

Evaluation criteria for National Institutes for Quantum and Radiological Science and Technology (Draft)

The underlined parts are the revised parts.

	Research area, etc.	Evaluation Criteria	Related Evaluation and Monitoring Indicators
Medical R&D concerning quantum and radiological science and technology	Exploratory/creative R&D area concerning quantum science and technology	<ul style="list-style-type: none"> <li>○ Whether the agency takes international trends and social needs into consideration</li> <li>Whether the agency implements R&amp;D, which has a potential of serving as an engine of the progress of quantum science and technology and create excellent research and technology seeds</li> <li>○ Whether the agency properly carries out R&amp;D management to maximize R&amp;D achievements</li> </ul>	<p>&lt;&lt;Evaluation Indicator&gt;&gt;</p> <ul style="list-style-type: none"> <li>- Results of efforts on R&amp;D management</li> </ul> <p>&lt;&lt;Monitoring Indicators&gt;&gt;</p> <ul style="list-style-type: none"> <li>- There is a challenge with a good theme set.</li> <li>- Creation results of excellent research and technology seeds</li> </ul>
	R&D area for revolutionary medical use of radiation	<ul style="list-style-type: none"> <li>○ Whether the agency carries out leading R&amp;D, which may lead to innovation with high economic/social impact and produce good results?</li> <li>○ Whether the agency works on R&amp;D, which is an interface for commercializing technologies</li> <li>Whether it advances bridging activities</li> <li>○ Whether the agency properly carries out R&amp;D management to maximize R&amp;D achievements</li> <li>(Research on heavy particle cancer radiotherapy)</li> <li>○ Whether the agency makes efforts for</li> </ul>	<p>&lt;&lt;Evaluation Indicator&gt;&gt;</p> <ul style="list-style-type: none"> <li>- Results of efforts on R&amp;D management</li> </ul> <p>&lt;&lt;Monitoring Indicator&gt;&gt;</p> <ul style="list-style-type: none"> <li>- There are challenges which created good results.</li> </ul> <p>(A disease diagnosis research by using optical and quantum imaging technique and a next-generation cancer therapy research by using radiopharmaceuticals)</p> <p>&lt;&lt;Monitoring Indicator&gt;&gt;</p> <ul style="list-style-type: none"> <li>- Qualitative and quantitative status of development and application of new pharmaceuticals, etc.</li> </ul> <p>(Research on heavy particle cancer radiotherapy)</p>

	proliferation and effective use of heavy particle cancer radiotherapy, which contributes to scientific and reasonable judgments on insurance listings	<<Monitoring Indicator>> - Qualitative and quantitative collection status of clinical research data
Radiation effects and exposure medical care research area	○ Whether the agency achieves a globally high level of research results of radiation effects and disclose the achievements	<<Evaluation Indicator>> - The status of creation of radiation effect research results in the light of global standards
R&D area concerning the application of quantum beams	○ Whether the agency carries out leading research, which may lead to innovation with high economic/social impact and produce good results in order to solve essential issues in various fields  <u>○ Whether the agency, as the national entity to promote establishment and operation of the high-brightness 3GeV class synchrotron radiation source for soft-X-rays, is steadily making efforts for R&amp;D on the establishment and etc. of the next-generation synchrotron radiation facilities.</u>  ○ Whether the agency properly carries out R&D management to maximize R&D achievements	<<Evaluation Indicator>> - Results of efforts on R&D management  <<Monitoring Indicator>> - There are challenges with good themes set - There are challenges which created good results.
R&D area concerning nuclear fusion	○ Whether the agency steadily works on necessary R&D based on international agreements  ○ Whether the agency carries out leading R&D	<<Evaluation Indicators>> - Status of progress management of ITER plan BA activities - Results of efforts on leading R&D and human resources development

