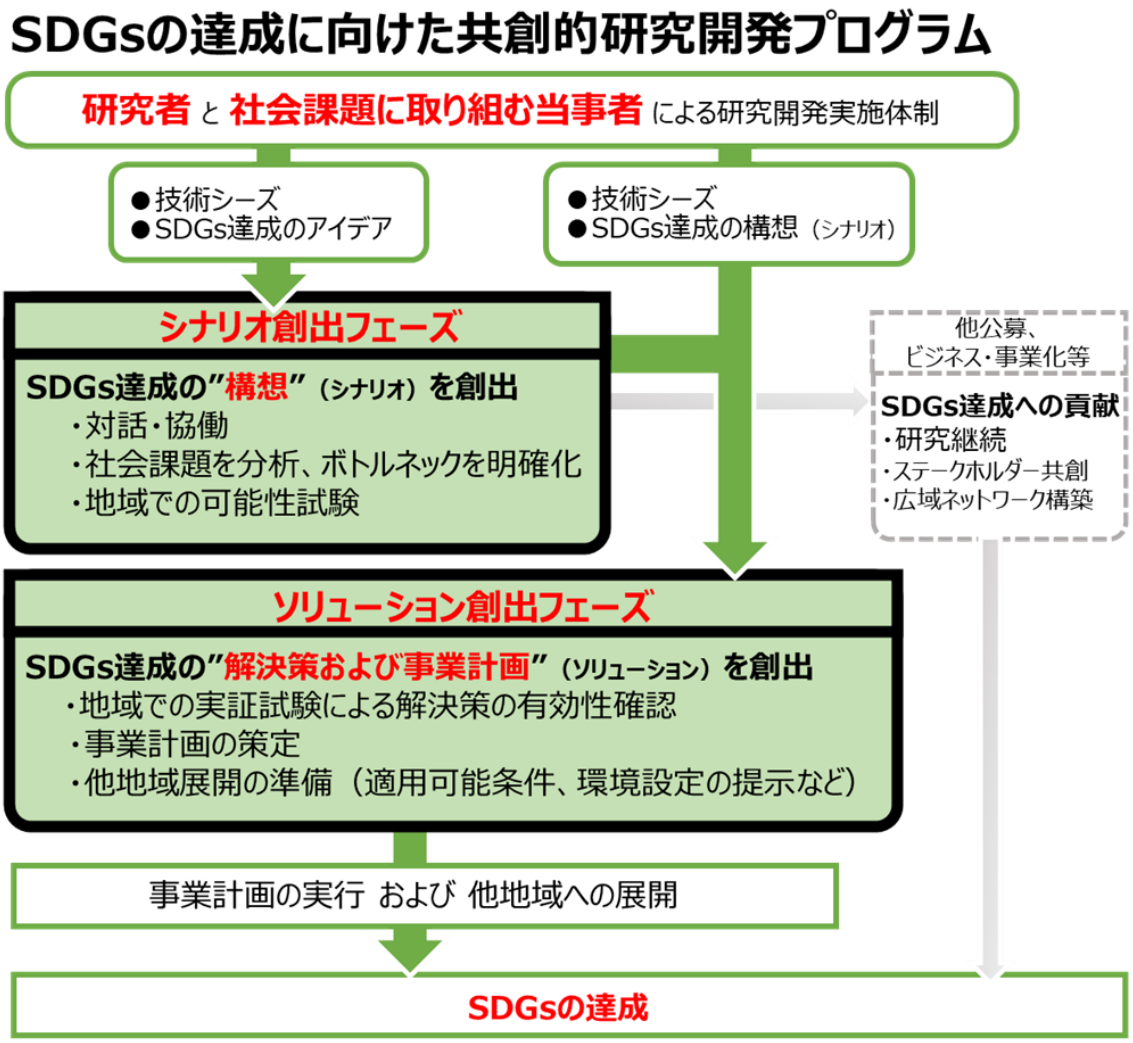

Figure: Solution-Driven Co-creative R&D Program for SDGs
(Scenario creation phase, Solution creation phase) Overview

- The Program will conduct **"co-creative"** research and development. Therefore, **dialogue** and **collaboration with local communities** is essential. Researchers at universities (Principal Investigators) and **representatives of parties working on social issues in communities** (Collaborators) are asked to work together to solve issues.

  “Co-creation” in this program is not limited to outreach activities aimed at increasing literacy and communicating research results in an easy-to-understand way but also includes concrete actions to solve social issues through dialogue and collaboration (engagement) with stakeholders from diverse perspectives.

- In the Program, they will work on the following in each phase to **establish a business plan and implementation system for solving social issues** after the research and development period ends.

  [Scenario Creation Phase]

  Extraction of social issue characteristics, **clarification of bottlenecks**, **performance of community possibility tests**, and **creation of concept (scenario)** to achieve the SDGs

  [Solution Creation Phase]

  Confirmation of effectiveness of solution to social issues through **verification tests in communities**, presentation of **applicable conditions for expansion into other communities**, and **business plan formulation** for independent continuation **centering on Collaborators**

■ Selection Schedule

Call begins	April 5, 2022 (Tue.)
Briefings of Solicitation	Online Implementation Details will be posted on the proposal application website as soon as decided. (https://www.jst.go.jp/ristex/proposal/)
Application deadline *1	Noon (12:00 p.m.) on June 8, 2022 (Wed.) (No delays accepted)
Document screening period	June to July (planned)
Notification of document screening results	Notice will be provided at least one week prior to interview screening
Interview screening*2	Scenario Creation Phase: July 28 (Thu.), 29(Fri.)

	Solution Creation Phase:　July 25 (Mon.)
Candidate Interview with the Program Director	August 22 (Mon.) and 25 (Thu.)
Notification and announcement of selection results	October 2022（planned）
Start of research and development	October 2022（planned）

*1 Deadline for submitting applications through the Cross-ministerial R&D Management System (e-Rad).

*2 Interview selection will be held online using Zoom. Please cooperate for the advance connection test.

■ Other Considerations

a. Proposers eligible for the interview after the results of document selection will be notified in writing and informed regarding the guidelines for the interview, date and time, and additional documents to be submitted. **During interview, both of Principal Investigator and Collaborator will be asked to explain the concept of his/her research and development project.**

b. The Principal Investigator will be notified of the results of document evaluation and interview regardless of if they are accepted or not.
In addition to the above, please be sure to enter an e-mail address, phone number and address registered in e-Rad, and the contact information provided in application form 1, as JST may contact the Proposer.

c. Proposers must have completed the educational program on research integrity at the time of proposal application. For details, please refer to "4.5 Requirements for Application" and "6.1 Enrolling in and Completing the Educational Program on Research Integrity".

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Chapter 1 Introduction to the Call for R&D Proposals

1.1 Overview of Strategic Basic Research Programs (RISTEX)

The Research Institute of Science and Technology for Society (RISTEX) of the Japan Science and Technology Agency (JST) seeks to create new social and public value through solving specific social problems. By building networks of stakeholders and implementers who engage in solving social problems, and promoting research and development (R&D) that makes use of knowledge in natural sciences, humanities and social sciences (HSS) under a competitive environment, we aim to obtain outcomes that will lead to practical solutions to problems in the actual society and to promote utilization of obtained outcomes in wider society.

In the JST RISTEX Programs, RISTEX sets up R&D Focus Areas and Programs (referred to as “Focus Areas and Programs”) it considers important in solving social problems, calls for proposals and promotes those selected as R&D projects (referred to as “Projects”).

The management of Focus Area and Program is performed by the Program Supervisor with the cooperation of Program Advisors. Principal Investigators and R&D participants conduct R&D within the institutions with which they are affiliated under the Program Supervisor’s management.

○ **Program Supervisor**

The Program Supervisor performs management of the Program as the person responsible for the operation of R&D that contributes to achieving the program targets set by the national government or RISTEX. The Program Supervisor conducts appropriate and flexible operations of the Program so that R&D can be carried out efficiently with the participation of stakeholders from diverse fields. In order to do this, the Program Supervisor develops the necessary networks, selects Projects, approves R&D plans, monitors their progress and provides advice through site visits and other means, and performs Ex-post evaluations. In addition, the Program Supervisor communicates the outcomes of the Program and how these are deployed in the wider society.

○ **Program Advisor**

The Program Advisor provides appropriate advice to the Program Supervisor from an expert perspective.

○ **Principal Investigator**

The Principal Investigator represents the Project and has overall responsibility for the Project. The Principal Investigator performs suitable management of implementation of R&D and appropriately

manages the outcomes and overall R&D expenses of the Project with R&D institution.

1.2 For Researchers Considering Applying or Participating in the Programs

1.2.1 Contribution to the accomplishment of sustainable development goals (SDGs)

JST to contribute to the accomplishment of SDGs!

At the "United Nations Sustainable Development Summit" held in September 2015, "Transforming our world: the 2030 Agenda for Sustainable Development" was unanimously adopted; the document was an achievement with "SDGs" at the core as a further comprehensive and new action target common to the world for the human beings, the Earth, and the welfare. The seventeen goals in the SDGs do not only indicate various problems in relation to the sustainability that is facing the humankind but also demand that those problems be solved comprehensively and in an integrated way. It is expected that scientific and technological innovation solves such social problems and that scientific evidence is provided to contribute to the formulation of excellent policies. We can say that these roles conform to "the science in the society and the science for the society," a new task of the science that was declared in "World Declaration on Science and the Use of Scientific Knowledge" (Budapest Declaration*), adopted at International Council for Science in 1999. As a core organization to promote the science and technology policies in Japan, JST promotes advanced fundamental research and works on the research and development of a problem-solving type to meet the requests from the society. SDGs are one of the worldwide objectives that can itemize all JST missions. We, in the course of the JST programs, want to collaborate with industries, academia, government agencies, and private enterprises and cooperate with researchers to realize a sustainable society.

President, Japan Science and Technology Agency (JST)

*The Budapest Declaration states that "science for knowledge," "science for peace," " science for development," and "science in society and science for society" are the responsibilities, challenges, and obligations of the science in the 21st century.

○For SDGs, the endeavors of JST, etc., access the following website.

https://www.jst.go.jp/sdgs/en/actionplan/index.html

1.2.2 Promotion of Diversity

JST Promotes Diversity!

The diversity is essential requisite for promotion of scientific and technological innovations. It is possible to open a new perspective of science and technology by the collaboration and discussion with various stakeholders having different specialties and values, irrespective of gender and nationality.

JST is, by promoting advances in diversity in its all activities in science and technology, undertaking possible problems of our future society, contributing to the strengthening of industrial competing power of Japan as well as to the enrichment of spiritual happiness of people. Our activities in this field accord with the “Sustainable Development Goals (SDGs)” agenda of the United Nations, in which goals relevant to diversity advancement are shown, including gender equality, contributing to efforts on our domestic problems but also to those on problems common to various countries.

Currently, the activity of woman is being positioned at the core of the Growth Strategy of the Japanese Government, being started as “the largest potential of Japan” in the strategy paper. Expending the participation of woman researchers in R&D projects is substantially important for advancing research and development, as they are a party of various researchers supporting science and technology innovations. JST is expecting that woman researchers would take this opportunity, positively and will apply to our Strategic Basic Research Programs, actively. JST is undertaking the improvement of our “Childbirth, Child-raising, Nursing Care Support System”, to constantly, based on the voice of the system users, creating environments enabling a researcher on leave to return his/her research, for example.

The call for and review of R&D proposals will be conducted also from a viewpoint of advancing diversity. Our dear researchers, we cordially invite you to the call for R&D proposals of the Strategic Basic Research Programs.

President, Japan Science and Technology Agency (JST)

We Are Waiting for Your Application!

JST is promoting diversity in research, based on our perspective that the diversity is for understanding of other researchers having ideas different from yours, and for creation of new values by combining your and their ideas. The diversity thus has potentials to give solutions not only to the domestic problems but also to problems common in all nations across the world. Therefore, JST is undertaking the societal problem of the globe such as the Sustainable Development Goals (SDGs), through the

promotion of diversity in research, collaborating with foreign institutions.

JST is promoting the diversity by ensuring the activities of women researchers, of course young researchers, and foreign researchers having foreign citizenship. To ensure that each researcher is fully able to exercise his/her skills, JST is providing continual supports for childbirth, childcare, and homecare of elderly relatives, and also endeavoring to maintaining a balanced membership composition in committees and alike. JST especially welcomes the application of women researches to our program, from whom we cannot have so many R&D proposals in previous years, to realize environments where various kinds of researcher can work, cooperating and competing with each other. Through these activities, JST is pursuing the creation of new values.

We are sincerely waiting for your active applications, especially those form woman researchers.

Director of the Office for Diversity and Inclusiveness
Department of Developing Human Resources for R&D Programs
Japan Science and Technology Agency (JST)

1.2.3 Toward the Promotion of Fair Research

Toward the Promotion of Fair Research

Recent incidents involving misconduct and dishonesty in research activities have resulted in an alarming situation that threatens the relationship of trust between science and society, and hinders the healthy development of scientific technologies. To prevent misconduct in research activities, there must be a function of autonomous self-purification in the scientific community. Each researcher must strictly adhere to strict discipline and work to create new knowledge and inventions that are useful for society, based on high moral standards that meet the expectations of society.

As a funding agency for research, the Japan Science and Technology Agency (JST) considers research misconduct to be a grave issue and makes every effort to prevent it in cooperation with relevant organizations, with the goal of regaining public trust.

1. JST believes that honesty in research activities is extremely important for Japan, which seeks to develop itself through science and technology.
2. JST supports honest and responsible research activities.
3. JST strictly condemns any misconduct in research activities.
4. JST will promote education in research ethics and reform its research funding programs in cooperation with relevant organizations, in order to prevent misconduct.

We must develop a healthy scientific culture based on social trust, so as to build a society filled with hopes and dreams for a bright future. We therefore request the continued understanding and cooperation of the research community and related institutions.

President, Japan Science and Technology Agency (JST)

1.2.4 Open access and data management plan

JST announced the basic policies for handling research achievements towards the promotion of open science in April 2017. The policies stipulate the basic concepts for allowing one's access to papers on research achievements and archiving, as well as on managing and disclosing research data.

In principle, researchers participating in this program are mandated to make the produced documents on research achievements available to the public via the repository organizations or publications for open access. Researchers are also requested to prepare a data management plan. This plan will contain details on policies and plans for archiving, managing, and publishing, or the non-disclosure of research data, which are being developed for achievements. Researchers must also submit the plan, along with the research plan document to JST. It is also mandatory for them to undertake archiving, managing, and publication of research data based on this plan.

Please see the following for details:

○ JST's basic policies for handling research achievements toward an open science promotion

https://www.jst.go.jp/all/about/houshin.html#houshin04

○ JST's Basic Policy Management Guidelines for Handling Research Outcomes for the Promotion of Open Science

https://www.jst.go.jp/pr/intro/openscience/guideline_openscience.pdf

In order to understand the content of information, support researchers and reflect this in basic policy (revisions), JST analyzes statistical data such as the number of data modules, the type of data, the type of publication, and the location of storage. The statistical data analyzed is intended to be made public, but we will not disclose individuals' personal data or names.

*For life sciences data, please refer to "6.18 Data disclosure from the National Bioscience Database Center."

Chapter 2 Philosophy on Program Administration for the Call and Selection

Program Supervisor: SEKI Masao

Visiting Professor, The Open University of Japan/

Senior Advisor, Sustainability Department, Sompo Japan Insurance Inc.

1. Background of the Sustainability Development Goals (SDGs)

The definition of Sustainable Development as used in the SDGs, is widely used around the world, and is commonly known as the "Sustainable Development Goals" (SDGs), chaired by the Gro Harlem Brundtland, Norway's first female Prime Minister. The United Nations Brundtland Commission's report "Our Common Future" (1987) defines the term. It is "development that meets that needs of the status quo without jeopardizing the ability of future generations to meet their own needs.

This concept, established in 1987, still holds true more than 30 years later. On the contrary, the importance of the concept and the need to implement it are increasingly recognized with a sense of urgency. This strong sense of urgency led to the adoption of the SDGs by the United Nations in 2015. While I commend the Brundtland Commission for its foresight and insight, it is very unfortunate that, if we think about it dispassionately, we still have not solved the problem.

As the various statistical trends clearly show, the sustainability of human society has not improved, future generations are increasingly at risk, and current needs are not being met. Global warming is accelerating, and the atmospheric CO_2 concentrations have already exceeded 400 ppm, which is considered a danger zone. However, at the current level of voluntary targets of countries around the world, it is impossible to limit temperature increase to within 1.5°C, which is strongly recommended by scientists, and if the current situation continues, it will be a cakewalk. The situation is the same in the United States.

According to the report by the Intergovernmental Panel on Climate Change (IPCC), the worst-case scenario is at 4.8 °C temperature rise and a maximum sea level rise of 0.82 m by the end of the century. The effects on society, the economy, and people's lives are expected to be immeasurable in all areas, including food, water, and health, as well as the damage to ecosystems and the intensification of natural disasters.

Along with the climate crisis, biodiversity has also been rapidly lost over the last 30 years. According to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Service (IPBES) report released in May 2019, as many as one million species are currently threatened with extinction. The decline in biodiversity to lead to a significant reduction in ecosystem services, with major consequences for a wide range of human societies. For example, the decline of pollinators has been estimated to lead to an annual economic loss of $577 billion due to reduced crop yields.

2. What is Happening in the World Today

In August 2018, Greta Thunberg, a 15-year-old (at that time) Swedish girl, started a one-woman protest against climate change policies by boycotting her school classes and sitting in front of the parliament building every Friday. This movement spread throughout Europe and the world as the “Fridays for Future” movement. Later, invited to speak to COP24 (24th Conference of the Parties to the United Nations Framework Convention on Climate Change), Greta said, “Unless we are willing to look not at what is politically possible, but at what needs to be done, there is no hope.” She urged policy makers to act to protect the future of young people and avert a climate crisis. Greta’s powerful message, delivered in a calm tone of voice, sparked a storm of empathy on an unprecedented scale around the world and spurred young people to take action, that on Friday, March 15, 2019, teenagers in 125 countries around the world rose up en masse and marched in protest. And it has grown to 7.6 million young people in more than 185 countries standing up in time for the UN Climate Change Summit in September 2019.

The climate crisis is shared around the world, and more than 2,000 cities and municipalities around the world have now declared a “climate emergency”. And major governments in Europe, the United States, China, Japan, and elsewhere have aligned and committed to achieving a decarbonized society by mid-century. However, the road to solving the problem is steep and there is not a moment to lose. To limit temperature rise to within 1.5°C, we must achieve a 45% reduction in greenhouse gases by 2030.

The fight against climate change requires the courage and determination to create a new socio-economic system that is not an extension of the past, and to carry out the “transformation” that is at the root of the SDG’s philosophy.

As for the other pillar of the SDG’s philosophy, “Leave No One Behind,” poverty and widening

inequality are major global issues. According to the 2019 report of the international NGO Oxfam, the growing maldistribution of wealth and widening inequality have become uncontrollable. For example, it states that the wealth of just 26 of the world's richest people equals the wealth of half of the world's population, or 3.8 billion people, counted from the poorest to the richest. Furthermore, 82% of the new wealth created in 2017 went to the richest 1% of the world's population, while only less than 1% went to the economically disadvantaged bottom half of the world's 3.8 billion people.

Furthermore, in terms of the interrelationship between climate change and poverty, it is important to note that it is these poor and vulnerable people who will be most affected by the negative impacts of climate change, such as extreme weather events and natural disasters. It is now an urgent task to achieve a resilient (strong and resilient) society against climate change by working on climate change mitigations and aiming for a decarbonized society, while at the same time putting more effort than ever before into disaster prevention and other climate change adaptation measures. We need to realize a resilient society that not only aims for sustainable and inclusive economic growth, but also protects human life, livelihood, and dignity in the face of increasing natural disasters and other downward risks to human life.

Humanity is now facing a tough battle against the new coronavirus, but in the recovering from the damaged economy and society, we should aim to rebuild a better society (build back better or build forward better), not simply restore it to the way it was. The key is to achieve economic recovery (green recovery) through massive investment to realize a decarbonized society, and at the same time, to realize an inclusive and resilient society through a co-creative approach to solving local issues, such as SOLVE. All of these are the very essence of the SDGs.

３．What Should We Do?

Needless to say, these global issues, such as climate crisis and poverty, are not something that is a matter for others. We in Japan are also called upon to take action to bring about major long-term changes. At the same time, there are a number of pressing issues that Japanese society in particular needs to resolve in order to create a society that is sustainable and leaves no one behind.

For example, in Japan, where the birthrate is declining and the population is aging rapidly, the working-age population to sustain the society is drastically decreasing, and it is clear that the current social system cannot be maintained by future generations. The reality is that we are either unaware

of this crisis, which we know is coming in the long run, or we are aware of it but are not taking sufficient action to deal with it. The trend of population concentration in large cities such as Tokyo is expected to continue, and even core cities such as prefectural capitals in regions outside of Tokyo are now facing a serious crisis of sustainability of local communities due to population decline, especially in the working age population.

However, as the phrase “Japan, a country with advanced issues” suggests, the problems that Japan faces are realities that many other countries will soon have to face. Therefore, if Japan is able to take the lead and demonstrate effective solutions, it can be used as a model for other countries in the future, and the Japanese model has the potential for global deployment. Crisis is also opportunity, and by providing solutions to the world’s problems, Japan has a unique opportunity for mid- to long-term growth and development.

