

Operational Guidelines for Cross-ministerial Strategic Innovation Promotion Program (SIP)

Governing Board

Issued on May 23, 2014

Revised on Mar. 31, 2016

Revised on Mar. 30, 2018

Revised on Jul. 19, 2018

Revised on Mar. 28, 2019

Revised on Jun. 27, 2019

This document specifies operational guidelines required for implementing the Cross-ministerial Strategic Innovation Promotion Program (hereinafter referred to as “SIP”) based on the “Basic Policy for Expenditure on Science, Technology and Innovation Promotion (Council for Science, Technology and Innovation, May 23, 2014; hereinafter referred to as the “Basic Policy”).

1. Executive and Deputy Directors in charge of SIP

- Special advisers to the Cabinet Office are appointed as the Executive and Deputy Directors in charge of SIP (hereinafter referred to as the “Executive Director, etc.”). Their term is two years in principle, but reappointment is allowed.
- The Executive Director, etc. who receive instructions from the Governing Board as specified in the Basic Policy, play a central role in examining the entire program policy, managing the progress of the program, and promoting collaboration among different R&D programs. Upon request of the Governing Board, the Executive Director, etc. report the progress of the program and so on.

2. Program Director (hereinafter referred to as “PD”)

- PD is a part-time officer in the Cabinet Office.
- The term of PD is three years but reappointment is allowed.
- PD is selected from applicants through an open recruitment process in principle.
- PD is responsible for the following tasks in addition to those specified in the Basic Policy:
 - 1) Summarize the R&D plan for the program in charge.
 - 2) Determine budget allocations for research themes of the program in charge.
 - 3) Supervise and guide Sub-PD (see Section 3), Strategy C (see Section 4) and Principal Researcher, etc. (see Section 7).
 - 4) Make a request to the management agency assigned to manage the program in charge for implementing required operations to promote research.
 - 5) Improve or discontinue research themes and implementation systems relating to the

program in charge.

6) Take charge of proceeding of the Promoting Committee for the program in charge.

7) Carry out other necessary tasks for promoting the program in charge.

- When there is a vacancy for a PD due to an accident or other reasons, Sub-PD appointed in advance by the PD fulfills the duties until the new PD is appointed.

3. Sub Program Director (hereinafter referred to as the “Sub-PD”)

- Sub-PD can be posted in the Cabinet Office to support the PD.
- PD selects Sub-PD and the Cabinet Office assigns the post.
- Sub-PD is responsible for the following tasks:
 - 1) Promote the program in charge according to the instructions from PD.
 - 2) Support PD and do the work deemed to be required by PD for promoting the program in charge.

4. Innovation Strategy Coordinator (hereinafter referred to as the “Strategy C”)

- Strategy C who is familiar with industrial trends and policies can be posted in the Cabinet Office to promote strategies for practical application and commercialization (hereinafter referred to as the “exit strategy”).
- PD selects Strategy C and the Cabinet Office assigns the post.
- Strategy C is responsible for the following tasks:
 - 1) Support the creation of an exit strategy for the program in charge according to instructions from PD.
 - 2) Conduct surveys and analyses required for creating an exit strategy according to instructions from PD.
 - 3) Support PD and do the work deemed to be required by PD for promoting the program in charge.

5. Promoting Committee

- When coordination at the Promoting Committee ends in failure, PD makes the final decision in consultation with the Cabinet Office.

6. R&D plan

- Before starting the new fiscal year, PD compiles a R&D plan in line with the coordination at the Promoting Committee, and the Governing Board provides advice and evaluation required for the R&D plan and its implementation.
- The Governing Board formulates the “SIP Implementation Policy” regarding basic

requirements and budget allocations for R&D plans for individual programs, based on which respective PDs make correction of their R&D plans. The Governing Board examines these R&D plans for approval.

