

## FY 2024 Application ANR-JST(CREST) Joint Call

### Research Proposal

Research Area	Fundamental Technology for Semiconductor-Device Structures Using Nanomaterials
Title of proposed research project	When the title is in English, describe the title also in Japanese (about 20 characters) along with the English title.

#### Japanese Side

Name of Research Director (PI)	
Affiliated Institution, Section, Title	Describe the affiliation and title accurately without any omission. (i.e., describe Graduate school, Department, Majors, XX laboratory, and project/tenure/associate/assistant professor).
Academic Background	<p>(Entry example)</p> <p>Completed Ph.D. in Graduate School of xxxx University in 20XX  (Instructor: Professor xxxx) 【Instructor Name Required】</p> <p>Doctoral Acquisition (xxxx)</p>
Professional Appointments of Research Director (PI) (Main work history and research contents)	<p>(Entry Example: It is essential to include the director's name of the belonged laboratory.)</p> <p>If you wish to inform the evaluator that your research was temporarily interrupted due to a life event (childbirth, childcare, nursing care, etc.), please indicate the duration of the interruption.</p> <p>Assistant Professor, Faculty of xxxx of xxxx University in 20XX to 20XX  Research about xxxx in the professor xxxx's laboratory  20XX to 20XX Childbirth and childcare leave  Researcher of xxxx Research Institute from 20XX to 20XX  Engaged in xxxx research in the xxxx laboratory of professor xxxx</p>
Information of Research Director (PI)	<p>URL:</p> <p>Please indicate URL of researchmap if not, please put the websites where the information of the applicant's research achievement is available.</p>
Research Period	[Oct. 2024] – [mm. yy] (xx years)
Total Research Budget	<p>Total Budget:            thousand yen</p> <p>(Do not include decimal point. Pay attention to the unit. (Check if the expenses exceed the upper limit set for research expenses stipulated in the "Research Supervisor's Policy on Call for Application, Selection, and Management". Do not include indirect cost.))</p>

## French Side

Name of Research Director (PI)	
Affiliated Institution, Section, Title	Describe the affiliation and title accurately without any omission. (i.e., describe Graduate school, Department, Majors, XX laboratory, and project/tenure/associate/assistant professor).
Academic Background	(Entry example) Completed Ph.D. in Graduate School of xxxx University in 20XX (Instructor: Professor xxxx) 【Instructor Name Required】 Doctoral Acquisition (xxxx)
Professional Appointments of Research Director (PI) (Main work history and research contents)	(Entry Example: It is essential to include the director's name of the belonged laboratory.) If you wish to inform the evaluator that your research was temporarily interrupted due to a life event (childbirth, childcare, nursing care, etc.), please indicate the duration of the interruption.  Assistant Professor, Faculty of xxxx of xxxx University in 20XX to 20XX Research about xxxx in the professor xxxx's laboratory 20XX to 20XX Childbirth and childcare leave  Researcher of xxxx Research Institute from 20XX to 20XX Engaged in xxxx research in the xxxx laboratory of professor xxxx
Information of Research Director (PI)	URL: Please indicate URL of researchmap if not, please put the websites where the information of the applicant's research achievement is available.
Research Period	[Oct. 2024] – [mm. yy] (xx years)
Total Research Budget	Total Budget:            thousand euros (Do not include decimal point. Pay attention to the unit. (Check if the expenses exceed the upper limit set for research expenses stipulated in the "Research Supervisor's Policy on Call for Application, Selection, and Management". Do not include indirect cost.))

# Research Proposal Overview

## Outline of Research Project

- In Form 2, Provide an overall description of the research proposal in one A4-size sheet (no exceptions). Use 10.5 point or larger font size (If these instructions are not followed, the research proposal might not be accepted). Unlike form 3-1 (project description), it is not allowed to cite numbers of papers that are shown in the list of achievements (form 6 and form 7).
- Insert figures and tables (in color, permitted) appropriately to be undertaken clearly.
  
- Form 2 is an important material for the document screening to be evaluated from the perspectives below:
  1. Is it aligned with the goals of the Research Area? (Can the proposal be expected to contribute to fulfilling the purpose of the Research Area? Mainly, does the proposal correspond to items a. in “(1) Selection Standards (Preliminary Evaluation Standards)” in Section 5.1.3, “Selection Perspective” of Application Guideline?)

“a-The research proposal contributes to the achievement of a Strategic Objective and is consistent with the Research Area purpose”
  2. Is it aligned with the goals of the CREST Program? (Mainly, does the proposal correspond to the goal noted in b. in “(1) Selection Standards (Preliminary Evaluation Standards)” in Section 5.1.3, “Selection Perspective” of Application Guideline for “Basic research that is unique, highly appreciated internationally, and expected to produce outstanding results that contribute greatly to scientific and technological innovation.”)

Therefore, in this form, provide a brief description that focuses on the details corresponding to Item 1, “Background and Objectives,” of CREST Form 3-1 (Project Description), and provide the minimum explanation (corresponding to Items 2 to 6 of Form 3-1) required to understand your description above.

(The scientific/technical evaluation of the validity and feasibility of the Project Description will be considered mainly with CREST Form 3-1)
  
- A preliminary selection entailing the document screening for each Research Area may be held from the perspectives of 1) and 2) above.

## Project Description

- Clearly state the work to be undertaken. Figures and tables (in color, permitted) may be included if necessary.
- For Form 3-1, do not exceed six A4-size sheets (no exceptions). Use 10.5 point or larger font size (If these instructions are not followed, the research proposal might not be accepted).
- In this form of project description, make effective references to the descriptions of research achievements in Forms 6 (PI) and 7 (Co-PI) to clarify the relationship between the achievement and the research being proposed by the research project applicant. In making the references, the numbers listed in the forms can be quoted in this form.

### 1. Background and Objective

- Describe scientific & technological needs, societal, economic, or industrial needs, including the trends of the related fields to illustrate the importance and necessity of the proposed research project. In accordance with the needs, describe the objectives of the proposed research project.
- Moreover, from a viewpoint of "Science Technology & Innovation", describe the impact of the proposed research on science & technology. Future social values resulting from the impact on science & technology are described in the "6. Future Prospect of Research" in detail.

