

Comprehensive Support Programs for Creation of Regional Innovation

Science and Technology Incubation Program in Advanced Regions

FY2009 “Practical Application Research”

Application Handbook

Deadline for Internet Applications

August 6 (Thursday), 2009

12:00 p.m.

Note

To submit a proposal under this program, the researcher or research institution must be registered on the Cross-ministerial R&D Management System (e-Rad). In some cases, the registration procedures may take several days, so please register at least two weeks prior to the deadline. (You may also register before the beginning of the period for submission of applications.)

June 2009

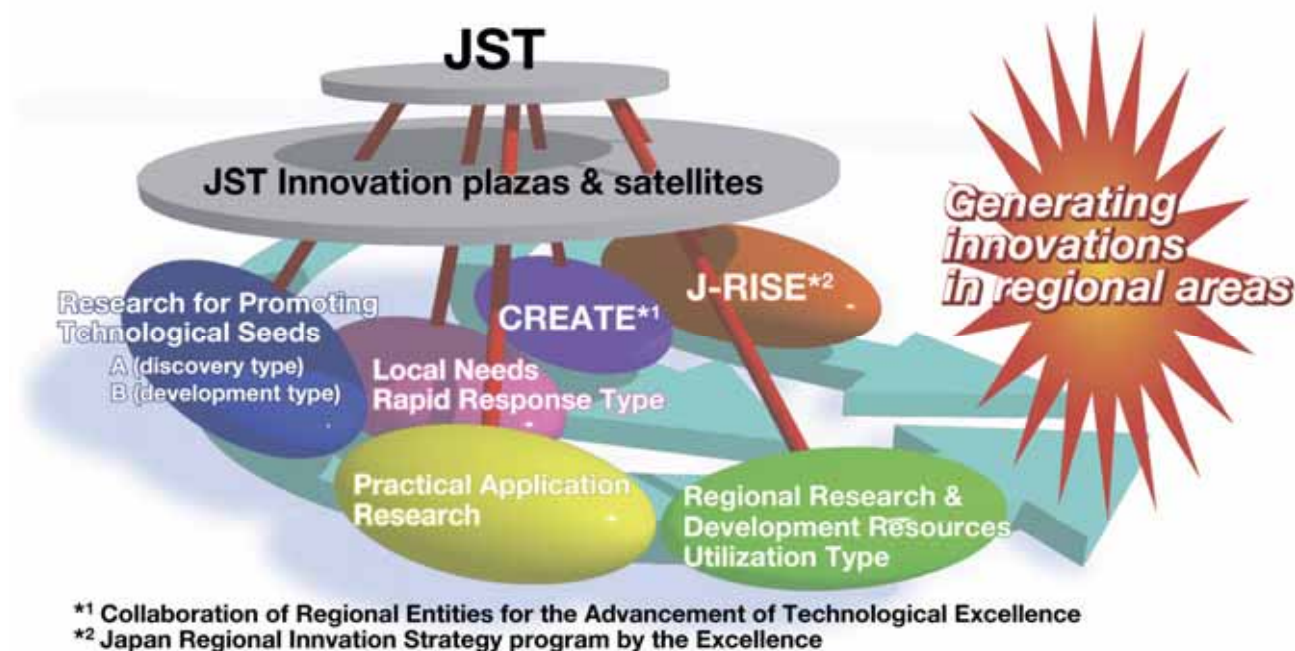
Department of Regional S&T Promotion,  
Japan Science and Technology Agency

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## About the Comprehensive Support Programs for Creation of Regional Innovation

The Comprehensive Support Programs for Creation of Regional Innovation are based at the JST Innovation Plazas and JST Innovation Satellites ("Plaza/Satellites") located throughout Japan. These programs foster collaboration among local governments, ministries and JST basic research and technology transfer operations and so on to enable research and development to be conducted seamlessly from the discovery of the seeds of innovation to commercialization (Research for Promoting Technological Seeds, Practical Application Research, Development Resources Utilization Program, etc.), thereby providing comprehensive support for the creation of innovation in regional areas.



## Positioning of Practical Application Research

Practical Application Research in Comprehensive Support Programs for Regional Innovation is based on findings obtained from Research for Promoting Technological Seeds through industry-academia-government collaborative research programs and aimed at the creation of regional innovation. Proposals are submitted to and selected at Plazas and Satellites in 16 locations around the country. Coordinators join research groups under supervision of the Director of a Plaza or a Satellite, offer advice from a commercialization standpoint, and provide relevant information and other types of support, thereby enabling an efficient management of research activities. Once Practical Application Research is completed, it is hoped, by utilizing the Regional Research and Development Resources Utilization Type and other programs, to commercialize research results.

# 1. Outline of Practical Application Research

## (1) Objective of Practical Application Research

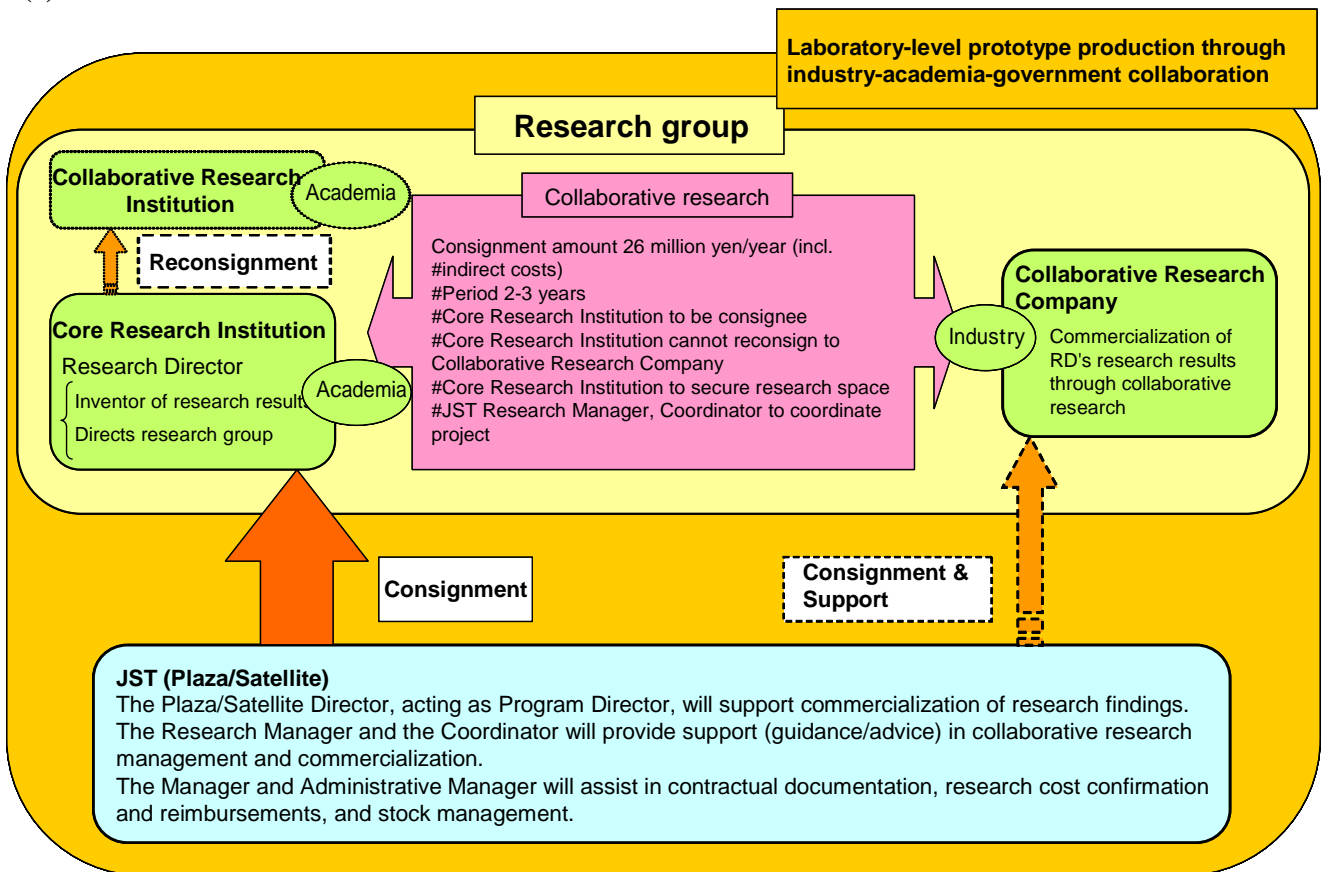
Practical Application Research is aimed, via regional industry-academia-government collaborative research programs, at developing toward commercialization research findings from universities, etc.\* and creating regional innovation.

(\*) “Universities, etc.” refer to national, public and private colleges and universities, organs used jointly by universities, specialized vocational high schools, national testing and research institutes, public testing and research institutes, and government-affiliated corporations, independent administrative agencies, and charitable corporations engaged in research and development activities.

## (2) Research topics

Research subjects must be based on research findings (patents, etc.) from universities, etc., with expectations for commercialization R&D within several years, thus requiring testing research toward commercialization.

## (3) Scheme



## (4) Implementation structure

### Core Research Institution (University, etc.)

The research institute to which the Research Director belongs, acts as the core player in driving the program, and conducts testing research activities through a consignment research agreement with the Japan Science and Technology Agency (hereafter “JST”).

### **Collaborative Research Company (Corporation)**

Tasked with joint research activities with the Core Research Institution and with commercialization of research findings. If necessary, the Collaborative Research Company will be consigned by JST to undertake research.

### **Collaborative Research Institution (University, etc)**

These are universities, etc. that participate jointly in the program, working alongside the Core Research Institution and Collaborative Research Companies through a division of labor. If necessary, the Collaborative Research Institution will be reconsigned by the Core Research Institution to undertake specific research topics.

### **JST Innovation Plaza/Satellite**

JST Innovation Plazas and Satellites call for and select new R&D proposals and consigned research projects to Core Research Institutions. If necessary, they may also consign research to Collaborative Research Companies. In addition, when it is visibly more efficient for JST than the Collaborative Research Company to do so, the Plaza or Satellite will purchase materials and provide other relevant services on behalf of the Company.

After the commencement of an JST-consignment program, the Program Officer (hereafter “PO”) and other staff will periodically monitor progress, sometimes joining project meetings and other venues. In particular, the Research Manager and Coordinator will provide general coordinating support in establishing liaison and collaboration between corporations and universities and other institutions. The support staff, as they monitor and manage progress, will summarize technical and commercialization issues at relevant junctures and offer guidance and advice in order to drive the program. At the end of the program, furthermore, they will offer advice as regards how to segue into other competitive R&D funding programs.

The PO will conduct interim and ex post evaluation of the program. In addition, three years after the conclusion of the program, the PO will conduct a follow-up research into the status of the technology in terms of commercialization and utilization.

The JST point of contact responsible for consignment research is the local Plaza or Satellite in the locality of the Core Research Institution. Please see the Plaza and Satellite jurisdiction below. Please also note that jurisdictional boundaries may change.

JST Innovation Plaza Hokkaido:	Hokkaido
JST Innovation Plaza Miyagi:	Miyagi Prefecture, Yamagata Prefecture, Fukushima Prefecture
JST Innovation Plaza Ishikawa:	Toyama Prefecture, Ishikawa Prefecture
JST Innovation Plaza Tokai:	Gifu Prefecture, Aichi Prefecture, Mie Prefecture
JST Innovation Plaza Kyoto:	Kyoto Prefecture, Nara Prefecture
JST Innovation Plaza Osaka:	Osaka Prefecture, Hyogo Prefecture, Wakayama Prefecture
JST Innovation Plaza Hiroshima:	Tottori Prefecture, Shimane Prefecture, Okayama Prefecture, Hiroshima Prefecture, Yamaguchi Prefecture

JST Innovation Plaza Fukuoka: Fukuoka Prefecture, Saga Prefecture, Nagasaki Prefecture, Kumamoto Prefecture, Okinawa Prefecture

JST Innovation Satellite Iwate: Aomori Prefecture, Iwate Prefecture, Akita Prefecture

JST Innovation Satellite Ibaraki: Ibaraki Prefecture, Tochigi Prefecture, Saitama Prefecture, Chiba Prefecture, Tokyo Prefecture, Kanagawa Prefecture

JST Innovation Satellite Niigata: Gunma Prefecture, Niigata Prefecture

JST Innovation Satellite Shizuoka: Yamanashi Prefecture, Nagano Prefecture, Shizuoka Prefecture

JST Innovation Satellite Shiga: Fukui Prefecture, Shiga Prefecture

JST Innovation Satellite Tokushima: Tokushima Prefecture, Kagawa Prefecture

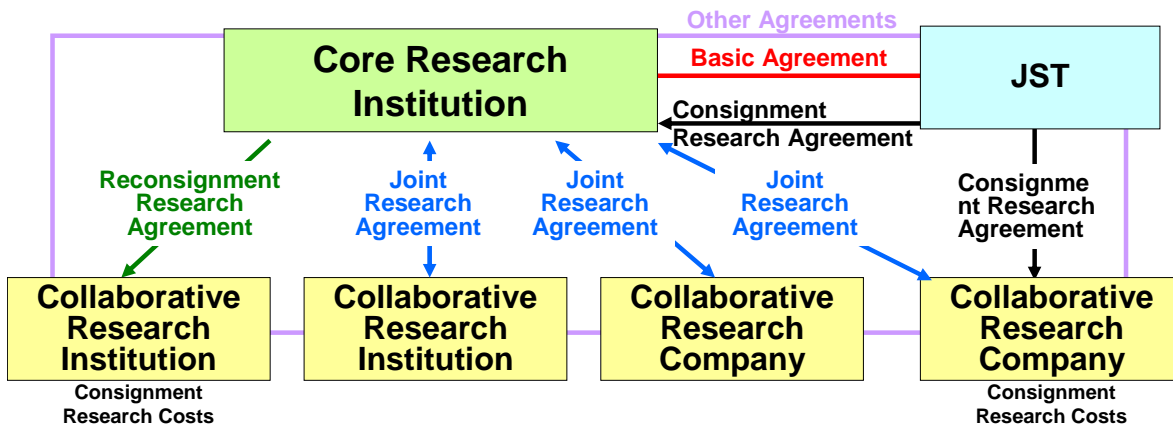
JST Innovation Satellite Kochi: Ehime Prefecture, Kochi Prefecture

JST Innovation Satellite Miyazaki: Miyazaki Prefecture, Oita Prefecture, Kagoshima Prefecture

(\*) Program Officer (PO)

The PO (Program Officer) is appointed by JST on the conditions that he or she possesses specialized knowledge and experience in research and development, is aware of R&D developments and trends, is capable of learned judgement based on expertise, and has a broad network of contacts. The PO's primary responsibilities include the drafting of a program management policy in accordance with the competitive funding system and of topic proposals based on JST evaluation, and execution and management of selected topics. Under the current system, the Director of a Plaza or a Satellite will assume this role.