In particular, the rapidly advancing Science, Technology and Innovation (STI) can be an effective way to achieve this. For example, services utilizing information technologies such as AI, IoT, Big Data, 5G, robotics, drones, and blockchain are already beginning to be widely used in areas related to everyday life, such as smart agriculture, mobility and distribution, medicine and healthcare, etc. Although it is true that these technologies have the power to disrupt the existing order and drastically change society and people’s lives at time, they also entail various risks because they are new technologies, the SDGs, with their high ideals of transforming society and creating a society in which no one is left behind. It is an indispensable driving force for the realization of this goal.

Technology is not a panacea, nor does technology itself solve problems. The accelerating pace of digital technology and other scientific and technological advances must be used for the future of people and society, and must be used as a force to solve problems. In other words, the solution concept we are aiming for is to “build a human-centric ultra-smart society.”

This is also the very core of Japan’s new growth model, the “Society 5.0” strategy, presented in the Fifth Science and Technology Basic Plan approved by the Cabinet in January 2016. Japanese industry also supports the government’s strategy as the entity responsible for implementing this strategy. In its Charter of Corporate Behavior, a code of conduct for member companies that was substantially revised to incorporate the SDGs and released in November 2017, Keidanren clarified its intention that industry will “play a leading role in realizing a sustainable society,” and in its Charter Implementation Guide, which outlines concrete actions to be taken, Keidanren has adopted the Society 5.0 for SDGs strategy, which outlines specific actions to be taken, and encourages member

companies to take action. In addition, in November 2018, we also released a comprehensive strategy, “Society 5.0: Creating the Future Together,” to provides policy recommendations for a new era. And in March 2020, Keidanren, the University of Tokyo, and GPIF released a joint research report, declaring their commitment to act together to “advance ESG investment, realize Society 5.0, and achieve the SDGs.” In addition, Keidanren has newly launched a new vision for future growth in the Corona Disaster, “New Growth Strategy” in November 2020. The strategy calls for an end to the growth path that has been followed to date. The Sixth Basic Plan for Science, Technology and Innovation (STI) approved by the Cabinet in March 2021, also calls for the resolution of social issues and the reduction of disparities in science, technology, and innovation. In order to create new value through innovation, it has been pointed out that it is important to use “comprehensive knowledge” from the humanities and social sciences that creates social value and “knowledge” from the natural sciences. In order to realize solutions to social issues through “comprehensive knowledge” that utilizes not only academic knowledge but also on-the-ground knowledge, it is essential to build a network for multi-stakeholder collaboration.

Now is the time for all sectors and stakeholders, including government, academia, industry, investors, civil society, consumers, labor and media, to pool their wisdom and energy to create and scale up solutions to global and local challenges for a long-term perspective. The key is a multi-stakeholder approach and the co-creation of solutions based on consistent stakeholder engagement and dialogue, starting from the research and development stage, in order to ultimately implement new and unprecedented technologies and ideas into society.

４．What This Program Aims to Achieve

In this program, we aim to solve social issues in a specific region by utilizing Science, Technology, and Innovation (STI) in this way, and to present the results as a solution that can be developed into a business plan and deployed in other regions in Japan and abroad. Although the program is based on technological seeds, it is not technology-driven but rather solution-driven in the sense that science and technology are considered as a component of a social system that should optimized and customized to solve problems. We also emphasize the concept of “backcasting,” in which we first determine the target society from an outside-in perspective based on the external environment and objective scientific knowledge, and then consider what needs to be done by calculating the difference

from the current situation in reverse.

The issues facing the region today are diverse and increasingly complex, and in order to solve them, it is essential not only for individual entities to respond individually, but also for diverse stakeholders to work together to find a solution that is not partially optimal, but rather optimal as a whole. The 17 goals of the SDGs are a collection of independent and disparate goals. Rather than a collection of goals, we need to pay attention to the interrelationships, tradeoffs, and synergies among them. It is important to take the stance of making society more sustainable, inclusive, and resilient (strong and flexible) by transforming the social system itself through co-creative activities in which diverse stakeholders collaborate.

The SDGs aim to “Leave No One Behind” by organizing and setting common goals that transcend the positions of citizens, businesses, central and local governments, NPOs, researchers, and others, regardless of whether they are in developed or developing countries. Researchers and local governments alike have their own unique challenges. Basically, it is often thought that each sector is the “expert” on such issues and each sector should solve its own problems. However, by rethinking these issues from the perspective of the SDGs, they become common challenges that everyone in this society should participate in as a concerned party, engage in dialogue, learn from each other, generate ideas, and collaborate by leveraging their strengths. Without this basic approach, we will not be able to solve the difficult and complex issues facing our society today. And only then will it be possible to create a significant impact that no single sector can produce on its own. This program aims to promote co-creative activities (identification and sharing of issues; dialogue, communication, and trust building; design of venues, tools, and management of systems for diverse actors to gather; creation of performance indicators (KPIs) and intermediate goals; development of solution scenarios; feasibility testing in the field; demonstration testing; and development of business plans). And to transform society and create a strong, inclusive and sustainable society that leaves no one behind, we support the creation of living knowledge in the form of “scenarios” and “solutions” to create impactful and “meaningful” change in society.

Chapter 3 Summary of Research and Development Program

3.1 Backgrounds and Goals of the Program

Transforming Our World: The 2030 Agenda for Sustainable Development (the 2030 Agenda) gives climate change and natural disasters as issues to face in addition to poverty, hunger and inequality. It expects efforts to address these.

Similarly, the 2030 Agenda argues that science, technology and innovation (STI) in a wide range of fields (e.g., information technology, medicine and energy) has the great potential to accelerate human progress, to close the digital divide and to develop a knowledge society. Science, technology, and innovation are positioned as an important means of realizing this. They are needed to contribute to achieving goals.

The 2030 Agenda gives 17 Sustainable Development Goals (SDGs) and 169 targets under the basic philosophy that no one will be left behind. We believe it is important that people who are working on regional social issues in Japan and people who wish to utilize their technology seeds to tackle social issues join forces and conduct R&D. This is needed to identify social issues and to create the solution strategies to them by means of science, technology, and innovation toward the achievement of these SDGs. We will promote R&D through co-creation of both parties in this program.

We will call for R&D proposals and will then select them as R&D projects in this program. We are calling for proposals that identify social issues in regions* and then demonstrate solution strategies to those issues in this program. At the same time, we ask that participating teams formulate a business plan to realize solution strategies after the end of the program. We are aiming to create a solution as one that combines that solution strategy and business plan.

We assume that the solutions created through this program will be taken over by those who are working on social issues. We expect those people to establish the solution strategies in specific regions and to then accumulate achievements at the regional level through activities to deploy them to other regions including those overseas. We hope that this will lead to the achievement of the SDGs.

*In this program, we will rate proposals for regional social issues that we can anticipate will be deployed horizontally in a wide range to other regions in Japan and then at a global level and that we can expect to further contribute to the achievement of the SDGs by bringing about a major economic and social impact higher than those we anticipate will be limited to a small-scale deployment of results because those issues exist only in a specific region.

3.2 Framework of the Program

Researchers (natural sciences, humanities and social sciences) and those involved in tackling social issues (Collaborators) will work together on R&D based on the idea of achieving the SDGs by utilizing technology seeds that have already been obtained. The purpose of this is to create solutions to regional social issues toward the achievement of the SDGs.

3.2.1 Research and Development Focus

(Relationship with the 17 Goals)

Please note that the 17 goals and 169 targets of the SDGs are related to each other rather than being individually independent. Accordingly, we are not seeking the sacrifice of one goal to achieve another goal.

(Three Dimensions of Sustainable Development)

The 2030 Agenda states that “we are committed to achieving sustainable development in its three dimensions – economic, social and environmental – in a balanced and integrated manner.” There is a need to create value that balances economic, social and environmental value in creating solutions to social issues.

(Targets of Support in This Program)

The efforts themselves to solve real-life social issues are the targets of support. It is essential that there are already technology seed to be used to solve social issues. Consequently, R&D of technology seeds itself is not a target of support.

Science, technology, and innovation are important means to achieve the SDGs. However, we believe solving issues by combining a variety of expertise with existing technology seeds can also

be an effective approach instead of technology seeds that use cutting-edge science and technology serving as the sole driving force of innovation.

The technology seeds in this program will be those with R&D results in the science and technology whose applications are envisaged. They will also be those which are at the stage in which it will be possible to test their feasibility in society. Even if these seeds have results in science and technology to solve real-life social issues, the laboratory-level feasibility tests to demonstrate their effect as a prototype and the development of software at the laboratory level will have already been completed.

In addition, even if the activities will ultimately contribute to solving problems in social issues, those that pursue only the commodification and commercialization of software and equipment are not targets of support in this program.

3.2.2 R&D Phase

We are looking for proposals to conduct R&D up to the creation of solutions that target specific regional social issues in regions in Japan in this program. We will establish two phases – the scenario creation phase and the solution creation phase – to provide the appropriate support according to the progress of the R&D. In either phase, proposals will depict a vision and adopt the backcasting technique to formulate a plan by coming back from that vision to the present time.

<Scenario creation phase>

Proposals will extract the characteristics of regional social issues through dialogue and collaboration and then analyze and clarify bottlenecks to tackle specific social issues. Proposals will examine solution strategies that utilize technology seeds and will then conduct a feasibility test in the region under the assumption of a new social system that solves social issues. Furthermore, this is the phase in which proposals will prepare a roadmap based on the evidence obtained from the feasibility test and then create a concept to realize deployment to other regions and to achieve the SDGs by FY2030.

<Solution creation phase>

Proposals will conduct R&D based on the concept of deployment to other regions and achievement of the SDGs by FY2030 (hereinafter the “scenario”). They will then demonstrate the

effectiveness of the social strategies for social issues through demonstration experiments in specific regions. At the same time, proposals will also present the applicable conditions and environment settings for deployment to other regions including those overseas. In parallel with this, this is a phase in which proposals will formulate a plan for independent continuation after the end of the program (business plan) and will then prepare to implement that plan. We assume that this business plan will be implemented mainly by the Collaborators.

This phase will support the demonstration stage. Although it is not intended to serve as a dissemination stage, it will be necessary to complete the foothold to a structure that allows continuation of independent activities and dissemination under the assumption that Collaborators will become the recipients of the results at the end of the solution creation phase. We are looking for proposals that specifically envision a path to independent activities.

The Proposer can apply for either the scenario creation phase or solution creation phase.

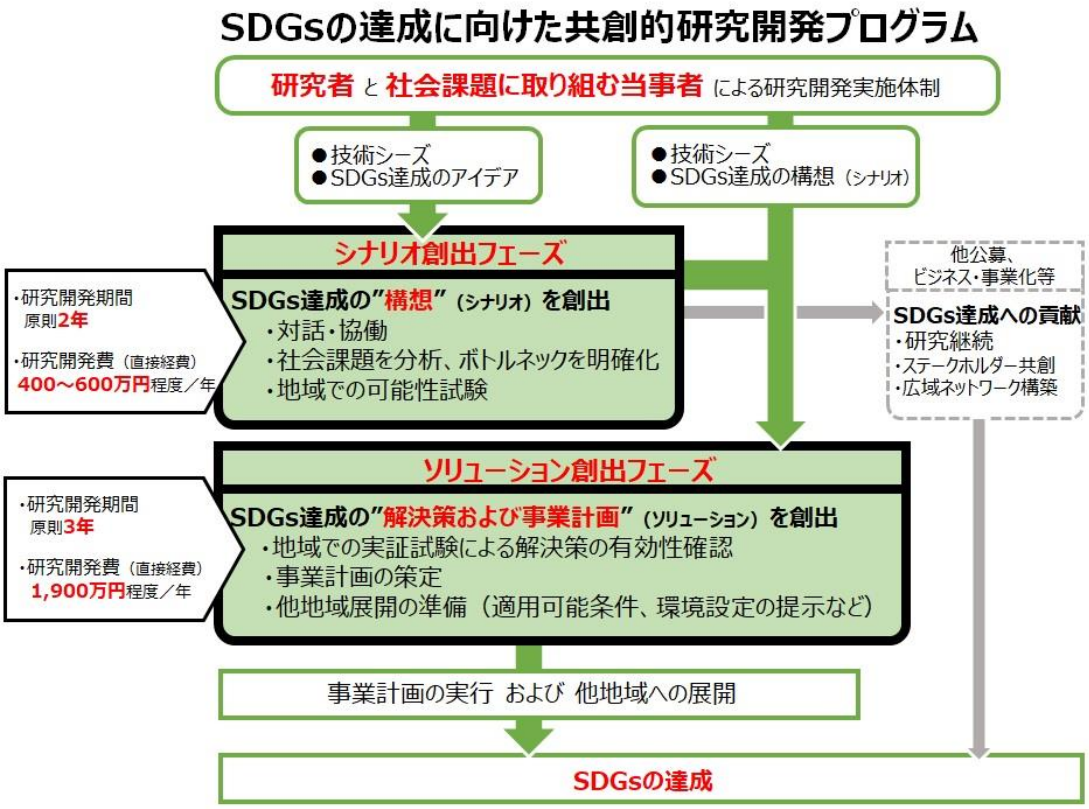


Figure: Overview of the Research & Development Phases

3.2.3 Notes on Proposals and the Conduct of Research and Development

This program attaches importance to cooperation with the industry, the Cabinet Office's SDGs Future City, the SDGs for Regional Revitalization Public-Private Partnership Platform, and activities to achieve the SDGs overseas. The Program Supervisor, Assistant Program Supervisor, Program Advisor and Secretariat may propose cooperation between the project and these organizational entities according to the progress of the project. If possible, we would also like to promote interaction with diverse entities including those overseas outside of the team in the project.

Moreover, we believe it is especially important to expand the base of young and female researchers who participate in interdisciplinary R&D aimed at solving regional issues while having an international perspective through this program. To that end, we look forward to active efforts to appoint young people and women to contribute to personnel development.

As the problem of COVID-19 is greatly affecting social life, it is also important to tackle such pressing social problems and problems that may affect us in the future.

(Management of the Program)

JST RISTEX and "Science and Society" Promotion Dept. will operate this program using the following structures and methods.

① A Program Supervisor is put in charge of operating the program and provides overall management.

② Assistant Program Supervisors are appointed to act on behalf of Program Advisors for some part of their tasks.

③ Program Advisors are appointed to give specialist advice to the Program Supervisor.

④ Together, the Program Supervisor, Assistant Program Supervisor, Program Advisor, and the secretariat conduct the call for projects and its selections, and implement meetings or initiatives necessary for effective program management (e.g., advising on research and development, conducting site visits, etc.).

⑤ The Program Supervisor will conduct reviews as necessary, including the adjustment of research and development budgets and the restructuring and consolidation of projects.

⑥ In running the program, we will respond flexibly, considering the social situation and international trends, which includes changes of emphasis and amendments to the call and selection policy.

⑦ In running the program, we will actively conduct various projects to promote exchange, cooperation and interaction among the projects selected and set up opportunities for discussion with internal and external parties that have a cross-sectional and bird's-eye view of the projects (e.g., program-wide meetings). We will also conduct outreach activities about R&D outcomes (such as meetings for reporting outcomes and disseminating information on the Web.).

3.2.4 Deployment after the End of the Project

<Scenario creation phase>

Using the R&D in the scenario creation phase as a foothold, we aim to (1) develop into the solution creation phase, (2) continue R&D with public or private funds other than those in (1) that can contribute to the achievement of the SDGs, and commercialize the R&D. In order to realize it, we hope to see the construction of a wide-area network involving various stakeholders, the deployment of the project results in other regions, strengthening of collaboration between the Principal Investigators and the Collaborators and exploring a new form of collaboration and co-creation, with an eye toward business and social implementation.

We ask that you apply to the call to participate in the solution creation phase in the same way as other proposals from the perspective of fairness to conduct R&D in the solution creation phase. Adoption or rejection will be determined in response to selection made under the same conditions and process as the other proposals. If you apply for the solution creation phase in the final year of the scenario creation phase (during the R&D period) and your proposal is adopted, you can continue your R&D without interruption.

<Solution creation phase>

We are looking for proposals that will be able to widely deploy the solutions proven in regions in Japan to other regions after the end of the R&D project. Furthermore, we are seeking proposals aimed at achieving the SDGs.

In addition to being deployed on the United Nations platform (e.g., the Online Platform of the Technology Facilitation Mechanism) as a tool to communicate with diverse stakeholders, we expect proposals to attract ESG investment, boost the Cabinet Office's SDGs Future City initiative and lead to other R&D projects.

Chapter 4 Call for Proposals and Selection

4.1 Call Period and Selection Schedule

The main schedule for selection is as follows. Please note that the submission deadline differs from other areas and programs.

Applications will be made through the Cross-ministerial R&D Management System (e-Rad) (Please refer to “4.6 Application Method”). As the application deadline approaches, heavy demands on the e-Rad system could slow the application process and even cause the application deadline to be missed. Please give yourself enough time to complete application of proposal. A withdrawal of an application through e-Rad after the deadline cannot be processed. JST will not accept proposals for which the application process has not been completed in e-Rad by the deadline for any reason.

The name and affiliation of the Proposer in e-Rad should match that provided in the research proposal. The application of a research proposal uploaded to e-Rad will not be accepted if it contains defects. A defect making the review of the proposal difficult refers to omission of proposal application forms, serious character corruptions that make it difficult to read, and omissions of important items on the application forms.

Furthermore, JST is not responsible for any defects in a research proposal that may occur before the submission deadline, regardless of whether the proposal was received or not. As such, all research proposal Proposers must understand that JST will not require or request the Proposer to make any revisions to their research proposals before the research proposal submission deadline.

Research proposal Acceptance begins	April 5, 2022 (Tue.)
Briefings of Solicitation	Online Implementation Details will be posted on the proposal application website as soon as decided. (https://www.jst.go.jp/ristex/proposal/)
Application deadline *1	Noon (12:00 p.m.) on June 8, 2022 (Wed.) (No delays accepted)
Document screening period	June to July (planned)
Notification of document screening	Notice will be provided at least one week prior to interview

results	screening
Interview screening*2	Scenario creation phase: July 28(Thu.), 29(Fri.) Solution creation phase: July 25, 2022 (Mon.)
Candidate Interview with the Program Director	August 22 (Mon.) and 25 (Thu.)
Notification and announcement of selection results	October 2022（planned）
Start of research and development	October 2022（planned）

*1 Deadline for submitting applications through the Cross-ministerial R&D Management System (e-Rad).

*2 Interview selection will be held online using Zoom. Please cooperate for the advance connection test.

4.2 Research and Development Period

Scenario creation phase: In principle, 2 years or less

Solution creation phase: In principle, 3 years or less

This will be adjusted in accordance with the content and plan of the R&D proposals and the selection policy.

4.3 Research and Development Budget (Direct Costs)

One issue (project)

Scenario creation phase: Maximum of approx. 4~6 million yen per year (12 months)

Solution creation phase: Maximum of approx. 19 million yen per year (12 months)

a. The budget may be adjusted according to the proposal, research plan, and adoption policy.
b. R&D activities will start in October, FY2022. Therefore, please include expenses for six months until the end of the fiscal year in your calculations.
c. Please refer to “5.5. Research and Development Budget” and “8. Q&A on Call for Proposals” for the use of the R&D budget (direct costs) and indirect costs.
d. JST will not directly hire those who engage in R&D – including the Principal Investigator.

As per the Collaborative Research Agreement, JST will pay the institution implementing the project

for all research and development budget (direct costs) and indirect costs (in principle, 30% of direct costs). This will be paid as consigned research funds.

We may make adjustments according to management (e.g., grasping the project's progress situation) by the Program Supervisor, Assistant Program Supervisor and Program Advisor when determining the R&D fund to be allocated. For details, please refer to "5.5 Research and Development Budget.

4.4 Number of Projects to be Selected

Scenario creation phase: Approximately 4~6 projects

Solution creation phase: Approximately 4 projects

The number of projects selected will be adjusted based on the content of the proposals received and other circumstances for both phases.

4.5 Requirements for Application

Principal Investigators must have completed the educational program on research integrity at the time of proposal application!

Note that if completion of the program cannot be confirmed, the application will be disqualified for failing to meet the requirements. At the time of proposal application, it is acceptable if the Principal Investigator only completed the program. For details, please read "6.1 Enrolling in and Completing the Educational Program on Research Integrity" and "Chapter 8 Q&A on Call for Proposals."

Research project Proposers, who will serve as Research Director, will submit the proposal themselves. Requirements for proposal application are presented below. Please ensure you understand these requirements for your application.

*In principle, if the determination is made that an application does not meet the requirements by the time of selection, the research proposal will either not be accepted or not be selected.

*If an application is selected, the application requirements must be maintained for the entire duration of the period of R&D Project. If the R&D Project fails to meet the requirements during the research period, the research project will in principle be completely or partially suspended (i.e. be terminated early).

In addition, proposals must be submitted after understanding the matters herein as well as “Chapter 6 Key Points in Submitting Proposals.”

4.5.1 Multiple Applications

(1) One person may only submit one proposal as Principal Investigator for one project only for one phase or the other.