### 2. Target of proposed research project

#### (1) Target to be achieved in the middle of the research period (within 60 words)

- Describe briefly (within 60 words) the research target in the middle of the proposed research period (for 5.5 years of entire research period, at the time of 3 years later from the start of the project).

#### (2) Target to be achieved at the end of the research period (within 60 words)

- Describe briefly (within 60 words) the research target at the end of the proposed research project.

### 3. Research Plans and Approach

- Describe concrete plan of pursuing the proposed research including the approaches to achieve the target and objectives specified in the previous item of this form, for each research group (PI's group, and each Co-PI's group).
- Show the outline of the time schedule to demonstrate your vision and plan specifically, how to attain "1. Background and Objective", while indicating milestones of research toward "1. Background and Objective." The schedule of the project should be shown in the form 3-2 as well. Also, clearly show the relationship of the project plan with the targets to be achieved after 3 years from the start of proposed research. This is one of the evaluation basis.
- Specify the strategy to acquire and manage intellectual property rights (such as application, authorization, licensing). Describe relevant intellectual property rights that the applicants own.

#### **4. Originality and novelty of the proposed research and comparison to current state of similar studies**

- Taking into account the state and trends of research in relevant fields, present originality and novelty of the proposed research project. Describe the advantages of the proposed research over others, specifying the competitive researches overseas.

#### **5. Preparation of fundamental technology**

Describe research background and achievements of the PI and other participants that are relevant to implement the proposed research project including the following information;

- Relevant projects conducted in the past and achievements of the PI and those of Co-PIs and other research participants (if necessary).
- Other preliminary knowledge, data, etc. (if any)
- Measures taken to the item “d” in “5.1.3 (1) Selection Perspective” from application guideline

<Excerpt from the item “d” in “5.1.3 (1) Selection Perspective”>

- The research project applicant has produced research results for accomplishing the research objectives.
- An optimal research organization is proposed. The research project applicant will exercise strong leadership and bear responsibility for the entire research team, and, if there will be Co-PIs, they are essential for to the pursuit of pursuing the research project, and a collaboration framework sufficient for enabling significant contributions toward the achievement of research objectives is provided.
- The research institution to which the PI and Co-PI belongs must have technological infrastructure such as research and development capabilities related to the relevant research field.

#### **6. Future Prospect of Research**

- Describe expected creation of science, technology & innovation, creation of new industry, acquirement and enforcement of intellectual properties, contribution to society, etc., which are likely realized in the future, by achievement of “1. Background and Objective” in the Project Description. The goal of the research area to be applied for should be also considered.

## Project Organization and Research Schedule

- **For Form 3-2, describe within two or less A4-size sheets (no exceptions).** If this instruction is not followed, the research proposal might not be accepted.

### 1. Project Organization

Group Name	Name of PI / Co-PI	Affiliation and Title	Research Title (around 12 words)
** Group (* * should be filled with the family name of PI)	Name of the PI	Affiliation and Title of the PI	Title of the proposed project as specified in the form 1.
++ Group (++ should be filled with the family name of Co-PI(1))	Name of the Co-PI (1)	Affiliation and Title of the Co-PI (1)	Name of the research Item of this group in charge *This is also specified in form 4-2.
+++ Group (+++ should be filled with the family name of Co-PI(2))	Name of the Co-PI (2)	Affiliation and Title of the Co-PI (2)	Name of the research Item of this group in charge *This is also specified in form 4-2.

#### Notes:

- JST, in principle, will enter into a contract research agreement with the organization to which the PI belongs and the ones to which a Co-PIs affiliate for each research theme.

## 2. Research Schedule

- See the example below and enter the schedule of the proposed research project. (The research period described in the following Example is 5.5 year.)
- The name of “PI’s Group”, “Co-PI’s group” should be same as those specified in the previous item of this form respectively.
- If proposed subject consists of several research subthemes, state clearly schedules of each subtheme and the organizations to pursue the subtheme.
- Length, position and thickness of arrows can be changed.

### Example

Research Subjects	2024 Fiscal year (6 months)	2025 Fiscal Year	2026 Fiscal Year	2027 Fiscal Year	2028 Fiscal Year	2029 Fiscal Year (12months)
<b>1. XX related Gene Expression Analysis</b>						
• Identification of XX related genes (PI’s Group)	→					
• XX Gene Expression Analysis (Co-PI’s Group 1,2)		→				
<b>2. Development and verification of model animal</b>						
• Development of XX model animal (PI’s Group)	→					
• Verification of XX model animal (Co-PI’s Group 2)			→			
<b>3. Imaging Analysis</b>						
• XX Data Collection (PI’s Group Co-PI’s Group 1)	→					
• Development of XX software (Co-PI’s Group 2)		→				
• Data Analysis (PI’s Group)				→		
<b>4. Development of XX Diagnostic Method</b>						
• Elucidation of XX Correlation (PI’s Group)			→			
• Development of diagnostic method and verification (Co-PI’s Group 1)				→		

## Research Project Organization 1 (Japanese Side)

(Research Members of the PI's Group)

- For Form4-1, describe within two or less A4-size sheets (no exceptions). (If this instruction is not followed, the research proposal might not be accepted.)

### PI's Group *example*

PI	Affiliation <sup>1)</sup> , Department	Title
○○ ○○	Department of ***, Graduate School of ***, ***, University	Professor
Research Participants <sup>2,3)</sup>	Affiliation <sup>4)</sup> , Department (Omit if the same as above)	Title
○○ ○○		Professor
○○ ○○		Associate Professor
○○ ○○		Lecturer
×× ××	*** Laboratory, *** Co., Ltd.	Principal Researcher

### Notes:

- If the proposed research project is selected, but the research organization to pursue the project will be different from the current affiliated organization of PI, provide the name of the institution at which the research will be conducted. Also, provide us with information on the details in the form 9.
- Provide sufficient consideration to the roles played by the members of the research group.
- Add additional lines for research participants as necessary. If the research staff has not been finalized at the time of the proposal, a note like "X persons for research staff" will suffice.
- If the same research theme needs to be pursued at multiple research organizations, it is possible to add members from the other organizations as research participants. This is only approved on the condition that the affiliated organization of the PI that enters into a contract with JST can manage the research budget. If it is necessary to enter into a contract with JST individually to manage the research budget, the researcher is to be listed in another Co-PI's group (See also the Q&A of "2.2.6(2) Requirements for Organizing a Research Project" of the application guidelines.).

