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Interim Report

A Panoramic View of Science, Technology, and Innovation Policy:

From the Enactment of the Basic Act on Science and Technology to Date

Center for Research and Development Strategy
Japan Science and Technology Agency

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Abbreviations

AIST	The National Institute of Advanced Industrial Science and Technology (2001-)
CAS	The Cabinet Secretariat
CCE	Central Council for Education
CST	Council for Science and Technology was an advisory body for Cabinet office during 1959 and 2001 and reorganized to CSTP.
CSTI	Council for Science, Technology and Innovation (2014-)
CSTP	Council for Science Technology and Policy (CSTP) was reorganized to CSTI in 2014
EA	Environment Agency (1971-2001)
FSC	Food Safety Commission
HEB	Higher Education Bureau, MEXT
JAERI	Japan Atomic Energy Research Institute (1956-2005) is reorganized to Japan Atomic Energy Agency
JICA	The Japan International Cooperation Agency
JPO	Japan Patent Office (1885-)
JRDC	Research and Development Corporation of Japan (JRDC) was merged with Japan Information Center for Science and Technology to form JST in 1996
JSPS	The Japan Society for the Promotion of Science
JST	Japan Science & Technology Corporation (1996-2003) Japan Science & Technology Agency (2003-)
MAFF	Ministry of Agriculture, Forestry and Fisheries
MESC	Ministry of Education, Science and Culture (MESC) became MEXT with STA in 2001.
METI	Ministry of Economy, Trade and Industry (2001-)
MEXT	Ministry of Education, Culture, Sports, Science and Technology (2001-)
MHLW	Ministry of Health, Labour and Welfare (2001-)
MIC	Ministry of Internal Affairs and Communications (2001-)
MITI	Ministry of International Trade and Industry, MITI was reorganized to METI in 2001
MLIT	Ministry of Land, Infrastructure, Transport and Tourism (2001-)
MOD	Ministry of Defense (2007-)
MOE	Ministry of the Environment (2001-)
MOF	Ministry of Finance (2001-)
MOHW	Ministry of Health and Welfare is reorganized to MHLW in 2001
MOT	Ministry of Transportation was reorganized to MLIT in 2001
MPT	Ministry of Posts and Telecommunications was merged with Management and Coordination Agency and Ministry of Home Affairs to form MIC in 2001
NEDO	The New Energy and Industrial Technology Development Organization (2003-)
RPB	Research Promotion Bureau, MEXT
SCJ	Science Council of Japan under supervision of Prime Minister's Office (1949-2001) Science Council of Japan under supervision of MIC (2001-2005) Science Council of Japan under supervision of Cabinet Office (2005-)
STA	Science and Technology Agency, STA became MEXT with MESC in 2001.
STPB	Science and Technology Policy Bureau, MEXT

1. Introduction

(1) Background and Objectives of This Report

Japan is currently facing various problems, such as declining population, falling birth rate, aging society, environmental and energy issues, and poor industrial competitiveness, and it is pinning its hopes on science, technology, and innovation to play a key role in solving these problems. However, public research and development funding has stagnated at this time of financial stringency, and it remains to be seen whether it will increase sufficiently to support science, technology, and innovation. Therefore, it has become even more critical to maximize the effects of science, technology, and innovation policy (STI policy) with the limited financial resources available.

Recently, Japan has introduced various science and technology promotion policies and schemes on the basis of the 1995 Basic Act on Science and Technology. Nevertheless, these laws, policies, frameworks, and relevant budgetary measures have not been analyzed systematically or comprehensively. It is not always easy to grasp the whole picture of the STI policy in Japan, particularly in recent years, because the policy has increased in complexity and diversity while the country's society is changing rapidly and complexly along with further globalization and advancement in information and communications technology. To make matters more complex, the implementation of the STI policy involves various ministries, which makes interministerial policy coordination more difficult. These factors have caused a bottleneck in the total optimization of the STI policy.

The Center for Research and Development Strategy (CRDS) of Japan Science and Technology Agency (JST) has published Panoramic View Reports[1] regularlyto provide an overall view of the latest research and development in science and technology fields. These Panoramic View Reports have been used as reference in formulating national research and development strategies (R&D strategies) and science and technology policies (S&T policies). However, the panoramic analysis of recent research and development is not sufficient to formulate appropriate science and technology strategies and policies. There is also a need to grasp the entire picture of the STI policy framework, which involves various ministries. Neither of these basic data is dispensable for planning R&D strategies and S&T policies.

Aimed at contributing to the development of appropriate R&D strategies and S&T policies, this interim report provides a clear view of historical changes in the STI policy by describing the whole picture of major policies and budgetary measures (public funding in science and technology). It is our great hope that this interim report will be used as reference in reviewing the policies that should be coordinated carefully as well as in formulating new policies. We also hope that this study will help policy makers deepen their understanding of history and grasp the entire picture of the STI policy. Because this is the first attempt to provide a panoramic view of the complicated STI policy framework, issues requiring further examination could remain. Therefore, we consider it important to ensure that this interim report will be followed by continued efforts to provide a panoramic view of the STI policy, keep track of developments in relevant budgetary measures, and make more detailed and easier-to-understand reports, while hearing opinions of involved parties, to share information among interested parties.

[1] JST CRDS Panoramic View Reports (published biannually). http://www.jst.go.jp/crds/report/report02.html

(2) Overview of Panoramic Views

This interim report provides a panoramic view of the STI policy from macro- to micro-levels to elucidate the whole picture of the policy. In this process, the STI policy is broken down into the following four levels according to its hierarchical structure: (i) comprehensive and cross-sectoral strategy/policy level, (ii) more specific policy measure level, (iii) individual scheme/program level (e.g., research and development projects and programs), and (iv) research and development issue level (see Figure 1.1)[2]. Among these four levels, Levels (i) to (iii) are examined in this panoramic analysis.

Moreover, this study classifies the STI policy into two categories: (A) science, technology, and innovation promotion infrastructure (hereinafter referred to as "STI promotion infrastructure") policies (e.g., frameworks and systems) and (B) sectoral policies (e.g., life sciences, environment, and energy sector policies). The former category is further divided into 10 policy areas and summarized in Section 2 below. Category B sectoral STI policies will be separately examined sector by sector (e.g., life sciences, environment, and energy sectors) by CRDS.

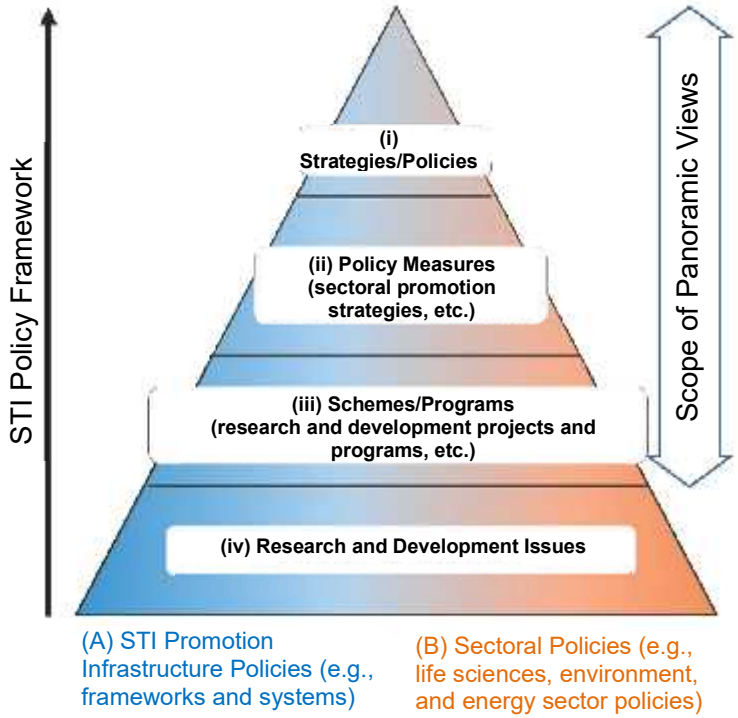

Figure 1.1 STI Policy Framework and Scope of Panoramic Views

As mentioned above, JST CRDS publishes Panoramic View Reports on different research and development sectors on a regular basis to offer basic information for formulating R&D strategies. These Panoramic View Reports provide a comprehensive view of research and development, identify priority research and development areas, and suggest the course of action on a sector-by-sector basis. In addition to these sectoral research and development trends, the latest developments in the STI policy should be closely monitored as both are indispensable for formulating effective R&D strategies and S&T policies. This is because the STI policy is closely linked with research and development activities. The

[2] Prepared by CRDS based on the Basic Guidelines for Implementing Policy Evaluation (Cabinet Decision of December 28, 2001; revised on December 16, 2005), Policy Evaluation Implementation Guidelines (approved by the Interministerial Liaison Meeting on Policy Evaluation on December 16, 2005), National Guidelines for Evaluating Government Funded R&D (Prime Minister's Decision of December 6, 2012), and JST CRDS Strategic Proposal "Towards Realization of Evidence-based Policy Formation: Development of Science, Technology and Innovation Policy" (March 2011).

significance of their interaction is growing even more in this time of uncertainty.

The conceptual image of the relationship between the entire spectrum of research and development and the STI policy framework is shown in Figure 1.2 below. As illustrated in this figure, the research and development spectrum covers natural and social sciences and humanities and ranges from basic/fundamental to applied research. On the other hand, the STI policy framework is composed of (i) strategies/policies, (ii) policy measures, (iii) schemes/programs, and (iv) research and development issues in connection with Category (A) STI promotion infrastructure policies, as shown in Figure 1.1. As illustrated in Figure 1.2, Category (A) STI promotion infrastructure policies widely affect the entire spectrum of research and development as they develop cross-sectoral research and development promotion frameworks/systems. Meanwhile, Category (B) sectoral STI policies largely have a sector-specific impact, implementing support policies to promote research and development on a sector-by-sector basis.

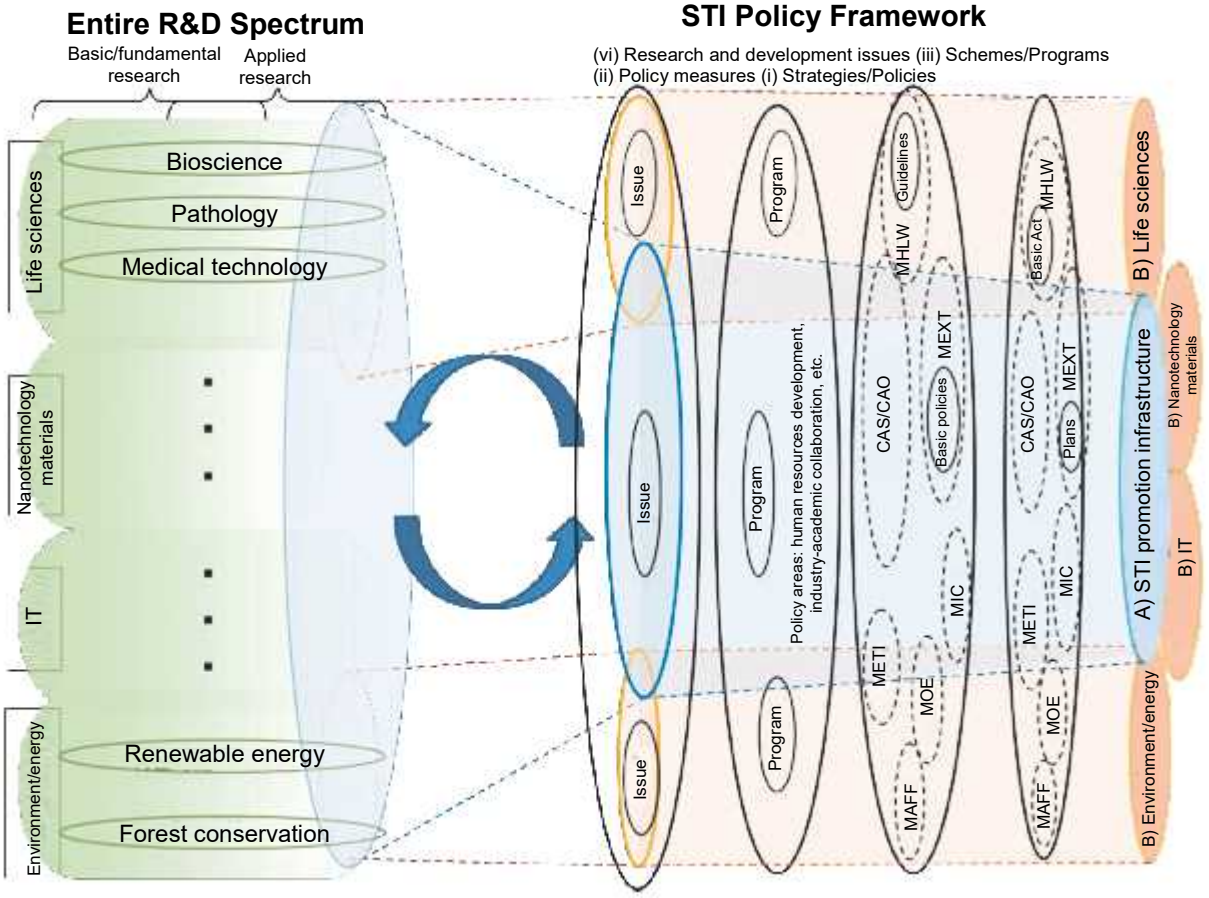

Figure 1.2 Relationship between the Entire Research and Development Spectrum and the STI Policy Framework

2. A Panoramic View of Science, Technology, and Innovation Promotion Infrastructure Policies

(1) Panoramic Analysis Method

This interim report uses the following panoramic analysis method to elucidate the entire structure and history of STI promotion infrastructure policies. It is not always easy to determine the scope of the STI promotion infrastructurepolicies defined here because the concept covers an extremely wide range of policy areas that are connected to each other, such as taxation, regulatory reforms, public procurement, policy financing, employment regulations, immigration control, and higher education. These relevant policy areas are only briefly examined in this interim report.

Information Sources for Analysis

This study mainly collects information from the Database of Science, Technology and Innovation Policy[3] constructed by the National Institute of Science and Technology Policy (NISTEP) and gathers public information from various other sources including the Council for Science, Technology and Innovation (CSTI) and relevant ministries and agencies. Moreover, this study collects other relevant information from experts and administrative officials.

The above-mentioned STI Policy Database classifies the STI policy into 33 policy groups based on administrative information such as White Papers on Science and Technology. The database provides a sector-by-sector summary of major policies implemented since the 1950s, along with a chronological description of each sector.

Temporal Scope of Analysis

This study mainly covers the period from 1995, when the Basic Act on Science and Technology was enacted, to 2013, but also examines other policies before and after this period, as required.

Classification of STI Promotion Infrastructure Policies

This report classifies the STI promotion infrastructure policies into 10 policy areas in the following. This classification is mainly based on the structure of the Fourth Science and Technology Basic Plan and on the classification of the above-mentioned 33 policy groups in the STI Policy Database, particularly on the structures of 21 policy groups overlapping with this study.

These policy areas respectively cover the following policies(see Table 2.1).

(i) Basic policies and promotion frameworks: basic science and technology strategies/policies, promotion frameworks, etc.
(ii) Human resources development: development and securing of human resources in science and technology, educational environment development, university reforms, etc.
(iii) Industry-academia-government collaboration: industry-academia collaborative research/commissioned research, commercialization of research results, etc.
(iv) Regional development: cluster formation, support for smooth regional development, etc.
(v) Intellectual property and standardization: institutional development for intellectual property, support for international standardization, etc.
(vi) Research infrastructure development: development of large research facilities and intellectual information infrastructure, promotion of their public use, etc.

[3] National Institute of Science and Technology Policy. *Construction of Database of Science, Technology and Innovation Policy.* November 2013.

(vii) Research and development funding: operation of research and development funding schemes, budgeting processes, etc.
(viii) Evaluation systems: assessment of research and development, evaluation of research and development institutions, etc.
(ix) International activities: international exchange, large international cooperation projects, science and technology diplomacy, etc.
(x) Science and technology for society: Science, Technology, Enginering, and Mathmathics(STEM) education, science communication, research ethics, etc.

Table 2.1 STI Promotion Infrastructure Policy Areas Classified for this report

(i)	Basic policies and promotion frameworks
(ii)	Human resources development
(iii)	Industry-academia-government collaboration
(iv)	Regional development
(v)	Intellectual property and standardization
(vi)	Research infrastructure development
(vii)	Research and development funding
(viii)	Evaluation systems
(ix)	International activities
(x)	Science and technology for society

Description Principles

This study, aimed at elucidating the policy frameworks and histories of the above-mentioned 10 policy areas, examines major strategies/policies, policy measures, and schemes/programs on an area-by-area basis. They are described according to the following rules.

- Each section consists of the following two components: (i) a brief (1 to 2 page) summary of policies and policy measures since 1995 and (ii) a chronological table of specific policy measures and programs.
- In principle, the policy measures and schemes/programs that cut across multiple policy areas are listed in all the relevant areas.
- In the chronological tables, policy measures and schemes/programs are described area by area and year by year, while strategies/policies are commonly listed in all areas.
- The policy measures and schemes/programs aimed at similar purposes are entered in cells of the same color.
- The schemes/programs described as “closed” are no longer accepting new applications. The schemes/programs that stop accepting new applications are written in gray letters.
- The programs with an annual budget of more than 5 billion yen are written in bold letters and entered in bold-framed cells. The programs with an annual budget of 1 to 5 billion yen are written in bold letters.

