

NATIONAL SCIENCE FOUNDATION

TOKYO REGIONAL OFFICE

January 10, 2008

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Report Memorandum #08-01

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Japanese Government S&T-related Budget and Major Programs/Projects for JFY2008 As Approved by the Ministry of Finance, December 25, 2007

The Japanese Government's total S&T-related budget for JFY2008 is Yen 3,570.8 billion (~\$32.5 billion), an increase of 1.7 percent from the JFY2007 budget (see Table 1 below). This increase is exceptional under the circumstances that non-S&T-related budgets were cut significantly, and epitomizes the Government's high expectation for science and technology. Viewed by ministry by ministry, MEXT (Ministry of Education, Culture, Sports, Science and Technology) receives, as in previous years, 65 percent of the total Japanese Government S&T-related budget (see Table 2). Reference can be made to the previous report on the Japanese Government S&T-related budget request at <http://www.nsftokyo.org/rm07-09.pdf>.

The rating of the programs/projects by CSTP was well reflected on the final figures (see Table 3, 4, 5, and 6 below). For example, of the new programs/projects, those rated "C" (to be

reviewed) were not funded at all. Of both the new and continuing programs/projects, to be highlighted are big increases for several projects under the Ocean and Earth Observation System. Among them, especially noteworthy is the budget for drilling R&D for Deep-sea Drilling Vessel “*Chikyu*” in the amount of Yen 6,408 million (~\$58 million), a big increase of 72 percent from JFY2007. A new Brain Science project is budgeted Yen 1,700 million (~\$15 million): a new project that supports GMO research is budgeted Yen 1,056 (~\$10 million): a new project of New-generation Network is budgeted Yen 2,130 million (~\$19 million): Green Sustainable Chemical Process is a new project whose budget is Yen 600 million (~\$5 million): S&T Cooperation to cope with Global Issues is newly funded by Yen 1,380 (~\$13 million) under a newly established budget item of “Science Diplomacy.”

Major competitive programs for basic research continue to be funded at the same level as the previous year. Grant-in-aid for Scientific Research is budgeted Yen 193,200 million (~\$1,756 million), 1 percent increase from the previous year; the budget for Global COE (Center of Excellence) program is Yen 33, 986 million (~\$309 million) and that for WPI (World Premier International) program is Yen 7,109 million (~\$65 million), both exactly doubled from the previous year as the funding for both of these started in the latter half of the previous year.

Table 1: S&T-related budget - JFY2008

	JFY2007 Budget (Billion Yen)	JFY2008 Budget (Billion Yen)	Increase/ Decrease (Billion Yen)	Increase/ Decrease (%)
S&T-related budget Total (A+B)	3,511.3	3,570.8	59.5	1.7
A: General Account	2,990.5	3,039.8	49.3	1.6
S&T Promotion Budget	1,347.7	1,362.8	15.1	1.1
B: Special Account	520.8	531.0	10.2	2.0

Table 2: S&T-related budget by ministry/agency - JFY2008

	JFY2007 S&T-related Budget (Billion Yen)	JFY2008 S&T-related Budget (Billion Yen)	Increase/ Decrease (%)
Ministry of Education, Culture, Sports, S&T	2,312.1	2,318.2	0.3

Ministry of Economy, Trade and Industry	503.3	512.7	1.9
Defense Agency	157.3	184.1	17.0
Ministry of Health, Labor, and Welfare	131.5	136.4	3.7
Ministry of Agriculture, Forests, and Fisheries	129.0	131.6	2.0
Ministry of Land, Infrastructure, and Transportation	78.5	78.6	0.0
Ministry of Internal Affairs and Communications	73.1	70.8	-3.1
Cabinet Secretariat	60.3	63.8	5.7
Ministry of Environment	31.4	33.1	5.2
Cabinet Office	16.2	18.1	11.8
Ministry of Foreign Affairs	11.5	11.9	3.6
Policy Agency	2.2	2.4	13.1
Ministry of Justice	2.0	6.3	214.7
Ministry of Finance	1.5	1.5	-2.4
Diet	1.1	1.2	3.6
TOTAL:	3,511.3	3,570.8	1.7

