

# NATIONAL SCIENCE FOUNDATION – TOKYO REGIONAL OFFICE

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## Report Memorandum #14-02

### Japan's Science, Technology and Innovation (STI) Budget And Budget-making Process for JFY2014

Japan's FY2014 (April 2014-March 2015) STI budget will be Yen 3,626.4 billion (\$36.3 billion), an increase of 1.1% over the previous year (see Table 1), and 3.75% of the total Japanese FY2014 budget. JFY2014 is the first year for the current Abe Administration to oversee the whole of the budget-making process (see: <http://www.nsftokyo.org/rm13-02.pdf> for JFY2013). The budget for JFY2014 is unique in two ways. First, in that the STI Budget Committee coordinated and determined Japan's STI budget for the first time in history; and second in that the budget represents Japan's Comprehensive STI Strategy which was established in June 2013 (see: <http://www.nsftokyo.org/rm13-03.pdf>).

**Table 1: JFY2014 STI Budget**

\* - The JFY2013 supplemental budget is actually used in JFY2014.

JFY2013 STI Budget (Billion Yen)	JFY2014 STI Budget (Billion Yen)	Increase/Decrease (%)	JFY2013 STI Supplemental Budget* (Billion Yen)
3,586.7	3,626.4	1.1	433.3

The STI Budget Committee was established within the Council for Science and Technology Policy (CSTP) in June 2013 in order to have CSTP take the lead role at an early stage in the designing of Japan's STI budget. The Committee members consist of the STI Ministers and Bureau Director-Generals of the STI ministries and agencies. All the STI ministries and agencies individually presented their preliminary plans for their JFY2014 budgets as early as June 2013, allowing plenty of time for discussions within the Budget Committee for the development of a focused STI budget without any duplication. As a result, the initial number of STI programs presented by the ministries and agencies, 243, was reduced to 98.

In mid-July the STI Budget Committee announced the STI budget guidelines for JFY2014 that list the five priority policy areas designated in the Comprehensive STI Strategy: 1) Clean and economic energy

systems; 2) Healthy long life; 3) Next-generation infrastructure; 4) Local-area revitalization; and 5) Recovery from the disaster caused by the 3-11 Tohoku earthquake. Based on the above guidelines, each STI ministry and agency submitted their final JFY2014 STI budget request to the Ministry of Finance (MOF) by the end of August 2013.

After discussions between the ministries & agencies and MOF, the JFY2014 budget proposal was sent to the Diet in December 2013. The proposed budget is still under discussion in the current Diet session and will be finalized by the end of March 2014. Unlike the situation in the U.S., the proposed budget rarely undergoes any significant changes while going through the Diet.

The budget for each STI ministry and agency is presented in Table 2. MEXT will be allocated as much as 63.8% of Japan's STI budget followed by METI's 14.9% and MHLW's 4.5%, the sequence being the same as in previous years. The huge increase of 422.3% allocated to the Cabinet Office is due to the establishment of the Strategic Innovation Promotion (SIP) program. SIP is a 5-year cross-ministerial program with industry-university-government collaboration to make focused funding to selected projects from basic research through commercialization in 10 technology fields: Innovative combustion; Next-generation power electronics; Innovative structural materials; Energy carrier; Marine resources exploration; Automatic driving systems; Infrastructure management; Disaster prevention and mitigation; Next-generation agriculture, forestry and fishery businesses; and Innovative design and production. The JFY2014 budget for SIP is Yen 50 billion (\$500 million).

**Table 2: JFY2014 STI Budget by Ministry and Agency**

Ministry and Agency	JFY2013 STI Budget (Billion Yen)	JFY2014 STI Budget (Billion Yen)	Increase/Decrease (%)
Ministry of Education, Culture, Sports, Science and Technology (MEXT)	2,315.7	2,311.8	-0.2
Ministry of Economy, Trade and Industry (METI)	521.2	539.6	3.5
Ministry of Health, Labor, and Welfare (MHLW)	162.6	172.7	0.0
Ministry of Defense (MOD)	166.9	161.5	-3.2
Ministry of Agriculture, Forests and Fisheries (MAFF)	93.1	97.9	5.2
Cabinet Office	14.2	74.0	422.3
Cabinet Secretariat	60.8	61.0	0.2
Ministry of Environment (MOE)	76.8	57.7	-24.9
Ministry of Land, Infrastructure, and Transport (MLIT)	50.6	52.9	4.5
Ministry of Internal Affairs and Communications (MIC)	49.4	49.2	-0.4
Reconstruction Agency	59.5	40.4	-32.1
Ministry of Justice (MOJ)	5.6	6.8	22.9
Ministry of Foreign Affairs (MOFA)	5.9	6.3	6.3
Police Agency	2.0	2.1	3.9
Ministry of Finance (MOF)	1.3	1.3	-0.5
Diet	1.1	1.1	0.1
<b>TOTAL:</b>	<b>3,586.7</b>	<b>3,626.4</b>	<b>1.1</b>

The following Table 3 provides specific details about each of the programs to be funded within each of the STI ministries and agencies.