(2) Overview of Major Laws, Policy Measures, Schemes/Programs, etc.

Using the abovementioned method, this report examines and summarizes major strategies/policies, policy measures, and schemes/programs following the Basic Act on Science and Technology (enacted in 1995) in the 10 policy areas presented in Table 2.1. Moreover, a chronological table of major events in Japan and around the world is inserted as reference information at the end of Section 2 (2).

Basic Policies and Promotion Frameworks

Year	Strategies/Policies/Frameworks	
	Science and Technology Policies/Frameworks	Relevant Policies
1995	**Basic Act on Science and Technology**	
1996	**First Science and Technology Basic Plan (FY1996–FY2000)**	
	●Japan Science and Technology Corporation established	
1997		
1998		Act on the Promotion of Technology Transfer from Universities to Private Business Operators (TLO System) (MITI/MESC)
1999		Act on Special Measures for Industrial Revitalization (Japanese Bayh-Dole Act) (MITI) and Basic Act on the Promotion of Core Manufacturing Technology (MITI)
2000		Industrial Technology Enhancement Act (MITI) Basic Plan on Core Manufacturing Technology (MITI)
2001	●Minister of State for Science and Technology Policy (CAO) ●Council for Science and Technology Policy established (CAO) ●Ministry of Education, Culture, Sports, Science and Technology established	
	Second Science and Technology Basic Plan (FY2001–FY2005)	
	●National Institute of Advanced Industrial Science and Technology reorganized as an incorporated administrative agency	
2002		Intellectual Property Basic Act (CAS)
2003	●Center for Research and Development Strategy established (JST) ●Research Center for Science Systems established (JSPS)	National University Corporation Act (MEXT)
	●Japan Science and Technology Agency, New Energy and Industrial Technology Development Organization, Japan Society for the Promotion of Science, RIKEN, etc., reorganized as incorporated administrative agencies	
2004	●National universities and inter-university research institutes reorganized as corporations	
2005	●Act on Science Council of Japan revised	
2006	**Third Science and Technology Basic Plan (FY2006–FY2010)**	Basic Act on Education revised (MEXT)
		New Economic Growth Strategy (METI)
2007	Long-term Strategic Guidelines “Innovation 25”	
2008		First Basic Plan for the Promotion of Education (CCE)
		Act on Improvement of Research and Development Capacity
		Strategy for Innovative Technology (CSTP)
2009		
2010	Action Plan for the Implementation of Important Science and Technology Policy Measures (formulated each year) (CSTP)	
2011	**Fourth Science and Technology Basic Plan (FY2011–FY2015)**	
2012		
2013	Japan Revitalization Strategy (Growth Strategy) and Comprehensive Strategy on Science, Technology and Innovation (formulated each year) (CSTP)	Second Basic Plan for the Promotion of Education (CCE)
2014	●Technology Strategy Center established (NEDO) ●Council for Science, Technology and Innovation (reorganized from the Council for Science and Technology Policy)	Act on Strengthening Industrial Competitiveness (METI)

●: Related to promotion frameworks; CSTP: Council for Science and Technology Policy

Human Resources Development

Year	Strategies/Policies: Science and Technology Policies	Strategies/Policies: Relevant Policies	Policy Measures, etc. (Human Resources Development): Title	Policy Measures, etc. (Human Resources Development): Description	Schemes/Programs (Human Resources Development): Description	Schemes/Programs (Human Resources Development): Competent Ministries, etc.	Schemes/Programs (Human Resources Development): Competent Ministries, etc.
1994			Report on Consultation No. 20 regarding the Basic Guidelines for Securing Science and Technology Human Resources in 1992 (CSTP)	These report defines the term "science and technology human resources" as those who are directly involved in research, development, production, and other relevant activities (e.g., researchers and engineers) and outlines the basic concepts of measures to be taken by the government to secure those human resources.			
1995	Basic Act on Science and Technology				**Cooperative System for Supporting Priority Research: closed in 2007**	Aimed at establishing an effective research support system for national research institutions, this program dispatches researchers with demanded expertise and knowledge (Special Coordination Funds for Promoting Science and Technology). [108 awards during the 13-year period]	STA
1996	First Science and Technology Basic Plan (FY1996–FY2000)		Program to Support 10,000 Postdoctorals (MESC)	Adopted under the First Science and Technology Basic Plan, this plan aims to establish a government-wide system to support 10,000 young researchers.	**Research Assistant (RA) System**	This system enables graduate students in doctoral programs to participate in research projects conducted at national universities and inter-university research institutes (The RA budget was transferred from the Special Account for National Schools to the Management Expenses Grants for National University Corporations in 2004, since the time it has been used at the discretion of each university. Private universities receive subsidies for part of the expenses of research assistants.).	MESC
1997			Act on Special Provisions concerning Employment, Salary and Working Hours of Fixed-Term Research Officers Engaged in Regular Services (MIC)	This law introduces two types of fixed-term employment systems for national research institutions: (i) Invitation Type to employ highly competent researchers and (ii) Young Researchers Development Type to foster creativity and research capacity.	Research System for Promotion of Mobility: closed in 2000	In order to encourage national research institutions to introduce a fixed-term employment system, financial support is provided to assist fixed-term researchers in conducting intensive research activities during their limited term of employment (Special Coordination Funds for Promoting Science and Technology).	STA
			Act on Term of Office of University Teachers, etc. (MESC)	This law provides for matters related to fixed-term employment systems in universities, inter-university research institutes, etc.			
1998		Act on the Promotion of Technology Transfer from Universities to Private Business Operators (TLO System) (MITI/MESC)					
1999		Act on Special Measures for Industrial Revitalization (Japanese Bayh-Dole Act) (MITI)					
		Basic Act on the Promotion of Core Manufacturing Technology (MITI)					
2000		Industrial Technology Enhancement Act (MITI)			**Industrial Technology Research Grant Program: closed in 2009**	Aimed at identifying industrial technology seeds that can address the needs of industry and society and developing human resources for industrial technology research, this program provides financial support so that young researchers at universities and incorporated administrative agencies can carry out research and development for industrial applications (disbursed until 2013; renamed as the Leading Industrial Technology Development Project Grant Funds (Grants for Young Researchers) in 2011).	MITI/ NEDO
		Basic Plan on Core Manufacturing Technology (MITI)			★Industrial Technology Fellowship Program: closed in 2010	This program supports the development of competent young researchers who have a broad vision and extensive experience in the industrial technology field as well as ability to promptly transform technology seeds into products and businesses.	MITI/ NEDO
2001	Council for Science and Technology Policy established; Ministry of Education, Culture, Sports, Science and Technology established		Basic Guidelines for Improvement of Mobility of Researchers (CSTP)	These guidelines facilitate the efforts of national research institutes, etc. to formulate a plan for introducing fixed-term employment and open recruitment systems.	Support Program for Fixed-term Young Researchers: closed in 2003	Aimed at spreading the fixed-term employment system across national research institutes, etc., this program provides financial support so that fixed-term young researchers at universities, national research institutions, etc. can concentrate on their independent research during their limited term of employment (Special Coordination Funds for Promoting Science and Technology).	STPB
	Second Science and Technology Basic Plan (FY2001–FY2005)		Policy for the Structural Reform of Universities (National Universities) (constituting part of the Toyama Plan; MEXT)	Developed as part of the effort to create internationally competitive universities, this policy outlines the structural reform plan of national universities to revitalize them.	**Development of Human Resources in Emerging Disciplines: closed in 2005**	This program supports the flexible formation of research units to develop researchers as soon as possible in areas lacking in competent human resources (Special Coordination Funds for Promoting Science and Technology).	STPB
2002		Intellectual Property Basic Act (CAS)			Research and Development Program for Nurturing Young Advanced IT Researchers (renamed in 2007 as the Research and Development Program for Nurturing Young ICT Researchers)	Aimed at developing next-generation young experts in the information and communications technology (ICT) field, this program provides financial support for research projects proposed by young researchers (part of Strategic Information and Communications Research and Development Promotion Program (SCOPE)). [Accepting 11 applications as of 2002]	MIC
					21st Century COE Program in KAKENHI: closed in 2004	Aimed at establishing the world most excellent centers of research and education in universities to upgrade their research levels and produce world-leading creative researchers, this program assists universities in strengthening their international competitiveness and distinctive attractiveness. [274 awards during the 3-year period (Each project receives 100 to 500 million yen per year for five years)]	HEB
					New categories of Young Scientists (A) and (B) added in KAKENHI	These new research categories are added to Grants-in-Aid for Scientific Research (KAKENHI) to further promote the research activities of young scientists in Japan who have achieved outstanding results.	JSPS
2003		National University Corporation Act (MEXT) (2004; reorganizing national universities and inter-university research institutes as corporations)			**Support Program for Distinctive University Education (Distinctive GP): merged in 2008**	Aimed at enhancing future university education through the application of distinctive good practices (GPs) that can contribute to improving university education, this program supports the wide dissemination of relevant information to the public (merged with the Contemporary GP Program into the Program for Promoting High-Quality University Education (Education GP) in 2008). [285 awards during the 6-year period]	HEB
2004			Development and Utilization of Science and Technology Human Resources (CSTP)	Prepared by the Expert Panel on Science and Technology Human Resources, this report suggests how to develop and secure scientists, engineers, and experts to produce world-class research results and promote their applications.	**Support Program for Contemporary Educational Needs (Contemporary GP): merged in 2008**	This program selects themes related to socially important policy issues (contribution to regional revitalization, intellectual property education, etc.) and assists universities, junior colleges, and technical colleges in putting GPs into action to address the policy issues (merged with the Distinctive GP Program into the Program for Promoting High-Quality University Education (Education GP) in 2008). [401 awards during the 6-year period]	HEB
2005			Graduate School Education in the New Age: Towards Development of Internationally Attractive Graduate School Education (report) (CCE)	Based on the Future of Higher Education in Japan (Central Council for Education, FY2005), this report outlines the course of action to be taken for enhancing university education, including the following basic policies: making graduate school education more practical (promoting systematic curriculum delivery) and raising the international recognition and credibility of graduate schools (assuring the quality of graduate school education).	★Cooperative Plans for High-level Personnel Dispatch: closed in 2006	In order to produce high-level professionals who can play a key role in research and business activities in graduate schools, support is provided to develop and implement long-term quality internship programs. [30 awards during the 2-year period]	HEB
					Initiatives for Attractive Education in Graduate Schools: closed in 2007	Aimed at strengthening the capacity of graduate schools to produce creative young researchers who can meet the new needs of society, these initiatives assist graduate schools in delivering motivational and creative education. [143 awards during the 3-year period]	HEB
2006	**Third Science and Technology Basic Plan (FY2006–FY2010)**	Basic Act on Education revised (MEXT)			A new category of Young Scientists (Start-up) added in KAKENHI	A new research category of Young Scientists (Start-up) is added to Grants-in-Aid for Scientific Research (KAKENHI) to support the research activities of researchers who have been freshly appointed to a research position.	JSPS
					★Project for Promoting Diversification of the Career Paths of Human Resources in Science and Technology: closed in 2009	This project develops a network of universities, business enterprises, academic societies, non-profit organizations (NPOs), etc. to systematically assist postdoctoral and other young researchers in choosing their careers, for example, by facilitating communication and information sharing between researchers and business enterprises, providing guidance, and dispatching trainees.	STPB
					Program for Nurturing Leading IT Specialists: closed in 2007	This program supports the establishment of education hubs to produce the world's highest-level IT experts with special skills and insights into social changes. [8 awards during the 2-year period]	HEB
					Female Researcher Support Model Development Program: renamed in 2011	This program supports the efforts of universities and other research institutes to implement GPs that should be followed to assist female employees in building research careers while giving birth to and raising children (Special Coordination Funds for Promoting Science and Technology). [55 awards during the 4-year period]	STPB
					A new category of Research Postdoctoral Fellowship added	It is a support mechanism to facilitate a smooth return to research work after maternity and parenting time away from the job. This support constitutes part of the Research Fellowship for Young Scientists Program implemented by Japan Society for the Promotion of Science (JSPS).	JSPS
					★Independent Research Environment Development for Young Scientists: closed in 2010	Aimed at improving the research environment, this program provides support, such as introducing the tenure track system, financing start-up expenses, and securing research spaces to allow researchers to conduct independent research activities (Special Coordination Funds for Promoting Science and Technology; replaced by the Tenure Track Dissemination and Establishment Program in 2011). [42 awards during the 3-year period]	STPB

Notes: Blue: Programs for undergraduate and graduate students; Red: Programs for postdoctoral fellows; Deep red: Programs for young researchers, etc.; ★: Career path; Gray letters: application closed

Bold letters / bold-lined frame: Programs with an annual budget of more than 5 billion yen; Bold letters: Programs with an annual budget of 1 to 5 billion yen; Program closing year: Fiscal year when the program stopped accepting new applications; *: FY2014 Programs