Table 3: Major Programs/Projects - JFY2008

Program/Project	Ministry/Agency/Res. Inst.	2007 budget (Mil. Yen)	2008 Budget Request (Mil. Yen)	2008 Budget (Mil. Yen)
Grant-in-Aid for Scientific Research	MEXT	191,300	217,481	193,200
Subsidies for private universities	MEXT	162,241	169,882	159,548
Remodeling of university facilities	MEXT	41,011	89,300	41,263
Coordination funds for promoting S&T	MEXT	36,800	42,300	33,800
Advanced multi-purpose Supercomputer	MEXT	7,735	19,529	14,500
X-ray Free Electric Laser	MEXT	7,473	17,757	11,000
Fast Breeder Reactor Cycle technologies	MEXT/METI	29,916	36,595	33,368
Ocean and Earth Observation System	MEXT/MIC	21,778	41,692	32,086
Space Transport System	MEXT	37,859	55,786	40,464

Table 4: New Large-scale R&D Programs/Projects - JFY2008

Program/Project	Ministry/Agency/Res. . Inst.	2008 Budget	2008 Budget (Million Yen)
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		Request (Million Yen)	
Innovation creation in local areas	METI	9,200	9,654
Basic research to create innovation	MAFF	10,760	6,805
Commercialization technologies to promote new policies on agriculture/forestry/fisheries	MAFF	8,969	5,200

Table 5: NEW Programs/Projects - JFY2008

	Program/Project	Ministry/Agency/ Res. Inst.	2008 Budget Request (Mil. Yen)	2008 Budget (Mil. Yen)
	NOTES			
Rating	Red letters: Competitive funds			
Competitive Funds that do not belong to specific fields				
A	Interdisciplinary research between human & social sciences	MEXT	991	500
C	High-risk challenging research	MEXT	1,000	0
Life Science				
S	Brain science: strategic promotion program (learn from brain)	MEXT	Part of 4,000	1,700
S	New agriculture development genome project (Innovative GMO and public understanding of the technologies)	MAFF	1,286	1,056
A	Comprehensive database project	METI	200	70
A	Medical care that meets individual genetic information	MEXT	2,794	2,794
A	New agriculture development genome project (identify useful genes and confirm their functions)	MAFF	1,630	1,292
A	Development of highly precise and efficient risk management on bird flu and BSE	MAFF	1,096	700
B	Omics basic research	MEXT/RIKEN	818	505
B	Protein basic research	MEXT/RIKEN	792	495

B	Sub-millimeter super-high resolution PET-MRI development	MEXT	549	0
B	New agriculture development genome project (innovative products development using DNA marker and technology development to make good use of genetic functions)	MAFF	2,088	1,656
B	Systematic elucidation of harms and risk mitigation in production/distribution/processing processes	MAFF	1,099	549
B	Commercialization of research results	MAFF	300	100
C	Brain science: strategic promotion program (protect and nurture brain)	MEXT	Part of 4,000	0
C	Simulation of origin of life	MEXT	250	0
Information Technology				
S	Base technologies for new-generation network	MIC/NICT	2,218	2,130
A	Green IT project (Save-energy technologies by cyber storage; electric power control of network equipment)	METI/NEDO	Part of 4,800	Part of 3,000
A	Dream chip development project (Basic: Three-dimensional semiconductor device)	METI/NEDO	Part of 1,500	Part of 1,200
A	Next-generation circuit architecture	METI-NEDO	500	250
A	System integration and linkage software to materialize e-science	MEXT	750	340
A	Common base to advance efficient investment in IT	METI	1,500	800
A	Ubiquitous/platform technologies	MIC	2,190	1,500
A	Multi-channel live sound system	MIC	480	456
B	Green IT project (Display technologies, using organic EL)	METI/NEDO	Part of 4,800	Part of 3,000
B	Next-generation device design	METI/NEDO	300	0
B	Dream chip development project (Applied: Communication device that copes with multi-cycles; three-dimensional semiconductor device that enables circuit rewriting)	METI/NEDO	Part of 1,500	Part of 1,200
B	Cell phone system that meets both terrestrial and satellite broadcasting	MIC/NICT	Part of 17,397	581