(2) You cannot apply to this program at the same time as applying to the calls in FY2021 for proposals in the Science of Science, Technology and Innovation Policy R&D Program, the Comprehensive Practical R&D Program for Ethical, Legal and Social Implications (ELSI) in Science and Technology or the technologies for society R&D program focusing on the prevention of social isolation we will launch in FY2022.

(3) Currently, Principal Investigators of the Research Institute of Science and Technology for Society cannot submit proposals (excluding cases where the research and development implementation period ends during fiscal year 2022).

*Multiple Applications are not permitted for other Strategic Basic Research Programs (CREST, PRESTO, and ACT-X).

4.5.2 Requirements for Proposers

Please make your proposal jointly signed by the following two people.

Person in charge of R&D (Principal Investigator)

Representatives of parties working on social issues (Collaborator)

The Principal Investigator and Collaborator will play a central role in promoting the project.

The Principal Investigator will be the person in charge of the project overall. We require this person to be someone who can take responsibility for all the R&D and promote it as the person in charge of R&D.

The person who will be the Principal Investigator should please make the proposal using the Cross-ministerial R&D Management System (e-Rad). The Principal Investigator can apply once for either the scenario creation phase or the solution creation phase.

The JST will support the organization conducting the R&D by paying the expenses necessary in

the R&D (R&D fund). When applying, the Principal Investigator should please obtain the consent of the head of the organization that will conduct the R&D or the organ to which the organization that will conduct the R&D belongs.

We ask that the Principal Investigator composes a structure with researchers in the natural sciences and humanities/social sciences looking to solve specific social issues and the Collaborators who will be the recipients of the solution created.

The purpose of the R&D on technologies for society is to produce innovation to solve social issues. This program targets specific regions. Therefore, the cooperation of people in the region is essential in this program. To that end, agreements must be reached on what is the purpose of the proposal, who will be the beneficiaries of the solution, how the purpose of the proposal will be achieved and what effect it will have and by when.

Accordingly, we assume that a collaborative process to form these agreements already exists. The R&D is not an activity to be conducted solely by a group of experts in a specific area like a university or research institution. Instead, you must proceed with the project while obtaining the cooperation of a diverse range of people including researchers in other fields, those who are familiar with the actual setting, the beneficiaries and government officials. You will need the flexibility and organizational structure to accept those people according to the requirements of the moment. You will need to add collaborating persons as members from the start of the R&D.

The Collaborator will be the representative of parties working on social issues. The Collaborator will represent the group or organization which directly faces those social issues and which wishes to solve them in collaboration with researchers. However, we assume that the group or organization will be substantially represented and will actually tackle the social issues. This means that the Collaborator does not need to be a representative as a job title.

In principle, the JST will enter into the Collaborative Research Agreement with the research institution to which the Principal Investigator and Lead Implementer (Collaborator or another research group leader) belong. If the institution to which the Lead Implementer belongs does not require the consigned R&D fund from the JST, it will also be possible to participate in the project by appropriately entering into an agreement with the institution to which the Principal Investigator belongs. This does not prevent the work of the Principal Investigator and Collaborator from being

undertaken by one person at the same time. However, it is very important that person can sufficiently execute the roles of both people with different personalities. Please also refer to “8. Q&A on Call for Proposals.”

In addition, it is necessary for either the Principal Investigator or Collaborator at least to belong to a university etc.*

*University etc. is the general term for the research institutions given below:

i) Incorporated educational institution (e.g., national university, public university or private university)

ii) Public research institution (e.g., national public research institution, public testing and research institution or independent administrative corporation)
*This includes the National Technical College

iii) An institution with a public character (e.g., public-service corporation) and which is approved by the JST

Other requirements for proposers are presented below.

a. The Proposer must be able to head up the R&D project members and exhibit leadership in implementing the project in order to realize the concept.

b. The Proposer who will serve as Principal Investigator must belong to a domestic Japanese research institute and be able to organize and implement research and development at that institution.

Furthermore, persons who correspond to the following can also apply as proposers.

・Researchers who have foreign citizenship, but who are affiliated with a domestic Japanese research institution.

・Researchers who are not currently affiliated with a research institution, or are affiliated with an overseas research institution, and, if selected as a Principal Investigator, must be able to organize and pursue project as a researcher affiliated with a domestic Japanese research institution.

・A Japanese national who currently resides overseas, and, if selected as Principal Investigator, must be able to organize and pursue project as a researcher affiliated with a domestic Japanese research institution.

*Domestic Japanese research institution indicates universities incorporated in Japan, national research and development corporations, specified non-profit corporations, companies, and local governments. However, the prescribed conditions must be satisfied. For more details, please refer to "5.9 Responsibilities of Research Institutions, etc."

*This also covers those affiliated with private sector companies and other non-university research institutions.

*Must not be in breach of restrictions of application requirements related to improper accounting practices and misconduct in research.

c. Able to assume responsibility for the entire project as the Principal Investigator throughout the entire period of the project. For details, please refer to "5.8 Responsibilities of Principal Investigator and Lead Implementers, etc." For example, during the project period, the Principal Investigator must reside in Japan and the Principal Investigator must be able to fulfill his/her responsibilities for a long period of time without interruptions, such as overseas business travel and other reasons.

d. Have already completed the educational program for research integrity at his/her affiliated research institution or will complete the JST- designated educational program by the application deadline. For details, refer to "6.1 Enrolling in and Completing the Educational Program on Research Integrity". For details, please refer to "6.1 Enrolling in and Completing the Educational Program on Research Integrity."

e. The Proposer must make the following four pledges upon application of his/her proposal.

・Understand and comply with "Guidelines for Responding to Misconduct in Research" (decided by the Minister of Education, Culture, Sports, Science and Technology on August 26, 2014).

・Understand and comply with "Guidelines on Management and Audit of the Public Research Expenses in Research Institutions (Implementation standards)" (revised February 18, 2014).

・If the research proposal is accepted, the Individual Researcher must not engage in misconduct in their research (fabrication, manipulation, and plagiarism) nor in inappropriate usage of research funds.

・The Proposer must not have engaged in misconduct in the past to achieve the research results that are mentioned in the submitted research proposal.

*The above verification will be part of the e-Rad Application Information Entry screen.

4.5.3 Requirements for research organization

Only Japanese research institutions can promote R&D in this program (can enter into the Collaborative Research Agreement). However, it does not matter is this entity is a private company, one of various organizations, an NPO, a university, a research institution or otherwise. Please also refer to “5.10 When a Person Belonging to an Overseas Institution Participates as the Lead Implementer.”

Research Institutions must fully understand that the research funds are public funding, ensure compliance with related laws, and make efforts to implement the research effectively. Any research organization that cannot perform the responsibilities described in “5.9 Responsibilities of Research Institutions, etc.” will not be approved to conduct research. Therefore, be sure to obtain prior approval from the Research Institution at which you plan to conduct your R&D before your application.

We may investigate and confirm the administrative management structure and financial status of each research institution prior to the adoption of the project, before entering into the Collaborative Research Agreement and during the period of the agreement. Institutions deemed to need appropriate execution and management of the consigned research fund as a result may be subject to a reduction in the R&D fund, a research suspension, a shortening of the agreement period, cancelation of the agreement and other measures even if the agreement is withholden or it is during the agreement period. This is in addition to having to following the consignment method designated by the JST.

If it is not possible to enter into the agreement, it may not be possible for the said research institution to conduct the R&D. In that case, we may ask you to review the implementation structure.

It is not a problem if the organization that will conduct the R&D newly organizes for the proposal. However, at the time of selection, we will consider whether the organization will exist for the period necessary to solve social issues and whether it has the organizational structure to be able to continue operations even after the end of the project.

4.6 Application Method

Applications will be submitted using the Cross-ministerial R&D Management System (e-Rad).

Please note that applications using paper media (postal email, express parcel delivery, hand delivery, etc.) or made by email will not be accepted.

For details, please refer to “Chapter 7 Application Method by Cross-ministerial R&D Management System (e-Rad).”

(1) Registration of research institution and Principal Investigator

An e-Rad log-in ID and password must be issued for the Proposer (Principal Investigator only).

When an e-Rad log-in ID and password are newly issued, the institution the Proposer is affiliated with must carry out the following registration in advance.

① If unregistered, the institution must first register as a “research institution”

② The Proposer must be registered in “Researcher Information”

Furthermore, if the Proposer is not affiliated with a specific domestic Japanese research institution at the time of application, the Proposer him/herself must register under 2. above only (however, it is assumed the person plans to be affiliated with a domestic Japanese research institution post selection).

For details about registration method, please refer to the e-Rad portal site.

Please complete registration procedures at least two weeks prior the deadline because the registration process may take several days to complete.

Furthermore, once registration is complete, the Proposer does not need to register again when submitting applications for programs or projects implemented by other ministries and agencies. In addition, if registration has been completed for programs or projects implemented by other ministries and agencies, the Proposer does not need to register again. Institutions and Proposers who have never submitted a proposal for competitive funds or received such funds (specified non-profit corporation, administrative institutions, institutions of private sector companies and affiliated

individuals) should pay particular attention.

(2) Preparation and submission of proposal

The Proposer should please personally prepare the proposal document and then apply to this program. Please download the proposal document format from the e-Rad portal site (https://www.e-rad.go.jp/) or this program's proposal application website (https://www.jst.go.jp/ristex/proposal/) and complete the proposal document based on the explanation found in "Chapter 9 Completing the Proposal."

Please be sure to complete the proposal using objective statements wherever possible using language that is simple and not overly specialized.

Please submit the proposal document via the e-Rad site.

The proposal document's format and where to submit it differ depending on what phase you are applying for (the scenario creation phase or the solution creation phase). Please pay particular attention to this.

4.7 Selection Method

4.7.1 Selection Process

Selection will be determined comprehensively based upon "4.8 Main Perspectives for Selection" following a review of proposal documents and interview of Proposers that passed the document selection process.

(1) Principal Investigators eligible for the interview after the results of document selection will be notified in writing and informed regarding the guidelines for the interview, date and time, and additional documents to be submitted. During interview, both of Principal Investigator and Collaborator will be asked to explain the concept of his/her research and development project.

(2) The Principal Investigator will be notified of the results of document evaluation and interview regardless of if they are accepted or not.

(3) For the selection schedule, please refer to "4.1 Call Period and Selection Schedule." Schedule details and changes will be made available as necessary on this program's proposal application website.

(4) In addition to the above, please be sure to enter an e-mail address, phone number and

address registered in e-Rad, and the contact information provided in application form 1, as JST may contact the applicant.

4.7.2 Selection System and Management of Conflicts of Interest

A Program Supervisor will make selection with the cooperation of the Assistant Program Supervisor and Program Advisor. Based on the results, JST will select Principal Investigator and projects to implement. In addition, JST may obtain the cooperation of outside reviewers as needed.

The following conflicts of interest will be managed according to JST's regulations, from the perspectives of fair and transparent evaluations and allocation of research funding.

(1) Management of conflicts of interest of persons involving with selection

To ensure fair and transparent evaluations, the following persons or parties who have conflicts of interest may be excluded from the selection process. If you have any concern about conflicts of interest between you and persons and parties involved in the selection process of your Research Proposal, please describe it specifically in the [Notice] section of the application forms 1.

a. Persons, who are relatives of research project Proposers:
b. Persons or parties who are affiliated with the same department or specialty at a research institution, such as university or national research and development corporation, or a company with which Proposers are affiliated.
c. Persons, who are conducting a close collaboration in a research work with Proposers. (Persons who are recognized as those practically affiliated with a research group with which Proposers are affiliated, such as those who are conducting a joint research project or have co-authored a paper with Proposers, a researcher pursuing the same research objectives as Proposers, or a researcher in the Proposer's project.)
d. Persons in a close teacher-student relationship, or in a direct employer-employee relationship
e. Persons in relationships of direct competition with Proposers
f. Persons in other relationships judged by JST to represent conflicts of interest with research project Proposers.

(2) Management of conflicts of interest of Principal Investigator

A conflict of interest could arise with Principal Investigator when a Principal Investigator appoints Lead Researchers from an institution that is related to the Principal Investigator and allocate research funds of JST to these institutes. Therefore, management for conflicts of interest between Principal Investigator and his/her related institution will be conducted in the light of necessity, rationality, and reasonableness of the relationship, in order to avoid any doubt of any third party.

"An organization that is related to the Principal Investigator" refers to any of the organizations that fall under the following categories. Items "a" and "b" are applicable not only to the Principal Investigators but also to the spouse and the relatives in the first degree of the Principal Investigator (hereinafter referred to collectively as "the Principal Investigator etc.").

a. An organization established based on the R&D achievement of the Principal Investigator etc. (Including the case in which the Principal Investigator etc. is not directly involved in the business management but is merely given a title such as technical consultant and the case in which the Principal Investigator etc. owns the organization's stock.)
b. An organization in which the Principal Investigator etc. is a director (including a CTO but excluding a technical consultant).
c. An organization in which the Principal Investigator owns its stock.
d. An organization in which the Principal Investigator is rewarded for implementation.

For a research proposal in which a researcher who belongs to the related organization of the Principal Investigator, is assigned as a Lead Implementer, it will be strictly judged from the viewpoint of requirement, rationality, and relevance.

Therefore, when a researcher who belongs to the related organization of the Principal Investigator is assigned as a Lead Implementer including Collaborator, the applicant must declare that a researcher who belongs to the related organization of the Principal Investigator is included as a Lead Implementer in the Notice section of the application.

Additional documents may be requested for the judgement on the conflicts of interest with the Principal Investigator.

(3) Management of conflicts of interest of JST

Adopting a company that JST has invested in (hereinafter "invested company") for this program and allocating research funds may be considered a conflict of interest with JST (conflict of interest

as an organization). Therefore, to avoid any doubt of any third party, JST implements management of conflicts of interest between JST and the invested companies.

With respect to the proposals that assigns an invested company of JST as a research institution, JST will assess the necessity, rationality, and adequacy of the applicable invested company.

For that purpose, if the institution is an invested company of JST, the application must complete the Notice section of the application forms 1 to declare that an invested company is included in research institutions.

Furthermore, this management is implemented to guarantee the fairness and transparency of the process on the side of JST. It is not disadvantageous to have accepted funds from JST in the process of the adoption in this program. Applicants are asked to be cooperative in JST's management of conflicts of interest.

*Refer to the following website for invested companies of JST. Furthermore, companies for which investment has been completed are not subject to management of conflicts of interests; thus, reporting is not required.

https://www.jst.go.jp/entre/result.html#M01

*The declaration base date is the date the call for proposals of this program begins. Please declare companies that have disclosed an investment from JST as of this date. There is no need to report companies for which an investment has not been disclosed even if an unofficial decision has been made because it is a confidential matter internally for JST.

Please refer to the following website for JST’s disclosure of investments.

https://www.jst.go.jp/entre/news.html

4.8 Main Perspectives for Selection

The selection process will decide on which proposals to adopt following a comprehensive review of social impacts while emphasizing the following points (Refer to “Chapter 2 Philosophy on Program Administration for the Call and Section” and “Chapter 3 Summary of Research and Development Program”). (Please also refer to “8. Q&A on Call for Proposals” when preparing the proposal document (preparation of the proposal document in line with the intent of this program).

<Points Common to the Scenario Creation Phase and Solution Creation Phase>

(1) The proposed content (e.g., issues, goals and R&D plan) should agree with the intent of this program. The specific social issues to be solved and vision to be realized by 2030 (a sustainable society) should be clarified.

(2) The relationship with the 17 goals and 169 targets of the SDGs should be organized.

(3) The proposal should be an inclusive initiative in line with the SDG's philosophy of leave no one behind.

(4) KPIs (easy-to-understand indicators to measure the effect) should be established and shard and PDCA should be taken into consideration with the participation of each stakeholder.

(5) A plan should be proposed in which stakeholders, including beneficiaries, participate when tackling the social issues. A co-creative collaborative structure (including collaboration between the Principal Investigator and the Collaborator) should be built.

(6) The region which will be the field of the R&D should be clear. The past collaborative relationship between the Principal Investigator and the Collaborator and the current status of each stakeholder involved in the project should be accurately analyzed.

(7) The Principal Investigator and the Collaborator should have sufficient experience, clear motivation and enthusiasm to promote the proposed R&D. They should be able to execute the R&D with responsibility as the governing entity in the co-creative activities.

(8) An appropriate financing plan should be taken into consideration as use of the R&D fund.

(9) There should be an R&D plan and structure in which the person responsible for the results (e.g., a representative of parties working on social issues) continues to tackle the social issues even after the end of the project.

<Scenario creation phase>

(1) The vision for achieving the SDGs and the importance of co-creation to achieve that vision should be recognized and shared among stakeholders.

(2) The applicable social issues and the status of their examination should be indicated.

(3) The network building and activity status through stakeholders engaging in dialogue and collaboration should be indicated.

(4) There should be specific and effective proposals with regards to the technology seeds to

solve the social issues and ideas for the approaches and techniques to solve them.

(5) The feasibility test implementation plan should be specific.

(6) An R&D plan should be formulated that considers the specific milestones for the creation of the scenario and the creation of the solution beyond that.

(7) The specific efforts of the coordinator, which will be the driving force of the project, should be assumed.

<Solution creation phase>

(1) The vision to be realized by 2030, the value to be created by the realization of that and the scenario for that should be clear. The path to solving social issues with the solution should be logical and realistic.

(2) The technology seeds (science and technology results) to be utilized should be appropriate as specific means to solve the issues and should be in the stage at which it is possible to conduct a demonstration experiment during the period.

(3) The demonstration experiment plan should be specific (e.g., size, participants, and location).

(4) The coordinator, the person responsible for establishing the solution strategy and the person responsible for deploying it to other regions should be clarified in the (Proposal Document Form 6) business concept (scenario). They should be appropriate for the scenarios to establish the R&D plan and solution and to realize deployment to other regions.

(5) A R&D plan should be formulated that considers risk avoidance and milestones to create the solution.

(6) The people who will benefit as the targets of the solution should be identified. The effect of that solution should be clear. At the same time, the potential to deploy it to other regions should be indicated specifically.

We will consider the following points as additional factors when proposals are evaluated equally in the document screening and interview screening processes. Please check “(Cooperation with Overseas Institutions)” in “8. Q&A on Call for Proposals” for the description of cooperation with overseas institutions. If applicable, please describe young and female researchers in the prescribed

section on Form 1.

- It should be possible to expect an international expansion in activities through cooperation with overseas institutions in regard to the results of the project.
- Young and female researchers and implementers should be proactively hired from the point of view of promoting diversity and training personnel. Furthermore, it should be possible to expect that they will play a major role in the planning and operation of the project.

4.9 Transitioning to the R&D Phase in the Selection Process

If a proposal among the applications for the solution creation phase has generally excellent content but we deem it to be lacking in terms of the analysis of the social issues, the construction of a specific structure to demonstrate the solution and the progress of the R&D, we may select it as an R&D project in the scenario creation phase.

If you agree to transition to be selected in the scenario creation phase in the selection process with an issue you applied for to the solution creation phase, please check the prescribed points when recording the application information on Proposal Form 1. Please note that we will ask you to submit additional materials in the selection process when transitioning between phases.

4.10 Other Considerations

*Proposal documents with defects may not be reviewed by JST.

*Whether the research and development budget correspond to unreasonable duplication and excessive concentration is an element of the selection. For details, please refer to “6.2 Measures against Unreasonable Duplication and Excessive Concentration.”

Inquiries and Other Matters

(1) Posting of Application Guidelines and where to submit the proposal

Application Guidelines and latest information	Proposal application website for Co-creative R&D program for achieving SDGs (Scenario creation phase, Solution creation phase) https://www.jst.go.jp/ristex/proposal/ https://www.jst.go.jp/ristex/solve/index.html
Application Guidelines and submission of proposals	Cross-ministerial R&D Management System (e-Rad) website https://www.e-rad.go.jp/

(2) Inquiries

Questions concerning the Call Programs, and procedures for preparation of application documents and submission, etc.	JST Research Institute of Science and Technology for Society (RISTEX) (person in charge of calls for proposals) JST "Science and Society" Promotion Dept. (person in charge of calls for proposals) **please send inquiries by e-mail.** E-mail: boshusolve@jst.go.jp (Office hours: 10:00 -12:00, 13:00 - 17:00 / Except on Saturdays, Sundays, and holidays)
Questions concerning the Cross-ministerial R&D Management System (e-Rad) Registration of research institution or researcher, or how to operate e-Rad, etc.	e-Rad helpdesk Tel: 0570-057-060 (navi dial) (9:00-18:00/Except on Saturdays, Sundays, holidays, and the year-end and new year period)

*JST will not answer any questions regarding the status of review or acceptance.

*JST and the e-Rad helpdesk will be extremely busy before the application submission deadline (proposal deadline). Be sure to make inquiries with adequate time until submission.