- The management agency (see Section 7) and/or Principal Researcher (including individual researchers or research organizations commissioned by the management agency) are indicated in the R&D plan if they are known, or added later when they are finalized.
- Part of the R&D plan can be kept closed to the public at the discretion of PD or the Cabinet Office.

7. Implementation System

(1) Using management agencies

- The Cabinet Office and related ministries assign a national R&D agency (hereinafter referred to as the “management agency”) for administrative work to implement budgets for an individual R&D program. The ministry should consult the Cabinet Office if it does not assign the management agency to implement budgets by necessity.
- The Cabinet Office examines details of R&D programs and operational characteristics of national R&D agencies to match management agencies and R&D programs. The same applies when the management agency is changed with the change in the R&D plan.
- The management agency conducts the following administrative work in accordance with R&D plans:
 - 1) Start an open recruitment process for selecting the Principal Researcher.
 - 2) Conclude a contract with the Principal Researcher.
 - 3) Manage funds.
 - 4) Manage the progress of program.
 - 5) Conduct self inspection and technical evaluation from a professional standpoint (peer review).
 - 6) Publish and disclose information on R&D outcomes (including handling of the SIP Symposium).
 - 7) Manage intellectual properties including the Intellectual Property Committee (see 8. (1)).
 - 8) Employ personnel for supporting PDs to conduct research programs (the management agency can employ or make a contract with Sub-PD or Strategy C as the duty position within the agency assigned by the Cabinet Office if it is deemed to be necessary for conducting research programs).
 - 9) Conduct related surveys and analyses.
 - 10) Perform other requirements recognized by PD and the Cabinet Office for promoting the

program in charges.

- The management agency is responsible for the contract with the Principal Researcher.
- For the research conducted by the management agency itself using program expenses from SIP, it needs to establish an appropriate internal management system in terms of contract, fund management and R&D progress management, etc. for conducting effective and appropriate research.

(2) Selecting the Principal Researcher

- The management agency (or the government (related ministry), under unavoidable circumstances; hereafter collectively referred to as the “Management Agency, etc.”) selects the Principal Researcher based on the R&D plan through an open recruitment process. However, selection without an open recruitment process is allowed if there are rational grounds, but this must be clearly indicated in the R&D plan.
- The Management Agency, etc. determine the progress of examination including the criteria for examination in consultation with the Cabinet Office and other ministries.
- Stakeholders, such as the Principal Researcher, researchers potentially becoming co-researchers of the Principal Researcher, and researchers potentially assigned by the Principal Researcher (re-assignment in perspective of the Management Agency, etc.); hereafter collectively referred to as the “Principal Researcher, etc.”) should not join the examination process for selecting the Principal Researcher, etc. The definition of stakeholders is in accordance with the provisions stipulated by the Management Agency, etc., but may be changed as required in consultation with PD and the Cabinet Office.
- The result of selection is finalized by the approval of PD and the Cabinet Office.

(3) Conflict of interest

- When there is a possibility of direct or indirect allocation of funds to an organization (companies, universities or national institutes, etc.) to which PD belongs, that PD should not participate in the process of selecting the Principal Researcher, etc.
- When funds are allocated to an organization to which PD belongs as a result of the above selection, PD needs to present details of fund allocation plan and the necessity at the Governing Board prior to approval with the confirmation together with the Cabinet Office that the allocation of funds to the organization is inevitable for promoting the program. Even when a Sub-PD is selected before the selection of the Principal Researcher, the same procedure as with PD should be followed.
- For preventing information on the process of selecting the Principal Researcher, etc. from

being disclosed in advance, the examination at the Governing Board is closed to the public. However, the Cabinet Office needs to make public the minutes of the relevant Governing Board after the Management Agency, etc. announce the selection of the Principal Researcher, etc.

