# **Proposal for Moonshot R&D project**

# **[Goals 8 Performers]**

# **Additional Application**

**(How to Complete the Form)**

[Form 1] An overview of the R&D subject

[Form 2] Proposal for R&D subject

[Form 3] Definition of terms

[Form 4] Budget plans

[Form 5] Information on conflicts of interest

[Form 6] Application status, efforts, and acceptance of other research funds

[Instructions for filling in the proposal for projects]

* Do not exceed the specified page count for each form.
* Always use 10-point font or larger for the body text.
* You can use drawings and tables as necessary in [Form 2] to [Form 3].
* Erase the instructions for filling in the forms which are shown in blue before you submit the forms.
* Remove this sheet (the cover page of the instruction about how you fill in the form) before you submit the form.
* The file size should be roughly 5MB or smaller.
* You are not allowed to change documents after the deadline.

Proposals that do not follow the instructions above will not be accepted and not be adopted.

**[Form 1] An overview of the R&D subject**

|  |  |
| --- | --- |
| **Title of the R&D subject (around 20 words)** | |
| Describe the title of the R&D subject you propose. | |
| **An overview of the R&D subject you propose (within 400 words)** | |
| Describe an overview of the R&D subject you propose (within 400 words including marks and signs). | |
| **Keywords** | |
| Write the keywords that express the feature of the R&D project you propose (five or less). | |
| **The R&D funds needed (total budget from September 2023 to March 2025)** | |
| ●●●thousands yen (including indirect cost)　\*The same amount as Form 4. | |
| **Information on the proponent (performer)** | |
| Your Full Name: | |
| Affiliation/Post: | |
| Nationality/Gender: | Date of Birth: |
| e-rad Researcher Number: Fill in the 8-digit researcher number assigned from the Cross-ministerial R&D Management System (e-Rad). (If you have not obtained the number yet, please indicate “None” and obtain it by the time the R&D subject is adopted, and the research and development is started.) | |
| Information on the proponent in researchmap etc.  URL:  Author ID:  \*Describe the URL if there is a website containing the information on the proponent (the webpage of an office at his or her organization, a page on researchmap, etc.) or describe the ID if the researcher ID of ORCID ID or Web of Science or the author ID on SCOPUS is known. | |
| Emergency contact information (e.g. cell phone number):  Address/Boarding: | |
| **Educational Background and Work Experience of the Proponent** | |
| Educational Background (the university you graduated from and the other academic institutions after)  Examples:  Year: Graduated from xx University, Department of xx  Year: Graduated from xx School of xx, Department of xx, majored xx  Year: Graduated from xx School of xx, Department of xx, majored xx  Year: Ph.D. of xx (xx University)  Work experience  Examples:  Year – year: xx Company, xx Department (developed xx)  Year - year: Project Associate Professor, xx University (involved in the study of xx)  Year – year: xx Company, xx Department (in charge of xx project) | |
| **Information on the candidate for the R&D subject participants** | |
| If there are essential participants who take part in important part of your R&D subject, please provide their names, affiliation, position and research contents they are in charge of (within 80 words including marks and signs).  If there are no essentiial participants in your R&D subject, please write “None in particular”.  (Examples of description)  R&D subject participant 1: Name, affiliation, position and research contents (within 80 words including marks and signs).  R&D subject participant 2: Name, affiliation, positionand research contents (within 80 words including marks and signs). | |

**\*Describe within 5 pages in form 2. Figures and tables with colors can be included.** **Please make sure that your proposal should be based on “2.2 The Call and selection of performers and R&D subject” in the application guidelines, and “PD Guidelines for Performers Applications”.**

**[Form 2] Proposal for R&D subject**

**１．Overview of Operating Methods**

Please provide the following information here. Please note that it is assumed that research and development that has not been tried in the meteorological field before may not be possible to adequately describe. Please describe as much as possible about novel ideas and technologies that have been developed in other fields, including the points being investigated and discussed at the proposal stage.

