

Business Report FY2021

1. General

During 51 years since its establishment, the Institute for Future Engineering (IFENG), a first-generation think tank in Japan, has continuously been trying to gain an insight into the developing tendency of science and technology and into socioeconomic changes, to identify issues and their solutions for a desirable future on the basis of engineering methodologies, and to propose ways how science and technology solve possible problems. The fiscal 2021 concludes the ninth year of IFENG as a public-interest corporation. Efforts to achieve a capability commensurate with the status of the institute have resulted in 81 researchers (mostly part-timers) compared with the initial 34. Synergy of the part-timers with different backgrounds with the full-time researchers who have got accustomed to the new management system has led to a variety of contracted works. Meanwhile, IFENG obtained for 2020 the third place in the GGTTI think tank ranking in the science and technology area, following the eighth in 2012 and 2013, the sixth in 2014, the fifth in 2015 and 2016, and fourth in 2017, 2018 and 2019. The rank for 2021 has not yet disclosed.

The gross income in FY2021 was nearly ¥32 million; after subtracting the amount corresponding to transactions near the end of the term, to be settled in the next year, the operating revenue was slightly less than ¥30 million. An extraordinary loss related to the anniversary activities was compensated for by asset gain, keeping the final result to a small deficit. However, the fundamental financial position of IFENG still remains weak. The immediate priorities for the institute are expansion and stabilization of the business and, particularly, improvement and effective utilization of skills of the expanded part-time research staff. This means increased interim financing: borrowing in FY2021 was a record-high ¥18 million. This amount is close to limit and will require comprehensive countermeasures.

IFENG had to change its working pattern in response to the worldwide changes of business climate caused by the COVID-19 pandemic which occurred late FY2019, but

this situation has proved to be a strong motivation to advance digitization of work, which has fully compensated for problems caused by the pandemic, as demonstrated by the Institute's semicentennial celebration. These experiences show anew the importance of flexible and agile moves.

2. Business-related activities

IFENG's article of incorporations define its activities in three categories¹⁾: investigations in the area of future engineering, interaction with the public related to future engineering (publicity, services, etc.), and international exchange related to future engineering¹⁾.

The activities of a public-interest corporation are to be classified into nonprofit (N) and for-profit (F) ones. The former is intended for the general public, while the latter is for specific parties.

For explanations in this section, the N and P activities are further divided into three each: (1) contracted investigations (investigations driven by commissions or subventions by other parties), (2) independent investigations (investigations relying on its own fund), and (3) interactive research²⁾. Individual details are presented below. Activities related to international exchange are described in the last paragraph without differentiating N and P categories.

A total of 50 projects (39 N1, 10 P1 and 1 P2) were implemented in FY2021, including one continued from the preceding year and one to be continued in the next year. Forty-five were thus concluded within the fiscal year and considered in the account settlement. Details of the projects are specified in the tables in the subsequent sections.

(1) Contracted investigations

The 44 F1 and P1 projects completed in FY2021 included 31 contracts with public institutions and 13 with private companies or foundations. Details are given for subventiary and commissioned investigations³⁾ respectively.

Of the 10 subventiary investigations, four projects were supported by the private sector (2 by Watanabe Memorial Foundation for the Advancement of New Technology, 1 by Toyota Foundation and 1 by Toshiba International Foundation), five were subsidized by the Grants-in-Aid for Scientific Research ("Kakenhi", Japan Society for the Promotion of Science) (2 contracts with the representatives and 3 joint investigations), and one by the Ministry of Foreign Affairs.

As for the remaining 34 commissioned projects, the commissions came from four governmental agencies plus 2 municipalities for 14 projects (compared with 13 in the preceding year, the same hereinafter), two government-run institutions for 11 (7), two universities for 2 (3), six business companies for 7 (8). The commissioning government agencies and municipalities included the Ministry of Education, Culture, Sports, Science and Technology; the Ministry of Agriculture, Forestry and Fisheries; the Ministry of the Environment; the Japan Patent Office; and Tokyo and Yamanashi Prefectures. Several National Research and Development Agencies (including Japan Science Technology Agency) and Independent Administrative Agencies, along with two national universities, have also commissioned research works to IFENG.

Five projects are to be continued to the next year: two commissioned projects by governmental agencies, one by a university and one by a private body, as well as a subventiary project with a private body.

In terms of the business categories, 35 projects belong to nonprofit activities (N1) and 9 for-profit activities (P1), as shown in the following table.

(2) Independent investigations

(i) Independent nonprofit investigations (N2)

The self-financed nonprofit independent investigations include preparatory works for supporting contracted projects (original concepts) and studies to expand researchers' knowledge. A series of six symposia was organized in FY2021 to commemorate the semicentenary of IFENG.

(ii) Independent for-profit investigations (F2)

The independent for-profit investigation performed in 2021 was a consultation program for a business company based on IFENG's existing knowledge.

(3) Interaction with the public

(i) Nonprofit interaction with the public (N3)

The activities below started in 2015 to feedback the research outcome of IFENG to wide public:

(a) In an SNS-based publicity program, IFENG's official Twitter account was established along with accounts for individual projects. It is intended to familiarize the public with the research outcome of the institute and to encourage their access to essential issues by inviting the followers of the accounts to visit the official IFENG website, particularly the "Insight" and "Forum" sections. Experiences obtained in the projects implemented in FY2015-16 were helpful. This activity has been suspended since 2019 due to renewal works of the Institute's website.

(b) Publication of Annual Report and expansion of the English pages in IFENG's website were realized along with individual researchers' publication of their research results and presentation of their views in a number of printed media, conferences, meetings and seminars.

(ii) For-profit interaction with the public (F3)

Support of research activities related to future engineering by IFENG members was continued.

(4) International exchange

The COVID-19 pandemic suppressed activities belonging to this category in 2021.

Notes

- 1) Article 4.
- 2) These categories are hereinafter represented as N1, N2, ..., P1, P2, etc.
- 3) Investigations supported by subsidization from subventionary funds are called “subventionary”; those based on other financial sources are “commissioned”.