Chapter 5 Promotion of R&D in Science and Technology for Society

5.1 Implementation Plan

a. Once a proposal has been selected, the Principal Investigator must prepare an overall R&D plan covering the entire period of the R&D project. The Principal Investigator must also prepare annual R&D plans for each year of the project. R&D plans should contain both budgets and the composition of R&D teams. Proposed R&D budgets are examined during the selection process. Actual research and development budgets will be confirmed by the Program Supervisor when R&D plans are formulated before going through an approval process.

b. R&D plans (overall R&D plans and yearly R&D plans) will be confirmed by the Program Supervisor before going through an approval process. Based upon advice from the Assistant Program Supervisor and Program Advisor, the Program Supervisor is to exchange opinions with the Principal Investigator, maintain an awareness of the day-to-day progress of the project, perform site visits, provide advice and coordination for the R&D plan, and provide guidance to the Principal Investigator as required.

c. The Program Supervisor may, as necessary to achieve the overall aims of this program, make adjustments between separate projects when determining project plans.

d. The period of the project may be shortened and the R&D budget may be reduced or canceled at the discretion of the Program Supervisor.

* R&D team compositions and budgets set forth in R&D plans may be revised during the research project period in response to the overall R&D program budget conditions and management actions taken by the Program Supervisor.

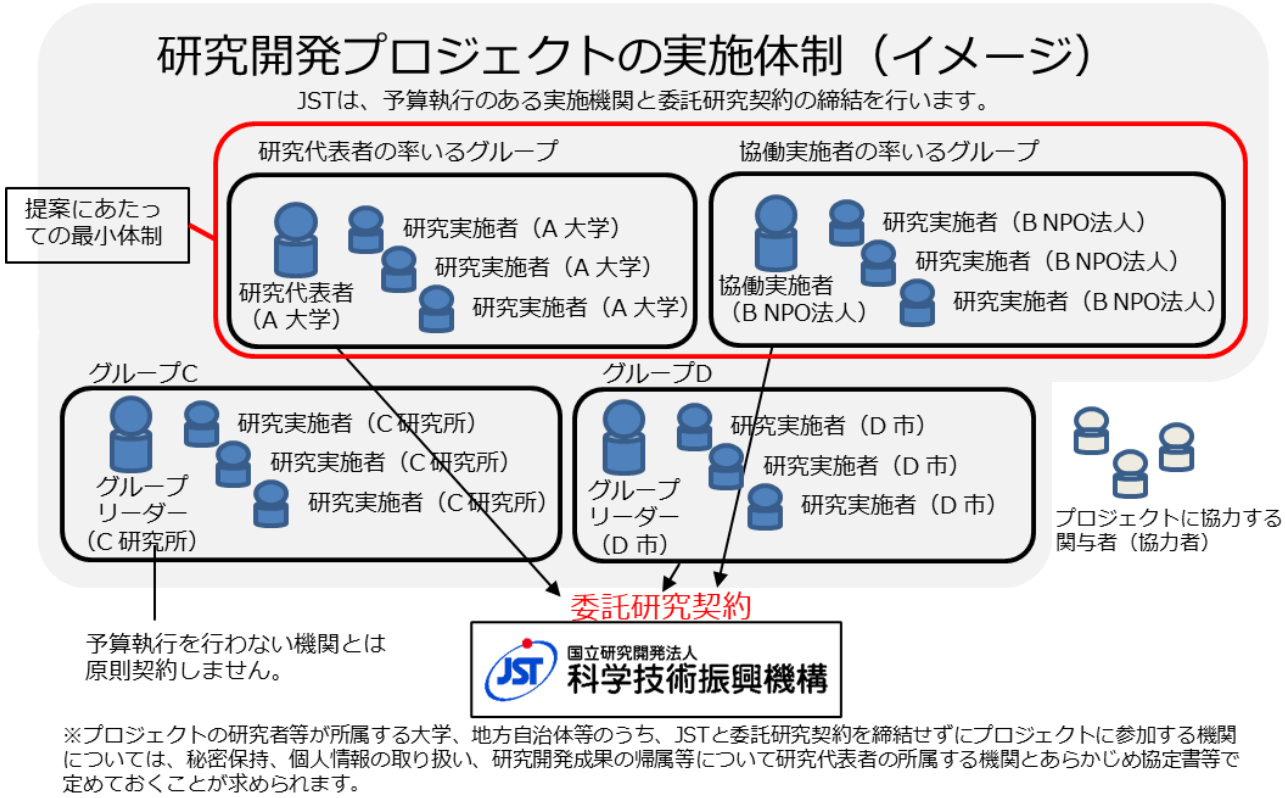
5.2 Implementation Team Composition

a. The Principal Investigator will lead R&D activities. In order to realize research initiatives, the Principal Investigator may have individuals engaged in problem resolution participate as project members (maximum of 20 individuals) in order to construct an ideal organization (group) for the project's implementation. The project members may also consist of individuals from institutions other than the Principal Investigator's affiliated institution.

b. When constructing implementation teams, clarity is to be provided regarding each group's roles and the content of the R&D to be performed before commencing with the project.

c. JST will enter into a Collaborative Research Agreement with the institution that the executor of the budget (Principal Investigator or lead implementer) is affiliated with.

d. As required for R&D progress, new project members (or other assistants, etc.) may be employed to participate in the project within the scope of the R&D budget.



5.3 Place of Implementation

In principle, the R&D will be implemented at the research institution that the implementers are affiliated with.

5.4 Collaborative Research Agreement

a. After approval, JST will enter into a Collaborative Research Agreement with the research institution that those leading the research are affiliated with.

b. If it is not possible to enter into a Collaborative Research Agreement with the research institution or create the management and audit systems required in connection with the use of public funds,

or if the institution is conspicuously financially unstable, it may not be possible to pursue R&D at the research institution in question. For more details, please refer to "5.9 Responsibilities of Research Institutions, etc."

c. In principle, patents and other intellectual property rights resulting from research shall, in accordance with the terms of the Collaborative Research Agreement, reside with the affiliated research institution under the condition that the institution abides by the items provided in Article 17 (Japanese version of the Bayh-Dole Act) of the Industrial Technology Enhancement Act. However, this rule does not apply to foreign research institutions.

(Supplement) Differences Between Collaboration and Subsidization

This project is a collaboration between JST and the institutions it has entered into Collaborative Research Agreements with. A collaboration involves entering into an agreement with a university, private firm, or other third-party to perform research that would initially have been conducted by the Japanese government, etc. (in this case JST) but has been contracted to this third-party due to the belief that it will lead to more beneficial results. In this situation, the institution consigned to do the project has an obligation to appropriately perform all consigned duties in line with the Collaborative Research Agreement and administrative manuals, and the consignee will confirm this.

By comparison, subsidization refers to having the government, etc., cover a portion of expenses incurred by projects being performed by universities, private firms, or another third party, that are recognized to have some benefits to the public at large. In this situation, the party that is issued the subsidy implements the project independently.

5.5 R&D Budget

As per the Collaborative Research Agreement, JST will pay the institution implementing the project for all research and development budget (direct costs) and indirect costs (in principle, 30% of direct costs). This will be paid as consigned research funds.

5.5.1 Research and Development Budget (Direct Cost)

The R&D budget (direct costs) relates to R&D directly required to implement the project. These costs include:

a. Commodities: Cost of purchasing new facilities*1, equipment, consumable supplies, etc.

b. Travel Expenses: Expenses for travel by the Principal Investigator, Collaborator, lead implementer, and other implementers listed on the research plan created after approval. Expenses covered include all direct costs for travel, as well as all invitations for travel, etc. directly related to pursuing the R&D in question.

c. Personnel Expenses and Honoraria: [Personnel Expenses] Salaries*2 and honorariums for all researchers, technicians, research assistants, etc., directly required to implement the research in question (however, Collaborator and lead implementer are excluded), [Honoraria] Honorariums for speakers at lectures, etc.

d. Other Expenses: Costs for presenting research results (research paper submission fees, etc.), costs for leasing and transferring equipment, etc.

*1The purchase of new research equipment and apparatuses shall proceed according to "Research Equipment and Apparatus Sharing Systems for Research Organization Units" (hereinafter referred to as "apparatus sharing systems"), which shall operate on the premise of "Introduction of New Research Equipment and Apparatuses Operating Integrally with Research Organization Management" (Advanced Research Fundamentals Working Group, Scholarship Commission, November 2015). Please refer to "6.12 Promotion on Effective Use of Research Facilities and Equipment".

*2: In principle, JST can pay expenses (buyout expenses) relating to the execution of non "PI personnel expense and" research operations by others on behalf of your team only if certain requirements are met by the person who will be the Principal Investigator (PI) in the project with the JST Competitive Research Fund System for universities etc.

○"Review to Enable Payment of Expenses for Others to Execute Non-research Operations from Direct Costs (Buyout System Introduction) and Payment of the Personnel Expenses of the Principal Investigator (PI) from Direct Costs (Contact)" (September 17, 2020) https://www.jst.go.jp/osirase/2020/pdf/20200917.pdf

Note: Examples of expenses that cannot be paid as the research budget (direct costs):

- Expenses that do not align with the research purpose
- Expenses for which the payment of indirect expenses is considered appropriate
- Expenses for which use in the settlement of the consigned research fund is judged to not be appropriate by the JST (*3)

*3 JST has established rules and guidelines specific to this project for some items, based on the Collaborative Research Agreement, administrative manuals, and the cross-ministerial expenses handling table, etc. Handling may differ between universities, etc. (universities, public research institutions, public interest corporations, etc. accepted by JST) and companies, etc. (mainly research institutions other than universities, etc., such as private enterprises). For more details, refer to the JST official administrative manuals at the URL below.

JST Collaborative Research Agreement Administrative Manuals

https://www.jst.go.jp/contract/index2.html

Ministry of Education, Culture, Sports, Science and Technology: Handling Table for Cross-Ministerial Expenses

https://www.jst.go.jp/contract/download/2022/2022_ristex_betten9.pdf

5.5.2 Indirect costs

Overhead (indirect) costs are costs required for the management, etc. of research institutions pursuing R&D; they are, in principle, capped at 30% of direct costs. According to “Common Guidance for the Execution of Indirect Expenses of the Competitive Fund” (agreed upon by the coordination committees of relevant ministries and agencies on April 20, 2001, and amended on July 18, 2019), a research institution shall create a policy on use, etc. and shall systematically and properly execute the policy to ensure that use of indirect costs is transparent.

5.5.3 Multiple-year Contracts and Carryover

JST allows for multiple-year contracts, as well as for consigned research funds and procurement contracts to be carried over into subsequent fiscal years. This is from the perspective of ensuring research expenses are used effectively and efficiently to maximize research results and to prevent unauthorized use. However, different conditions apply for universities and businesses when performing carryovers (there may be cases where concluding a multi-year contract and carrying over research expenses are impossible at some institutions due to incompatible administration systems). FY2021 is the final year of the JST’s mid-term plan. Therefore, in principle, the carry-over of the consigned research fund will not be permitted.

5.6 Reports

The fiscal year and final reports form the basis of the reports to be made in writing. However, we may ask for separate reports as necessary. In addition, please note that the annual report also affects approval of the plan in the next fiscal year.

Moreover, depending on the progress of the project, if, for example it becomes difficult to continue R&D or if it becomes possible to execute the business plan at an earlier stage than the initial R&D plan so support from the JST is no longer necessary, we may ask you to revise your R&D plan or to change your R&D period (including the discontinuation of R&D) through management by the Program Supervisor, Assistant Program Supervisor and Program Advisor.

We also place importance on reports and public relations in a form that is open widely to diverse stakeholders in addition to those for the Program Supervisor, Assistant Program Supervisor, Program Advisor and the Secretariat in regard to project progress reports. Please consider building a structure in which it is possible to disseminate information in a timely manner using booklets and social networking sites.

5.7 Evaluation of the Project

For all projects, a post-evaluation will be conducted by the Program Supervisor in cooperation with the Assistant Program Supervisor and Program Advisor and others when the research and development has been completed.

If further improvement in the validity and feasibility of the scenario can be expected in the scenario creation phase, we may extend the R&D period by up to one year with an interim evaluation. If a further improvement in the establishment of the solution technique or the potential for deployment can be expected in the solution creation phase, we may extend the R&D period by up to two years with an interim evaluation.

A follow-up survey will be conducted after a certain period of time following the completion of the research and development.

5.8 Responsibilities of Principal Investigator and Lead Implementers, etc.

(1) The Principal Investigator and lead implementers are obliged to conduct their research, honestly and effectively, fully understanding that their research is funded by tax revenues collected from citizens.

(2) After their projects are approved, these individuals must agree to fulfill the following duties presented to them at JST briefings, etc., and submit a written agreement to JST.

a. Comply with requirements for application guidelines and regulations of affiliated institutions.

b. Understand that JST R&D budgets are funded by tax revenues. For this reason, they must avoid any research misconduct, including fabrication, falsification, and plagiarism, and/or the improper use of R&D funds.

c. Ensure that all implementers and other individuals participating in the R&D project are fully informed of the JST designated Educational Program on Research Integrity (eAPRIN (previously CITI Japan) e-learning program) and have enrolled in and completed the program. For details, refer to “6.1 Enrolling in and Completing the Educational Program on Research Integrity”. For details, please refer to “6.1 Enrolling in and Completing the Educational Program on Research Integrity.”

Note that failure to complete the Educational Program on Research Integrity in c. will result in the suspension of the R&D budget until it has been completed, and this has been confirmed by JST.

(3) The Principal Investigator and implementers must complete the JST designated Educational Program on Research Integrity (eAPRIN (previously CITI Japan) e-learning program).

(4) Project promotion and management

These individuals are also entirely responsible for project progress and management. These responsibilities include providing necessary progress management, as well as the results of the project. After clarifying the roles and responsibilities within the project, the Principal Investigator and lead implementers will play a leading role in steadily promoting the project and coordinating unified results. These individuals will need to submit required plans and reports, etc. to JST (including the Program Supervisor), conduct project strategy meetings or site visits to confirm the strategy and progress of the project, and respond to evaluations, etc. The Principal Investigator and lead implementers will also need to submit reports on the progress of the R&D when requested by the Program Supervisor.

(5) R&D budget management

The Principal Investigator is responsible for managing R&D costs for the entirety of the project (spending plans and progress, etc.) together with the research institution implementing the project. In the same manner, the lead implementers are also responsible for managing the R&D budget

for their groups along with the institution implementing the project.

(6) Considerations regarding implementers hired as part of the project

Please ensure that necessary consideration is given to the working conditions for implementers recruited to participate in the project, especially those employed using the R&D budget. Factors should include the R&D environment, working environment, and conditions of work.

(7) Participation in program activities

Active involvement in JST-sponsored program activities designed to meet the goals of the program (events including training camps and symposiums) and cross-project initiatives is required.

(8) Outreach activities for R&D results

Since R&D activities are funded by the government, active disclosure of R&D results is expected both within Japan and overseas, taking into account the acquisition of intellectual property rights. If the results obtained are to be published in newspapers or magazines, or in a thesis, etc., details about the implementation of the project, as well as a statement stating that they are the results of the Research Institute of Science and Technology for Society must be provided. Participation in and presentations of findings at workshops and symposiums hosted or backed by JST in Japan and around the world is also required.

Participation in ‘Human Network for Collaboration Between Researchers and Collaborators to Solve Social Problems’ operated by this Program is required, along with cooperation relating to disseminating and sharing information, as well as planning and holding workshops and symposiums, etc.

(9) All matters related to the project must be performed in-line with the contract between JST and the research institution, along with JST's rules and regulations.

(10) Cooperation with project evaluations, JST accounting audits, and national audits is also required.

(11) Information must be provided, and interviews conducted that allow for the assessment of programs (both interim and post-evaluation) and follow-up investigations conducted after a certain period of time has elapsed since the completion of the project.

5.9 Responsibilities of Research Institutions, etc.

Research institutions must fully recognize that consigned research funds are paid using public money. They must ensure compliance with related laws and make efforts to implement research

effectively. Research institutions that cannot perform their responsibilities, as described below, will not be permitted to conduct R&D. Researchers are therefore requested to obtain consent from all research institutions where their R&D is going to be implemented before applying.

a. Research institutions are obliged to enter into a Collaborative Research Agreement with content provided by JST. They are also required to properly implement their R&D in accordance with the Collaborative Research Agreement, administrative manuals, and R&D plan. The research institution shall not be permitted to perform R&D if it cannot enter into a Collaborative Research Agreement with JST, or it is determined that it cannot suitably perform the R&D in question.

※ A model of the Collaborative Research Agreement can be found at the following URL:
https://www.jst.go.jp/contract/index2.html

b. Research institutions are responsible for creating a framework to manage and audit public research funds. They are also obligated to properly execute their consigned research funds in accordance with the "Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)" (decided by the Minister of Education, Culture, Sports, Science and Technology on February 15, 2007; revised on February 18, 2014). In addition to reporting the status of their management and audit system for public research budgets to the Ministry of Education, Culture, Sports, Science and Technology, research institutions are also obliged to cooperate with any investigations into the implementation of their system. (See: 6.27 Consideration on “Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)”).

https://www.mext.go.jp/a_menu/kansa/houkoku/1343904.htm

c. In accordance with the “Guidelines for Responding to Misconduct in Research” (adopted by the Minister of Education, Culture, Sports, Science and Technology on August 26, 2014), research institutions are responsible for implementing regulations and systems required to prevent misconduct. Research institutions are also responsible for cooperating with any investigations relating to these systems based on these guidelines. (See: 6.27 “Guidelines for Responding to Misconduct in Research”)

https://www.mext.go.jp/a_menu/jinzai/fusei/index.htm

d. Research institutions are responsible for ensuring that those participating in R&D are aware of

the content of the guidelines described in b. and c. and are provided with training based upon educational materials related to research integrity provided by JST.

e. Research institutions shall manage spending/management of R&D budgets properly in accordance with the regulations of the research institution while still maintaining reasonable flexibility. Institutions must also follow any special expenditure rules for the project defined in administrative manuals, etc., provided by JST. (Research institutions receiving Grants-in-Aid for Scientific Research may deal with consigned research funds for which there are no definitions in the administrative manuals, based upon the Grants-in-Aid guidelines for the institution in question.)

f. Research institutions must enter into contracts with researchers who will be implementing R&D and will be inventors of intellectual property relating to the R&D. This is to ensure the properties are transferred from these researchers to the institutions. In particular, appropriate action must be taken when an individual who is not subject to the Research institution's regulations regarding inventions (such as a student who is not an employee of the institution) participates in the R&D. This could include entering into a contract with the student in advance to ensure that intellectual property rights pertaining to inventions (including their conception) produced by the student during the R&D belong to the research institution (except in cases where it is clear that the student cannot become the inventor). Conditions of compensation for the transfer of intellectual property rights should not be unfavorable to the student who made the invention.

In principle, the prior approval of JST is required to transfer or provide exclusive licenses to use intellectual property to other persons or parties, etc. A prior report to JST is also needed when applying for, registering, implementing, or renouncing property rights.

JST must be notified of intellectual property produced by research institutions through the contract for R&D with JST. Any required applications must also be made, as per Article 17 of the Industrial Technology Enhancement Act. This applies even after the contracted R&D period ends.

g. Research institutions are responsible for cooperating with accounting investigations performed by JST and with government accounting audits.

h. Research institutions are obliged to obey measures pertaining to changes to methods of payment of consigned research funds as well as decreases to R&D budgets decided by JST,

based on JST's investigations of their administrative management systems, financial conditions, etc.

In addition, if project evaluations performed at the end of the JST's mid- to long-term target period requires that JST be dissolved or reduced in size, or if changes to the government's budgetary measures are made, as per the special terms in the Collaborative Research Agreement, the contract may be canceled, or reductions in consigned research funds may be made. Based on the results of the mid-term evaluations of the project, measures such as increases or decreases to consigned research fund payments, changes to the contract period, cancellation of research, etc., may be made. If JST judges that the continuation of research is not appropriate, JST may take measures such as canceling the contract, regardless of any remaining time left in the contract itself. Research institutions are required to follow these measures.

i. If the research entering into the Collaborative Research Agreement is a national or municipal organization, the institution itself is responsible for ensuring that necessary budgetary measures are put in place prior to the start of the Collaborative Research Agreement period. (If it becomes clear that these required procedures were not performed after the agreement is entered into, the Collaborative Research Agreement may be canceled, with any consigned research funds to be repaid.)

j. As a part of efforts to prevent misconduct in R&D activities, JST requires researchers who will take part in newly approved research projects and are affiliated with the research institution, to enroll in and complete an educational program on research integrity (procedures required for enrollment will be handled by JST). Research institutions are responsible for ensuring that relevant individuals enroll in and complete the program.

If these individuals fail to complete the program as stipulated despite repeated reminders by JST, JST instructs to the research institution to halt, partially or entirely, the payment of consigned research funds. The institution is to stop all use of the R&D budget and must not recommence using them until further notice from JST is given.

k. Necessary measures are to be put in place regarding intellectual property, confidentiality, etc., such as joint research agreements, with research institutions participating in the project, to the extent that these do not infringe on the Collaborative Research Agreement with JST. This is to prevent impediments to the appropriate implementation of R&D and the utilization of R&D

results.

l. As consigned research funds are government resources, proper processes should be put in place to ensure they are used economically, efficiently, effectively, legitimately, and accurately, in a way that allows for accountability regarding this usage. Funds should be used in a planned manner. Procurement for the purpose of using any remaining budget at the end of the R&D period or at the end of the fiscal year is to be avoided.