Human Resources Development

Year	Strategies/Policies: Science and Technology Policies	Strategies/Policies: Relevant Policies	Policy Measures, etc. (Human Resources Development): Title	Policy Measures, etc. (Human Resources Development): Description	Schemes/Programs (Human Resources Development): Description	Schemes/Programs (Human Resources Development): Competent Ministries, etc.	Competent Ministries, etc.
2007	Long-term Strategic Guidelines "Innovation 25"		Guidelines on Measures for the Promotion of Graduate School Education (CCE)	These guidelines outline a five-year action plan to improve and enhance graduate school education. In order to make graduate school education internationally appealing, the guidelines suggest the following three courses of action for the reform: (i) making graduate school education more practical, (ii) securing international recognition and credibility of graduate schools, and (iii) developing internationally competitive and excellent centers of education and research.	A new category of Young Scientists (S) added	This new research category is added to Grants-in-Aid for Scientific Research (KAKENHI) to further promote the research activities of young Japanese and foreign scientists who have achieved outstanding results.	JSPS
					Global COE Program: closed in 2009	Aimed at further developing and enhancing the education and research capabilities of graduate schools and establishing world-class research infrastructure to produce world-leading creative researchers, this program supports the establishment of world-class centers of education and research. [140 awards during the 3-year period (Each project receives 50 to 500 million yen per year for five years)]	HEB
					★Industry-Academia Human Resources Development Partnership	Aimed at building a common understanding between the industrial and academic sectors and encouraging them to take concrete measures, this partnership organizes meetings to promote dialogue on a wide range of cross-sectoral and sector/industry-specific issues on human resources development.	METI
					★Support Program for Development of Manufacturing Engineers: closed in 2007	This program supports the development and implementation of education programs organically combining lectures, experiments, and practices through cooperation with local communities and industries as well as training of manufacturing engineers who can bring innovation to their regions through collaboration between local universities and regional industries. [2 awards during the 1-year period]	HEB
					★Service Innovation Human Resources Development Program: closed in 2007*	This program supports education to produce human resources with interdisciplinary knowledge in business, IT, humanities, and other fields as well as high-level knowledge and expertise on the service industry and skills to help enhance service productivity and create innovation. [6 awards during the 1-year period]	HEB
					Graduate School Education Reform Support Program: renamed in 2009	This program supports systematic and structured education activities in the master's and doctoral programs to make graduate school education more practical and thus create an international education environment. [221 awards during the 3-year period (Each project receives approximately 50 million yen for three years)]	HEB
2008		Basic Plan for the Promotion of Education (CCE)			★**Development of Young Researchers Creating Innovation: closed in 2010**	This program facilitates the development of research training systems to enable young researchers to learn not only the expertise in niche academic fields but also the ability to produce creative results in wide-ranging fields inside and outside of Japan (part of Special Coordination Funds for Promoting Science and Technology; replaced by the Postdoctoral Internship Promotion Program in 2011). [23 awards during the 3-year period]	STPB
		Act on Improvement of Research and Development Capacity			AIST Innovation School	Through onsite research projects, lectures, and on-the-job training at business enterprises, this education program develops postdoctoral fellows and doctoral students into all-round experts who can play an active role in various fields in society.	AIST
		Strategy for Innovative Technology (CSTP)			**Program for Promoting High-Quality University Education (Education GP): closed in 2008**	This program provides active support for policy issue-oriented good pracitices to enhance the quality of higher education (developed by combining the Distinctive GP and Contemporary GP Programs). [148 awards during the 1-year period (Each project receives 20 to 50 million yen per year for two to three years)]	HEB
					★**Industry-Academia Collaborative Program for Human Resources Development: closed in 2010**	This program facilitates dialogue between the industrial and academic sectors and supports the development and establishment of practical human resources development programs.	METI
2009					**Systematic Graduate School Education Reform Promotion Program (renamed from the Graduate School Education Reform Support Program): closed in 2009**	It is renamed from the Graduate School Education Reform Support Program. [221 awards during the 3-year period (Each project receives approximately 50 million yen for three years)]	HEB
					Global 30 (Project for Establishing Core Universities for Internationalization (Project for Establishing University Network for Internationalization)): closed in 2009	This project supports the development of basic infrastructure to internationalize universities (e.g., developing degree programs in English and building mechanisms to provide academic and life support for international students) (restructured into the Project for Establishing University Network for Internationalization through budget screening in 2011 in order to share the outcomes of the project among all the universities in Japan). [Accepting 13 applications during the 1-year period (Each project receives 200 to 400 million yen for five years)]	HEB
					Program to Accelerate Reforms in the Training System for Female Researchers	Universities, etc. aiming to establish/reform recruitment and training systems for female researchers are provided with five-year financial support for hiring, research, research training, and mentoring expenses for female researchers.	STPB
					★Program on Human Resources Development and Employment Hubs for Next-generation Industries: closed in 2009	This program supports the integrated effort of public research institutes, universities, business enterprises, local governments, etc. to train, re-educate, and employ researchers, research assistants, engineers, etc. who can play a key role in next-generation industries.	METI
2010	Action Plan for the Implementation of Important Science and Technology Policy Measures (formulated each year) (CSTP)				★Next-generation Advanced Technology Personnel Development and Employment Support Program for Small and Medium Enterprises, etc.: closed in 2010	This program supports the collaborative effort of regional universities, public research institutes, business enterprises, local governments, etc. to employ and train advanced technology experts who can play a key role in next-generation industries.	METI
					Program for Advancing Strategic International Networks to Accelerate the Circulation of Talented Researchers: closed in 2013	This program assists universities and other research institutes in sending abroad their young researchers engaged in international collaborative research to promote the circulation of talented researchers.	JSPS
2011	**Fourth Science and Technology Basic Plan (FY2011–FY2015)**		Basic Policy on Support for Diverse Career Paths for Young Postdoctoral Fellows to Be Employed through the MEXT Public Research Funds (CST Committee on Human Resources)	This policy suggests that application guidelines for research institutes applying to the MEXT for public research funds to hire young postdoctoral researchers should require applicants to develop career support plans and keep track of career development.	**Program for Leading Graduate Schools**	Aimed at producing leaders who can play an active role in the wide-ranging fields of industry, academia, and government, and lead the world in growth industries, this program supports the establishment of leading graduate schools that can offer quality-assured, world-class doctoral programs. [20 awards as of 2011]	HEB
					★ **Internship Promotion Program for Postdocs**	Aimed at assisting postdoctoral fellows in developing career paths in a wide range of fields, in addition to working as university teachers and incorporated administrative agency researchers, this program supports career development programs, including long-term internship programs. [7 awards as of 2011]	STPB
					★**Tenure Track Promotion and Establishment Program**	Aimed at creating an environment where young researchers can conduct independent research activities, this program supports universities, etc. that have adopted the tenure track system.	STPB
					Development of the System to Foster and Secure University Research Administrators: closed in 2012	This program supports the establishment of a national system to develop and secure human resources with expertise in research and development, including the raising and management of research funds and the management and exploitation of intellectual property at universities, etc.	STPB
			Second Guideline on Measures for the Promotion of Graduate School Education (CCE)	This guideline outlines a five-year action plan to improve and enhance graduate school education. The guideline supports the basic policy of strengthening the effort to make graduate school education more practical while emphasizing the promotion of dialogue and information sharing with various communities inside and outside of Japan and the creation of opportunities for graduate school graduates to display their abilities and suggesting how to ensure and improve the quality of graduate school education.	Program for Supporting Research Activities of Female Researchers (renamed from the Female Researcher Support Model Program)	Aimed at allowing female researchers to display their maximum potential, this program provides support to create an environment where they can build research careers while going through life events such as giving birth to and raising children as well as to promote collaboration with other universities, business enterprises, etc. (part of Special Coordination Funds for Promoting Science and Technology). [10 awards as of 2011]	STPB
					Program for Promoting the Globalization of Universities	This program assists universities in developing and implementing education exchange programs that accept credits and grades from other higher educational institutes and award degrees beyond the boundaries of the national higher education system.	HEB
					Infrastructure Development Grants for Strengthening Education and Research Capacity	Subsidies (fixed-amount grants) are provided for the construction of facilities, etc. to strengthen the educational and research capacity of national universities. [54 awards as of 2012]	HEB
2012			University Reform Action Plan	This plan outlines the university reform policy structured around the following two main pillars: (i) functional restructuring of universities and (ii) improvement and enhancement of their governance. The plan also suggests that systematic efforts be made to complete the reform by FY2017.	**Grants for Excellent Graduate Schools**	Universities with a strong foothold to provide high-level education and research programs and make good use of advanced research infrastructure are provided with financial support to create an environment where doctoral students can concentrate on their studies. The support is aimed at facilitating infrastructure development to produce world-class researchers. [24 awards as of 2012]	HEB
					National University Reform Promotion Program	This program provides financial support to assist national universities in promoting reforms and enhancing their functions in accordance to their redefined missions. This program also facilitates the reform of teachers colleges, the internationalization of universities, and the development of global human resources (National University Reform Promotion Subsidies; 14 awards as of 2012). Moreover, aimed at strengthening the foundation of the reform, the program provides focused support for the development of basic and advanced facilities (Funds for Strengthening the Foundations of National University Reforms).	HEB
					Global Human Resources Development Promotion Program: closed in 2013	Aimed at developing the global capabilities of students to their fullest potential so that they can play an active role in the world, this program provides support to develop a framework to promote the globalization of university education. [42 awards as of 2012]	HEB
2013	Comprehensive Strategy on Science, Technology and Innovation (formulated each year) (CSTP)		National University Reform Plan	This plan indicates the future direction of the national university reform and suggests specific policies and measures, such as building a mechanism that can enable universities to take advantage of their strengths and features to facilitate their self-improvement and autonomous development.	**Research University Enhancement Promotion Program**	Aimed at expanding universities engaged in world-class research activities and enhancing the research capacity of Japan, this program assists universities, etc. in strengthening their research capacity, for example, by securing research administrators and improving the research environment. [22 awards as of 2013 (Each project receives 200 to 400 million yen for 10 years)]	RPB
	Japan Revitalization Strategy (Growth Strategy)	The Second Basic Plan or the Promotion of Graduate School Education (CCE)			**Grants for Strengthening University Education and Research Infrastructure**	Financial support is provided to develop facilities that will contribute to the reformation of national universities, including reorganizing the function of universities based on the analysis of their strengths and features and promoting governance reforms to support the functional reorganization.	HEB
					Center of Community Program	This program strengthens the function of universities as Centers of Communities (COC) to attract diverse human resources, information, and technologies to contribute to solving problems and assists universities in collaborating with local communities to promote educational, research, and social contribution activities.	HEB
					Program for Establishment of Medium- and Long-term Researcher Exchange System	Aimed at expanding opportunities for medium- and long-term internships to gain experience in practical research and foster innovation capacity, this program supports the collaborative effort of universities and business enterprises to establish such frameworks.	METI
2014	Council for Science, Technology and Innovation (reorganized from the Council for Science and Technology Policy)	Act on Strengthening Industrial Competitiveness			**Super Global University Program***	This program supports universities that have the potential to be ranked in the top 100 in world university rankings (potential top-ranked universities) as well as universities that can take on pioneering challenges based on their past accomplishments, such as the internationalization of education, and lead the globalization of Japan's society (globalization-leading universities). [37 awards as of 2014]	HEB

Notes: Blue: Programs for undergraduate and graduate students; Red: Programs for postdoctoral fellows; Deep red: Programs for young researchers, etc.; ★: Career path; Gray letters: application closed

Bold letters / bold-lined frame: Programs with an annual budget of more than 5 billion yen; Bold letters: Programs with an annual budget of 1 to 5 billion yen;
Program closing year: Fiscal year when the program stopped accepting new applications; *: FY2014 Programs

Industry-Academia-Government Collaboration

Year	Strategies/Policies		Policy Measures, etc. (Industry-Academia-Government Collaboration)		Schemes/Programs (Industry-Academia-Government Collaboration)		
	Science and Technology Policies	Relevant Policies	Title	Description	Description	Competent Ministries, etc.	Competent Ministries, etc.
1995	Basic Act on Science and Technology						
1996	First Science and Technology Basic Plan (FY1996–FY2000)						
1997			National Public Service Act revised	The law is revised to allow national public employees to engage in research, development, and technological support activities at private enterprises.	[Joint] Regional Consortium Research and Development Program: closed in 2007	Aimed at creating new industries and businesses and achieving regional economic growth, this program provides support for industry-academia-government collaborative advanced research and development for commercialization (taken over by the Ministry of Economy, Trade and Industry in 2001). [326 awards during the 11-year period]	NEDO/ MITI
			Special Act for Education Personnel revised	The law is modified to revise the retirement payment terms of national university faculty members, etc. to prevent the losses caused by taking research leaves.			
1998		Act on the Promotion of Technology Transfer from Universities to Private Business Operators (TLO System) (MITI/MESC)	Act for Facilitating Government Research Exchange partially revised	Aimed at encouraging private enterprises, etc. to develop joint research facilities within the premises of national universities, etc., the law is revised to allow those who have established such facilities to use state-owned land at an affordable rent.	Small Business Innovation Research (SBIR) System introduced	This system assists small and medium enterprises, etc., in transforming research and development results into business activities by providing subsidies, reducing patent fees, and offering low-interest loans from Japan Finance Corporation.	
1999		Act on Special Measures for Industrial Revitalization (Japanese Bayh-Dole Act) (MITI)			[Joint] Industry-Academia Collaborative Research and Development Program (matching funding for industry-academia collaboration): closed in 1999	This program promotes organic collaboration between industry and academia for practical research by universities, etc. Aimed at transforming the research seeds of universities, etc. into products and businesses, the program supports joint research truly matching academic seeds to business needs. [33 awards during the 1-year period]	MESC MITI
		Basic Act on the Promotion of Core Manufacturing Technology (MITI)			[VB] Pre-venture Program: closed in 2003	Aimed at promoting the commercialization of innovative research results from universities, national research institutions, etc., this program supports research and development whose results can be transformed into businesses as well as feasibility studies for commercialization. [50 awards during the 5-year period]	JST
2000		Industrial Technology Enhancement Act (MITI)	National Public Service Act revised	The law is revised to allow national public employees to concurrently hold the position of executive officer in a private enterprise.	[VB] Joint Research Promotion Program for Ventures and Small and Medium Enterprises: closed in 2000	This program promotes practical joint research through organic collaboration between universities and ventures small and medium enterprises. The program supports projects that will transform the research seeds of universities into products and businesses. [14 awards during the 1-year period]	JSPS
		Basic Plan on Core Manufacturing Technology (MITI)			[Joint] Industrial Technology Research Grant Program: renamed in 2011	Aimed at identifying industrial technology seeds that can address the needs of industry and society and developing human resources for industrial technology research, this program provides financial support so that young researchers at universities and incorporated administrative agencies can carry out research and development for industrial applications (renamed as the Leading Industrial Technology Development Project Grant Funds (Grants for Young Researchers) in 2011).	MITI
2001	Council for Science and Technology Policy established; Ministry of Education, Culture, Sports, Science and Technology established		1,000 Venture Firms Originating in Universities (Hiranuma Plan) (METI)	This plan aims to create 1,000 venture businesses originating in universities for three years from FY2002 to FY2004.	Industry-Academia-Government Collaboration Summit: closed in 2008	Summit meetings are held to discuss the roles of industry, academia, and government and new developments in collaboration to create innovation that can contribute to Japan's economic growth.	CAO
	Second Science and Technology Basic Plan (FY2001–FY2005)				Industry-Academia-Government Collaboration Support Program: closed in 2008	This projgram appoints industry-academia-government collaboration coordinators to meet the needs of universities, etc. (renamed as the Advanced Industry-Academia-Government Collaboration Promotion Program and expanded to cover not only university activities but also regional contribution and development in 2006; merged into the Program for Strategic Development of Industry-Academia-Government Collaboration (Coordination Program) in 2008).	MEXT
2002		Intellectual Property Basic Act (CAS)	Basic Ideas and Promotion Approaches of Industry-Academia-Government Collaboration (CSTP Expert Panel on Science and Technology System Reform)	This is a report on industry-academia-government collaboration, including type- and sector-specific issues and specific measures to promote regional science and technology development and establish an industry-academia-government collaborative platform.	[Joint] Research and Development for Commercialization and Application of Technologies Developed by Universities: closed in 2009	This program supports collaborative research between private enterprises and universities, etc. to commercialize university research results. The program facilitates the efforts of business enterprises to transform university research results into businesses (implemented as a NEDO program since 2003; conducted under the Innovation Application Promotion Program in 2007).	METI
					Industry-Academia-Government Collaboration Promotion Conference	Aimed at solving specific problems to take a leap forward in industry-academia-government collaboration, this conference brings together leaders and business professionals at the first line to promote discussion, research, technical transfer, information exchange, dialogue, and interaction on specific challenges.	
					[Joint] Program for Effective Promotion of Industry-Academia-Government Collaborative Research: closed in 2005	Aimed at effectively facilitating industry-academia-government collaborative research to address social and economic needs, this program provides financial support for research projects carried out by business enterprises at their own expense and in collaboration with universities, etc. The program promotes the active matching of research seeds at universities and other research and development institutions to the research needs of business enterprises. [76 awards during the 5-year period]	MEXT
2003		National University Corporation Act (MEXT) (2004; reorganizing national universities and inter-university research institutes as corporations)			Program for Development of Intellectual Property Headquarters in University: closed in 2007	Aimed at making effective use of university research results to benefit society, this program develops a model system to promote the systematic creation, management, and exploitation of intellectual property at universities, etc. (transformed into the Program for Strategic Development of Industry-Academia Collaboration in 2008). [43 awards during the 5-year period]	MEXT
					Technology Transfer Support Center Program: renamed in 2011	Aimed at promoting Japan's strategic acquisition and exploitation of intellectual property in accordance with the Intellectual Property Policy Outline, this program developed a system to assist universities, etc. in filing intellectual property rights (renamed as the Intellectual Property Utilization Support Program in 2011).	JST
					[VB] Supporting Program for Creating University Ventures: closed in 2008	Aimed at creating university ventures to promote the return of university research results to society and economy, this program supports research and development required for the start-up and expansion of businesses based on university research results, etc. (transformed into the Creative Seeds Development Program in 2005; retransformed into the Adaptable and Seamless Technology Transfer Program through Target-driven R&D (A-STEP) in 2009).	JST
					Research and Development Promotion Tax System revised	The Research and Development Promotion Tax System is drastically reformed to establish a special tax deduction system for industry-academia collaborative and commissioned research and a tax deduction system for experimental research expenses.	MOF
2004					Innovation Japan: University Technology Exhibition	This program provides opportunities for industry-academia collaboration and technology transfer by bringing together technology seeds from universities across Japan and showcasing them for business enterprises. This exhibition, particularly new technology exhibition, is the largest event in Japan that facilitate the matching of research seeds to industrial needs, especially in new technologies (part of Technology Transfer Support Center Program).	JST/NEDO
2005			Technology Strategy Map (METI)	This Map shows the Technology Strategy to outline a roadmap for the development of industrial technologies important to Japan.	[VB] Creative Seeds Development Program: closed in 2009	Aimed at commercializing university research results (creating university ventures and promoting technology licensing), this program facilitates research and development, according to the technological phases of the issues, in a competitive environment (Under this program, the Program for Development of Creation Models and the Program for Application and Development of Innovative Ventures are newly established, and the Supporting Program for Creating University Ventures and the Contract Development Program are restructured).	JST
2006	**Third Science and Technology Basic Plan (FY2006–FY2010)**	Basic Act on Education revised (MEXT)			Creation of Innovation Centers for Advanced Interdisciplinary Research Areas Program: closed in 2008	This program provides support at most for 10 years to establish research and development bases engaged in basic research, with an eye to future applications, while developing next-generation researchers and engineers through industry-academia collaboration in advanced interdisciplinary fields considered to be important for creating innovation (part of Special Coordination Funds for Promoting Science and Technology; taken over by MEXT in 2011). [21 awards during the 3-year period]	MEXT
					[Joint] Industry-Academia Collaboration Seeds Innovation Program: closed in 2008	This program facilitates industry-academia collaborative research and development in two stages: (i) Potentiality Verification Stage to call for industries to identify potential seeds from basic research and collaborate with academia to verify their potentialities and (ii) Practicability Verification Stage to verify the feasibility of selected seeds.	JST
2007	Long-term Strategic Guidelines "Innovation 25"						
2008		First Basic Plan for the Promotion of Education (CCE)			Project for Strategic Development of Industry-Academia-Government Collaboration: closed in 2009	Aimed at sustainable development of intellectual property strategies at universities, etc., this program supports diverse unique and independent projects through national, public, and private universities, etc. (Strategy Development and Coordination Programs) (transformed into the Program for Promoting Self-Sustaining Management of Industry-Academia-Government Collaboration in Universities in 2010). [55 awards / 80 applicants as of 2008]	MEXT
		Act on Improvement of Research and Development Capacity			Program for Establishing Advanced Innovation Hubs: closed in 2009	This program supports the development of innovation hubs to assist universities/research institutes and business enterprises in establishing collaborative mechanisms to work together throughout the process from basic and applied research to product testing and commercialization.	METI
		Strategy for Innovative Technology (CSTP)					
2009					[Joint] Program for Strategic Promotion of Innovative Research and Development (S-Innovation)	This program facilitates the long, seamless process from research and development to commercialization on subjects selected based on the results of basic research programs of JST.	JST
					[Joint/VB] Adaptable and Seamless Technology Transfer Program through Target-driven R&D (A-STEP)	This program provides seamless support for medium- and long-term research and development projects by combining optimal support options, including identifying and commercializing useful research results (technology seeds) at universities, public research institutes, etc. (transformed from the Creative Seeds Development Program, etc.)	JST
2010	Action Plan for the Implementation of Important Science and Technology Policy Measures (formulated each year) (CSTP)				Program for Promoting Self-Sustaining Management of Industry-Academia-Government Collaboration in Universities: closed in 2012	Aimed at creating an environment where universities, etc. can take initiative in industry-academia-government collaboration, this program provides support, such as enhancing the function of industry-academia-government collaboration headquarters, etc. and appointing industry-academia-government collaboration coordinators, etc. (transformed from the Project for Strategic Development of Industry-Academia-Government Collaboration).	MEXT
					[Joint] Program for Collaborative Research Based on Industrial Demand	This program supports universities engaged in basic research that can help solve technological problems shared by industries. The program accelerates solutions to technological issues by establishing a platform for "collaborative creation" (dialogue between the industrial and academic sectors) to transfer knowledge and ideas from market to research.	JST
					Program for Development of Innovation Hubs for Bridging the Technology Gap: closed in 2010	This program supports the development of research and development facilities, etc. to assist universities/research institutes and business enterprises in establishing collaborative mechanisms to work together throughout the process from basic and applied research to product testing and commercialization. [11 awards] (Inviting applications in 2011)	METI
2011	**Fourth Science and Technology Basic Plan (FY2011–FY2015)**				Development of the System to Foster and Secure University Research Administrators: closed in 2012	This program supports the establishment of a national system to develop and secure human resources with expertise in research and development, including the raising and management of research funds and the management and exploitation of intellectual property at universities, etc.	MEXT
					Intellectual Property Utilization Support Program	This program is renamed from the Technology Transfer Support Center Program (launched in 2003).	JST
					[Joint] Leading Industrial Technology Development Project Grant Funds (Grants for Young Researchers): renamed	Aimed at identifying industrial technology seeds that can address the needs of industry and society and developing human resources for industrial technology research, this program provides financial support so that young researchers at universities and incorporated administrative agencies can carry out research and development for industrial applications (renamed from the Industrial Technology Research Grant Program launched in 2000).	METI
2012					[VB] Program for Creating Start-ups from Advanced Research and Technology (START Program)	This program supports the development of business and intellectual property strategies towards commercialization of risky but highly potential technology seeds by combining public sector funding and private sector know-how for commercialization before starting up university ventures. [27 awards as of 2012]	MEXT
					Program for Promoting Industry-Academia Collaboration Innovation: closed in 2012	This program promotes investment in research and development and accelerates the application of new technologies by supporting the development of facilities required to commercialize new technologies.	METI
					[Joint/VB] Public-Private Innovation Program: closed in 2012	The national government invests in universities, etc. to promote public-private partnership research and development projects to transform research and development outcomes into businesses and products.	MEXT
2013	Comprehensive Strategy on Science, Technology and Innovation (formulated each year) (CSTP)	Second Basic Plan for the Promotion of Education (CCE)			[Joint] Center of Innovation Science and Technology-based Radical Innovation and Entrepreneurship Program (COI STREAM)	Selecting subjects based on the hidden future needs of society, this program supports industry-academia collaboration for commercialization-driven research and development from the basic research stage beyond organizational and sectoral boundaries. [12 awards as of 2013]	MEXT
					[Joint] Support Program for Strengthening the Creation of Seeds and Needs of Universities	Aimed at supporting activities to create innovation from universities, etc. and efforts to identify subjects for collaborative studies in accordance with the visions of the COI STREAM, this program explores new seeds, needs, ideas, etc.	MEXT
	Japan Revitalization Strategy (Growth Strategy)				[Joint] Impulsing Paradigm Change through Disruptive Technologies Program (ImPACT)	Aimed at developing creative scientific and technological innovation that can dramatically change industry and society, this program facilitates challenging high-risk yet high-impact research and development.	CSTP
2014	Council for Science, Technology and Innovation (reorganized from the Council for Science and Technology Policy)	Act on Strengthening Industrial Competitiveness (METI)			[Joint] Cross-ministerial Strategic Innovation Promotion Program (SIP) *	CSTI allocates budget across ministries and sectors to promote measures, including regulatory and institutional reforms, to create a seamless process from basic research to applications (commercialization and business development). Program directors are appointed on an issue-by-issue basis.	CSTI