### ○ Research Subjects and Overview

#### • Title of Research Theme :

Enter "the name of the proposed project" in form 1 and research theme in form 3-2 "1. Project Organization"

#### • Research Subjects in Charge :

Enter "the research subtheme" specified in the form 3-2 "2. Research Schedule", of which the PI's

group is in charge.

- **Overview of the research :**

Describe briefly an overview of the research subjects that the PI's Group will be in charge of.

- **Role in the entire research project :**

Describe the role which the PI's group plays in realizing the proposed research project. Also, specify the measures taken to the item "d" in "5.1.3 Selection Perspective (1)" from application guideline. ("The research institution to which the PI and Co-PI belongs must have technological infrastructure such as research and development capabilities related to the relevant research field. ")

## Research Project Organization 2 (Japanese Side)

(Research Members of the Co-PI's Group)

- If a Co-PI's group (Co-PI's institution) other than the PI is required, list them in Form 4-2 (this form) per joint research institution. **This form 4-2 should be described within two or less A4-size sheets (no exceptions) for each Co-PI's group.** (If this instruction is not followed, the research proposal might not be accepted).
- The research expenditures of overseas Co-PI's groups are funded only when the participation of the groups is essential to realize the research concept. Elaborate the necessity in detail in particular. Further, such funds are applicable only when the implementation of the research is difficult unless the overseas Co-PI's groups are involved; therefore, describe the grounds. Even if the necessity of such Co-PI's groups is recognized, the research expenditures of the overseas Co-PI's groups may not be funded if the terms and conditions of the contract are not acceptable. In this case, describe a proposal for cooperation (the second-best option).

### **Co-PI's Group (1) example**

Co-PI	Affiliation <sup>1)</sup> , Department	Title
○○ ○○	Department of **, ***University	Professor
Research Participants <sup>2,3)</sup>	Affiliation <sup>4)</sup> , Department (Omit if the same as above)	Title
○○ ○○		Principal Researcher
○○ ○○		Researcher
2 researchers to be hired		Research fellow
×× ××	*** Laboratory, *** Co., Ltd.	Principal Researcher

#### Notes:

- If the proposed research project is selected, but the research organization to pursue the project will be different from the current affiliated institution of the Co-PI, provide the name of the organization at which the research will be conducted. Also, provide us with information on the details in the form 9.
- Provide sufficient consideration to the roles played by the members of the research group.
- Add Additional lines for research participants if necessary. If the research staff has not been finalized at the time of the proposal, a note like "X persons for research staff" will suffice.
- If the same research theme needs to be pursued at multiple research organizations, it is possible to add the members from other organizations as research participants. This is only approved on the condition that the affiliated organization of the Co-PI that enters into a contract with JST can manage the research budget. If it is necessary to enter into a contract with JST individually to manage the research budget, the researcher is to be listed in another Co-PI's group (See also the Q&A of "2.2.6(2)

Requirements for Organizing a Research Project” of the application guidelines.).

○ **Research Subjects and Overview**

• **Title of Research Theme of the Co-PI's group :**

Enter “the name of the research theme” of this group specified in form 3-2 “1. Project Organization”

• **Research Subjects in Charge :**

Enter “the research subjects” specified in the form 3-2 “2. Research Schedule”, of which this Co-PI's group is in charge.

• **Overview of the research :**

Describe briefly an overview of the research subjects that this Co-PI's group will be in charge of.

• **Role in the entire research project and necessity :**

Describe the role which this Co-PI's group plays in realizing the proposed research project.

Also, specify the measures taken to the item “d” in “5.1.3 Selection Perspective (1)” from application guideline. (“The research institution to which the PI and Co-PI belongs must have technological infrastructure such as research and development capabilities related to the relevant research field. ”)

• **Reason of why this group is necessary for this project (applicable only to overseas Co-PI's groups):**

- Necessity of the joint research group for achieving the goal of the project
- Availability of specific facility, equipment, environment, etc.

Describe briefly the necessity of the researcher/the research institute involved for achieving the goal of the proposed research project and the grounds for the difficulty in the implementation of the research unless a certain Co-PI's Group is involved in terms of the specific research facility, equipment, environment, etc.

• **An alternative proposal for cooperation with the applicable group, in case a contract cannot not be concluded (applicable only to overseas Co-PI's groups):**

Describe a proposal (the second-best option) for cooperation in the case in which JST does not finance the research.

• **The state of enforcement of the security trade control (applicable only when an overseas Co-PI's Group is involved):**

Describe the state of enforcement of the security trade control concerning the research group of PI and the domestic Co-PI's Group.

## Research Project Organization 1 (French Side)

(Research Members of the PI's Group)

- For Form4-1, describe within two or less A4-size sheets (no exceptions). (If this instruction is not followed, the research proposal might not be accepted.)

### Main Co-PI's Group

PI	Affiliation <sup>1)</sup> , Department	Title
○ ○ ○ ○	Department of ***, Graduate School of ***, ***, University	Professor
Research Participants <sup>2,3)</sup>	Affiliation <sup>4)</sup> , Department (Omit if the same as above)	Title
○ ○ ○ ○		Professor
○ ○ ○ ○		Associate Professor
○ ○ ○ ○		Lecturer
× × × ×	*** Laboratory, *** Co., Ltd.	Principal Researcher

#### Notes:

- If the proposed research project is selected, but the research organization to pursue the project will be different from the current affiliated organization of PI, provide the name of the institution at which the research will be conducted. Also, provide us with information on the details in the form 9.
- Provide sufficient consideration to the roles played by the members of the research group.
- Add additional lines for research participants as necessary. If the research staff has not been finalized at the time of the proposal, a note like "X persons for research staff" will suffice.
- If the same research theme needs to be pursued at multiple research organizations, it is possible to add members from the other organizations as research participants. This is only approved on the condition that the affiliated organization of the PI that enters into a contract with JST can manage the research budget. If it is necessary to enter into a contract with JST individually to manage the research budget, the researcher is to be listed in another Co-PI's group (See also the Q&A of "2.2.6(2) Requirements for Organizing a Research Project" of the application guidelines.).

#### ○ Research Subjects and Overview

##### • Title of Research Theme :

Enter "the name of the proposed project" in form 1 and research theme in form 3-2 "1. Project Organization"

##### • Research Subjects in Charge :

Enter "the research subtheme" specified in the form 3-2 "2. Research Schedule", of which the PI's

group is in charge.