First, please describe the following at the time of proposal

- Targets of the proposed operation method and the purpose of the operation (e.g., reducing water vapor in the sky, lowering the temperature of the sea surface, etc.)

- Overview of the proposed operation method (including theoretical basis, novelty/challenges, current maturity level and issues, etc.)

In addition, please provide the following information for the R&D period (maximum 1.5 years) and beyond.

- Prospects for the proposed operation method (including engineering feasibility, scalability, cost-effectiveness, etc.)

The operating method which have already used in the field of the meteorology are also the scope of this call, however, in such cases, please explicitly state the advantages over competing R&D, etc. and the challenging problems to be solved in the R&D period (1.5 years), along with the current state of knowledge, in addition to the above.

If there are any ethical, legal, or social issues (ELSI) to be considered in the use of the manipulation technique itself, please describe them as well as your current views on them.

**２．Goals to be achieved by the end of the R&D period**

Please include the following information here. Please note that the goals to be achieved will be finally decided upon the agreement with the PM, thus, the goals in this proposal are not promised to be approved.

- Goals to be achieved by the end of the R&D period (preferably as quantitative as possible, but if they can only be stated qualitatively due to low scientific and technological maturity or other reasons, that is still acceptable).

- Basis for considering that the above goals can be achieved (e.g., current research/study progress, theoretical basis, etc.)

**３．Details of R&D**

Please describe in as much detail as possible the specific R&D plan you propose to achieve the goals stated in section 2. Please include an approximate schedule, and any equipment that will be required at each stage of the research along with the purpose of it.

Please note that the R&D plan will be finally decided upon the agreement with the PM, thus, the plan in this proposal is not promised to be approved.

**４．R&D organization**

Please describe the R&D team in this proposal. If the R&D subject is devied into some parts and those are being in charge of participants other than the proponent, please describe the team clearly with chart, illustration, etc.

In addition, describe the reasons why you believe that the R&D team is sufficient to implement the contents of the proposal. For each proposer and key research participant, itemize up to five achievements related to this proposal (e.g. peer-reviewed paper, book, award, patent, invitation lecture, or presentation at an international institution). The content of each item should be described.

**\*Describe within 1 page in Form 3.**

**[Form 3] Definition of terms**

**Describe any terms that you believe it would be useful for evaluators from various disciplines to understand the proposal. If there are no applicable terms, please state "none in particular”. You may also add figures and tables (color acceptable) if necessary.**

**[Form 4] Plans for budget plans**

**The actual R&D cost will be finally determined upon agreement of the R&D plan with the PM, therefore, no commitment of R&D cost is made based on the information provided in the proposal.**

(unit: thousand yen)

|  |  |  |  |
| --- | --- | --- | --- |
|  | FY2023  （7 months） | FY2024 | Total |
| Cost for equipment |  |  |  |
| Cost for consumables |  |  |  |
| Cost for travel |  |  |  |
| Cost of labor |  |  |  |
| Others |  |  |  |
| Total  direct cost |  |  |  |
| Indirect cost |  |  |  |
| Total |  |  |  |

\* Please refer to "3.3.2 Indirect Expenses" for the ratio of indirect expenses.

●Please provide a description of the major expenditure items and their purposes.

**In terms of short-term R&D, expensive equipment and fixtures should not be purchased but be procured as rental or usage of existing equipment, etc. If you need to purchase such equipment and fixtures, please explain the necessity in this section.**

１．The existence of an “institution related to performer” as a joint research institution in your proposal. (e.g., institutions established based on the R&D activities of proposer).

**[Form 5] Information on conflicts of interest**

　Your proposal designates ”institutions related to the proposer” as a joint research institution.

Yes　No　\*Select one.

Provide a specific description if you answered, "Yes.":

The definition of a "institutions related to the performer” here is as follows

1) An organization established based on the results of the Proposer's R&D activities.