8. Handling of R&D outcomes

(1) Intellectual Property Committee

- The Intellectual Property Committee is formulated for each program or research item that comprises the program at the Management Agency, etc. or an organization to which the selected Principal Researcher belongs (Commissioned Body).
- The Intellectual Property Committee determines the policy for presenting papers on R&D outcomes and making application for and maintaining of patents (hereinafter referred to as the “intellectual property right”), in addition to coordinating the licensing of the intellectual property right as required.
- The Intellectual Property Committee is composed of a PD or his/her representative, major stakeholders and experts, etc. in principle.
- The detailed management and operations of the Intellectual Property Committee are determined by the organization at which the Committee is placed.

(2) Agreement on the intellectual property right

- The Management Agency, etc. determine in advance the handling of confidentiality, background intellectual property right (owned or acquired by the Principal Researcher or his/her organization prior to the participation in the program, or after participation in the program without SIP expenses) and foreground intellectual property right (generated during the program with SIP expenses) through the contract with the Commissioned Body.

(3) Licensing of the background intellectual property right

- The owner of the background intellectual property right grants the license to other participants in the program under certain conditions specified by the owner (note: or, “according to the agreement among participants in the program”).
- When the conditions, etc. specified by the intellectual property right owner may have bad influence upon the promotion of SIP (including not only R&D but also practical application and commercialization of outcomes), the Intellectual Property Committee coordinates to obtain rational solutions.

(4) Handling of the foreground intellectual property right

- The foreground intellectual property right belongs to the organization to which the Principal Researcher who invented the intellectual property right concerned belongs (Commissioned Body) in principle pursuant to paragraph 1, Article 17 of the Industrial Technology Enhancement Act.
- When the intellectual property right was invented by a re-assigned body, and is determined to belong to this body, the approval of the Intellectual Property Committee is required. The Committee can set conditions for approval.
- When the owner of the intellectual property right is not enthusiastic about commercialization, the Intellectual Property Committee makes recommendations for the person who is considered to actively promote commercialization to own or acquire the licensing of the intellectual property right.
- For the resignation of a participant during the implementation period, the Management Agency, etc. may set the license or order the gratuitous conveyance of all or part of outcomes obtained by this participant with SIP expenses during participation (all outcomes from the beginning to the resignation if the period of participation extends over several years).
- The owner of the intellectual property right bears expenses relating to the application and maintenance of intellectual property rights in principle. In case of a joint application, the quotient ratio and burden of expenses are determined by applicants through consultation.

(5) Licensing of the foreground intellectual property right

- The owner of the foreground intellectual property right grants the license to other participants in the program under certain conditions specified by the owner (note: or, “according to the agreement among program participants”).
- The owner of the foreground intellectual property right grants the license to third parties by specifying the conditions which are no more advantageous to those applied to participants in the program.
- When the conditions specified by the owner of the intellectual property right may have bad influence on the promotion of SIP (including not only R&D but also practical application and commercialization of outcomes), the Intellectual Property Committee coordinates to obtain rational solutions.

(6) Approval of transfer, setting or movement of exclusive license of foreground intellectual property rights

- Pursuant to paragraph 1-4, Article 17 of the Industrial Technology Enhancement Act, approval of the Management Agency, etc. is needed for the transfer, setting or movement of

the exclusive license of foreground intellectual property rights except for the movement from mergers or splits, or transfer, setting or movement of the exclusive license to an affiliate or parent company (hereinafter referred to as the “case of movement, etc. of intellectual property rights from mergers, etc.”).

- The owner of the intellectual property right needs approval of the Management Agency, etc. for the case of movement, etc. of intellectual property rights from mergers, etc. based on the contract with the Management Agency, etc.
- Even after the movement, etc. from mergers, etc., the Management Agency, etc. can retain the license with sublicensing rights for the intellectual property right concerned. If this condition is not accepted, the movement, etc. are not approved.

(7) Handling of intellectual property rights upon termination

- The Intellectual Property Committee discusses how to handle intellectual property rights, etc. of which no one wants to own at the end of R&D (abandonment or continuous ownership by the Management Agency, etc.).