**Table 3: Major Programs and Projects Implemented in JFY2014**

Program and Project	JFY2013 Supplemental Budget Yen Billion	JFY2014 Budget Yen Billion
<b>Ministry of Education, Culture, Sports, Science and Technology (MEXT)</b>		
Next-generation marine resource exploration system	-	1.40
Energy carrier R&D project	TBD	TBD
Innovative energy storage systems including post lithium-ion batteries	-	TBD
Research on social infrastructure using E-Defense (3-D shake table)	2.40	TBD
Focused Research on the Nankai Trough	-	TBD
R&D on agricultural products creation and increased food production technologies to realize efficient agribusiness	TBD	TBD
Tohoku Medical Megabank Project	-	3.64
Industry-university-government collaboration on Tohoku-oriented S&T innovation	-	2.62
Efficient and effective decontamination and removal technologies for radioactive substances	-	TBD
Establishment of consortia for training S&T personnel	-	1.03
Strengthening of research universities	-	6.40
World Premier International program	-	9.61
<b>Ministry of Economy, Trade, and Industry (METI)</b>		
Next-generation power electronics technology development	-	4.50
Innovative structural materials technology development	-	4.80
Manufacturing process technologies for chemical products by innovative catalysis	-	TBD
Magnetic materials technology development for highly efficient motors for next-generation automobiles	-	3.00
Wind power generation technology R&D	-	6.60
Next-generation energy and social system demonstrations	-	6.00
Next-generation advanced driving support system R&D and demonstration	-	0.80
System development and improvement to cope with social issues such as infrastructure maintenance and management	-	2.22
Fine (micro) bubble technology R&D	-	0.20
Manufacturing renovation using 3-D molding technologies	-	4.00
Industry-university collaborative research evaluation model demonstrations	-	0.30
Mid- and long-term research personnel exchange systems	-	0.08
New industries creation support platform (support for R&D-type ventures)	10.20	0.58
<b>Ministry of Health, Labor, and Welfare (MHLW)</b>		
Research on 3-11 Tohoku Disaster victims' health, and general health support at the time of large-scale disasters	-	0.37
Research on radioactive substances in foods	-	0.08
<b>Ministry of Agriculture, Forests, and Fisheries (MAFF)</b>		
Evaluation and advancement of long life of agricultural water facilities	TBD	TBD
Next-generation technologies for agri-products using genomic information	-	TBD
Interdisciplinary research to culture new kinds of seed	TBD	TBD
Advancement of agri-production system using IT and robot technologies	-	TBD

Frontier technology to cope with international competition	-	TBD
R&D on revitalization of the fishing industry	TBD	TBD
Advanced technology development to revitalize local food production in the 3-11 Tohoku disaster-affected areas	-	2.40
Technology development for removal or reduction of radioactive substances on the 3-11 Tohoku Disaster affected farmlands	-	0.21
<b>Cabinet Office</b>		
Cross-ministerial Strategic Innovation Promotion Program (SIP)	-	50.0
Impulsing PARadigm Change through disruptive Technologies (ImpACT)	55.0	-
Comprehensive disaster prevention information system	-	0.34
<b>Cabinet Secretariat – Health and Medical Strategy Office: The Cabinet Secretariat’s Health and Medical Strategy Office prioritized and made the budgetary decisions below; the JFY2014 budget will actually be allocated to the STI ministries and agencies in parentheses. In JFY2015, the programs and projects below will be passed to a new funding agency that is to be established to oversee all health and medical programs and projects.</b>		
New Medical Products Creation	-	25.4
<ul style="list-style-type: none"> <li>- RIKEN health and medical frontier project (MEXT): Yen 2.5 billion</li> <li>- Life science research support (MEXT): Yen 3.9 billion</li> <li>- Innovative biomedical products creation (MEXT): Yen 1.1 billion</li> <li>- R&amp;D on pioneer pharmaceuticals and medical equipment (MHLW): Yen 2.8 billion</li> <li>- Operating funds to the National Institute of Biomedical Innovation (MHLW): Yen 1 billion</li> <li>- New drug creation research (MHLW): Yen 2.4 billion</li> <li>- Clinical and applied research (MHLW): Yen 3.5 billion</li> <li>- New drug creation technologies for next-generation treatment/diagnosis (METI): Yen 5.3 billion</li> <li>- Part of the funds to the Nat. Inst. of Advanced Industrial S&amp;T (METI): Yen 2 billion</li> <li>- Improvement of drug review speed and quality, and strengthening of safety measures (MHLW): Yen 0.9 billion</li> </ul>		
All-Japan Efforts on Medical Equipment Development	-	11.2
<ul style="list-style-type: none"> <li>- Frontier measurement analysis technology and equipment development (MEXT): Yen 1.1 billion</li> <li>- Development of research results (MEXT): Yen 1.2 billion</li> <li>- Made-in-Japan medical equipment creation (MHLW): Yen 1.4 billion</li> <li>- Improvement of equipment review speed and quality, and strengthening of safety measures (MHLW): Yen 0.9 billion</li> <li>- Medical equipment and system for future medical care (METI): Yen 3.5 billion</li> <li>- Promotion of medical and engineering research collaboration (METI): Yen 3.1 billion</li> </ul>		
Innovative Medical Technology Creation Project	-	12.1
<ul style="list-style-type: none"> <li>- Network to accelerate translational research (MEXT): Yen 6.5 billion</li> <li>- Establishment of hospitals that focus on clinical medicine (MHLW): Yen 2.5 billion + Yen 1.0 billion (JFY2013 supplemental budget)</li> <li>- Japanese version of NIH (a new funding agency that is to be established in JFY2015 to oversee all health and medical programs and projects) clinical medicine projects (MHLW): Yen 1.3 billion + Yen 0.4 billion (JFY2013 supplemental budget)</li> <li>- Clinical and applied research (early detection and international standard) (MHLW): Yen 1.7 billion</li> </ul>		
Regenerative Medicine Creation Highway	-	15.1
<ul style="list-style-type: none"> <li>- Network to accelerate translational research (MEXT): Yen 6.5 billion</li> <li>- Commercialization of regenerative medicine (MHLW): Yen 3.0 billion</li> <li>- Establishment of centers to commercialize regenerative medicine (MHLW):</li> </ul>		