- **Overview of the research :**

Describe briefly an overview of the research subjects that the PI's Group will be in charge of.

- **Role in the entire research project :**

Describe the role which the PI's group plays in realizing the proposed research project. Also, specify the measures taken to the item "d" in "5.1.3 Selection Perspective (1)" from application guideline. ("The research institution to which the PI and Co-PI belongs must have technological infrastructure such as research and development capabilities related to the relevant research field. ")

## Research Project Organization 2 (French Side)

(Research Members of the Co-PI's Group)

- If a Co-PI's group (Co-PI's institution) other than the PI is required, list them in Form 4-2 (this form) per joint research institution. **This form 4-2 should be described within two or less A4-size sheets (no exceptions) for each Co-PI's group.** (If this instruction is not followed, the research proposal might not be accepted).
- The research expenditures of overseas Co-PI's groups are funded only when the participation of the groups is essential to realize the research concept. Elaborate the necessity in detail in particular. Further, such funds are applicable only when the implementation of the research is difficult unless the overseas Co-PI's groups are involved; therefore, describe the grounds. Even if the necessity of such Co-PI's groups is recognized, the research expenditures of the overseas Co-PI's groups may not be funded if the terms and conditions of the contract are not acceptable. In this case, describe a proposal for cooperation (the second-best option).

### **Joint Research Group (1)**

Co-PI	Affiliation <sup>1)</sup> , Department	Title
○○ ○○	Department of **, ***University	Professor
Research Participants <sup>2,3)</sup>	Affiliation <sup>4)</sup> , Department (Omit if the same as above)	Title
○○ ○○		Principal Researcher
○○ ○○		Researcher
2 researchers to be hired		Research fellow
×× ××	*** Laboratory, *** Co., Ltd.	Principal Researcher

#### *Notes:*

- If the proposed research project is selected, but the research organization to pursue the project will be different from the current affiliated institution of the Co-PI, provide the name of the organization at which the research will be conducted. Also, provide us with information on the details in the form 9.
- Provide sufficient consideration to the roles played by the members of the research group.
- Add Additional lines for research participants if necessary. If the research staff has not been finalized at the time of the proposal, a note like "X persons for research staff" will suffice.
- If the same research theme needs to be pursued at multiple research organizations, it is possible to add the members from other organizations as research participants. This is only approved on the condition that the affiliated organization of the Co-PI that enters into a contract with JST can manage the research budget. If it is necessary to enter into a contract with JST individually to manage the research budget, the researcher is to be listed in another Co-PI's group (See also the Q&A of "2.2.6(2)

Requirements for Organizing a Research Project” of the application guidelines.).

○ **Research Subjects and Overview**

• **Title of Research Theme of the Co-PI's group :**

Enter “the name of the research theme” of this group specified in form 3-2 “1. Project Organization”

• **Research Subjects in Charge :**

Enter “the research subjects” specified in the form 3-2 “2. Research Schedule”, of which this Co-PI's group is in charge.

• **Overview of the research :**

Describe briefly an overview of the research subjects that this Co-PI's group will be in charge of.

• **Role in the entire research project and necessity :**

Describe the role which this Co-PI's group plays in realizing the proposed research project.

Also, specify the measures taken to the item “d” in “5.1.3 Selection Perspective (1)” from application guideline. (“The research institution to which the PI and Co-PI belongs must have technological infrastructure such as research and development capabilities related to the relevant research field. ”)

• **Reason of why this group is necessary for this project (applicable only to overseas Co-PI's groups):**

- Necessity of the joint research group for achieving the goal of the project
- Availability of specific facility, equipment, environment, etc.

Describe briefly the necessity of the researcher/the research institute involved for achieving the goal of the proposed research project and the grounds for the difficulty in the implementation of the research unless a certain Co-PI's Group is involved in terms of the specific research facility, equipment, environment, etc.

• **An alternative proposal for cooperation with the applicable group, in case a contract cannot not be concluded (applicable only to overseas Co-PI's groups):**

Describe a proposal (the second-best option) for cooperation in the case in which JST does not finance the research.

• **The state of enforcement of the security trade control (applicable only when an overseas Co-PI's Group is involved):**

Describe the state of enforcement of the security trade control concerning the research group of PI and the domestic Co-PI's Group.

## Research Budget (Japanese Side)

- Prepare the budget plan and sort it by items and by groups for each year.

### 1. Research Budget Plan in Item (Entire Team) *example*

	1 <sup>st</sup> Year 2024.10~ 2025.3	2 <sup>nd</sup> Year 2025.4~ 2026.3	3 <sup>rd</sup> Year 2026.4~ 2027.3	4 <sup>th</sup> Year 2027.4~ 2028.3	5 <sup>th</sup> Year 2028.4~ 2029.3	Final Year 2029.4~ 2030.3	Total (Thousand yen)
<b>Equipment</b>	20,000	40,000	0	0	0	0	60,000
<b>Materials/ Consumables</b>	20,000	40,000	30,000	30,000	20,000	20,000	160,000
<b>Travel</b>	1,000	2,000	2,000	2,000	2,000	1,000	10,000
<b>Personnel and Services (Number of Researchers)</b>	6,000 (2)	12,000 (2)	12,000 (2)	12,000 (2)	12,000 (2)	6,000 (1)	60,000
<b>Other</b>	10,000	0	0	0	0	0	10,000
<b>Total (Thousand yen)</b>	57,000	94,000	44,000	44,000	34,000	27,000	300,000

#### Notes:

- A more detailed budget plan will be requested when the proposal proceeds to the interview screening.
- The budget plan, after adopted, may be revised during the research period according to the state of the project, Research Area policy, and project evaluation, etc.

Budgeted costs are itemized as follows:

- **Equipment:** Cost for tangible properties with relatively expensive
- **Materials / Consumables:** Cost for purchasing materials and consumables
- **Travel:** Travel expenses of the PI or participants.
- **Personnel and Services:** Personnel expenses and compensation for postdoctoral researchers, technicians, research assistants (RA), etc.
- **(Numbers of researchers):** The number of researchers, technicians, and research assistants who are newly employed for the proposed research project
- **Other:** Costs other than the above (e.g., printing, equipment lease, freight costs, etc.)

