

Purpose and background

- In recent years, the science and technology innovation capabilities of Japan has decreased relatively.
 - University Ranking (THE): Until 2014, five universities were ranked among the top 200, but since 2015 it is only two Universities, the University of Tokyo and Kyoto University.
 - Number of the top 10% most cited papers : Japanese share in the world declined from 5.1 % (2004-2006) to 2.9 % (2014-2016).
- In order to survive the intensified international competition, **the system reform that emphasizes the activation of “innovation” is urgently needed.**

(Effective Date , etc.)

- Date of Promulgation :
Dec. 14, 2018
- Effective Date :
Jan. 17, 2019

Outline

1. Changes in purposes and names

- **To build a virtuous cycle of knowledge, human resources and funds** through the activation of science and technology innovation creation, the name was changed into **the “Act on Activation of the Creation of Science and Technology Innovation.”**

2. Reform of universities and R&D agencies

- While the universities and R&D agencies work hard to **strengthen the management abilities to satisfy the social needs quickly and accurately**, the Act stipulates the GOJ to support these activities.

3. Strengthening of industry-university-government collaboration and venture creation capability and growth potential

- The Act stipulates the development, etc. of systems for universities and R&D agencies to promote the organized industry-university-government collaboration systems.
- To strengthen the support for universities/R&D agency-originated ventures,
 - **Expand investments** by the R&D agencies (expansion of investable agencies (Reference1)/ expansion of investees (Reference 2)
 - The Act stipulates the acquiring/holding of the shares, etc. at the time of **providing licenses/services** as venture support for universities/ R&D agencies.

4. Flexible execution and diversification of R&D fund

- If a supplementary budget is taken, **a fund will be created at the fund allocation agencies (Reference 3) without any individual law amendment**, to quickly start an R&D program in response to the new policy needs.

5. Promote human resources development and activities

- The Act stipulates the improvement of the environment that promotes recruitment of women and foreign researchers as well as enables **young researchers** to research safely and independently.

6. Others

- The Act stipulates the promotions of science and technology innovation policy via contribution to the **regional revitalization** and the exploitation of evidence.
- The Act stipulates matters that need further examination for revitalization of the creation of science and technology innovation.
 - Revitalize the creation of science and technology innovation including humanities.
 - Reform the national university corporations from the point of view of the revitalization of the creation of science and technology innovation, etc.

Investable agencies (those between brackets are before revision)

- 1 National Institute of Information and Communications Technology (NICT)
- 2 National Institute for Materials Science (NIMS)
- 3 National Institutes for Quantum and Radiological Science and Technology (QST)
- (4 Japan Science and Technology Agency (JST))
- 5 RIKEN
- 6 National Institute of Biomedical Innovation, Health and Nutrition
- 7 National Cancer Center
- 8 National Cerebral and Cardiovascular Center
- 9 National Center of Neurology and Psychiatry
- 10 National Center for Global Health and Medicine
- 11 National Center for Child Health and Development

- 12 National Center for Geriatrics and Gerontology
- 13 National Agriculture and Food Research Organization (NARO)
- 14 Japan International Research Center for Agricultural Sciences (JIRCAS)
- 15 Forest Research and Management Organization
- 16 National Research and Development Agency, Japan Fisheries Research and Education Agency (FRA)
- (17 National Institute of Advanced Industrial Science and Technology (AIST))
- 18 Japan Oil, Gas and Metals National Corporation (JOGMEC)
- (19 New Energy and Industrial Technology Development Organization(NEDO))
- 20 Public Works Research Institute (PWRI)
- 21 Building Research Institute
- 22 National Institute of Maritime, Port and Aviation Technology

Investees (those between brackets are before revision)

- (1 R&D agency-originated ventures)
- 2 Venture capitals, etc. that support R&D agency-originated ventures
- 3 Agencies that support utilization of the result of the R&D agencies by joint-research matching and licensing

