Launch of "Healthcare AI Platform Collaborative Innovation Partnership (HAIP)" Approved by MHLW and METI Ministers
For social implementation of fundamental technologies to support the spread and development of healthcare AI services

Overview

Nihon Unisys, Ltd. ("Nihon Unisys"), Hitachi, Ltd. ("Hitachi"), IBM Japan Ltd. ("IBM Japan"), SoftBank Corp. ("SoftBank"), and Mitsui & Co., Ltd. ("Mitsui"), today established the "Healthcare AI Platform Collaborative Innovation Partnership ("HAIP")" following approval from the Ministers of Japan's Ministry of Health, Labor and Welfare (MHLW) and Ministry of Economy, Trade and Industry (METI), based on the Act on Research and Development Partnership concerning Mining and Manufacturing Technology, with the aim of achieving the further spread and development of healthcare AI services.

The HAIP is a Collaborative Innovation Partnership (CIP), a non-profit mutual benefit corporation established with the approval of the qualified minister in accordance with the Technology Research Association Law, with the aim of overcoming problems that cannot be solved by a single organization and promoting commercialization of technologies through test research in collaboration among multiple companies, universities, independent administrative agencies, etc. The newly established HAIP will conduct research and development on fundamental technologies common to the industry that will contribute to the spread and development of healthcare AI services.

The results of the HAIP's research and development will become open to the public domain to contribute to the further spread and development of healthcare AI services, ensure the quality of medical care, and reduce the burden placed on medical professionals.

Background to establishment

In recent years, increases in both the sophistication and fragmentation of medical care has created a large knowledge and information gap, not only between medical professionals and patients and their families, but also between advanced researchers and medical professionals. In addition, medical professionals are forced to spend more time than before to acquire knowledge and skills, and to record detailed medical information, and this excess burden has become a major social issue.

Although there are now many real cases of AI technology being utilized in the medical field both in Japan and overseas to address the above-mentioned issues, there are still major challenges to be overcome with regard to the establishment of common fundamental technologies—a matter that cannot be addressed by individual companies alone. This includes the establishment of forward-thinking common connectivity procedures, methods for the provision of an advanced security environment, and adapting to trends with a view to international standardization, among others.

In this context, from fiscal 2020 a team consisting of Nihon Unisys, Hitachi, IBM Japan, SoftBank, and Mitsui has been working with the Japan Medical Association AI Hospital Promotion Center (established within the Japan Medical Association in June 2020) to study the social implementation

of a healthcare AI platform (Healthcare AIPF) under the Cross-ministerial Strategic Innovation Promotion Program (SIP).

In order to deal with the current issues, it is important that the above-mentioned common fundamental technologies for realizing the social implementation of a Healthcare AIPF are researched and developed by multiple participants in the public domain in accordance with an Open and Close strategy, and that the results are actively disclosed. As such, the decision was made to establish a CIP as a non-profit mutual benefit corporation, with the approval of the qualified minister based on the Technology Research Association Law, as an operating body for research and development in this open area.

Business outline and structure

The HAIP will conduct research and development of fundamental technologies common to the industry that will contribute to the spread and development of healthcare AI services. Specific areas of testing and research are as follows.

(1) Research and development of a portal site function system (portal system) that provides a menu of advanced healthcare AI services in an integrated manner.

(2) Research and development in the area of security, such as user authentication (multi-step and multi-factor authentication) for medical institutions and others using the portal system, and encryption technology for data transfer.

(3) Research and development on APIs (Application Programming Interface), as a standard for connecting portal systems and healthcare AI services.

(4) Research and development to organize functional and non-functional requirements suitable for practical application using healthcare AI services with 5G networks order to release (1), (2), and (3) as common platforms that can be used with ease by medical professionals.

(5) Research and development of technologies to prevent physical data proliferation by providing data to healthcare AI service development vendors and researchers in a virtual environment.