(5) Agreement format



Basic Agreement (Multiple-Years)

JST and the Core Research Institution shall enter into a Basic Agreement based on all plans, produced at the beginning of the Project, for the whole duration of the Project.

Consignment Research Agreement (Single-Year)

JST and the Core Research Institution, and a Collaborative Research Company if necessary, shall also enter into a Consignment Research Agreement based on annual plans for each fiscal year of the Project.

Reconsignment Research Agreement (Single-Year)

The Core Research Institution may enter into a Reconsignment Research Agreement with a Collaborative Research Institution. It may not, however, reconsign any part of the research to a Collaborative Research Company.

#### Joint Research Agreement (Single-Year)

The Core Research Institution, Collaborative Research Institutions (excluding those that have been reconsigned), and the Collaborative Research Company will enter into Joint Research Contracts between them.

#### Other Agreements (Multiple-Year)

All bodies participating in the same Project (JST, the Core Research Institution, Collaborative Research Institutions, Collaborative Research Companies) will enter into necessary agreements on intellectual property rights and confidentiality and jointly promote the Project.

## **2. Application outline**

### **(1) Application requirements**

An applicant must meet the following requirements:

- An application must be based on research findings from a university and other institutions
- The projected research must assume eventual commercialization.
- Patents and other rights\* (original rights) required for commercialization and licensing have either been applied or are being prepared for application.  
(\* )These rights, in addition to patents, include model utility rights, circuit layout usage rights, breeder rights, and others.
- There must not be prior patents and/or other cases of commercialization, and permission of all original rights holders has been obtained.
- An application must be made and submitted jointly by a university and company.

A multiple number of universities and companies may submit a joint application. Applicants are encouraged to form a joint project in the most efficient configuration for R&D work.

### **(2) Applicant's requirements**

Applicants must meet the following requirements:

#### **(i) Research Director**

- The would-be Research Director must have been involved in earlier R&D work, findings of which are forming the basis of the projected research. (If the original rights are patents, then the Research Director candidate must be one of the inventors so identified in the patents.)
- The Research Director candidate must belong as a full-time researcher to a Japanese university or research institute for the duration of the Project.

(\* ) For cases that do not meet the above conditions, please contact us.

#### **(ii) Collaborative Research Company**

- The Collaborative Research Company must have basic resources and R&D capacity needed for the future commercialization utilizing research findings by universities, etc.
- Researcher(s) in the employ of the Collaborative Research Company must be assigned various tasks in the R&D Project.
- It must be a legal entity residing in Japan.

### **(3) Application period**

From June 24 (Wed.), 2009 to 12:00, August 6 (Thu.), 2009

### **(4) Number of applications that will be accepted**

About two subjects per Plaza/Satellite

### **(5) Consignment research costs**

Up to ¥26 million per project per fiscal year (including indirect costs)

Consignment research cost amounts may be modified subject to JST's budgetary requirements.



**(6) Research period**

The research period may be chosen from the following two options:

- a) April 1, 2010 - March 31, 2012 (two years); or
- b) April 1, 2010 - March 31, 2013 (three years).

**(7) Research location**

The Core Research Institution and the Collaborative Research Company will provide physical environments for research. However, in areas that fall under Plazas' jurisdiction, research may also be conducted at the Plazas' research facilities.

**(8) Application procedure**

- Both the Core Research Institution and Research Director must be registered in the Cross-Ministerial R&D Management System (e-Rad) in advance.
- Submission of an application requires both application on e-Rad and delivery of relevant documents by mail. For more detail on the application procedure and production of application documents, please see 8. How to Submit Application Documentation and 9. Manual for Notation in Application Documents.

### 3. Disbursement of consignment research costs

#### (1) Consignment research costs

JST will enter into a (single-year) Consignment Research Agreement with the Core Research Institution and, if necessary, with a Collaborative Research Company.

Consignment research costs: Up to ¥26 million/fiscal year (including indirect costs)

Research period: Two or three years

Consignment research costs are a sum total of direct and indirect costs. Applicants may add up direct costs first, and then compute indirect costs at 30% of direct costs (or, in the case of a Collaborative Research Company, within 30% of direct costs).

Please note well that actual amounts to be disbursed by JST, following official selection of the Project, may depend upon a close examination of various plans in application documentation and subsequent discussion and be adjusted accordingly.

#### (i) Direct costs

##### -Cost of goods and supplies

Research facility, equipment, prototypes, software, costs for purchase of research reagents and materials, consumables

##### -Travel expenses

Travel expenses for Research Director and Research Collaborator(s)

\* Expenses associated with travel of external staff and of researchers of the Collaborative Research Company will require JST's prior consent for subsidy.

##### -Rewards, remuneration, etc.

• Personnel costs at universities, etc. for researches, technicians and research assistants to be newly hired to conduct research for the Project.

• Compensation for technical training by external researchers

\* Personnel costs for staff working at the Collaborative Research Company cannot be subsidized.

##### -Others

Any Other Costs Required in Pursuit of the Project

• Costs for publication of research findings (fees for submission of papers, printing of separate copies), conferences (space rental, etc.), transportation, machine leasing and repair, printing, acquisition of literature, etc.

\*When facilities, consumables, and services are purchased from Collaborative Research Companies, or when services are outsourced to them, such costs, upon JST's prior approval, may be covered as Project expenses as far as original costs are concerned.

#### (ii) Indirect costs (overhead costs)

Indirect costs refer to expenses managed responsibly by reassignment organizations with a view to betterment of the work environment or for functional improvements. For the handling of indirect costs, please see "Common Guidelines for the Execution of Indirect Expenses in Competitive Funds"

(agreement at the liaison meeting of related government/ministries on competitive funds, revised March 27, 2009) (Appendix 1).

**(2) Expenses that cannot be paid out of direct costs**

(i) Costs unrelated to this research

(ii) The following costs cannot be subsidized, even if they are needed for the performance of this research.

- Costs for construction of buildings (facilities) and acquisition of real estate
- Costs for dealing with accidents and disasters occurring during the research period
- Costs for outsourcing Project-related R&D work to a third party other than Collaborative Research Institutions (Property testing and other outsourced services in the interest of efficiency improvements, however, may be excluded.)
- Personnel costs for staff, at universities, etc., other than researchers, technicians, and assistants engaged in R&D work
- Personnel costs for staff belonging to a Collaborative Research Company
- Food, entertainment, and annual membership fees for academic circles
- Costs associated with submission of patent applications
- Costs without rational or logical explanation

e.g., costs for bulk purchases of consumables in excess of consumption forecast for the research period

**(3) Reconsignment from the Core Research Institution and Consignment by JST to a Company**

Part of the Project's research may, if necessary, be reconsigned by the Core Research Institution to a Collaborative Research Institution.

The Core Research Institution, however, may not reconsign any part of research to a Collaborative Research Company. JST will directly consign the Company, if necessary.

In principle, the proportion of R&D work consigned to a Collaborative Research Institution and/or consigned to a Collaborative Research Company shall not exceed 50% of all R&D work in within the entire Project.

## **4. Review**

### **(1) Review methods**

A review of submitted proposals will be conducted by the Advisory Group (external experts) (\*) for each Plaza or Satellite.

The PO, with assistance from the Advisory Group, will review the contents of the submitted documents in accordance with “(3) Evaluation Criteria” below. The PO may make inquiry into the application details.

Review proceedings will not be disclosed. Persons who have a conflict of interest with an applicant shall not evaluate the proposed Project.

All persons involved in the review process shall not disclose to a third party any information acquired during this process, not only for the term of the process but also after they have resigned from their position. They are all mandated to manage and protect the confidentiality of any information with goodwill and utmost care.

JST will not discuss aspects of an ongoing review process or respond to query. Nor will JST return application documentation to an applicant.

(\*)The Advisory Group: Group of external experts set up to enable the PO to assess and evaluate proposed research topics smoothly and speedily.

### **(2) Review procedure**

Reviews will be conducted in the following steps.

#### **(i) Formality review**

Submitted documents will be reviewed to see if they meet submission requirements (criteria for applicants, requested monetary amount, availability of required forms, disqualification based on history of impropriety in research activities and improper use of research funds, etc.).

Applications that do not meet with submission requirements will be removed from subsequent consideration.

#### **(ii) Review of Documentation**

The PO, with assistance from the Advisory Group, will review the contents of the submitted documents. Based on its outcome, the PO will select proposed topics that will proceed to the interview stage.

#### **(iii) Interview**

The PO, with assistance from the Advisory Group, will conduct interviews. Researchers from Collaborative Research Company will also be asked to attend the interview, in addition to the Research Director.

#### **(iv) Selection of Research Topics**

Based on evaluation by the PO of the interviews, the Program Director (“PD”) (\*) will select final candidates, from which JST will name research topics.

(\*) PD: A person appointed by JST on the basis of superior S&T expertise and knowledge required for management of the competitive funding system and evaluation of R&D topics. The PD’s main responsibilities will be to determine management policy for the competitive funding system and to select research topics for the Program based on evaluation results.

### **(3) Evaluation Criteria in a review**

A review (except for a formality review) will be conducted in accordance with the criteria below. Because one of the Program's goals is commercialization of R&D findings by universities, etc., the review process will focus on the scope of commercialization in the application.

- (i) Innovativeness and superiority: The proposed research topic must promise technological innovation and offer expectations of marketability.
- (ii) Feasibility of plan: The proposal must consist of feasible and realistic R&D plans for eventual commercialization.
- (iii) Other factors needed to achieve results