Yen 0.4 billion (JFY2013 supplemental budget)		
- Evaluation technologies for commercialization of regenerative medicine (METI): Yen 2.5 billion		
- R&D on medical equipment and systems to realize future medicine (METI): Yen 0.6 billion		
Japan Cancer Research Project	-	17.2
- Strategic nurturing of the next-generation cancer research seeds (MEXT): Yen 5.9 billion		
- Commercialization of innovative cancer medicine (MHLW): Yen 8.7 billion		
- R&D on medical equipment and systems (METI): Yen 2.6 billion		
Brain and Mental Diseases	-	7.1
- Strategic promotion of brain science and complete elucidation of brain function network (MEXT): Yen 5.5 billion + Yen 3.1 billion (JFY2013 supplemental budget)		
- Strategic promotion of molecular imaging research (MEXT): Yen 0.4 billion		
- R&D on longevity and disability (MHLW): Yen 0.9 billion		
- R&D on medical equipment and systems (METI): Yen 0.3 billion		
<b>Ministry of Environment (MOE)</b>		
Off-shore wind power systems	-	1.37
Strengthening of global environment observation systems via satellites	1.05	3.73
Comprehensive research on radioactive substances, disasters caused by the radiation, and their effects on the environment	-	1.15
Countermeasures for damage to the environment caused by radioactive substances	-	TBD
<b>Ministry of Land, Infrastructure, and Transportation (MLIT)</b>		
Development and introduction of robots for next-generation social infrastructure	0.33	-
Maintenance and management of social capital using IT	-	0.06
Social capital stock maintenance and management technology development and systematization	-	TBD
Technology development for protecting facilities in coastal areas from disasters and accidents	-	1.22
Advancement of monitoring and predictive technologies for localized torrential downpour, tornadoes, and other abnormal weather phenomena	0.88	-
Establishment of Intelligent Transport Systems (ITS) in cooperation with MIC, using information and communication technologies (ICT)	-	TBD
Safety evaluation and standards of anti-seismic non-structural materials	-	0.02
Comprehensive countermeasures for rivers and banks against earthquakes and tsunamis	-	TBD
<b>Ministry of Internal Affairs and Communications (MIC)</b>		
Standardization of smart-grid communication interfaces	-	TBD
R&D on photonic network technologies and super-high-speed low-power-consumption optical network technologies	0.45	TBD
Situation appraisal at the time of large-scale disaster using aircraft SAR	TBD	0.70
R&D on fire-fighting robots for disasters	-	0.21
R&D on the advancement of G-space platform	-	0.35
Establishment of Intelligent Transport Systems (ITS) with MLIT, using information and communication technologies (ICT) in cooperation	-	0.21
Establishment of ICT base for maintaining and managing smart infrastructural systems	-	0.21
Big Data for creation of new industries and innovation	0.45	TBD

Advancement of oil tank safety technologies, and fire extinguishing technologies in case of fire on accumulation of industrial and domestic waste	-	0.04
R&D on safe fire-fighting	-	TBD
Strategic Information and Communications R&D Promotion Programme (SCOPE)	-	2.05
ICT Innovation Creation Challenge Program	-	0.50