Mid- to Long-Term Strategy for J-STAGE Aimed at Journal Promotion in Japan

The Japan Science and Technology Information Aggregator, Electronic (hereinafter "J-STAGE") is a platform for publishing and providing access to the electronic versions of publications featuring academic articles (hereinafter "journals") released in Japan.

Journals are an important tool for disseminating and distributing research outputs released in Japan, with academic societies playing a primary role as publishers. Journals provide each academic discipline with a forum for discussion, generating debate, and disseminating superior research outputs by soliciting such outputs from both inside and outside Japan. Journals use research results as a foothold, as they seek to contribute to the development of their respective research fields and of the academic societies that publish them. The purpose of J-STAGE is to provide academic societies with assistance related to the publication and dissemination of journals and contribute to the improvement of research capabilities in Japan.

J-STAGE, which was launched in fiscal year 1999, renewed its system in fiscal years 2004, 2012, and 2017 to add functions and enhancements expected of an e-journal platform in accordance with global standards. In June 2013, facing an extremely tight science and technology budget, J-STAGE recognized the need to discuss policies regarding its operational continuity. Thus, J-STAGE established a committee of external experts to carry out discussions of its past accomplishments, as well as its necessity and significance for the future. The outputs have been compiled as the "Japan Science and Technology Information Aggregator, Electronic (J-STAGE) operational policy (report)." J-STAGE has operated under the policies set forth in the report. Consequently, J-STAGE has grown to become Japan's leading journal platform used by about half of the academic societies in the nation.

The primary policy objective for J-STAGE remains unchanged: the strengthening of academic journals published in Japan (strengthening their capabilities to transmit information internationally). However, the environment surrounding these journals has undergone a rapid and drastic transformation. Therefore, to pursue operations in a strategic fashion, readers' diversified needs must be understood so that these trends can be incorporated into forward-looking policy measures. There are various issues to consider in determining J-STAGE's future direction, and these issues are complex. They

include, for instance, the oligopoly among overseas journal publishers, the promotion of open science in the form of open access and data sharing, and the diversification of content and research workflow.

Under such circumstances, in March 2018, the Japan Science and Technology Agency (JST), which operates J-STAGE, established the J-STAGE Advisory Committee, made up of outside experts on academic information distribution, university libraries, open science, and journal publishing. The committee considered future directions for J-STAGE and compiled its basic stance and policy measures as a mid- to long-term strategy for the operation of J-STAGE. Based on this strategy, the implementation method and timeline will be fleshed out, and the necessary measures will be phased in.

1　Basic operational stance

【Basic Stance 1】 Maintenance of an e-journal platform and response to new requests

With the rapid development of ICT, approaches to academic communication have also rapidly changed in recent years. Even so, research outputs continue to be publicly available through academic papers, which remain an important tool for information dissemination. J-STAGE, a platform for publication and dissemination of academic papers as e-journals, has been focusing on academic articles since its inception. This function, which is the strength of J-STAGE, will be maintained. However, J-STAGE should also respond to the needs of the day related to modified approaches to academic communication such as changes in research workflow, diversification of disseminated academic contents, and the promotion of open science.

【Basic Stance 2】 Stronger cooperation and co-creation with academic societies related to the strengthening of Japanese journals

The policy challenge that J-STAGE must tackle continues to be the strengthening of academic journals in Japan. For this challenge, it is important that academic societies, which publish these journals, and JST, which operates the e-journal platform, think and act together. In addition to providing an e-journal platform to all registered publications, JST should strengthen its cooperation with academic societies, which are direct users of

J-STAGE, to jointly strengthen journals in Japan by implementing more effective measures in accordance with the objectives of these journals and the situations in which they find themselves.

【Basic Stance 3】 Improvement of J-STAGE services through optimized methods

Modularization is progressing with respect to services related to scholarly communications, with the result that systems development and service provision are becoming more diverse in response to the characteristics of various services. J-STAGE should enhance its services by optimizing and combining the following services from the standpoint of their objectives, implementation timeframe, and cost effectiveness: services that J-STAGE should develop on its own (self-development); services that should be procured from external sources (the use of external services); and services that should involve the participation or cooperation of third parties for development (standardization).

2　Direction for expansion of policy measures and initiatives

➢　Development and maintenance of basic functions of e-journals in Japan

J-STAGE, a representative e-journal platform used by about half of Japan's academic societies, is an essential infrastructure for dissemination and distribution of research outputs in the nation. The largest and most important responsibility of J-STAGE with respect to its stakeholders, as a platform for publication and dissemination e-journals in Japan, is to expand the content of its platform, make such content continually available, increase the number of site visits, maintain and strengthen its relations with related organizations for distribution purposes, and establish new alliances. Efforts should be made to fulfill this responsibility.

