

FY2024
RISTEX R&D Programs
“Responsible Innovation with Conscience and Agility”
(RInCA)

Call for R&D Proposals
[Application Guideline]

Application Call Period

Wednesday, April 10 ~ 12:00 (noon, Japan time) on Wednesday, June 5, 2024

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



Research Institute of Science and Technology for Society (RISTEX),
Japan Science and Technology Agency (JST)

April 2024

RISTEX R&D Programs
Responsible Innovation with Conscience and Agility (RInCA)”
Overview of the FY2024 Call for R&D Proposals

The main schedule for call for R&D proposals and selection (FY2024) is as follows. The schedule is subject to change in the future, so be sure to confirm the latest information on the specified website.

RISTEX “Call for R&D Proposals” website:

https://www.jst.go.jp/ristex/proposal/proposal_2024.html

Applications will be made through the Cross-ministerial R&D Management System (e-Rad) (Please refer to “4.5 Application Method.” Applications by paper, postal mail, express parcel delivery and/or email will not be accepted).

As the application deadline approaches, heavy demands on the e-Rad system could slow down the application processing speed and even cause the application deadline to be missed. Please give yourself enough time to complete submission 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 title and affiliation of the Proposer in e-Rad should match those provided in the R&D proposal. Please note that the application of an R&D proposal uploaded to e-Rad will not be accepted if it contains defects making the review of the proposal difficult. “A defect making the review of the proposal difficult” refers to omission of proposal application forms, 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 an R&D proposal that may occur before the submission deadline, regardless of whether the proposal was received or not. Therefore, all Proposers applicants must understand that JST will not modify the R&D proposals with prior confirmation from the Proposers or request the Proposers to make any revisions to their R&D proposals before the R&D proposal submission deadline.

■ Selection Schedule

Call begins	Wednesday, April 10, 2024
Briefings of solicitation	Thursday, April 25, 2024 Conducted online (registration required) Details will be posted on the proposal application website. (https://www.jst.go.jp/ristex/proposal/proposal_2024.html)
Application deadline *	12:00(Noon, Japan time) on Wednesday, June 5, 2024 (No delays accepted)
Document screening period	June to July 2024 (planned)
Notification of document screening results	Notice will be provided at least one weeks prior to interview screening (planned)
Interview screening	Monday, August 5 and Tuesday, August 6 ,2024 Conducted online
Candidates interview with the Program Supervisor	Monday, August 19, and Tuesday, August 20,2024 (planned) Conducted online
Notification and announcement of selection results	Early-October, 2024 (planned)
Start of R&D	Early-October, 2024 (planned)

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

CONTENTS

Chapter 1. Introduction to the Call for R&D Proposals	6
1.1 Overview of RISTEX R&D Programs.....	6
1.2 For Researchers Considering Applying or Participating in the Programs.....	7
1.2.1 Contribution to the accomplishment of sustainable development goals (SDGs).....	7
1.2.2 Promotion of Diversity.....	8
1.2.3 Toward the Promotion of Fair Research.....	9
Chapter 2. Concept of Program Supervision in Solicitation and Selection	11
Chapter 3. Overview of R&D	18
3.1 The Goal of the Program.....	18
3.2 R&D Focus.....	18
3.3 Notes on the R&D Implementation Structure and Approach.....	21
3.4 Management of the Program.....	22
Chapter 4. Call for Proposals and Selection	27
4.1 Call Period and Selection Schedule.....	27
4.2 R&D Period and R&D Budget.....	28
4.3 Number of Projects to be Selected.....	29
4.4 Requirements for Application.....	29
4.4.1 Multiple Applications.....	30
4.4.2 Requirements for Proposers.....	30
4.4.3 Requirements for Research Institutions.....	31
4.5 Application Method.....	32
4.6 Selection Method.....	33
4.6.1 Selection Process.....	33
4.6.2 Selection System and Management of Conflicts of Interest.....	34
4.7 Main Perspectives for Selection.....	36
4.8 Other Considerations.....	38
Chapter 5. Promotion of R&D after Adoption	40
5.1 Implementation Plan.....	40
5.2 Implementation Team Composition.....	40
5.3 Place of Implementation.....	41

5.4 Collaborative Research Agreement	41
5.5 R&D Budget	42
5.5.1 R&D Budget (Direct Costs)	42
5.5.2 Overhead (Indirect) Costs	44
5.5.3 Multiple-year Contracts and Carryover	44
5.6 Reports	44
5.7 Evaluation	45
5.8 Responsibilities of Principal Investigator and Lead Joint Researchers	45
5.9 Responsibilities of Research Institutions	47
5.10 When a Person Belonging to an Overseas Institution Participates as the Lead Joint Researcher	51
5.11 Other Considerations	52
5.11.1 Systems for Childbirth, Childcare, CareGiving	52
5.11.2 Using the JREC-IN Portal	52
Chapter 6. Key Points in Submitting Proposals	53
6.1 Enrolling in and Completing the Educational Program for Research Integrity	53
6.2 Measures against Unreasonable Duplication and Excessive Concentration	55
6.3 Ensuring Research Integrity against New Risks Associated with Internationalization and Openness of Research Activities	58
6.4 Measures against Inappropriate Usage of Research Funds	59
6.5 Measures taken for Researchers whose Application and Participation Eligibilities are Restricted in Another Competitive Research Fund System	61
6.6 Measures Taken to the Violation of Related Guidelines	61
6.7 Carryover of Research Expenses	62
6.8 Cross-ministerial Expenses Handing Partitioned Table	62
6.9 Exchange of Direct Costs between Expense Items	63
6.10 Securing Research Period until the End of Fiscal Year	63
6.11 Indirect Costs	63
6.12 Promotion on Effective Use of Research Facilities and Equipment	64
6.13 Improving the treatment of (latter-stage) doctoral students	65
6.14 Securing an independent and stable research environment for young researchers	67
6.15 Equal Participation of Men and Women and Measures for Promotion of Human Resource	

Development.....	68
6.16 Self-motivated Research Activities by Young Researchers Employed to Carry Out Projects .	69
6.17 Support for Diverse Career Paths for Young Researchers with Doctoral Qualifications	70
6.18 Securing management personnel of URA, etc.....	70
6.19 Security Export Control (Measures against Leakage of Technology internationally)	71
6.20 Strict Adherence to United Nations Security Council Resolution No. 2321	73
6.21 Dialogue and Collaboration with Public Stakeholders.....	73
6.22 Research Data Management.....	74
6.23 Data disclosure from NBDC	76
6.24 Description of systematic numbers in the acknowledgments of the papers, etc.....	76
6.25 Research Support Service Partnership Certification System (A-PRAS).....	77
6.26 Items Noted Regarding the Reformation of Competitive Research Funds	77
6.27 Consideration on “Guidelines for the Management and Audit of Public Research Funds in R&D Institutions (Practice Standards)”	77
6.28 Consideration on “Guidelines for Responding to Misconduct in Research”.....	79
6.29 Duty to Complete Education on Research Ethics and Compliance.....	83
6.30 Handling of Information on the e-Rad system.....	83
6.31 Provision of Information on the e-Rad System to the Cabinet Office	83
6.32 Registration of researcher information to “researchmap”.....	84
6.33 Patent Applications by JST.....	84
Chapter 7. Submission via the Cross-ministerial R&D Management System (e-Rad)...	86
7.1 Cross-ministerial R&D Management System (e-Rad).....	86
7.2 e-Rad Usage Notes.....	86
7.3 Application method using e-Rad.....	87
7.4 Others	87
7.5 Operating instructions and notes.....	88
Chapter 8. Q&A on Call for R&D Proposals	91
Chapter 9. Guide to Completing the Proposal.....	100
Chapter 10. References	100

Chapter 1. Introduction to the Call for R&D Proposals

1.1 Overview of RISTEX R&D Programs

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 R&D 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.

This program corresponds to the Competitive Research Fund System posted on the Cabinet Office website (<https://www8.cao.go.jp/cstp/compefund/>).

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 research 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 R&D 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.



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. Expanding the participation of woman researchers in R&D projects is substantially important for advancing R&D, 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 researchers 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 from woman researchers.

Director of Diversity and Inclusiveness
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)

Chapter 2. Concept of Program Supervision in Solicitation and Selection

Program Supervisor: KARASAWA Kaori

Professor, Department of Social Psychology,

Graduate School of Humanities and Sociology, The University of Tokyo

■ Background

While the significance of the deepening relationships and interactions between science and technology (S&T) and society has been recognized for some time, these are now becoming increasingly important due to the rapid advancement of emerging sciences and technologies. Such sciences and technologies, which are advancing at an accelerating pace, are characterized by extremely rapid transition from R&D to social implementation, their uncertain and multifaceted impact on humans and society, and their overwhelming impact. They expand the relationship of science and technology to people and societies, providing new knowledge and benefits, and enabling people and societies to be better. On the other hand, they have also had the potential to cause irreversible destruction throughout human history.

Looking back, discussions regarding the relationship between S&T and society have been posing various serious challenges at different times in history. There has been the recognition of the negative impacts of S&T on people, society and the environment, including the social responsibility of scientists in research after World War II; global environmental problems such as industrial pollution, some cases of which have caused severe regional damage, and atmospheric pollution and climate change; and accidents at nuclear power stations. Awareness of these, however, has come to motivate engagement in further discussions about the relationship between S&T and society. Awareness of these, however, has undeniably motivated the engagement in further discussions about the relationship between S&T and society. Against this backdrop, research on ethical, legal and social implications/issues (ELSI) was established formally for the first time in the budget allocated for the Human Genome Project launched in 1990 in the US. This is a research area which anticipates and considers the ethical, legal and social implications of R&D outcomes, which has later expanded its focus on genome research to other areas such as other emerging biotechnologies, information technology, nanotechnology and brain science.

Meanwhile, as a significant issue that arose during the start of the Program, we cannot overlook

the impact that COVID-19 has had on our daily and economic activities. We have experienced the unknown virus and its infectious risks, abrupt environmental changes and uncertain prospects, the vast flow of information with sometimes dubious contents, the anxiety and fear of the invisible, criticism and discrimination, disruption and disparity –situations that lead to confusion. As the way of life and society have now changed dramatically, it can be said that the need to reexamine the relationship between S&T and society is once again being brought into question.

The political and societal position of the Program is to respond to global-scale problems faced by humanity (grand challenges) as exemplified by the Sustainable Development Goals (SDGs), which have been identified as important mission at a policy level and in industrial circles. With the rapid expansion of environmental, social and governance (ESG) investment in the global marketplace, there is a call to reconcile values emphasizing economic rationality with values such as the sustainability of the natural environment and giving consideration to gender and equity. In this situation, there is an expectation that S&T will contribute to resolving social issues including the grand challenges, and the transcendence and integration of various disciplines and collaboration with diverse stakeholders are considered important to this end. Moreover, it is necessary for such efforts to not only result in the overcoming of issues, but to also involve a discussion and anticipation of problems that, from the early stages of R&D, include researchers across disciplines and various stakeholders in society. Upon such a foundation, we could achieve the creation of innovation which truly contributes to the greater good of society. This is known as the responsible research and innovation (RRI), positioned as a concept that has its origin in ELSI in the US, as well as S&T governance and public engagement mainly developed in Europe.

Japan's science and technology policy is also based on this trend. With regard to S&T and innovation, the Basic Act on Science and Technology was substantially revised for the first time in 25 years and came into effect as the Basic Act on Science, Technology and Innovation in April 2021. Of particular note are the deletion of the clause which excluded humanities and social sciences (“those relevant only to the humanities”) from its definition of S&T, and the inclusion of “creation of innovation” in its objectives. The 6th Science, Technology and Innovation Basic Plan (Cabinet Decision of March 26, 2021), which is drawn up based on this law, places a particular emphasis on creation and application of “comprehensive knowledge” by integration of knowledges in humanities/social sciences (HSS) and natural sciences in order to promote policymaking by back-

casting as well as social changes led by innovation. To realize these, it is mentioned that co-creation by researchers and various stakeholders is essential, and that promotion of engagement in ELSI is necessary to resolve increasingly complex social issues and implementation of emerging sciences and technologies.

However, the current situations of these attempts seem to imply that concepts and ideas of ELSI/RRI may not be so successfully establishing activities which are to be integrated in R&D and innovation in such a way as to produce synergetic effect. A situation is evident in which R&D and the social implementation of results tend to take place first, and the discovery of points at issue and the raising of questions related to, e.g., ethics, legal issues, responsibility and human wellbeing occur afterward. To overcome this situation, “comprehensive knowledge” through “co-creation” by stakeholders is required. It is also necessary to promote practical collaboration from the early stages of development and implementation in close cooperation with the practitioners of scientific and technological development and implementation, and to conduct reflective examination of S&T and their value as well as their relationship with people and society.

■ **Focus on Humans: Consideration from the Perspectives of Human Nature and Interaction between People and Society**

Development of S&T related to human subjects is more prominent than ever and has the potential to change various aspects of people and society, including one’s self-understanding and decision-making, human autonomy, interpersonal relations and group relations. Advances in S&T are expected to contribute to improvement of people’s lives and societies, but in order for this to be realized, a harmonious relationship should be maintained between S&T and individuals/organizations that make decisions according to various needs and desire and act based on those decisions, as well as the societies in which they exist. Although S&T has the ability to make life more pleasant and convenient, if it relieves one’s desire too naively, this may destabilize sustainability of society. In addition, S&T has the power to control human behavior (regardless of its intention). As excessive control could cause, for example, ethical problem of justification and legal problem of fairness, it may even jeopardize people’s very wellbeing by threatening individuals’ autonomy or resulting in backlash or despair. Emerging sciences and technologies in particular are characteristic not only for their distinctively rapid pace of progress and immense impacts on people and societies, but also for norms and ethics associated with them being not necessarily given and change dynamically, and thus attention should be paid to such aspects.

When pursuing R&D and social implementation of S&T, careful consideration of ethical, legal and associated social issues that become apparent in trying to achieve a harmonious relationship with humans and societies is an essential part of responsible research and innovation. For such a pursuit to have an effect, focusing on “humans/individuals” who make up the society, and considering issues based on the understanding of their characteristics in cognitions and social behavior would be one key aspect. Far from being a mere gathering of people, our society comprises of various elements such as organizations, norms, laws and economic/industrial systems, exhibiting multiple functions. In such a society, for us to envisage the future, it is essential to contemplate what meaning we should assign to S&T, how it could be accepted and used, and how it should be positioned now and in the future. Answering these questions requires not only macro-level perspectives such as the vision of society expected to be achieved by the advancement of S&T, as well as institutional, normative and ethical dimensions, but also micro-level considerations such as the current states of literacy and understanding of S&T; value systems; anticipated impacts of S&T on society including costs and risks/benefits; trust in S&T itself and organizations and groups that promote S&T; and cognition, behavior and psychological reactions of particular communities and individuals with regard to S&T. It is important to grasp the characteristics of decisions and behavior comprehensively by incorporating the notion that people do not always make rational decisions, and by elucidating distortions due to cognitive bias or incentives.

