Chapter 4

Status of ICT Policy at MIC

Section 1 Promotion of Comprehensive ICT Policies

1. Current State and Challenges

(1) Arrival of aging society with fewer children and distressed local economy

In Japan, the low birthrate and population decrease have become increasingly serious. Decline in births is progressing at a faster speed than past projections. Total fertility rate once recovered to 1.45 but has been slightly decreasing in the past few years. Progress of declining birthrate and aging has significant impacts on socioeconomics through population (especially working-age population) decrease, which include decline in labor supply, contraction of the economy and market, lower economic growth rate, fewer leaders in communities and society, increasing burden on working generations and decline in the level of administrative services.

In particular, many regions are facing various social challenges to solve toward regional revitalization: increase in the number of vulnerable road users, shortage in workers who provide medical/nursing care services, decline in retail/daily-life-related services in communities and increasing burden of infrastructure maintenance/management.

In this context, ICT utilization is expected to enable the employment of people who had few employment opportunities due to various social reasons including child care, family care and disabilities, while at the same time contributing to improvement of corporate productivity and business processes. Construction of a structure for new value creation taking advantage of digital technologies would help problem solving and attraction enhancement in communities.

(2) Preparedness for intensifying disasters

In recent years, weather disasters have become increasingly serious and frequent due to climate change, and large scale earthquakes including the Nankai Trough earthquake, subduction zone earthquakes around Japan Trench and Chishima Trench, are imminent. Furthermore, because infrastructure that was intensively developed in and after the high-growth period will age at once hereafter, it is necessary to ensure steady maintenance/renewal of infrastructure. However, preventive maintenance cycle is not yet established. Failure to make appropriate responses would not only increase medium- to long-term total cost but also cause dysfunction of administrative and socioeconomic systems of Japan.

In order to overcome these national crises, protect

lives and assets of the people and maintain important functions of the state and society, it is necessary to advance Japan's development as a disaster-resistant country by accelerating and deepening the efforts for disaster prevention/mitigation and national resilience.

For more efficient implementation of the measures for disaster prevention/mitigation and national resilience, it is essential to take advantage of digital technologies that have been rapidly developing in recent years. It is expected that ICT utilization will enable high-quality disaster countermeasures including efficient and effective transfer/sharing of disaster information and thereby help realization of a disaster-resistant resilient society. In addition, it is necessary to ensure reliable and prompt communication through broadcasting at times of disaster by promoting measures toward a resilient and disaster-resistant broadcast network.

(3) COVID-19 pandemic

The COVID-19 pandemic triggered the need to adopt a non-contact/non-face-to-face lifestyle in various scenes of daily life including shopping, commuting and leisure activities. Enterprises also need to introduce a non-contact/non-face-to-face workstyle and improve operation efficiency amid slumping consumption. When social conditions are greatly changing in this way, various problems of Japan including its delay in digitalization have come to the surface due to the COVID-19 pandemic. On the other hand, there are also positive changes toward the future: changes in workstyle using digital technologies, an increased awareness of environmental problems and an increased interest in living in the countryside. In addition, there are new moves and attempts including young people and enterprises playing active roles in the world.

In this context, we need to spread digitalization at the micro level -individuals, homes, awareness/action of enterprises- and accelerate the move toward "post-coronavirus" society by changing systems and structures across society including legacy corporate organizations, and by changing workstyle and manpower training toward more diversity, resilience and flexible response to changes.

(4) Changing world affairs

Trade issues between the United States and China have become increasingly serious, and their competition

in 5G, quantum and other cutting-edge technologies is intensifying. When changes in the power balance in international society have become increasingly accelerated and complicated, new challenges including security in economy and technologies have come to the surface. On another front, with the progress of science and technology in recent years, activities in outer and cyber spaces have increased, which has brought about a big opportunity but also generated new risks and threats.

In this context, while cooperating with the international community, Japan needs to work on its economic security policy including strengthening of ICT supply chain and construction of safe and reliable ICT infrastructure, and countermeasures against cyber-attacks and other new challenges accompanying the progress of innovative ICT.