(Matters to be addressed)

- ・ Make efforts to grasp the trends in scholarly information distribution and update functions as necessary to meet the global standards expected of an e-journal platform.
- ・ As an e-journal platform that stores research outputs from Japan, ensuring robustness is essential. Thus, efforts should be made to protect its content and strengthen security.

➢ Strengthening of journals in response to different objectives and situations

As a result of an effort to provide functions and services that respond to the needs of all journals stored on J-STAGE, the number of journals stored on the platform has increased, and the objectives have become more diverse. For this reason, it has become necessary to provide functions that cater to specific objectives and situations for particular journals, in addition to providing common functions and services. Thus, JST should strengthen its cooperation with academic societies to learn about the directions and challenges of these journals, encourage active participation of academic societies with future visions, consider new functions, and provide services starting with what is available now.

(Matters to be addressed)

✧ Establishing a mechanism to strengthen cooperation with academic societies
- ・ Hold talks with organizations that use J-STAGE regarding directions and challenges for their journals and provide a venue where J-STAGE users share their best journal practices and explore cooperation.
- ・ Provide information on overseas developments and policy backgrounds related to academic communications that may help organizational users establish strategies for their journals.

♦ Provision of functions or services geared toward specific objectives or situations
- Provide advanced customization functions to support strategies to win international competition (such as a function to analyze site visits).
- Provide expert consultations to help strengthen international communication capabilities (such as information maintenance for journals, registration with internationally recognized databases, and acquisition of metrics)
- Provide a support function to strengthen the capabilities of Japanese-language journals, which have mainly been distributed in Japan, to disseminate information overseas (for example, a function to convert abstracts into English via machine translation to increase search-engine hits from overseas).

➢ Response to the needs of the day

In light of the changes in scholarly communications and the global trends in open science, expand the research workflow and content covered by J-STAGE so that Japanese journals can respond to the needs of the day. In addition, make efforts to contribute to the promotion of the use of research outputs.

(Matters to be addressed)
- To respond to the expansion of the means of disseminating research results and the shortened transmission timeframe, which result from using preprint servers, consider the installation of dedicated preprint servers and the multi-stage implementation of faster publication methods.
- It has become a global trend to release data to support the conclusion of an article, along with the article itself. Thus, consider the installation of a data repository to maintain and publish supporting data for articles.
- In selecting development methods for these functions, consider external repositories (organizational repositories, sector-specific repositories, etc.) as available resources.
- For the purpose of removing barriers to the utilization of articles and research data, consider providing support tools that contribute to data preparation in a machine-readable format and cooperating with external data-mining platforms and services. In addition, support the publication of data journals.

J-STAGE Advisory Committee

(Without honorifics; in Japanese alphabetical order)

Chairman

Syun Tutiya	Professor, Research Department, National Institution for Academic Degrees and Quality Enhancement of Higher Education

Member

Naoto Oku	President, Pharmaceutical Society of Japan; Professor, Teikyo University Faculty of Pharma-Science
Koichi Ojiro	Communication Manager, Research Center for Open Science and Data Platform at the National Institute of Informatics
Takehiko Kitamori	Professor, Department of Applied Chemistry, The University of Tokyo School of Engineering
Mikiko Tanifuji	Managing Director, Materials Data Platform Center Research and Services Division of the Materials Data and Integrated System at the National Institute for Materials Science
Kazuhiro Hayashi	Senior Research Fellow, Science and Technology Foresight Center at the National Institute of Science and Technology Policy of the Ministry of Education, Culture, Sports, Science and Technology
Takashi Hikihara	Professor, Kyoto University Graduate School of Engineering; Director-General of the Kyoto University Library Network and Director of the Kyoto University Main Library
Hideaki Yamamura	Secretary General, Japan Institute of Metals and Materials

J-Stage Advisory Committee

Schedule

Meeting 1

Date & Time: March 9, 2018 (FRI) 15:00–17:00

Venue: JST Tokyo Headquarters, F8, conference room 2

Topic:

1 Mid- to long-term strategy for J-STAGE (outline)

2 Other

Meeting 2

Date & Time: August 1, 2018 (WED) 13:00–15:00

Venue: JST Tokyo Headquarters, F4, conference room

Topic:

1 Efforts undertaken so far regarding the compilation of mid- to long-term strategy for J-STAGE

2 Mid- to long-term strategy for J-STAGE (interim proposal)

3 Other

Meeting 3

Date & Time: November 30, 2018 (FRI) 14:00–16:00

Venue: JST Tokyo Headquarters, F2, conference room 3

Topic:

1   Efforts undertaken so far regarding the compilation of mid- to long-term strategy for J-STAGE

2   Mid- to long-term strategy for J-STAGE (final proposal)

3   Other