■ Creation of Value Relevant to the Japanese Context

When considering the relationships between S&T and humans/societies, we need to examine and envisage how S&T should be with/for the present and future society in which we live. In other words, each subject that engages in such a discussion needs to start the examination from the society s/he or it belongs to while also being aware of the uniqueness of the society as well as universal characteristics of the society. In that sense, how to perceive the significance of Japan as a given setting is one crucial perspective in such an examination.

Although S&T possesses a certain degree of universality, its implementation requires examination of particular approaches which take into account the characteristics and conditions of the specific society (community). In addition, how conflicts of embedded values and ethical issues manifest in the process of implementation of S&T's outputs depends on the society's unique history, institutions and customs. Accordingly, rather than merely borrowing/applying theories and case studies from overseas, notably Europe and the US, we need to engage with the fundamental question of what

kind of value we are trying to realize by continuous discussions and articulation from various perspectives while pragmatically confronting the challenges facing Japanese society.

In doing so, it is important for us to adopt a perspective conscious of Japan's social, cultural and historical attributes. We can look at the issues either by adopting a global perspective on Japan, or by a Japanese local perspective on the world, but here I suggest that we scrutinize the generality and uniqueness of cases and social contexts in Japan, as such an attempt may enable us to conceive universal value that meets a global standard, and to discover the strategies for building an optimal relationship between S&T and humans/societies, as well as benefits S&T brings. There is anticipation that this could lead to the creation of new value and services that stem from Japanese people, society, culture and history, and even to rulemaking adaptable to the international community.

■ The Challenge of Co-creative Science, Technology and Innovation

One point to note is that we should not regard these efforts to reconciling S&T with humans and societies as brakes on R&D, but rather as navigators for the creation of innovation and the future society, thereby serving as the impetus for us to presciently and actively create many options for the future. In order to ensure the effectiveness of such efforts, we must engage in the "issues occurring at this very moment" at the sites of R&D, as well as to point out potential future issues and to start discussing these under the appropriate framework. With consideration for the complex and multilayered elements as well as diverse perspectives of people/societies, we need to contemplate how S&T really should be, search for theories and implement the design of R&D or of technology to industries/economies while attempting to constantly question its agreement with humans/societies. On-site engagement in such a pursuit repeatedly and interactively, I would suggest, is what is truly required of future R&D.

In terms of emerging sciences and technologies, first, there would be post-R&D cases, of which ethical, legal and social issues are already apparent and need to be attended to immediately. For example, legal regulations relating to the safety of technologies related to automated driving, artificial intelligence, which is being used extensively for decision-making support and the application of genome-editing technology to crops and foods fall into this category. Many relevant issues have already been recognized on the R&D front, requiring practical collaboration in R&D among researchers in the humanities and social sciences and other stakeholders, with the goal of addressing the issues to find solutions.

There also would be cases which are anticipatory in nature with regard to R&D, of which specific issues have not yet become apparent due to uncertainty/ambiguity associated with the topics or areas of S&T. In such cases, it is required to promptly anticipate possible impacts, both positive and negative, and risks of R&D, as well as to seek the possibility of reconciliation with humans/societies, so that appropriate measures can be taken. Examples of this kind include synthetic biology and materials informatics which hold the potential to bring innovation to various areas; human augmentation which enhances human capabilities by technology; neurotechnology, which involves reading and intervening in human emotions; and generative AI, whose use is rapidly expanding. In these exploratory areas of S&T, an approach involving not only discussing these only from the perspective of how people and societies would accept them and adapt/adjust to them, but also deliberating the significance and philosophy of S&T while, given the reality of uncertainty, exploring and assessing with researchers in HSS and various stakeholders what a vision for humans and societies should be, is becoming even more important.

Besides emerging sciences and technologies, there are also existing areas of S&T of which social applications have already been realized, or for which policies have been implemented, that urgently require the consideration of ELSI, in the services resulting from them and the associated ethics, along with the derivation of value which is to be realized. Examples include the use of biometric technologies such as automatic facial recognition and their implications for privacy, the ethics and designing of governance in the application of block-chain technology, the issues of “dual use” in bacterial/viral research and drone technology, gendered innovation, the ethics of applying the concept of nudge in behavioral economics to public policy. These have the possibility of resulting in immense impacts on social institutions, R&D structure, and human behavior, but at the same time, these are also the areas in which innovations based on interaction with societies/people are anticipated to occur, and as such, engaging in these issues with new perspectives is considered important.

Besides, co-creative science, technology and innovation is the very embodiment of collaborative efforts among a true diversity of stakeholders including researchers in natural sciences and HSS, technical developers, and citizens living in society. To move beyond joint research as a mere formality, unidirectional public understanding activities and subservient risk management and compliance, science and technology communication that enables co-creation is important.

With ongoing advancement in communication-related information technology and cognitive

science, we should also consider the streamlining and sophistication of methodologies for “dialogue” and “deliberation.” The communication that occurs amid experimentation in co-creative science, technology and innovation is also likely to contain uniquely Japanese contexts, and here, too, important components of R&D can be found.

■ Learning from Experience and History

Building upon past experience is crucial in addressing the aforementioned perspectives as part of R&D. With regard to the deepening relationships between S&T and humans/societies, so-called trans-science issues (questions that can be asked of, but cannot be answered by science alone) have existed since before the emergence of ELSI and RRI, and been earnestly addressed also in Japan. Typical examples include pollution, chemical terrorism, BSE crisis, the accident at the Fukushima nuclear power stations, and the COVID-19 pandemic and numerous problems associated with it that we are facing at this very moment. These are likely to serve as historically significant turning points for the relationships between S&T, humans and societies.

In addressing ethical, legal and social implications/issues related to emerging sciences and technologies and co-creative science, technology and innovation now and in future, R&D must take a stance of learning from past achievements and problems while also keeping in the mind that the future may far exceed those experiences and predictions.

Emphasizing the above-mentioned points, the Program promotes practical and comprehensive R&D on ELSI/RRI that bring together the knowledge of researchers and stakeholders, targeting universal issues that arise between S&T and humans/societies, as well as issues unique to Japanese society.

The Program aims to build a responsible research and innovation ecosystem in which S&T and humans/societies are in harmony by presenting concrete cases through trials, actively disseminating information domestically and internationally, building functions and mechanisms that will continue after the Program ends, and developing diverse ELSI/RRI human resources.

Chapter 3. Overview of R&D

3.1 The Goal of the Program

The Program aims to realize a society in which science and technology (S&T) in a harmonious relationship with humans and societies can create new value in a sustainable manner, by promoting the development of practical collaborative models to carry out responsible research and innovation while identifying and anticipating ethical, legal and social implications/issues.

3.2 R&D Focus

The Program supports R&D of ELSI/RRI, which aims to create practical collaborative models that contribute to the dissemination and establishment of responsible research and innovation. Specifically, it promotes R&D that engages in “exploration and forecasting” of the society S&T should seek to achieve, and of the new values and changes it brings to people and society, “analysis and evaluation” of the risks/benefits and impacts that arise from this, “design and governance” of R&D from a human, social and ethical perspective, and “advancement of science and technology communication” that contributes to the promotion of responsible research and innovation.

The Program addresses the issues unique to Japanese society that arise between S&T and humans/societies, with an emphasis on international deployment and outreach. It is important to consider issues in the context of local characteristics of Japanese society, culture, and history. By contemplating the generality or uniqueness of Japanese contexts/cases, it may become possible to figure out appropriate responses by S&T, humans and societies, or to present new values which can be shared globally. Thus, it seeks to go beyond importing overseas research and case studies or theories.

In R&D projects, importance should be placed on having research concepts based on specific efforts to address ELSI in S&T. In consideration of the current status of R&D for the targeted emerging sciences and technologies, specific challenges should be defined, such as those for which ELSI issues have already emerged and the impact of solutions, although a reactive measure, is significant; those for which ELSI studies should be undertaken prospectively from the early stages of R&D; and those for which ELSI studies are urgently needed for sciences and technologies that have already been implemented in society.

This program also places importance on R&D that may contribute toward strengthening the foundations for ELSI / Responsible Research and Innovation (RRI) practices as well as disseminating and establishing ELSI/RRI activities. This would include, for example, the following: R&D that engages in theory construction by conducting global comparative studies and trend analysis related to the relationship between emerging technologies and society; R&D for discovering human resources and building networks for ELSI/RRI; R&D on ELSI/RRI methodologies and evaluation indexes that can be applied to diverse emerging technologies, etc. These research projects do not necessarily always require a comprehensive team structure or practical RRI initiatives, and may also be comparatively small-sized projects in terms of duration and budget.

Examples of key anticipated outputs are listed below (a, b and c).

a. Creation of tangible measures for ELSI

- The development of tangible solutions that take into account the nature of S&T and related ELSI
 - Analysis and evaluation of risks/benefits and impacts from the perspective of ELSI
 - Implementation of business design that offers new value, and proposals for strategies for intellectual property and standardization
 - Recommendations for the rule-making, including regulations such as laws and ordinances, frameworks such as certification and regularization and economic measures such as insurance and compensation
 - Proposals for design guidelines, boundary conditions and codes of conduct (CoC) for R&D under various social and environmental conditions
 - Proposals for evaluation indicators and principles for risk governance, and guidelines which can serve as a shared understanding.

b. Development of co-creative mechanisms and methodologies

- Development of mechanisms and methodologies for dynamic/organic feedback to the sites of research regarding the impact of S&T on people and society, as well as ethical and legal issues, from the upstream stage of R&D
 - Exploration/forecast/analysis of the vision of society that S&T should aim, the structure of

- problems, issues to be dealt with and stakeholders involved.
- Designing of dialogue and coordination methods for co-creative science, technology and innovation
 - Methods of upstream co-creation with stakeholders, and the function of technology assessment
 - Empirical verification and development for the advancement of function and design in science and technology communication
 - Methodology of translation of knowledge regarding S&T and associated risks among stakeholders in various positions
 - Methodology of dialogue and coordination for establishing constructive discussions and convergence, while taking into account the presence of diverse perspectives
 - Development of systems, tools, evaluation methods and indicators that contribute to the advancement of science and technology communication, with the application of new S&T, such as information and communication technology.

c . Case analysis of trans-science issues and recommendations based on archive for the future society

- Conducting case analysis and discovering past and present problems related to trans-science issues that have been faced by Japan or the world, giving recommendations for the future and disseminating information to the world based on archives.
- * The Program covers issues considered important in terms of the relationship between S&T and humans/societies, which provide a foundation for the engagement in ELSI of S&T and which should be referred to in its development, especially issues with significant social impacts, such as those relating to human life (e.g, issues related to emerging infectious diseases including COVID-19, or the accident at the Fukushima nuclear power stations resulting from the Great East Japan Earthquake).

Regarding “b. Development of co-creative mechanisms and methodologies,” which focuses on co-creative science, technology and innovation, and development of methodology, it is expected to be pursued in combination with “a. Creation of tangible measures for ELSI,” as it should be conducted based on the characteristics of target S&T/ELSI. Also, we welcome proposals which challenge “c. Case analysis of trans-science issues and recommendations based on archive for the future society”

as these should provide a firm foundation for R&D in ELSI.

There of course would be plenty of proposals for outputs not listed here, which should depend on the research themes. Applicants are also welcomed to make suggestions flexibly regarding the duration of R&D, the budget size, and project structure, according with R&D items listed in a, b and c.

3.3 Notes on the R&D Implementation Structure and Approach

- Domestic universities, research institutes, public interest corporations, private companies, NPOs, NGOs, administrative agencies and other entities that can be entrusted with research by JST as an organization will collaborate to conduct R&D.
- In conducting R&D, the basic principle is to work in specific partnerships and collaborations with R&D practitioners, stakeholders and communities that share the same awareness of issues and challenges, including researchers in humanities and social sciences, natural sciences, and engineering, corporations, NPOs and NGOs, media, URAs, communicators, legal professionals, administrative organs and local communities. In the past, pioneering R&D and initiatives related to ELSI and RRI have been conducted mainly in the HSS. We expect that the proposals not only take the application of this expertise and the uses of those personnel as a basis, but also attempt to cooperate and connect with the sites of R&D in natural sciences and industry.
- here is not necessarily a general rule that sites, stakeholders, and communities are to engage in initiatives under specific forms of cooperation or collaboration when conducting R&D which contributes to the foundation strengthening and/or promulgation/taking root of the workings of ELSI/RRI. Regardless of whether cooperation or collaboration is involved, superior proposals are adopted.
- The program is not about supporting the R&D of individual technologies themselves, but for research that supports putting them into practice in responsible ways. Accordingly, we welcome proposals that include cooperation and connection with other existing R&D projects and programs currently underway.
- We will consider gender and other diversity perspectives in all aspects of R&D, including research subjects, research methods, prerequisites and design in technological development.
- The Program calls for rapid return and dissemination of results by understanding the changes

and needs of people and society while promoting R&D and taking a business creation perspective.

- When planning and implementing R&D, we place great importance on RRI perspectives. In other words, it is important to incorporate an approach that is anticipatory, reflective, deliberative, inclusive and responsive.
- The Program aims to produce human resources with a deep understanding of ELSI/RRI through implementation of R&D activities and the ability to apply this understanding in practical R&D activities. Specifically, we will develop human resources who, while specializing in the humanities, social sciences, or particular S&T fields, are able to work or be involved in ELSI/RRI across multiple S&T fields and topics without being confined to conventional disciplinary frameworks. Therefore, the Project welcomes the participation and recruitment of young people in their 20s to 40s. When employing young researchers in the Project, the Principal Investigator will be asked to provide a plan for their development (e.g., what skills and abilities they will need, devices from which they can gain experience, and anticipated places where the skills and abilities acquired through the Program can be used on an ongoing basis)

3.4 Management of the Program

JST RISTEX will operate the Program using the following structures and methods.

- A Program Supervisor is put in charge of operating the Program and provides overall management.
- Program Advisors are appointed to give specialist advice to the Program Supervisor.
- In addition, program implementation committee members and evaluation committee members are appointed to seek opinions from external experts in specialized areas necessary for the implementation and evaluation of the R&D.
- Together, the Program Supervisor, Program Advisors, program implementation committee members and the secretariat conduct the call for projects and its selections, taking the necessary actions for effective program management (e.g., running program meetings, advising on R&D, conducting site visits, etc.).
- The Program Supervisor will conduct reviews as necessary, including the adjustment of R&D budgets and the restructuring and consolidation of Projects.
- 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.

- We will actively conduct various activities to promote exchange, cooperation and interaction among the Projects selected and set up opportunities for discussion with internal and external parties with cross-sectional and holistic perspectives 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.).

In addition, the Program plans to implement the following activities.