5.10 When a Person Belonging to an Overseas Institution Participates as the Lead Implementer

Individuals belonging to overseas research institutions can participate in the project while being based at the overseas institution (however, the Principal Investigator is required to belong to a domestic research institution. Please refer to "4.5 Requirements for application" for more details) Research institutions that cannot perform their required responsibilities will not be permitted to conduct R&D. Researchers are therefore requested to obtain consent from the institutions where their R&D is going to be implemented before applying.

a. If the individual is deemed to be crucial for the Principal Investigator’s research initiative and it will be difficult (not possible to) implement the project without the overseas institution’s participation.

b. Research institutions are obliged to enter into a Collaborative Research Agreement with content provided by JST. (We may adjust the agreement terms for matters for which it is considered that there are reasonable grounds to do so in consideration of the characteristics of the research content.) Indirect costs paid will be a maximum of 30% of direct costs. They are also obliged to properly implement their R&D, in accordance with the Collaborative Research Agreement and R&D plan. The research institution shall not be permitted to perform research if it cannot enter into a Collaborative Research Agreement with JST, or it is determined that it cannot suitably perform the R&D in question.

c. In cases where either the Collaborative Research Agreement and JST specify separate guidelines, etc., the research institution will be responsible for managing expenditure and research expenses in an appropriate manner based on these guidelines. The institution is also required to prepare and submit a detailed statement of expenses (equivalent to an income and expenditure book for domestic institutions) in English that provides details of research expenses. The research institution must, even during the period of the agreement, cooperate

with all investigations into expenses, etc., by JST, as requested.

d. The intellectual property rights generated by the implementation of research will be shared equally with the JST. You will be obliged to equally bear with the JST the expenses necessary to apply for the protection and to maintain intellectual property rights. (however, Article 17 of the Industrial Technology Enhancement Act (Japanese version of the Bayh-Dole Act) does not apply to overseas institutions). As a result, any invention that may become intellectual property must be reported to JST immediately (within ten business days).

*Due to Security Export Controls, JST may not enter into Collaborative Research Agreements with institutions published on the “Foreign User List[*1]” by the Japanese Ministry of Economy, Trade and Industry (METI).

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*1 METI has issued the “Foreign User List” with the aim of strengthening the effectiveness of a catch-all control on goods related to weapons of mass destruction.
https://www.meti.go.jp/policy/anpo/law05.html#user-list

5.11 Other Considerations

5.11.1 Systems for Childbirth, Childcare, Care Giving

As part of its efforts to promote equal participation from men and women, JST has implemented support systems for childbirth, childcare, and caregiving. This system provides a "Gender Equality Promotion Fund" (maximum amount: 300,000 yen per month x number of months of support) for R&D projects, etc., with the aim of enabling full-time researchers who are employed through projects being funded by JST (excluding indirect costs) to continue their research in the midst of life events (childbirth, childcare, nursing care), or to continue their careers from the time they return to research if they have to suspend their research.

Please see the following websites for details:

https://www.jst.go.jp/diversity/about/research/child-care.html

5.11.2 Using the JREC-IN Portal

The database of researchers and research staff (JREC-IN Portal https://jrecin.jst.go.jp/) is the largest website for recruiting researchers in Japan. The service contains information on human

resources, including researchers, supporting staff, as well as engineers involved in research. The database is completely free to browse.

The database currently holds more than 19,000 pieces of information on human resources from universities, public research organizations, and private business firms, and has more than 130,000 registered users. In addition, it is possible to simplify the management of the application documents by using the Web application function of the JREC-IN Portal. At the same time, this can also reduce the burden on job applicants. We hope you'll make use of the JREC-IN Portal to search for human resources (postdoctoral, researchers, and so on) with high levels of knowledge when recruiting for research projects.

JREC-IN Portal is linked with researchmap, and its resume and achievement list creation function enable you to easily create resumes using the information registered in researchmap.

Chapter 6 Key Points in Submitting Proposals

6.1 Enrolling in and Completing the Educational Program on Research Integrity

The R&D project applicant (= the Principal Investigator) must complete the Educational Program on Research Integrity as a prerequisite for application. Note that if completion of the program cannot be confirmed, the application will be disqualified for failing to meet the requirements (Enrollment in and completion of the research integrity educational program by the time of application is not a pre-requisite for those other than the applicants.

To enroll in the Educational Program on Research Integrity and to submit a declaration of completion, follow either procedure (1) or (2) below. For application instructions using e-Rad, refer to “Chapter 7. Submission via the Cross-ministerial R&D Management System (e-Rad).”

（1）For applicants who have completed an equivalent program at their institution

Applicants, who have already completed an e-learning program or educational seminar on various aspects of research integrity (including eAPRIN (ex-CITI Japan) e-learning program and JSPS e-Learning Course on Research Ethics) at your institution by the time of their application, are requested to make the declaration of it on the e-Rad application information input screen.

（2）For applicants who have not completed an equivalent program at their institution (including applicants at institutions who do not have such a program)

a. Applicants who have in the past completed eAPRIN (ex-CITI Japan) e-learning program in a JST program: Applicants who have in the past completed eAPRIN (ex-CITI Japan) e-learning program in a JST program by the time of their application are requested to make the declaration of it on the e-Rad application information input screen.

b. For other applicants for whom a. above does not apply: Applicants who find it difficult to enroll in the educational program for research integrity because their institution does not offer such a program or for other reasons may enroll in and take a digest version of eAPRIN (ex-CITI Japan) e-learning program offered through JST. Please attend from the URL below.

https://edu2.aprin.or.jp/ard/

No cost is needed for completing the program, which will take one to two hours to complete. Once enrolled, applicants are expected to complete the program without delay and then to declare the completion of the program and to also enter the number of the completion confirmation sheet (7 figures number + ARD) in the e-Rad application information input screen.

■Contact for consultation on the Educational Program on Research Integrity

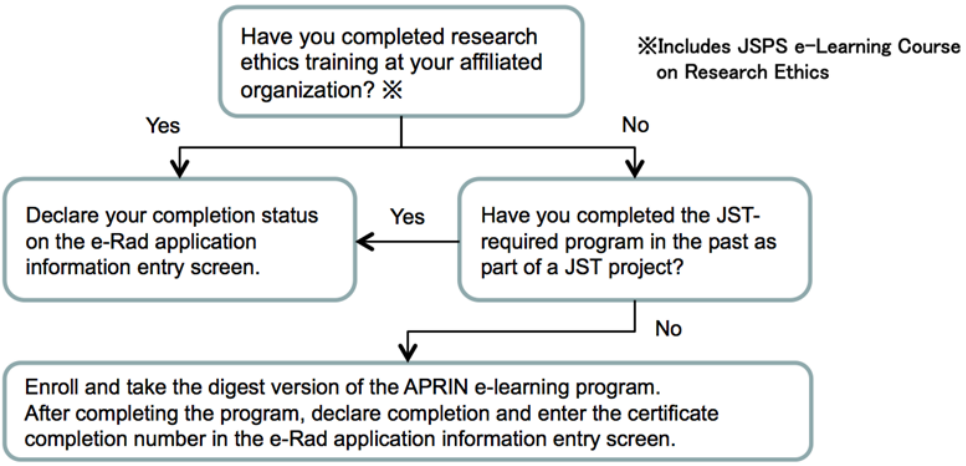
Japan Science and Technology Agency
Department of Audit and Legal Affairs, Research Integrity Division
E-mail： rcr-kousyu@jst.go.jp

■Contact for consultation on the call for application

JST RISTEX　E-mail： boshu@jst.go.jp

* Include the program name, e-Rad's proposal ID, research applicant name and project name in the body of email.

<Flow chart for Reporting Completion of Research Ethics Education Programs>



JST requires researchers of the projects to enroll in and complete designated units of the eAPRIN (ex-CITI Japan) e-learning program. All researchers of an accepted proposal are required to complete the designated units of the eAPRIN (ex-CITI Japan) e-learning program (excluding those who have already completed the designated modules at their institution or in another JST program).

6.2 Measures against Unreasonable Duplication and Excessive Concentration

○Measures against " Unreasonable Duplication"

If a researcher is unnecessarily receiving competitive funds from multiple sources for the same R&D project (same project name or content receiving competitive funding or proposal-based research funding (hereinafter referred to as "competitive funds") being undertaken by the same researcher, and any of the following applies, the researcher shall be made ineligible to apply for this program, or selection of their R&D project withdrawn, or their budget reduced (hereinafter referred to as "withdrawal of R&D project selection.")

・In the case that simultaneous proposals have been submitted for multiple competitive research funds and duplicate approval granted for essentially the same R&D project (including cases in which there is a considerable degree of research content duplication; hereinafter the same shall apply).

・In the case that a duplicate application is made for funding of a R&D project that is essentially

the same as another R&D project that has already been selected and has already received competitive research funding.

・In the case that there is an overlap in intended application of research funding between multiple R&D projects.

・Other cases equivalent to the above.

At the application stage for this program there are no limitations regarding the submission of proposals to other competitive funding programs, etc. If a R&D project is selected by another competitive funding program, report this promptly to JST at the contact address (boshu@jst.go.jp). If reporting is omitted, the approval decision for the R&D project may be revoked.

○Measures against “ Excessive Concentration”

Even if the content of the research proposed for this program differs from the content of another research being carried out under another competitive funding program, if that the overall research funding allocated to the same researcher or research group (hereinafter referred to as “researchers”) in relevant fiscal year exceeds an amount that can be utilized effectively and efficiently and can be used within the research period, and any of the following applies, selection of the R&D project under this program may be withdrawn.

・In the case that an excessive amount of research funding is being received in light of the capabilities of the researchers and the research methods being used, etc.

・In the case that an excessive amount of research funding is being received, compared with the amount of effort (percentage of the researchers’ overall working time* that is required for carrying out the said R&D project) allocated to the R&D project.

・In the case that highly expensive research equipment is purchased unnecessarily

・Other cases equivalent to the above

For this reason, if you submit proposals to other competitive funding programs, after submitting your application to this program, and the R&D project is selected by another competitive funding program, or if any information provided on your application changes, please report this promptly to JST at the contact address (boshu@jst.go.jp). If reporting is omitted, the approval decision for the R&D project may be revoked.

*The total work time of a researcher includes the time not only for research activities but also for

teaching activities, management assignments, and other activities substantially equivalent to work.

How "effort" should be understood

Definition of "effort"

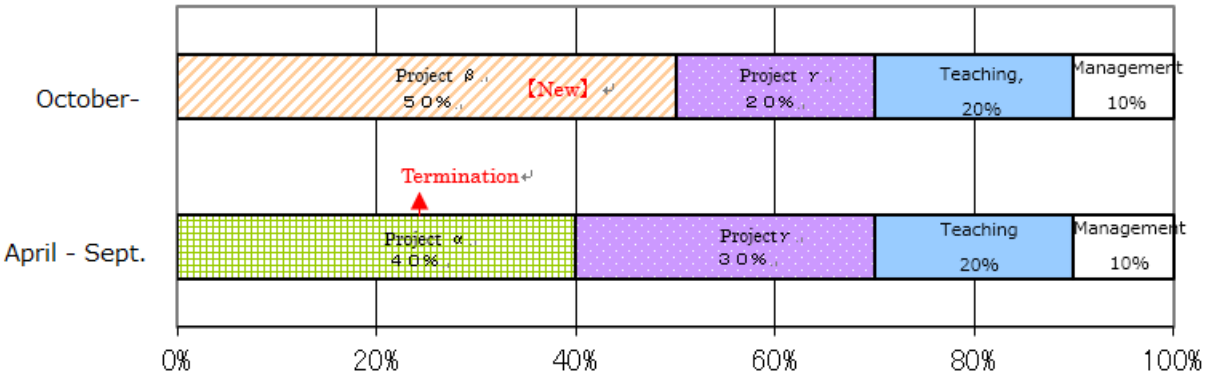
○According to the Third Science and Technology Basic Plan, "effort" is defined as "the distribution of time during which an individual engaging in a research copes with a research, education, and management."

○When a researcher makes a proposal for a R&D project, he/she needs to describe the percentage of his or her time required to implement the research relative to the time that is taken for his/her total work."*

○Note that the total work time includes not only the time for research activities but also the time taken for teaching and management activities.

○Accordingly, the amount of "effort" may vary depending on a review or an assessment of a research.

Ex. Project α is canceled halfway in the fiscal year and Project β is adopted. The state of the percentage of the total work time is as shown here. (Project γ continues for one year.)



○ In this example, Project α is canceled at the end of September (40% effort distributed) and Project β is started as a new one from October (50% effort distributed). The "effort" in Project γ varies from 30% to 20%.

*"Guideline for Proper Implementation of Competitive Funds" (an agreement at the liaison committee of relevant governmental bodies concerning competitive funds, revised on June 22, 2017)

○Information on Proposal Contents Provided to Eliminate Unreasonable Duplications and Excessive Concentration

In order to eliminate unreasonable duplication and excessive concentration, to the extent neces-

sary the information of some proposals (or selected projects/programs) may in some cases be provided through the Cross-ministerial R&D Management System (e-Rad) to other departments in charge of competitive funds, including other government ministries. Furthermore, when it is required that checks be made for duplicate project applications under other funding programs, the information may be provided in a manner alike.

6.3 Ensuring research integrity against new risks associated with internationalization and openness of research activities

In order to promote the creation of science and technology and innovation in Japan, it is necessary to continue to strongly promote international joint research with various partners, with open science as the main principle. At the same time, in recent years, new risks associated with the internationalization and openness of research activities may impair the values that form the basis of the research environment, such as openness and transparency, and researchers unintentionally fall into conflicts of interest and responsibilities. Dangers have been pointed out, and under these circumstances, building an internationally reliable research environment as Japan will promote necessary international cooperation and exchanges while preserving the values that form the basis of the research environment. Is indispensable for.

Therefore, universities, research institutes, etc. have stated that "the policy for ensuring research integrity against new risks associated with the internationalization and openness of research activities (decided by the Integrated Innovation Strategy Promotion Council on April 27, 2021). Based on this, establish rules and management systems related to conflicts of interest and responsibilities, and autonomously ensure the soundness and fairness (research integrity) of research at researchers, universities, research institutes, etc. Is important.

From this point of view, we are confirming whether we can appropriately secure efforts while eliminating unreasonable duplication and excessive concentration of competitive research funds and ensuring transparency in research activities. We may make inquiries to the institution to which we belong, as necessary, regarding the status of maintenance of regulations and the status of grasping and managing information.

6.4 Measures against Inappropriate Usage of Research Funds

Inappropriate use and reception (referred to as “inappropriate usage” hereinafter) of research

budgets related to implemented issues are strictly treated as described below.

○**Measures Taken in the Case that inappropriate Usage of Research Expenses are Found**

(ⅰ) Measures to Cancel Contracts

The Collaborative Research Agreement contract is cancelled or altered if issues of inappropriate usage are found, and a request is made for refunding all or part of the entrusted funds. Contracts for the following year and subsequent years may not be concluded.

(ⅱ) Measures to Restrict Application and Participation Eligibility※1

Restriction measures set out in the table below, depending on the levels of inappropriate usage, are taken against the application and participation eligibility of researchers※2 (including researchers who conspired, referred to as ("researchers who conspired to inappropriate usage")) who exercised inappropriate usage of research expenses of this project or those whose involvement in inappropriate usage is not proven but who violated due care of a prudent manager. Or they are otherwise reprimanded.

Furthermore, the outlines of pertinent inappropriate usage (names of researchers who exercised inappropriate usage, project names, affiliations, research issues, amounts of budget, fiscal year of research, contents of inappropriate usage, contents of measures taken, etc.) are provided to persons of other ministries and their independent corporations in charge of competitive funds, who may restrict application and participation of the researchers in other systems for competitive funds of the prefectures.

※1 "Application and participation" refer to the proposal, subscription, and application of a new project; participation in research as a new joint researcher; and participation in an ongoing R&D project as a Principal Investigator or a joint researcher.

※2 "Researchers who violate due care" refer to those whose involvement in inappropriate usage is not proven but who violated the duty of due care of product manager they should exercise.

Classification of person who committed or is involved in misconduct in use of research budget	Extent of maliciousness in misconduct		Period of ineligibility for applying to competitive research fund, deemed to be reasonable*3
A researcher who committed a misconduct or a researcher who was in conspiracy with a person who committed a misconduct *1	1. Use of a research budget to make a private profit		10 years
	2. Other than 1.	①Impact of the misconduct on the society is substantial and maliciousness of the misconduct is judged to be high	5 years

		②Neither ① or ③	2-4 years
		③The impact of the misconduct on the society is small and the maliciousness of the misconduct is judged to be low.	1 year
A researched who used a fabrication and other dishonest means to receive a competitive research fund or etc. and a researcher who was in conspiracy with the person who committed this misconduct			5 years
A researcher who did not commit or was not involved in a misconduct, but used a research budget, inappropriately, failing to fulfill his/her duty of due care of prudent manager *2			1 to 2 years (in maximum) in accordance with the degree of failure of fulfilling his/her duty of due care of prudent manager

A strict warning is issued under any of the following conditions without restricting application or eligibility for participation.

*1: In case of item 1, the influence over the society is minor, the malignancy of the act is minor, and the amount of unjustifiable use is small.

*2: In case of item 3, the influence over the society, as well as the malignancy of the act, is minor.

*3: Also ineligible in the fiscal year in which inappropriate usage of research funds are identified.

(ⅲ) About Public Announcement of a Case of Inappropriate Usage

Among those who are involved in an inappropriate usage of the program's research funds or those who failed to fulfil their duty of due care of prudent manager, regarding those researchers whose eligibility of application to or participation in this program is restricted, information of the outline of their misconduct (name of researcher, name of program, name of affiliated institution, fiscal year of research, details of misconduct, details of measures taken) will be disclosed in principle by JST. At the same time, information of outline of their misconduct will be disclosed in principle by MEXT.

Furthermore, according to the "Guidelines for the Management and Audit of Public Research Funds in R&D institutions (Practice Standards)," once misconduct is determined as the outcome of an investigation of an institute, it will be the responsibility of the R&D institution to announce the results of the investigation; hence, we request that each institution deal with the matter appropriately, following the "Guidelines".

* Please refer to the following URL for the outline of the fraudulent cases currently announced on the website of MEXT.

https://www.mext.go.jp/a_menu/kansa/houkoku/1364929.htm

6.5 Measures taken for Researchers whose Application and Participation Eligibilities are Restricted in Another Competitive Fund System

Researchers on whom restriction is imposed for the reason of inappropriate usage of research expenses in another competitive fund system* under the central government or independent administrative agencies are not eligible to apply to or participate in this program while their qualifications are restricted for application in the competitive fund system.

” Other competitive fund systems” include those systems that newly start a call for proposals in public 2022 fiscal year and those that finished before the 2021 fiscal year.

* Refer to “R&D proposal funding system” (https://www8.cao.go.jp/cstp/compefund/)

6.6 Majors taken to the Violation of Related Guidelines

Violation of the guidelines provided in this chapter or any other inappropriate behavior may result in withdrawal of approval for the research project or cancellation of the research; return of all or part of the project’s research funding, and measures taken to publicize the facts of the matter.

Violation of related laws or guidelines, etc., in conducting research may result in penalties and sanctions being applied to persons and organizations that committed the violation, and the suspension or cancellation of research funding.

6.7 Carryover of Research Expenses

Making a carryover of research expenses until the end of next fiscal year for a maximum, may be permitted according to the delay of the progress in the project occurs and is difficult to conclude within the fiscal year due to unavoidable conditions difficult to determine in advance the research or study method of the experimental research, such as weather-related conditions, obtaining rare materials and others etc.

6.8 Cross-ministerial Expenses Handing Partitioned Table

The expense items of research costs specific to the Strategic Basic Research Programs are determined on the basis of “Cross-ministerial Expenses Handing Partitioned Table.” As for research expenditure, refer to the “Cross-ministerial Expenses Handing Partitioned Table” on the website

(https://www.jst.go.jp/contract/download/2022/2022_ristex_betten9.pdf).

Currently, in response to the "6th Science and Technology / Innovation Basic Plan", the "Integrated Innovation Strategy 2020" and the "Comprehensive Package for Strengthening Research Capabilities and Supporting Young Researchers", the system for competitive research funding is being improved. Based on this, in this project, it is possible to spend personnel expenses of the research representative of the project (hereinafter referred to as “PI”) expenses related to agency work other than research (buyout expenses) from direct expenses. And, when spending expenses (buyout expenses) related to agency work other than research and PI personnel expenses, the following requirements need and paperwork procedure to be checked.

○ "Review of the Possibility of the Use of Direct Costs for Someone to Carry Out Duties Other Than Research (Introduction of Buyout System) and for Principal Investigator (PI) Personnel Expenses (contact)" (September 17, 2020)
https://www.jst.go.jp/osirase/2020/pdf/20200917.pdf

○ Please refer to the following URL for the Buyout System in RISTEX.
https://www.jst.go.jp/ristex/funding/funding_outline/for_researcher.html

6.9 Exchange of Direct Costs between Expense Items

Direct costs of different expense items can be exchanged under certain condition. Exchange are allowed without approval from JST when the amount of direct costs to be exchanged does not exceed 50% of the total direct costs (5 million JPY if the 50% of total direct costs is less than 5 million JPY).

6.10 Securing Research Period until the end of Fiscal Year

In order to enable researchers to continue their research work until the end of a fiscal year, statements below should be followed in every JST competitive funds.

（1）The research institutes and researchers must submit the notification of the completion as a work product of the project in a prompt manner when a project is finished. JST makes inspections on the completion of the project and the achievements of the research.