Fund allocation agencies

- 1 Japan Agency for Medical Research and Development (AMED)
- 2 Japan Science and Technology Agency
- 3 Japan Society for the Promotion of Science (JSPS)
- 4 National Agriculture and Food Research Organization (NARO)
- 5 New Energy and Industrial Technology Development Organization (NEDO)

Main revisions

1. Changed the title into the “Act on Activation of the Creation of Science and Technology Innovation”
2. Expansion of objectives and basic principles (Articles 1-8)

In order to build of a virtuous cycle of human resources, knowledge and funds by revitalizing the creation of science and technology innovation, we stated the basic philosophy of enhancement of management ability at R&D agencies and universities, etc.
3. Human resource development of entrepreneurial people, data scientists, etc. (Article 10)

Entrepreneurial people, data scientists, etc. are added as examples of human resources to be developed.
4. Employment stabilization of young researchers (Article 12-2)

A new article was added concerning measures for the employment stabilization of young researchers and the treatment according to personnel evaluation results.
5. The use of the cross appointment system (Article 15)

The use of the cross appointment system was added to the article concerning promotion of personnel exchanges.
6. Fair and appropriate implementation of R&D and proper use of research funds (Article 24-2)

The revised act provides the prevention of research misconduct as well as the prevention of illegal use of research funds.
7. Strengthening management ability at R&D agencies and universities, etc. (Article 24-3)

A new article was added on the development and securing of management professionals.
8. Development of research and development facilities/information infrastructure (Article 24-4)

A new article was added on the development of R&D facilities and equipment, information infrastructure, and intellectual foundation.
9. Exploitation of matching funds and award-type R&D, etc. (Article 25)

The proper exploitation of R&D system such as matching funds and award-type R&D, etc. was added to the article in relation to the promotion of competition.
10. Measures for indirect expenses (Article 26-2 and Article 34-3)

A new article was added on measures of indirect expenses of government-funded R&D and joint research with private operators.

11. Creation of a fund (Article 27-2 and Article 27-3)

A new article was added on the creation of a fund for quickly allocating fund to the agencies.

12. Promotion of the private finance initiative (Article 30)

The exploitation of the system by which the GOJ allocates funds according to the acceptance situation of private funds was added in order to enhance private investments to R&D agencies and universities, etc.

13. Promotion of contributions for R&D, etc. (Article 31)

A new article was added on promoting the understanding of the public on science and technology for the active acceptance of contributions.

14. Promotion of interorganizational industry-university-government collaboration (Article 34-2)

A new article was added on the development of an interorganizational system necessary to promote the collaboration among industry, academia, and government.

15. Acquiring and holding shares, etc.
(Article 34-4 and Article 34-5)

A new article was added on acquiring and holding shares or stock acquisition rights in supporting the ventures orienting from the R&D agency and the national university corporation, etc.

16. Enhancement of investment function by the R&D agency (Article 34-6)

A new article was added on the enhancement of investable R&D agencies and other investees

17. Regional revitalization through the creation of science and technology innovation (Article 34-7)

A new article was added on the promotion of industry, university, government collaboration, etc. to realize a unique, energetic, and self-reliant local community.

18. Adoption and promotion, etc. of innovative technology at public works, etc. (Article 44-2)

A new article was added on the uses, etc. of innovative R&D results, etc. at public works, etc.

19. Promotion of the evidence-based policy making at the CSTI (Article 47-2)

A new article was added on the policy promotion and cooperation among related organizations by CSTI's using the evidence.

20. Study provisions on resource allocation concerning humanities, national university reforms, intellectual property utilization and government-funded R&D (Articles 49 - 52)

The articles stipulates to consider the following in the future:

- Activation of the creation of science and technology innovation including humanities
- Reform the national university corporations from the point of view of the revitalization of the creation of science and technology innovation, etc.
- Use and exploitation of copyright materials and other intellectual properties
- Desired way of allocating resources for government-funded R&D

21. Penal provision (Article 53)

A new provision was added on penal provisions (non-penal-fine) pertaining to authorization concerning fund management and investment.