B	Control & management of next-generation network that meets both small and large-volume data transmission	MIC	400	0
B	Radar communication technologies for vessels	MIC	Part of 17,397	70
B	Safe and secure disaster-prevention information technologies	MIC	300	0
B	WEB analysis technologies that enable collection and analyses of huge volume cyber information	MEXT	300	0
C	Establishment of WEB application as social infrastructure	MEXT	200	0
Environment				
A	Biological diversity index and evaluation method useful for agriculture	MAFF	326	228
A	Promotion of eco-innovation: innovative technology development	METI	1,000	420
B	Biological and environmental management of coastal areas with appeal points	MLIT	13	13
B	Environmental nano particles' effects on the environment	MOE	10	3
B	Basic tool development program for promoting use of marine resources (Marine life resources)	MEXT	100	0
Nanotechnology/Materials				
A	Whole solid lithium ion battery with advanced credibility and function	MEXT/NIMS	286	230
A	Sustainable hyper composite technologies	METI/NEDO	360	320
A	Network-type research center to develop basic technologies in light quantum	MEXT	1,900	1,500
B	Nano molecule materials for sensing gas molecules	MEXT/NIMS	505	202
B	Evaluation of deterioration of non-contact materials for structural parts by laser probe	MEXT/NIMS	261	224
B	Innovative membrane separation technologies	METI	300	200
B	Innovative materials to regenerate organic	MEXT/NIMS	425	200

	tissues by controlling fiber orientation			
B	Innovative process nano measurement base technologies	METI/NEDO	800	0
C	Increase of volume of plant and weed production using light	MEXT	100	0
Energy				
S	Next-generation reactor	METI	1,498	1,250
A	Nuclear energy basic strategic research initiative	MEXT	1,000	510
A	Solid Oxide Fuel Cell (SOFC) element technologies	METI/NEDO	1,400	1,350
A	Superconducting power apparatus with Yttrium: wire material development and SMES (Superconducting Magnetic Energy Storage)	METI-NEDO	2,300	Part of 3,000
A	Environment friendly steel processing technology	METI/NEDO	600	560
B	Decontamination of uranium after breeder reactor reprocessing	METI	1,000	950
B	Hydrogen manufacturing-transportation-storage system	METI/NEDO	2,000	1,700
B	Advanced use of future fuel	METI	600	600
B	Commercialization of ultra super critical thermal power generation: element technologies	METI	200	200
B	Superconducting power apparatus with Yttrium: high temperature superconducting cable and high temperature superconducting transformer	METI/NEDO	3,700	Part of 3,000
B	Innovative glass melt processing technology	METI/NEDO	400	350
Monozukuri (Manufacturing)				
S	Green sustainable chemical process	METI/NEDO	600	600
A	Interdisciplinary next-generation device manufacturing technologies	METI/NEDO	1,600	1,150
B	Simulation software that will be the base for creating innovation	MEXT	1,250	500
C	Technologies to utilize knowledge in frontier fields to accelerate innovation creation	MEXT	100	0
C	Green sustainable chemical process (advanced commercialization technologies)	METI/NEDO	600	0

C	Innovative highly efficient processing technologies	METI/NEDO	500	0
Social Infrastructure				
A	Advancement of authentication on minute plant materials	PA	47	46
A	Survey and observation of strain focused areas in north of the Main Island where earthquakes frequently occur	MEXT	1,300	401
A	Disaster mitigation in case of large-scale earthquake in Tokai area	MEXT	1,200	495
A	Super long life house used by multi generations and management of land and houses	MLIT	358	129
B	RN matter detection technologies in case of radiological terror	PA	34	32
B	Modification of facilities for monitoring large-scale earthquakes in urban areas	MEXT/NIED	216	0
B	Wide-area earthquake monitoring facilities	MEXT/NIED	496	0
B	Disaster prevention support program	MEXT	300	30
B	Development of coal fiber complex materials to save energy	METI	5,500	5,000
Frontier				
A	Frontier space system by miniaturization	METI/NEDO	1,000	605
A	Development of basic tool to make use of marine resources: Mineral resource fields and energy resource fields	MEXT	400	400
Science and Technology Diplomacy				
S	Science and technology cooperation with developing countries	MOFA/JICA	1,380	1,380
		MEXT/JST	1,250	700
A	Environment leader fostering initiative	CAO/MEXT≠MOE	703	405
A	MEXT programs for S&T Diplomacy	MEXT	3,843	2,020
B	G8 S&T Ministerial Meeting	CAO/MEXT≠MOE	13	11
B	International S&T in infectious diseases field	MHLW	Part of 2,873	Part of 2,436