(8) Participation of foreign organizations (foreign companies, universities, researchers, etc.)

- Participation is accepted when foreign organizations are essential to promote R&D programs.
- In the perspective of appropriate implementation and administration, there should be dedicated sections or agents capable of conducting administrative work for the acceptance of R&D programs in Japan in principle.
- The foreign organizations and the Management Agency, etc. share the intellectual property right.

9. Evaluation

(1) What to be evaluated

1) Entire SIP system (hereinafter referred to as the “System”)

i) Evaluation body

The Governing Board invites outside experts for evaluation.

ii) Time of evaluation

- Advance evaluation, interim evaluation (evaluation conducted by the end of the 3rd fiscal year after the beginning of this term (2nd term); the same applies to the rest of this document) and evaluation upon termination (hereinafter referred to as the “final evaluation) are scheduled.
- Follow-up evaluation may be carried out as required after a certain time from the

termination (three years in principle).

iii) Evaluation items and criteria

Whether the institutional design characteristic to SIP, including budget allocation by the Cabinet Office (adjustment cost), programs set by CSTI and GB, selection of PDs, flexible budget allocation, promotion of R&D by PDs, administrative work for budget implementation by the Management Agency, etc., exert (or exerted) good influence on inter-ministerial cooperation, measures of relevant ministries and agencies, and industry-university joint research activities and programs? Are there needs to be improved in the SIP system?

iv) Feedback of evaluation results

- The advance evaluation focuses on the plans after the next fiscal year from the year of starting the programs and the results are fed back to these plans.
- The interim evaluation focuses on the results up to the relevant fiscal year and plans after the next fiscal year, and the results are fed back to these plans.
- The final evaluation focuses on the results up to the out year, and results are reflected in the follow-up evaluation, etc. after the end of the program.
- The follow-up evaluation focuses on the validity, etc. of the System for applying them to the future planning of science, technology and innovation policies.

2) SIP programs

i) Evaluation body

- The Governing Board invites outside experts for evaluation.
- Results of self inspection by PDs and the Management Agency, etc. and technical evaluation from a professional standpoint (peer review) can be used as reference materials.

ii) Time of evaluation

- Advance evaluation, year-end evaluation in every fiscal year (“interim evaluation” until the end of the 3rd fiscal year from the year of starting the program) and final evaluation are scheduled.
- Follow-up evaluation may be carried out as required after the termination of the program.
- In addition, evaluations within a fiscal year may also be conducted when needed.

iii) Evaluation items and criteria

The evaluation items and criteria are based on the “National Guideline on the Method of Evaluation for Governmental R&D (decided by the Prime Minister on December 21, 2016)” as listed below for evaluating their necessity, efficiency and validity. Evaluation

does not only classify the results as “achieved” or “unachieved” but also analyzes the causes and factors of failure and proposes the ways of improvement.

- a) Importance of the program implementation and its consistency with the purpose of SIP system
 - b) Adequacy of the objectives (especially those for outcomes), the degree of achievement of the progress schedule chart for achieving the objectives
 - c) Appropriateness of management, especially the ways to exhibit the effects of ministerial cooperation
 - d) Strategic nature and degree of achievement of practical application and commercialization
 - e) Potential effects or spillover effects at the final evaluation; and adequate and clear definition of ways to conduct follow-up evaluation after the termination of the program
 - f) The state of achievement of “requirements” (see the attachment) imposed in the 2nd program examination
 - g) The state of achievement of TRL (Technology Readiness Levels) for individual research themes of each program
- iv) Feedback of evaluation results
- The advance evaluation focuses on the plans after the next fiscal year, and the results are fed back to these plans.
 - The year-end evaluation in every fiscal year makes a short list or traces programs and research themes as required. For individual research themes of each program, which are concluded in the interim evaluation not to be able to establish a social implementation system, the continuation of R&D is not approved in principle.
 - The year-end evaluation focuses on the results up to the relevant fiscal year and on plans after the next fiscal year, and results are fed back to these plans.
 - The final evaluation focuses on the results up to the out year, and results are reflected in the follow-up evaluation, etc. after the end of the program.
 - The follow-up evaluation focuses on the progress of practical application and commercialization of the program, and proposes the ways of improvement.