■ Networking activities for team building

The Program envisages the implementation of Projects by “teams” which aim for co-creation between researchers in S&T and HSS, as well as diverse stakeholders from society, from the beginning of the R&D. However, we know that it is not always easy for people from different sectors and areas of expertise to come together on a daily basis to form a team for an R&D project.

Throughout the year, with the cooperation of institutions inside and outside JST, the Program will conduct activities to identify potential candidates and participants from a wide range of sectors and fields, and continue to plan networking events such as open forums for meeting others.

In addition, if the intervention by the Program or JST can contribute to the increasing possibility of cooperation and collaboration with researchers and stakeholders inside and outside the Program and the strengthening of the team structure, we will conduct active networking and its support.

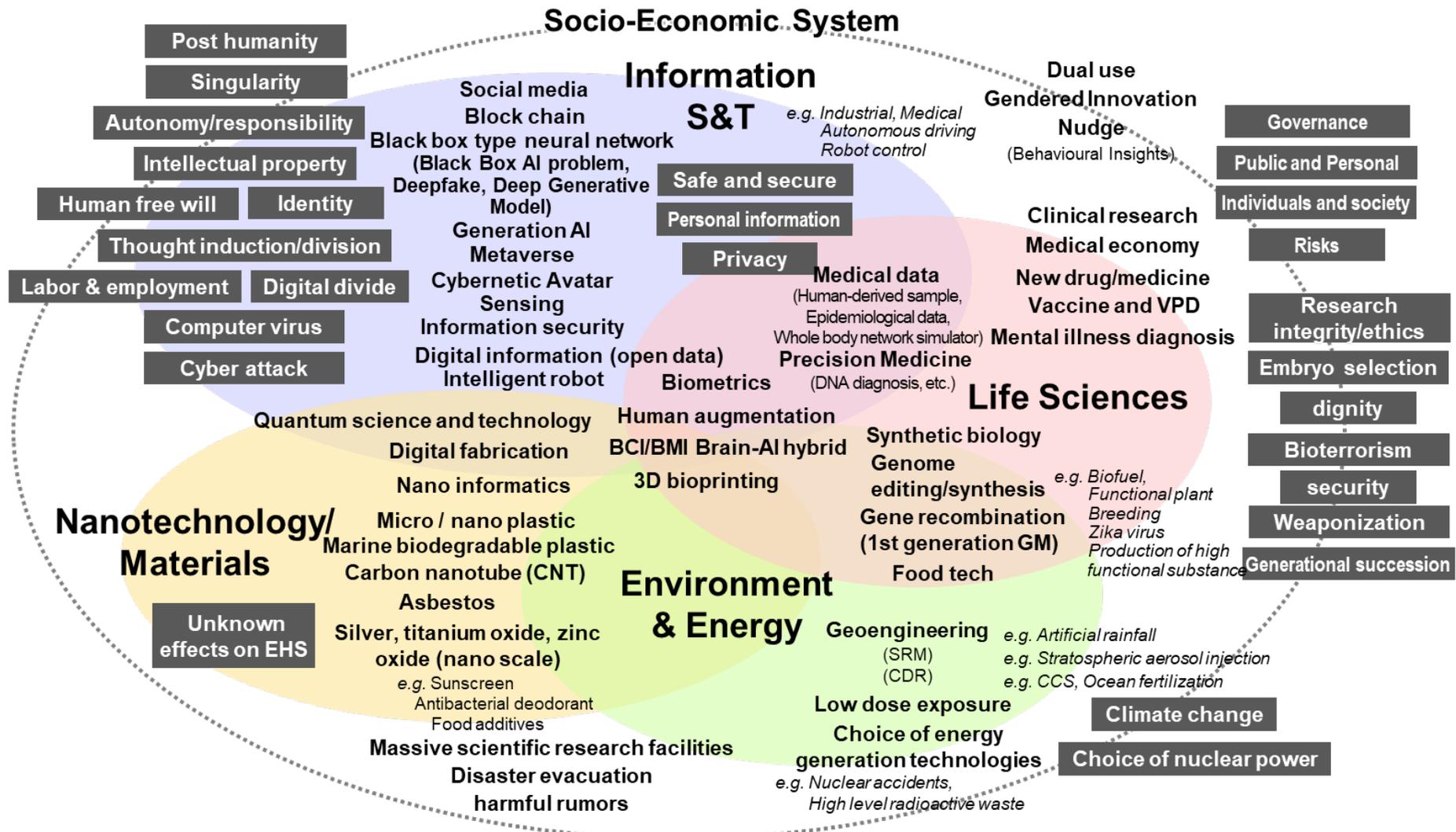
■ Engaging in discourse on the question regarding the fundamental values of life, people and society

In promoting R&D, we ask that the diverse members who participate in each project, including researchers from the humanities, social sciences, natural sciences, and engineering, as well as technology developers and social stakeholders, explore “common issues related to the fundamental values of life, people, and society” (points at issue), and hold continuous discussion. In this discussion, it will be necessary to “verbalize” and “represent” the challenges involved in ELSI/RRI and the responses to such challenges through the examination of how to formulate R&D questions from the perspective of examining various concepts related to “the greater good for

people and society,” and through activities to critically evaluate the significance of practices and results. In the Program, we support and aggressively promote this activity, which we call “engagement in discourse.”

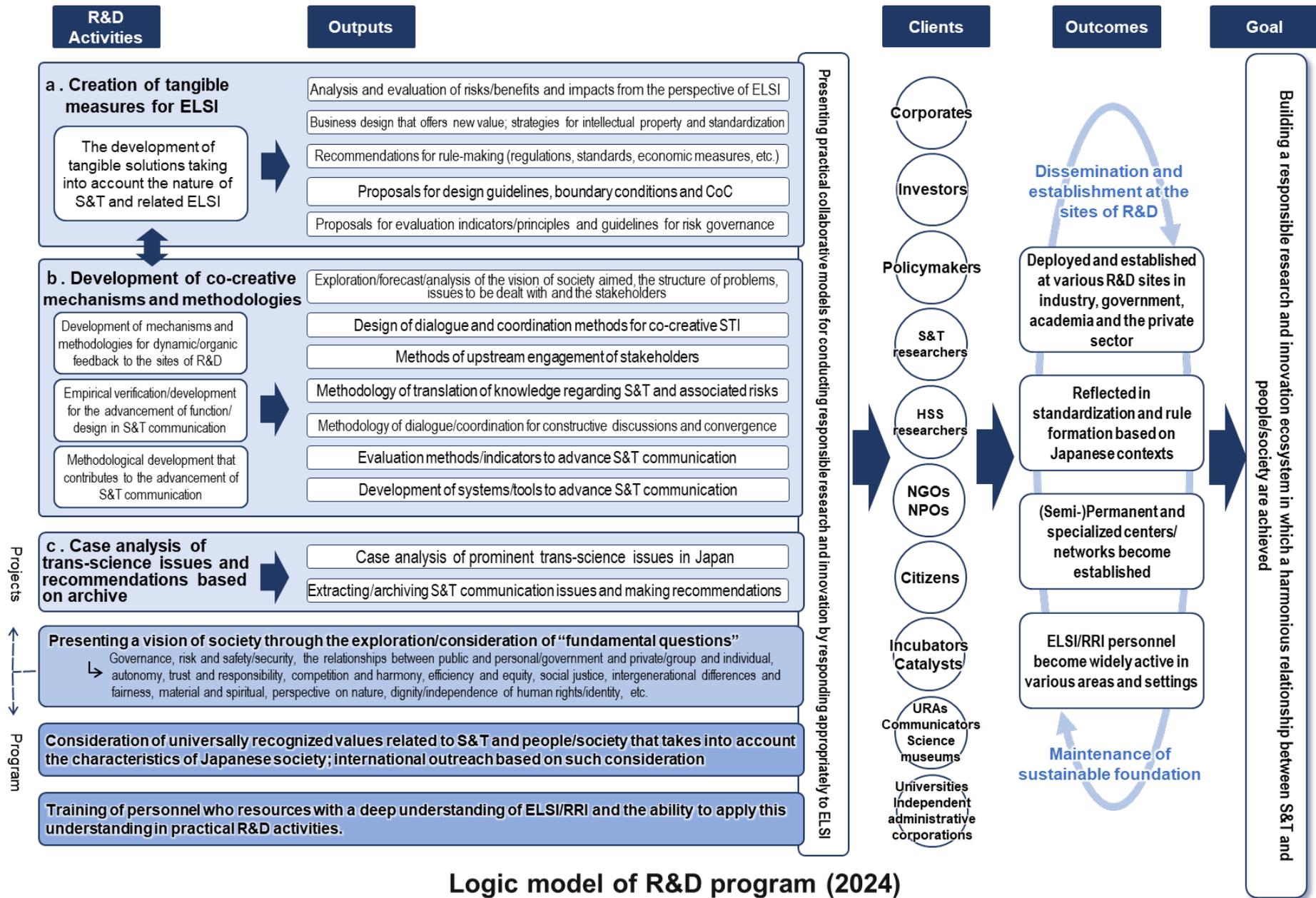
The engagement in discourse can be considered as a challenge to set the crucial “questions,” and to verbalize the vast thoughts and ideas put into answering them. These are the questions which would lead the engagement in ELSI/RRI to the realization of society truly valuable for humanity, such as whether the society aimed by the target S&T is unequivocally ideal, how we should judge the values S&T is about to generate, and where the responsibility lies for problems surrounding S&T.

This Program positions the engagement in discourse as the foundation for the overall conceptual structure of the Program, and thus, it encourages discussions across Projects. To promote such attempts, we will actively set up necessary activities and opportunities as well as disseminate information within Japan and overseas, as the Program’s own activities



* Prepared based on JST-CRDS research reports (CRDS-FY2019-RR-04, CRDS-FY2021-RR-07) etc. (March 2024 Revision)

Characteristic emerging technologies in each field and keywords example regarding Ethical, Legal and Social Implications/Issues



Chapter 4. Call for Proposals and Selection

4.1 Call Period and Selection Schedule

The main schedule for call for proposals and selection is as follows.

Applications will be made through the Cross-ministerial R&D Management System (e-Rad) (Please refer to “4.5 Application Method.” Applications by paper, postal mail, express parcel delivery and/or email will not be accepted). 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 title and affiliation of the applicant in e-Rad should match that provided in the R&D proposal. Please note that the application of a R&D proposal uploaded to e-Rad will not be accepted if it contains defects making the review of the proposal difficult. “A defect making the review of the proposal difficult” refers to omission of proposal application forms, 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 R&D proposal that may occur before the submission deadline, regardless of whether the proposal was received or not. Therefore, all R&D proposal applicants must understand that JST will not modify the R&D proposals with prior confirmation from the applicants or request the applicant to make any revisions to their R&D proposals before the R&D proposal submission deadline.

Call begins	Wednesday, April 10 , 2024
Briefings of solicitation	Thursday, April 25, 2024 Conducted online (registration required) Details will be posted on the proposal application website as soon as decided. (https://www.jst.go.jp/ristex/proposal/proposal_2024.html)
Deadline for submitting application*	12:00(Noon , Japan time) on Wednesday, June 5 , 2024 (No delays accepted)
Document screening period	June to July 2024 (planned)
Notification of document screening results	Notice will be provided at least one weeks prior to interview screening (planned)

Interview screening	Monday, August 5 and Tuesday , August 6 ,2024 Conducted online
Candidates interview with the Program Supervisor	Monday, August 19 ,and Tuesday , August 20 ,2024 Conducted online
Notification and announcement of selection results	Early-October, 2024 (planned)
Start of R&D	Early-October, 2024 (planned)

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

4.2 R&D Period and R&D Budget

In this program, R&D budgets and periods will be flexibly set according to the particulars of proposals from the perspective of flexible and dynamic funding according to the characteristics of R&D topics, social needs and other factors.

In order to achieve this, in addition to the usual R&D Projects, Feasibility Studies framework is also established to undertake, for example, (1) enhancement of R&D plans by intensively studying the details of ELSI to be addressed and clarifying the issues, and (2) building comprehensive R&D implementation structures by searching for and collaborating with the necessary research fields and stakeholders.

■ R&D Projects

- R&D Period: 1–3 years and 6 months*¹
- R&D Budget: Approx. 6-12 million yen/year (direct costs) *²

*¹ The R&D period is set from 12 months (until Sept. 2024) to 42 months (until Mar. 2027).

*² Applicants are welcomed to make suggestions flexibly regarding the duration of R&D, the budget size, and project structure, according with R&D items.

■ Feasibility Studies*

- Feasibility Studies period: 6 months (in one fiscal year)
- Feasibility Studies budget: 1.5-3 million yen/6 months (direct costs)*¹

A feasibility study is not for the purpose of conducting independent examination/research activities. A feasibility study is expected to lead to proposing and implementing R&D projects for this program, and is therefore a framework intended for engaging in activities that are required

to enable conducting such R&D projects in the future, such as examining theories in order to design the R&D and working on supplementing the implementation structure. Thus, as a rule, those who conduct a feasibility study must apply for this program in the next application period. At that time, the selection process will take place in the same manner as for other applications, with no priority status given.

*¹ Applicants are welcomed to make suggestions flexibly regarding the duration of R&D, the budget size, and project structure, according with R&D items.

As per the Collaborative Research Agreement, JST will pay the institution implementing the project for all R&D budget (direct costs) and indirect costs (in principle, 30% of direct costs).–

We may make adjustments according to management by the Program Supervisor when determining the R&D fund to be allocated. For details, please refer to “5.5 R&D Budget.”

4.3 Number of Projects to be Selected

R&D Projects: Approx. 3 projects

Feasibility Studies: Approx. 3 projects

4.4 Requirements for Application

Principal Investigators must have completed the educational program for 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 for Research Integrity” and “Chapter 8. Q&A on Call for R&D Proposals.”

Proposers, who will serve as Principal Investigator, 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.”

4.4.1 Multiple Applications

- (1) One person may only submit one proposal as Principal Investigator for one project only.
- (2) Multiple applications will not be permitted for those applying to the FY2024 call for R&D proposals for “Solution-Driven Co-creative R&D Program (SOLVE) for SDGs (scenario-creation phase, solution-creation phase)”, “SOLVE for SDGs: Social Isolation & Loneliness”, “Solution-Driven Co-creative R&D Program for SDGs: Trust Formation from Social Aspects in the Information Society.”
- (3) Current Principal Investigators of the RISTEX R&D Programs cannot submit proposals (excluding cases where the R&D implementation period ends during FY2024).

4.4.2 Requirements for Proposers

- a. The applicant must be able to head up the researchers and exhibit leadership in implementing the project in order to realize the concept.
- b. The applicant who will serve as Principal Investigator must belong to a domestic Japanese research institute and be able to organize and implement R&D at that institution.
Furthermore, persons who correspond to the following can also apply as applicants.
 - 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 research 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 research as a researcher affiliated with a domestic Japanese research institution.