B	Part of new agricultural development genome project	MAFF	Part of 5,004	Part of 4,004
B	METI's programs for S&T Diplomacy	METI/NEDO	1,439	1,434
B	MLIT's programs for S&T Diplomacy	MLIT	Part of 2,310	93
Personnel Fostering/Public Understanding of Science and Technology				
A	Fellowship to support young researchers of challenging spirit	MEXT	3,000	0
A	Class to foster future scientists	MEXT/JST	200	100
B	Personnel fostering for industry-university cooperation	METI	3,000	2,822
C	Fostering of technicians who support S&T innovation	MEXT	100	0
C	Public understanding activities by merging S&T and culture	MEXT	100	0
Local S&T/Industry-university-government cooperation /Intellectual property				
A	Industry-university-government cooperation strategic development program	MEXT	4,839	2,819
B	Detailing company researchers in frontier fields to universities	MEXT	180	0
B	Unique seeds development program: University-oriented innovative medicine innovation	MEXT/JST	2,000	Part of 500
B	Technology transfer support center program (Patent portfolio)(part of the program)	MEXT/JST	200	0

Table 6: CONTINUING Programs/Projects - JFY2008

Program/Project	Ministry/Agency/ Res. Inst.	2007 Budget	2008 Budget Request (Mil. Yen)	2008 budget (Mil. Yen)
NOTES				
Red letters: Competitive funds				
To be accelerated				

	To be promoted			
	To be decelerated			
Competitive Funds that do not belong to specific fields				
WPI (World Premier International) Research Center Program	MEXT	3,500	9,167	7,109
Basic Research Programs, including ERATO, CREST, SORST, ICORP, & Sakigake (PRESTO)	MEXT	48,626	55,527	50,326
Human & social sciences research	MEXT	103	140	101
Basic Research (Physics & Astronomy)				
ALMA	MEXT/NINS	3,979	4,211	3,101
J-PARC	MEXT/JAEA/KEK	31,112	26,189	18,928
RI Beam Factory	MEXT/RIKEN	2,842	4,745	3,192
Spring-8	MEXT/RIKEN	9,053	9,489	9,165
Basic Research (Universities)				
Global COE Program (Post 21st Century COE Program)	MEXT	15,758	46,958	33,986
21st Century COE Program	MEXT	22,016	4,634	3,905
Life Science				
Basic research for producing pharmaceuticals	MHLW	5,306	6,499	5,202
Translational research	MEXT	1,500	2,500	1,750
Basic research for clinical application	MHLW	4,130	4,957	4,957
Risk analyses of food and pharmaceuticals	MHLW	1,491	1,752	1,752
Comprehensive database project	MEXT	1,600	1,600	1,100
Bio-informatics promotion center	MEXT/JST	1,682	1,730	1,682
Comprehensive database for MAFF-related genome information	MAFF	721	721	707
National bio-resource project	MEXT	1,776	1,776	1,400
Bio-resource project	MEXT/RIKEN	2,393	3,785	3,181
Analyses of genomic functions	MEXT	2,301	1,991	1,500
Target protein research program (Post-protein 3000)	MEXT	5,527	5,527	5,200
Plant science	MEXT/RIKEN	1,599	1,726	1,519
Sugar chain function utilization technology	MEXT/NEDO	1,190	1,190	1,000
Comprehensive brain research	MEXT/RIKEN	9,191	10,106	9,321
Comprehensive research on immunology/allergy	MEXT/RIKEN	3,456	3,757	3,261

Comprehensive research on Developmental/regenerative science	MEXT/RIKEN	4,802	5,187	4,467
Development of medical equipment	MHLW	823	1,219	823
SNP	MEXT/RIKEN	1,590	1,842	1,600
Basic research in health/medical areas	MHLW/NIIBIO	8,186	8,179	8,169
Bayh-Dole contract fee for R&D on pharmaceutical products	MHLW/NIBIO	1,200	1,200	1,200
Bio basic technology to support acceleration of genome pharmaceuticals	METI/NEDO	4,360	4,940	3,686
New functional antibody pharmaceuticals	METI/NEDO	1,190	1,300	1,000
New and recurring infectious diseases research centers	MEXT	2,750	2,800	2,500
AIDS/hepatitis/new and recurring infectious diseases	MHLW	5,895	7,071	6,008
Innovative cancer treatment	MEXT	675	765	600
Particle beam cancer treatment	MEXT/NIRS	5,537	5,979	5,797
Third comprehensive strategy for cancer	MHLW	6,178	7,413	6,487
Cancer research support	MHLW	1,804	1,850	1,804
Intelligent operation equipment R&D	METI/NEDO	700	800	600
Countermeasures for cardiovascular and habit-oriented diseases and prevention/ treatment of immunity/allergy diseases	MHLW	6,855	8,113	6,591
Mental health science	MHLW	1,954	2,281	1,856
Molecular imaging (partially competitive funds)	MEXT/NIRS	3,808	5,241	3,896
Medical infrastructure in local areas	MHLW	825	1,052	840
Japanese-type livestock feeding by large amount of simple feed	MAFF	506	606	519
New production system, using IT	MAFF	604	602	482
Commercialization and industrialization of Agri-bio products	MAFF	618	618	454
Designated experiments	MAFF	973	973	924
Commercialization at industries	MAFF	1,200	2,000	1,400
Comprehensive agri-genome research	MAFF	3,239	589	442
Environment friendly manufacturing technologies, using microorganism functions	METI/NEDO	1,381	1,381	1,105
Environment friendly manufacturing technologies, using	METI/NEDO	1,658	1,658	1,596