（2）Submit the accounting report by May 31.

（3）Submit the report on the research achievements by May 31.

Each research institute should make efforts to organize necessary systems at the institute based

on the fact that the purpose of those practices is to secure the research period that continues at the end of a fiscal year.

6.11 Storage of Receipts and Report of Actual Usage of Overhead Costs (Indirect Costs)

Institutions who received overhead costs are required to manage the costs appropriately and store the receipts as an evidence for the appropriate use of overhead costs for five years counted from the next fiscal year from which the project ended.

Institutions which received overhead costs are required to report the actual use of overhead costs via e-Rad before June 30 of the next fiscal year. (If a research institute has acquired two or more competitive funds, report all indirect costs accompanied by such competitive funds.) How to use e-Rad system is described on e-Rad operation manual

(https://www.e-rad.go.jp/en/manual/ for_researcher.html).

FAQs are also provided on the website (https://qa.e-rad.go.jp/).

6.12 Promotion on Effective Use of Facilities and Equipment

According to “Reform on Competitive Research Funds for Sustainable Creation of Research Achievements (Midterm Summary)” (Examination Meeting on the Reform of Competitive Funds, June 24, 2015), it is considered appropriate that facilities/equipment which are comparatively large in scale and have high general applicability should in principle be shared, under the assumption that the original research objectives are sufficiently accomplished.

In addition, the "Comprehensive Package for Enhancing Research Capability and Supporting Young Researchers" (January 23, 2020, Council for Science, Technology and Innovation) and the "6th Science and Technology Innovation Basic Plan" (Cabinet decision on March 26, 2021) request the promotion on the maintenance and sharing of research equipment and facilities, to establish a system for introducing, updating and utilizing research equipment (core facility), and to formulate and publish a sharing policy.

Based on the above, for research facilities/equipment which are purchased by the Program, and particularly for large scale, general purpose items, positive efforts for sharing should be made, including sharing within the scope that does not hinder the progress of the applicable Project, use of research facilities and equipment purchased with other research funds, and purchase and sharing

by combining multiple research funds, within the scope of the management conditions of other research funds and in accordance with the equipment sharing system in the affiliated institution or organization. Please note that it is necessary to strike a balance between management as shared equipment/facilities and accomplishment of the research purpose of the applicable Project.

Moreover, participants are asked to promote the sharing of research facilities and equipment beyond the framework of individual research organizations and institutes by positively cooperating with the "Inter-University Network for Common Utilization of Research Equipment," which was implemented for the purpose of the mutual use of facilities in the National Institutes of Natural Sciences, and the sharing system constructed thanks to the "Equipment Support Center Maintenance Business New Shared System Introduction Support Program" and the "New Shared System Introduction Core Facility Construction Support Program" in each university.

○ "Reform on the Competitive Research Funds for Sustainable Creation of Research Achievements (Midterm Summary)" (Examination Meeting on the Reform of Competitive Funds, June 24, 2015), in Japanese.
https://www.mext.go.jp/b_menu/shingi/chousa/shinkou/039/gaiyou/1359306.htm

○ "6th Science and Technology / Innovation Basic Plan" (March 26, 2021, Cabinet decision) in Japanese.
https://www8.cao.go.jp/cstp/kihonkeikaku/6honbun.pdf

○ Unification of usage rule of competitive research funds (March 5, 2021), in Japanese.
https://www8.cao.go.jp/cstp/compefund/toitsu_rule_r30305.pdf

○ "The Purchase of Shared Facilities Using Multiple Research Fund Systems (Use of Combined Total)"(September 10, 2020, Agreement between the institutions allocating funds and the relevant supervising government bodies)
https://www.mext.go.jp/content/20200910-mxt_sinkou02-100001873.pdf

○ Inter-University Network for Common Utilization of Research Equipment, in Japanese.
https://chem-eqnet.ims.ac.jp/

○New shared system introduction support program, Core Facility Construction Support Program, in Japanese
https://www.jst.go.jp/shincho/program/pdf/sinkyoyo_brochure2020.pdf

6.13 Improvement of Treatment of Doctoral Student Participants

In the "Science and Technology / Innovation Basic Plan" (decided by the Cabinet on March 26, 2021), financial support for graduate students, especially doctoral students (second semester), in order to attract excellent students and working people from inside and outside of Japan. The aim is to triple the number of doctoral students who receive living expenses equivalent to the conventional amount (equivalent to about 30% of students enrolled in the doctoral program receiving living expenses equivalent). Set as a numerical target, "RA, etc. in each business and university, etc., in order to promote salary payment at an appropriate level as a research assistant (RA) to doctoral students from competitive research expenses and joint research expenses. We will formulate rules for the expenditure of RA expenses related to employment and rewards, and will implement them sequentially from FY2021. " There is a need to expand employment and improve treatment of doctoral students as research assistant (RA) in universities and research institutions.

Moreover, in relation to doctoral students, the "Guidelines for the Employment and Training of Postdoctoral Researchers" (December 3, 2020, Committee on Human Resources, Council for Science and Technology) note that "while they are students, they also possess aspects of researchers, and so it is a key obligation of universities that train researchers to guarantee their treatment and maintain an environment in which they can carry out research activities"; "it is particularly important to treat them based on appropriate evaluations of their contributions, including paying them according to the hours they have worked under appropriate work management by determining compensation commensurate with the nature and content of their duties"; and "in your application for competitive research funds, there is a need to include the costs required if you are employing an RA in a university, and you should review the university’s rules to ensure that you can pay your RA(s) an appropriate level of compensation."

Based on the above, in these programs, please actively employ doctoral students who are necessary for the execution of your research as RAs and TAs, and pay them according to the hours they have worked under appropriate work management by setting a unit price commensurate with the nature and content of their duties, while aiming for the salary level to be equivalent to the cost of living. In addition, when applying for these programs, please apply with a financial plan that also takes into account the costs of the above-mentioned doctoral students.

・With regard to the salary level equivalent to living expenses (around 1.8–2.4 million yen per year), the " 6th Science and Technology /Innovation Basic Plan" assumes that 1.8 million yen

per year is an amount equivalent to living expenses; it also references payments to excellent doctoral students—doctoral course students (DC) who are paid research subsidies so they can give their undivided attention to their research without feeling financial unease—and gives 1.8–2.4 million yen per year as an indicative range for the amount needed to live.

- With regard to the treatment of doctoral students who have been hired to carry out a research project, the "Guidelines for the Employment and Training of Postdoctoral Researchers" state that "the standard pay for a specially-appointed assistant professor employed with competitive research funds is considered to be around 2,000 yen to 2,500 yen per hour, taking average amounts of pay into account."
- The specific amount and period of payment will be determined by the research institution. There is no restriction on the amount of payment above or below the level mentioned above.
- When employing students as RAs, etc., please pay attention so they do not work excessive hours, and consider the balance between work time and the doctoral students' own research and study time.

6.14 Securing an independent and stable research environment for young researchers

The "Research Ability Improvement Reform 2019" (23 April 2019, Ministry of Education, Culture, Sports, Science and Technology) and the "Development of science, technology and innovation policy towards knowledge-based value creation: Becoming a world leader country with the realization of Society 5.0; Final Report" (March 26, 2020, Special Committee on General Policy, Council for Science and Technology) point out the importance of ensuring a period of employment of around five years or more for fixed-term posts for specially-appointed teaching staff and postdoctoral researchers, as short-term employment periods can be a major obstruction to career development.

In addition, regarding national universities and inter-university research institute corporations, the Guidelines for Human Resource Payroll Management Reform in National Universities: Towards the Construction of an Appealing Human Resource Payroll Management that will Contribute to Enhancing Education and Research Abilities (February 25, 2019, Ministry of Education, Culture, Sports,

Science and Technology) state that "in order to realize both perspectives of training and stable employment for young teaching staff, it is desirable to promote an institutional system that incorporates the perspective of training researchers while maintaining mobility; for example, ensuring a fixed period of employment of around 5–10 years by making use of expenses that can be used with a high degree of freedom, such as indirect costs or donations, even if there is a fixed period of employment."

Based on the above, if you are employing young researchers such as specially-appointed teaching staff or postdoctoral researchers in these programs, please confirm who is responsible for human resources and accounting in your department, and endeavor to guarantee the research period as the length of their term of employment; please try to ensure as much as possible that the term of employment is fixed (around five years or more) by making use of indirect costs, basic costs, donations, etc. from external funds.

6.15 Self-motivated Research Activities by Young Researchers Employed to Carry Out Projects

With regard to young researchers employed in these programs, based on the "Implementation Guidelines for Self-motivated Research Activities by Young Researchers Employed with Competitive Research Funds" (Revised on December 18, 2020, Agreement of the Liaison Meeting of Related Government bodies on Competitive Research Funds), if the Principal Investigator, etc. judges that it will not hinder the progress of a project but help it, and permission is obtained from the research institution with which they are affiliated, researchers may use some of their efforts working on these programs for self-motivated research activities and/or activities that will improve their research and management capabilities, while using program funds for personnel expenses. Please see the following for more information.

○ "Self-motivated Research Activities by Young Researchers Employed to Carry Out Projects (contact)" (April 10, 2020)
https://www.jst.go.jp/osirase/2020/pdf/20200414.pdf

○ Measures for RISTEX Programs related to the "Implementation Guidelines for Self-motivated Research Activities by Young Researchers Employed with Competitive Research Funds"
https://www.jst.go.jp/ristex/funding/funding_outline/for_researcher.html

6.16 Support for Diverse Career Paths for Young Researchers with Doctoral Qualifications

The “Basic Policy of the Ministry of Education, Culture, Sports, Science and Technology for Supporting Diverse Career Paths for Young Researchers with Doctoral Qualifications Employed with Public Research Funds” (December 20, 2011, Council for Science and Technology, Committee on Human Resources) calls for “active efforts to support public R&D institutions and Principal Investigators that employ young researchers with doctoral qualification with public research funds, with the aim of securing diverse career paths in Japan and other countries for young researchers with doctoral qualifications. Also, the “6th Science and Technology Innovation Basic Plan” (Cabinet decision of March 26, 2021) also sets targets regarding the “expansion of career paths and mobility to industry.” Furthermore, the “Guideline for the Employment and Training of Postdoctoral (December 3, 2020, the Committee on Human Resources, Council for Science and Technology Policy) states that "it is essential that doctorate human resources with high level specialization and advanced research skills should help drive innovation by contributing in a wide range of positions, including at venture companies and global corporations, and accordingly, initiatives are needed for the diversification of career paths after the completion of the postdoctoral period.”

Based on this, when a project is selected in this call for R&D applications and young researchers such as specially-appointed researchers and postdoctoral researchers are to be employed with public research funds (competitive research funds or other project research funds, or public invitation-type education research funds for universities), the institution concerned should make active efforts to support those researchers in securing diverse career paths. Institutions should also consider using indirect funds in these efforts.

6.17 Securing management personnel such as URA

In the "6th Science and Technology Innovation Basic Plan" (Cabinet decision on March 26, 2021), it is pointed out the importance that quality assurance and treatment improvement as professionals so that management personnel such as URA becomes attractive jobs. In addition, the "Comprehensive Package for Strengthening Research Capabilities and Supporting Young Researchers" (January 23, 2020, Science Technology and Innovation Conference) also showed the need to establish career paths for management personnel, URAs, engineers, etc.

Based on these, when management personnel such as URA employed by research institutes or newly hired are engaged in the management of research programs of this project, the research

institute is not limited to this project, but other management personnel. Please try to secure a fixed term (about 5 years or more) as much as possible by utilizing indirect expenses of external funds, basic expenses, donations, etc.

6.18 Security Export Control (Measures against Leakage of Technology internationally)

Many advanced technologies are studied at R&D institutions. Particularly at universities, there is a heightened risk of leakage of advanced technologies and research-related materials/equipment or misuse in development/manufacture of weapons of mass destruction owing to the increased number of international students and foreign researchers due to internationalization. For this reason, an organizational response by the R&D institution is required when a R&D institution conducts research activities, including the relevant contract research, so that research results with potential military applications are not passed to groups or individuals considering activities of concern, such as terrorist groups and developers of weapons of mass destruction.

In Japan, for the purpose of maintaining international peace and security, export controls (*) are imposed based on the Foreign Exchange and Foreign Trade Act (Act No. 228 of 1949; hereinafter, “Foreign Exchange Act”). Accordingly, when attempting to export (provide) goods or technologies controlled under the Foreign Exchange Act, in principle, a license from the Minister of Economy, Trade and Industry (METI) is necessary. All those participating in this program must comply with the Foreign Exchange Act and all other laws, ordinances, guidelines, notifications, etc. of the national government. In addition to legal action and penalties, distribution of research funds may be stopped and the decision to allocate research funds may be cancelled if research is conducted in violation of the relevant laws, ordinances, guidelines, etc.

* 1 Currently, Japan's security export control system is mainly based on international agreements, etc. (1) Freight with certain specifications and functions among the items listed in Appendix 1 of the Export Trade Control Order and Appendix 1 of the Foreign Exchange Order (A system (list regulation) that requires the permission of the Minister of Economy, Trade and Industry when trying to export (provide) technology) and (2) when trying to export (provide) cargo (technology) that does not fall under the list regulation, military It consists of two systems (catch-all control) that require the permission of the Minister of Economy, Trade and Industry when there is a risk of diversion (use requirements / consumer requirements or inform requirements).

Not only the export of cargo but also the provision of technology is subject to the regulation of the Foreign Exchange Law. When providing list regulation technology to non-residents (including residents who fall under a specific type (* 2) after May 1, 2022), or when providing it in a foreign country, prior to the provision. Permission required. To provide technology, we provide technical information such as design drawings, specifications, manuals, samples, and prototypes on storage media such as paper, mail, CD, DVD, and USB memory, as well as technical guidance and skills. It also includes the provision of work knowledge through training and technical support at seminars. Acceptance of foreign students from abroad and activities such as joint research may include many exchanges of technologies that may be subject to the regulations of the Foreign Exchange Law. Please note that the technology acquired through this project may also be subject to regulation when it is intended to be exported (provided).

* 2 Refers to the type of resident who is strongly influenced by non-residents, and it is permitted based on the provisions of Article 25, Paragraph 1 of the Foreign Exchange and Foreign Trade Law and Article 17, Paragraph 2 of the Foreign Exchange Ordinance. Transactions or acts that provide technology that requires ”1. (3) Refers to the specific types specified in (1) to (3).

In addition, based on the Foreign Exchange Law, it is necessary to establish a security trade management system when exporting list-regulated cargo or providing list-regulated technology to foreign countries (* 3). Therefore, by the time the contract is concluded, it will be confirmed whether or not the project plans to export cargo and technology that are subject to the export restrictions of the Foreign Exchange Law, and if there is an intention to export, it will be confirmed whether or not there is a management system. It may be. If you are willing to export and do not have a management system, we request that you establish a system by the earlier of export or the end of this project. The confirmation status may be reported to the Ministry of Economy, Trade and Industry at the request of the Ministry of Economy, Trade and Industry. In addition, if it is found that the technology acquired through this project violates the regulations related to the Foreign Exchange Law, the contract may be canceled in whole or in part.

* 3 Exporters, etc. are obliged to comply with the "Exporter Compliance Standards" stipulated in

Article 55-10, Paragraph 1 of the Foreign Exchange Law. In addition, the security trade management system here is based on the management system in the "Exporter Compliance Standards", and by appropriately exporting list-regulated cargo or providing list-regulated technology to foreign countries. The internal control system of an organization to prevent illegal exports.

Details of security trade management are available on the websites of the Ministry of Economy, Trade and Industry. See below for details.

- Ministry of Economy, Trade and Industry (METI) : Security Trade Management (general) https://www.meti.go.jp/policy/anpo/englishpage.html
- Ministry of Economy, Trade and Industry (METI) : Deemed export control (* 2 related page above) https://www.meti.go.jp/policy/anpo/anpo07.html
- Ministry of Economy, Trade and Industry: Guidance on sensitive technology management related to security trade (for universities and research institutes) https://www.meti.go.jp/policy/anpo/law_document/tutatu/t07sonota/t07sonota_jishukanri03.pdf
- Ministry of Economy, Trade and Industry: Model Security Trade Management Regulations Manual for Universities and Research Institutes https://www.meti.go.jp/policy/anpo/daigaku/manual.pdf
- Center for Information on Security Trade Control: https://www.cistec.or.jp/export/jisyukanri/modelcp/modelcp.html
- Ministry of Economy, Trade and Industry: Security Trade Guidance (Introduction) https://www.meti.go.jp/policy/anpo/guidance.html

6.19 Strict Adherence to United Nations Security Council Resolution No. 2321

In response to the nuclear test and repeated launching of ballistic missiles by North Korea in September 2016, The United Nations Security Council (hereinafter referred to as “Security Council”), adopted Security Council Resolution No. 2321 on October 30, 2016, that substantially increased and strengthened sanctions against North Korea. Accordingly, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) issued the Request for Strict Adherence to United Nations Security Council Resolution No. 2321 (2016 MEXT document No. 98) on February 17, 2017.

“Scientific and technical cooperation” in the section 11 in the main text of the Resolution is not limited to technologies regulated under the Foreign Exchange and Foreign Trade Act, but includes

all cooperation with the exception of medical exchange. Accordingly, it is important to remember that the research institution must adhere to this Resolution in all research activities, including the relevant commissioned research.

See the following link for more information on Security Council Resolution No. 2321.

Ministry of Foreign Affairs of Japan: United Nations Security Council Resolution No. 2321, Japanese translation (Ministry of Foreign Affairs Notice No. 463 (issued on December 9, 2016))

https://www.mofa.go.jp/mofaj/files/000211409.pdf

6.20 Dialogue and Collaboration with Public Stakeholders

In "Promotion of" Science and Technology Dialogue with the People "(Basic Initiative Policy)" (decided by the Minister of State for Science and Technology Policy and a member of the Diet on June 19, 2010), the excellent results of science and technology are constantly being achieved. In order to create and further develop Japan's science and technology, it is essential to return the results of science and technology to the people, gain the understanding and support of the people, and promote science and technology together. It has been. If the research results are selected for this open call and receive an annual allocation of 30 million yen or more per year, public lectures on research results, symposiums, continuous distribution of research results on the Internet, and various stakeholders We ask that you actively engage in "scientific and technical dialogue with the people" such as round table conferences that involve the public.

○ Promotion of "Science / Technology Dialogue with the People" (Basic Initiative Policy)

https://www8.cao.go.jp/cstp/stsonota/taiwa/taiwa_honbun.pdf

In addition, the "6th Science, Technology, and Innovation Basic Plan" (approved by the Cabinet on March 26, 2021) calls for the co-creation of knowledge and the enhancement of science and technology communications through the participation of diverse entities, including citizen participation. JST provides the following examples of "opportunities for interactive dialogue and collaboration among diverse entities.“

○Science Agora

https://www.jst.go.jp/sis/scienceagora/

○Miraikan

https://www.miraikan.jst.go.jp/en/

6.21 Open Access and Research Data Management

In April 2017, JST announced the basic policy regarding the handling of research results for the promotion of open science. This policy stipulates the basic concept of making research results papers open access and storing, managing, and disclosing research data in the research activities of this project.

As a general rule, researchers participating in this project are requested to publish their research papers through institutional repositories and publications premised on open access in 12 months after publishment. In addition, based on the data policy of the research institution, researchers create a data management plan that describes the policy and plan regarding the storage / management, disclosure / non-disclosure of research data generated as a result of research activities. Please submit it to JST and carry out the research activities after storing, managing, and disclosing the research data based on this plan. This plan can be changed during the course of conducting research.

See below for more information.

○ JST's basic policy regarding the handling of research results for the promotion of open science

https://www.jst.go.jp/all/about/houshin.html#houshin04

○ JST Basic Policy Operation Guidelines for Handling Research Results to Promote Open Science

https://www.jst.go.jp/pr/intro/openscience/guideline_openscience.pdf

In addition, JST analyzes statistical data such as the number of data modules, data types, disclosure types, storage locations, etc. for the purpose of grasping the contents of the description, supporting researchers, and reflecting (revising) in the basic policy. JST assumes that the analyzed statistical data will be disclosed, but will not disclose individual personal data or data whose names are known.

* For life science data, please refer to "8.22 Data Disclosure from NBDC ".

6.22 Data disclosure from NBDC

The National Bioscience Database Center (NBDC) of JST has proceeded the Integration of

Life Science Database Project (https://biosciencedbc.jp/) to promote the integrated use of databases in the life sciences field created by various research institutions and others.

Additionally, in “Progress and Future Direction of the Integration of Life Science Database Project" (January 17, 2013), NBDC has also worked for the object projects that receive provision of data and databases are to be expanded.

Based on these points, program participants are asked to cooperate in disclosure of the following types of data and databases obtained from this program.

No.	Type of Data	Place of Disclosure	URL
1.	Overview of databases constructed for disclosure	Integbio Database Catalog	https://integbio.jp/dbcatalog/?lang=en
2.	Copies of data in connection with results published in paper presentation, etc. or copies of databases constructed for disclosure	Life Science Database Archive	https://dbarchive.biosciencedbc.jp/index-e.html
3.	Of items in 2, data related to human beings	NDBC Human Database	https://humandbs.biosciencedbc.jp/en/

< Contact >

Department of NBDC Program

Japan Science and Technology Agency

TEL: +81-3-5214-8491

e-mail: nbdc-kikaku@jst.go.jp

6.23 Systematic numbering in acknowledgments of papers

When announcing R&D results obtained in this program, you must indicate that R&D was funded by JST.