The HAIP's activities will be carried out in collaboration with other SIP participating organizations under the SIP "System for Advanced Diagnosis and Treatment by AI Hospitals" to promote research and development with a view to future social implementation.
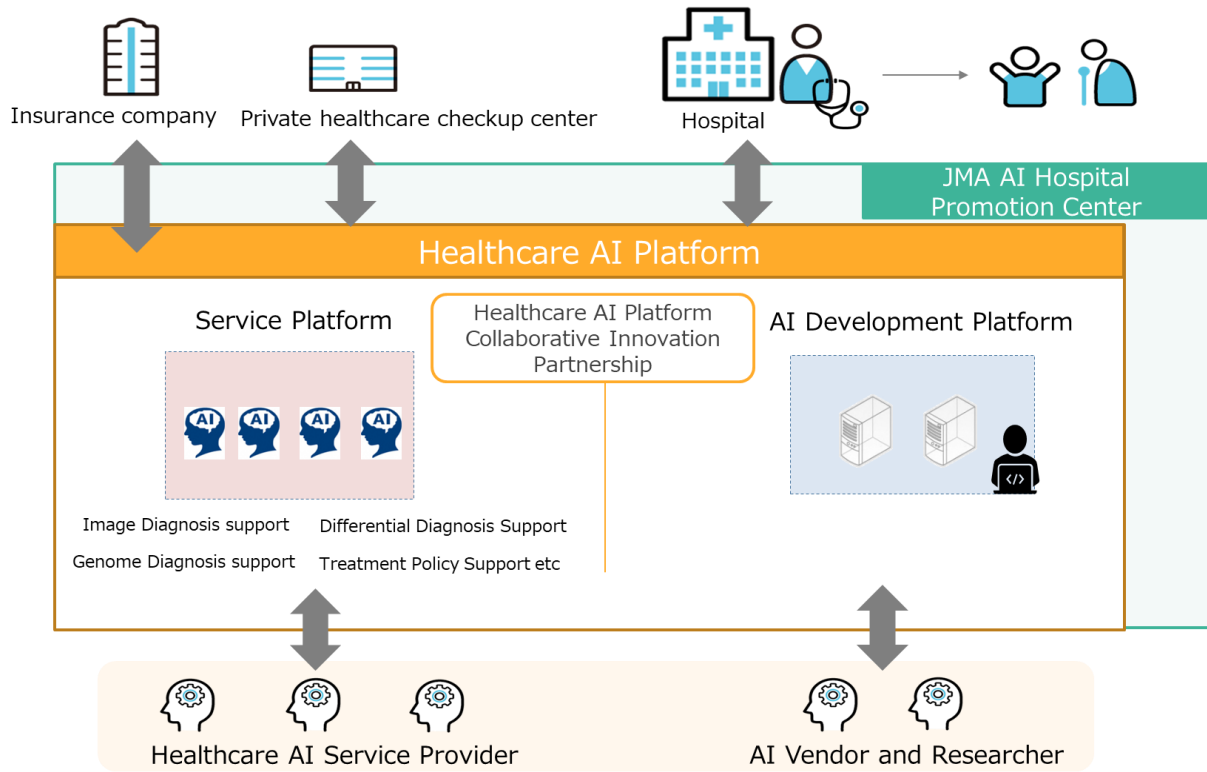
Expected results

With common fundamental industry technology, the HAIP can quickly and economically:

- Establish an environment where not only medical institutions but also private health checkup centers and insurance companies can use healthcare AI services with ease and peace of mind.

- Though supporting the research and development of innovative healthcare AI services, seek to contribute to the spread and development of safe and secure healthcare AI services, ensure the quality of medical care, reduce the burden on medical professionals, and ultimately help realize Society 5.0 in the medical field.

Since CIPs can be reorganized into joint-stock companies based on the results of their research, the HAIP will take steps to transition to a joint-stock company in the future, with the aim of commercializing the research results and implementing them in society.

<＜Image of the healthcare AI platform＞

Insurance company   Private healthcare checkup center   Hospital

JMA AI Hospital Promotion Center

Healthcare AI Platform

Service Platform

Healthcare AI Platform Collaborative Innovation Partnership

AI Development Platform

Image Diagnosis support   Differential Diagnosis Support
Genome Diagnosis support   Treatment Policy Support etc

Healthcare AI Service Provider   AI Vendor and Researcher

For inquiries on this matter, please contact

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