

Evaluation of FY2018 Operating Results for  
Japan Science and Technology Agency

August 2019

Minister of Education, Culture, Sports, Science and Technology

1. Items related to the evaluation		
Agency	Japan Science and Technology Agency	
FY for evaluation	FY evaluation	FY2018
	Mid to long-term objective period	FY2017-2021 (4th term)

2. Items related to the assessor			
The Competent Minister	Minister of Education, Culture, Sports, Science and Technology		
Incorporated jurisdiction dept	Science and Technology Policy Bureau	Dept. and person in charge	Knowledge Infrastructure Policy Division, ShinOkuno
Evaluation and Inspection dept	Science and Technology Policy Bureau	Dept. and person in charge	Planning and Evaluation Division, Masao Yokoi

3. Items regarding implementation of the evaluation
<p>June 5, 2019: Members of Japan Science and Technology Agency Sub-Committee (hereinafter, “JST Sub-Committee”) conducted an onsite survey of Tokyo University’s molecular life innovation building (research achievements development business (Center of Innovation (COI) program)) and faculty of agriculture (strategic creation and research advancement business (ERATO), future society creation business).</p> <p>June 21, 2019: We conducted an onsite survey of the photonics integrate system research core (research achievements development business (A-STEP)) at Tokyo Institute of Technology.</p> <p>July 9, 2019: A JST Sub-Committee (16th) was held, where a hearing was held regarding the results of self-evaluation by JST board members (president, executive directors and auditors) and the staff.</p> <p>July 24, 2019: A JST Sub-Committee (17th) was held, where, in light of the results of self-evaluation as explained by JST at the 16th Sub-Committee, necessary counsel was obtained from Sub-Committee members on the draft of evaluation by the competent minister.</p> <p>August 1, 2019: A JST Sub-Committee (18th) was held, where, in light of the results of self-evaluation as explained by JST at the 16th Sub-Committee, necessary counsel was obtained from Sub-Committee members on the draft of evaluation by the competent minister.</p> <p>August 6, 2019: National Research and Development Agency Council of the Ministry of Education, Culture, Sports, Science and Technology (15th)</p>

4. Important items and others relating to the evaluation
<ul style="list-style-type: none"> <li>○ Fiscal 2018 is the second fiscal year for the 4th mid to long-term objectives and plan period</li> <li>○ Mid to long-term objectives were revised on March 1, 2019, and the mid to long-term plan was approved on March 14th (establishment of a moonshot-type research development system)</li> </ul>

1. Overall rating						
Rating* (S, A, B, C, D)	A	FY2017	FY2018	FY2019	FY2020	FY2021
		A	A			
Reasons for rating	As shown in the overall evaluation of the agency as a whole, the creation of considerable achievements and anticipated creation of achievements in the future and so on were recognized as a result of comprehensive consideration based on circumstances surrounding the agency's business achievements, efforts and so on through its activities and with the national research and development agency's mid to long-term objectives taken into account.					

2. Evaluation of the whole agency
<p>○ As the core implementing agency of the basic plan on science and technology, and in terms of the administration and business concerning research and development, JST conducts business around three main areas, which are “Drafting and advising on research and development strategies that co-create our future”, “Creation of knowledge and conversion to economic and societal value”, and “Advancing the co-creation of our future and education and training of human resource to create our future”. We recognize progress and achievement in the first two of these main areas and in “other important items concerning business operation” surpass targets in terms of advancements and achievements in business, and because in particular the business results below are significant, we have given this a mark of A.</p> <p>○ With regard to the drafting and advising on research and development strategies through which we will jointly create our future, we can give high marks to the implementation of CRDS knowledge into not only the drafting of policies at the Ministry of Education, Culture, Sports, Science, and Technology but into each strategy for AI, bio, quantum technologies innovation, which is the overall strategy of our government. Furthermore, with regard to the report “Beyond Disciplines”, we can give good marks to the contributions to devising Keidanren’s “Working towards Society 5.0 by realizing the conversion of ‘Strategy’ to ‘Working together to create’” into which views on “Promoting fusion” and “Promoting of research agencies as international hubs” are incorporated. In addition, concerning LCS, with regard to T20 which will be held in May 2019 with Japan as the host country, our work to date was given good marks, and one person from LCS was selected to be the co-chairman of climate change and environment, and we can give good marks to the strong participation in advising G20.</p> <p>○ With regard to the creation of knowledge and conversion of this into economic and societal value, we can give good marks to the development of a coil that connects high-temperature superconducting materials together in a large-scale project for future society creation business, and to the achievements in research that were obtained including the success in the validation of NMR’s permanent current operation; and furthermore, to the creation of achievements with impact onto society, including the fact that the platform technology, which the “Built-in OS” research areas of CREST came together to perform research and development, led to enact an international standard on Open Systems Dependability, and the actual application of this to miniaturized satellites, which is a very complex system. In addition, we can give good marks to, starting with, the achievements coming in from the health innovation project at the COI site of Hirosaki University, a university receiving the first Japan Open Innovation Prize Prime Minister’s Award, and to the proactive work towards building an autonomous system and its implementation into society, and the achievements that on forthcoming from them. With regard to the university-led new industry creation program (START), we can give good marks to attracting risk money of more than 9 billion yen in total (more than 3 billion yen on prior fiscal year) since the establishment of 43 venture corporations (50% of the 86 issues on which support has completed).</p> <p>○ With regard to other important items concerning business operations, in addition to the establishment of a sub-taskforce under “JST Reform Taskforce”, we can give good marks to the advancements in the study of focused work since 2019 in regard to the Hamaguchi plan (presented as the Hamaguchi plan and action items in April 2019), the establishment of “sustainable society advancement office”, and the substantiation of and revision to the basic policy for all of JST concerning contributions to scientific and technological innovations towards the achievement of SDGs.</p>