Notes: Green: Groundwork preparation; Blue: Research support; [Joint]: Collaborative / commissioned research; [VB]: Ventures; Gray letters: Application closed

Bold letters / bold-lined frame: Programs with an annual budget of more than 5 billion yen; Bold letters: Programs with an annual budget of 1 to 5 billion yen;
Program closing year: Fiscal year when the program stopped accepting new applications; *: FY2014 Programs

Regional Development

Year	Strategies/Policies		Policy Measures, etc. (Regional Development)		Schemes/Programs (Regional Development)		
	Science and Technology Policies	Relevant Policies	Title	Description	Title	Description	Competent Ministries, etc.
1995	Basic Act on Science and Technology		Report on Consultation No. 22 regarding the Basic Guidelines for Activating Science and Technology Activities in Regions in 1994 (CSTP)	This report outlines basic ideas and specific measures to activate regional science and technology development, including enhancing government policies and accelerating the initiatives of local governments and other parties concerned.			
1996	First Science and Technology Basic Plan (FY1996–FY2000)				Regional Science Promotion Program: closed in 2001	This program strengthens the function of Regional Science Promotion Centers to coordinate research activities among national and public research institutions, universities, and private research institutes and conduct matching activities centered on local needs identification, seeds research and development, and verification testing. [9 awards during the 6-year period]	JST
1997					Collaboration of Regional Entities for the Advancement of Technological Excellence: closed in 2008	This program supports the development of new technologies and industries by assisting universities, national and public research institutions, research and development enterprises, etc. in conducting collaborative research to develop prototypes based on technology seeds produced through basic research by universities, etc. (renamed as the Collaboration of Regional Entities for the Advancement of Technological Excellence in 2005). [39 awards during the 12-year period (Each project receives approximately 240 million yen per year for approximately five years)]	STA/ JST
					Regional Consortium Research and Development Program: closed in 2007	Aimed at creating new industries and businesses and achieving regional economic growth, this program provides support for industry-academia-government collaborative advanced research and development for commercialization (taken over by the Ministry of Economy, Trade and Industry in 2001).	NEDO/MITI
					Grants for Technology Development for Creation of New Industries (renamed as the Grants for Technology Development for Creation of New Regional Industries in 2002); closed in 2007	Aimed at creating new regional industries, this program supports applied technology development, especially in the field of advanced technology.	MITI
1998		Act on the Promotion of Technology Transfer from Universities to Private Business Operators (TLO System) (MITI/MESC)					
1999		Act on Special Measures for Industrial Revitalization (Japanese Bayh-Dole Act) (MITI)					
		Basic Act on the Promotion of Core Manufacturing Technology (MITI)					
2000		Industrial Technology Enhancement Act (MITI)					
2001	Council for Science and Technology Policy established; Ministry of Education, Culture, Sports, Science and Technology established	Basic Plan on Core Manufacturing Technology (MITI)	University-based Structural Reform Plan for Revitalizing the Japanese Economy (Part of Toyama Plan; MEXT)	This plan outlines the course of action and specific measures to be taken in the reform to develop the world's highest-ranked universities, transform Japan into a human resource rich country, and promote urban and regional revitalization.	**Establishment of Innovation Plazas and Satellites: closed in 2011**	Research Application Plazas are established in sites with high potential for research and development to support research activities (renamed as JST Innovation Plazas in April 2007). [8 Plazas]	JST
	Second Science and Technology Basic Plan (FY2001–FY2005)				**Industrial Cluster Plan**	This plan aims to establish industrial clusters as well as a wide personal network with regional bureaus of economy, trade, and industry as nodes between industrial professionals, academic researchers, and government officials. Under this plan, a total of 17 projects are carried out across Japan. (2002–2009: Subsidies for New Region-wide Project Support and Collaboration; 2005–2009: Commission Fees for New Region-wide Project Support and Collaboration).	METI
2002		Intellectual Property Basic Act (CAS)			**Knowledge Cluster Initiative: closed in 2009**	In collaboration with other regional initiatives, this program supports the creation of knowledge clusters by organizing forums to promote industry-academia-government collaborative research under regional initiative and disseminate their results.	MEXT
					Urban Area Industry-University-Government Collaboration Promotion Program: closed in 2009	This program supports the development of clusters reflecting regional characteristics by using the "knowledge" of universities, etc. to create new technology seeds, start up new businesses, and develop R&D-oriented regional industries.	MEXT
2003		National University Corporation Act (MEXT) (2004; reorganizing national universities and inter-university research institutes as corporations)	Regional Revitalization Headquarters	It is established under the Cabinet Secretariat to revitalize regional economies and create regional employment.			
2004					Research and Development for Promotion of Regional Information and Communications Technology (renamed as the Research and Development for Regional ICT Promotion in 2007)	Scientists at community-oriented universities and local small and medium enterprises are entrusted with research and development on subjects they have proposed. (Part of Strategic Information and Communications Research and Development Promotion Program (SCOPE)).	MIC
2005					**Comprehensive Support Programs for Creation of Regional Innovation: closed in 2009**	These programs are based at JST Innovation Plazas and Satellites and collaborate with technology transfer projects by local governments, regional bureaus of economy, trade, and industry, and Japan Science and Technology Agency (JST) to provide seamless support for research and development and facilitate community-oriented coordination activities (phased out by 2013).	JST
2006	**Third Science and Technology Basic Plan (FY2006–FY2010)**	Basic Act on Education revised (MEXT)	Program for Revitalizing Regional Knowledge Centers (Regional Revitalization Headquarters)	This program includes groundwork preparation and other support measures to facilitate the initiatives of local communities in collaboration with universities.			
2007	Long-term Strategic Guidelines "Innovation 25"						
2008		First Basic Plan for the Promotion of Education (CCE)	Strategy for Regional Revitalization through Science and Technology (CSTP)	This strategy provides a whole picture of regional science and technology policies and outlines the national government's comprehensive and strategic approach to accelerate the creation of regional innovation.			
		Act on Improvement of Research and Development Capacity			**Regional Innovation Cooperation Program: closed in 2012**	Research and Development Project for Creation of Regional Innovation (to promote research and development of applied technologies by research entities with an optimal combination of regional resources; closed in 2010), Program for Development of Clusters for Creation of Regional Innovation (to promote mutual collaboration between research institutes, provide technological support to business enterprises, and develop evaluation methods; closed in 2009), Program for Development of Creative Industry-Academia Collaboration Systems (to appoint experts to technology licensing organizations (TLOs), etc. to strengthen the industry-academia collaboration systems; closed in 2012), and Research and Development for Commercialization Originating in Universities (to support research and development by combining technology seeds from universities and research and development resources from business enterprises; closed in 2009).	METI
		Strategy for Innovative Technology (CSTP)					
2009					Regional Innovation Strategy Program by Excellence: closed in 2009	This program promotes industry-academia-government collaborative research and development focused on individual research and development issues in areas critical to local business needs. [Accepting 2 applications]	JST
					Program for Development of Regional Industry-Academia-Government Collaborative Research Hubs: closed in 2009	Aimed at promoting industry-academia-government collaborative research to take advantage of regional strengths, this program establishes regional industry-academia-government collaborative research clusters with research facilities.	JST
2010	Action Plan for the Implementation of Important Science and Technology Policy Measures (formulated each year) (CSTP)				**Regional Innovation Cluster Program (Innovation System Development Program): closed in 2010**	In order to strengthen systematic collaboration between communities and universities, etc. and further promote regional self-reliance, the Knowledge Cluster Initiative, the Urban Area Industry-University-Government Collaboration Promotion Project, and the Project for Strategic Development of Industry-Academia-Government Collaboration (aimed at establishing an industry-academia-government collaboration system centered on universities) are merged into one project (phased out by 2013).	MEXT
2011	**Fourth Science and Technology Basic Plan (FY2011–FY2015)**				Selection of Regional Innovation Strategy Promoting Regions	Regional Innovation Strategies are formulated, and Regional Innovation Strategy Promoting Regions are selected. All measures taken by relevant ministries are combined to assist the selected regions throughout the process from basic research at universities to commercialization at business enterprises to achieve the Regional Innovation Strategies.	MEXT/METI/MAFF/MIC
					Regional Innovation Strategy Support Program	Participating organizations from the private, academic, and public sectors collaborate to support regional initiatives, from basic research through commercialization, to create sustainable, developmental innovation while making good use of regional strengths and features.	MEXT
2012					**Program for Development of International Science Innovation Hubs through Academic-Industrial Collaboration Utilizing Regional Resources: closed in 2013**	This program supports the development of advanced equipment and core facilities for shared use by universities and business enterprises (Equipment Development for Shared Industry-Academia Use and Facility Development for Shared Industry-Academia Use) so that they can make a combined effort to create advanced innovation. [10 sites]	MEXT
2013	Comprehensive Strategy on Science, Technology and Innovation (formulated each year) (CSTP)	Second Basic Plan for the Promotion of Education (CCE)			Council on Regional Industrial Competitiveness	In response to the Japan Revitalization Strategy, this council is established to facilitate innovative regional initiatives to strengthen their industrial competitiveness and revitalize their economies autonomously as well as develop a system where the national government can work with local governments to reflect regional initiatives in the national decision-making process.	METI
	Japan Revitalization Strategy (Growth Strategy)				**Program for Development of Open Innovation Infrastructure in the Region: closed in 2013**	This program provides universities and regional public laboratories with necessary facilities for the development of support platforms serving as research and development hubs for small and medium enterprises in the strategic fields specified by the Council on Regional Industrial Competitiveness (applications invited in 2014).	METI
2014	Council for Science, Technology and Innovation (reorganized from the Council for Science and Technology Policy)	Act on Strengthening Industrial Competitiveness (METI)			Support Program for Infrastructure Development for Creation of New Industrial Clusters*	This program supports the networking of industrial, academic, and governmental partners centered on local leading companies and the matching of technology seeds to market needs.	METI

Notes: Blue: Cluster and network development, etc. Red: Foothold establishment (development of facilities and human resources) and research support

Gray letters: Application closed; Bold letters / bold-lined frame: Programs with an annual budget of more than 5 billion yen; Bold letters: Programs with an annual budget of 1 to 5 billion yen; Program closing year: Fiscal year when the program stopped accepting new applications; *: FY2014 Programs