(2) Publication of evaluation results

- Evaluation results are released to the public in principle.
- The Governing Board, which deals with off-the-record R&D information, etc., is closed to the public.

(3) Self inspection

- The Principal Researcher, when appointed to the program, carries out self inspection prior to the standard evaluation. Self inspection by PDs and the Management Agency, etc. and technical evaluation from a professional standpoint (peer review) are also conducted and the results are reported to the Governing Board.
- Items and criteria of the self inspection by PDs are in accordance with the evaluation items and criteria (aforementioned).
- The self inspection by the Management Agency, etc. focuses on the adequacy of administrative work for budget implementation and so on.
- The self inspection by the Principal Researcher, etc. focuses on the progress of efforts for practical application and commercialization.
- The technical evaluation from a professional standpoint (peer review) by the Management Agency, etc. is conducted by outside experts who examine whether the content of programs and established systems are suitable as the SIP program based on the evidence and global perspective.

(4) Efficient self inspection and evaluation

- The self inspection and evaluation must be conducted in an efficient manner in as much as they are carried out every fiscal year.

10. Contribution from private companies

- In the implementation of research themes in SIP, PDs and the Cabinet Office continuously seek for human and physical contributions from private companies.
- When the interim evaluation identifies the research theme for a program which may improve the competitiveness of private companies but need a lot of money in R&D phases, a matching fund system is applied for sharing expenses equally by the private company dealing with that research theme and the government (SIP budgets). The details of the matching fund system are separately specified.

11. Social implementation of R&D outcomes

- The Governing Board consults PDs, the Cabinet Office and relevant ministries and agencies holding jurisdiction over regulations as required regarding regulations and institutional reforms essential for social implementation of R&D outcomes acquired in SIP, and examines their solutions, etc.
- The Management Agency, etc. keep result reports from Principal Researchers, including the research themes aborted along the way, in an appropriate manner, and present them in its website except for confidential information in an attempt to disclose as much information as

possible.

12. Other

- The Management Agency, etc. should strictly separate the grants as SIP operating expenses from ordinary operating expenses and adequately manage them as SIP budgets.
- The indirect expenses should basically account for 10 to 15 percent of direct expenses, but the amount of up to 30 percent may be allocated as indirect expenses specified in the Common Guidelines for the Payment of Indirect Expenses under Competitive Funds (based on the agreement at the liaison meeting of relevant ministries and agencies as revised on May 29, 2014).

- The Cabinet Office regularly exchanges views with CSTI expert members and PDs. The Executive Director, etc. may take command of administrative work.

13. Besides the above, the Cabinet Office sets up the details required for promoting SIP.

Requirements for the 2nd Term Programs

- 1) Goals to achieve Society5.0
- 2) Emphases given to the areas requiring productivity revolution
- 3) R&D leading to social change, not simple R&D
- 4) Important areas for solving social issues and raising competitiveness of Japanese economy and industry
- 5) Clearly defined exit strategy for commercialization, practical application and social implementation (clear indication of commercialization after five years)
- 6) Institutional exit strategy including intellectual strategy, international standardization and regulatory reform
- 7) Cross-ministerial efforts essential for inter-ministerial cooperation
- 8) Focused, end-to-end R&D from basic research to practical application and commercialization
- 9) Setting “collaborative areas” and promoting them separately as “competitive areas” (with an open and close strategy)
- 10) Establishment of industry-academy-government collaborative schemes, systems enabling participating companies to make practical application and commercialization of R&D outcomes, and built-in elements for matching funds