#### Remarks on the research budget

Describe any remarks on applicable items if necessary, when a large amount of labor cost, travel cost, or the like is required.

(CREST - Form 5)

### 2. Research Budget plan by group

- Propose a most suitable research team that is necessary and adequate for bringing the research idea of the research representative into reality. When a Co-PI's group is organized, the group must be necessary

and essential for bringing a research idea into reality and be able to make great contributions to achieving the research objectives.

	<b>1st Year</b> 2024.10~ 2025.3	<b>2nd Year</b> 2025.4~ 2026.3	<b>3rd Year</b> 2026.4~ 2027.3	<b>4th Year</b> 2027.4~ 2028.3	<b>5th Year</b> 2028.4~ 2029.3	<b>Final Year</b> 2029.4~ 2030.3	<b>Total</b> (Thousand yen)
<b>PI's Group</b> ○○○○ (**University)	20,000	40,000	25,000	25,000	20,000	15,000	145,000
<b>Co-PI's Group 1</b> ○○○○ (**University)	20,000	30,000	10,000	10,000	5,000	5,000	80,000
<b>Co-PI's Group 2</b> ○○○○ (**University)	17,000	24,000	9,000	9,000	9,000	7,000	75,000
<b>Total</b> (Thousand yen)	57,000	94,000	44,000	44,000	34,000	27,000	300,000

### List of major equipment costing 10 million yen or more (item, estimated cost)

*Example*

\*\*\* Group

XXXXXX 15,000 Thousand Yen

XXXXXX 10,000 Thousand Yen

\*\*\* Group

XXXXXX 10,000 Thousand Yen

## Research Budget (French Side)

- Prepare the budget plan and sort it by items and by groups for each year.

### 1. Research Budget Plan in Item (Entire Team on French Side) *example*

	1 <sup>st</sup> Year 2024.10~ 2025.3	2 <sup>nd</sup> Year 2025.4~ 2026.3	3 <sup>rd</sup> Year 2026.4~ 2027.3	4 <sup>th</sup> Year 2027.4~ 2028.3	5 <sup>th</sup> Year 2028.4~ 2029.3	Final Year 2029.4~ 2030.3	Total (Thousand yen)
<b>Equipment</b>							
<b>Materials/ Consumables</b>							
<b>Travel</b>							
<b>Personnel and Services (Number of Researchers)</b>							
<b>Other</b>							
<b>Total</b> (Thousand Euro*)							

#### Notes:

- A more detailed budget plan will be requested when the proposal proceeds to the interview screening.
- The budget plan, after adopted, may be revised during the research period according to the state of the project, Research Area policy, and project evaluation, etc.

Budgeted costs are itemized as follows:

- **Equipment:** Cost for tangible properties with relatively expensive
- **Materials / Consumables:** Cost for purchasing materials and consumables
- **Travel:** Travel expenses of the PI or participants.
- **Personnel and Services:** Personnel expenses and compensation for postdoctoral researchers, technicians, research assistants (RA), etc.
- **(Numbers of researchers):** The number of researchers, technicians, and research assistants who are newly employed for the proposed research project
- **Other:** Costs other than the above (e.g., printing, equipment lease, freight costs, etc.)

#### Remarks on the research budget

Describe any remarks on applicable items if necessary, when a large amount of labor cost, travel cost, or the like is required.

**\* In JST-ANR Joint Call, Budget upper limit on French side is 500,000 euro/5.5 years, including all research teams (main CO-PI, Joint Researchers).**

## 2. Research Budget plan by group

Propose a most suitable research team that is necessary and adequate for bringing the research idea of the research representative into reality. When a Co-PI's group is organized, the group must be necessary and essential for bringing a research idea into reality and be able to make great contributions to achieving the research objectives.

	1 <sup>st</sup> Year 2024.10~ 2025.3	2 <sup>nd</sup> Year 2025.4~ 2026.3	3 <sup>rd</sup> Year 2026.4~ 2027.3	4 <sup>th</sup> Year 2027.4~ 2028.3	5 <sup>th</sup> Year 2028.4~ 2029.3	Final Year 2029.4~ 2030.3	Total (Thousand yen)
PI's Group ○○○○ (**University)							
Co-PI's Group 1 ○○○○ (**University)							
Co-PI's Group 2 ○○○○ (**University)							
<b>Total</b> (Thousand yen)							

### List of major equipment costing 10 million yen or more (item, estimated cost)

*Example*

\*\*\* Group

XXXXXX 15,000 Thousand Yen

XXXXXX 10,000 Thousand Yen

\*\*\* Group

XXXXXX 10,000 Thousand Yen

## **Research Achievement (Japanese Side)**

**(PI : (Example)Taro Gijyutsu)**

**【Author notation in English papers by the PI : (example) Taro Gijyutsu】**

- In the document screening, evaluators (research supervisor, research area advisor) sometimes search through publication databases to check achievements in detail. Enter the PI's name for publication [author notation in English papers] without abbreviation in the above brackets.
- List a maximum of 10 items within 3 pages for each Co-PI.
- Items can be numbered consecutively so that they can be referred in form 3-1(project description).
  
- Based on your research achievements, describe your ability to accomplish the proposed project and to exercise strong leadership with responsibility for the entire research team. See the following instruction for sufficient descriptions.
- Provide your research achievements such as research papers, books, proceedings of international conferences, invited lectures at major international conferences, awards, data sets, software, patents, licenses, start-up businesses, standards or any other research achievements you deem relevant in relation to your research field and the proposed project. Prioritize those which are more relevant to your proposal and more recent.
- Write a short, factual explanation of the significance of each achievement and your role in producing it. Please note that the explanation should be as objective and quantitative as possible (This does not mean JIF or h-index should be included).
- As for papers, include author (Enter all authors and underline the name of Co-PI), title of the paper, journal, volume, page and publication year. Include only those already published or confirmed to be published. Abbreviation of the author's name, for example, T. Gijyutsu is acceptable.
- As for patents, include patent application number, inventor, title of invention, applicant, and date of application

## **List of Achievements (Co-PI(s)) (Japanese Side)**

- List a maximum of 10 items within 2 pages.
- Items can be numbered consecutively so that they can be referred in form 3-1(project description).
  