Intellectual Property and Standardization

Year	Strategies/Policies: Science and Technology Policies	Strategies/Policies: Relevant Policies	Policy Measures, etc. (Intellectual Property and Standardization): Title	Policy Measures, etc. (Intellectual Property and Standardization): Description	Schemes/Programs (Intellectual Property and Standardization): Title	Schemes/Programs (Intellectual Property and Standardization): Description	Schemes/Programs (Intellectual Property and Standardization): Competent Ministries, etc.
1995	**Basic Act on Science and Technology**		WTO-TBT and TRIPS Agreements	The Agreement on Technical Barriers to Trade (TBT Agreement) requires that compulsory standards and conformance assessment procedures should be developed and revised in principle in accordance with international standards (ISO, IEC, etc.). The Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS Agreement) requires comprehensive protection of intellectual property rights.			
1996	**First Science and Technology Basic Plan (FY1996–FY2000)**						
1997					Patent Licensing Promotion Project (Patent Licensing Advisors): closed in 2010	This program dispatches advisors to identify patented technologies owned by universities, public research institutes, business enterprises, etc. and available for transfer and licensing, grasp the technology needs of start-up, small, and medium enterprises, and match resources to needs.	JPO
					Standardization Research and Development Program: closed in 2008 (taken over by the Joint Research and Development Program for International Standardization in 2009)	This program supports the effort to achieve international standardization after the research and development phase in the four priority fields as well as in the fields of energy, manufacturing technology, safety/security, etc. (FY1997–FY2001: implemented through New Energy and Industrial Technology Development Organization (NEDO); FY2002: implemented by private entities commissioned or subsidized by the national government).	MITI
1998		Act on the Promotion of Technology Transfer from Universities to Private Business Operators (TLO System) (MITI/MESC)			Research and Development Promotion Scheme for International Standardization: closed in 2004	This program supports research that can contribute to international standardization activities, such as making research-based proposals to International Telecommunication Union (ITU) and other international standardization organizations.	MPT
1999		Act on Special Measures for Industrial Revitalization (Japanese Bayh-Dole Act) (MITI) Basic Act on the Promotion of Core Manufacturing Technology (MITI)			Electronic patent application filing system introduced	A PC application software is developed and distributed by the Japan Patent Office to allow everyone to submit an electronic application online at affordable costs.	JPO
2000		Industrial Technology Enhancement Act (MITI) Basic Plan on Core Manufacturing Technology (MITI)					
2001	Council for Science and Technology Policy established; Ministry of Education, Culture, Sports, Science and Technology established **Second Science and Technology Basic Plan (FY2001–FY2005)**		Japanese Industrial Standards Committee (METI)	Japanese Industrial Standards Committee (JISC) reviews and deliberates on industrial standards and provides advice on the promotion of industrial standardization in response to consultations from relevant ministers.			
2002		Intellectual Property Basic Act (CAS)	Intellectual Property Policy Outline (Strategic Council on Intellectual Property)	This policy outline provides a roadmap for reform to further promote the creation, protection, and exploitation of intellectual property to revitalize Japan's economy and society. The reform is to be carried out in a focused and planned manner and completed by FY2005.	Dispatch of University Intellectual Property Advisors	Experts on the management of intellectual property are dispatched to universities without intellectual property management systems.	JPO
			Expert Panel on Intellectual Property Strategies established (CSTP)	This expert panel is established to review and deliberate on comprehensive strategies for the protection and exploitation of intellectual property (dissolved in September 2013).	Research and Development for Acquisition of International Technologies (part of Strategic Information and Communications Research and Development Promotion Program (SCOPE)) (2007 Research and Development for Strengthening International Competitiveness): closed in 2009	This program facilitates research and development that can contribute to enhancing Japan's international competitiveness in the future, such as research whose results can be used to develop international standards.	MIC
			Report on Intellectual Property Strategies (CSTP)	This report provides advice on (i) improving the intellectual property management system of universities, etc., (ii) establishing a legal system for intellectual property in the advanced technology sectors, and (iii) developing human resources and other infrastructure (published annually until 2009).			
2003		National University Corporation Act (MEXT) (2004; reorganizing national universities and inter-university research institutes as corporations)	Intellectual Property Strategy Headquarters (CAS)	In accordance with the Intellectual Property Basic Act, the headquarters is established under the Cabinet Secretariat.	**University Intellectual Property Headquarters Development Program: closed in 2007**	Aimed at making effective use of university research results to benefit society, this program develops a model system to promote the systematic creation, management, and exploitation of intellectual property at universities, etc. (transformed into the Program for Strategic Development of Industry-Academia Collaboration in 2008).	MEXT
			Plan to Promote the Creation, Protection, and Exploitation of Intellectual Property (Intellectual Property Strategy Headquarters)	This plan outlines policies to make Japan an intellectual property-oriented nation.	**Technology Transfer Support Center Program: renamed in 2011**	Aimed at promoting Japan's strategic acquisition and exploitation of intellectual property in accordance with the Intellectual Property Policy Outline, this program developed a system to assist universities, etc. in filing intellectual property rights (renamed as the Intellectual Property Utilization Support Program in 2011).	JST
					Manuals for Establishment of University Intellectual Property Management System	Published by the Japan Patent Office, these manuals outline practical approaches that universities should take in their intellectual property activities.	JPO
2004			Intellectual Property Promotion Plan 2004 (annually published; Intellectual Property Strategy Headquarters)	This plan is formulated by the Intellectual Property Strategy Headquarters (led by the Prime Minister).	Fixed-term patent examiners	The Japan Patent Office employed approximately 500 outside experts as fixed-term patent examiners over the five years from FY2004 to FY2008.	JPO
2005			Intellectual Property High Court	Established under the Tokyo High Court, the Intellectual Property High Court deals with appellate cases on patent rights and challenges to decrees issued by the Japan Patent Office.	Online application filing system introduced	The online application system is introduced to accept electronic applications 24 hours a day and seven days a week.	JPO
2006	**Third Science and Technology Basic Plan (FY2006–FY2010)**	Basic Act on Education revised (MEXT)	International Standardization Comprehensive Strategy (Intellectual Property Strategy Headquarters)	This is a strategy for international standardization. It is formulated by the Intellectual Property Strategy Headquarters.	e-seeds.jp	This is an integrated online search engine that retrieves public information on technology seeds from universities and other data sources. It also provides business enterprises with direct access to researchers, etc. (part of Technology Transfer Support Center Program)	JST
			Strategic Objectives for International Standardization (METI)	The objectives include doubling the number of Japan's proposals for international standards by 2015 and increasing Japan's presence in the international standardization arena up to the level corresponding to its economic power and scientific and technological level.	Program for International Standardization in Innovative Fields for Enhancing Industrial Competitiveness: closed in 2008	This program supports the development and proposition of international standards in new technology fields, such as service robots, to hone Japan's competitive edge.	METI
					Research Study Program on Standardization to Address Social Needs: closed in 2008	This program provides support to strengthen safety/security regulations by referring to technical standards and develop and propose drafts of Japanese Industrial Standards (JIS) to address social needs, such as special consideration for the elderly and disabled and environmental protection.	METI
2007	Long-term Strategic Guidelines "Innovation 25"						
2008		First Basic Plan for the Promotion of Education (CCE) Act on Improvement of Research and Development Capacity Strategy for Innovative Technology (CSTP)	Intellectual Property Strategies (CSTP)	These strategies make suggestions based on science and technology policies, including developing intellectual property systems at universities, etc.	**Project for Strategic Development of Industry-Academia-Government Collaboration: closed in 2009**	Aimed at sustainable development of intellectual property strategies at universities, etc., this program supports diverse unique and independent projects through national, public, and private universities, etc. (Strategy Development and Coordination Programs) (transformed from the University Intellectual Property Headquarters Development Program; retransformed into the Program for Promoting Self-Sustaining Management of Industry-Academia-Government Collaboration in Universities in 2010).	MEXT
2009	Action Plan for the Implementation of Important Science and Technology Policy Measures (formulated each year) (CSTP)				Research Program for International Standardization: renamed in 2011	This program provides seamless and focused support for international standardization from additional research and development through verification testing, drafting of standards, and submission to international standardization organizations, especially in the four priority fields specified by the Science and Technology Basic Plan (replaced by the Program for Strategic Acceleration of International Standardization).	NEDO
					Joint Research and Development Program for International Standardization: closed in 2013	This program facilitates public-private partnership projects to promote the international standardization process from feasibility studies to research and development, drafting, submission, and follow-up after proposition to international standardization organizations, in an integrated, systematic, and focused manner (transformed from the Research and Development Program for Standardization).	METI
					Standards Development Program for Social Environment Improvement and Industrial Competitiveness Enhancement: closed in 2012	In this program, technical data and other relevant information are collected and reviewed by a committee consisting of relevant business professionals, academic experts, consumers, etc. to draft and propose Japanese Industrial Standards (JIS).	METI
2010					Asian Standardization Promotion Program	In this program, Japan collaborates with other Asian countries to develop performance assessment methods, etc. so that its technologies can be properly assessed. The program also facilitates the adoption of the assessment methods by international and foreign national standardization organizations.	METI
					Program for Promoting Self-Sustaining Management of Industry-Academia-Government Collaboration in Universities: closed in 2012	Aimed at creating an environment where universities, etc. can take initiative in industry-academia-government collaboration, this program provides support, such as enhancing the function of industry-academia-government collaboration headquarters, etc. and appointing industry-academia-government collaboration coordinators, etc. (transformed from the Project for Strategic Development of Industry-Academia-Government Collaboration).	MEXT
2011	**Fourth Science and Technology Basic Plan (FY2011–FY2015)**				Development of the System to Foster and Secure University Research Administrators: closed in 2012	This program supports the establishment of a national system to develop and secure human resources with expertise in research and development, including the raising and management of research funds and the management and exploitation of intellectual property at universities, etc.	MEXT
					Intellectual Property Utilization Support Program	This program is renamed from the Technology Transfer Support Center Program (launched in 2003).	JST
2012			Anti-Counterfeiting Trade Agreement (ACTA)	It is a comprehensive international framework that enables member states to take effective measures to prevent the infringement of intellectual property rights, especially the spread of counterfeit and pirated goods.	**Strategic Project for Accelerating International Standardization**	This project supports joint projects to draft and propose international standards while streamlining the standardization process, including research, development, and collection of verification data and other technical information.	METI
					Strategic International Collaborative Research and Development Promotion Project	In collaboration with foreign governments, this program facilitates the strategic research and development process from the early research and development phase to the final phase of commercialization and international standardization.	MIC
2013	Comprehensive Strategy on Science, Technology and Innovation (formulated each year) (CSTP) Japan Revitalization Strategy (Growth Strategy)	Second Basic Plan for the Promotion of Education (CCE)	Intellectual Property Policy Vision and Basic Policy Concerning Intellectual Property Policy (Intellectual Property Strategy Headquarters)	The Intellectual Property Strategy Headquarters formulates intellectual property policies for the next decade.			
2014	Council for Science, Technology and Innovation (reorganized from the Council for Science and Technology Policy)	Act on Strengthening Industrial Competitiveness (METI)	Public-private strategy of the standardization (METI)	This strategy outlines specific measures, including developing a public-private partnership system, strengthening world-class standardization infrastructure, and enhancing collaboration with other Asian countries.			

Note: Blue: Intellectual property; Red: International standardization; Gray letters: Application closed; Bold letters / bold-lined frame: Programs with an annual budget of more than 5 billion yen; Bold letters: Programs with an annual budget of 1 to 5 billion yen

Research Infrastructure Development

Year	Strategies/Policies		Policy Measures, etc. (Research Infrastructure Development)		Schemes/Programs (Intellectual Property and Standardization)		
	Science and Technology Policies	Relevant Policies	Title	Description	Title	Description	Competent Ministries, etc.
1990			Report on Consultation No. 16 regarding the Basic Guidelines on the Development of Infrastructure for Science and Technology Promotion (CST)	This report is made on the Basic Guidelines on the Development of Infrastructure for Science and Technology Promotion, focused on research support functions for science and technology information and intellectual property rights.			
1991					**Large Synchrotron Radiation Facility (SPring-8) Development Program**	The trial development of SPring-8 and the construction of its building were launched in 1990 to start the public use of the facility by 1998. The program was carried out by RIKEN and Japan Atomic Energy Agency (completed in 1997).	STA
1994			Act on the Promotion of Public Utilization of the Specific Advanced Large Research Facilities	Aimed at promoting the public use of large synchrotron radiation facilities (e.g., SPring-8), this law develops user-friendly systems, for example, by introducing a system to register one-stop operators to provide user services, including inviting and screening research proposals and providing technical support.			
1995	**Basic Act on Science and Technology**						
1996	**First Science and Technology Basic Plan (FY1996–FY2000)**				**Research Database Development Support Program**	This program develops a database collecting data from national research institutions and provides public online access to the database to facilitate the wide dissemination of research information (renamed as the Research Database Development Program in 2001).	JST
1997							
1998		Act on the Promotion of Technology Transfer from Universities to Private Business Operators (TLO System) (MITI/MESC)	Act for Facilitating Government Research Exchange partially revised	Aimed at encouraging private enterprises, etc. to develop joint research facilities within the premises of national universities, etc., the law is revised to allow those who have established such facilities to use state-owned land at an affordable rent.	ReaD (Directory Database of Research and Development Activities)	This database provides public access on the Internet to information on universities and other public research institutes, researchers, research issues, and research resources.	JST
1999		Act on Special Measures for Industrial Revitalization (Japanese Bayh-Dole Act) (MITI) Basic Act on the Promotion of Core Manufacturing Technology (MITI)			J-STAGE (comprehensive system to distribute and share science and technology information)	It is an e-journal website to provide public access to science and technology journals, etc. published by Japanese academic societies.	JST
2000		Industrial Technology Enhancement Act (MITI) Basic Plan on Core Manufacturing Technology (MITI)			J-STORE	It is a free database to provide online access to research results of universities, national and public research institutions, etc.	JST
					National Institute of Informatics (NII)	National Center for Science Information Systems is restructured as National Institute of Informatics (NII).	
2001	Council for Science and Technology Policy established; Ministry of Education, Culture, Sports, Science and Technology established		Five-Year Program for Emergent Renovation and Building of Facilities of National Universities, etc.	This program suggests the systematic and intensive development of universities and other facilities to ensure that they can produce world-class education and research results.	**X-Ray Free Electron Laser (XFEL) Development Program (SACLA)**	This is one of the policy programs for facility development. As a research facility combining the features of laser and synchrotron X-rays, SACLA has produced a wide range of advanced research results in various scientific and technological fields (completed in 2010).	MEXT
	Second Science and Technology Basic Plan (FY2001–FY2005)		Intellectual infrastructure development plan (Council for Science and. Technology)	Aimed at developing intellectual infrastructure, such as research materials (e.g., biological and genetic resources), measuring standards, measurement/analysis/test-evaluation methods, advanced tools, and databases, this plan outlines specific intellectual infrastructure development measures until 2010 (revised in 2006).	**Japan Proton Accelerator Research Complex (J-PARC) Construction Program**	Jointly constructed by Japan Atomic Energy Agency (JAEA) and High Energy Accelerator Research Organization (KEK), this research complex is equipped with the world's highest intensity proton accelerator that offers innovative research techniques using various secondary particles, such as neutrons, mesons, and neutrinos (completed in 2008).	MEXT
2002					**National BioResource Project**	This project develops a system to systematically collect, develop, preserve, and provide biological and genetic resources critical to life science research and important for Japan to manage strategically.	MEXT
2003		National University Corporation Act (MEXT) (2004; reorganizing national universities and inter-university research institutes as corporations)			Jdream	It is a science and technology database to retrieve scientific, technological, medical, and pharmaceutical papers from inside and outside Japan.	JST
2004					**Development of Advanced Measurement and Analysis Systems**	This program facilitates the development of the world's best measurement and analysis technologies and systems that only Japan can provide in order to meet the needs of advanced researchers in the world.	JST
2005							
2006	**Third Science and Technology Basic Plan (FY2006–FY2010)**	Basic Act on Education revised (MEXT)	Second Five-Year Program for Emergent Renovation and Building of Facilities of National Universities, etc.	This program facilitates the systematic and intensive development of national universities and other facilities (While giving the highest priority to the renovation of aged facilities, the program also aims to solve the problem of limited space and restore research centers of excellence, etc.).	Next-Generation Supercomputer Project	This project develops the world's most advanced and highest performance next-generation supercomputer: K computer (completed in 2012).	MEXT
			Act on the Promotion of Public Utilization of the Specific Advanced Large Research Facilities partially revised	Specific high-speed computer facilities are additionally defined as "Specific Advanced Large Research Facilities." In order to promote the public use of these facilities, registered institutions for facilities use promotion (e.g., Japan Synchrotron Radiation Research Institute) are appointed to select users and provide user support services.			
			Act for Facilitating Government Research Exchange partially revised	In order to promote the public use of advanced research facilities owned by incorporated administrative agencies, universities, etc., the law is revised to support information dissemination.	e-seeds.jp	This is an integrated online search engine that retrieves public information on technology seeds from universities and other data sources. It also provides business enterprises with direct access to researchers, etc. (part of Technology Transfer Support Center Program).	JST
2007	Long-term Strategic Guidelines "Innovation 25"				**Integrated Database Project**	This project supports the formulation and evaluation of life-science database development strategies, develops basic technologies for database integration, and builds a portal site (taken over by Japan Science and Technology Agency (JST) in 2011).	MEXT
					Program for Creating Innovation through Public Use of Advanced Research Facilities	This program facilitates the public use of advanced research facilities owned by incorporated administrative agencies, universities, etc. The "Kyoyo Navi" site (general navigation site for public use of research facilities) is built online to enhance user support services.	MEXT
					Program for Promoting the Public Use of Advanced Research Infrastructure	This program provides support to universities, incorporated administrative agencies, etc. that are willing to provide public access to their advanced research facilities (or facility clusters) (renamed as the Project for Creation of Research Platforms and Sharing of Advanced Research Infrastructure in 2011).	MEXT
					Nanotechnology Platform Japan Program	This program provides strategic support for nanotechnology and material science technology development throughout the process from basic and pioneering research to commercialization as well as support to develop human resources, research and development clusters, and enhance infrastructure.	MEXT
2008		First Basic Plan for the Promotion of Education (CCE) Act on Improvement of Research and Development Capacity	Act on the Promotion of Public Utilization of the Specific Advanced Large Research Facilities partially revised	The neutron beam facilities of Japan Proton Accelerator Research Complex (J-PARC) are additionally defined as Specific Advanced Large Research Facilities.	Designation system for Joint Usage/Research Centers	In this system, Joint Usage/Research Centers are designated by the Minister of Education, Culture, Sports, Science and Technology. These Joint Usage/Research Centers are expected to strengthen Japan's scientific research infrastructure and promote new scientific developments (designating 95 bases in 46 universities as Joint Usage/Research Centers as of April 2014).	MEXT
		Strategy for Innovative Technology (CSTP)	Act for Facilitating Government Research Exchange abolished	The law is abolished as the Act on Improvement of Research and Development Capacity is legislated.	**Program for Development of Distinctive Joint Research Centers**	This program establishes joint research centers to raise the standards of research in the relevant fields and promote interdisciplinary research to create new scientific fields and facilitate the advancement of scientific research in Japan. [Adopting 5 centers (2008)]	MEXT
2009					**Program for Establishment of Innovative High-Performance Computing Infrastructure (HPCI Program)**	This program creates a useful computational environment by connecting the flagship "K computer" with other major supercomputers and data storages in Japan via high-speed Internet and setting up a one-stop helpdesk.	MEXT
2010	Action Plan for the Implementation of Important Science and Technology Policy Measures (formulated each year) (CSTP)		Master Plan for Academic Large Facility Projects and Large-scale Research Projects 2010 (SCJ)	It is Japan's first master plan for large projects cutting across all academic disciplines.	Funding Program for World-leading Research Infrastructure: closed in 2010	This program supports the development of research facilities to expand opportunities for researchers who have studied abroad to display their abilities as well as stimulate international "brain circulation" to allow the world's leading researchers to play an active part (adopting projects such as the Large-scale Cryogenic Gravitational Wave Telescope Project and the Project for Exploring New Laws of Physics with the Upgraded B-factory Accelerator). [Accepting 14 applications]	MEXT
2011	**Fourth Science and Technology Basic Plan (FY2011–FY2015)**		Third Five-Year Program for Facilities of National Universities	This program facilitates the strategic development of facilities so that each national university corporation can make the best use of their features based on their future vision.	Facilities Support Center Development Program	Aimed at improving the education and research environment, this program provides necessary support for institutional development to facilitate the effective use of relevant facilities, including promoting the public use of relevant facilities, and strengthens technical support systems (constituting part of the Special Expenses Grants).	MEXT
2012					**Large-scale Academic Frontier Research Promotion Program**	This program provides strategic and systematic support for large-scale scientific research projects to ensure quick and proper response to international competition and collaboration while raising social/public awareness and support.	MEXT
2013	Comprehensive Strategy on Science, Technology and Innovation (formulated each year) (CSTP) Japan Revitalization Strategy (Growth Strategy)	Second Basic Plan for the Promotion of Education (CCE)					
2014	Council for Science, Technology and Innovation (reorganized from the Council for Science and Technology Policy)	**Act on Strengthening Industrial Competitiveness**					