2. Initiatives for Promotion of Comprehensive ICT Policies

(1) Promotion of initiatives toward the Digital Garden City Nation

The Vision for a Digital Garden City Nation is a plan to connect to the world by digitalizing rural areas, creating new waves of changes and narrowing the gap between rural and urban areas. In November 2021, the Council for the Realization of the Vision for a Digital Garden City Nation chaired by the prime minister was set up in order to achieve the vision while promoting regional vitalization through digital transformation.

In response, MIC set up the Promotion Headquarters of the Vision for a Digital Garden City Nation in November 2021 and has been promoting initiatives based on the three pillars behind the vision: (1) development of digital infrastructure; (2) development and securing of digital human resources and initiatives to leave no one behind; and (3) digital implementation to solve regional challenges.



Council for the Realization of the Vision for a Digital Garden City Nation URL https://www.cas.go.jp/jp/seisaku/digital_denen/index.html

Related data

MIC Promotion Headquarters of the Vision for a Digital Garden City Nation URL https://www.soumu.go.jp/main_sosiki/singi/denen_toshi/index.html

(2) Consideration of information and communications policies toward 2030

Considering the increasing presence of overseas platform operators in Japan's information and communications market and supply chain risks due to changing international situations, MIC consulted the Information and Communications Council regarding "Desirable Information and Communications Policies toward 2030" in September 30, 2021. In response, the council conducted research and investigations on the direction and urgent tasks of information and communications policies in order to achieve the realization of Society 5.0¹ and ensure economic security.

In order to ensure the independence, existence and prosperity of Japan, and to ensure strategic autonomy and acquire strategic indispensability of the ICT industry which is playing an increasingly important role as a strategic core industry, the report finds the following as necessary: (1) advancement and maintenance of information and communications infrastructure; (2) maintaining and strengthening of international competitiveness of the information and communications industry (R&D, solutions, human resources); and (3) construction of a free and highly reliable information space (**Fig**- **ure 4-1-2-2)**. In this process, considering the challenges facing Japan and factors of "digital defeat" of its ICT industry, the report presents the direction of the initiatives (e.g. development and introduction of new technologies with potential to become game changers, customer/market-oriented business development process, implementation of solutions by integrating manufacturing technologies and digital infrastructure).

It also presented eight priority fields and items of focus in each field. The fields are: (1) spread and advancement of 5G and its overseas expansion; (2) expansion of broadband; (3) R&D, implementation and international standardization of the next-generation networks; (4) study on future vision of broadcasting and broadcasting system; (5) construction of a safe and secure environment for internet use; (6) promotion of content services; (7) security of cyber security overlooking the entire cyber space; and (8) strengthening of human resources and promotion of its use. For the above, the report finds it essential to start new initiatives free of existing ways through organic linking of roles (vertical division) and cross-functional initiatives across stakeholders, relevant government offices and MIC departments.

¹ Vision set forth in the Fifth Science and Technology Basic Plan (Cabinet Decision on January 22, 2016). This is a human-centered society balancing economic development and resolving of social issues through the sophisticated integration of cyberspace with physical space by maximizing ICT ("Super Smart Society"). Industry-academia-public-private initiatives have been promoted toward its realization by around 2030. **Chapter 4**

Figure 4-1-2-2 Basic approach toward the realization of Society 5.0

Information and communications policies to support Society 5.0 and economic security In order to ensure the independence, existence and prosperity of Japan, we aim to ensure strategic autonomy and to acquire strategic indispensability of the information and communications industry which is playing an increasing role as a strategic core industry. (1) Advancement and maintenance of information and communications infrastructure that supports Society 5.0 (2) Maintaining and strengthening of international competitiveness of the information and communications industry (R&D, solutions, human resources)
(3) Construction of a free and highly reliable information space Resilient and vigorous society in the 2030s (Society 5.0) ✓ Inclusive: society where everyone can be active ✓ Sustainable: society which sustainably growing ✓ Dependable: society that enables activities with security Development and introduction of new technologies that will become game changers Development Creation of new markets through international collaboration International contribution and realization of SDGs through international cooperation Customers/Markets Overseas Demonstration expansion ational situation i the United States Demonstration of strength in cyber-physical fusion Solution of social issues Digital implementation/vitalization in rural areas SDGs Implementation



Related data

General Policy Committee, Information and Communications Policy Section, Information and Communications Council URL https://www.soumu.go.jp/main_sosiki/joho_tsusin/policyreports/joho_tsusin/sougou_seisaku/index.html