plant functions				
Information Technology				
Photonics network	MIC/NICT	3,465	3,948	3,637
Fostering frontier IT specialists	MEXT	798	948	828
MIRAI (millennium Research for Advanced Information Technology)	METI/NEDO	6,200	5,600	5,000
Integrated circuit application chip project	METI-NEDO	1,978	1,680	1,400
Next-generation process friendly design technology	METI/NEDO	941	941	893
Spintronics non-volatilization function	METI/NEDO	650	650	520
Next-generation large-scale low-electric energy consumption display	METI/NEDO	1,235	1,235	1,173
Device system for advanced function/super low electric power consumption computing	MEXT	525	900	425
Intelligent technologies for next-generation robots	METI/NEDO	1,900	1,900	1,500
Open source software utilization	METI/IPA	703	650	560
Industry-university software engineering project	METI/IPA	2,200	2,800	2,420
Secure platform project	METI	995	995	800
Shift to wireless system in unused frequency zone	MIC	2,845	Part of 17,397	2,328
Element technologies for advanced use of frequency in mobile communication system	MIC	4,241	Part of 17,397	3,799
Next-generation network	MIC/NICT	3,052	3,101	3,001
Next-generation backbone	MIC	1,619	1,800	1,296
Next-generation advanced efficiency network device	METI/NEDO	1,159	1,159	1,043
Support for automatic movement	MLIT	701	692	526
Information navigation project	METI	4,570	5,000	4,108
Countermeasures for information leak	MIC	1,000	1,700	1,100
Early-stage warning for computer security	METI/IPA	1,826	2,180	1,869
Trial for stopping cyber attach, including spam mail and phishing	MIC	884	900	747
Corporate/individual information security measures	METI/IPA	1,482	1,482	1,440
Promotion of R&D on strategic information communication	MIC	2,950	3,400	2,573
Promotion of private sector basic technology R&D	MIC/NICT	6,500	6,500	4,200
Environment				

Evaluation of global warming effects on agriculture, forestry and fisheries and countermeasures	MAFF	276	650	455
Comprehensive promotion of global environmental research	MOE	2,960	3,810	3,197
21st century climate change prediction program	MEXT	2,313	2,813	2,232
Basic process model for global environmental change prediction	MEXT/ JAMSTEC	1,721	1,705	1,556
Short-term climate change simulation from the whole earth scale to local	MEXT/ JAMSTEC	1,075	1,075	1,075
Global warming countermeasures	MOE	3,302	3,709	3,709
Global environment observation by satellite	MOE/NIES	715	743	665
Water/heat/matter cycle observation at various scales from basin to globe	MEXT/ JAMSTEC	677	707	677
Chemical substance risk analyses	MHLW	1,348	1,618	1,281
Grant for waste disposal study	MOE	1,261	1,861	1,135
Field test for use of local biomass energy	METI	1,904	1,904	Part of 8,588
Promotion of environmental technology development	MOE	881	1,600	836
Nanotechnology/Materials				
Nanotechnology/materials-oriented interdisciplinary research areas	MEXT	2,140	2,440	Part of 2,000
Nanoelectronics semiconductor new materials/new structure technology development: New materials and new structure nano electronic devices	METI/NEDO	500	1,000	500
Nanoelectronics semiconductor new materials/new structure technology development: Nitrogen-related chemical combination semiconductor board/expitaxial development	METI/NEDO	500	660	500
Alternate materials for rare metals	METI/NEDO	1,100	1,400	1,000
Innovative advancement of strength and functions of steel materials	METI/NEDO	825	1,200	1,000
Cancer diagnosis/treatment technologies by nanobiotechnology: Molecular imaging equipment	METI/NEDO	Part of 1,200	Part of 1,200	Part of 960
Medical equipment development (Nanomedicine)	MHLW	1,937	2,119	1,937