Note: Deep red: Development of specific advanced large research facilities; Red: Development and public use of facilities and equipment; Blue: Information infrastructure development

Gray letters: Application closed; Bold letters / bold-lined frame: Programs with an annual budget of more than 5 billion yen; Bold letters: Programs with an annual budget of 1 to 5 billion yen; Program closing year: Fiscal year when the program stopped accepting new applications

Research and Development Funding

Year	Strategies/Policies		Policy Measures, etc. (Research and Development Funding)		Schemes/Programs (Research and Development Funding)		
	Science and Technology Policies	Relevant Policies	Title	Description	Title	Description	Competent Ministries, etc.
1995	**Basic Act on Science and Technology**						
1996	**First Science and Technology Basic Plan (FY1996–FY2000)**				Research for the Future Program: closed in 2000	Aimed at solving global issues, this program facilitates the advancement of university-led scientific research (funded by government investment until 2001 and by grants-in-aid from 2002 to 2004).	JSPS
1997							
1998		Act on the Promotion of Technology Transfer from Universities to Private Business Operators (TLO System) (MITI/MESC)	Act for Facilitating Government Research Exchange partially revised	Aimed at encouraging private enterprises, etc. to develop joint research facilities within the premises of national universities, etc., the law is revised to allow those who have established such facilities to use state-owned land at an affordable rent.	**A new category of Scientific Research on Priority Areas added to Grants-in-Aid for Scientific Research (KAKENHI)**	The research category of Scientific Research on Focused Areas is abolished and replaced by Scientific Research on Priority Areas to promote the advancement of research that can raise the standards of science and help solve global issues such as environmental problems and life-threatening diseases.	JSPS
					Small Business Innovation Research (SBIR) System introduced	This system assists small and medium enterprises, etc., in transforming research and development results into business activities by providing subsidies, reducing patent fees, and offering low-interest loans from Japan Finance Corporation.	
1999		Act on Special Measures for Industrial Revitalization (Japanese Bayh-Dole Act) (MITI)					
		Basic Act on the Promotion of Core Manufacturing Technology (MITI)					
2000		Industrial Technology Enhancement Act (MITI)					
		Basic Plan on Core Manufacturing Technology (MITI)					
2001	Council for Science and Technology Policy established; Ministry of Education, Culture, Sports, Science and Technology established		Common Guidelines for Payment of Indirect Expenses under Competitive Funding Schemes (agreed at the Interministerial Liaison Meeting on Competitive Funding)	These guidelines specify the common procedures for all relevant ministries paying indirect expenses, including purposes, usage, and payment amounts and methods.	ndirect expenses included in some of Grants-in-Aid for Scientific Research (KAKENHI)	Indirect expenses are included in Grants-in-Aid for Scientific Research (A), Specially Promoted Research, and Scientific Research (S). In order to improve the research environment of researchers receiving the grants and strengthen the function of their research institutes, additional funds corresponding to 30% of the research funds (direct expenses) are allocated to the research institutes to cover their management expenses.	JSPS
	Second Science and Technology Basic Plan (FY2001–FY2005)						
2002		Intellectual Property Basic Act (CAS)			**New categories of Young Scientists (A) and (B) added to Grants-in-Aid for Scientific Research (KAKENHI)**	These new research categories are added to further promote the research activities of young, next-generation scientists (Young Scientists (A): 5 to 30 million yen; Young Scientists (B): 5 million yen or less).	JSPS
					21st Century COE Program: closed in 2004	Aimed at establishing the world's most excellent centers of research and education in universities to upgrade their research levels and produce world-leading creative researchers, this program assists universities in strengthening their international competitiveness and distinctive attractiveness. [Accepting 274 applications during the 3-year period]	MEXT (HEB)
					Strategic Basic Research Program	The basic research programs that have been carried out by Japan Science and Technology Agency (JST) are restructured into a new scheme.	JST
2003		National University Corporation Act (MEXT) (2004; reorganizing national universities and inter-university research institutes as corporations)	Reform of the Competitive Research Funding System (CSTP Expert Panel on Science and Technology System Reform)	This report suggests specific measures for the reform of Japan's competitive research funding system (e.g., securing funds for indirect expenses corresponding to 30% of the total budget, defining the roles of Program Officers (POs) and Program Directors (PDs), and adopting multiyear funding).	Research Center for Science Systems	The research center is established under Japan Society for the Promotion of Science (JSPS), a funding organization under the Ministry of Education, Culture, Sports, Science and Technology, to conduct research studies on science promotion policies to facilitate the activities of JSPS.	JSPS
					Center for Research and Development Strategy	The center is established under Japan Science and Technology Agency (JST) to make plans and suggestions for priority fields of science, institutional reforms, etc.	JST
					Research and Development Promotion Tax System revised	The Research and Development Promotion Tax System is drastically reformed to establish a tax deduction system for experimental research expenses and a specially recognized depreciation system for research and development equipment and facilities.	MOF
2004							
2005							
2006	**Third Science and Technology Basic Plan (FY2006–FY2010)**	Basic Act on Education revised (MEXT)			**A new category of Young Scientists (Start-up) added to Grants-in-Aid for Scientific Research (KAKENHI)**	This new research category is added to support the research activities of researchers who have been freshly appointed to a research position (renamed as Research Activity Start-up in 2010) (Each project receives up to 1.5 million yen per year for up to 2 years).	JSPS
2007	Long-term Strategic Guidelines "Innovation 25"		Guidelines for Supervision and Auditing of Public Research Funds at Research Institutions (MEXT)	These guidelines require research institutes to develop a system to prevent the misuse of public research funds.	**World Premier International Research Center Initiative (WPI)**	Based on the Third Science and Technology Basic Plan, Innovation 25, and other related policies, this program provides focused support to assist universities, etc., with their initiatives, such as institutional reforms, and establish "globally visible" research centers that boasts an outstanding research environment and a high standard of research.	MEXT
			Report on the Expansion of Competitive Funds and the Promotion of System Reforms (CSTP Expert Panel on Basic Policy Promotion)	This report suggests an approach to the drastic reform of competitive funding and other research funding schemes (adopting multiyear funding, etc.).			
2008		First Basic Plan for the Promotion of Education (CCE)			**A new category of Scientific Research on Innovative Areas added to Grants-in-Aid for Scientific Research (KAKENHI)**	This new category is added to identify and support ambitious research going beyond the conventional framework of science, such as research in emerging and interdisciplinary fields and cross-sectoral collaborative research (Each proposed area receives 10 to 300 million yen per year for 5 years).	JSPS
		Act on Improvement of Research and Development Capacity			e-Rad (Cross-Ministerial Research and Development Management System)	This cross-ministerial system enables the online management of the research and development process (from the acceptance, screening, and adoption of applications to the management of adopted issues and reporting of results) centered on competitive funding schemes.	
		Strategy for Innovative Technology (CSTP)					
2009			Task Force to Integrate Rules for the Use of Competitive Funds (CSTP)	Appointed to develop an action plan, the task force held three meetings between March and June 2010 to discuss how to integrate rules for the use of competitive funds.	Funding Program for World-Leading Innovative R&D on Science and Technology (FIRST Program): closed in 2013	This program aims to facilitate innovative research to reinforce Japan's international competitiveness and apply the research results to benefit society and people (multiyear funding is adopted).	CSTP
2010	Action Plan for the Implementation of Important Science and Technology Policy Measures (formulated each year) (CSTP)				Funding Program for Next Generation World-Leading Researchers (NEXT Program): closed in 2013	This program supports the research activities of young and female scientists as well as researchers of regional research institutes, etc.	CSTP
2011	**Fourth Science and Technology Basic Plan (FY2011–FY2015)**				Multiyear funding adopted for some of Grants-in-Aid for Scientific Research (KAKENHI)	Multiyear funding becomes available for Grants-in-Aid for Young Scientists (B), Challenging Exploratory Research, and Scientific Research (C).	JSPS
					Strategic Funds for the Promotion of Science and Technology: closed in 2013	This fund is established to facilitate the formulation and effective implementation of policies by ministries and strengthen their control over the STI policy (renamed from Special Coordination Funds for Promoting Science and Technology).	MEXT
2012			System Reforms for Promotion of Scientific and Technological Innovation: Innovation Environment Reforms(CSTP Expert Panel on Science, Technology and Innovation Policy*)	This report suggests structural reforms for issue-oriented scientific and technological innovation and measures to enhance basic research.	Multiyear funding adopted for some of Grants-in-Aid for Scientific Research (KAKENHI)	Multiyear funding becomes available for Grants-in-Aid for Young Scientists (A) and Scientific Research (B).	JSPS
					Public-Private Innovation Program: closed in 2012	The national government invests in universities, etc. to promote public-private partnership research and development projects to transform research and development outcomes into businesses and products.	MEXT (HEB)
2013	Comprehensive Strategy on Science, Technology and Innovation (formulated each year) (CSTP)	Second Basic Plan for the Promotion of Education (CCE)			**Center of Innovation Science and Technology-based Radical Innovation and Entrepreneurship Program (COI STREAM)**	Selecting subjects based on the hidden future needs of society, this program supports industry-academia collaboration for commercialization-driven research and development from the basic research stage beyond organizational and sectoral boundaries. [Accepting 12 applications as of 2013]	MEXT
	Japan Revitalization Strategy (Growth Strategy)				**Impulsing Paradigm Change through Disruptive Technologies Program (ImPACT)**	Aimed at developing creative scientific and technological innovation that can dramatically change industry and society, this program facilitates challenging high-risk yet high-impact research and development.	CSTP
2014	Council for Science, Technology and Innovation (reorganized from the Council for Science and Technology Policy)	Act on Strengthening Industrial Competitiveness (METI)	Integration of Virement Rules (agreed at the Interministerial Liaison Meeting on Competitive Funding)	The relevant ministries and agencies agree on the integration of virement rules in their competitive funding schemes.	**Cross-ministerial Strategic Innovation Promotion Program (SIP) ****	The Council for Science, Technology and Innovation (CSTI) allocates budget across ministries and sectors to promote measures, including regulatory and institutional reforms, to create a seamless process from basic research to applications (commercialization and business development). Program directors are appointed on an issue-by-issue basis.	CSTI

Note: Red: System operation improvements, etc. Light blue: New research support schemes. Gray letters: Application closed; Bold letters / bold-lined frame: Programs with an annual budget of more than 5 billion yen; Bold letters: Programs with an annual budget of 1 to 5 billion yen; Program closing year: Fiscal year when the program stopped accepting new applications

*: Reorganized from Expert Panel on Basic Policy (Dec. 2004–Mar. 2006), Expert Panel on Basic Policy Promotion (Jun. 2006–May 2009), and Expert Panel on Basic Policy (Jun. 2009–Mar. 2011); **: FY2014 programs