In the case of a paper presentation, please include "JST RISTEX Program Grant Number <10-digit systematic number>" in the Acknowledgment. If there is any other method to be decided by the

submitting organization, please enter the information accordingly. The 10-digit systematic number of this program is <JPMJRX + 4-digit assignment number>. The systematic number will be announced at the time of adoption.

The following examples show the acknowledgment of the paper:

【English】

This work was supported by JST RISTEX Grant Number JPMJRXxxxx.

【Japanese】

本研究は、JST RISTEX JPMJRXxxxx の支援を受けたものです。

* When two or more programs are related to the paper, all the related program names and systematic numbers should be written.

6.24 Research Support Service Partnership Certification System (A-PRAS)

"Development of Science and Technology Innovation Policy for Knowledge-Intensive Value Creation-Toward a World-Leading Country by Realizing Society 5.0-Final Summary" (March 26, 2020, Science and Technology Council Comprehensive Policy Special) In the committee), "Based on the fact that startups that have strong feelings and passion for research support and return of research results to society, which were carried out by the government as a public business, are beginning to appear. Therefore, it is necessary to form a new public-private partnership system. "

Under such circumstances, the Ministry of Education, Culture, Sports, Science and Technology established the "Research Support Service Partnership Certification System (A-PRAS)" in the first year of Reiwa. This system improves the research environment for researchers by accrediting research support services provided by private businesses that meet certain requirements as "research support service partnerships" by the Minister of Education, Culture, Sports, Science and Technology, and science in Japan. With the aim of accelerating the promotion of technology and the creation of innovation, and supporting the development of various efforts related to research support services, nine services have been certified by the second year of the Ordinance.

Details of each certified service can be found on the following Ministry of Education, Culture, Sports, Science and Technology web page. Please use all means.

https://www.mext.go.jp/a_menu/kagaku/kihon/1422215_00001.htm

○ "Development of Science and Technology Innovation Policy for Knowledge-Intensive Value Creation-Toward a World-Leading Country by Realizing Society 5.0-Final Summary" (March 26, 2nd year of Reiwa Science and Technology Council Comprehensive Policy Special Committee)

https://www.mext.go.jp/b_menu/shingi/gijyutu/gijyutu22/houkoku/1422095_00001.htm

6.25 Reform of Competitive Research Funds

At the present time, the government has received the "6th Science and Technology Innovation Basic Plan" and "Integrated Innovation Strategy 2021" and is holding discussions about improving systems related to competitive research funds so as to enable the more efficient and effective use of research funds. If, within the period of this call for submissions, policies common to all competitive research fund projects are announced regarding the improvement of funding systems and the use of funds, you will be notified about these policies when they apply to submissions for these programs and the use of program funds.

6.26 Consideration on “Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)”

(1) Implementation of Management and Audit Systems Based on the “Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)”

In implementing the program, research institutions must stringently observe the “Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)” (decided by the Minister of Education, Culture, Sports, Science and Technology on February 15, 2007; revised on February 1, 2021). There is a need for research institutions, having implemented a system for managing and auditing public research funds, to take responsibility for making every effort to properly disburse the contract research funds in line with the aforementioned guidelines. If the Ministry of Education, Culture, Sports, Science and Technology (MEXT) decides that the system of a research institution for managing and auditing is insufficient, based on an investigation according to the said guidelines, measures such as reduction of indirect costs of competitive research funding could be taken on the said institution.

(2) Submission of the “Self-evaluation Checklist for Implementation of Proper Systems” based on the “Guidelines for the Management and Audit of Public Research Funds in Research Institutions

(Practice Standards)”

In concluding a contract for this project, the research organization must prepare for a management and auditing system for research expenses based on the said guidelines and submit a “Self-evaluation Checklist for Implementation of Proper Systems” (“checklist,” hereinafter), which is a report on the situation (research undertaking is not approved unless the checklist is submitted).

Accordingly, starting on April 1, 2022, you must review the content of the following website, download the FY2022 version of the checklist from the Cross-Ministerial Research and Development Management System (e-Rad), fill it out, and submit it (upload it) via e-RAD to the Competitive Research Fund Coordination Office, Research Environment Division, Science and Technology Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT).

Please note that contracts for research institutions that have submitted the FY2021 version of the checklist will be approved irrespective of the above, but you must also submit the FY2022 version of the checklist by December 1, 2022.

On the other hand, institutions that are not receiving competitive funds from the MEXT or administrative agencies under the jurisdiction of the MEXT do not have to submit a checklist.

See the website of the MEXT below for details of the method for checklist submission.

https://www.mext.go.jp/a_menu/kansa/houkoku/1324571.htm

* Note: A perfect environment for using e-Rad is necessary for checklist submission. Also be aware that registering a research institution with e-Rad normally takes about two weeks. See the URL below in addition to the URL given above for details of the procedures related to the use of e-Rad.

https://www.e-rad.go.jp/organ/index.html

Since the said guidelines encourage the “promotion of issuing and sharing information,” please proactively publish and disseminate information regarding their misconduct prevention initiatives via their websites.

In the case that, in implementing a research initiative, the initiative involves a research requiring the consent/cooperation of other parties, research requiring particular care in handling personal information, research requiring bioethical or safety measures to be taken, and other researches requiring procedures subjected to laws and regulations, be sure to carry out the necessary procedures, such as obtaining the approval of an external and internal ethics committee of a R&D institution. If

research activities are conducted overseas or collaborative research activities with institutions overseas are conducted, please confirm the regulations and laws in advance, and adhere to them.

6.27 Consideration on “Guidelines for Responding to Misconduct in Research”

(1) Administrative System based on the “Guidelines for Responding to Misconduct in Research”

In applying to this funding program and conducting research activities, research institutions are required to adhere to the “Guidelines for Responding to Misconduct in Research” (decided by the Minister of Education, Culture, Sports, Science and Technology (MEXT) on August 26, 2014, hereinafter referred to as the “guidelines”).

In the case that the Ministry of Education, Culture, Sports, Science and Technology finds defects in the approach of organizations as a result of a survey of the situation, based on the guidelines, the Ministry may take measures including reduction of indirect expenses of the whole competitive fund for the pertinent organization. The “whole competitive research fund” includes all financing distributed by the MEXT and independent administrative agencies under the jurisdiction of the MEXT

(2) Submission of the “Self-evaluation Checklist” Based on the “Guidelines for Responding to Misconduct in Research”

When concluding a contract for this program, research organizations must submit “a checklist related to the approach, based on ‘Guidelines for responding to misconduct in research” (hereinafter, “checklist of inappropriate research conduct”). (Research undertaking is not approved unless a checklist of inappropriate research conduct is submitted).

Accordingly, starting on April 1, 2022, you must review the content of the following website, download the FY2022 version of the Research Misconduct Checklist from the Cross-Ministerial Research and Development Management System (e-Rad), fill it out, and submit it (upload it) via e-RAD to the Research Integrity Promotion Office, Research Environment Division, Science and Technology Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT).

Please note that contracts for research institutions that have submitted the FY2021 version of the Research Misconduct Checklist will be approved irrespective of the above, but you must also submit the FY2022 version of the checklist by September 30, 2022.

Institutions that are not receiving competitive funds from the MEXT or administrative agencies under the jurisdiction of the MEXT do not have to submit a Research Misconduct Checklist.

See the website of the MEXT below for details of the method for Research Misconduct Checklist submission.

https://www.mext.go.jp/a_menu/jinzai/fusei/1420301_00001.htm

*Note: A perfect environment for using e-Rad is necessary for Research Misconduct Checklist submission. Also be aware that registering a research institution with e-Rad normally takes approximately two weeks. See the URL below in addition to the URL given above for details of the procedures related to the use of e-Rad.

https://www.e-rad.go.jp/organ/index.html

(3) Measures Taken for Misconduct in Research Activities Based on the “Guidelines for Responding to Misconduct in Research”

Misconduct in research activities in this program is treated strictly as described below.

(i) Measures to Cancel the Contract

In the case of specific misconduct (fabrication, falsification, and plagiarism) is identified of research of the program, the Collaborative Research Agreement is cancelled or altered and a refund of all or part of the entrusted expenses is requested. Furthermore, there may be cases in which no agreement is concluded in the following years.

(ii) Measures to Restrict Application and Participation Eligibility

Measures given in the table below, depending on the level of inappropriateness and responsibility of specific misconduct, to restrict application to and participation in this project are imposed upon researchers involved in certain misconduct in research papers or reports of this project and those whose involvement has not been established but who are found responsible to an extent for the violation of the duty of due care as a distinct manager of pertinent papers and reports. Furthermore, in the case that such restriction measures are taken on qualification for application and participation, information is provided to pertinent sections of competitive research fund systems (referred to as “competitive research fund system related to the Ministry of Education, Culture, Sport, Science and Technology” hereinafter) distributed by the Ministry of Education, Culture, Sport, Science and Technology and independent administrative agencies of the ministry and to pertinent sections of competitive research fund systems (referred to as “competitive research fund systems related to other ministries” hereinafter) distributed by other ministries and their independent administrative agencies, which may similarly restrict qualification for application and participation in competitive fund systems

related to the Ministry of Education, Culture, Sport, Science and Technology and to other ministries.

<table>
<tr><td colspan="3">Classification of person ineligible to apply to competitive research funds, being involved in specific research misconduct</td><td>Degree of maliciousness in specific research misconduct</td><td>Ineligible period of application.</td></tr>
<tr><td rowspan="5">Person who was involved in a research misconduct</td><td colspan="2">1． Especially malicious person, who, from the beginning of research, had an intention to commit a specific research misconduct</td><td></td><td>10 years</td></tr>
<tr><td rowspan="3">2. The author of a research paper, which is a product of a research where a specific research misconduct was committed</td><td rowspan="3">The authors of the paper, who are responsible for the whole content of it. Namely, they are the supervisor and the representative author of the paper or others who are identified to be equivalently responsible for the paper.</td><td>The misconduct has a substantial impact on the development of relevant research fields and on the society, or the maliciousness of the deed is judged to be high.</td><td>5-7 years</td></tr>
<tr><td>The misconduct has a small impact on the development of relevant research fields and on the society, or the maliciousness of the deed is judged to be low</td><td>3-5 years</td></tr>
<tr><td></td><td>2-3 years</td></tr>
<tr><td colspan="2">Persons who conducted a specific research misconduct other than those of 1 and 2.</td><td></td><td>2-3 years</td></tr>
<tr><td colspan="3" rowspan="2">Person who has not been involved in a specific research misconduct but is a responsible author of a paper relevant to a research where a specific research misconduct was committed, being the supervisor or representative author of the paper, or a person, who is identified to be equivalently responsible for the paper.</td><td>The misconduct has a substantial impact on the development of relevant research fields and on the society, or the maliciousness of the deed is judged to be high.</td><td>2-3 years</td></tr>
<tr><td>The misconduct has a small impact on the development of relevant research fields and on the society, or the maliciousness of the deed is judged to</td><td>1-2 years</td></tr>
</table>

	be low	

* In principle, the application restriction period will be calculated from the following fiscal year that was determined the specific fraudulent activity. Eligibility for participation is also restricted for the fiscal year in which a specific misconduct is determined as such

(iii) Measures Taken to Researchers whose Qualification is Restricted for Application to and Participation in the Competitive Fund System and Base Expenses

Qualification is restricted for application to and participation in this project for researchers whose qualification is restricted for application to and participation to competitive research fund related to MEXT; management grants to national university corporations, inter-university research institute corporations and independent administrative agencies under MEXT; base expenses including private school subsidies; or competitive fund systems related to other ministries during the period the restriction is in effect.

(iv) Public Announcement of Misconduct

In principle, JST makes a public announcement with regard to the outline of specific misconduct in research activities of this project (name of researcher, project name, affiliation, research year, contents of misconduct, and measures taken). The Ministry of Education, Culture, Sports, Science and Technology also makes a public announcement concerning the contents of the pertinent misconduct (name of misconduct, kind of misconduct, research field of misconduct, name of expense account of misconduct, outline of misconduct, measures taken by research organization, measures taken by fund distributor, and so on).

The said guidelines state that a research organization announces the survey result immediately. Each organization is requested to handle the case accordingly.

https://www.mext.go.jp/a_menu/jinzai/fusei/1360483.htm

6.28 Duty to Complete Education on Research Ethics and Compliance

Researchers who participate in the project of this research program shall receive training on research ethics education for the prevention of misconduct in research activities as per the “Guidelines for Responding to Misconduct in Research” and on compliance education as per the “Guidelines for

the Management and Audit of Public Research Funds in Research Institutions."

During the process of concluding a Collaborative Research Agreement after the selection of a proposed research project, it is necessary for all researchers participating in the research project, including the Research Director and Individual Researchers, to receive training on research ethics education and compliance education and submit a document to confirm their understanding of the contents of the training.

6.29 Handling of Information on the e-Rad system

Information of individual projects that have been selected for adoption (name of funding program, name of research project, name of affiliated research institution, name of Research Director, budget amount, implementation period, and research project summary) shall be deemed to be "information that is scheduled to be made public" as prescribed under Article 5, Paragraph 1, Item (a) of the "Act on Access to Information Held by Independent Administrative Agencies" (Act No. 140 of 2001). This information will be announced on the web page of this program as appropriate after selection.

6.30 Provision of the e-Rad system to the Cabinet Office

The "6th Science, Technology and Innovation Basic Plan" (decided by the Cabinet on March 26, 3rd year of the Ordinance) states that EBPM for policy making based on objective evidence will be thoroughly implemented in science and technology and innovation administration. The information registered in the common research and development management system (e-Rad) of the ministries and agencies is used for appropriate evaluation of research and development with national funds, effective and efficient comprehensive strategy, planning of resource allocation policy, etc.

Information on research achievements and accounting and use of indirect expenses related to the competitive research fund for selected projects shall be input in e-Rad every year. The information necessary for macroscopic analysis, including information on research achievements and accounting performance, will be provided to the Cabinet Office.

6.31 Registration of researcher information to "Researchmap"

"Researchmap" (https://researchmap.jp/?lang=en) is the largest Japanese database of researcher information to provide a partial view of Japanese researchers nationwide. A public organization operates the services in a stable and sustainable manner, so as to make information on registered

profiles and achievements available to the public via the internet. Moreover, researchmap collaborates with e-Rad and numerous databases of college professors to enable registered information to be accessed through other systems; there is no need for researchers to repeatedly register the same achievement in various applications and databases.

The information in researchmap is utilized effectively for surveying national academic or S&T plans, as well as for statistical purposes. Researchers involved in this Program are advised to register at researchmap.

6.32 Patent Applications by JST

In case a R&D institution does not acquire rights to an invention, JST may acquire those rights in some cases. Therefore, if a R&D institution does not foresee acquiring rights to an invention, the researcher should notify JST promptly, providing information concerning the said invention, etc. in any appropriate format. (The above “information concerning the said invention” means information necessary for JST to determine whether an application for intellectual property rights is possible or not, for example, a copy of the notification of invention used in the R&D institution.)

JST will conduct a study based on the received notice, and if JST judges, based on the results, that an application for the said invention, etc. is possible, a separate “Patent Rights Transfer Agreement” will be concluded between the R&D institution and JST.

Chapter 7 Submission via the Cross-ministerial R&D Management System (e-Rad)

7.1 Cross-ministerial R&D Management System (e-Rad)*

The cross-ministerial R&D Management System (e-Rad) is a cross-ministerial system that provides a series of on-line processes to manage the publicly funded research programs under the jurisdiction of ministries and agencies (Acceptance of applications → Screening → Selection → Management of selected project → Registration of research results and accounting performance).

* "e-Rad" is an abbreviation of the R&D management system common to all ministries, with the acronym for Research and Development (R&D for science and technology) followed by the acronym Electric (Electron).

7.2 e-Rad usage notes

Applicants are requested to make an application using e-Rad (https://www.e-rad.go.jp/en). Please be aware of the following points when submitting your application:

(1) Pre-registration of R&D institution and researcher information is required. Please refer to “7.5 (1).”

(2) Please allow several days (or more) after the application deadline for inputting information into e-Rad: Input of information into e-Rad takes a minimum of around 60 minutes. Furthermore, on the day of the application deadline, there is a risk that the e-Rad system may be congested and inputting may take a long time. Please allow sufficient time before the application deadline to commence inputting information into e-Rad.

(3) It is possible to “temporarily save” input information: It is possible to discontinue input of and temporarily save application information part way through. For details, please refer to e-Rad operation manual (https://www.e-rad.go.jp/en/manual/for_researcher.html).

(4) “Retraction” on e-Rad system is possible: Up to the application deadline, it is possible for researchers to retract and re-edit their R&D proposals. However, do NOT “retract” R&D proposals on the day of the application deadline. On the day of the application deadline, there is a risk that the e-Rad system may be crowded and re-editing the proposal after retraction may take a very

long time. For details, please refer to e-Rad operation manual (https://www.e-rad.go.jp/en/manual/for_researcher.html).

7.3 Application method using e-Rad

(1) Register R&D institution and researcher information.

The R&D institution must register its researcher information and be issued a log-in ID and password. For detail, please refer to “7.5 (1).”

↓

(2) Obtain required application guideline and R&D proposal forms.

Please check the list of Calls for Proposals in the e-Rad Portal site and download the Application Guideline and the Proposal format. Please ensure to choose the Proposal format corresponding to the Program/Phase as each Proposal format is different.

↓

(3) Prepare a R&D proposal (Maximum file size: 5 MB).

↓

(4) Enter application information into the e-Rad system.

Enter the necessary information into the e-Rad system. It takes approximately 60 minutes.

↓

(5) Submit your R&D proposal. (Upload file to e-Rad for submission)

Please ensure to submit your proposal to the correct Program.

7.4 Inquiries and Service Availability

(1) How to operate e-Rad

For how to operate e-Rad, visit the portal site (https://www.e-rad.go.jp/en/) or download the manual from the site. Be sure to agree to the terms of use before making an application.

(2) Where to direct questions on how to use the e-Rad system

Questions about the program itself are answered by the person in charge of the program, as usual. Questions about e-Rad operation methods are answered by the e-Rad Help Desk. Before asking questions, be sure to read both the website outlining the Call for Proposals and the e-

Rad Portal site carefully.

Questions concerning the Call Programs, and procedures for preparation of application documents and submission, etc.	**Research Institute of Science and Technology for Society (RISTEX),** **Japan Science and Technology Agency (JST)** E-mail：boshusolve@jst.go.jp
Questions concerning the Cross-ministerial R&D Management System (e-Rad) Registration of institution or research, or how to operate e-Rad, etc.	**e-Rad helpdesk** Tel: 0570-057-060 (navi dial) Office hours: 9:00-18:00 ●Except on Saturdays, Sundays, holidays, and the year-end and new year period.

- RISTEX ”Call for R&D Proposals” website (https://www.jst.go.jp/ristex/proposal/)
- e-Rad portal website (https://www.e-rad.go.jp/en/)

*JST will not answer any questions regarding the status of review or acceptance.

*JST and the e-Rad helpdesk will be extremely busy on the application submission deadline (proposal deadline). Be sure to make inquiries with adequate time until submission.

(3) Availability of e-Rad

Basically, e-Rad operates 24 hours a day, 365 days a year, but may stop the service for system maintenance. This will be announced in advance on the portal site.

7.5 Notes

(1) Pre-registration of R&D institution and researcher information

R&D institutions have to be registered on e-Rad by the time of application. One R&D institution must assign a representative for e-Rad, download the R&D institution registration form from the e-Rad portal website, and apply for registration. However, if the proposer belongs to an overseas R&D institution, the R&D institution will be registered at JST after adoption. Please proceed to the application screen with no affiliation registered for the researcher ID (cross-ministerial R&D

Management System (e-Rad)), click the “Basic Information” tab and enter the affiliated institution. In that case, it is necessary for the proposer him/herself to obtain the e-Rad login ID and password.

The acquisition procedure is as follows. Please register prior to two weeks or more. Please refer to the e-Rad portal website for details (https://www.e-rad.go.jp/en/).

1) Researchers belonging to domestic R&D institutions

- Worker: R&D institution clerk
- Registration Contents: R&D Institution and Researcher Information

2) Researchers who belong to a foreign R&D institution or researchers who do not belong to a R&D Institution

- Worker: Proposer yourself
- Registration Details: Researcher Information

(2) Points to note when uploading a proposal to the e-Rad system

・Please ensure to use the format provided for the Program in the fiscal year of the application. Applications using formats for other programs and/or for other fiscal years will not be accepted.

・The documents need to be converted to pdf before uploading to the e-Rad. It can be performed from the menu after logging into the e-Rad.

・Please make sure that the size of the proposal pdf submitted is no more than 5MB.

・Please delete all the track change records.

・Please do not set a password to the pdf file of the proposal.

・Please check that the file converted to pdf has the page numbers inserted

・Please make sure to check the converted pdf file as following errors could occur.

* The use of external characters or special characters may cause corrupted text in the page or file concerned (please refer to “e-Rad operation manual” (can be downloaded from the e-Rad Portal site) regarding the use of characters permitted to use).