- Provide research achievements such as research papers, books, proceedings of international conferences, invited lectures at major international conferences, awards, data sets, software, patents, licenses, start-up businesses, standards or any other research achievements you deem relevant in relation to your research field and the proposed project. Prioritize those which are more relevant to your proposal and more recent.
- Write a short, factual explanation of the significance of the achievements and your role in producing each of them. Please note that the explanation should be as objective and quantitative as possible (This does not mean JIF or h-index should be included).
- As for papers, include author (Enter all authors and underline the name of Co-PI), title of the paper, journal, volume, page, publication year. Include only those already published or confirmed to be published.
- As for patents, include patent application number, inventor, title of invention, applicant, and date of application

## **Research Achievement (French Side)**

**(PI : NAME of Researcher)**

**【Author notation in English papers by the PI : NAME of Researcher】**

- In the document screening, evaluators (research supervisor, research area advisor) sometimes search through publication databases to check achievements in detail. Enter the PI's name for publication [author notation in English papers] without abbreviation in the above brackets.
- List a maximum of 10 items within 3 pages for each Co-PI.
- Items can be numbered consecutively so that they can be referred in form 3-1(project description).
  
- Based on your research achievements, describe your ability to accomplish the proposed project and to exercise strong leadership with responsibility for the entire research team. See the following instruction for sufficient descriptions.
- Provide your research achievements such as research papers, books, proceedings of international conferences, invited lectures at major international conferences, awards, data sets, software, patents, licenses, start-up businesses, standards or any other research achievements you deem relevant in relation to your research field and the proposed project. Prioritize those which are more relevant to your proposal and more recent.
- Write a short, factual explanation of the significance of each achievement and your role in producing it. Please note that the explanation should be as objective and quantitative as possible (This does not mean JIF or h-index should be included).
- As for papers, include author (Enter all authors and underline the name of Co-PI), title of the paper, journal, volume, page and publication year. Include only those already published or confirmed to be published. Abbreviation of the author's name, for example, T. Gijyutsu is acceptable.
- As for patents, include patent application number, inventor, title of invention, applicant, and date of application

## **List of Achievements (Co-PI(s)) (French Side)**

- List a maximum of 10 items within 2 pages.
- Items can be numbered consecutively so that they can be referred in form 3-1(project description).
  
- Provide research achievements such as research papers, books, proceedings of international conferences, invited lectures at major international conferences, awards, data sets, software, patents, licenses, start-up businesses, standards or any other research achievements you deem relevant in relation to your research field and the proposed project. Prioritize those which are more relevant to your proposal and more recent.
- Write a short, factual explanation of the significance of the achievements and your role in producing each of them. Please note that the explanation should be as objective and quantitative as possible (This does not mean JIF or h-index should be included).
- As for papers, include author (Enter all authors and underline the name of Co-PI), title of the paper, journal, volume, page, publication year. Include only those already published or confirmed to be published.
- As for patents, include patent application number, inventor, title of invention, applicant, and date of application

## Information on Other Supports (Japanese Side)

### [Notes]

- When PI or Co-PIs are receiving, apply for, or plan to apply for competitive funding programs (including CREST / PRESTO / ACT-X, AMED-CREST, PRIME) 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), fill in the research project name, research period, role, amount of research expenses received by the individual, and effort. Please refer to "8.1 Measures against Unreasonable Duplication and Excessive Concentration" and "9 Limitations on Multiple Applications within the Strategic Basic Research Programs" of the application guidelines. In the case that it is difficult to enter due to unavoidable circumstances such as being unable to enter based on the contents of the confidentiality agreement that has already been concluded, it is possible to submit this research proposal without filling in any items other than effort. Please note that this information will be provided to the reviewers at the time of proposal selection.
- If the information entered in the research proposal differs from reality, the research project may be rejected.
- We may ask for application and plan documents submitted to other systems when a proposal reaches the interview screening.
- Enter this proposed CREST project first, followed by other research projects in a descending order of the amount of research funds (for the whole period, only direct cost) the applicant receives.
- Add rows if needed.

(\*) When applying, the call of FY2021 is made based on the fact that the "Integrated Innovation Strategy 2020" stipulates that "disclosure of information on the status of acceptance of foreign funds is a requirement when applying for research funds." Therefore, it is clarified that research funds from overseas should also be entered in the form of "whether or not there is other support" (or "status of application / acceptance of research funds, etc." depending on the project). In addition to competitive funds, both domestically and internationally, please list all research funds such as grants from private foundations, contract research expenses from companies, and joint research expenses.

### PI : Name (Affiliation)

No.	Program (Name of Institution)	Status	Title of Project (Name of Principal investigator)	Research Period	Role (Principal Investigator or co-Principal Investigator)	Research Fund Received (1) Allocated Budget (For entire period) (2) FY 2025 (planned) (3) FY 2024 (planned) (4) FY 2023 (actual)  (Thousand yen/unit)	2024 FY Effort (%)
-	CREST (This Application)	Submitted	Title of the proposed research project (Name of the PI)	2024.10 — 2030.3	Principal Investigator	(1) (2) (3) <i>*Same amounts in form 5 "2.PI's Group"</i>	30
(1)	Grants-in-Aid for Scientific Research, Fundamental	Awarded	Creating W by V (** **)	2023.4 — 2026.3	Principal Investigator	(1) 100,000 (2) 50,000 (3) 25,000	10

	research (S) (Japan Society for the Promotion of Science)					(4)	5,000	
(2)	ALCA, JST Strategic Basic Research Programs (Japan Science and Technology Agency)	Submitted	Achieving high performance in X by Y (** **)	2024.10 — 2030.3	Co-Principal Investigator	(1) (2) (3) (4)	90,000 35,000 8,000 -	-
(3)						(1) (2) (3) (4)	-	

### 【Notes for Description】

Due to unavoidable circumstances, e.g. confidentiality agreement, it is possible to submit without filling in the items other than effort. (This research proposal will be provided to outside experts during the screening process.)

#### (1) Status

Enter one of the following.

Do not enter effort for a theme corresponding to “Submitted” except for the CREST proposed theme.

**Awarded:** It is currently awarded, or decided to be awarded.

**Submitted:** It is at the state of selection and it is yet to be decided to be awarded.

#### (2) Role

Enter one of the following.

##### Principal Investigator:

Research fund is to be received as a representative for the research theme.