		and develop human resources that can lead global R&D projects	<<Monitoring Indicator>> - Procurement achievement of equipment shared by Japan  * Common to 5 points above <<Monitoring Indicator>> - The number of scientific papers - The number of top 10% scientific papers - Qualitative and quantitative status of creation, securing, and utilization of intellectual properties
Dissemination of R&D achievements by an intelligible method and promotion of utilization of outcomes		○ Whether the agency promotes dissemination of R&D achievements and utilization of outcomes by an intelligible method	<<Evaluation Indicator>> - Results of efforts on dissemination of R&D achievements and utilization of outcomes by intelligible methods  <<Monitoring Indicator>> - Understanding of the results of the development of integration and the past record of information transmission - The number of presentations at symposiums and academic meetings - Qualitative and quantitative status of creation, securing, and utilization of intellectual property <u>- Results of efforts on investment and etc. for venture businesses originated from the agency</u>
R&D promotion through international cooperation and industry-academia-government collaboration		○ Whether the agency promotes R&D through international cooperation and industry-academia-government collaboration	<<Evaluation Indicator>> - Qualitative and quantitative status of industry-academia-government collaboration

		<ul style="list-style-type: none"> <li>○ Whether the agency creates a platform to promote collaboration among business, academia, and government</li> </ul>	<<Monitoring Indicator>> - The amount of money concerning joint research from companies and the number of joint researches -The number of eligible persons in the cross appointment system
Functions to be fulfilled by a public research institution	Functions to be fulfilled as the central organization in measures for nuclear emergency, radiological protection, etc.	<ul style="list-style-type: none"> <li>○ Whether the agency steadily carries out important tasks as a technical support organization, designated public institution, and advanced radiation medicine support center</li> </ul>	<<Evaluation Indicator>> - Results of efforts as a technical support organization, designated public institution, and advanced radiation medicine support center - Results of efforts on human resources development of agency's staff responsible for nuclear disaster measures and radiological protection, etc.
	Contribution to reconstruction in Fukushima	<ul style="list-style-type: none"> <li>○ Whether the agency steadily carries out R&amp;D to contribute to the reconstruction of Fukushima</li> </ul>	- Results of efforts on revitalization support for afflicted regions  <<Monitoring Indicators>> - The number of participations in training sessions for nuclear disaster prevention by national and local governments, etc., and the number of dispatched experts - The past record of correct information transmission to society through media, lectures, etc.
	Human resources development	<ul style="list-style-type: none"> <li>○ Whether the agency implements human resources development to satisfy social needs</li> </ul>	<<Evaluation Indicators>> - Results of efforts on human resource development training activities etc. - Results of efforts on human resource development in collaboration with universities
	Promotion of utilization	<ul style="list-style-type: none"> <li>○ Whether the agency promotes the utilization of</li> </ul>	<<Evaluation Indicator>>

	of facilities and equipment	facilities and equipment, etc.	- Results of efforts on promotion of utilization of facilities and equipment  <<Monitoring Indicator>> - Actual sharing of facilities, etc.
	<u>Establishment and etc. of the next-generation synchrotron radiation facilities by the regional public-private partnership</u>	<u>○Whether the agency, as the national entity to promote establishment/operation of the high-brightness 3GeV class synchrotron radiation source (the next-generation synchrotron radiation facilities), has steadily promoted the establishment and etc. of the next-generation synchrotron radiation facilities by the regional public-private partnership.</u>	<<Evaluation Indicator>>  <u>- Progress management status on establishment and etc. of the next-generation synchrotron radiation facilities by the regional public-private partnership</u>
Other related matters		○ Whether a mechanism of the integration of organizations beyond sites has been introduced	<<Evaluation Indicator>> - Results of efforts on integration of organizations beyond sites
		○ Whether the agency implements strategic personnel management including the success of women in the workplace and the diversity of researchers	<<Evaluation Indicator>> - Results of efforts on the success of women in the workplace and the diversity of researchers  <<Monitoring Indicator>> - The percentage of women in doctor's program of the sector and the percentage of female researchers in new recruits