2) An organization in which the proposer is an officer (including CTO, but not including technical advisor)

3) An organization in which the proposer holds shares.

4) An organization from which the proposer receives revenues from royalties or licensing fees.

**２．The existence of a “JST-invested company” as a joint research institution.**

　Your proposal designates ” JST-invested company” as a joint research institution.

Yes　No　\*Select one.

Please disclose whether the institutions to which the participants of this proposal belong are JST-invested companies or not in accordance with "2.9.2 Management of participant conflicts of interest in selection processes (3) Managing conflicts of interest of JST " in the Application Guidelines (Moonshot Goal 8 R&D performer).

\*Refer to the website below for information on JST-invested companies. Please note that companies that investment form JST have terminated are not the subject to the management of conflict of interest management and do not need to disclose.

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

\* The companies which JST’s investment to them have been publicity known at the date of open of this call should be disclosed. The companies which JST’s investment to them have already decided, however the fact is not disclosed to the public, are not required to declare here to keep confidentiality within JST..

Please refer to the following website for JST's investment announcement.

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

**[Form 6] Application status, efforts, and acceptance of other research funds**

The proponent should describe the competitive funds of the national government or any other research aid the proponent is currently participating in, has applied for, or is applying for. Include the title of the project, the period of implementation, the role, and the amount of the research funds you receive, your efforts, and the like. In addition, provide an overview of your activities other than research and their effort.

Please fill in the list this in order of the amount of research funds received.

As for "Effort," describe the ratio (percent) of the time which will be allocated to proponent's R&D projects listed below in tables(1)(2)(3) to the time for all tasks in one year (not only the time for research and management activities but also the time for profitable business and non-profitable activities, education, medical activities, etc.); it should total 100 percent.

\*See section 5.3, "Measures for Irrational Duplications and Extreme Convergences

\*If description is different from the fact, the adoption may be canceled later.

\*Correct this form and contact our inquiry office shown at the end of this application form via email if any change arises in the content described in this form. For example, an application you filed and/or an application you plan to file for a research subsidy or the like is adopted or rejected while your proposal in this R&D project is still in the selection process.

\*If you are selected as an applicant and invited to our interview-based review, we may ask you to submit the application form, the plans, and the like for other research funds.

Add or delete rows in the table if necessary.

(1) The research fund you have applied for (Direct Cost)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Title of the fund system/research fund (research period/name of the organization providing the fund)** | **Title of the**  **project**  **(Name of the representative)** | **Affiliation and post at time of application** | **Direct cost in the fiscal year 2023**  **(Total direct cost for the whole period)** | **Effort**  **(%)** | **Reason for applying to this call in addition to other research funding** |
| [This proposal]  Moonshot Research and Development |  | （Performer） |  | XX |  |
| Grant-in-Aid for Scientific Research (S) (April 2023 -  March 2029) | The creation of xx by yy  (xxxx) | Research collaborator | 10 million yen  (XX million yen in total) | 5 | ~~ |

(2) The research funds to be received (Direct Cost)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Title of the fund system/research fund (research period/name of the organization providing the fund)** | **Title of the**  **project**  **(Name of the representative)** | **Affiliation and post at time of application** | **Direct cost in the fiscal year 2023**  **(Total direct cost for the whole period)** | **Effort**  **(%)** | **Reason for applying to this call in addition to other research funding \*** |
| JST CREST (April 2020 -  March 2024) | The creation of xx by yy  (xxxx) | Performer | 14 million yen  (XX million yen in total) | 5 | △△のため |

(3) Other activities

|  |  |  |  |
| --- | --- | --- | --- |
| **Organization** | **Post** | **Activity** | **Effort(%)** |
| WW University | Professor | Academic Affairs | 40 |
| XX Corporation | Director (Part-time) | Deliberation on business plans, business operation plans | 3 |
| yy Corporation | Advisor | Guidance on R&D projects | 2 |