*Domestic Japanese research institution indicates universities, national R&D corporations, specified non-profit corporations, public interest corporation, companies, and local governments, etc. that have legal personality in Japan. However, the prescribed conditions

must be satisfied. For details, please refer to “5.8 Responsibilities of Institutions.”

*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 R&D project. For details, please refer to “5.7 Responsibilities of Principal Investigator_and Lead Joint Researchers.” For example, during the R&D 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, please refer to “6.1 Enrolling in and Completing the Educational Program for Research Integrity.”

e. The applicant must make the following four pledges upon submission 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)” (decided by the Minister of Education, Culture, Sports, Science and Technology on February 15, 2007; revised on February 1, 2021).
- If the R&D 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 applicant must not have engaged in misconduct in the past to achieve the research results that are mentioned in the submitted R&D proposal.

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

4.4.3 Requirements for Research Institutions

In principle, only Japanese research institutions can promote R&D in this program (can enter into

the Collaborative Research Agreement). However, it does not matter if this entity is a private company, one of various organizations, an NPO, a university, a research institution or otherwise. Please also refer to “5.9 When a Person Belonging to an Overseas Institution Participates as the Lead Joint Researcher.”

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 “5.8 Responsibilities of Research Institutions” 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 follow the consignment method designated by 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 the Proposer 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.

4.5 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. Submission via the Cross-ministerial R&D Management System (e-Rad).”

(1) Registration of institution and Principal Investigator

The applicant must obtain an e-Rad log-in ID and password (Principal Investigator only). When

newly obtaining an e-Rad log-in ID and password, the institution the applicant 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 applicant must be registered in “Researcher Information”

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

Once registration is complete, the applicant 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 applicant does not need to register again. Institutions and applicants who have never submitted a proposal for competitive research 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/en/>) or this program’s proposal application website (https://www.jst.go.jp/ristex/proposal/proposal_2024.html) and complete the proposal document based on the explanation found in “Chapter 9 Guide to 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.

4.6 Selection Method

4.6.1 Selection Process

Selection will be determined comprehensively based upon “4.7 Main Perspectives for Selection” following a review of proposal documents and interview of applicants that passed the document selection process.

- (1) After the document screening, the Proposers selected for interviews will be notified in writing and will also be informed of the interview procedures, schedule, and additional materials to be submitted. During the interview, the Proposer him/herself will be asked to explain the concept of his/her project specifically.
- (2) The results of the document screening and interview screening will be notified to the Proposer (Principal Investigator) regardless of whether the proposal is accepted.
- (3) For the selection schedule, please refer to “4.1 Call Period and Selection Schedule.” Details and changes in the plan will be posted on the program's call for R&D proposals website. (https://www.jst.go.jp/ristex/proposal/proposal_2024.html)
- (4) In addition to the above, please make sure that your e-mail address and phone number registered in the e-Rad are available for receiving and replying.

4.6.2 Selection System and Management of Conflicts of Interest

Selection will involve Program Supervisor with the cooperation of the 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 during 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 the applicant has any concern about conflicts of interest between the applicant and persons and parties involved in the selection process of the R&D proposal, the applicant should describe it specifically in the application form “8. Management of conflicts of interest.”

- a. Persons, who are relatives of the Proposers
- b. Persons affiliated with the same faculty or department of a university or other research institutions as the Proposer, or directors of the university, etc., to which the person subject to evaluation belongs or of the legal entity that administers the university, and those deemed to be involved in its administration, and persons acting externally on behalf of such an entity.
- c. Persons who are affiliated with the same company as the Proposer or persons who are affiliated with the parent company of the company to which the person subject to evaluation

belongs.

- d. Persons, who are conducting a close collaboration in a research work with the Proposers. (For example, persons who are recognized as those practically affiliated with a research group with which the Proposers is affiliated, such as those who are conducting a joint research project or have co-authored a paper with the Proposers, researchers pursuing the same research objectives as the Proposers, or a researchers in the Proposer's project.)
- e. Persons in a close teacher-student relationship, or in a direct employer-employee relationship
- f. Persons in relationships of direct competition with the Proposers
- g. Persons in other relationships judged by JST to represent conflicts of interest with the 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 Joint 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 Investigator 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 R&D proposal in which a researcher who belongs to the related organization of the Principal Investigator, is assigned as a Lead Joint Researcher, it will be strictly judged from the viewpoint of requirement, rationality, and relevance.

In this case, the applicant must declare that a researcher who belongs to the related organization of the Principal Investigator, is included as a Lead Joint Researcher in the application form “8. Management of conflicts of interest.”

Furthermore, additional documents may be requested in order to judge conflicts of interest with the Principal Investigator.

(3) Management of conflicts of interest related to 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 clarifies it to avoid the conflict of interests between JST and the invested companies.

With respect to the proposals made by a researcher who belongs to an invested company of JST, 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 I application form “8. Management of conflicts of interest” to declare that an invested company is included in institution.

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/en/result.html>).

4.7 Main Perspectives for Selection

When submitting a proposal, the proposal may be submitted as an R&D project or a feasibility study.

Proposals submitted as R&D projects, but that are determined to require further development of the R&D concept by the Program Supervisor may be screened as proposals for feasibility studies.

When selecting proposals, decisions are made following comprehensive investigations in accordance with the proposed budget size while emphasizing the following points, and the accepted proposals are selected. When submitting a proposal, be sure to refer to “Chapter 2. Philosophy on Program Supervision in Solicitation and Selection” and “Chapter 3. Overview of R&D Program.”

< R&D Projects >

- ① The objectives of the proposed R&D project are in agreement with the objectives of the Program and specific issue or area of S&T has been set as the subject of R&D.
- ② The significance of the proposed R&D is logically expressed and there is a clear vision for contributing to the dissemination and establishment of responsible research and innovation which is to be achieved after the R&D.
- ③ The originality of the proposed R&D (the focus of the R&D or the setting of the issue, the implementation structure, innovations in R&D management, etc.) is clearly expressed and is challenging in light of trends in relevant R&D and initiatives in Japan and overseas.
- ④ The results of the proposed R&D are expected to have an impact (creation of academic /public value, contribution to current or future social or industrial needs, transmission and expansion to other disciplines/areas in Japan and overseas, etc.).
- ⑤ Issues, hurdles and difficulties relating to conducting and implementing the proposed R&D are anticipated and specific countermeasures have been investigated.
- ⑥ Through realistic collaboration/cooperation with the sites of R&D and stakeholders that share an understanding of the problems and issues, the structures necessary for implementation of the R&D have already been established or there are specific concepts and plans for implementation structures to be established (including reinforcement during the R&D period).
- ⑦ The plans for the proposed R&D (size of budget, period, milestone setting, etc.) is appropriate.

In addition, the following points are subject to assessment as additional elements.

- The detailed description of practical and challenging collaboration with the sites of R&D in emerging sciences and technologies and stakeholders (proposals that include collaboration and links with other R&D projects or programs related to emerging sciences and technologies that are currently underway are welcomed).
- Specificity of the path to the design and implementation of the outputs to be produced.

- The potential for creating universally recognized value that meets a global standard and the possibility of international deployment, based on the considerations of generality/uniqueness of contexts of Japanese society or Japanese cases.
- Practical setting of skills and abilities believed to be necessary for the personnel that the proposed R&D project seeks to develop and produce and specificity of innovations for such development and production and concepts after completion of the project.

< Feasibility Studies >

- ① The objectives of the R&D planned to be implemented after the proposed feasibility study are in agreement with the objectives of the Program.
- ② The significance of the R&D planned to be implemented after the proposed feasibility study is logically expressed.
- ③ The originality of the R&D idea to be implemented after the proposed planning and investigation and the magnitude of the impact of R&D results must be specifically described, and must be challenging in light of trends in relevant R&D and initiatives in Japan and overseas.
- ④ The issues to be addressed during the period of feasibility study (necessary issues clarifications, specification of R&D plan and future concepts, identification of expected issues and hurdles and investigation of their countermeasures, establishment of necessary implementation structures, etc.) are clear.
- ⑤ The plan for the proposed feasibility study (size of budget, period, etc.) is appropriate.

For Feasibility Studies, too, the points subject to assessment as additional elements mentioned earlier in the section for Projects apply.

4.8 Other Considerations

Proposal documents with defects may not be reviewed by JST.

Whether the R&D budget corresponds 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 guideline and where to submit the proposal

Application guideline and latest information	R&D Program “Responsible Innovation with Conscience and Agility (RInCA)” call for R&D proposals for FY2024 website https://www.jst.go.jp/ristex/proposal/proposal_2024.html
Application guideline and submission of proposals	Cross-ministerial R&D Management System (e-Rad) website https://www.e-rad.go.jp/en/

(2) Inquiries

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) For questions regarding RISTEX in general: E-mail: boshu@jst.go.jp For questions regarding the call for proposals in this Program: E-mail: boshu-elsi@jst.go.jp * Please send your questions by E-mail.
Questions concerning the Cross-ministerial R&D Management System (e-Rad) Registration of institution or researcher, or how to operate e-Rad.	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)

*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.

Chapter 5. Promotion of R&D after Adoption

5.1 Implementation Plan

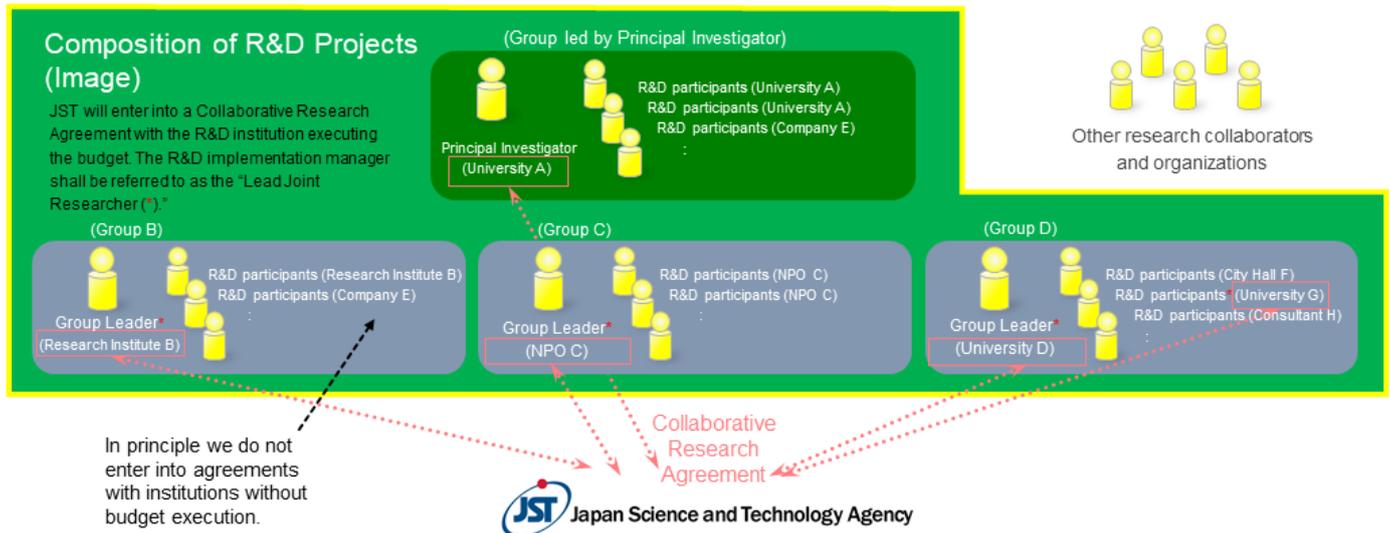
- a. Once a proposal has been selected, the Principal Investigator must prepare an overall R&D plan covering the entire period of the R&D project. The Principal Investigator must also prepare annual R&D plans for each year of the project. R&D plans should contain both budgets and the composition of R&D teams. Proposed R&D budgets are examined during the selection process. Actual R&D budgets will be decided after gaining confirmation and approval by the Program Supervisor in formulating R&D plans.
- b. R&D plans (overall R&D plans and yearly R&D plans) will be decided after gaining approval by the Program Supervisor before going through an approval process. Based upon advice from the 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, in order to achieve the overall aims of this program, etc 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 R&D project period in response to the overall R&D program budget conditions and program 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 10 individuals) in order to construct an ideal organization (group) for the project's implementation. The team 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 and Lead Joint Researcher) 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 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 R& institution that those leading the research (Principal Investigator and Lead Joint Researcher) are affiliated with.
- b. If it is not possible to enter into a Collaborative Research Agreement with the R&A 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 institution in question. For more details, please refer to "5.8 Responsibilities of Institutions."
- 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 R&A 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.
- d. A Collaborative Research Agreement will be signed with foreign research institutions. Intellectual property rights will be shared equally with JST, on the condition that the expenses for purposes

such as application and maintenance are also shared equally. (If an institution does not agree to this condition, all rights will belong to JST.) Inventions, etc. that could be subject to intellectual property rights need to be reported promptly (within 10 business days) to JST. For details such as other responsibilities, refer to “5.9 When a Person Belonging to an Overseas Institution Participates as the Lead Joint Researcher”.

(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 research institution implementing the project for all research costs (direct costs) and indirect costs (in principle, 30% of direct costs). This will be paid as consigned research funds.

5.5.1 R&D Budget (Direct Costs)

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

- a. Commodities: Cost of purchasing new facilities*¹, equipment, consumable supplies, etc.
- b. Travel Expenses: Expenses for travel by the Principal Investigator, Lead Joint Researcher 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: Salaries and honorariums for all researchers*², technicians, research

assistants, etc. (excluding Lead Joint Researchers), directly required to implement the research in question, as well as 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. ^{*2}

Note: The following are examples of items not handled as research costs (direct costs).

- Costs for items not consistent with the research objectives
- Costs that are considered to be more appropriately treated as overhead costs (indirect costs)
- Costs that JST determines are not appropriate when settling consigned research funds.^{*3}

^{*1} The 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>

Please refer to the following URL for the policy on the scope of eligibility, expenditure ceiling, etc. for the RISTEX R&D Programs.

https://www.jst.go.jp/ristex/funding/funding_outline/for_researcher.html

^{*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 Partitioned 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>

Cross-ministerial Expenses Handling Partitioned Table (JST RISTEX R&D Programs)

https://www.jst.go.jp/contract/download/2024/2024_ristex_betten9.pdf

5.5.2 Overhead (Indirect) Costs

Overhead (indirect) costs are costs required for the management, etc. of the 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 October 1, 2021), a policy on use, etc. shall be created and shall be systematically and properly executed 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 R&D 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 R&D expenses are impossible at some institutions due to incompatible administration systems).

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 that support from 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 widely open 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

(1) Evaluation of the Program

- This program will be evaluated after a certain period has passed (interim, post).

(2) Evaluation of Projects, etc.