Evaluation Systems

Year	Strategies/Policies		Policy Measures, etc. (Evaluation Systems)		Schemes/Programs (Evaluation Systems)		
	Science and Technology Policies	Relevant Policies	Title	Description	Title	Description	Competent Ministries, etc.
1995	**Basic Act on Science and Technology**						
1996	**First Science and Technology Basic Plan (FY1996–FY2000)**						
1997			National Guidelines on the Method of Evaluation for Governmental R&D	These guidelines facilitate the development and establishment of evaluation systems for individual research and development institutes and issues.	Guidelines for Evaluation of Research and Testing Institutes and Research Themes	The Ministry of Agriculture, Forestry and Fisheries formulates evaluation guidelines.	MAFF
					Promotion of Evaluation of Research and Development	The Science and Technology Agency publishes a report on evaluation methodology.	STA
					Evaluation Methodology for Scientific Research (Suggestion)	The Ministry of Education, Science and Culture publishes a report on the evaluation of scientific research.	MESC
					Technology Evaluation Guidelines of the Ministry of International Trade and Industry	The Ministry of International Trade and Industry formulates evaluation guidelines.	MITI
1998		Act on the Promotion of Technology Transfer from Universities to Private Business Operators (TLO System) (MITI/MESC)			Guidelines on Evaluation Methodology for Health and Labor Scientific Research	The Ministry of Health, Labor and Welfare formulates evaluation guidelines.	MOHW
					Basic Guidelines for Evaluation of Research	The Environment Agency formulates evaluation guidelines.	EA
					Guidelines for Evaluation of Research and Development	The Ministry of Transport formulates evaluation guidelines.	MOT
1999		Act on Special Measures for Industrial Revitalization (Japanese Bayh-Dole Act) (MITI)					
		Basic Act on the Promotion of Core Manufacturing Technology (MITI)					
2000		Industrial Technology Enhancement Act (MITI)			Technology Evaluation Guidelines of the Ministry of International Trade and Industry	The Ministry of International Trade and Industry revises its evaluation guidelines.	MITI
		Basic Plan on Core Manufacturing Technology (MITI)					
2001	Council for Science and Technology Policy established; Ministry of Education, Culture, Sports, Science and Technology established		Policy evaluation based on the Government Policy Evaluations Act (Act No. 86 of 2001)	Administrative organs are required to conduct ex-ante evaluations for individual research and development projects estimated to incur large costs.	Evaluation of national research institutions, etc.	Against the backdrop of the efforts of the ministries and agencies to evaluate their policies, the Evaluation Committee for Incorporated Administrative Agencies evaluates national research institutions based on the Act on General Rules for Incorporated Administrative Agencies.	MEXT
	Second Science and Technology Basic Plan (FY2001–FY2005)		National Guidelines for Evaluating Government Funded R&D (CSTP)	These guidelines facilitate strict evaluation of research and development policies, researcher performance, and other relevant matters.			
			Expert Panel on Evaluation established (CSTP)	The Expert Panel on Evaluation is established to review and deliberate on the establishment of research and development evaluation rules as well as the evaluations of national priority research and development projects.	Guidelines for Evaluation of Research and Development under the Ministry of Agriculture, Forestry and Fisheries	The Ministry of Agriculture, Forestry and Fisheries formulates evaluation guidelines.	MAFF
2002		Intellectual Property Basic Act (CAS)			Implementation Guidelines for Evaluation of Information and Communications Research under the Ministry of Internal Affairs and Communications	The Ministry of Internal Affairs and Communications formulates evaluation guidelines.	MIC
					Guidelines for Evaluation of Research and Development under the Ministry of Education, Science and Culture	The Ministry of Education, Science and Culture formulates evaluation guidelines.	MEXT
					Guidelines for Evaluation of Scientific Research and Development under the Ministry of Health, Labor and Welfare	The Ministry of Health, Labor and Welfare formulates evaluation guidelines.	MHLW
					Technology Evaluation Guidelines of the Ministry of Economy, Trade and Industry	The Ministry of Economy, Trade and Industry formulates evaluation guidelines.	METI
					Guidelines for Evaluation of Research and Development under the Ministry of Land, Infrastructure, Transport and Tourism	The Ministry of Land, Infrastructure, Transport and Tourism formulates evaluation guidelines.	MLIT
					Guidelines for Evaluation of Research and Development under the Ministry of the Environment	The Ministry of the Environment formulates evaluation guidelines.	MOE
					Guidelines for Evaluation of Research and Development under the Ministry of Defense	The Ministry of Defense formulates evaluation guidelines.	MOD
2003		National University Corporation Act (MEXT) (2004; reorganizing national universities and inter-university research institutes as corporations)					
2004					Evaluation of national university corporations, etc.	National universities are evaluated group by group and area by area by the National Institution for Academic Degrees and University Evaluation (restructured from National Institution for Academic Degrees in 2000).	MEXT
					Evaluation of progress in the implementation of science and technology policies based on the Science and Technology Basic Plan (FY2001–FY2005)	A follow-up evaluation is implemented to measure progress in the implementation of science and technology policies over the past three years (2001–2003). The evaluation is conducted in accordance with the Second Science and Technology Basic Plan (which requires annual follow-up evaluations to be carried out at the end of each fiscal year and a detailed follow-up evaluation three years after the launch of the plan).	CSTP
2005			National Guidelines for Evaluating Government Funded R&D revised (CSTP)	The guidelines are revised to promote evaluation that can motivate researchers to take on the challenge of innovation and take responsibility for the results, reliable evaluation that meets the global standards, and useful evaluation that can make changes.	Guidelines for Evaluation of Research and Development under the Ministry of Education, Science and Culture and Technology Evaluation Guidelines of the Ministry of Economy, Trade and Industry: revised	The Ministry of Education, Science and Culture and the Ministry of Economy, Trade and Industry revise their respective evaluation guidelines.	MEXT/METI
2006	**Third Science and Technology Basic Plan (FY2006–FY2010)**	Basic Act on Education revised (MEXT)			Implementation Guidelines for Evaluation of Information and Communications Research under the Ministry of Internal Affairs and Communications, Guidelines for Evaluation of Research and Development under the Ministry of Agriculture, Forestry and Fisheries, and Guidelines for Evaluation of Research and Development under the Ministry of the Environment: revised	The Ministry of Internal Affairs and Communications, the Ministry of Agriculture, Forestry and Fisheries, and the Ministry of the Environment revise their respective evaluation guidelines.	MIC/MAFF/MOE
2007	Long-term Strategic Guidelines "Innovation 25"						
2008		First Basic Plan for the Promotion of Education (CCE)	National Guidelines for Evaluating Government Funded R&D revised (CSTP)	In order to produce outstanding research and development results and accelerate their applications for society and people, the guidelines are revised to promote the application of evaluation results to future research and development and ensure implementation in accordance with global standards.	Guidelines for Evaluation of Scientific Research and Development under the Ministry of Health, Labor and Welfare and Guidelines for Evaluation of Research and Development under the Ministry of Defense: revised	The Ministry of Health, Labor and Welfare and the Ministry of Defense revise their respective evaluation guidelines.	MHLW/MOD
		Act on Improvement of Research and Development Capacity					
		Strategy for Innovative Technology (CSTP)					
2009					Follow-up evaluation of the Third Science and Technology Basic Plan	A follow-up evaluation is implemented to measure progress in the implementation of science and technology policies over the past three years (2006–2008). The evaluation is conducted in accordance with the Third Science and Technology Basic Plan (which requires a detailed follow-up evaluation to be carried out three years after the launch of the plan to measure its progress).	CSTP
					Implementation Guidelines for Evaluation of Information and Communications Research under the Ministry of Internal Affairs and Communications, Guidelines for Evaluation of Research and Development under the Ministry of Education, Science and Culture, Guidelines for Evaluation of Scientific Research and Development under the Ministry of Health, Labor and Welfare, Technology Evaluation Guidelines of the Ministry of Economy, Trade and Industry, Guidelines for Evaluation of Research and Development under the Ministry of the Environment, and Guidelines for Evaluation of Research and Development under the Ministry of Defense: revised	The Ministry of Internal Affairs and Communications, the Ministry of Education, Science and Culture, the Ministry of Health, Labor and Welfare, the Ministry of Economy, Trade and Industry, the Ministry of the Environment, and the Ministry of Defense revise their respective evaluation guidelines.	MIC/MEXT/MHLW/METI/MOE/MOD
2010	Action Plan for the Implementation of Important Science and Technology Policy Measures (formulated each year) (CSTP)				Guidelines for Evaluation of Scientific Research and Development under the Ministry of Health, Labor and Welfare and Guidelines for Evaluation of Research and Development under the Ministry of Land, Infrastructure, Transport and Tourism: revised	The Ministry of Health, Labor and Welfare and the Ministry of Land, Infrastructure, Transport and Tourism revise their respective evaluation guidelines.	MHLW/MLIT
2011	**Fourth Science and Technology Basic Plan (FY2011–FY2015)**						
2012			National Guidelines for Evaluating Government Funded R&D revised (CSTP)	The guidelines are revised to launch the evaluation of research and development programs and facilitate indicator-based target setting.	Technology Evaluation Guidelines of the Ministry of Economy, Trade and Industry Guidelines: revised	The Ministry of Economy, Trade and Industry revises its evaluation guidelines.	METI
2013	Comprehensive Strategy on Science, Technology and Innovation (formulated each year) (CSTP)	Second Basic Plan for the Promotion of Education (CCE)					
	Japan Revitalization Strategy (Growth Strategy)						
2014	Council for Science, Technology and Innovation (reorganized from the Council for Science and Technology Policy)	Act on Strengthening Industrial Competitiveness (METI)	Report on Consultation No. 2 regarding the Development of Draft Guidelines for Evaluation of Research and Development Procedures and Projects (CSTI)	This report provides national research and development agencies with guidelines on medium- and long-term target setting and evaluation.	Follow-up evaluation of the Fourth Science and Technology Basic Plan	A follow-up evaluation is implemented to measure progress in the implementation of science and technology policies over the past three years (2011–2013). The evaluation is conducted in accordance with the Fourth Science and Technology Basic Plan (which requires the national government to evaluate the progress of the plan at an appropriate time and in an appropriate way and use the evaluation results to review the basic plan and formulate new policies).	CSTP
					Guidelines for Evaluation of Research and Development under the Ministry of Education, Science and Culture: revised	The Ministry of Education, Science and Culture revises its evaluation guidelines.	MEXT

Note Light blue: Guidelines for research and development evaluation

International Activities

Year	Strategies/Policies		Policy Measures, etc. (International Activities)		Schemes/Programs (International Activities)		
	Science and Technology Policies	Relevant Policies	Title	Description	Title	Description	Competent Ministries, etc.
1982					**Overseas Research Fellowships**	This program assists young Japanese researchers in engaging in research activities at overseas universities and research institutes.	JSPS
1983			Suggestions on the International Students Policy for the 21st Century (MESC)	This report outlines a comprehensive approach to the International Students Policy aimed at accepting approximately 100,000 international students.			
1984			Report on the Development of the International Students Policy for the 21st Century (MESC)	This report outlines a long-term plan for the International Students Policy aimed at accepting 100,000 international students by the beginning of the 21st century.			
1986		**Act for Facilitating Governmental Research Exchange**					
1988					**JSPS Postdoctoral Fellowships for Research in Japan**	This program invites young researchers from developed Western countries to do collaborative research at universities, etc. in Japan.	JSPS
					STA Fellowships (Invitation Fellowships for Research in Japan)	Funded with the Special Coordination Funds for Promoting Science and Technology, this program invites young foreign researchers to national research institutions, etc. in Japan (implemented by JST in 1989 and by JSPS in 2001).	STA/JRDC/JSPS
1989					JSPS Cooperative Research Fellowship: closed in 2001	Aimed at further promoting international research exchanges, this program dispatches researchers from national institutions, etc. in Japan to other Asia-Pacific countries for research collaboration and interaction.	JRDC
1990					**Human Frontier Science Program (HFSP)**	This international collaborative program provides financial support for basic research in life sciences. The program assists international collaborative research teams with their research expenses and young researchers with travel and accommodation expenses so that they can participate in international and domestic research activities.	MITI/STA
1994					**Large Hadron Collider (LHC) Program**	Initiated by the European Organization for Nuclear Research (CERN), this program develops a proton colliding beam particle accelerator. The construction plan is officially adopted by the CERN Board of Directors (completed in 2008).	MESC
1995	**Basic Act on Science and Technology**						
1996	**First Science and Technology Basic Plan (FY1996–FY2000)**				Dispatch of Young Researchers for Research Abroad: closed in 2001	This program assists young Japanese scientists in engaging in long-term overseas research.	JST
1997							
1998		Act on the Promotion of Technology Transfer from Universities to Private Business Operators (TLO System) (MITI/MESC)			**Construction of International Space Station (ISS)**	Aiming to make full use of the space environment and develop infrastructure for manned space activities, the four powers comprising Japan, the US, Europe, and Canada (at the beginning) start collaborating to develop a manned space station in low earth orbit (approximately 400 km above the planet) (completed in 2011).	STA
1999		Act on Special Measures for Industrial Revitalization (Japanese Bayh-Dole Act) (MITI)					
		Basic Act on the Promotion of Core Manufacturing Technology (MITI)					
2000		Industrial Technology Enhancement Act (MITI)					
		Basic Plan on Core Manufacturing Technology (MITI)					
2001	Council for Science and Technology Policy established; Ministry of Education, Culture, Sports, Science and Technology established						
	Second Science and Technology Basic Plan (FY2001–FY2005)						
2002		Intellectual Property Basic Act (CAS)					
2003		National University Corporation Act (MEXT) (2004; reorganizing national universities and inter-university research institutes as corporations)	Report on the Development of the International Students Policy: Aimed at Enhancing the Quality and Quantity of International Student Exchanges (CCE)	This report outlines medium- and long-term policies as well as priority measures that should be taken as soon as possible and within five years at the latest.	**Strategic International Research Cooperative Program (SICP)**	Aimed at supporting small-scale international research cooperation, this program supports international research projects with the designated countries and regions and in the fields selected by the Ministry of Education, Culture, Sports, Science and Technology.	JST
					Integrated Ocean Drilling Program (IODP)	This program uses the US, European, and Japanese drillships that can operate drills up to 7,000 m in deep seawater to drill in deep seas and reveal environmental variations, crust structures, and crust ecosystems.	MESC
2004					STS Forum	The STS Forum, a non-profit organization, holds international forums (annual general meetings) every autumn in Kyoto to discuss science, technology, and society-related issues shared by all mankind.	
2005					Strategic Fund for Establishing International Headquarters in Universities: closed in 2005	This program establishes a nationwide inter-university system as a strategic foundation for international activities. [Accepting 20 applications during the 1-year period]	MESC
2006	**Third Science and Technology Basic Plan (FY2006–FY2010)**	Basic Act on Education revised (MEXT)			International Collaborative Research for Solving Common Regional Issues: closed in 2010	As part of the initiative to strengthen science and technology diplomacy, this program uses Japan's high research potential to promote reciprocal international collaborative research with Asian and African countries (part of Special Coordination Funds for Promoting Science and Technology).	MESC
					Flexible International Exchanges: closed in 2010	This program promotes flexible international exchange projects in cooperation with universities, research institutes, academies/societies, and other participating organizations inside and outside of Japan.	JSPS
2007	Long-term Strategic Guidelines "Innovation 25"				JSPS International Training Program (ITP): closed in 2013	By sending young Japanese scientists abroad, this program increases opportunities for them to engage in collaborative research with top-ranked overseas research institutes and interact with foreign scientists.	JSPS
					International Thermonuclear Experimental Reactor (ITER) Program (ITER Agreement enters into effect)	Japan, the EU, the US, Russia, China, Korea, and India participate in this international science and technology program to construct and operate an experimental reactor in order to verify the scientific and technological feasibility of nuclear fusion energy.	MEXT
2008		First Basic Plan for the Promotion of Education (CCE)	Toward the Reinforcement of Science and Technology Diplomacy (CSTP)	This report outlines the basic policy of promoting science and technology diplomacy as well as examples of actual challenges and possible solutions.	G8 Science and Technology Ministers' Meeting	This is the first meeting of G8 Ministers of Science and Technology to discuss how to transfer the benefits of science and technology to society and people. The Ministers acknowledge the importance of developing innovative technologies to create a low-carbon society and agree to enhance cooperation in research and development.	CAO
		Act on Improvement of Research and Development Capacity	Framework of the 300,000 International Students Plan formulated	This framework aims to enhance the international competitiveness of Japanese universities, etc. in education and research and to accept 300,000 international students by 2020.	**Science and Technology Research Partnership for Sustainable Development (SATREPS)**	This program promotes research collaboration between researchers from Japan and developing countries to solve global issues and utilize research outcomes in the future.	JST /JICA
		Strategy for Innovative Technology (CSTP)					
2009					**Strategic International Collaborative Research Program (SICORP)**	In collaboration with Official Development Assistance projects, this program facilitates international collaborative research that can solve global issues as well as problems faced by developing countries. The program strategically promotes collaborative research with developed countries in advanced fields and joint research with emerging Asian countries under the equal partnership based on intergovernmental agreements.	JST
2010	Action Plan for the Implementation of Important Science and Technology Policy Measures (formulated each year) (CSTP)		Master Plan for Academic Large Facility Projects and Large-scale Research Projects 2010 (SCJ)	This outlines Japan's first master plan for large projects cutting across all academic disciplines.	Asian Standardization Promotion Program	In this program, Japan collaborates with other Asian countries to develop performance assessment methods, etc. so that its technologies can be properly assessed. The program also facilitates the adoption of the assessment methods by international and foreign national standardization organizations.	METI
					Young Researcher Overseas Visits Program for Accelerating Brain Circulation: closed in 2010	This program assists research institutes in sending abroad their young researchers engaged in international collaborative research to promote global brain circulation.	JSPS
2011	**Fourth Science and Technology Basic Plan (FY2011–FY2015)**				Strategic Young Researcher Overseas Visits Program for Accelerating Brain Circulation: closed in 2013	This program assists universities and other research institutes in sending young researchers conducting international collaborative research with world-class research institutions to their counterpart countries so that they can take on various challenges, in accordance with the international research strategies of the individual research institutes.	JSPS
					CONCERT-Japan Project	This is one of the international cooperation projects implemented by the European Union's Seventh Framework Program for Research and Technological Development (FP7).	JST
2012			Suggestions on the Establishment of Platform to Discuss the "Strategic Development of Globally Integrated Activities" (CSTP)	The Task Force for Science and Technology Diplomatic Strategies (CSTP) suggests the establishment of a platform to discuss Japan's international activities in science and technology and identifies issues to be addressed regarding the platform.	Core-to-Core Program	This program provides support to establish a sustainable cooperative relationship that connects core research and education institutes in Japan and around the world to promote research on globally important, advanced research issues or regional issues.	JSPS
					e-Asia Joint Research Program	This program promotes international joint research aimed at solving common problems in the East Asian region, such as environmental protection, disaster management, and infectious disease control.	JST
					Belmont Forum	Consisting of international science organizations and research funding agencies around the world, the Belmont Forum supports global environmental change research. It brings together researchers and provides financial support for international joint research.	MEXT/JST
2013	Comprehensive Strategy on Science, Technology and Innovation (formulated each year) (CSTP)	Second Basic Plan for the Promotion of Education (CCE)	Strategy on Accepting International Students to Take Advantage of Global Growth (MEXT)	This strategy identifies the regions of origin and the fields of study to be prioritized in accepting international students.	Provisional secretariat established for Future Earth	This framework for international collaboration aims to comprehensively promote research that can help solve global issues, in collaboration with the International Council for Science (ICSU) and other funding agencies.	
	Japan Revitalization Strategy (Growth Strategy)						
2014	Council for Science, Technology and Innovation (reorganized from the Council for Science and Technology Policy)	Act on Strengthening Industrial Competitiveness (METI)			**Strategic International Research Networking Promotion for Accelerating Brain Circulation***	Aimed at establishing a strong network with the world's top-ranked research institutes in specific fields, this program provides focused support to assist Japanese universities and other research institutes in exchanging researchers with the world's top-ranked research institutes.	JSPS
					Japan-Asia Youth Exchange Program in Science (Sakura Science Plan)*	Through close industry-academia-government collaboration, this program invites outstanding young people from other Asian countries to stay in Japan for a short period of time. The program facilitates interactions between young future leaders from Japan and other Asian countries in the science and technology fields. [Accepting 24 applications as of 2014]	JST

Note: Blue: Personnel exchange; Red: International collaborative research, etc

Gray letters: Application closed; Bold letters / bold-lined frame: Programs with an annual budget of more than 5 billion yen; Bold letters: Programs with an annual budget of 1 to 5 billion yen; Program closing year: Fiscal year when the program stopped accepting new applications; *: FY2014 Programs; SCJ: Science Council of Japan