##### Co-Principal Investigator:

Research fund is to be received as a person in a non-representing position for the research theme

#### (3) Research fund received

Enter the amount of the research fund in thousand yen in a following manner.

(a) Awarded as “Principal Investigator” in the research project

Enter the amount of the research fund of the team supervised by the Principal Investigator, excluding that of joint research teams.

(b) Awarded as “Co-Principal Investigator”

Enter the amount of the research fund of the joint research team represented by the Co-Principal Investigator.

#### (4) Effort

Enter “ratio of time (%) necessary for conducting research relative to 100% for the whole work hours during the CREST research period (2023.10-2024.3) in fiscal year 2023 if adopted for CREST. Do not enter effort for themes that are already applied and in the process of selection, or that are planned to be applied (those entered as “Submitted”).

Take care that the sum of effort for the theme proposed for CREST and other themes that are entered as “Awarded” does not exceed 100%.

**Co-PI (1) : Name (Affiliation)**

No.	Program (Name of Institution)	Status	Title of Project (Name of Principal investigator)	Research Period	Role (Principal Investigator or co-Principal Investigator)	Research Fund Received (1) Allocated Budget (For entire period) (2) FY 2025 (planned) (3) FY 2024 (planned) (4) FY 2023 (actual)  (Thousand yen/unit)	2024 FY Effort (%)
-	CREST (This Application)	Submitted	<i>Title of the proposed research project (Name of the PI)</i>	2024.10 — 2030.3	Co-Principal Investigator	(1) (2) (3) <i>*Same Amounts in form 5 "2.Co-PI's group 1"</i>	20
(1)	Health and Labor Sciences Research Grants (Ministry of Health, Labor and Welfare)	Awarded	Deployment for Z (** **)	2022.9 — 2026.3	Principal Investigator	(1) 50,000 (2) 20,000 (3) 20,000 (4) 5,000	10
(2)						(1) (2) (3) (4)	
(3)						(1) (2) (3) (4)	

## Other Special Remarks (Japanese Side)

- In Form 9 Provide an overall description of other special remarks within three A4-size sheets (no exceptions). (If this instruction is not followed, the research proposal might not be accepted.) For items that have check boxes, please check the applicable ones.

\* Please refer to “Chapter 5, 5.1.2 (2)” in the application guidelines and state whether or not you have a conflict of interest.

### 1. Conflict of interest between the applicant and evaluators

- (1) Conflict of interest between the research applicant (PI) and evaluators (research supervisor, research area advisor)

Follow the description of application guideline “5.1.2 (2)① Persons Involved in the Selection Process” to describe conflict of interest of the research applicant shared with the research supervisor or research area advisor of the research area to which the proposal is submitted.

- (a) Conflict of interest between the research applicant and the research supervisor (as an evaluator):

YES      NO

If YES, state the reason.

Reason: e.g. The research applicant conducted joint research with the research supervisor on ○○project (20xx-20xx). It comes under condition (f) for conflict of interest stipulated in 5.1.2(2)①.

- (b) Conflict of interest between the research applicant and the research area advisor(s):

YES      NO

If YES, write the name of research area advisors with conflict of interest and state the reason.

Research area advisor with conflict of interest: (The Advisor’s Name)

Reason: e.g. The research applicant is conducting joint research with the research area advisor in \*\* project. It comes under conditions (c) for conflict of interest stipulated for 5.1.2(2)①.

#### <Note for Description>

When conflict of interest is observed, **concisely describe the reason including whether the conflict of interest comes under a condition of application guideline “5.1.2 (2)① Persons Involved in the Selection Process.”** The research supervisor and the research area advisor that JST judged to share conflict of interest based upon the description is excluded from the document screening and is asked to refrain from speaking at the selection process and not to participate in the interview screening. For this reason, be sure to clearly enter the name of the research area advisor with conflict of interest. As for a list of research area advisors, see the website for research areas to which applications are to be submitted, which is linked to the website for submitting

applications.

**[Application Guideline 5.1.2.(2): Conditions for those with conflict of interest (summary)]**

**(a) Relatives**

**(b) Current affiliation with the same department or research lab as the research project applicant at a university or other national government-funded research and experiment institution, or current affiliation with the same company**

\*: “Department” means, one level higher than the smallest unit

**(c) Close cooperation on a joint research project (For example, working on a joint research project, publishing co-authored a research paper, working toward the same objectives as a member of the same research team, performed different parts of the same research project, or were otherwise essentially affiliated with the same research group).**

**(d) Close teacher-student relationship, or a direct employer-employee relationship**

**(e) Relationships of direct competition**

**(f) Other relationships judged by JST to represent conflicts of interest**

**(2) Conflict of interest between the Co-PIs and evaluators (the research supervisor/ research area advisors)**

Follow the description of application guideline “5.1.2 (2)① Persons Involved in the Selection Process” to describe conflict of interest of each Co-PI shared with the research supervisor to which the proposal is submitted.

(a) Co-PI (1): (Name), (Affiliation)

1) Conflict of interest with the research supervisor (as an evaluator):

YES       NO

If YES, state the reason.

Reason: e.g. He/She is conducting joint research with the research supervisor in \*\* project (20xx-20xx). It comes under conditions (f) for conflict of interest stipulated for 5.1.2(2).

2) Conflict of interest with the research area advisor(s):

YES       NO

If YES, write the name of research area advisors with conflict of interest and state the reason.

Research area advisor with conflict of interest: (The Advisors’ Name)

Reason: e.g. He/She is conducting joint research with the research area advisor in \*\* project. It comes under conditions (c) for conflict of interest stipulated for 5.1.2(2).

(b) Co-PI (2): (Name), (Affiliation)

1) Conflict of interest with the research supervisor:

YES       NO

If YES, state the reason.

Reason: e.g. He/She is conducting joint research with the research supervisor in \*\* project (20xx-

20xx). It comes under conditions (f) for conflict of interest stipulated for 5.1.2(2).

2) Conflict of interest with the research area advisor(s):

YES      NO

If YES, write the name of research area advisors with conflict of interest and state the reason.

Research area advisor with conflict of interest: (The Advisors' Name)

Reason: e.g. He/She is conducting joint research with the research area advisor in \*\* project. It comes under conditions (c) for conflict of interest stipulated for 5.1.2(2).