- A Program Supervisor will select proposals with the cooperation of the Assistant Program Supervisor and Program Advisor.
- 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 R&D have been completed.
- A follow-up survey will be conducted after a certain period following the completion of the R&D.

5.8 Responsibilities of Principal Investigator and Lead Joint Researchers

(1) The Principal Investigator and Lead Joint Researcher 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.

- Comply with application guideline and other requirements.
- 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.
- Ensure that all implementers and other individuals participating in the R&D project are fully informed of the JST designated educational program for research integrity and have enrolled in and completed the program. For details, refer to “6.1 Enrolling in and Completing the Educational Program for Research Integrity”.

Note that failure to complete the educational program for 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 for research integrity.
 - (4) Project progress 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 Joint Researcher 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 meetings to confirm the strategy and progress of the project (under the assumption these will be held during site visits), and respond to evaluations, etc. The Principal Investigator and Lead Joint Researcher 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 institution implementing the project. In the same manner, the Lead Joint Researchers 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 RISTEX R&D Programs 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 RISTEX's "Human Network for Collaboration Between Researchers and Collaborators to Solve Social Problems" 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 R&A 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 R&D program (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

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 R&D 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 the 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 R&D Institutions (Practice Standards)" (decided by the Minister of Education, Culture, Sports, Science and Technology on February 15, 2007; revised on February 1, 2021). 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 (MEXT) , research institutions are also obliged to cooperate with any investigations into the implementation of their system. (See: 6.26(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)”).

https://www.mext.go.jp/a_menu/kansa/houkoku/1343904_21.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. Institutions are also responsible for cooperating with any investigations relating to these systems based on these guidelines. (See: 6.27 (1) Administrative System based on the “Guidelines for Responding to Misconduct in Research”)

https://www.mext.go.jp/b_menu/houdou/26/08/1351568.htm

- d. Research institutions are responsible for ensuring that R&D participants are aware of the content of the guidelines described in b. and c. above 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 institutions 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 reports and 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. Research institutions are required to establish an appropriate management and reporting system.

- 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 in 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 R&D project, measures such as increases or decreases in 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 institution 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 part of its efforts to prevent misconduct in R&D activities, JST requires researchers who will take part in newly approved research projects and are affiliated with their research institution to complete one of the programs or educational materials listed below:

- “eAPRIN” provided by the Association for the Promotion of Research Integrity
- “eL CoRE” provided by Japan Society for the Promotion of Science
- “For the Sound Development of Science -The Attitude of a Conscientious Scientist-” by Japan Society for the Promotion of Science
- “Responsible Research Practices to Learn from Cases - A Casebook to Instill Awareness and Learning” by Japan Agency for Medical Research and Development
- “A Compendium of Near-Miss Incidents Related to Research Integrity” by Japan Agency for Medical Research and Development
- Other research ethics education programs and training deemed equivalent to the above by your affiliated research institution.

(If the research institution deems it equivalent, the video material "Gaps in Ethics" provided by JST is also acceptable.)

If it is difficult for researchers to enroll in an educational program for research integrity at their affiliated organization, for example, if the organization does not have an educational program for research integrity, they can receive the eAPRIN program (e-learning materials operated by the Association for the Promotion of Research Integrity [APRIN]) via JST.

If these individuals fail to complete the program as stipulated despite repeated reminders by JST, JST will 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 Joint Researcher

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 "4.4 Submission Requirements." 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. In principle, research institutions are obliged to enter into a Collaborative Research Agreement with the Collaborative Research Agreement form provided by JST. (Taking into consideration the characteristics of R&D implementation, contract clauses may be subject to change if it is agreed that there is a rational reason to do so.) 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. For other details on conditions, see the latest Collaborative Research Agreement form.

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

5.11 Other Considerations

5.11.1 Systems for Childbirth, Childcare, CareGiving

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" (Amount obtained by multiplying standard sum of 300,000 yen by the 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 (direct costs only) 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 website below for more 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 20,000 pieces of information on human resources from universities, public research organizations, and private business firms, and has more than 140,000 registered users. It is advisable that the JREC-IN Portal is utilized to search for human resources (postdoctoral researchers, researchers, etc) with high levels of knowledge when recruiting for R&D projects.

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

¹ METI has issued the “The End User List” with the aim of strengthening the effectiveness of a catch-all control on goods related to weapons of mass destruction. The list provides information on foreign organizations that have sparked unallayable concern that they may be developing or otherwise handling weapons of mass destruction, etc. <https://www.meti.go.jp/policy/anpo/law05.html#user-list>

Chapter 6. Key Points in Submitting Proposals

6.1 Enrolling in and Completing the Educational Program for Research Integrity

The Principal Investigator must complete the educational program for 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 educational program on research integrity by the time of application is not a prerequisite for those other than the Principal Investigator.)

To enroll in the educational program for 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).”

a. For Proposers who have completed an equivalent program at their institution

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

b. For Proposers who have not completed an equivalent program at their institution (including Proposers at institutions who do not have such a program)

a. Proposers who have in the past completed eAPRIN (ex-CITI Japan) e-learning program in a JST program: Proposers 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 Proposers for whom a. above does not apply: Proposers 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. After enrolling and completing the digest version promptly, Proposers are expected to declare completion in the e-Rad application information input screen.

■Contact for consultation on the educational program for research integrity

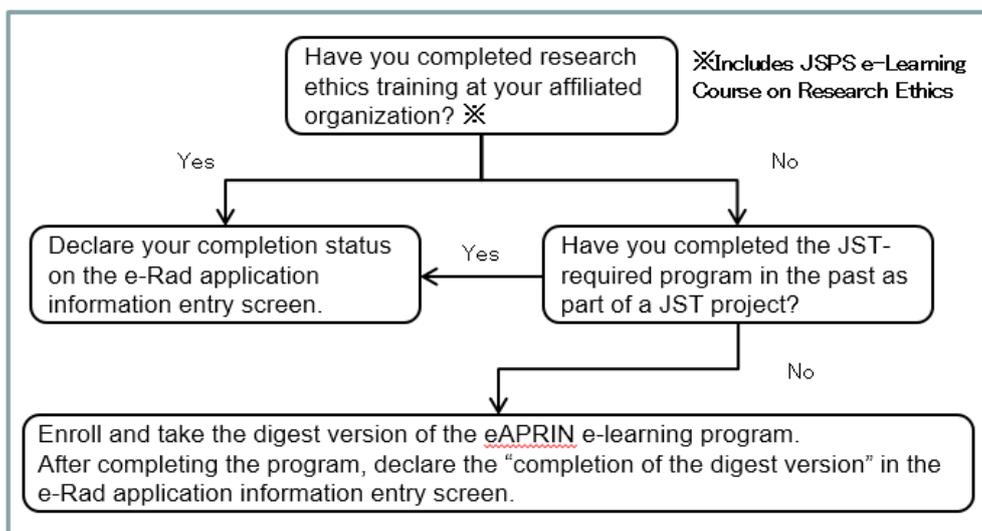
Department of Legal Affairs and Compliance, Japan Science and Technology Agency (JST)
E-mail : rcr-kousyu@jst.go.jp

■Contact for consultation on the call for R&D Proposals

Research Institute of Science and Technology for Society (RISTEX),
Japan Science and Technology Agency (JST)
(For general inquiries) E-mail : boshu@jst.go.jp
(For applications) E-mail : boshu-elsi@jst.go.jp

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

<Flow Chart for Reporting Completion of Education Programs for Research Integrity>



JST requires researchers participating in this program to complete either one of the programs or educational materials listed below:

- “eAPRIN” provided by the Association for the Promotion of Research Integrity
- “eL CoRE” provided by Japan Society for the Promotion of Science
- “For the Sound Development of Science -The Attitude of a Conscientious Scientist-” by Japan Society for the Promotion of Science
- “Responsible Research Practices to Learn from Cases – A Casebook to Instill Awareness and Learning” by Japan Agency for Medical Research and Development
- “A Compendium of Near-Miss Incidents Related to Research Integrity” by Japan Agency for Medical Research and Development
- Other research ethics education programs and training deemed equivalent to the above by your affiliated research institution.

(If the research institution deems it equivalent, the video material “Gaps in Ethics” provided by JST is also acceptable.)

If it is difficult for researchers to enroll in an education program for research integrity at their affiliated organization, for example, if the organization does not provide an education program for research integrity, they can receive the eAPRIN program (e-learning materials operated by the Association for the Promotion of Research Integrity [APRIN]) via JST.

The same measures will be implemented in this fiscal year. Therefore, if accepted, all researchers participating in R&D (including Lead Joint Researchers) are required, in principle, to complete the

research ethics education programs or educational materials designated by JST shown above (except when the researchers have already completed the research ethics education programs or educational materials designated by JST shown above at their affiliated institutions, in JST's projects, and others).

6.2 Measures against Unreasonable Duplication and Excessive Concentration

○Measures against “Unreasonable Duplication”

If a given R&D project by a given researcher (i.e. the name and content of the R&D project are the same, and the R&D project is receiving competitive research funding) is unnecessarily receiving multiple competitive or other research funds (all current research funds for individual research subjects, such as subsidies, grants, joint research funds, contract research funds, etc., including those from overseas *), and any of the following applies, the R&D projects may be rejected, canceled or reduced (hereinafter referred to as “rejection of R&D projects”) depending on the degree in this program.

- In the case that simultaneous proposals have been submitted for multiple competitive research funds or other 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 funds or other research funds.
- In the case that there is an overlap in intended application of research funds or other research funds 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 or other research fund. If a R&D project is selected by another competitive or other research funds, report this promptly to JST at the contact address (boshu-elsi@jst.go.jp). If reporting is omitted, the approval decision for the R&D project may be revoked.

* Excludes basic expenses or internal funds that are allocated within the institution to which the company belongs, commercial activities stipulated by the Commercial Code, and financing through direct or indirect financing.

○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 research or other research fund, 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, in this program, the R&D projects may be rejected in accordance with the degree of the following cases.

- Cases where, in light of the abilities of the Researchers and the research methods, excessive research funds are allotted.
- Cases where, in comparison with the effort (the allocation rate (%)) of the time necessary to carry out the said research activities with respect to the entire working time of researcher) that is being allotted to the research project in question, excessive research funds are allotted.
- Cases where the purchase of unnecessarily expensive equipment is carried out.
- Other cases equivalent to the above

*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.

For this reason, if you submit proposals to other competitive or other research funds, 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-elsi@jst.go.jp). If reporting is omitted, the approval decision for the R&D project may be revoked .

○How to Eliminate Unreasonable Duplication and Excessive Concentration

To eliminate unreasonable duplication and excessive concentration of competitive research funds, ensure transparency in research activities, and ensure appropriate efforts, Proposers shall provide the following information at the time of application.

(i) Information on the current application / acceptance status of other competitive or other research funds including those of other ministries, and all current affiliated institutions / positions.

At the time of application, regarding the Principal Investigator / Lead Joint Researchers, the current application / acceptance status of other competitive and other research funds including

those of other ministries (program name, R&D subject, implementation period, budget amount, effort, etc.) (Hereinafter referred to as “information on research funds”) and information on all current affiliated institutions / positions (including side jobs, participation in foreign recruitment programs, honorary professors without employment contracts, etc.) (hereinafter referred to as “information about your institution / position”) are required to be provided in the application documents and the Cross-ministerial R&D Management System (hereinafter referred to as “e-Rad”). If the application documents or e-Rad contain false statements, the R&D project may be rejected.

Of the information on research expenses, information on joint research with which confidentiality agreements have been signed will be handled as follows in consideration of individual circumstances so that activities such as industry-academia collaboration will not be shrunk.

- Only the information necessary to confirm whether the submitted R&D project does not result in unreasonable duplication or excessive concentration of research funds and can appropriately secure the effort related to the execution of the R&D project (in principle, information of the joint research such as only the name of the partner institution, the amount of research funds accepted, and information related to effort) will be requested.
- However, if it is difficult to submit the name of the partner institution and the amount of research expenses accepted due to unavoidable restrictions such as the confidentiality agreement that has already been concluded, it is possible to submit the application without the information. Even in that case, JST may make inquiries to the institution to which you belong if necessary.
- In addition to the affiliated institution, information may be shared between distribution institutions and related ministries and agencies, but even in that case, it will be shared only by those who have a duty of confidentiality.

When concluding a non-disclosure agreement, etc. in the future, please consider assuming that you may submit only the necessary information when applying for competitive research funds. However, if both contracting parties agree on the scope of information to be kept confidential and its legitimate reason (such as when it is considered to be extremely important in corporate strategy and highly confidential), it is possible to make a contract that does not assume the confidential information will be submitted.

- (ii) Other information necessary to ensure transparency in all research activities in which one is involved. To ensure transparency in all research activities in which you are involved, JST requests

a pledge that we are properly reporting the necessary information on research expenses, affiliated institutions and job titles, and support for facilities and equipment other than donations and funds* to the institution to which you belong based on the relevant regulations. If it is found that an appropriate report has not been made in violation of the pledge, the R&D project may be rejected.

Information on the acceptance status of facilities / equipment, etc. that are not used for the R&D project of the application but are used for the research that is separately engaged does not relate to unreasonable duplication or excessive concentration. However, from the viewpoint of confirming whether an R&D project can be sufficiently carried out or not, in addition to the pledge, JST may ask the affiliated institution to submit the status of grasping and managing the information.

* Includes cases where articles such as research facilities, machines, and equipment are supplied, and services are provided even in the manner of free of charge.

○ **Provision of Information on Proposal Contents to Eliminate Unreasonable Duplications and Excessive Concentration**

In order to eliminate unreasonable duplication and excessive concentration, to the extent necessary, the information of some proposals (or selected projects/programs) may in some cases be provided through e-Rad to other departments in charge of competitive research funds, etc. including those of other government ministries.

6.3 Ensuring Research Integrity against New Risks Associated with Internationalization and Openness of Research Activities

In order to promote the creation of science, 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, it is pointed out that there are new risks associated with the internationalization and openness of research activities which may impair the values that form the basis of the research environment, such as openness and transparency, and there are dangers that researchers unintentionally fall into conflicts of interest and responsibilities. Under these circumstances, building an internationally reliable research environment as Japan is indispensable for promoting necessary international cooperation and exchanges while preserving the values that form the basis of the research environment.

Therefore, in accordance with “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), it is essential to 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.

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 you 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 the ongoing R&D projects 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 program 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 in charge of the competitive research funds or other ministries, who may restrict application and participation of the researchers in their competitive research funding programs.

*1 “Application and participation” refers to proposing, registering for, and/or applying for a new project, newly participating in research as, e.g., a Joint Researcher, and/or participating in an ongoing research project (continuing project) as a Principal Investigator, Joint Researcher, etc.

*2 “Researchers who violate due care” refers 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*3·4	
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 researcher who used a fabrication and other dishonest means to receive a competitive research funds 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	

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

Refers to instances in *1 in the table where the action is considered to have a negligible impact on society and exhibits a low degree of malicious intent, and the amount of inappropriately used research funds is small.

