

Overview of the 2017 White Paper on Information and Communications in Japan

Part 1 Special Theme — Data-driven Economy and Social Change

In the data-driven economy, diverse data is created, collected, distributed, analyzed and utilized to the utmost in order to solve various problems in society through redesigning all socio-economic activities even including the stage of manufacturing process.

Smartphones, digital equipment closely connected to individuals' lives, create a mass of human data. On the premise of the development of Internet of Things (IoT), the scope of available big data expands, and a significant social and economic change that may be referred to as the 4th Industrial Revolution will be brought about. [Chapter 1 to Chapter 3]

Information and communication technology (ICT), which is a general-purpose technology applicable in diverse fields, will also contribute to solving various social problems, such as population declines, shrinking local economies, and disasters. [Chapter 4 and Chapter 5]

Chapter 1 Present and Future of Smartphone Economy

Along with the dissemination and the increase of hours of use of smartphones, consumption of online services using smartphones has further increased and companies have come to accumulate larger amounts of generated data, which suggests an increasing possibility of new value creation through the utilization of such data. On the other hand, compared with the United States and the United Kingdom, people are less willing to utilize new services, such as FinTech and sharing services, in Japan, and it is a future challenge to increase users of those services as a whole.

Chapter 2 Advent of the Age of Big Data Utilization

The Amended Personal Information Protection Act (in May 2017) and the Basic Act on the Advancement of Utilizing Public and Private Sector Data (in December 2016) have been put into force and international discussion has deepened concerning free distribution of information. The environment is thus being developed for the commencement of the utilization of big data. Many general users in Japan provide personal data and show understanding, while there remains a strong sense of anxiety over data provision. Companies need to make efforts to reduce the gap in awareness between individuals and companies such as through ensuring security of data or disabling data collection.

Chapter 3 Changes Brought About by the 4th Industrial Revolution

Japanese people generally have high expectations for the 4th Industrial Revolution in the information and communications industry, but international comparison reveals delay in data utilization in Japan. Many Japanese companies cite the establishment of rules and human resources development as the most significant challenges as preconditions for the revolution. In the economic growth scenario premised on the simultaneous progress of the development of IoT and corporate reform (at an average annual growth rate of 2.4%), it is estimated that real GDP will reach 725 trillion yen by 2030.

Chapter 4 ICT Utilization Useful for Solving Social Problems

In order to solve serious social problems such as a decrease in working-age population and population outflow from rural areas, ICT is expected to be fully utilized in the process of working style reform and regional revitalization. Teleworking is actually contributing to increasing labor force participation rates and enhancing labor productivity. Local governments that have actively taken tourism promotion measures, such as the information provision and the development of Wi-Fi-environments for tourists, are enjoying increased foreign tourists and other outcomes.

ICT investment including that in teleworking and local governments' promotion measures utilizing ICT are expected to further expand into the future.

Chapter 5 The 2016 Kumamoto Earthquake and ICT Utilization

As a result of efforts to strengthen communication and broadcasting infrastructure after the Great East Japan Earthquake and the expansion of the use of smartphones, ICT was fully utilized at the time of the 2016 Kumamoto Earthquake for communicating and sharing information in disaster-stricken areas. LINE was the third most frequently used means for collecting information at the time of the earthquake, following mobile phones and terrestrial broadcasting.

It is expected that new ICT tools will be more positively utilized in the future, in such forms as indirect public notices based on the analysis of big data of SNS information (disaster information analyzer (DISAANA)) and by the use of the L-Alert.

Part 2 Basic Data and Policy Directions

Chapter 6 Basic Data on the ICT Field

This Chapter broadly introduces trends in the market size, the number of employees, and GDP, etc. of the Japanese ICT industry and data showing trends in ICT service utilization, with a focus on the results of the Basic Survey on the Information and Communications Industry, the Communications Usage Trend Survey and other surveys conducted by MIC.

Chapter 7 ICT Policy Directions

This Chapter introduces the latest developments in Japan's ICT policy by sector, such as telecommunications policy, radio policy, and broadcasting policy, as well as the utilization, R&D, and international strategy, with a focus on initiatives by MIC.