3. Issues to be solved and /or improved for each subject

- With regard to the drafting and advising on research and development strategies that together create our future, with respect to CRDS, we expect that investigations, monitoring, and advising work on “emerging, fused, and academic fields” towards a further reinforcement in the research capacity of our country to be performed, and provide advising at a deeper level on also the modality of a research system that promotes the merging of fields, such as the creation of a platform for research resources and the advancement in data-driven model sciences, in addition to the merging of fields to create a new science and the solving of problems in society. In addition, reinforcement in the dissemination is desirable so that various concerned parties can further apply these achievements in, for example, policy recommendations. (See p7)
- Concerning the creation of knowledge and the conversion of this into economic and societal value, with regard to exploratory acceleration model of a future society creation business, we will incorporate innovative ideas and outstanding technology seeds, and from a standpoint to advance research and development towards proof of concept (POC), in view of knowledge that is obtained to date from the business operation, it is desirable that we work continuously on the study of topics and the improvements to the screening process for topics. In particular, we expect to work on the study of topics that take under further consideration the economic and societal situation (needs) in Japan and overseas and the research and development trends (potential technology seeds and technological bottlenecks in moving towards realization), and on the reinforcement of coordination with, among others, strategic creation research advancement business and research achievements development business. Furthermore, with regard to cutting-edge topics in the functional validation phase of the research achievements optimization and development support program (A-STEP), we expect that work will be conducted to maximize the achievements in research, by making reinforcements to coordination including coordination with coordinators in each region and with each program, as well as connecting the achievements in research to the next phase of A-STEP and to other joint programs between industry and academia, during the support activities for research and development. (See p63)
- With regard to other important items concerning business operations, we need to develop them into what will improve our specific businesses at JST, based on the Hamaguchi plan and action items (presented in April 2019) which reports on the items that are to be specifically worked on starting in 2019. In particular, we expect to reinforce the “connection” function, which takes strong achievements that were obtained in ERATO and elsewhere and connects them with the next program. Furthermore, it is desirable that we accelerate strategic research and development including emerging areas of fusion, such as reinforcement of cooperation with individual businesses (eg, strategy, future society, industry-related business) at JST, based on JST’s mid-term research and development strategies that were devised by the “Program Strategy Advancement Office” based on evidence data (See p288).

4. Other items

Major opinions of National Research and Development Agency Committee	From the standpoint of maximization of the achievements in research and development, we expect that the information will be disseminated in a manner that is understandable by the general public as to just how much in achievements our research is producing.
Auditor’s special comments	No special matters to note.

\* Evaluation categories are as follows:

- S: Based on the National Research and Development Agency’s aims, businesses with mid to long-term objectives due to comprehensive consideration based on some circumstances regarding the agency’s business achievements, and efforts through its activities, especially the creation of considerable achievements, anticipated creation of special achievements in the future and so on toward “maximization of R&D achievements” under the conditions of appropriate, effective and efficient operations are recognized.
- A: Based on the National Research and Development Agency’s aims, businesses with mid to long-term objectives due to comprehensive consideration based on some circumstances regarding the agency’s business achievements, and efforts through its activities, especially the creation of considerable achievements, anticipated creation of special achievements in the future and so on toward “maximization of R&D achievements” under the conditions of appropriate, effective and efficient operations are recognized.
- B: Based on the National Research and Development Agency’s aims, business with mid to long-term objectives due to comprehensive consideration based on some circumstances regarding the agency’s business achievement, and efforts through its activities, a, certain degree of expectation for the creation of achievement and creation of achievement in the future toward “maximization of R&D achievements” were recognized, and steady business operations have been also recognized.
- C: Based on the National Research and Development Agency’s aims, businesses with mid to long-term objectives due to comprehensive consideration based on some circumstances regarding the agency’s business achievements, and efforts through its activities, the creation of achievements, further drastic efforts and improvements toward “maximization of R&D achievements” or “appropriate, effective and efficient operations” are anticipated.
- D: Based on the National Research and Development Agency’s aims, businesses, mid to long-term objectives and so on, as a result of comprehensive consideration based on some circumstances regarding the agency’s business achievements, efforts and so on, through its activities, special efforts and improvements including a fundamental drastic review, toward “maximization of R&D achievements” or “the appropriate, effective and efficient operations” are required.