Refers to instances in *2 in the table where the action is considered to have a negligible impact on society and exhibits a low degree of malicious intent.

*4: In principle, the application restriction period will be calculated from the fiscal year following the fiscal year when the unauthorized use is recognized, and the research funds are refunded. 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

Regarding those who are involved in an inappropriate usage of the program's research funds or researchers whose eligibility of application to or participation in this program is restricted among those who failed to fulfill their duty of due care of prudent manager, information of the outline of their misconduct (name of research institution, name of program, fiscal year in which the misconduct took place, details of misconduct, amount of research expenses illegally spent, number of researchers involved in the misconduct and other details) will be disclosed in principle by JST. In principle, the details will also be disclosed 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.

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 Research Fund System

Researchers on whom restriction is imposed for the reason of inappropriate usage of research expenses in another competitive research fund system* including those managed by other ministries are not eligible to apply to or participate in this program while their qualifications are restricted for application in the competitive research fund system.

"Other competitive research fund systems" include those systems that newly start a call for proposals from FY2024 onwards and those that finished in FY2023 and before.

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

6.6 Measures Taken to the Violation of Related Guidelines

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 if the delay of the progress in the project occurs, and it is difficult to conclude within the fiscal year due to unavoidable circumstances such as difficulties to determine in advance the research or study method of the experimental research, restrictions associated with planning, weather-related conditions, limited availability of materials, and others.

6.8 Cross-ministerial Expenses Handling Partitioned Table

The expense items of research costs specific to this Programs are determined on the basis of “Cross-ministerial Expenses Handling Partitioned Table.” As for research expenditure, refer to the “Cross-ministerial Expenses Handling Partitioned Table (JST-RISTEX R&D Programs)” on the following website.

https://www.jst.go.jp/contract/download/2024/2024_ristex_betten9.pdf

Currently, in response to the “6th Science, Technology and Innovation Basic Plan, “Integrated Innovation Strategy 2023” and the “Comprehensive Package for Strengthening Research Capabilities and Supporting Young Researchers,” the system for competitive research funding is being improved. Based on this, this program makes it 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. When spending PI personnel expenses and expenses related to agency work other than research (buyout expenses), please refer to the following necessary requirements and paperwork procedure.

In addition, in line with the “Common Guidelines for the Development of a Competitive Research Funding System from the Perspective of Gender Equality and Human Resource Development” (February 8, 2023, Liaison Conference of Relevant Ministries and Agencies on Competitive Research Funding), this program allows for the allocation of direct expenses to support the development of human resources in science and engineering that will support the next generation.

- “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>

○Measures for RISTEX R&D Programs

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. Exchanges 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 research funds.

- (1) 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 by the end of a fiscal year.

6.11 Indirect Costs

Research institutions receiving indirect costs are required to formulate a policy for the use of these funds under the supervision of the institution representative, to execute systematic and appropriate implementation in accordance with the policy, and to ensure transparency in the use of such costs by providing explanations to researchers or by other means. Research institutions must also appropriately manage indirect costs and retain receipts and other supporting documents that demonstrate the appropriate use of indirect costs for a period of five years from the year following the completion of the project.

Research institutions that have received indirect costs are required to submit an annual report detailing the actual use of these funds through e-Rad by June 30 of the following fiscal year (in cases where a research institution has received two or more competitive research funds, it should report the total of all indirect costs associated with those funds). If you are unsure of how to use e-Rad for reporting purposes, please consult the e-Rad operation manual for guidance (https://www.e-rad.go.jp/manual/for_organ.html)

or FAQ (<https://qa.e-rad.go.jp/>).

According to the revised "Common Guidelines for the Allocation of Indirect Expenses from Competitive Funds" (April 20, 2001 Liaison Conference of Relevant Ministries and Agencies on Competitive Research Funding), only projects funded by grants or management funds from independent management agencies are allowed to use the funds to replace depreciable assets they own, in accordance with accounting standards.

6.12 Promotion on Effective Use of Research 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 "6th Science, Technology and Innovation Basic Plan (Cabinet Decision of March 26, 2021)" and the "Integrated Innovation Strategy 2022" (Cabinet decision on Jun 3, 2022) 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.

In March 2022, MEXT established the "Guidelines for the Sharing and Promotion of Research Equipment and Apparatuses" for purposes such as promotion of strategic establishment, operation and sharing of research equipment and apparatuses by institutes such as universities.

Based on the above, for research facilities/equipment which are purchased by this program, and particularly for large-scale, general purpose items, positive efforts for sharing should be made in accordance with the equipment sharing system at the affiliated institution or organization, including sharing which does not hinder the progress of the project, use of research facilities and equipment purchased with other research funds within the scope of their management conditions of other research funds, and purchase and sharing by combining multiple research funds. In such cases, it is important to be aware that sharing is also possible during the project period and consider further sharing. Among other reasons, this will strengthen research capabilities by facilitating the use of the latest research equipment and apparatuses. Please note that it is necessary to strike a balance between management as shared equipment/facilities and accomplishment of the research purpose of the 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 “New Shared System Introduction Support Program” and the “Core Facility Construction Support Program” in each university.

- “Reforme on the Competitive Research Funds for Sustainable Creation of Research Achievements (Midterm Summary)” (Examination Meeting on the Reform of the Competitive Research Funds, June 24, 2015)
https://www.mext.go.jp/b_menu/shingi/chousa/shinkou/039/gaiyou/1359306.htm
- “6th Science, Technology and Innovation Basic Plan” (Cabinet Decision of March 26, 2021)
<https://www8.cao.go.jp/cstp/kihonkeikaku/6honbun.pdf>
- “Integrated Innovation Strategy 2022” (Jun 3, 2022, Cabinet decision) in Japanese.
https://www8.cao.go.jp/cstp/tougosenryaku/togo2022_honbun.pdf
- Unification of Usage Rule of Competitive Research Funds (amended on May 24, 2023).
https://www8.cao.go.jp/cstp/compefund/toitsu_rule_r50524.pdf
- “The Purchase of Shared Facilities Using Multiple Research Funding Systems (Use of Combined Total)” (Agreement between the institutions allocating funds and the relevant supervising government bodies, September 10, 2020)
https://www.mext.go.jp/content/20200910-mxt_sinkou02-100001873.pdf
- “Guidelines for the Sharing and Promotion of Research Equipment and Apparatuses” (established March 2022)
https://www.mext.go.jp/content/20220329-mxt_kibanen01-000021605_2.pdf
 (Reference: Summary on YouTube) https://youtu.be/x29hH7_uNQo
- Inter-University Network for Common Utilization of Research Equipment
<https://chem-eqnet.ims.ac.jp/>
- New Shared System Introduction Support Program.
<https://www.jst.go.jp/shincho/program/sinkyoyo.html>
- Core Facility Construction Support Program
<https://www.jst.go.jp/shincho/program/corefacility.html>

6.13 Improving the treatment of (latter-stage) doctoral students

The “6th Science, Technology and Innovation Basic Plan” (Cabinet Decision of March 26, 2021) set a numerical target to triple the number of doctoral students who receive the amount equivalent

to living expenses (equivalent to about 30% of students enrolled in the doctoral program receiving the amount equivalent to living expenses), improving 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. In addition, the Basic Plan states that in order to promote the payment of salaries to doctoral students (second semester) at an appropriate level for research assistants (RA) from competitive research funds and joint research funds, the government will formulate rules for the payment of RA expenses relating to employment and remuneration for RAs at each business and university, and implement them sequentially from FY2021, urging the expansion of the employment of doctoral students as RAs and their improved treatments at universities and R&D agencies.

Moreover, in relation to doctoral students (second semester), 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 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 expenses required as direct costs 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 this program, please actively employ doctoral students who are necessary for the execution of your research as RAs, etc., 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 this program, please apply with a financial plan that also takes into account the costs of the above-mentioned doctoral students.

(Notes)

- Under the “6th Science, Technology, and Innovation Basic Plan”, the amount equivalent to living expenses of doctoral students is set as a minimum of 1.8 million yen per year. In addition, in

order for excellent doctoral students to focus on their research without financial concerns, it also states a significant expansion of the number of beneficiaries receiving about 2.4 million yen per year that is equivalent to the stipend paid through the JSPS Research Fellowship for Young Researchers (Doctoral Course Students (DC)) program.

- 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 fund is considered to be around 2,000 yen to 2,500 yen per hour *, taking average amounts of pay into account. ”
- * The standard pay for a specially-appointed assistant professor employed with competitive research funds, etc. is considered to be around 2,000 yen to 2,500 yen per hour in the case of a doctoral student, taking average amounts of pay into account. (Calculated based on the median monthly salary (between 400,000 and 450,000 yen) of specially-appointed assistant professors according to the Survey on Instructor Employment at Research Universities (Preliminary Report) published August 2020 divided by the number of working hours per day (between 7 hours 45 minutes and 8 hours) for actual days worked (between 19 and 20 days), excepting weekends and holidays, and multiplying by 0.8 in light of their status as doctoral students.)
- 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 that 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 “Guidelines for the Employment and Training of Postdoctoral Researchers” (December 3, 2020, Committee on Human Resources, Council for Science and Technology) note that “while many postdoctoral students are employed for less than three years, their employment term must enable them to focus on the same research activities for a reasonable period of time, as an overly short term of employment could impede them from building a career,” and “an employment term of three to five years at each post is ideal in light of the fact that postdoctoral students should ideally proceed

to the next step in the period of three to seven years between the time they have gained postdoctoral experience in one or two locations and their late 30s.

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 these considerations, when hiring young researchers such as specially appointed faculty members and postdoctoral fellows for this program, applicants are advised to check with the staff in charge of the human resources and accounting of your department in ensuring that the length of the researchers' employment term is the same as that of their R&D periods. It is also advised to secure the particular length of their employment term by utilizing indirect expenses of other external funding awards, essential expenses, donations, etc. as far as possible so that their employment term will not be too short.

6.15 Equal Participation of Men and Women and Measures for Promotion of Human Resource Development

The "Science, Technology and Innovation Basic Plan" (approved by the Cabinet on March 26, 2021), "Basic Plan for Gender Equality" (approved by the Cabinet on December 25, 2020) and "Policy Package regarding Education and Human Resource Development toward the Realization of Society 5.0" (approved by the Council for Science, Technology and Innovation on June 2, 2022) aim to foster a research environment that enables both men and women to continue their research activities even in the midst of major life events such as childbirth, childcare, and eldercare responsibilities and to facilitate the appointment of outstanding women researchers as Principal Investigators. In addition, the plans seek to increase the enrollment of women in science and engineering master's and doctoral programs by promoting the attractiveness of these fields to female junior and senior high school students, as well as their guardians and teaching staff. This initiative

aims to address the existing disparity in women's participation in Ph.D. natural science programs and to expand the pool of potential knowledge holders in Japan.

Moreover, failure to take gender differences into account in the R&D process, which must take such considerations into account, could have inappropriate consequences in the societal implementation phase. Therefore, it is imperative to conduct research and technological development efforts that take appropriate account of gender differences, including differences in physique, body structure and function.

Building on the above, this program will also prioritize initiatives aimed at fostering the engagement of women researchers and broadening the talent pool of individuals ready to lead future endeavors in science and technology.

- Research and development that could have inappropriate consequences in the societal implementation phase if conducted without appropriate consideration of gender differences, including differences in physique, body structure and function, should be conducted with such differences in mind.
- The costs associated with online courses and visiting lectures on subjects such as science, physics, and chemistry taught by Ph.D.s in science and mathematics to elementary, middle, and high school students may be paid out from direct expenses.
- Costs associated with disseminating research findings in formats accessible to middle and high school students, such as through social media, may be paid out from direct expenses.

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

With regard to young researchers employed in this program, 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 Relevant Ministries 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 this program 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.

- “Implementation Guidelines for Self-motivated Research Activities by Young Researchers Employed with Competitive Research Funds” “Liaison Conference of Relevant Ministries and Agencies on Competitive Research Funds” (revised on December 18, 2020)
<https://www8.cao.go.jp/cstp/compefund/jisshishishin.pdf>

- Please refer to the following URL for the policy on the scope of eligibility, etc. for the RISTEX R&D Programs

https://www.jst.go.jp/ristex/funding/files/senjukanwa_houshin.pdf

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

The “6th Science, Technology and Innovation Basic Plan” (Cabinet decision of March 26, 2021) sets targets regarding the “environments that provide excellent young researchers with prospects for activities in various fields, including academia, industry and government”. 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 proposals and young researchers such as specially-appointed researchers and postdoctoral researchers are to be employed with public research funds (competitive or other 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.

6.18 Securing management personnel of URA, etc.

In the “6th Science, Technology, and Innovation Basic Plan” (Cabinet decision of March 26, 2021), the importance of efforts to ensure professional quality and improve treatment has been pointed out for making URA and other management personnel to be attractive positions. In addition, the need of establishing career paths for management personnel, URA and engineers, etc.

Based on the above, when management personnel employed by the research institution, or newly hired URA, etc., is engaged in the management of this research program, the research institutes

should secure a term of office for a certain period as much as possible by utilizing indirect expenses, basic expenses, donations, etc., of other external funds, not limited to this program, so that their employment term will not be too short.

At the same time, as support for securing career paths of the management personnel, please take positive efforts for providing opportunities to participate in URA training, etc. Please consider utilizing indirect costs for such efforts.

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

Many advanced technologies are studied at research 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 research institution is required when a research 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, export controls*¹ 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.

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, permission is required prior to the provision. Provision of technology includes not only providing technical information, such as design drawings, specifications, manuals, samples and prototypes in storage media, such as paper, e-mail, CD, DVD, or USB memory, but also providing work knowledge through technical guidance, training or technical assistance in seminars. In addition, activities such

as hosting foreign students and engaging in collaborative research may involve significant technology exchanges that fall under the regulatory scope of the Foreign Exchange Law. Please be aware that the export (provision) of technology obtained through this program, or the transfer of technology already owned for use in this program, may also be subject to controls.

The Foreign Exchange Law requires the establishment of a security export control system when exporting List Control goods or providing List Control technology to another country ^{*3}. For this reason, it is necessary to confirm, prior to the conclusion of the contract, whether the project intends to provide, as part of this program, goods or technology subject to export control under the Foreign Exchange Law. If so, it should be checked whether a control system is established or not at its research institution via e-Rad. If the project intends to provide such goods/technology and its research institution does not have a control system in place, the research institution is required to establish such a system prior to the provision of such goods/technology or prior to the completion of the project, whichever is earlier. It is required to report on the status of the confirmation if requested by METI. In addition, if it is found that the technology acquired through the project violates the regulations related to the Foreign Exchange Law, the contract may be canceled in whole or in part.