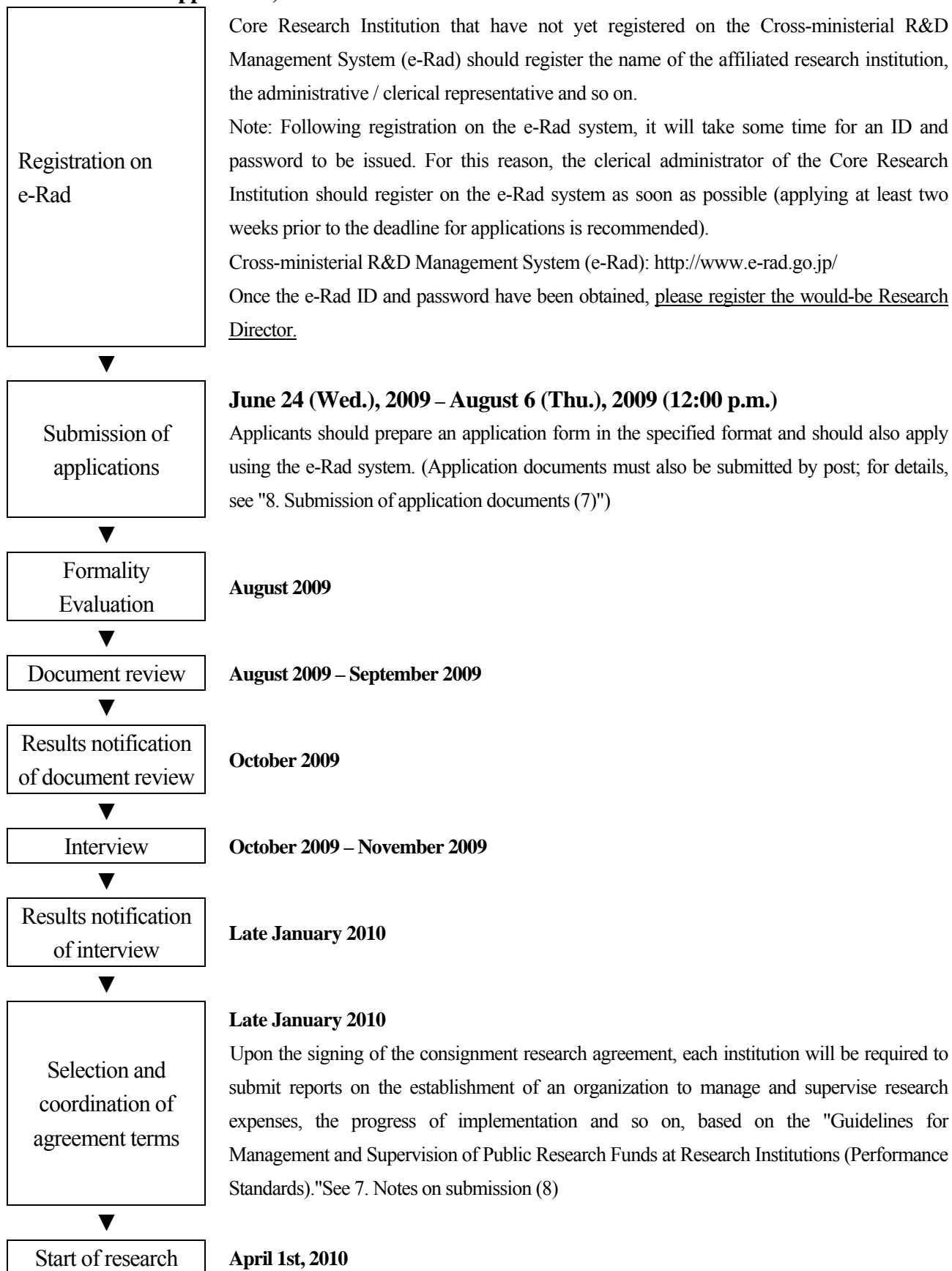
### **(4) Notification of results, etc.**

- (i) Following the review of documentation, the Research Directors of those topics selected for the interview stage will be notified accordingly in writing. The date and other details of the interview will likewise be notified.
- (ii) The Research Director of any application that has been turned down, either in the documentation review or in the interview stage, will be so notified at each stage.
- (iii) The Research Director of a proposal selected for the Program will be notified accordingly in writing and also provided with details of procedure needed to commence the Project.
- (iv) Selected applications will be announced on the JST homepage and elsewhere, including their research topics, Research Director (name, affiliation, position, title, etc.), Collaborative Research Institutions and Companies, and a summary of research. In the event of non-selection, JST will not publicize any of the information.

For management of applications, please see "7. Notes on submission (9) Handling of application details and personally identifiable data."

\* In order to provide for transparency and fairness, POs' identity will be disclosed on the JST homepage and elsewhere

## 5. Schedule for Application, Review etc.



Note: The dates in this schedule represent general guides only and may change as a result of various factors.

## **6. Responsibilities of the Research Director and other researchers following selection**

The Research Director and Research Collaborators of a selected research topic, as they conduct R&D work and spend consignment research costs, must meet the following requirements:

### **(1) Promotion of the research**

Research Director must be responsible for managing research and development activities, disclosing results and all other aspects of project promotion.

Research Director must be responsible particularly with respect to preparing plans, submitting various approval applications accompanying changes to plans, submitting regular reports and so on.

### **(2) Registration in Cross-ministerial R&D Management System (e-Rad)**

Once the proposal has been selected by JST, and if researchers at a company to which JST will consign research or at universities to whom the Core Research Institution will reconsign part of the Project have not yet been registered with e-Rad, they must be promptly registered with e-Rad.

### **(3) Presentation of “Progress Reports on Implementation in Accordance with the Guidelines for Management and Supervision of Public Research Funds at Research Institutions (Performance Standards).”**

The Core Research Institution and Companies to which JST consigns research are required to submit to the Ministry of Education, Culture, Sports, Science and Technology (MEXT) “Progress Reports on Implementation in Accordance with the Guidelines for Management and Supervision of Public Research Funds at Research Institutions (Performance Standards)” Please see “7. Notes on Submission (8)” for detail.

### **(4) Accounting management for consignment funds**

Expenses for the research and development project are disbursed from the national budget and are therefore subject to audit, which may include on-site inspection. Applicants should be thoroughly aware of this fact and should be prepared to accommodate on-site inspections and the like.

Universities, etc., and companies to which JST has consigned research are required to track and account for research expenses at all times and to strive for an efficient usage of money so as to obtain maximum results from minimum and fairest spending. Expenses must be so managed that they are categorized and itemized according to amounts and reasons and match the corresponding evidence. JST may ask for such evidence as and when it disburses funds.

### **(5) Project execution management**

During the research period, JST will manage the execution of the project to ensure that the objectives of research and development are achieved. Plaza/Satellite will check on the progress as needed (which may include on-site investigations), and the Research Manager and Coordinators and the like will offer advice, provide information and provide other support from the standpoint of commercialization and so on. During the period of research and development, the Core Research Institution will submit reports regarding progress in research and development and the use of the consignment research costs that have been received, on a regular or as-needed basis.

## **(6) Evaluation**

The Advisory Group and PO will conduct interim and ex post evaluation. Evaluators will review annual reports from and conduct interviews with the Research Director, so as to determine if the project has accomplished its original goals and plans set out at the beginning of the project. They will also conduct a follow-up survey three years after the end of the project, to evaluate it in terms of further research and development and application, technology transfers to businesses and contributions to regional innovation (which may involve a field survey). This follow-up survey will in turn provide materials for follow-up evaluation. The results of the ex post evaluation and follow-up evaluation will be released on JST's homepage and elsewhere.

(\* The Advisory Group and other persons engaged in the evaluation process are required to respect and protect the confidentiality of any information obtained during this process.

## **(7) Vesting of obtained items**

Ownership of research equipment and other items obtained through the use of consignment research costs disbursed by JST will be vested in JST. (Ownership will not revert to the institution with which the consignment agreement was signed.)

The consignee organ will handle all procedures for purchase of such equipment and JST will lease the equipment to the research-consigned institution. The institution, etc. will be responsible for exercising the care of a good manager with regard to the management of equipment, etc. (Equipment, etc. may not be used for purposes other than the research and development project.)

## **(8) Intellectual property right**

Intellectual property rights (patent rights, utility model rights, design rights, trademark rights, circuit placement use rights, breeder's rights, copyrights and other intangible property rights that have been created) obtained through research and development implemented using consignment funds for the research and development project will be vested in the inventor (affiliated institution), in accordance with the specific conditions (relating to application, reporting of achievements etc.) specified in the text of Article 19 of the Law on Strengthening Industrial Technical Capabilities" (Law No. 44, 2000) (the Japanese version of the Bayh-Dole Act). JST must be informed when achievements relating to these intellectual property rights have been obtained.

During the research period, in principle, original rights as well as intellectual property rights obtained in the Project may not be transferred or licensed to a third party. (If, however, JST and the research group agree that they would present no obstacle to commercialization, rights may be transferred or licensed.)

## **(9) Publication of research findings**

Program participants are encouraged to disclose and publicize results and findings at academic conferences in Japan and overseas and in media, so long as intellectual property rights are not violated. At the end of each Project, participants are asked to report findings at a conference aimed at the general public. They may also be asked to cooperate with and contribute to JST's effort to disclose and disseminate Program findings.



Approval must be obtained in advance from JST when disclosing research and development achievements by means of books, newspapers, magazine articles and so on. It must be clearly stated that these are the achievements of the JST research and development project, and materials that are made public must be submitted to JST.

## **7. Notes on submission**

### **(1) Measures to deal with unreasonable overlaps and excessive concentration of funds**

#### **(i) Measures to deal with unreasonable overlaps**

In the event that competitive funding from multiple sources has been unnecessarily allocated by the national government or independent administrative agencies for research by the same researcher on the same research issue (meaning in terms of the name and content of the research for which competitive funding is allocated), and in the event that any of the following is applicable, under this program the application may be excluded from the review, or selection may be canceled, or the amount of the expenses may be reduced ("cancellation of selection, etc.).

- If the applicant has applied at essentially the same time (including overlapping to a considerable degree; the same hereafter) for competitive funding from multiple sources for the same research issue, and the applicant has been selected to receive two or more funds
- If the applicant has applied for other funding for a research issue that is essentially identical to one for which the applicant has already been selected and has already been allocated competitive funding
- If there is duplication in the use of research funds among multiple research issues
- Other similar situations

At the application stage, there are no restrictions on submitting proposals to other competitive funding programs and the like. However, in the event that you are selected to receive funding under another competitive funding program or the like, you must inform the administrative office for this program without delay. Failure to report such circumstances may result in cancellation of selection, etc. under this program.

#### **(ii) Measures to deal with excessive concentration of funds**

Even in the event that the content of research being implemented with other competitive funding or the like differs from the content of research proposed under this program, cancellation of selection, etc. under this program may occur in the event that the overall research funds allocated to that researcher or research group ("researcher, etc.") during the fiscal year in question exceeds the limits of the funds that can be used in an effective and efficient manner, to the point where the funds cannot be completely used up during the research period, and in the event that any of the following is applicable.

- If the research funds that have been allocated are excessive considering the capability of the researcher, etc., the research method and so on
- If the research funds that have been allocated are excessive considering the effort allocated to that research issue, meaning the percentage of the researcher's total work time (%) that is needed to implement that research
- If expensive research equipment has been purchased unnecessarily
- Other similar situation

For this reason, please inform the administrative office for this program without delay in the event that you are selected to receive funding under another competitive funding program or the like after

you have submitted the proposal documents for this program, or in the event of any other changes to the information noted on the application. Failure to report such circumstances may result in cancellation of selection, etc under this program.

(iii) Provision of information relating to proposal content for the purpose of eliminating unreasonable overlaps and excessive concentration of funds

To eliminate unreasonable overlaps and excessive concentration of funds, some of the information relating to the content of applications (or selected issues / projects) may be provided to the departments in charge of other competitive funding programs, etc. including other ministries, by means of the Cross-ministerial R&D Management System (e-Rad) or the like. Information may be provided in the same manner if JST is asked to perform the same checks regarding other competitive funding programs.

**(2) Acceptance of applications for other competitive funding, etc. including from other ministries**

In the event of acceptance under another competitive funding program, or research subsidies of other kinds (including cases in which an application has been submitted but the results are not yet known), this fact must be noted on the application form (Form 3) under "List of research grants, subsidies etc. from public institutions."

If and when there is an unreasonable overlap in application content with other programs and/or an excessive concentration of funds, or if there are descriptions in the documentation that contradict facts, JST may choose not to select the proposal and, if the application has been selected, undo the selection or reduce the funding amount.

An institution may apply to the current Program so long as applications to other competitive funding programs have not yet been selected. In order to avoid unreasonable overlaps and excessive concentration of funds, however, ongoing or scheduled research subsidy from any competitive funding and other programs shall disqualify an institution from applying to the JST Program for the same research topic (whether in name or content).

**(3) Measures to deal with dishonest receipt or use of funds**

In the event of dishonest receipt or use of research funds relating to an issue for which research is conducted under this program ("dishonest use, etc."), the following disposition may be taken.

- Measures to deal with dishonest receipt or use of funds on the part of researchers

(i) Cancellation of agreement, etc.

In the event of dishonest use, etc., the consignment agreement will be canceled or altered and applicants will be required to return all or part of the consignment funds. In addition, in some cases agreements will not be signed with that applicant for subsequent fiscal years.

(ii) Restrictions on application and participation\*

Restrictions will be placed on application and participation in this program by researchers who have used, etc. consignment funds for this program in a dishonest manner, and researchers who have been complicit in this dishonest use, etc.

In addition, in some cases a general outline of the dishonest use, etc. (name of researcher, name of program, affiliated institution, research issue, budget, fiscal year in which research was conducted, nature of dishonest behavior, etc., nature of measures devised as a result and so on) may be provided to the administrators of other competitive funding programs, including those of other ministries and independent administrative agencies. (In some cases, restrictions may be placed on application and participation in other competitive funding programs, including those of other ministries and independent administrative agencies.)

The period of restriction on application and participation in this program on the part of researchers who have used, etc. funds in a dishonest manner, and researchers who have been complicit in the dishonesty will be from two to five years, beginning from the fiscal year following the fiscal year in which execution of research funding, etc. was terminated, etc. The exact duration will be determined based on the specifics of the dishonest use, etc.

Specifics of the use of research funds, etc. for other purposes	Period of time deemed to be appropriate
1 Used for unnecessary purposes in the performance of research, etc. relating to the research project, etc.	2 years
2 Used for a purpose that is different from that of the research project, etc. in the performance of related research, etc.	3 years
3 Used for purposes unrelated to research, etc.	4 years
4 Cash was disbursed for a mendacious request	4 years
5 The acceptance of the application was the result of lying or other dishonesty	5 years
6 Regardless of 1 through 4, funds were used for personal economic benefit	5 years

\* "Application and participation" means proposing or submitting an application for a new technical issue, participating in new research as a joint researcher, etc.