Frontier nano station (nanotechnology network, quantum beam facilities)	MEXT	1,800	2,443	1,727
Societal acceptance of nanomaterials	MEXT/NIMS	722	722	469
Frontier optical science research	MEXT/RIKEN	882	1,075	882
Commercialization of nanotechnology/frontier parts materials (Nanotech challenge)	METI/NEDO	2,170	2,170	1,736
Interdisciplinary and inter-industry nanotechnology/frontier materials commercialization	METI/NEDO	1,800	2,800	1,910
Energy				
New energy technology R&D (Solar and wind)	METI/NEDO	3,710	5,300	Part of 7,700
Commercialization of polymer electrolyte fuel cell (PEFC)	METI/NEDO	5,130	7,000	6,669
Confinement of CO2 underground	METI	1,070	1,318	1,305
ITER	MEXT	5,382	12,158	10,298
Nuclear energy system	MEXT	5,205	6,307	5,926
High-level radioactive waste disposal R&D	MEXT/JAEA	8,937	8,997	8,718
Geological disposal technology	METI	3,376	3,876	3,682
Innovative commercialization of nuclear energy	METI	902	1,600	800
Full reactor MOX fuel nuclear reactor facilities	METI	3,400	3,500	3,000
Supplemental funds for promoting uranium condensing technologies, using centrifugal method	METI	911	1,200	1,100
New energy technology field tests (Solar and wind)	METI/NEDO	8,920	7,209	Part of 8,588
Frontier research on fuel cell	METI/NEDO	996	1,000	900
Frontier science basic research on hydrogen	METI/NEDO	1,665	1,800	1,750
Practical application of solid oxide fuel cell	METI/NEDO	765	900	800
Large-scale experiment of residential fuel cell	METI/NEDO	3,420	2,800	2,711
Frontier science basic research on hydrogen reserve materials	METI/NEDO	757	1,000	908
Practical application of fuel cell system	METI	1,800	1,500	1,300
Advanced functional interdisciplinary technology development for refining oil	METI	7,600	8,811	7,930
Innovative next-generation oil refining technology development	METI	2,326	4,400	3,960

Coal production/use technology promotion: Multi-purpose coal gas production	METI	1,800	2,818	Part of 3,251
Power generation by gasification of jet stream floor coal	METI	1,596	2,067	2,067
GTL technologies of natural gas	METI	6,867	6,000	6,000
Methane hydrate development	METI	4,014	2,533	2,533
Commercialization of next-generation power reserve system	METI	4,900	7,100	5,300
Strategic development of energy saving technologies	METI/NEDO	8,000	8,000	6,900
Establishment of infrastructure for hydrogen-economy society	METI/NEDO	2,550	2,010	1,400
New commercialization of fuel cell	METI/NEDO	340	440	250
Monozukuri (Manufacturing)				
Frontier measurement analysis technology/equipment development	MEXT/JST	4,800	6,000	5,500
Super hybrid material technology development	METI/NEDO	800	800	620
Strategic basic technology development	METI/SMRJ	9,361	11,571	8,805
Optical catalyst creation project for recycling society	METI/NEDO	1,100	1,100	880
Highly integrated and complex MEMS technology development	METI/NEDO	1,100	1,100	825
Super flexible display parts technology development	METI/NEDO	620	730	620
Social Infrastructure				
Safe and secure society	MEXT	405	1,001	625
Special project for prevention/mitigation of urban-area large-scale earthquakes (Plate structure, anti-seismic evaluation/security of function)	MEXT	1,450	1,639	1,102
Anti-seismic research, using E-defense	MEXT/NIED	1,962	2,803	1,830
Advancement of monitoring/modeling of the change in crust for mitigation of earthquake and volcanic lava disaster and advancement of prediction	MLIT	1,053	1,151	989
Next-generation environment-friendly airplane	METI/NEDO	3,390	5,920	4,700
Next-generation environment-friendly airplane: materials manufacturing/ processing technology development	METI	830	840	800