^{*1} Currently, based on international agreements, etc., Japan enforces two types of security export control: (1) a system that requires approval from the Minister of Economy, Trade and Industry for the export (provision) of goods (technology) that exceeds certain specifications and functionalities, such as carbon fiber and numerically controlled machine tools (List Control); (2) a system that requires approval from the Minister of Economy, Trade and Industry for the export (provision) of goods (technology) that do not fall under the List Control and meet certain requirements (application requirements, consumer requirements, or informed condition) (Catch-All Control).

^{*2} Refers to the types of residents who are strongly influenced by non-residents, which are specified in 1.(3)サ①～③ of “transactions or acts providing technology that requires permission based on the regulations of Foreign Exchange and Foreign Trade Law, Article 25, Paragraph 1, and the Foreign Exchange Order, Article 17, Paragraph 2.”

^{*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 refers to the internal control system of an organization to prevent illegal exports by appropriately exporting list-regulated cargo or providing list-regulated technology to foreign countries.

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

• METI: Security Trade Management (general)

<https://www.meti.go.jp/policy/anpo/>, etc. See below for details.

- Security Export Control Handbook by METI
<https://www.meti.go.jp/policy/anpo/seminer/shiryo/handbook.pdf>
- METI: Guidance on sensitive technology management related to security trade (for universities/research institutions):
https://www.meti.go.jp/policy/anpo/law_document/tutatu/t07sonota/t07sonota_jishukanri03.pdf
- Center for Information on Security Trade Control
<https://www.cistec.or.jp/export/jisyukanri/modelcp/modelcp.html>
- Transactions or acts involving the provision of technology that requires permission based on the regulations of Foreign Exchange and Foreign Trade Law, Article 25, Paragraph 1, and the Foreign Exchange Order, Article 17, Paragraph 2
https://www.meti.go.jp/policy/anpo/law_document/tutatu/t10kaisei/ekimu__tutatu.pdf

6.20 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 November 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>

6.21 Dialogue and Collaboration with Public Stakeholders

“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) states that, in order to constantly achieve the excellent results of science and technology and 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. If your project is selected for this open call, we request that you actively engage in “scientific and technical dialogue with the people” such as public lectures on research results, symposiums, continuous distribution of research results on the Internet, and round table conferences that involve various stakeholders.

- Promotion of “Science and 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” (Cabinet decision of 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 – The National Museum of Emerging Science and Innovation

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

6.22 Research Data Management

In April 2017, JST announced the basic policy regarding the handling of research results for the promotion of open science. This was amended in April 2022. 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 program.

As a general rule, researchers participating in this program are requested to publish their research papers through institutional repositories and open-access publications. In particular, a peer reviewed research paper should in principle be published within 12 months. 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, 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. In addition, the project is required to create metadata *, according to the rules set by JST, on the controlled research data listed in the Data Management Plan, etc. The project is requested to appropriately deposit controlled research data with metadata in an institutional repository designed by the respective research institution, NII Research Data Cloud operated by National Institute of Informatics, or other sources.

Refer to the following for more details.

- JST's Basic Policy Regarding the Handling of Research Results for the Open Science Promotion
<https://www.jst.go.jp/all/about/houshin.html#houshin04> (Japanese version only)
- JST's Basic Policy Operational Guidelines Regarding the Handling of Research Results for the Open Science Promotion
https://www.jst.go.jp/pr/intro/openscience/guideline_openscience_r4.pdf
 (Japanese version only)

* The items to be noted in the Data Management Plan and metadata items are shown in the above guideline.

- Management and Use of Research Data Using Public Funds (Cabinet Office)
<https://www8.cao.go.jp/cstp/kenkyudx.html>
 - Basic Idea of the Management and Use of Research Data Using Public Funds
 (Council for Science, Technology and Innovation)
<https://www8.cao.go.jp/cstp/tyousakai/kokusaiopen/sanko1.pdf>
 - Common metadata items in the “Basic Idea of the Management and Use of Research Data Using Public Funds” (draft) (as of March 31, 2023)
https://www8.cao.go.jp/cstp/common_metadata_elements.pdf

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 in the Data Management Plan, supporting researchers, and reflecting these contents in (revising) the basic policy. JST intends to release analyzed statistical data, but will not release individual personal data or data containing identifiable names.

* For life science data, please refer to “6.22 Data Disclosure from NBDC.”

6.23 Data disclosure from NBDC

The National Bioscience Database Center (NBDC) (<https://biosciencedbc.jp/>) in the JST has carried out the Life Science Database Integration Project by promoting the integrated use of databases in the life sciences field created by various R&D institutions and others.

In “Progress and Future Direction of the Integration of Life Science Database Project” (January 17, 2013), the object projects that receive provision of data and databases are to be expanded, centering on the project promotion division of the NBDC (originally the NBDC as a whole).

Based on these points, program participants are asked to cooperate in disclosure of the following types of data and databases related to the life sciences field that are 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.	Data in the 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	NBDC Human Database	https://humandbs.dbcls.jp/en/

6.24 Description of systematic numbers in the acknowledgments of the papers, etc.

When submitting the research results obtained in this program, please indicate that you have received the grant from this program. In the Acknowledgment of the paper, please include “JST RISTEX Grant Number 10 digit systematic number”. The systematic number of the project consists of “JPMJRS + alphanumeric 4 digits”. The systematic number will be announced at the time of adoption.

The following is an example of the Acknowledgment in the paper.

[English] :

This work was supported by JST RISTEX Japan Grant Number JPMJRSxxxx, Japan.

[Japanese] :

本研究は、JST RISTEX JPMJRSxxxx の支援を受けたものである／です。

* If there are two or more programs related to the paper, please list the program names and systematic numbers.

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

The Ministry of Education, Culture, Sports, Science and Technology (MEXT) established the “Research Support Service Partnership Certification System (A-PRAS)” in FY2019 to improve the research environment for researchers, accelerate the promotion of science and technology and the creation of innovation in Japan, and support the development of various efforts related to research support services. The system accredits 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. Eight services have been certified as of April 2023. Researchers are encouraged to explore the wide range of services offered, including finding collaborators, promoting and commercializing research results, and obtaining research funding and equipment.

The details of each certified service can be viewed on the MEXT website below.

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

6.26 Items Noted Regarding the Reformation of Competitive Research Funds

At the present time, based on “The 6th Science, Technology and Innovation Basic Plan,” “Integrated Innovation Strategy 2022,” and “Comprehensive Package to Strengthen Research Capacity and Support Young Researchers,” the government 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 programs 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 this program and the use of program funds.

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

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

In applying to this funding program and conducting research activities, research institutions must stringently observe the “Guidelines for the Management and Audit of Public Research Funds in R&D

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) finds deficiencies in the organization's system implementation as a result of an examination of system implementation based on the guidelines, the research institution may be subject to measures including a reduction in indirect expenses of the whole competitive research funds, etc. distributed by MEXT and by independent administrative agencies under its jurisdiction.

* Please refer to the following URL for the details of the “Guidelines for the Management and Audit of Public Research Funds in R&D Institutions (Practice Standards).”

https://www.mext.go.jp/a_menu/kansa/houkoku/1343904_21.htm

(2) Response to and 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 program, the research organization must establish a management and auditing system for research expenses based on said guidelines and respond/submit the “Self-evaluation Checklist for Implementation of Proper Systems” (hereinafter, “Checklist”), which is a report on the situation (research undertaking will not be approved unless the checklist is responded/submitted).

After April 1, 2024, institutions are urged to review the information provided on the MEXT website listed below and respond to and submit the Checklist according to the instructions provided on the website prior to concluding a collaborative research agreement.

Contracts will be approved for research institutions that have already submitted the FY2023 Checklist regardless of the above. Your organization is requested to complete and submit the FY2024 Checklist procedures by December 1, 2024, if it falls into this category.

The response and submission process must continue throughout the period in which competitive research funding or similar support from JST is received and administered.

On the other hand, institutions that do not receive competitive funding from MEXT or administrative agencies under its jurisdiction are not required to submit or respond to a Checklist.

For more information on this matter, including the above, please refer to the MEXT website shown below.

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

As these guidelines incorporate the concept of "encouraging the dissemination and exchange of information," research institutions are invited to actively disseminate information about misconduct prevention measures, for example, by posting such information on their websites.

6.28 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 MEXT, 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 for the pertinent organization including reduction of indirect expenses of the whole competitive research funds distributed by the MEXT and independent administrative agencies under its jurisdiction.

* Refer to the following webpage for the guideline.

https://www.mext.go.jp/b_menu/houdou/26/08/1351568.htm

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

Each research institution needs to submit the checklist on the status of implementation in accordance with “Guidelines for Responding to Misconduct in Research” (hereinafter referred to as the “Research Misconduct Checklist”). (The R&D institution that fails to submit the checklist cannot conduct R&D activities).

Accordingly, after April 1, 2024, research institutions are requested to review the content of the website below, download the FY2024 version of the Research Misconduct Checklist from e-Rad, complete it, and submit (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 FY2023 version of the Research Misconduct Checklist will be approved irrespective of the above, but you must also submit the FY2024 version of the checklist by September 30, 2024.

Institutions that do not receive funding or budgetary measures from MEXT or administrative agencies under its jurisdiction are not required to submit the Research Misconduct Checklist.

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

https://www.mext.go.jp/a_menu/jinzai/fusei/1420301_00005.html

Note1: A perfect environment for using e-Rad is necessary for checklist submission. Note that the registration of an R&D institution for e-Rad requires approximately two weeks. See the URL below in addition to the URL given above for details of the procedure related to the use of e-Rad.

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

Note2: Institutions that conduct research activities with competitive funding or budgetary measures from MEXT or administrative agencies under its jurisdiction are required to submit the Research Misconduct Checklist for the duration of the research activity before September 30 of each fiscal year (or the immediately preceding business day if September 30 falls on a Saturday, Sunday, or holiday).

(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 that a specific misconduct (fabrication, falsification, and plagiarism) is found in the R&D project of this 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 program are imposed upon researchers involved in certain misconduct in research papers or reports of this program 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 distributed by the Ministry of Education, Culture, Sport, Science and Technology (MEXT) and independent administrative agencies under its jurisdiction (referred to as “competitive research fund system related to MEXT” hereinafter) and to pertinent sections of competitive research fund systems distributed by other ministries and their independent administrative agencies (referred to as “competitive research fund systems related to other ministries” hereinafter), which may similarly restrict qualification for application and participation in competitive research fund systems related to MEXT and to other ministries.

* “Application and participation” refers to proposing, registering for, and/or applying for a new project, newly participating in research as, e.g., a Joint Researcher, and/or participating in an ongoing research project (continuing project) as a Principal Investigator, Joint Researcher, etc.

Classification of person ineligible to apply to competitive research funds, being involved in specific research misconduct		Degree of maliciousness in specific research misconduct	Ineligible period of application*
Person who was involved in a research misconduct	1. Especially malicious person, who, from the beginning of research, had an intention to commit a specific research misconduct		10 years
	2. The author of a research paper, which is a product of a research where a specific research misconduct was committed	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.	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.
			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
		The authors of the paper other than those described above.	

	3. Persons who conducted a specific research misconduct other than those of 1 and 2.		2-3 years
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.		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.	2-3 years
		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	1-2 years

* In principle, the application restriction period will be calculated from the fiscal year following the fiscal year when the specific fraudulent activity is determined. 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 Research Fund System and Base Expenses

Qualification is restricted for application to and participation in this program for researchers whose qualification is restricted for application to and participation in other 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 research fund systems related to other ministries during the period the restriction is in effect.

“Competitive research fund systems related to the MEXT, Culture, Sport, Science and Technology” and “competitive research fund systems related to other governmental ministries” include those systems that started a new call for proposals after FY2024 and those that ended in or before FY2023.

(iv) Public Announcement of Misconduct

If misconduct occurs in research activities under this program, JST will, in principle, disclose the details of the project (name of the misconduct case, type of misconduct, project name, outline of misconduct and measures taken by JST). In principle, the details will also be disclosed by MEXT.

The said guidelines state that an research institution shall announce the survey results immediately. Each organization is requested to handle the case accordingly.

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

6.29 Duty to Complete Education on Research Ethics and Compliance

Researchers who participate in the R&D project of this 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 R&D project, the Principle Investigator is required to submit a document to confirm that all researchers participating in the R&D project have received and comprehend the contents of training on research ethics education and compliance education.

6.30 Handling of Information on the e-Rad system

Information on e-Rad about individual projects that have been selected for adoption (name of the program, name of the R&D project, name of the affiliated R&D institution, name of the Principal Investigator, budget amount, implementation period and the summary of the R&D project) is considered “information intended to be made public” under Article 5, Paragraph 1, Item (a) of the “Act on Access to Information Held by Independent Administrative Agencies” (Act No. 140 of 2001). Once the proposal has been accepted, this information will be made available to the public through the JST Project Database (hereinafter, “PDB”, <https://projectdb.jst.go.jp/>), which is administered by JST, as well as through this program’s website and the Integrated Research Proposal Search (GRANTS, <https://grants.jst.go.jp/>), as appropriate. Also, research reports and other documents submitted by researchers that can be made public may be disclosed to the public through the PDB.

6.31 Provision of Information on the e-Rad System to the Cabinet Office

The “6th Science, Technology and Innovation Basic Plan” (Cabinet decision of March 26, 2021) states that EBPM for policy making based on objective evidence will be thoroughly implemented in science, technology and innovation administration. The information registered in the Cross-ministerial Research and Development Management System (e-Rad) is used for appropriate evaluation of R&D with national funds, effective and efficient comprehensive strategy, planning of resource allocation policy, etc.

For this purpose, it is required to enter all updates to information regarding research outputs and accounting of the selected project and any use of indirect expenses related to competitive funding

awards 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.

6.32 Registration of researcher information to “researchmap”

The “researchmap” (<https://researchmap.jp/?lang=en>) is a Japanese database of researcher information with over 300,000 entries. Achievement information can be managed and disclosed here. 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.

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 encouraged to actively register at researchmap.

6.33 Patent Applications by JST

In case an R&D institution does not acquire rights to an invention, JST may acquire those rights in some cases. Therefore, if 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 research 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 research institution and JST.

*** System for Non-Disclosure of Patent Applications**

The purpose of the patent system is to provide patent rights and to conduct uniform public disclosure of inventions for which a patent application has been filed. This is intended to encourage further technological progress and to prevent duplication of R&D efforts. On the other hand, prior to

the implementation of the System for Non-Disclosure of Patent Applications, the Japanese patent system required that the contents of a patent application be disclosed to the public one year and six months after filing, regardless of whether the invention should be kept confidential for security reasons. In many countries, it is common practice to keep patent applications for such inventions closed to the public. Consequently, Japan established the System for Non-Disclosure of Patent Applications under the "Act on the Promotion of Ensuring National Security through Integrated Implementation of Economic Measures" (Law No. 43 of 2022) (hereinafter, "the Economic Security Promotion Act"), which suspends patent disclosure procedures in certain cases to prevent dissemination.

