



Preface

Special Issue on Healthcare Solutions for the Future

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A rapidly aging society along with a falling birth rate is becoming one of Japan's most pressing social problems. To achieve a healthy and long-life society, primary prevention before the onset of disease and secondary prevention upon early disease detection and treatment commencement are becoming increasingly important in addition to the development of new technologies for disease treatment. Thanks to advances in the *omics* sciences, in which bio-molecular data such as DNA, RNA, and protein data are systematically analyzed, the field of medicine is transitioning from "medicine focused on the treatment of disease" to "healthcare intent on extending healthy life expectancy through preventive care."

In Japan, "extending the nation's healthy life expectancy" is part of the "Japan Revitalization Strategy," and the government, which considers healthcare to be a strategic field, aims to make Japan more globally competitive in the healthcare industry. Estimates based on the trends described above show that the domestic market for healthcare will expand greatly, from the present 16 trillion yen to 37 trillion yen by 2030, as will the overseas market (from 163 trillion yen to 525 trillion yen). We thus expect ICT-related business in the healthcare field to grow significantly in the years to come.

Fujitsu began doing business in the field of medical care in the 1970s by developing and enhancing medical-accounting and computerized provider order entry (CPOE) systems. Then, in the latter half of the 1990s, Fujitsu leveraged its core business of electronic medical record (EMR) systems to acquire a dominant share of the medical care market centered about leading medical institutions. Later, as the use of EMR systems spread and the need grew among regional medical institutions to exchange healthcare information, Fujitsu rolled out health information exchange (HIE) networks as cloud services. These services are now widely used in many regions of Japan by medical care institutions, pharmacies, and nursing-care facilities.

Today, there are many expectations surrounding healthcare, particularly the introduction of new solutions and services using big data and the cloud, including the use of data stored on EMR systems, the creation of new services, and collaboration with other fields. In light of these opportunities, Fujitsu established the "Next-Generation Healthcare Innovation Center" in

2013 with the aim of expanding further into the field of healthcare by leveraging its technical strengths and accumulated know-how. The mission of this Center is to create new businesses that make maximum use of ICT by collaborating with leading research institutions and healthcare facilities.

The Center will be active in many areas in line with various national projects. The activities of the Center will include the development and expansion of next-generation healthcare information systems, the creation of healthcare-related big data services that integrate health and lifestyle information with the results of medical examinations to prevent the exacerbation of diseases, reduce medical expenses, and optimize diagnoses and medical treatment. These activities will also include enhancement of IT-Soyaku^{note)} (*in silico* drug design) using high-performance computing (HPC) and development of a biological simulation business. These activities will also help to expand Fujitsu's healthcare business overseas. I expect Fujitsu to accelerate its efforts in social innovation through the creation of a next-generation healthcare platform as an information infrastructure of the future, providing comprehensive support for medical treatment, healthcare, and welfare services.

In short, the Fujitsu Group intends to be a unified, driving force behind business innovation in the healthcare field with the aim of creating a society that brings healthy living within reach of everyone. In this endeavor, I look forward to your ongoing feedback and encouragement.

note) For more details, please see the article in this special issue entitled "Project on Bio-IT for Next-generation Healthcare."