Domestic airplane: highly functional technology/clean engine technology R&D	MEXT/JAXA	2,704	2,725	2,725
All weather/high density flight technology	MEXT/JAXA	381	546	546
Special project for prevention/mitigation of urban-area large-scale earthquakes (Wide-area crisis management/mitigation system)	MEXT	0	200	0
Frontier				
Flight evidence of LNG propulsion	MEXT/JAXA	3,244	14,989	5,600
Next-generation transport: system design	MEXT/NEDO	2,593	1,030	620
International Space Station: operation and utilization	MEXT/JAXA	18,972	17,504	16,964
SERVIS (space environment reliability verification system)	MEXT/NEDO	600	750	490
Next-generation earth observation sensor research: Hyper-spectrum sensor technology	MEXT/NEDO	603	2,020	1,303
Oil resource remote detection technology	MEXT	1,550	1,600	1,600
Advancement of reliability of satellites	MEXT/JAXA	652	959	459
Maintenance of solid rocket technologies	MEXT/JAXA	54	2,800	214
Personnel Fostering/Public Understanding of Science and Technology				
Graduate education reform support program	MEXT	3,501	8,597	5,070
Fellowship program: Ph.D. and postdoc	MEXT/JSPS	14,915	17,644	15,794
Practically minded personnel fostering by industry-university cooperation	MEXT	534	909	733
OIST (Okinawa Institute of S&T)	CAO/OIST	8,726	15,597	10,752
International fellowship program	MEXT/JSPS	1,487	1,596	1,492
Foreign researcher invitation program	MEXT/JSPS	6,821	6,519	6,503
Assistants for science classes	MEXT/JST	2,000	3,000	2,450
Super science high school	MEXT/JST	1,444	1,560	1,482
Science partnership project	MEXT/JST	1,218	1,198	1,118
Development and use of science education materials	MEXT/JST	685	635	515
Science education facilities	MEXT	1,310	2,000	1,320
Local S&T/Industry-university-government cooperation/Intellectual property				
Intelligent cluster creation	MEXT	8,940	11,720	9,096
Urban area Industry-university-government cooperation	MEXT	4,510	5,140	4,600

research				
Local area innovation creation program	MEXT/JST	9,411	14,384	11,025
Local area incentive cooperative research program	MEXT/JST	2,341	1,321	1,300
Wide area new business support network	METI	1,699	1,274	1,139
Local area resource utilization-type R&D	METI	1,956	1,956	1,706
Small & medium-size and venture companies support program	METI	1,900	1,678	621
Frontier research facilities joint use innovation creation program	MEXT	1,380	1,656	1,382
Industry-university seeds innovation program	MEXT/JST	1,800	3,120	2,200
Unique seeds development program	MEXT/JST	9,043	9,918	8,122
Technology transfer support center (part of the program)	MEXT/JST	537	828	509
Support for industrial technology research	METI/NEDO	5,892	6,113	4,779
Technology transfer support center program (overseas patent application)(part of the program)	MEXT/JST	2,105	2,404	2,080
World-leading international standardization	METI	1,181	1,348	988

Appendix

Abbreviation	Full Name
CAO	Cabinet Office
IPA	Information-technology Promotion Agency
JAEA	Japan Atomic Energy Agency
JAMSTEC	Japan Agency for Marine-Earth Science and Technology
JAXA	Japan Aerospace Exploration Agency
JSPS	Japan Society for the Promotion of Science
JST	Japan Science and Technology Agency
KEK	High-energy Accelerator Research Organization
MAFF	Ministry of Agriculture, Forestry and Fisheries
METI	Ministry of Economy, Trade, and Industry
MEXT	Ministry of Education, Culture, Sports, Science and Technology
MHLW	Ministry of Health, Labour, and Welfare
MIC	Ministry of Internal Affairs and Communications
MLIT	Ministry of Land, Infrastructure, and Transportation
MOE	Ministry of Environment
NEDO	New Energy and Industrial Technology Development Organization
NIBIO	National Institute of Biomedical Innovation
NICT	National Institute of Information and Communication Technology
NIED	National Research Institute for Earth Science and Disaster Prevention
NIES	National Institute for Environmental Studies
NIMS	National Institute of Materials Sciences
NIRS	National Institute of Radiological Sciences
PA	Police Agency
RIKEN	Institute of Physical and Chemical Research
SMRJ	Organization for Small and Medium Enterprises and Regional Innovation of Japan