<Note for Description>

If JST judges that the conflict of interest exists on the basis of this information, JST will ask the research supervisor and the research area advisor to refrain from expressing their opinion in discussions about the selection of the research applicant that plans to collaborate with the pertinent Co-PI during the document/interview screening.

[Application Guideline 5.1.2.(2): Conditions for those with conflict of interest (summary)]

(a) Relatives

(b) Current affiliation with the same department or research lab as the research project applicant at a university or other national government-funded research and experiment institution, or current affiliation with the same company

\*: "Department" means, one level higher than the smallest unit

Example: When affiliation is, JST university, Chemical Department, Biology Course, Engineering Laboratory, "Biology course" will be the corresponding "Department"

(c) Close cooperation on a joint research project (For example, working on a joint research project, publishing co-authored a research paper, working toward the same objectives as a member of the same research team, performed different parts of the same research project, or were otherwise essentially affiliated with the same research group).

(d) Close teacher-student relationship, or a direct employer-employee relationship

(e) Relationships of direct competition

(f) Other relationships judged by JST to represent conflicts of interest

## **2. Co-PI's group organization that is related to the PI (organizations etc. established based on R&D achievements by the PI etc.)**

Follow the instructions in Application Guideline, Section 5.1.2.(2)① Persons Involved in the Selection Process, "Conditions for those with conflict of interest" to describe whether the organization to which the Co-PI belongs is "an organization in relation to the PI." If this is applicable to your case, describe the grounds for such applicability.

Organization that is related to the PI:

YES      NO

If YES, write the name of the organization and the Co-PIs as well as state the reason.

The name of the organization (the Co-PI's name participating): XX Corporation (Taro Kagaku)

Reason: e.g. This organization was established based on R&D achievement by the research director, which conforms to Item (a) among the requirements defined in 5.1.2 (2) ②

<Notes for Description>

“An organization that is related to the PI” refers to any of the organizations that fall under the following categories. Items “a” and “b” are applicable not only to the PI but also to the spouse and the relatives in the first degree of the research representative (hereinafter referred to as “the PI etc.”).

a. An organization established based on R&D achievement of the PI etc.

(Including the case in which the researcher or the like is not directly involved in the business management but is merely given a title such as technical consultant and the case in which the researcher or the like has stocks.)

b. An organization in which the PI etc. is a director (including a CTO but excluding a technical consultant)

c. An organization whose PI has stocks

d. An organization whose PI is rewarded for implementation

### 3. Participation by a research group of a company financed by JST

Follow the instructions in Application Guideline, Section 5.1.2 (2)① Persons Involved in the Selection Process, “Conditions for those with conflict of interest” to describe whether the organization to which the PI belongs or to which a Co-PI belongs is a company in which JST has invested.

Participation by a company financed by JST:

YES     NO

If YES, write the name of the organization and the PI / the Co-PIs.

The name of the organization (the PI): XX Corporation (Taro Kagaku)

The name of the organization (a Co-PI): XX Corporation (Taro Kagaku)

<Notes for Description>

“The organization that is related to the PI” refers to any of the organizations that fall under the following categories. Items “a” and “b” are applicable not only to the PI but also to the spouse and the relatives in the first degree of the PI (hereinafter referred to as “the PI etc.”).

\*For the companies in which JST has invested, access the following website. The companies in which JST has terminated the investment are not within the scope of our management of the conflict of interest. You do not need to describe such companies.

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

\*The standard date to determine the applicability of the conditions described above is the date on which we begin accepting applications. Describe the companies that are disclosed as a company in which JST has invested as of the standard date. If a company is one of the companies in which JST is going to invest but is not disclosed as such, do not describe such a company for the sake of the

secrecy of the internal information of JST.

For the disclosed information on the investment made by JST, access the following website.

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

#### **4. (Only for those relevant) The contact of the manager at the department or the division in charge of the research agreement at the overseas research institute**

Enter name, affiliation, e-mail address, and telephone number.

<Notes for Description>

- Follow the instructions in Application Guideline, Section 2.2.6 Proposal Submission Requirements (2) Requirements for Organizing a Research Project, the research costs of the groups belonging to an institute overseas, are, in principle, not funded by JST; therefore, their research costs may need to be funded by themselves.
- If it is recognized that it is essential for a research institute overseas to participate in a research as a Co-PI's group (a researcher belonging to the research institution overseas participates in the research as a joint researcher) to fulfill the concept of the research, the research cost of the research group can be funded by JST. If you want to compose a research team involving a research institute overseas (which requires approval by the research supervisor), describe the reasons that the joint researcher belonging to a research institute overseas is required in your research proposal (CREST - Form 4-2). Further, even in a proposal that assumes that JST funds the research cost, separately describe a plan for cooperation with the group in the proposal (CREST - Form 4-2) in case where a contract is not concluded.
- A research contract needs to be concluded between JST and the overseas research organizations. For this reason, check with the person responsible for research contracts at the overseas research organization to find whether a research contract could be concluded using the template for research contracts with overseas research organizations shown at the below URL.

[https://www.jst.go.jp/kisoken/boshuu/teian/koubo/agreement\\_crest.pdf](https://www.jst.go.jp/kisoken/boshuu/teian/koubo/agreement_crest.pdf)

- JST may directly check whether a contract could be concluded with the overseas research organization with a person at its department responsible for research contracts through the research applicant after the deadline for proposals. For this purpose, enter the contact (name, affiliation, e-mail address, telephone number) of the person responsible for research contracts at the overseas research organization.
- Before the interview screening, submit a form (required for only the applicant who is to be interviewed after the document screening) for entering whether the person responsible for research contracts at the research organization approves the requirements for the research contract presented by JST (\*).

(\*) JST's Requirements for research contract: The payment for indirect expenses does not exceed 30% of the direct expenses (research expenses). The intellectual property rights for the results of the proposed research must be shared in half (50:50) with JST. The Research Institute shall disclose to JST each intellectual property right created in performing the Collaborative Research

within 10 business days. The overseas organization must prepare and provide JST with detailed documents describing pertinent expenses in English. For the details, see “Template for research contracts to be used by overseas research organizations” described above.

**5. (Only for those relevant) special notes for efforts by a PI**

If the PI (Managers such as the Dean of the Graduate School) requires work time(efforts) for a special task, please indicate so.

**6. The other special remarks:**

- Differences from the previous application (in case of applications that have been made to the research area two times or more)
- Change of research institute affiliation, other special notes