Science and Technology for Society

Year	Strategies/Policies		Policy Measures, etc. (Science and Technology for Society)		Schemes/Programs (Science and Technology for Society)		
	Science and Technology Policies	Relevant Policies	Title	Description	Title	Description	Competent Ministries, etc.
1995	**Basic Act on Science and Technology**				Science Camp	Science Camps are held at universities, public research institutes, and business enterprises to allow high school, higher secondary school, and technical college students (10th- to 12th-grade students) to learn advanced science and technology through hands-on activities.	JRDC
1996	**First Science and Technology Basic Plan (FY1996–FY2000)**						
1997			Bioethics Committee (CST)	The Bioethics Committee is established to discuss issues related to bioethics (dissolved in 2000).			
1998		Act on the Promotion of Technology Transfer from Universities to Private Business Operators (TLO System) (MITI/MESC)	Focusing on the Importance of Communicators (STA Committee on the Promotion of Public Understanding of Science and Technology)	This report indicates the importance of interpreters and suggests the necessity of allocating 1% of the research budget to public relations activities.			
1999		Act on Special Measures for Industrial Revitalization (Japanese Bayh-Dole Act) (MITI) Basic Act on the Promotion of Core Manufacturing Technology (MITI)	Public Comment Procedure for Formulating, Amending or Repealing a Regulation	The so-called public comment procedure is established. It requires that when formulating, amending, or repealing a regulation, administrative organs should publish its draft, collect public comment and information, and then make a final decision.	Children's White Paper on Science and Technology	Children's White Paper on Science and Technology is a cartoon booklet containing pictures and data to teach science and technology in a way easy for children to understand. It is published and distributed to all elementary schools, public libraries, science museums, etc. around Japan.	STA (H20:JST)
2000		Industrial Technology Enhancement Act (MITI) Basic Plan on Core Manufacturing Technology (MITI)	Act on Regulation of Human Cloning Techniques Fundamental Principles of Research on the Human Genome	The law prohibits the transfer of a cloned embryo into a uterus and regulates the handling of specified embryos. These principles require researchers to obtain informed consent, protect and manage genetic information, and formulate research plans.	Science Channel	Science Channel is a video streaming site that features familiar daily topics to explain advanced science and technology.	JST
2001	Council for Science and Technology Policy established; Ministry of Education, Culture, Sports, Science and Technology established **Second Science and Technology Basic Plan (FY2001–FY2005)**		Expert Panel on Bioethics (CSTP)	The Expert Panel on Bioethics is established to develop the Guidelines on the Handling of Specified Embryos and examine and discuss other matters related to bioethics.	**National Museum of Emerging Science and Innovation (Miraikan)** IT-based Science and Technology Education Infrastructure Development (Advanced Digital Content Development) Roundtable on Chemicals and the Environment Science and Technology Policy Recommendation Program: closed in 2003 Institution of Science and Technology for Society: Restructured in 2005	This is a comprehensive hub that provides information to promote the public understanding of science and technology and facilitates interactions between researchers with innovative ideas. This program develops digital educational materials to help understand scientific technology and science and distributes them via the Internet to schools and other educational institutions around Japan. This roundtable is held to promote mutual understanding and information sharing on the environmental risks of chemicals among the representatives of the public, private, and civil sectors. This program provides financial support for research to enhance the science and technology policy-making capacity to address national and social priority issues (Special Coordination Funds for Promoting Science and Technology). This research promotion organization is established based on the Recommendation on Research and Development of Science and Technology for Society.	JST JST MOE MEXT JAERI/JST
2002		Intellectual Property Basic Act (CAS)			**Science Literacy Enhancement Initiative**	This initiative promotes collaboration between research and education institutions to increase opportunities for pupils and students to learn science and technology through hands-on experience and enhance teacher training (e.g., Super Science High Schools).	MEXT
2003		National University Corporation Act (MEXT) (2004; reorganizing national universities and inter-university research institutes as corporations)			Go for it Specialists: closed in 2011	Aimed at fostering future specialists, this program designates technical colleges offering a curriculum that can enable students to learn advanced technologies and skills (part of Science Literacy Enhancement Initiative).	MEXT
2004					Food Risk Communication	Meetings on Food Risk Communication are held around Japan to discuss BSE (Bovine Spongiform Encephalopathy) control measures, imported food safety measures, the positive list system for agricultural chemical residues, health foods, and other related matters.	MHLW/FSC/MAFF
2005			Report of the Conference on Science and Technology Awareness Raising Policy: Toward People-oriented Science and Technology Administrative Procedure Act (1993) revised	Aiming to create "science and technology for society," this report suggests that science and technology should be taught in an easy-to-understand and interesting way. The report also highlights the necessity of promoting outreach activities to deepen dialogue and setting standards for the level of science and technology literacy that adults should have. The law requires that when establishing an administrative order, etc. (e.g., cabinet and ministerial ordinances), administrative organs should publish its draft and collect public comment and information in advance. With this revision, the Cabinet Decision of 1999 concerning the Public Comment Procedure for Formulating, Amending or Repealing a Regulation was abolished in April 2006.	Supporting Student Contests in Science and Technology University Partnership Project Regional Model Project for Fostering Children's Fundamental Science Literacy: closed in 2008 Research Institute of Science and Technology for Society (RISTEX) established Human Resources Development in Emerging Areas (2001–2005)	Aimed at developing world-class researchers and engineers, Japan Science and Technology Agency (JST) assists students in participating in international contests. The National Museum of Nature and Science collaborates with universities to develop the science literacy and communication skills of students, for example, by providing students with free access to the museum and developing training programs for science communicators. This project expands opportunities to access hands-on and problem-solving education including observation and experiment activities by establishing a school-centered comprehensive education system that combines various regional resources, such as science museums and volunteers. The Research Institute of Science and Technology for Society (RISTEX) promotes collaboration between interested parties to solve social problems and carries out objective-driven research and development (restructured from the Institution of Science and Technology for Society established in 2001). The science and technology communicator training programs of Hokkaido University, Waseda University, and the University of Tokyo were selected for support, which ended in 2009 (Special Coordination Funds for Promoting Science and Technology).	JST MEXT JST JST MEXT
2006	**Third Science and Technology Basic Plan (FY2006–FY2010)**	Basic Act on Education revised (MEXT)	Actions against Research Misconduct (CSTP) Guidelines for Responding to Misconduct in Research (MEXT) Code of Conduct for Scientists (SCJ)	This report suggests that research communities, relevant ministries and agencies, universities, research institutes, etc. should formulate ethical guidelines and regulations against research misconduct. These guidelines outline the survey and discussion results on actions against misconduct in research funded by competitive funds, etc. (Special Committee on Scientific Misconduct). This code of conduct establishes minimum moral standards for scientists in all disciplines to follow in order to obtain the trust and mandate from society, conduct independent and autonomous research, and promote the healthy development of science.	Science Café Science Partnership Program Promotion of Important Problem-solving Research (2004–2006) Science Agora 2006	In accordance with the Statement "Towards Dialogue with Society" adopted at the 19th session, the Science Council of Japan focuses on science communication as one of the most important activities and organizes Science Café around Japan. This program develops a curriculum emphasizing science and mathematics for high schools, etc. (part of Science Literacy Enhancement Initiative). Research on property evaluation, etc. is promoted through the Multidisciplinary Expert Panel on the Impact of Nanotechnology and the Research Study on the Promotion of Social Acceptance of Nanotechnology (launched in 2005) (Special Coordination Funds for Promoting Science and Technology). This science event is held every year, attracting a variety of people ranging from children to adults and from citizens to scientists and science communicators.	SCJ JST MEXT JST
2007	Long-term Strategic Guidelines "Innovation 25"		Guidelines for Supervision and Auditing of Public Research Funds at Research Institutions (MEXT)	These guidelines outline the measures to prevent the misuse of public research funds and require research institutes to develop a system to implement these measures.	Science Education Assistant Allocation Project: closed in 2012 Science and Mathematics Students Support Project Program for Promoting Science and Technology Communication Collaboration (formerly Regional Science Education Center Promotion Program) Safe and Secure Science and Technology Project: closed in 2009	This project sends undergraduate and graduate students, retiring teachers, and other outside personnel as Science Education Assistants for 5th- and 6th-grade classes in order to support observation and experiment activities in class and enhance teachers' skills. This project focuses on enhancing the motivation and ability of students interested in science and mathematics. This program supports various science communication activities around Japan to link science and technology with society. This project promotes research and development that can solve important issues affecting the safety and security of people's lives.	JST MEXT JST MEXT
2008		First Basic Plan for the Promotion of Education (CCE) Act on Improvement of Research and Development Capacity Strategy for Innovative Technology (CSTP)	Charter of the Science Council of Japan (SCJ)	The Charter states the basic objectives, duties, and responsibilities of the Council Members and Members of the Science Council of Japan (SCJ).	Future Scientist Training Program	This program assists universities and technical colleges in creating and maintaining an advanced learning environment for students interested and competent in science and mathematics.	JST
2009	Action Plan for the Implementation of Important Science and Technology Policy Measures (formulated each year) (CSTP)				Program for Establishing Training Centers for Core Science Teachers	This program supports collaboration between universities and boards of education to develop and deliver training programs, establish regional science and mathematics education centers, and use them to develop teachers who can play a core role in local science and mathematics education.	JST
2010			Promotion of the Dialogue on Science and Technology with Citizens (Basic Policy) (CSTP)	This report suggests that application guidelines should require applicants for public research funds of 30 million yen or more to engage in dialogue on science and technology with citizens.* * Interactive communication activities through which researchers explain science and technology to citizens.	Program for Promoting Science Club Activities for Junior High and High School Students	This program supports science club activities at junior high and high schools, etc. to identify students with high potential and promote sustainable club activities.	JST
2011	**Fourth Science and Technology Basic Plan (FY2011–FY2015)**				Science for Redesigning Science, Technology and Innovation Policy Program	Support is provided to achieve evidence-based policy-making to develop problem-solving policies.	MEXT
2012					Center for Science Communication (CSC) established	The Center for Science Communication is established to bridge various science communication gaps.	JST
2013	Comprehensive Strategy on Science, Technology and Innovation (formulated each year) (CSTP) Japan Revitalization Strategy (Growth Strategy)	Second Basic Plan for the Promotion of Education (CCE)	Code of Conduct for Scientists: Revised Version (SCJ)	The 2006 Code of Conduct for Scientists is revised to add descriptions on research that answers to social wishes, dual use of scientific research outcomes, research integrity, scientists in society, and legal compliance as well as include a section of scientific advice.			
2014	Council for Science, Technology and Innovation (reorganized from the Council for Science and Technology Policy)	Act on Strengthening Industrial Competitiveness	Code of Conduct for Scientists: Revised Version (SCJ)	These guidelines enhance preventive measures against misconduct by requiring universities and other research institutes to take responsibility.	Program for Developing Risk Communication Models**	This program assists expert groups and organizations in promoting risk communication and develops risk communication models so that experts in any field can fulfill their accountability to society when a risk is involved.	MEXT

Note: Red: Science education; Deep red: Promotion of public understanding; Blue: Research ethics, etc

Gray letters: Application closed; Bold letters / bold-lined frame: Programs with an annual budget of more than 5 billion yen; Bold letters: Programs with an annual budget of 1 to 5 billion yen; Program closing year: Fiscal year when the program stopped accepting new applications; **: FY2014 Programs; SCJ: Science Council of Japan

3. A Panoramic View of Public Science and Technology Funds

History of Public Science and Technology Funds and a Panoramic View of Relevant Projects, etc.

In Japan, science and technology projects are funded by competent ministries and agencies in accordance with action plans formulated by the Council for Science, Technology and Innovation (CSTI) and relevant resource allocation plans. The administrative work to coordinate the budgeting process (coordination and announcement of the funding) was transferred from the Ministry of Education, Culture, Sports, Science and Technology to CSTI in 2014, when the Act for Establishment of the Cabinet Office was revised. This interim report describes the chronological change of science and technology funding at the program level (from 2001 to 2013), focusing on grants from the Ministry of Education, Culture, Sports, Science and Technology, which account for a majority of the public funding, while referring to Japan's public funding system as a whole (see Figure 3.1).

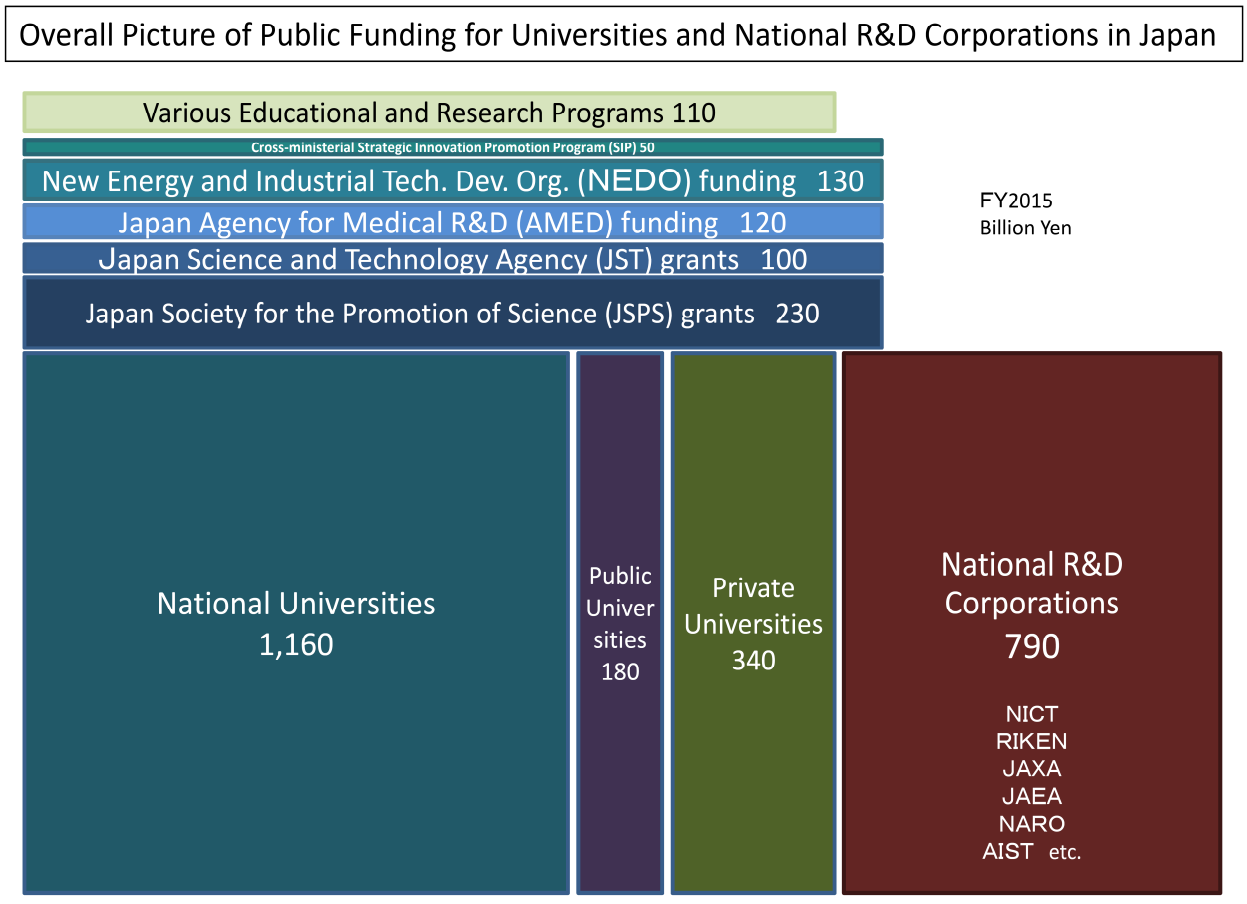

Figure 3.1: Overall Picture of Public Funding for Universities and National R&D Corporations in Japan

4. Conclusion

In Japan, diverse policy measures and schemes/programs are currently implemented under the STI policy framework based on the Basic Act on Science and Technology and other relevant laws, regulations, and basic plans. Aimed at providing a panoramic view of the STI policy framework, this interim report outlines the recent developments in relevant laws, policy measures, and schemes/programs, and tracks the changes in the science and technology funding system as a whole.

Summary of this Interim Report

In order to contribute to reviewing R&D strategies and STI policies in Japan, this report provides a panoramic view of the country's STI policies, which has increased in diversity and complexity. This study classifies the STI promotion infrastructure policies into 10 policy areas and examines the changes in these policies on an area-by-area basis in order to elucidate the historical background of the basic STI promotion infrastructure policies since the enactment of the Basic Act on Science and Technology. This area-by-area analysis includes a brief description of developments in policies and policy measures, chronological tables of specific policy measures, and programs implemented by ministries and agencies.

Moreover, this report examines the program-level change of public funding in science and technology over the last 15 years, revealing an increase in competitive funding and a decrease in infrastructure funding since 2001. Furthermore, these programs are classified into four categories, namely (i) research environment development, (ii) basic research funding, (iii) applied research and development funding, and (iv) human resources development, and further analyzed to visualize the detailed changes in competitive funding.

Toward the Future

In Japan, it has become increasingly important to grasp the whole picture of the STI policy in order to achieve total optimization of financial resource allocation in policy implementation. The elucidation of the entire structure of this complicated STI policy framework, including its historical background, is becoming more significant as the basis for policy-making.

CRDS will continue the effort of providing a panoramic view of the STI policy following this interim report. This effort will include updating reports to reflect the latest developments. It may also be essential to reconsider the classification of the STI promotion infrastructure policies, which are now classified into 10 policy areas, according to the changes in the STI policy. Moreover, given that the policy covers various policy areas that interact with each other, we consider it critical to review the scope of this policy analysis.

Thus, a potential course of action is increasing the comprehensiveness of information and deepening the understanding of historical developments in each policy area. In other words, we might as well collect information on the historical background of the policy-making process, which is intricately linked to political, economic, and social conditions, from various stakeholders, in addition to public information from ministries, agencies, and other parties concerned, beyond the organizational boundaries to conduct a multifaceted analysis. Moreover, it may be meaningful to delve into the implementation methods (application systems, implementing agencies, etc.), outcomes, and short-, medium-, and long-term impacts of policy measures and schemes/programs in each policy area.

It is considered essential to encourage parties concerned to conduct a panoramic analysis of the STI policy including the above-mentioned points. Such policy analysis is expected to lay the foundation for R&D strategies and STI policy-making.

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