Mid to long-term objectives	FY evaluation					Itemized evaluation document No.	Remarks
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021		
<b>I. Items concerning maximization of achievements in research and development and improvements in quality of other businesses</b>							
<b>1. Formulating visionary R&amp;D strategies for co-creation of the future with society</b>	A	A				□-1	
<b>2. Creating knowledge and transforming it into economic and social value</b>	A	A				□-2	
<b>3. Promoting dialogue with society and cultivating human resources</b>	A	B				□-3	
<b>II. Items concerning improved efficiency in business operations</b>	B	B				□	
<b>III. Items concerning improvements in the financial conditions</b>	B	B				□	
<b>IV. Other important items concerning business operations</b>	B	A				□	

\* Evaluation categories are as follows:

[Administrative and projects related to research and development (I)]

S: Based on the National Research and Development Agency's aims, businesses, mid to long-term objectives and so on, and as a result of comprehensive consideration based on some circumstances regarding the agency's business achievements, efforts and so on through its activities, especially the creation of considerable achievements, anticipated creation of special achievements in the future and so on toward "maximization of R&D achievements" under the conditions of appropriate, effective, and efficient operations are recognized.

A: Based on the National Research and Development Agency's aims, businesses, mid to long-term objectives and so on, and as a result of comprehensive consideration based on some circumstances regarding the agency's business achievements, efforts and so on through its activities, the creation of considerable achievements, anticipated creation of achievements in the future and so on toward "maximization of R&D achievements" under the conditions of appropriate, effective, and efficient operations are recognized.

B: Based on the National Research and Development Agency's aims, businesses, mid to long-term objectives and so on, and as a result of comprehensive consideration based on some circumstances regarding the agency's business achievement, efforts and so on through its activities, a certain degree of expectation for the creation of achievement and creation of achievement in the future toward "maximizing the achievements of R&D achievements" were recognized, and steady business operations have been also recognized.

C: Based on the National Research and Development Agency's aims, businesses, mid to long-term objectives and so on, and as a result of comprehensive consideration based on some circumstances regarding the agency's business achievements, efforts and so on through its activities, the creation of achievements, further drastic efforts and improvements toward "maximization of R&D achievements" or the "appropriate, effective, and efficient operations" are anticipated.

D: Based on the National Research and Development Agency's aims, businesses, mid to long-term objectives and so on, and as a result of comprehensive consideration based on some circumstances regarding the agency's business achievements, efforts through its activities, special efforts and improvements including a fundamental drastic review, toward "maximization of R&D achievements" or the "appropriate, effective, and efficient operations" are required.

[Other than administrative work and projects regarding research and development (After II)]

S: Based on the activities of a corporation, remarkable performance exceeding the intended objectives is recognized quantitatively and qualitatively in the mid- to long- objective plan (in terms of quantitative indicators, 120% or more vis-à-vis planned mid to long-term objective value (or planned FY value), and remarkable performance is also recognized qualitatively)

A: Based on the activities of a corporation, remarkable performance exceeding the intended objectives is recognized in the mid to long- term objective plan (in terms of quantitative indicators, 120% or more vis-à-vis planned mid to long-term objective value (or planned FY value).

B: Performance exceeding the intended objectives is recognized in the mid to long- term objective plan (in terms of quantitative indicators, 100% or more but less than 120% vis-à-vis planned mid to long- term objective value (or planned FY value).

C: Performance falls below the intended objectives in the mid to long- term objective plan, requiring improved performance (in terms of quantitative indicators, 80% or more but less than 100% vis-à-vis planned mid to long- term objective value (or planned FY value).

D: Performance falls below the intended objectives in the mid to long-term objectives, requiring drastic improvement of business including its abolishment (in terms of quantitative indicators, less than 80% vis-à-vis the planned mid to long-term values (or values on prior fiscal year), or it is recognized that the competent Minister is required to make an order for improving business operation or taking other necessary measures).

The following grades are to be assigned when one is forced to raise an evaluation based on qualitative indicators such as evaluation of internal controls, and when operations performance is difficult to measure such as when meeting certain conditions is set as the target.

S:—

A: The agency reached the target level, for targets whose difficulty grade were set high.

B: The agency reached the target level (This excludes items that correspond to “A”).

C: The agency couldn't reach the target level (This excludes items that corresponding to “D”). D: A fundamental review of operations is needed because the agency couldn't reach the target level , and this includes when the Minister in charge finds that the Minister needs to order improvements in operations management and order other necessary actions.