#### **(4) Measures to deal with acts of dishonesty in research activities**

In the event of an act of dishonesty (forgery, falsification or plagiarism; hereafter "acts of dishonesty, etc.") in research activities relating to technical issues for which research and development is implemented, the following steps will be taken in accordance with "Guidelines for Measures Taken for Acts of Dishonesty in Research Activities" (established August 8, 2006 by the Special Committee on Dishonest Acts in Research Activities of the Council for Science and Technology).

##### **- Steps taken in the event of acts of dishonesty in research activities**

###### **(i) Measures taken on an individual program basis**

- Cancellation or alteration of contract, return of consignment funds

Based on the " Common Guidelines for the Execution of Indirect Expenses in Competitive Funds " (agreement at liaison meeting by related government/ministries on competitive funds, revised November 14, 2006), the consignment agreement will be canceled or altered regarding issues for which

acts of dishonesty in research activities have been committed, and applicants will be required to return all or part of the consignment funds, with consideration given to the heinousness, etc. of the dishonest acts. In addition, in some cases agreements will not be signed with that applicant for subsequent fiscal years.

**(ii) Restrictions on application and participation**

Application and participation in the program will be restricted for a certain period of time for the following individuals. In addition, in some cases a general outline of the act of dishonesty, etc. (name of researcher committing the dishonest act, affiliated institution, research issue, budget, fiscal year in which research was conducted, nature of dishonest act, nature of measures devised as a result and so on) may be provided to the departments in charge of other competitive funding programs including other ministries, as a result of which these departments may restrict application and participation in the competitive funding within their jurisdiction.

Target of measures	Period in which application and participation are restricted (starting from the fiscal year after the one in which the dishonesty was committed)
Author or co-author of a research-related paper, etc. who is recognized to have been involved in an act of dishonesty involving that research paper, and other persons recognized to have been involved in the dishonest act	2 - 10 years
Person recognized to be responsible for the content of a paper, etc. relating to research in which an act of dishonesty was committed, even though that person is not recognized to have been involved in the dishonest act	1 - 3 years

**(5) Steps taken for researchers who are subject to restrictions on application and participation in other competitive funding programs**

Restrictions will be imposed on application and participation in this program by researchers who have been subjected to restrictions, either with regard to other competitive funding programs\* under the jurisdiction of the national government or independent administrative agencies, or research projects administered by JST other than competitive funding programs, as a result of to dishonest use, etc. of research funds or acts of dishonesty in research activities. The restrictions relating to this program will be in effect during the period in which restrictions are imposed on qualification for application to other competitive research programs.

"Other competitive funding programs" includes new programs that began accepting applications in FY 2009. In some cases, it may also apply to programs that ended in years prior to FY 2009.

\* See the following website regarding the specific programs that are subject to restrictions on application and participation:

URL: <http://www8.cao.go.jp/cstp/compefund/06ichiran.pdf>

**(6) Steps taken in the event that relevant laws have been broken**

If research has been conducted in violation of relevant laws, guidelines etc., selection of the application will be canceled or the consignment contract will be canceled or altered, and applicants will be required to return all or part of the consignment funds. In some cases, the facts may be made public.

**(7) Matters relating to storage of receipts for indirect costs**

Research institutions to which indirect costs are allocated will be responsible for appropriate management of these costs. Receipts and other documentation proving that indirect costs have been used appropriately must be stored in an appropriate manner for a period of five years beginning from the fiscal year following the one in which the research and development project was concluded.

**(8) Submission of reports on the status of organization, etc. based on guidelines (implementation standards) for the management and auditing of public research funds at research institutions**

Under the agreement for this program, each research institution is required to submit reports on the preparation, status of implementation etc. of a management and supervision organization for research funds, based on the guidelines mentioned in the title of this section. (The promotion of research will not be permitted unless reports on the status of implementation of this organization are submitted.)

For this reason, prior to the signing of the consignment research agreement, the research institution must submit a report in the format indicated on the website below to the Competitive Funding Coordination Office of the Research and Coordination Division in the Science and Technology Policy Bureau of MEXT.

URL [http://www.mext.go.jp/a\\_menu/02\\_b/08191222/001.htm](http://www.mext.go.jp/a_menu/02_b/08191222/001.htm)

Due dates for the status report and other details will be notified, once the application has been selected, in writing by JST's office for auditing research organs.

If a report was already submitted on another occasion in April 2009 or thereafter, there is no need to submit a new report. In such a case, please note in the application forms the code number assigned by the Cross-ministerial R&D Management System (e-Rad) for the research institution, the fact of your submission of the report, and the date of submission (or of posting, if mailed).

In addition, if project implementation is to continue in FY 2011 and thereafter, applicants will need to submit another report around the autumn of 2010, so you should expect to receive a notification or the like from JST or MEXT.

Following the submission of a report, in some cases an on-site inspection by MEXT (including the agency allocating funding) may be needed to determine the status of preparation of the organization. Your cooperation is requested in such cases.

In addition, with regard to the content of the report, if the response to the "essential matters" indicated in the notification from the head of the Science and Technology Policy Bureau dated May 31,

2007 is determined to be inappropriate or inadequate, or if other problems remain unresolved, research funds may not be disbursed.

## **(9) Handling of application data and personal information**

### **(i) Handling of information regarding technical issues, etc.**

The application documents and other submitted data are used to review the application. The review may include overlapping reviews by other projects and other agencies within JST.

Information on individual technical topics that have been accepted (name of program, name of research topic, and such other details as would be made public according to the application manuals of other public funding programs, name of Research Director, budget, research period) is considered to be "Information planned for public disclosure" in accordance with Article 5, Section 1-b of the "Law on Disclosure of Information Held by Independent Administrative Agencies, etc." (Law No. 140, 2001). Following acceptance, this information will be made public on the program website at the appropriate time.

In the event of non-selection, JST will not disclose the information, Irrespective of selection or otherwise, however, JST will record research topics, research directors, research institutions, and objectives, so long as the applicants agree, and disclose the information to other research institutions and companies with a view to information sharing with other funding programs and businesses.

### **(ii) Management of personal information**

Laws for the protection of personal information and related laws will be strictly observed with regard to personal information provided in connection with the application. This information will be used only for the following purposes. (This does not include cases in which providing this information is required by law.)

Please see the following website for details.

[http://www.soumu.go.jp/gyoukan/kanri/a\\_05\\_f.htm](http://www.soumu.go.jp/gyoukan/kanri/a_05_f.htm)

- Used for the review and for administrative contact, notification and other purposes relating to the review
- Following the review, used for additional administrative notification of accepted applicants regarding the agreement, etc., and to provide information on the holding of briefings, etc., and for other notification needed for the management of technical issues accepted for research and development
- Used for notification purposes (sending invitations to research achievement briefings, seminars, symposiums, etc. held by JST, invitations to apply for various projects, information regarding projects etc.)

## **(10) Provision of information from e-Rad to the Government Research and Development Database\***

Various types of information may be provided via the Cross-ministerial R&D Management System (e-Rad), which is managed and operated by MEXT, to the database mentioned in the title, which has been created by the Cabinet Office. In order to prepare this information, applicants may be asked to cooperate in the checking of data and various other tasks.

\* Created by the Council for Science and Technology Policy in the Cabinet Office to enable various types of information to be obtained in an integrated and comprehensive fashion and allow necessary information to be located and analyzed. The database is designed to make it possible to appropriately evaluate research and development activities conducted with national government funds, and to plan overall strategies and policies for funding allocation and the like in an effective and efficient manner.

## **(11) Other**

In applying for the JST Program, please ensure to take bioethics into consideration, secure safety, and comply with various statutes as well as ministerial ordinances and ethical guidelines. Please also make sure whether or not the proposed research topic requires formal approval, filing of reports, or confirmation by the responsible leader of the applicant institution, and/or reporting and requests by Collaborative Research Companies to the national and local governments. If applicable, all necessary procedures must be completed by the beginning of the project.

Main statutes and other legal instruments set forth by various ministries and agencies are listed up below. Please note well, however, that, depending on the research topic and category, there may be other statutes and regulations.

- Law regarding the regulation of human cloning technology (Law No.146, 2000)
- Guideline on the handling of the specified embryos (Ministerial Announcement No.83, MEXT, 2009)
- Guideline on generation and usage of the human embryonic stem cell (Ministerial Announcement No.84, MEXT, 2009)
- Ethical guideline on human genome and gene analysis research (Ministerial Announcement No.1, MEXT; Ministry of Health, Labour and Welfare (MHLW); Ministry of Economy, Trade and Industry (METI), 2004)
- Ministerial ordinance regarding clinical testing of pharmaceutical products (Ministerial Ordinance No.28, Ministry of Health and Welfare, 1997)
- On research and development using human organs enucleated during surgical operations (Recommendation, Council of Health Sciences, 1998)
- Ethical guideline regarding epidemiological research (Ministerial Announcement No.1, MEXT, MHLW, 2007)
- Guideline on gene therapy clinical research (Ministerial Announcement No.2, MEXT and MHLW, 2004)
- Ethical guideline on clinical research (Ministerial Announcement No.415, MHLW, 2008)
- Law regarding the multiplicity of life through the regulation of genetically modified organisms (Law No.97, 2003)

See the following websites for information regarding the laws, etc. established by MEXT and the Ministry of the Environment.

MEXT website (efforts relating to bioethics and safety)



URL [http://www.mext.go.jp/a\\_menu/shinkou/seimei/main.htm](http://www.mext.go.jp/a_menu/shinkou/seimei/main.htm)

Ministry of the Environment website (basic guidelines regarding animal rights management)

URL [http://www.env.go.jp/nature/dobutsu/aigo/2\\_data/rule.html](http://www.env.go.jp/nature/dobutsu/aigo/2_data/rule.html)

- In the event that research planning relates to studies or research requiring the agreement or cooperation of the other parties or societal consensus, be sure to take the appropriate steps to protect human rights and preserve profits before submitting the application.

If there are violations of the above requirements or cases of improper behavior in a project, JST in response may undo the selection, stop the research, recover the whole or part of the funds, and/or publicize the relevant facts.

## 8. Submission of application documents

The Research Director of a proposed project must submit the application documents via the Cross-ministerial R&D Management System (e-Rad) and via post in his/her name.

### (1) About the Cross-ministerial R&D Management System (e-Rad)

**The Cross-ministerial R&D Management System (e-Rad)** is a lateral system used in all ministries that enables all processes relating to research and development management -- with particular focus on the competitive funding programs administered by each ministry -- to be conducted online. (Submission of application -> review -> selection -> management of selected research issues -> reporting of achievements etc.)

"e-Rad" stands for "Electronic system for Research and Development."

<http://www.e-rad.go.jp/>

### (2) Registration of research institutions and researcher data

#### (i) Registration of research institutions

The Core Research Institution must be registered on the e-Rad system prior to submission of the application.

(Organ registration of the Core Research Institution or Collaborative Research Company is not necessary during the application process. However, once the proposal has been selected by JST for the Program, Collaborative Research Institutions to be reconsigned by the Core Research Institution and the Collaborative Research Company to be consigned by JST must be registered.)

One person at the Core Research Institution should be designated to serve as clerical administrator for the e-Rad system. That person should download the research institution registration form from the e-Rad portal site and submit a registration application. (In the event that other persons share the burden of clerical work, registration applications should be submitted for those persons as well.) In some cases, several days are needed for registration procedures, so please register at least two weeks in advance. Registration is effective across ministries; once registration is complete, there is no need to re-register at the time of application for programs or projects administered by other ministries etc. Similarly, if you have already registered for a program or project administered by another ministry etc. using the e-Rad system, you do not need to register again.

The institution registered here is known as the affiliated research institution.

#### (ii) Registration of researcher data

In order to apply for the Program, the clerical administrator of the Core Research Institution must register the would-be Research Director as a researcher on e-Rad and obtain his/her log-in ID and password.

(At the time of application submission, there is no need to register researchers other than the Research Director. However, it may be necessary to do so once the proposal has been selected by JST for the Program.)

Please see for more detail the operation manual on the e-Rad portal site for research institutions.

### (3) Inquiries regarding the use of the e-Rad system

Inquiries regarding this program are accepted at the JST department in charge of this program. For inquiries regarding the use of the e-Rad system, please contact the e-Rad Help Desk.

Before contacting the e-Rad Help Desk, check carefully on the e-Rad portal site to see if the answer to your question is noted there.

Please note that JST will not respond to inquiry about the evaluation process, including whether applications have been selected or not.

Comprehensive Support Programs for Creation of Regional Innovation:

<http://www.jst.go.jp/chiiki/index.html>

Portal site: <http://www.e-rad.go.jp/>

For more information:

Inquiry about the Program and its activities, and about application documentation and submission	See the contact information at the end of this pamphlet
Inquiries regarding the use of the Cross-ministerial R&D Management System (e-Rad)	e-Rad Help Desk tel:0120-66-877 (within Japan) 9:30 a. m. - 5:30 p. m. (not available Saturdays, Sundays and holidays)

### (4) Hours of the e-Rad system availability

Monday - Friday          6:00 a. m. - 2:00 a. m. (next day)

Sunday                  6:00 a. m. - 2:00 a. m. (next day)

These hours apply to holidays as well. The system is not available on Saturdays.