Under the Economic Security Promotion Act, if the description, etc., of a patent application includes an invention that, if made known to the public, would be highly likely to create a situation involving undermining the security of the nation and its citizens through actions taken from the outside, the patent procedures, such as publication of the application, decision of patent grant and decision of refusal, are suspended by a procedure established as "security designation." In addition, during this period, disclosure of the invention's contents, including public disclosure, and use of the invention that could lead to similar results are generally prohibited. Withdrawal by filing a withdrawn patent application is also prohibited. Researchers are requested to comply with national laws, guidelines, and notices including the Economic Security Promotion Act.

The details of the System for Non-Disclosure of Patent Applications can be viewed on the Cabinet Office website. See below for details.

- Cabinet Office: System for Non-Disclosure of Patent Applications

https://www.cao.go.jp/keizai_anzen_hosho/patent.html

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 → Report on research achievements).

* "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 Electronic (Electron).

7.2 e-Rad Usage Notes

Applications for this funding program should be submitted through e-Rad.

To apply, refer to the e-Rad portal site (hereinafter, "the portal site") (<https://www.e-rad.go.jp/>).

*Paper documents are generally not accepted in the various application procedures for use of e-Rad. Please perform the various procedures on the e-Rad portal site.

*Please check the recommended operating environment

(https://www.e-rad.go.jp/operating_environment.html) first.

Additionally, pay particular attention to the following points when applying.

(1) Proposers are required to pre-register information on the R&D institution and its researchers.

*Please refer to "7.5 (1)" for details.

(2) Proposers are required to register information on research integrity in e-Rad in advance. Please

*refer to "7.5 (2)."

(3) Please allow several days (or more) before 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.

(4) 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).

- (5) “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. R&D proposals cannot be “retracted” after the application deadline. 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) Registration of Information on research institution, researcher and research integrity. Researchers without a log-in ID and password must be registered by the administration staff of the R&D institution. For detail, please refer to “7.5 (1), (2).”

↓

- (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 as each Proposal format is different.

↓

- (3) Prepare an 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 Others

- (1) 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.

<p>Questions concerning the Open Call</p> <p>Programs, and procedures for preparation of application documents and submission, etc</p>	<p>Questions are accepted by e-mail.</p> <p>Society Research Institute of Science and Technology for Society (RISTEX),</p> <p>Japan Science and Technology Agency (JST)</p> <p>For general inquiries</p> <p>E-mail : boshu@jst.go.jp</p> <p>For applications to this program:</p> <p>E-mail: boshu-elsi@jst.go.jp</p>
<p>Questions concerning the Cross-ministerial R&D Management System (e-Rad)</p> <p>Registration of institution or research, or how to operate e-Rad, etc.</p>	<p>e-Rad helpdesk</p> <p>Tel: 0570-057-060 (navi dial)</p> <p>Office hours: 9:00-18:00 (Except on Saturdays, Sundays, holidays, and the year-end and new year period.)</p>

- RISTEX “Call for R&D Proposals” website

https://www.jst.go.jp/ristex/proposal/proposal_2024.html

- e-Rad portal website

<https://www.e-rad.go.jp/en/>

(2) 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 Operating instructions and notes

(1) Pre-registration for use of e-Rad

(<https://www.e-rad.go.jp/organ/index.html>) (<https://www.e-rad.go.jp/en/researcher/index.html>)

R&D institutions and their researchers have to be pre-registered on e-Rad by the time of application. Once registration has been completed, subsequent registrations are not required for systems and projects managed by other ministries, agencies, etc. Additionally, R&D institutions and/or researchers who are already registered in a system or project managed by another ministry, agency, etc. do not need to register for e-Rad.

① Registration of an R&D institution

An R&D institution must assign a representative for e-Rad, and this representative must complete the procedure on the “Apply for registration of an R&D institution” page (<https://www.e-rad.go.jp/organ/entry.html>). Registration may take several days. Allow at least two weeks for this procedure.

② Registration of department information, administrator information, work information, and researcher information

The representative logs in to e-Rad using the ID and password they obtained in step ①, registers department information, administrator information, work information, and researcher information, and issues IDs and passwords for administrators and researchers. Lead Joint Researchers other than Principal Investigators do not need to register in order to apply, but will need to obtain an ID by the time their project is adopted.

For details on how to register, refer to “10. Procedure for R&D institutions”, “11. Procedure for administrators at R&D institutions”, and “12. Procedure for researchers” in the manual for representatives of R&D institutions on the portal site (https://www.e-rad.go.jp/manual/for_organ.html) (<https://www.e-rad.go.jp/en/researcher/index.html>).

(2) Registration of research integrity information

***Be sure to register this information if it has not been input since the amendment of e-Rad (March 15, 2022). If it has already been registered, it does not need to be registered again.**

To eliminate unreasonable duplication and excessive concentration of competitive research funds, ensure transparency in research activities, and ensure appropriate efforts, Proposers shall provide information on the current application / acceptance status of other competitive research funds including those of other ministries and other research funds (program name, R&D subject, implementation period, budget amount, effort, etc.) and information on all current affiliated institutions / positions (including side jobs, participation in foreign recruitment programs, honorary professors without employment contracts, etc.) according to the amendment of the “Guidelines on Competitive Research Funds” on December 17, 2021.

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

- Please check these application guidelines thoroughly when creating a proposal document.
 - 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 proposal document needs to be converted to PDF before uploading it to e-Rad. This can be done in the menu displayed after logging in to 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).

For details, please refer to the Call for R&D Proposals in Japanese.

Chapter 8. Q&A on Call for R&D Proposals

■ Enrolling in the Educational Program for Research Integrity

✓ Content of the Educational Program for Research Integrity

Q1. What content must be included in the educational program for research integrity conducted by affiliated institutions?

- A1. 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), 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 educational programs for research integrity. 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.

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

✓ Program completion certification

Q2. Is it necessary to submit documentation certifying completion of an educational program for research integrity?

- A2. No, submission is not necessary at proposal.

✓ Deadline for completing the program

Q3. I cannot complete the educational program for research integrity before the application deadline. Can I complete the program after the deadline?

- A3. Completion of the educational program for research integrity 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”.

✓ Declaration of Completion

Q4. I have 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?

A4. You do not need to complete the program again. Declare the “completion of the digest version” in the e-Rad application information input screen.

✓ Availability of an English Version of the eAPRIN (ex-CITI Japan) Digest Version

Q5. 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?

A5. Please take the English digest version of eAPRIN (ex-CITI Japan).

■Proposal/Application

✓ Proposer Requirements

Q6. Is there an age limit?

A6. There is no specific age limit, but it is necessary that the Principal Investigators (Proposers) be able to create a structure that can perform the research at an organization or the like in Japan and carry out the R&D projects throughout the project period.

✓ Multiple applications

Q7. I previously submitted a proposal for a different JST project. Can I also submit a proposal in this area/program?

A7. Yes, you may submit another proposal. However, Proposers may not submit an application for this program together with 2024 calls for the “Solution-Driven Co-creative R&D Program for SDGs Scenario Creation Phase, Solution Creation Phase”, “SOLVE for SDGs: Social Isolation & Loneliness”, and “SOLVE for SDGs :Trust Formation from Social Aspects in the Information Society.” 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

Q8. Do I need to obtain approval from my affiliated research institution when I apply?

A8. 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 "5.8 Responsibilities of Research Institutions, etc." There is no need to submit an approval letter.

✓ Implementation by Foreign Institutions

Q9. What criteria will be used to determine whether the performance of research would be impractical if not done at a foreign institution?

A9. 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 at a 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.

✓ "Information on Other Supports" of Research Proposal Application

Q10. It says that it includes foreign institutions. What should be specifically described about the research funds that plan to accept or apply for from overseas institutions?

A10. At the time of application, researchers will be asked to fill in a wide range of research expenses that they are applying for and will accept, so competitive funding, subsidies from private foundations, contract research expenses from companies, joint research expenses, etc. Please be sure to fill in all research funds accepted from foreign institutions.

✓ Interview Screening

Q11. If I am not available on the day of the interview screening, can I change the interview screening date?

A11. Please be aware that because the schedule is determined by coordinating the schedules of numerous evaluators, the schedule cannot be re-adjusted.

✓ Basis for cumulated R&D Budget

Q12. Is it necessary to indicate in the proposal the basis for the cumulated R&D budget?

A12.No, it is not necessary. Applicants who are selected for interview screening may be required to prepare supplementary explanatory materials including details of the R&D budget for each institution.

✓ Direct Costs

Q13. After R&D 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)?

A13. 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

Q14. What types of expenditures can indirect costs be used for?

A14.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 Research Fund” (Agreement of the liaison meeting of relevant ministries on competitive research funds, April 20, 2001 and amended on October 1, 2021) 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 researchers 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, Research paper submission fees (paper publication fees).

– 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 R&D environment of researchers who received competitive research 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 operation manual (https://www.e-rad.go.jp/en/manual/for_researcher.html) or the FAQs (<https://qa.e-rad.go.jp/>).

✓ Outsourcing

Q15. Is it possible to subcontract software preparation and other such work to external companies, etc.?

A15.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

Q16. 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?

A16.As long as it is possible to continue research activities unhindered by the change in position, research activities may be continued.

✓ Subcontracting

Q17. Do the Collaborative Research Agreements between JST and the joint researchers’ 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.

A17.In this program, Collaborative Research Agreements are not subcontracts.

JST concludes, on an individual basis, a Collaborative Research Agreement with the institution to which the researcher in charge of budget implementation belongs.

✓ Definitions of and differences between “Lead Joint Researcher” and “Group Leader”

Q18. What is the definition of Lead Joint Researcher? What is the difference from the Group Leader?

A18. The difference between “Lead Joint Researcher” and “Group Leader” is as follows.

Lead Joint Researcher:

JST concludes a Collaborative Research Agreement with the institution to which the researcher in charge of budget implementation belongs on an individual basis, disbursing R&D expenses accordingly. One R&D implementation manager is appointed to represent each institution with which JST has concluded a Collaborative Research Agreement. R&D implementation managers other than the Principal Investigator are called “Lead Joint Researchers.”

Group Leader:

An R&D project is composed of multiple groups, depending on the content and plan of the R&D. The researcher who represents each group is referred to as the “Group Leader.” Each group should have one “Group Leader”.

✓ Registration on e-Rad by Lead Joint Researcher/Group leader

Q19. Other than the Principal Investigator, is it necessary to register anyone on e-Rad?

A19. “Lead implementer” is a unique name used by JST and is not on e-Rad. “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.

✓ Researcher number on e-Rad of Lead Joint Researcher/Group Leader

Q20. Some Joint Researcher/Group Leaders do not have e-Rad researcher number, but can they still register on e-Rad?

A20. Only the Principal Investigator is required to have an e-Rad researcher number when applying. In addition, Joint Researches/Group, 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.

✓ Securing an R&D period (R&D implementation) until the end of the fiscal year

Q21. When does a R&D results report need to be submitted?

A21.JST has made the following arrangements so that implementers can make the most use of R&D period to conduct R&D.

- 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.
- * Each research institution shall establish the necessary internal structures considering that the objective of the above arrangements is to secure an R&D period (R&D implementation) until the end of the fiscal year.

✓ Adopted Proposals and Application Status

Q22. Please let us know the status of proposals and applications for other RISTEX programs in the last fiscal year.

A22. Refer to following Websites:

1. FY2023 joint press release on adoption results of the three following programs.

<https://www.jst.go.jp/pr/info/info1642/index.html>

- SOLVE for SDGs: Scenario Creation Phase, Solution Creation Phase
- SOLVE for SDGs: Social Isolation & Loneliness
- Responsible Innovation with Conscience and Agility (RInCA)

2. Solution-Driven Co-creative R&D Program for SDGs :Trust Formation from Social Aspects in the Information Society

<https://www.jst.go.jp/pr/info/info1646/index.html>

✓ English Version of the Application Guidelines

Q23. Is the content of the English call procedures exactly the same as the Japanese version?

A23. 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.

Q24. Could I prepare my proposal in English?

A24. This program only accepts applications in Japanese.

Chapter 9. Guide to Completing the Proposal

Please refer to the original Japanese version.

Chapter 10. References

(Related websites)

■ Cabinet Office

- the "6th Science and Technology / Innovation Basic Plan"
<https://www8.cao.go.jp/cstp/kihonkeikaku/index6.html>
- the "Integrated Innovation Strategy 2022"
<https://www8.cao.go.jp/cstp/tougosenryaku/2022.html>
- "Convergence of Knowledge: Basic Concept and Strategic Promotion Measures — Interim Summary"
<https://www8.cao.go.jp/cstp/stmain/20220408.html>

■ Japan Business Federation

- "Toward the Formulation of a Basic Plan for Science, Technology, and Innovation"
<https://www.keidanren.or.jp/policy/2020/099.html>

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

- "Development of Science, Technology, and Innovation Policy for Knowledge-Intensive Value Creation: Aiming to Be a Country that Leads the World in Realizing Society 5.0 (Final Summary)"
https://www.mext.go.jp/b_menu/shingi/gijyutu/gijyutu22/houkoku/1422095_00001.htm

■ JST

Center for Research and Development Strategy (CRDS)

- "Toward Deepening of Relationship with Society in Science, Technology, and Innovation Policy: Creation and Establishment of ELSI/RRI in our Country"
<https://www.jst.go.jp/crds/report/CRDS-FY2019-RR-04.html>
- "Science, Technology, and Innovation Reform in View of Expansion from ELSI to RRI: Toward Strengthening of Lateral Efforts in Policy, Funding, and R&D"
<https://www.jst.go.jp/crds/report/CRDS-FY2021-RR-07.html>
- "Explanation of ELSI for Natural Science Researchers"
<https://www.jst.go.jp/crds/report/CRDS-FY2021-XR-02.html>

Research Institute of Science and Technology for Society

- Responsible Innovation with Conscience and Agility (RInCA)
<https://www.jst.go.jp/ristex/rinca/en/>

- Human-Information Technology Ecosystem (HITE)
<https://www.jst.go.jp/ristex/hite/en/index.html>
- ELSI initiatives
<https://www.jst.go.jp/ristex/en/research-activities/elsi/index.html>

[Inquiries]

Please send your questions by E-mail.

The latest information can be found in RISTEX site for call for proposals (FY2024):

https://www.jst.go.jp/ristex/proposal/proposal_2024.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

For questions regarding RISTEX in general: (E-mail)

boshu@jst.go.jp

For questions regarding the call for proposals in this Program: (E-mail)

boshu-elsi@jst.go.jp

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

e-Rad helpdesk Tel: 0570-057-060 (navi dial)

Office hours: 9:00-18:00 (Japan Time)

(Except on Saturdays, Sundays, holidays, and the year-end and new year period)