Please refer to the original Japanese version for the following part.

Chapter 8 Q&A on Call for Proposals

■ Enrolling in the educational program for research integrity

Content of the educational program for research integrity

Q What content must be included in the educational program for research integrity conducted by affiliated institutions?

A Educational programs for research integrity are the responsibility of each research institution. JST does not specify the specific teaching material to be used in such programs.

(Reference)

According to the “Guidelines for Responding to Misconduct in Research Activities” (August 26, 2014, adopted by the Minister of Education, Culture, Sports, Science and Technology), which were effective as of April 2015, research institutions are required to implement a structure for preventing misconduct—such as the installation of a “Research Integrity Education Manager”-and conduct education at the institutional level. Further, the allocating institution is also required to confirm researcher enrollment in the institution’s research integrity education program.

Note, however, that the details in the referenced guidelines focus on misconduct related to academic papers and does not cover bioethics and conflicts of interest, which are different topics. If you have any questions, please contact the JST Office of Research Integrity.

Japan Science and Technology Agency Department of Audit and Legal Affairs, Research Integrity Division

E-mail: rcr-kousyu@jst.go.jp

Program completion certification

Q Is it necessary to submit documentation certifying completion of an educational program for research integrity?

A No, submission is not necessary at proposal.

Deadline for completing the program

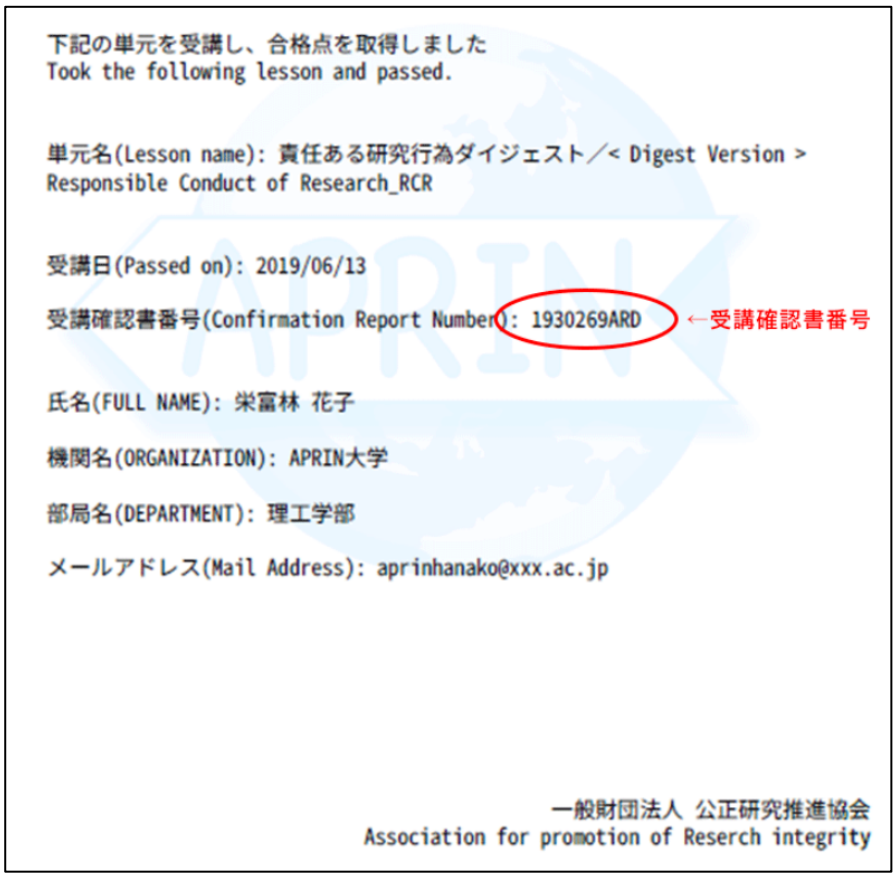
Q I cannot complete the educational program for research integrity before the application deadline. Can I complete the program after the deadline? Can I complete the program after the deadline?

A Completion of the educational program for research integrity by Principal Investigator is a prerequisite for applying. Enrollment and completion of this program will not be permitted after the solicitation deadline. For details, please refer to “6.1 Enrolling in and Completing the Educational Program on Research Integrity”.

Confirmation Report and Declaration of Completion

Q I have completed the digest version of eAPRIN (ex-CITI Japan), but where/how do I view the Confirmation Report Number?

A After passing the quiz, Confirmation Report can be issued. The Confirmation Report Number (7 digits + ARD) is written on the Confirmation Report.


下記の単元を受講し、合格点を取得しました
Took the following lesson and passed.

単元名(Lesson name): 責任ある研究行為ダイジェスト／< Digest Version >
Responsible Conduct of Research_RCR

受講日(Passed on): 2019/06/13

受講確認書番号(Confirmation Report Number): 1930269ARD ←受講確認書番号

氏名(FULL NAME): 栄富林 花子

機関名(ORGANIZATION): APRIN大学

部局名(DEPARTMENT): 理工学部

メールアドレス(Mail Address): aprinhanako@xxx.ac.jp

一般財団法人 公正研究推進協会
Association for promotion of Reserch integrity

Sample of Confirmation Report

Q. I completed the digest version of eAPRIN (ex-CITI Japan) when submitting a proposal for this project (or other JST projects) last fiscal year (or this fiscal year); do I need to enroll in and complete the program again?

A. You do not need to complete the program again. Please input your Confirmation Report Number issued when you completed the program on the Individual Items tab of e-Rad.

Availability of an English version of the eAPRIN (ex-CITI Japan) digest version

Q Since I have not taken the program offered by my institution, I am planning to enroll in the digest version of eAPRIN (ex-CITI Japan). What options are there if my native language is not Japanese, which makes taking the course in Japanese difficult?

A. Please take the English digest version of eAPRIN (ex-CITI Japan).

* eAPRIN is an e-learning program operated by the Association for the Promotion of Research Integrity (APRIN). The name was changed from CITI Japan to eAPRIN effective on October 1, 2018.

■ Others

Requirements for Proposers

Q. Is there an age limit?

A. There is no specific age limit, but it is necessary that Principal Investigator and Collaborator (proposers) be able to create a structure that can perform the research at an organization or the like in Japan and carry out the research and development projects throughout the project period.

Q. Can I be both the Principal Investigator and Collaborator?

A. Yes, you may be both. However, as you are taking on the roles of both “the person in charge of research and development” and the “representative of parties working on social issues” at the same time, your ability to secure sufficient effort and to balance both roles are subject to evaluation. If you will be taking on both roles in the solution creation phase, you will also provide a business

plan for the institution that will bear responsibility for the establishment and dissemination activities after the completion of the project.

Q. When multiple institutions participate as parties addressing social issues, does each institution need a “representative of parties working on social issues "?

A. This is not necessary. However, one representative must be decided per application, and must be submitted jointly with the “the person in charge of research and development.”

Technology Seeds

Q. This program requires the utilization of Technology Seeds that have already been obtained, but which Technology Seeds are these? Is there any scope or restrictions?

A. Technology Seeds based on natural science are envisioned, so please make applications within this expected scope. When making selections, we will take the various definitions of natural science into account.

Q. Must all Technology Seeds be included in the application if there are many?

A. Please include up to three representative Technology Seeds.

Multiple Applications

Q. I previously submitted a proposal for a different JST project. Can I also submit a proposal in this program?

A. Yes, you may submit another proposal. However, you may not submit multiple applications with the 2021 call for the “Science of Science, Technology and Innovation Policy” R&D program, the “Comprehensive Practice of Science and Technology on Ethical, Legal and Social Implications/Issues (ELSI)” R&D program and SOLVE for SDGs: Social Isolation & Loneliness. In addition, in cases where the Principal Investigator, etc. or Research Participants, etc. participate in multiple projects (topics) through any competitive fund system operated by JST, adjustment may be made such as reducing the research and development budget according to the effort of

the researchers or requiring researchers to select one project for implementation.

Institutional Approval at the Time of Application

Q. Do I need to obtain approval from my affiliated research institution when I apply?

A. You do not need approval from your institution for applications submitted through e-Rad, however, please ensure that you obtain prior consent. After projects are selected, JST will enter into a Collaborative Research Agreement with the researchers' affiliated research institutions. Please note that, if a Collaborative Research Agreement cannot be entered into, the research and development budget cannot be used, so please carefully read "5.9 Responsibilities of Research Institutions, etc." There is no need to submit an approval letter.

Implementation by Foreign Institutions

Q What criteria will be used to determine whether the performance of research would be impractical if not done at a foreign institution?

A Decision concerning whether research must be performed overseas are assumed as following.

① Required facilities do not exist in Japan and have been installed only in foreign institution.

② There is investigation and research that can be performed only by the research institution.

③ Research materials and data can be obtained only at a foreign research institution or foreign location and cannot be brought to Japan.

Collaboration with Foreign Institutions

Q. Collaboration with foreign institutions gives extra points, but is such collaboration actively encouraged when conducting R&D?

A. This means we will evaluate issues with the future potential to be developed internationally through collaboration with foreign institutions and other means after the completion of research and development in this program. Collaboration with foreign institutions is allowed during the research period, but locations for the feasibility and verification tests are limited to regions within Japan.

Interview Selection

Q. If I am not available on the day of the interview selection, can I change the interview selection date?

A. Please be aware that because the schedule is determined by coordinating the schedules of numerous evaluators, the schedule cannot be re-adjusted.

Entering of Research and Development Budget

Q. Do the “research and development budget” written on the application include the amount of indirect costs paid to the institution when the collaborative research agreement is concluded?

A. Research and development budget refers to direct costs. They do not include indirect costs. Please enter only direct costs.

Direct Costs

Q. After the research and development commences, is it possible to change the detailed use of funds within the budget based on the progress and other factors (for example, using funds initially allocated to expenses for goods to travel expenses) (exchange of direct costs between expense items)?

A. The exchange of direct costs between expense items can be done under certain conditions.

・Conditions for shifting funds without requiring approval from JST:

If the amount of funds to be shifted from each expense items does not exceed 50% of the total direct costs in the relevant fiscal year (if 50% of the total direct costs does not exceed 5 million yen, then 5 million yen)

・Conditions for shifting funds after approval from JST (Program Supervisor) that it is necessary for research implementation

If the amount of funds to be shifted from each expense items exceeds 50% of the total direct costs in the relevant fiscal year and exceeds 5 million yen

Note that you are not allowed to exchange direct cost and overhead (indirect) cost.

Indirect Costs

Q. What types of expenditures can indirect costs be used for?

A. Indirect costs are funds for the research institution to allocate to the expenses required for improving the research environment of the implementers participating in a project selected for this program or for enhancing the overall functionality of the research institution. The “Common Guidance for the Execution of Indirect Expenses of the Competitive Fund” (agreed upon by the coordination committees of relevant ministries and agencies on April 20, 2001 and amended on May 29, 2014) gives the following examples as the main uses of indirect costs.

1) Expenses relating to management divisions

- Expenses for development, maintenance, and operation of management facilities and equipment
- Expenses necessary for management administration

Expenses for purchase of supplies and consumables, equipment lease expenses, miscellaneous expenses, personnel expenses, communications and transportation expenses, honoraria, domestic and overseas travel expenses,

conference expenses, printing expenses, etc.

2) Expenses relating to research divisions

- Expenses relating to goods used in common

Expenses for purchase of supplies and consumables, equipment lease expenses, miscellaneous expenses, communications and transportation expenses, honoraria, domestic and overseas travel expenses, conference expenses,

printing expenses, newspaper and periodical expenses, utility expenses

- Expenses necessary to promote research activities through applications of the relevant research etc.

Personnel expenses for research and research support staff, Expenses for purchase of supplies and consumables, equipment lease expenses, miscellaneous expenses, communications and transportation expenses, honoraria, domestic and overseas travel expenses, conference expenses, printing expenses, newspaper and periodical expenses, utility expenses

- Patent related expenses

- Research building development, maintenance, and operation expenses
- Experimental animals facility development, maintenance, and operation expenses
- Researcher interaction facility development, maintenance, and operation expenses
- Facility development, maintenance, and operation expenses
- Network development, maintenance, and operation expenses
- Large-scale computing (including supercomputer) development, maintenance, and operation expenses
- Large-scale computing building development, maintenance, and operation expenses
- Library development, maintenance, and operation expenses
- Field development, maintenance, and operation expenses

Etc.

3) Expenses relating to other relevant operation divisions

- Expenses relating to dissemination of research results
- Expenses relating to publicity, etc.

Even in cases other than the above, indirect costs may be used in cases where the head of the research institution makes a determination that the expenses are necessary to improve the research and development environment of researchers who received competitive funds or to enhance the overall functionality of the research institution. However, this does not include funds that are to be allocated to direct costs.

Research institutions that receive distributions of indirect costs shall properly manage indirect costs and appropriately retain receipts and the like evidencing the proper use of indirect costs for five years from the fiscal year after the fiscal year in which the project is concluded. Furthermore, research institutions that receive distributions of indirect costs shall report the results of annual indirect cost use to JST by June 30 of the following fiscal year via the Cross-ministerial R&D Management System (e-Rad). If the method of making reports via e-Rad is not clear, please refer to the e-Rad user manual (https://www.e-rad.go.jp/manual/for_organ.html) or the FAQs (http://qa.e-rad.go.jp/).

Outsourcing

Q. Is it possible to subcontract software preparation and other such work to external companies, etc.?

A. If it is required as a matter of advancing the project, it is possible. If it is required as a matter of advancing the project, it is possible. However, there is a premise that such subcontracting of work to outside parties is based on “subcontracting agreements” that exclude research and development work. In principle, the subcontracting of research and development work is not permitted.

Personnel Transfers after Proposal Selection

Q If a Principal Investigator experiences a change in position (promotion, transfer to a different research institution, etc.) while conducting research, will the Principal Investigator be permitted to continue research activities?

A As long as it is possible to continue research activities unhindered by the change in position, research activities may be continued.

Subcontracting

Do the Collaborative Research Agreements between JST and the implementers’ affiliated research institutions take the form of “subcontract” (see note) via the Principal Investigator’s research institution?

Note: “Subcontract” in the Collaborative Research Agreement means that JST concludes a research agreement only with a research institution with which the Principal Investigator is affiliated and the research institution with which the said Principal Investigator is affiliated concludes another research agreement with a research institution with which a joint researcher is affiliated.

A. In this program, Collaborative Research Agreements are not subcontracts. A JST contracts separately with each of research institutions with which the Principal Investigator and Lead Implementers are affiliated.

Lead Implementer

Q. What is the definition of lead implementer?

A

Group Leader:

Research and development project comprises multiple research groups. The implementer who represents each group is referred to as the “group leader.” Principal Investigators or Collaborators are group leaders.

Lead implementer:

JST contracts Collaborative Research Agreement separately with each of research institutions and disburses research and development funds, and the group leaders who belong to the research institution that contracts Collaborative Research Agreement with JST, other than Principal Investigator, is referred to as the “lead implementers.” Collaborators are lead implementers too.

Registration on e-Rad by Lead implementer/Group Leader

Q. Other than the Principal Investigator or Collaborator, is it necessary to register anyone on e-Rad?

A. “Lead implementer” is a unique name used by JST and is not on e-Rad. Please register the “lead implementer” as the group leader. It is not necessary to register the implementers.

Q. Some Collaborators and Lead Implementers/Group Leaders do not have e-Rad researcher number, but can they still register on e-Rad?

A. Only the Principal Investigator is required to have an e-Rad researcher number when applying. In addition, Collaborators, Principal Investigators/Group Leaders and Implementers do not need researcher numbers when applying. After project selection, you will be asked to obtain e-Rad researcher numbers as needed.

Coordinator and Bearer

Q. Can the Principal Investigator or Collaborator also be the coordinator, person in charge of establishing solutions, and person in charge of expanding solutions to other communities, as

written in the application (Form 6) project concept of the solution creation phase?

A. The most appropriate people should be the coordinator, person in charge of establishing solutions, and person in charge of expanding solutions to other communities. We generally do not expect the Principal Investigator or Collaborators to have dual roles. However, exceptions may be made if it is optimal for the Principal Investigator or Collaborators to also be the coordinator, person in charge of establishing solutions, or person in charge of expanding solutions to other communities. For example, it may be considered in the following cases.

- When the collaborator is a member of the local government and the solution is to be institutionalized in the local government for it to established (dual roles as Collaborator and person in charge of establishing solutions)
- When the Principal Investigator is a member of a nationally active NPO and will independently develop solutions after the completion of the R&D project (dual roles as Principal Investigator and person in charge of expanding solutions to other communities)

Furthermore, we will confirm that the background and roles of the coordinator, person in charge of establishing solutions, and person in charge of expanding solutions to other communities are consistent with the “R&D Plan” and the “Scenario for Establishing Solutions and Expanding Solutions to Other Communities” during selection.

Securing a Research and Development Period (research and development implementation) Until the End of the Fiscal Year)

Q. When does a research results report need to be submitted?

A. JST has made the following arrangements so that implementers can make the most use of research and development period to conduct research and development.

・The deadline for submitting the report on the research achievements, “Results Report” for the fiscal year is May 31 of the following fiscal year.

・The deadline for submitting the accounting report, “the Collaborative Research Results Report (and Income and Expenditure Settlement Report)” for the fiscal year is May 31 of the following fiscal year.

・However, if the end of the research and development period for the last fiscal year is not the end of March of the relevant fiscal year, please submit the report above by the date designated by JST within 61 days after the end of the contract period.

* Each research institution shall establish the necessary internal structures considering that the objective of the above arrangements is to secure a research and development period (research and development implementation) until the end of the fiscal year.

Selected topics and submitted applications

Q. What were the research topics selected and applications submitted last fiscal year in RISTEX's other area and programs?

A. Refer to following Websites:

1. Following 3 programs: Press release of the selection results of Reiwa 3

https://www.jst.go.jp/pr/info/info1525/index.html

・SOLVE for SDGs: Scenario Creation Phase, Solution Creation Phase

・Science of Science, Technology and Innovation Policy

・Responsible Innovation with Conscience and Agility

2. SOLVE for SDGs: Social Isolation & Loneliness: Press release of the selection results of Reiwa 3

https://www.jst.go.jp/pr/info/info1535/index.html

Research Institute of Science and Technology for Society Proposal application website

https://www.jst.go.jp/ristex/proposal/index.html

English Call Procedures and Preparation of Applications in English

Q. Is the content of the English call procedures exactly the same as the Japanese version?

A. The English version of the call procedures is a translation of the Japanese version. In the unlikely event that there is a different interpretation due to the wording, please refer to the Japanese as the correct version.

Q. Can I prepare my application in English?

A. This program only accepts applications in Japanese.

Preparation of Applications in Accordance with the Purpose of This Program

Q. Please tell me what I should pay particular attention to when preparing my application in accordance with the purpose of this program.

A. For calls in previous years, there were excellent applications that were not selected because they did not fit the purpose of the program. The following tendencies were seen as reasons for not being selected, so please refer to them when preparing or reviewing your application.

1) Reasons for not being selected that were often seen in the scenario creation phase

・More importance is placed on the research and development of Technology Seeds than on addressing social issues.

・There is little likelihood that the issue will be solved with Technology Seeds.

・There is almost no prospect of future expansion into other communities.

・The participation of important stakeholders, including beneficiaries, is not shown in the plan when conducting the proposed feasibility study.

・There is an unreasonable connection between the application content and the targeted social issue.

・The application content lacks novelty and originality, and has little social impact.

2) Reasons for not being selected that were often seen in the solution creation phase

・More importance is placed on the research and development of Technology Seeds than on addressing social issues.

・There is almost no prospect of expansion into other communities after completion of the project.

・The participation of important stakeholders, including beneficiaries, is not shown in the plan when conducting the proposed verification test.

Chapter 9 Completing the Proposal

(Omitted)

Chapter 10 References

(Related websites)

■United Nations Information Centre

2030 Agenda

https://www.unic.or.jp/activities/economic_social_development/sustainable_development/2030agenda/

■Japan Business Federation

https://www.keidanrensdgs.com/

■Ministry of Education, Culture, Sports, Science and Technology (MEXT)

http://www.mext.go.jp/b_menu/shingi/gijyutu/gijyutu2/092/houkoku/1410641.htm

http://www.mext.go.jp/a_menu/kagaku/kokusai/sdgs/1408737.htm

http://www.mext.go.jp/a_menu/kagaku/kokusai/sdgs/1408738.htm

■JST

Science, Technology and Innovation (STI) for implementing the SDGs

https://www.jst.go.jp/sdgs/actionplan/index.html

【Inquiries】

Questions concerning the call for R&D proposal are accepted by e-mail.

boshusolve@jst.go.jp

The latest information will be posted on the following RISTEX Website.

https://www.jst.go.jp/ristex/proposal/

https://www.jst.go.jp/ristex/solve/index.html

Research Institute of Science and Technology for Society (RISTEX)

Japan Science and Technology Agency (JST)

Address: Science Plaza, 5-3 Yonbancho, Chiyoda-ku, Tokyo 102-8666, Japan

【Questions concerning the Cross-ministerial R&D Management System (e-Rad)】

e-Rad helpdesk: 0570-057-060 (Navi Dial)

Office hours: 9:00～18:00

※Excepted on Saturdays, Sundays, holidays and the year-end and new-year period