Please note that the system may be unavailable due to inspection and maintenance, even during the hours listed above. Scheduled times of system unavailability will be announced on the e-Rad portal site.

## (5) Example of use of the e-Rad system

Conducted by Core Research Institution

### **Register on Cross-ministerial R&D Management System (e-Rad)**

One person should be designated at the institution to serve as clerical administrator for the e-Rad system. That person should download the research institution registration form from the e-Rad portal site and submit a registration application. (In the event that other persons share the burden of clerical work, registration applications should be submitted for these persons as well.) In some cases, several days are needed for registration procedures, so please register at least two weeks in advance.

Reference: <http://www.e-rad.go.jp/shozoku/system/index.html>



Conducted by Core Research Institution

### **Import electronic certificate**

An affiliated research institution notification form (containing the system login ID and initial password for the clerical administrator) and electronic certificate will be sent by the system administrator. Import the electronic certificate into your work PC and log in using the login ID and initial password in the notification.

Reference: Section 2.1 in Affiliated Research Institution Manual ver.1.20



Conducted by Core Research Institution

### **Register the department data, data for persons sharing the burden of clerical work and researcher data**

On the e-Rad system, enter the department data, the data for persons sharing the burden of clerical work (if applicable) and the researcher data (for the person to be named Research Director when the application is submitted). A researcher ID and password will be issued.

Reference: Section 2.2, 2.3, 2.4 and 2.5 in Affiliated Research Institution Manual ver.1.20



Conducted by Research Director

### **Download the application procedures and application form**

On the e-Rad system, check the list of programs for which applications are currently being accepted and download the application procedures and application form. Alternately, download the corresponding file from the program website.

Reference: Section 2.2 and 2.3 in Researcher Manual ver.1.20



Conducted by Research Director

### **Enter application data and upload application form**

Enter the necessary data into the system and upload the application form.

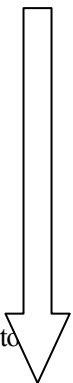
Reference: Section 2.3 in Researcher Manual ver.1.20



(\*) Because the Program does not require formal approval procedure within the Core Research Institution, they may be submitted directly to JST by the Research Director



**Application received by JST**



Documents that must be sent by post, etc.

## (6) e-Rad operations and important notes

### (i) Download application forms

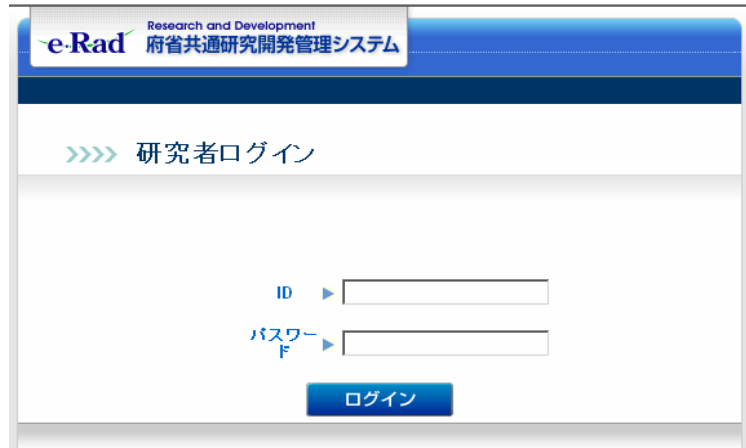
Read the terms of usage on the e-Rad portal site (<http://www.e-rad.go.jp/>) and download the latest version of the researcher (common) manual.

Log-in for Researchers

(研究者ログイン)

Log into e-Rad from e-Rad's researcher page.

Use the log-in ID and password provided in the "Log-in information notification." The password may be changed.



The screenshot shows the e-Rad portal header with the logo and the text "Research and Development 府省共通研究開発管理システム". Below the header, the page title is "研究者ログイン". There are two input fields: "ID" and "パスワード". A blue "ログイン" button is positioned below the password field.

Menu for Researcher

(研究者向けメニュー)

Click "List of Applications" (「公募一覧」)



The screenshot shows the e-Rad portal header with the logo and the text "Research and Development 府省共通研究開発管理システム". There are "ヘルプ" and "ログアウト" buttons in the top right. The page title is "研究者向けメニュー". The text "前回ログイン 2008/05/01 20:27:39" is displayed in the top right. A list of menu items is shown, with "公募一覧" circled in red. Other items include "電子申請", "応募基本情報変更・交付・委託契約手続き情報一覧", "成果報告情報一覧", "課題一覧", "研究者情報管理", "メール通知不要設定", and "パスワード変更".

List of funding organs  
(配分機関情報一覧)

Click on Japan Science and Technology Agency's (独立行政法人科学技術振興機構) “application information input (応募情報入力)” button.

府省庁名	配分機関名	公募一覧
内閣府本府	内閣府	応募情報入力
総務省	総務省	応募情報入力
総務省	消防庁	応募情報入力
総務省	消防庁消防大学校消防研究センター	応募情報入力
総務省	独立行政法人情報通信研究機構	応募情報入力
文部科学省	文部科学省	応募情報入力
文部科学省	独立行政法人物質・材料研究機構	応募情報入力
文部科学省	独立行政法人防災科学技術研究所	応募情報入力
文部科学省	独立行政法人放射線医学総合研究所	応募情報入力
文部科学省	独立行政法人科学技術振興機構	応募情報入力
文部科学省	独立行政法人日本学術振興会	応募情報入力
文部科学省	独立行政法人理化学研究所	応募情報入力

List of submissions  
(受付中公募一覧)

Download the application guideline (公募要領) and application forms (申請書様式).

公募名	公募要領	申請書様式	URL	募集要領の有無	応募受付開始日	募集内容締切日	応募受付終了日	応募情報入力
平成24年度 重点領域研究 推進事業の 公募(専攻研 究)	 	 	募集要領 申請書様式 応募要領 申請書様式 応募要領 申請書様式		2009年 月 日		2009年 月 日	応募情報入力

## (ii) Production of the Application Forms

Please see “9. Instructions on notation in the application forms” for notes on notation.

Some (but not all) of instructions as to how to notate in the application forms are set forth below, please always consult the e-Rad portal site for other details.

<http://www.e-rad.go.jp/kenkyu/doc/teiansho.html>

- Please use Word or PDF in production of the application forms (Forms 1-4). The forms may not upload properly on e-Rad if they are not made of Word 2000 and Adobe Acrobat Reader (Adobe Reader) 5.0 or subsequent versions.
- Please do not protect the forms with a password.
- Please delete revision history in Word.
- Please only use GIF, BMP, JPEG or PNG for image files to be attached on the application forms. Other image formats do not convert properly into PDF.
- Maximum file size that can be uploaded onto e-Rad is 3MB. Multiple documents cannot be uploaded at the same time.

- End use-defined characters and other special characters can be garbled during uploading and PDF conversion. For e-Rad compatible characters, please see the portal site. Please also retrieve and view uploaded documents and confirm that they have uploaded and converted properly.

**(iii) Input of application data and upload of application forms**

List of programs seeking applications  
(受付中公募一覧)

Click on the “application data input (応募情報入力)” button the program to which you wish to apply.



Application criteria  
(応募条件)

Please read the notes and then click “agree and proceed. (承諾して次へ進む)” button.



Registration of application data  
(confirmation of researcher data)  
(応募情報登録【研究者情報の確認】)

Review registered researchers and click “next. (次へ進む)” button.

(Notices of receipt automatically generated by the e-Rad system are sent to the e-mail address displayed on this page. If the address is not yours, please see additional notes below.)



(Additional Note) How to change the e-mail address displayed on the “Registration of application data (confirmation of researcher data)” page

- The e-mail address displayed on this page is the one that was registered by the applicant as his/her contact point. Requests for revision of the application forms or any changes in the status of the proposal are automatically transmitted to this e-mail address.

- If it is necessary to change this e-mail address to your own, please contact administrative staff of the research institution to which you belong.

Registration of application data (Common data) (応募情報登録【研究共通情報】の入力)

Researcher manual 2.3-6

New or existing (新規継続区分): Choose new (新規)

Topic ID (課題 ID): Ignore

R&D topic (研究開発課題名): Input topic title in application form 1

Research period (start) (研究期間 (開始)): 2010

(end) (終了予定): 2011 (for 2 years)

2012 (for 3 years)

Main category, subsidiary categories 1-3 (主分野、副分野 1 ~ 3):

Input the “main category” and “subsidiary categories” under “Technological category of research topic” in Application Form 1

(For three-digit codes, please input one zero before the code number)

Research keywords 1-5: Input the “keyword” code number in Application Form 1

(For single- and double-digit numbers, please use one or two zeros for blank digits)

Research purpose (研究目的): Input “see application forms (「申請書参照」)”

Research outline (研究概要): Copy 200 characters from “research purpose” (public) from the application form 1.

>> Click “next.” button.



Applicant data registration (input of research-specific data)

(応募情報登録【研究個別情報の入力】)

Researcher manual 2.3-8

Input Plaza/Satellite (プラザ・サテライト) of your jurisdiction, category of institution (所属区分), zip code (連絡先郵便番号), contact address (連絡先住所), contact telephone number (連絡先電話番号), e-mail address, in accordance with instructions.

>> Click “next” button.

Application data registration (input of initial budget)

(応募情報登録【応募時予算額の入力】)

Researcher manual 2.3-9

Direct/indirect costs (直接経費・間接経費) (Core Research Institution): Please input the Core Research Institution’s estimated direct and indirect costs, in thousands of yen, under “required expenses” in Application Form 1.

Direct/indirect costs (Collaborative Research Institution/Company):

- If there are direct and indirect costs to be incurred by Collaborative Research Institution/Company, please input their sums. If the research period is two years, keep the value of 2012 as “0.”

>> Click “calculate (計算)” button and then Click “next.” button

Application data registration (input of research institution data),

応募情報登録【研究組織情報の入力】

Researcher manual 2.3-10

Direct/indirect costs

Please input sum totals of direct and indirect costs to be incurred by the Core Research Institution for the whole term of the Project.

Effort (エフォート):

Please input the estimated ratio of effort, in percentages, required for this research project for all participating researchers

out of all their work hours (including research, instruction, and clinical activities, etc.) per year.

Input the Research Director's effort in "participating researchers" in Application Form 1.

1. Specialty area (専門分野): No input necessary

3. Role division (役割分担): No input necessary

(Do not click "add (追加)" button)

>> Click "next" button

Application data registration (Selection status)

### 応募情報登録【採択状況の入力】

Researcher manual 2.3-12

**No input is necessary.**

>> Click "next" button



Application data registration (Application data file selection)

### 応募情報登録【応募情報ファイルの指定】

Researcher manual 2.3-14

Please select the application form file to be uploaded

>> Click "next" button



Application data registration (review input data)

応募情報登録【入力情報の確認】

Researcher manual 2.3-16

Please review the input data and click “OK” button.

If you want to revise any of the data, please click “return (戻る)”

(Please do not click on the back button on the browser.)

A “now processing...(処理中・・・)” message will be displayed under the page, and uploaded files and input data will be automatically merged and converted into PDF. Since there are instances of an unsuccessful merger, please download the generated PDF files and review the documents for any errors.

**Research and Development e-Rad 府省共通研究開発管理システム**

応募情報登録【入力情報の確認】

研究者情報の確認>>研究共通情報の入力>>研究個別情報の入力>>応募時予算額の入力>>研究総額情報の入力>>応募・受入状況の入力>>応募情報ファイルの指定>>入力情報の確認

【応募者情報(研究共通情報)】

年度	2010年度
配分機関名	独立行政法人科学技術振興機構
研究種別	重点地域研究開発推進プログラム
事業名	育成研究
新着種別区分	新着
課題ID	
研究開発課題名	〇〇装置の開発
研究種別	応用研究, 開発研究
研究期間	(開始) 2010年度～(終了予定) 2012年度
主分野	(コード) 1000 (名) 自然科学一般
副分野1	(コード) 0102 (名) ライフサイエンス(医学・医療)
副分野2	(コード) (名)
副分野3	(コード) (名)
研究キーワード1	(コード) 034 (名) 脳神経疾患
研究キーワード2	(コード) (名)
研究キーワード3	(コード) (名)
研究キーワード4	(コード) (名)
研究キーワード5	(コード) (名)
研究目的	申請書参照
研究概要	<input type="checkbox"/> 〇〇に関する〇〇装置の開発及び企業化を目指す。

【応募者情報(研究個別情報)】

プラザ・サテライト	プラザ北海道
所属区分	国大
連絡先電話番号(半角数字)	102-6666
連絡先住所	東京都千代田区西葛城5番地3
連絡先電話番号(半角数字)	03-5214-XXXX
E-mailアドレス(半角英数字)	YYYY@isp.jp

【応募者情報(応募時予算)】

使用内訳(千円)	直経費合計(千円)		平成22年度	平成23年度	平成24年度	合計
	直経費合計(中経研究機関分)	直経費合計(共同研究機関・共同研究企業分)	15,000	15,000	15,000	45,000
間接経費(一般管理費)(千円)	小計		20,000	20,000	20,000	60,000
	間接経費合計(中経研究機関分)	間接経費合計(共同研究機関・共同研究企業分)	4,500	4,500	4,500	13,500
	小計		1,500	1,500	1,500	4,500
	研究総費(千円)		6,000	6,000	6,000	18,000
			26,000	26,000	26,000	78,000

【研究総額情報】

	研究者氏名	所属研究機関 所属機関 職名	専門分野 学位 役職分類	直経費(直経費) 間接経費(一般管理費) (千円)	エフォート(%)
研究代表者	(研究番号) 00000167 (フリガナ) 力平 久 (漢字) 力平 久	(所属研究機関コード) 9000001021 (所属機関名) その他 (職名) 教授	(専門分野) (学位名) 博士 (役職分類)	45,000	30
合計				45,000 0	

【応募・受入状況】

機種の 名称	配分機関	事業	課題	研究開発課題名	研究期間	予算額(千円)	エフォート(%)

【応募情報ファイル】

添付ファイル C:\Documents and Settings\tsurumen\デスクトップ\ダウンロード\jyushiki\_021.doc

「OK」ボタンをクリックしてシステムエラー画面が表示される場合は、このプロセスまで連絡してください。

キャンセル 戻る 一時保存 **OK**

## Application data registration

### 応募情報登録確認画面

Researcher manual 2.3-18

1. Please click on the “download (ダウンロード)” button and review the PDF file.

Please use the PDF password indicated in the log-in data notification (same as log-in ID).

Please confirm and see if your diagrams are properly shown in PDF.

2. If your documents are in proper order, press the “confirmed/submit (確認完了・提出)” button.

This step completes the submission of an application to JST.

Once the application documents are submitted, the information contained therein cannot be modified.

The documents will be available for viewing by the administrator of the applying institution at the time of submission to JST.



Application to the Practical Application Research Program requires approval by the representative of the applicant institution but e-Rad operations do not require his/her approval on the system. Administrators of an applying research institution are asked not to set a deadline within their institutions before August 6.

### (iv) Confirmation of submission status on the e-Rad portal

In accordance with the Researcher manual (2.3-23- ), please confirm that the status of your submitted application is “in submission at funding organ” (the due date for submission is Thursday, August 6, 2009).

## Submission status

### 受付状況一覧画面

Researcher manual 2.3-23

Please see and make sure your submission status is “submitted to funding organ (配分機関受付中).”



If your submission status does not display “submitted to funding organ” by the application due date, then your application will become void.

**(v) JST’s receipt of an application / confirmation on the e-Rad portal site’s submission status page**

- JST will complete receipt of all applications by August 20, 2009
- From August 21 onward, please make sure that the status of your application is “being processed at funding organ” on e-Rad’s submission status page.
- JST will not notify applicants of JST’s receipt of applications.

Submission status

**受付状況一覽画面**

From August 21 onward, please make sure that the status of your application is changed to “being processed by funding organ” from “submitted to funding organ.”



**(7) Due date for application documents and rules for submission**

Application to the Program requires both (i) application procedure on the Cross-ministerial R&D Management System (e-Rad) and (ii) delivery of application documents to JST by post.

Documents	Forms	Submission method	
		e-Rad	Post (hard copy)
Practical Application Research application	Forms 1-4	1 copy	1 copy
Copy of applications for patents (original rights) *1	-	-	5 copies each
Copy of reference literature (up to 3 articles)	-	-	5 copies each
Corporate profile or pamphlet of Collaborative Research Company *2	-	-	5 copies each
The latest annual report or securities report of the Collaborative Research Company	-	-	5 copies each

\*1 There is no need to attach as evidence patent application documents that have not yet been submitted.

\*2 Please submit a document that includes the following information: company name, HQ location, founding year and month, equity capital, board directors, size of workforce, business, main shareholders, main banks, main trading partners, corporate history.

**(i) e-Rad due date: 12:00, Thursday, August 6, 2009**

- Please register the would-be Research Director and his/her research organ on the Cross-ministerial Research & Development Management System (e-Rad) at least two weeks prior to the above due date.

- The system does not accept submission after the above date and time. Please submit your application well in advance.

(ii) Due date for mail delivery: August 6 (Thursday), 2009 (post mark of the same date is valid)

(\*) Please send documents to the Plaza or Satellite in the jurisdiction of which the Core Research Institution is located (for Plaza/Satellite jurisdiction please see page 3; for their addresses, please see the end of the volume).

- Please submit the same Practical Application Research application (Forms 1-4) as the ones uploaded on e-Rad.
- Please send the documents via mail (registered delivery) or courier service so that you may have evidence of submission. JST does not accept submission via fax and e-mail.
- Applications may not be accepted if they have not been sent on the due dates or if the documents are incomplete.
- Application documents will not be returned.

## 9. Guide to notation in the application

Please download the application forms for the “Science and Technology Incubation Program in Advanced Regions (Practical Application Research)” from the e-Rad portal site and produce your application in accordance with the Application Handbook.

Cross-ministerial Research & Development Management System (e-Rad): <http://www.e-rad.go.jp>

- Please keep your application simple and efficient. You may enhance the document as you see fit but please keep the given format intact.
- Notes in blue in the application forms are instructions and considerations for your attention. Please delete them as you complete the application forms.

### (i) Form 1 Application Form

- For Office use only

This is strictly for Office use. Please do not write anything here.

- Research topic

Please provide the name of your research project that describes its scope and content clearly. Please note concisely the kinds of technology to be researched and developed, the category of systems to be deployed upon commercialization, and the materials required.

- Core Research Institution (University, etc.)

Please spell out the full and official name of the institution, without any abbreviations

Head of institution	Please write the name of the person in charge of the applying institution. For a university, it will be the president of the school, the dean of a college, department, or graduate school; for a company, the representative director and president or someone on the board with powers of representation.
Research Director	Please write the name of the leader who will head up the research project. The Research Director is an inventor of a relevant original right(s), belongs to a domestic university as a full-time researcher, and capable of leading the project with responsibility.
Administrative contact person	Following JST’s selection of an application, the Clerical administrator will serve as the first point of contact over administrative matters pertaining to the consignment research agreement.

- Collaborative Research Company (compulsory) & Institution(s)

Main researchers	Please list up researchers who will be the principal contributors to the project at Collaborative Research Companies and/or Institutions.
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Because an application is submitted online via e-Rad, there is no need for seals to be physically

stamped on the documents. JST assumes, however, that an application is made and submitted with understanding and consent on the part of the responsible representative(s) of your institution for this Program.

(ii) Form 2 Patent & Reference literature lists

Please list up all patents\* (original rights) relevant for future commercialization, including those that are being prepared for application.

The key criterion for applying to this Program is as follows: patents and other rights\* (original rights) required for commercialization and licensing have either been applied or are being prepared for application; and There may not be prior patents and/or other cases of commercialization, and permission of all original rights holders has been obtained (please see 2. Application Outline (1) Application requirements).

As for reference literature, please list representative works to date among the Research Director's papers and academic conference presentations on the research topic.

(\* In addition to patents, these rights include model utility rights, circuit layout usage rights, breeder rights, and others.

(iii) Form 3 List of R&D subsidies from public organizations

Please list all financial grants and subsidies from competitive R&D funding programs of the Government or of independent administrative agencies that the Research Director and/or main researchers are currently receiving, planning to apply for within this financial year, are currently applying for, and/or have received within the past three years.

(iv) Form 4 Lists of Patents held by other parties and of reference literature

Please list all patents held by other parties and reference literature that will be relevant upon commercializing technologies used in the research topic.

In addition, if you have conducted any research into these issues, please describe in the margin your methodology (outsourced parties, keywords, databases, etc.) and findings.



## 10. Q&A on Practical Application Research

(Application Criteria: Research Director)

Q1 Is it possible to apply for the Program if the Research Director is set to retire during the research period?

A1 If the Research Director is able to stay on at his/her research institution inside Japan as a full-time researcher even after retirement and enter into a consignment research agreement with the institution, then it is possible to apply.

(\*) If the above condition cannot be met, please contact JST before applying.

Q2 Is it possible to apply if the Research Director is a foreign national?

A2 If the Research Director is serving at his/her research institution inside Japan as a full-time researcher and enter into a consignment research agreement with the institution, then it is possible to apply.

(\*) If the above condition cannot be met, please contact JST before applying.

(Application Criteria: Collaborative Research Company)

Q3 If the Research Director belongs not only to a university but to a venture company, etc., is it possible to have that company participate as a Collaborative Research Company?

A3 One purpose of this Program is to transfer research findings (patents, etc.) to companies and to commercialize the technology. If the Research Director is Representative Director and President, or even a board member, of a company, that company will be deemed to have internalized the technology associated with findings in the research topic. If this company is the sole Collaborative Research Company proposed for the Program, then it will not match the Program's stated purpose. On the other hand, if there are going to be several Collaborative Research Companies, then their roles will be judged separately. Please discuss with JST before applying.

Q4 An incorporated foundation falls under the definition of "a university and other research institution." Is it possible to participate in the Program as a Collaborative Research Company?

A4 If the foundation is a legal entity established within Japan, and if its charter states as part of the foundation's activities production and distribution of goods and/or services, which are essential for commercialization of R&D findings, then it is possible for it to apply for the Program.

Q5 Is it possible for a venture business owned by college students to participate as a Collaborative Research Company?

A5 Yes. Because the students are participating as company researchers, their personnel costs may not be paid out of direct costs.

(Application Criteria: Original rights)

Q6 Is it possible to apply for the Program even if the Research Director is not identified as an inventor of an original right?

A6 If the Research Director is not an inventor of any original right, then he/she may not apply. If, on the other hand, there are several original rights involved, and some do not have the Research Director as an inventor, it is possible to apply for the Program.

Q7 Is it possible to apply for the Program, even if a Collaborative Research Company is the sole applicant of an original right?

A7 If the inventors of that particular original right include the Research Director, and if that right can be deemed to be an outcome of university research, then it is possible to apply for the Program.

Q8 If an original right is pending application, by when must the application be submitted?

A8 The original right application must be submitted by the beginning of the research project, i.e., April 1, 2010.

Q9 How are original rights going to be treated?

A9 Original rights are not to be transferred or licensed to a third party during the research period, so that they may be kept available to Collaborative Research Companies as they attempt commercialization. (If JST sees no obstacle to commercialization effort, however, rights may be transferred or licensed.)

Furthermore, if the Collaborative Research Company wishes to license original rights, the holder(s) may discuss terms with the Company and approve the licensing.

If there are other holders of original rights than universities and companies, it is important to explain the above considerations to them before the commencement of the project and obtain their prior approval.

(Application Method )

Q10 Upon application to the Program, it is necessary to register the Core Research Institution as a research organization and the Research Director as a researcher on e-Rad, but is it likewise necessary to do with Collaborative Research Institutions and Companies and their researchers?

A10 There is no need to register Collaborative Research Institutions and Companies or their researchers on e-Rad at the time of application to the Program. As for those Collaborative Research Companies to which JST must consign R&D, or those Collaborative Research Institutions to which the Core Research Institution must reconsign R&D work, please register these entities and their main researchers on e-Rad as soon as your application has been selected for the Program.

Q11 Is it necessary to have seals of approval from the representatives of research institutions in the application documents?

A11 Because the application process takes place online at the e-Rad portal site, there is no need to have physical seals. However, please make sure you have all necessary approval from participating entities before applying.

(Review)

Q12 Are interview dates already set? Who among project researchers should attend the interview?

A12 No interview dates are set yet. As soon as they have been fixed, JST will provide the information in the homepages of the Plazas and Satellites. Attendance is required of the Research Director and researchers of Collaborative Research Companies.

Q13 May anyone other than the Research Director attend the interview on his/her behalf?

A13 In principle, no. The Research Director and researchers of Collaborative Research Companies are asked to come to the interview.

(Contracts)

Q14 Is it possible for JST to directly consign R&D to a Collaborative Research Institution?

A14 In principle, no. As and when Collaborative Research Institutions must undertake R&D and expend JST-consigned research funds, please have the Core Research Institution reconsign that work to the Collaborative Research Company.

Q15 “Progress reports on implementation in accordance with guidelines (implementation standards) for management and auditing of public research funds at research institutions” are required as part of the consignment research agreement with JST. Are Collaborative Research Companies and Institutions likewise required to file these reports? And what about Collaborative Research Institutions to be reconsigned?

A15 Those entities that are not receiving consignment research funds are not required to submit such progress reports. As for Collaborative Research Institutions to be reconsigned, it will be the responsibility of the Core Research Institution to ensure that implementation and reporting, as well as cooperation for field surveys, are done properly at these reconsigned institutions.

(Implementation system)

Q16 Is it possible for the Research Director to continue the research project even when he/she has been assigned to another institution during the term of the project?

A16 If his/her new posting is at a university, and if that institution is able to enter into a consignment research agreement with JST, then the Research Director may continue the project. In such an instance, the same Plaza/Satellite will remain in charge of the project.

Q17 Is it possible for students to participate in a project?

A17 Graduate students are permitted to participate in the Program so long as the following conditions are met. Undergraduate students, however, are in principle not permitted to participate.

- (a) Permission has been obtained from universities and companies participating in the project to allow graduate students to join it.
- (b) Research institutions are able to employ graduate students to as research assistants and require them legally to observe the same responsibilities as other researchers in terms of confidentiality and prior approval where inventions and publications are concerned.
- (c) Graduate students are allowed to pursue their studies without any impediments while participating in the project.

- (d) Graduate students are insured by the Student Education and Research Accident and Casualty Insurance (compulsory) and the Student Education and Research Accident Liability Insurance (optional).

(Direct costs)

Q18 It is possible for the Core Research Institution to outsource to companies?

A18 It is possible for the Core Research Institution to outsource to a third party such services as data analysis, at specification, that includes no research elements. In such an instance, please estimate its cost under “Others” in the cost columns in Application Form 1.

It is not possible, however, for the Core Research Institution to outsource R&D, in whole or in part, to a company. A company undertaking Program-related research and development must participate in a research project as a Collaborative Research Company. In such a case, JST will directly consign R&D to the company.

Q19 In what instances would company researchers’ travel expenses be approved?

A19 It is possible to pay for travel expenses of company researchers so long as conditions (i) and (ii) below are met.

(i) Destinations are located within Japan.

(ii) Destinations and objectives meet the following requirements:

( a )Presenting findings from the JST Practical Application Research Program at an academic conference (mere attendance is not acceptable)

( b ) Presenting at JST-organized symposia and events, at JST’s request

( c ) Attending and presenting at JST’s interim and ex post evaluations.

Research-related meetings, surveys, collection of relevant literature are, in principle, not acceptable

Q20 Is it possible to cover travel expenses for graduate students participating in the research project?

A20 Yes, so long as such travels are judged to be necessary for the project. Please discuss with JST as and when such need arises.

Q21 After the conclusion of the project, what happens to equipment and goods that have been purchased out of direct costs?

A21 Equipment and goods acquired by universities must be transferred to their custody immediately after the conclusion of the research project at free of charge. Those acquired by companies will be transferred to them, at a certain cost, after a period of paid-for lease. It is also possible, subject to consultation among the Core Research Institution, the Collaborative Research Institutions and Companies, and JST, to transfer such equipment and goods to a joint research company or to any other party other than the consignees of the original project.

**(Form 1)**

To: Mr. Michio Obara

Vice Director-General, Innovation Headquarters, JST

**Application for the Science and Technology Incubation Program  
in Advanced Regions**

For Office Use Only			
Date received	/ /2009		
Plaza/Satellite		Receipt no.	

**(Practical Application Research)**

I have read and understood the application requirements for the above program. / /2009

Topic title			
Core Research Institution (University, etc)	Name of institution		
	Representative		Position
	Location		
	Research Director		Post/position
	Address and contact information	TEL. / FAX. E-mail	
	Research Director CV	Please write year of birth, academic and professional history, research accomplishments.	
	Administrative contact person		Post/position
	Administrative contact details	TEL. / FAX. E-mail	
	e-Rad ID	Researcher code number (Research Director): (eight digits) Research institution code number: (ten digits)	
	Progress report submission date	<input type="checkbox"/> Already submitted : (Year/Month/Day) <input type="checkbox"/> Not yet submitted	

(Attach an additional page for each Collaborative Research Company.)

<b>Collaborative Research Company</b>	Name of institution			
	Representative		Position	
	Location	URL:		
	Main Research Collaborator		Post/position	
	Address and contact information	TEL. / FAX. E-mail		

(Attach an additional page for each Collaborative Research Institution.)

<b>Collaborative Research Institution</b>	Name of institution			
	Representative		Position	
	Location			
	Main Research Collaborator		Post/position	
	Address and contact information	TEL. / FAX. E-mail		

(\* Please refer to Appendix 1 (p.52, Handbook) for main category and sub-categories.

Please see Appendix 2 (p.53, Handbook) for keywords and their code numbers.

Research field(*)	Main category (one)	
	Sub-categories (up to 3)	
	Keywords (up to 5)	
<p>Utilization of application data</p> <p>Upon selection for the Program, JST will publicize the research objective of an application on its homepage and elsewhere, unless such publicity poses any risk to patents, etc. Please describe the project's outline in 200 Japanese characters, in the Japanese language.</p> <p>Irrespective of selection, furthermore, JST will record research topics, Research Directors, research institutions, and research summaries, so long as the applicants agree, and disclose the information to other research institutions and companies with a view to information sharing with other funding programs and businesses. If you agree with this initiative, please check the "Agree" box below.</p>		
<p>Research summary (for publication), about 200 Japanese characters</p>		
<p>Publication of application data      <input type="checkbox"/> Agree      <input type="checkbox"/> Do not agree</p> <p>(Please convert the relevant square to ■)</p>		

Topic title	Please write again
	<p>1. Outline of technology and product to be commercialized</p> <p>Please provide a concise and objective description, in about 400 Japanese characters, of product outline, usage, characteristics of core technology involved (details of patents), its superiority versus competitive technologies (technical factors), and points of differentiation (functionality, cost, etc.).</p>
	<p>2. Outline of objectives during the research period</p> <p>Please provide goals for the project during the research period, with 1. above as the ultimate goal.</p>
	<p>3. Detailed description of technology and product to be commercialized</p> <p>(1) Technology and product profile in terms of innovation, originality and superiority</p> <p>Please present objective data and reference materials, based on the above "description...of product outline, usage, characteristics of core technology involved (details of patents), its superiority versus competitive technologies (technical factors), and points of differentiation (functionality, cost, etc.)</p> <p>(2) Developments in competitive technology and products, and expected market developments</p>



#### 4. Ripple effect

##### (1) Economic

Please present a concrete vision, including such factors as price comparison, market competitiveness, revenue forecast, market share, and also provide supporting rationale.

##### (2) Social

Please forecast product's impact on ordinary citizens' lifestyle when the objectives of the project have been accomplished.

##### (3) Commercialization plan

Please present plans for commercialization after the conclusion of the research period, in terms of system, factors, duration and go-to-market timing. (Please provide maximum detail for the 3 years after the project.)

## 5. Research plans

### (1) Concrete plans

#### (i) Technical issues to be solved and numerical targets to be achieved

Please provide target values for the research project, as well as their current values, areas for improvement, annualized numerical goals, etc.

#### (ii) Measures/methodology for technical issue resolution

Please list issues and very specific methods for resolution that are required in order to attain the above-stated goals. Please provide description and discuss their effectiveness. (JST needs to have a clear idea here, as well as for (i) above, for evaluation. Please be objective.)

(iii) Research period: April 2010- Month ( ) Year ( ) (maximum through March 2013)

Research item	Apr/'10	Oct/'10	Apr/'11	Oct/'11	Apr/'12	Oct/'12	Mar/'13

(iv) Implementation structure

Please describe roles and tasks of universities and other research institutions, companies, and researchers participating in the project and their relationships, with easy-to-grasp diagrams.

(v) Research Collaborators

Please identify the Research Director with double asterisks (\*\*) and the Main Research Collaborator at each Collaborative Research Institution/Company with a single asterisk (\*).

Name	Post/position	Location of implementation	Period	Research item	Effort*
					%
					%
					%
					%
					%
					%
					%
					%
					%
					%

(\*) Effort: With a Research Collaborator's entire work load per year at 100% (including research, instruction, medical activities, etc.), the relative portion (%) of effort required for the Project.

(2) Costs

(i) Overall

Please provide costs for each university or company consigned to participate in the project.

Please do not include costs of reconsignment to Collaborative Research Institutions in the Core Research Institution's estimates.

For a two-year project, please delete the FY 2011 column.

(unit: 1,000 yen)

Consignment Research Costs	Name of institution	FY2010	FY2011	FY2012	Total
Direct Costs					
	Subtotal				
Indirect Costs					
	Subtotal				
Total( Direct Costs & Indirect Costs )					

(ii) Breakdown by participating institution

Please write out details of expenditure by research institution and company. Please expand the table if necessary. For a two-year project, please delete the FY 2011 column.

Name of research institution: \_\_\_\_\_

(unit: 1,000 yen)

	Item/description	FY2010	FY2011	FY2012	Total
Direct Costs	Cost of goods and supplies				
	(Main breakdown)				
	Travel expenses				
	(Main breakdown)				
	Rewards, remuneration, etc.				
	(Main breakdown)				
	Others				
	(Main breakdown)				
	Subtotal				
	Indirect Costs ( ____ % of direct costs )				
	Total				

6. Research to date/background

For relevant patents and reference literature, please provide details in Form 2 "List of patents and reference literature." For research subsidies and other support from public organs, please write them down in Form 3 "List of research subsidies and assistance from public organs."

(1) Research status and results

(2) Relationships among participating members



(Form 2)

## List of patents and reference literature

### 1. Patents (original rights)

Please list patents (original rights), including those pending application, that are required for commercialization.

Classification number	Name of innovation	Application number (Date of application)	Applicant	Inventor	Registration number	Licensing possibility (*)

(\*) Please state the possibility of licensing for a patent held by a Collaborative Research Company. If any relevant patent is already being licensed, please state the information.

### 2. Reference literature, etc.

Please list the representative works among articles and conference presentations.

(1) Research papers

(2) Academic conference presentations



(Form 3)

## List of research subsidies and assistance from public organs

Ministry/local government/organ	Program name	Applicant (effort*)	Topic title	Research period	Amount ('000 yen)

Please list public subsidies involving the Research Director and main Research Collaborators at Collaborative Research Institutions and Companies.

Please list all instances of public subsidy, including those being received right now as well as those pending application within this financial year or in application, and any you have received in the past three years.

For those that are pending application or in application at the moment, please specify "pending application" or "in application" underneath the corresponding amounts.

(\* Effort: With a Research Collaborator's entire work load per year at 100% (including research, instruction, medical activities, etc.), the relative portion (%) of effort required for the JST project.

(Form 4)

## List of related third-party patents and reference literature

### 1. Patents held by other parties

Classification number	Name of invention	Application number (Date of application)	Applicant	Inventor	Registration number

### 2. Reference literature

(1) Research papers

(2) Academic conference presentations

(Separate Table 1)

Research Field List

No.	Priority research fields	Categories
0101	Life science	Genomes
0102	Life science	Medicine and medical care
0103	Life science	Food science and technology
0104	Life science	Neuroscience
0105	Life science	Bioinformatics
0106	Life science	Environment and ecology
0107	Life science	Materials production
0189	Life science	Basic biology
0199	Life science	Others
0201	Information communications	High speed network technology
0202	Information communications	Security technology
0203	Information communications	Service and application related technology
0204	Information communications	Home appliance networking technology
0205	Information communications	High speed computing technology
0206	Information communications	Simulation technology
0207	Information communications	High speed mass storage
0208	Information communications	Input and output technology*1
0209	Information communications	Human arbitrary and meaning understanding technology
0210	Information communications	Sensor technology
0211	Information communications	Human interface evaluation
0212	Information communications	Software technology
0213	Information communications	Device technology
0289	Information communications	Shared basic research
0299	Information communications	Others
0301	Environment	Global environment
0302	Environment	Regional environment
0303	Environment	Environmental risk
0304	Environment	Recycling-oriented social systems
0305	Environment	Biodiversity
0389	Environment	Shared basic research
0399	Environment	Others
0401	Nanotechnology, materials	Nanomaterials (electronic, magnetic, optic application, etc.)
0402	Nanotechnology, materials	Nanomaterials (structural material application, etc.)
0403	Nanotechnology, materials	Nano-information device
0404	Nanotechnology, materials	Nano-medical and life science application
0405	Nanotechnology, materials	Nanobiology
0406	Nanotechnology, materials	Energy and environmental application
0407	Nanotechnology, materials	Surface and interface
0408	Nanotechnology, materials	Measurement technology and standard technology
0409	Nanotechnology, materials	Processing, synthesis, and process
0410	Nanotechnology, materials	Basic properties
0411	Nanotechnology, materials	Calculation, theory, and simulation
0412	Nanotechnology, materials	Materials and technologies to create safe space
0489	Nanotechnology, materials	Shared basic research
0499	Nanotechnology, materials	Others

No.	Priority research fields	Categories
0501	Energy	Fossil fuel and artificial fuel
0502	Energy	Nuclear energy
0503	Energy	Natural energy
0504	Energy	Energy conservation and energy utilization
0505	Energy	Environmental load reduction
0506	Energy	Cooperation and contribution to international society
0589	Energy	Promotion of basic scientific technologies
0599	Energy	Others
0601	Manufacturing technology	High precision technology
0602	Manufacturing technology	Precision part processing technology
0603	Manufacturing technology	High value added extreme technology (micromachine etc.)
0604	Manufacturing technology	Technologies to minimize environmental load
0605	Manufacturing technology	Quality control and manufacturing floor safety technology
0606	Manufacturing technology	Advanced production technology
0607	Manufacturing technology	Medical and welfare equipment
0608	Manufacturing technology	Assembly process
0609	Manufacturing technology	System technology
0689	Manufacturing technology	Shared basic research
0699	Manufacturing technology	Others
0701	Social infrastructure	Researching mechanisms of and forecasting abnormal natural phenomenon
0702	Social infrastructure	Researching applied technology for mitigating disaster damage
0703	Social infrastructure	Advanced disaster prevention support systems
0704	Social infrastructure	Disaster prevention technology
0705	Social infrastructure	Measures to deal with deterioration of social infrastructure
0706	Social infrastructure	Safety measures for semi-hazardous and hazardous substances
0721	Social infrastructure	Rebuilding living areas in harmony with the environment
0722	Social infrastructure	Broadly-based regional research
0723	Social infrastructure	Improving water cycle and implementing water management
0724	Social infrastructure	Developing new transportation systems geared to the new flow of people and materials
0725	Social infrastructure	Barrier-free access
0726	Social infrastructure	Adoption of universal design
0789	Social infrastructure	Shared basic research
0799	Social infrastructure	Others
0801	Frontiers	Planetary science(including astronomy)
0802	Frontiers	Space exploitation
0821	Frontiers	Marine science
0822	Frontiers	Marine development
0889	Frontiers	Shared basic research
0899	Frontiers	Others
0900	Humanities and sociology	
1000	Natural science	

\*1: Indicates technology that simplifies input/output with information communications systems. Note that this does not apply to Research Category Nos. 209 to 211.

## (Separate Table 2)

## Keywords List

No.	Keywords	No.	Keywords	No.	Keywords
001	Genetics	044	Cryptography and authentication	087	Environmental analysis
002	Genome	045	Secure networking	088	Pollution prevention and countermeasures
003	Protein	046	Highly Reliable network	089	Ecosystem restoration and maintenance
004	Sugar	047	Copyright and content protection	090	Environmental harmonious agriculture , forestry, and fishery
005	Lipid	048	High-performance computing	091	Environmentally harmonious urban infrastructure and construction
006	Nucleic acid	049	Dependable computing	092	Natural coexistence
007	Cell and tissue	050	Algorithms	093	Policy research
008	Biomolecules	051	Modeling	094	Magnetic storage
009	Biodynamics	052	Visualization	095	Hyperfine semiconductors
010	Cytogenesis and differentiation	053	Analysis and evaluation	096	Very high-speed information processing
011	Brain and nervous system	054	Recording technology	097	Atomic and molecular scale processing
012	Animal	055	Data storage	098	Scanning probe electron microscope (STM, AFM, STS, SNOM, others)
013	Plant	056	Large-scale file system	099	Quantum dot
014	Microorganism	057	Multimodal interface	100	Quantum wire
015	Viruses	058	Image, character and voice recognition	101	Quantum well
016	Praxiology	059	Most Language processing	102	Superlattice
017	Evolution	060	Automatic tending	103	Molecular Machine
018	Information engineering	061	Virtual reality	104	Nanomachine
019	Proteome	062	Agent technology	105	Tunnel phenomena
020	Translation research	063	Smart sensor information systems	106	Quantum computer
021	Transplantation and regeneration	064	Software efficiency and stability improvement	107	DNA computer
022	Health care and welfare	065	Directory and information retrieval	108	Spin electronics
023	Regenerative medicine	066	Content archiving	109	Strong correlation electronics
024	Food	067	System-on-chip technology	110	Nanotube and fullerene
025	Agricultural, Forestry and Fishery Products	068	Device design and manufacturing processes	111	Quantum containment
026	Genetically modified food	069	High-density packaging	112	Self organizing
027	Biotechnology	070	Advanced functional device technology	113	Molecular recognition
028	Dementia	071	Power saving, high energy density technology	114	Minority electron device
029	Cancer	072	Display	115	High-performance laser
030	Diabetes	073	Remote sensing	116	Superconducting material and elements
031	Circulatory organs and hypertension	074	Monitoring (non remote sensing)	117	High-efficiency photovoltaic material and elements
032	Allergies and asthma	075	Atmosphere phenomena	118	Quantum beam
033	Infectious diseases	076	Climatic change	119	Optical switching
034	Cranial nerve disease	077	Hydrospheric phenomena	120	Photonic crystals
035	Aging	078	Geographic phenomena	121	Microresonator
036	Drug reaction	079	Biological phenomena	122	Terahertz / infrared material and elements
037	Biotechnology-related equipment	080	Qualitative/quantitative environmental forecasts	123	Nanocontact
038	For Tonic network	081	Environmental change	124	Supramolecular chemistry
039	Advanced telecommunications	082	Hazardous chemical substances	125	MBE epitaxial
040	Cable access	083	Waste treatment	126	Monomolecular measuring (SMD)
041	Advanced Internet technologies	084	Waste recycling	127	Optical tweezers
042	Mobile communications	085	Atmospheric pollution prevention and purification	128	(Molecular) motor
043	Satellite network	086	Water and soil pollution prevention and purification	129	Enzyme reaction



## **(Appendix 1)**

### **Handling of indirect costs**

The handling of indirect costs, in line with “Common Guidelines for the Execution of Indirect Expenses in Competitive Funds” (agreement at the liaison meeting of related government/ministries on competitive funds, revised March 27, 2009)” and “Illustrations of main uses of indirect costs,” is as follows:

#### ○ Uses of indirect costs

Indirect costs are expenditure to be used for improvement in the environment or the capability of a research institution that has been awarded competitive public funds. More specifically, such cost items, of all expenditure necessary for the management of a research institution's research project involving competitive funds, shall include the following:

#### (1). Expenses incurred for the administration department

Expenses for facility management and equipment preparation, maintenance and operation

Expenses required for management affairs

Office equipment, consumables, equipment lease, miscellaneous tasks, labor costs, communications and transportation, rewards, domestic travel, meetings, printing, etc.

#### (2) Costs incurred in research dept.

##### - Costs related to articles used commonly

Cost to purchase fittings, cost of consumables, cost of equipment lease, cost of miscellaneous services, communication/transportation cost, rewards, domestic/oversea travel cost, cost of meetings, cost of printing, cost of newspapers/magazines, cost of energies

##### - Costs required to promote research activities by applying the relevant research

Personnel cost of researcher/research assistant, etc., cost to purchase fittings, cost of consumables, cost of equipment lease, cost of miscellaneous services, communication/ transportation cost, rewards, domestic/oversea travel cost, cost of meetings, cost of printing, cost of newspapers/magazines, cost of energies

##### - Costs incurred in patents

##### - Costs incurred in the review of life ethics

##### - Services, maintenance and operation costs for research building

##### - Services, maintenance and operation costs for experimental animal control facility

##### - Services, maintenance and operation costs for researchers' exchange facility

##### - Services, maintenance and operation costs for equipments

##### - Services, maintenance and operation costs for networks

##### - Services, maintenance and operation costs for large-scale computers (including super computer)

##### - Services, maintenance and operation costs for large-scale computer building

##### - Services, maintenance and operation costs for library

##### - Services, maintenance and operation costs for farming places, etc.

(3) Other costs incurred in related business depts.

- Costs incurred in research result development businesses
- Costs incurred in public relations, etc.

Costs other than those listed above may be incurred for improvements in the research and development environment for researchers who have won competitive funds, or for general improvements for the whole institution, if they are judged to be necessary by the head of the institution. Those costs which should be treated as direct costs should not be indirect costs.

**(Appendix 2)**

**The Japan Science and Technology Agency Promotes Gender Equality**

JST is a firm believer in gender equality in science and technology fields. The 3rd Science and Technology Basic Plan outlining the science and technology policy to be implemented by Japan through FY 2010, prepared by the Council for Science and Technology Policy (a Cabinet office), contains a section on "Promoting the activities of female researchers." The future of science and technology in Japan depends on the capabilities of the researchers who are active in these fields, and it will be essential to create an environment that enables diverse individuals to make the most of their enthusiasm and abilities. As one step toward this goal, the plan indicates a specific numerical target 25% for "the prospective recruitment target of female researchers for the natural sciences as a whole."

One of the principles of JST for promoting activities is "to establish a Gender Equality Promotion Plan relating to JST activities, in order to take the lead in promoting the creation of an environment in which diverse research personnel including female researchers can make effective use of their abilities."

Gender equality will be observed in calling for and reviewing applications for new research topics. JST welcomes the participation of both men and women in proposing new research concepts, and both men and women are encouraged to apply.

Koichi Kitazawa

President

Japan Science and Technology Agency

For a further leap forward

All female researchers, let's take this opportunity to apply for a further leap forward!

The percentage of female researchers is 13% (As of 2007. 2008 report on Survey of Research and Development by Ministry of Internal Affairs and Communications). The number is rising but still very low. Some of the reasons behind this low number include the difficulties in continuing research due to child bearing, child rearing and nursing care, inadequate system for the employment of female researchers, very limited number of female students who major in science, and majors in limited areas.

The government is working on this issue. I believe that change in the way of thinking of female researchers is also necessary. I would like these capable individuals to take the challenge of continuing their studies towards a further step-up and avoid giving up, or accepting the idea that "This is my limit." or "I am okay with where I am now"

I hope that female researchers will take this opportunity to apply themselves, develop their own research ideas, prosper as researchers, and become role models to encourage others.

Kashiko KODATE

Program Director

Office for a Gender Equal Society,

Japan Science and Technology Agency

(Professor, Japan Women's University)



[List of Contacts]

**1. JST Innovation Plazas**

- \*Hokkaido 11 chome, Kita 19-Jou Nishi, Kita-ku, Sapporo City, Hokkaido, 060-0819 Japan  
Tel. 011-708-1181 / Fax. 011-708-1185
- \*Miyagi 6-6-5, Minami-Yoshinari, Aoba-ku, Sendai City, Miyagi Pref., 989-3204 Japan  
Tel. 022-719-5755 / Fax. 022-719-5756
- \*Ishikawa 2-13, Asahi-Dai, Noomi City, Ishikawa Pref., 923-1211, Japan  
Tel. 0761-52-0781 / Fax. 0761-52-0787
- \*Tokai 23-1, Ahara-cho, Minami-ku, Nagoya City, Aichi Pref., 457-0063, Japan  
Tel. 052-829-3160 / Fax. 052-829-3161
- \*Kyoto 1-30, Goryoohara, Nishikyo-ku, Kyoto City, Kyoto, 615-8245, Japan  
Tel. 075-383-1300 / Fax. 075-383-1301
- \*Osaka 3-1-10, Techno-Stage, Izumi City, Osaka, 594-1144, Japan  
Tel. 0725-51-3350 / Fax. 0725-51-3360
- \*Hiroshima 3-10-23, Kagamiyama, Higashi-Hiroshima City, Hiroshima Pref., 739-0046, Japan  
Tel. 082-493-8235 / Fax. 082-493-8236
- \*Fukuoka 3-8-34, Hyakudo-Hama, Sawara-ku, Fukuoka City, Fukuoka Pref., 814-0001, Japan  
Tel. 092-851-8169 / Fax. 092-851-8230

**2. JST Innovation Satellites**

- \*Iwate 3-35-2, Iokashinden, Morioka City, Iwate Pref., 020-0852, Japan  
Tel. 019-635-0727 / Fax. 019-635-0818
- \*Ibaraki Tsukuba Research Assistance Center Bldg. A 3F, 2-1-6, Sengen, Tsukuba City,  
Ibaraki Pref., 305-0047, Japan Tel. 029-898-9533 / Fax. 029-898-9663
- \*Niigata NICO Techno Plaza 2F, 4-1-9, Shinsan, Nagaoka City, Niigata Pref., 940-2127  
Tel. 0258-21-0250 / Fax. 0258-21-0257
- \*Shizuoka Shizuoka University Innovation Joint Research Center, 3-5-1, Jouhoku, Naka-ku,  
Hamamatsu City, Shizuoka Pref., 432-8561, Japan  
Tel. 053-412-2511 / Fax. 053-412-2520
- \*Shiga Collabo Shiga 21 1F, 2-1, Uchide-Hama, Otsu City, Shiga Pref., 520-0806, Japan  
Tel. 077-511-1440 / Fax. 077-511-1441
- \*Tokushima Tokushima University Industry-Academic-Government Coordination Plaza Venture  
Business Fosterage Laboratory 4F, 2-1, Minamijo Sanjima-cho, Tokushima City,  
Tokushima Pref., 770-8506, Japan Tel. 088-611-3117 / Fax. 088-611-3118
- \*Kochi Kochi University of Technology, 185, Miyanokuchi, Tosayamada-cho, Kami City, Kochi  
Pref., 782-8502, Japan Tel. 0887-57-4800 / Fax. 0887-57-4801
- \*Miyazaki Daiichi Miyagin Bldg 6F, 1-7-4, Tachibana Higashi, Miyazaki City, Miyazaki Pref.,  
880-0805, Japan Tel. 0985-24-0564 / Fax. 0985-24-0584

**3. JST Headquarters**

Department of Regional S&T Promotion, Office of Technology Transfer and Innovation

5-3, Yonbancho, Chiyoda-ku, Tokyo 102-8666 Japan

Tel: 03-5214-8419 / Fax: 03-5214-8487 / E-mail: [jstate@jst.go.jp](mailto:jstate@jst.go.jp)