

2013 White Paper on Information and Communications in Japan

Contents

Part 1

Special Theme: How Can We Make Strategic Use of “Smart ICT” to Bring Vigor and Growth to Japan?

Chapter 1

Utilizing “Smart ICT” Advancement to Create New Values	2
Section 1 New ICT Trend: “Smart ICT” to Produce Japan’s Vigor and Growth	2
1. “Smart ICT” to produce Japan’s vigor and growth —General—	2
2. Utilizing G-spatial information to create new values	5
3. Smart revolution to produce changes in business operations	6
Section 2 “Innovation” and Global Expansion of ICT Industries	9
1. Overview of ICT industry innovation in Japan	9
2. Global expansion of ICT industries	11
3. Broadcasting industry’s global expansion and next-generation broadcasting initiative	16
Section 3 Growth Potential Coming from Big Data Utilization	18
1. Big Data bringing about new growth	18
2. Measuring Big Data information distribution and accumulation (macro survey)	19
3. Big Data utilization cases and potential effects (micro survey)	21

Chapter 2

Utilizing ICT to Solve Social Challenges	25
Section 1 Electronic Administration and Open Data	25
1. Promoting electronic administration	25
2. Promoting open data	26
3. Electronic administration promotion and recognition by people and local governments (questionnaire survey)	27
Section 2 ICT to Advance Social Infrastructure	30
1. Promoting ICT Town Development	30
2. Promoting measures for life resources using ICT	32
Section 3 How ICT should be Used in a Super-aging Society	33
1. Present state of super-aging society	33
2. New currents in super-aging society	33
3. MIC initiatives —Discussions at Super-aging Society Design Council—	34

Chapter 3

Attaining Safe, Secure ICT Utilization Environment and R&D Strategy	35
Section 1 Big Data utilization and personal data	35
1. Potential and problems of personal data utilization and distribution	35
2. International comparison of personal data users' consciousness of data treatment	35
3. Government initiatives	41
Section 2 Information security and safe, secure information utilization	41
1. Cyber attacks growing more sophisticated and complicated	41
2. Information users' consciousness of information security	41
3. Information security initiatives in Japan	43
Section 3 R&D to promote ICT innovation	43
1. Present situation and challenges for innovation creation	43
2. Steps for innovation creation in Japan	45

Part 2

Current State of ICT and Policy Trends

Chapter 4

Current State of ICT	48
Section 1 ICT Industry Trends	48
1. Economic size of the ICT industry	48
2. ICT industry's economic spillover effects	49
Section 2 ICT Industry Operations	49
1. Basic survey on the information and communications industry	49
Section 3 Internet Usage Trends	51
1. Status of Internet diffusion	51
2. Challenges for safe, secure Internet usage	52
Section 4 Cloud service utilization trends	54
1. Status of cloud service utilization in Japan	54
Section 5 Telecommunications sector	54
1. Telecommunications market	54
2. Status of telecommunications services provision	55
Section 6 Broadcasting sector	56
1. Broadcasting market	56
2. Status of broadcasting services	57
Section 7 Radio utilization	58
1. Status of radio utilization and the number of radio stations	58
2. Radio surveillance to exclude jamming of key radio communications, etc.	58
Section 8 Content market trends	59
1. Present status of Japan's content market	59
Section 9 Research and development (R&D)	62
1. ICT industry research spending	62
2. Technology trading	62
3. Number of researchers	63

Chapter 5

Outlook for Information and Communications Policies	64
Section 1 Recovery and Reconstruction from the Great East Japan Earthquake	64
Section 2 Promotion of a Comprehensive Strategy	64
1. Promotion of a National Strategy	64
2. Development of cloud services	64
3. ICT productivity acceleration	64
Section 3 Development of Information and Communications Policy	64
1. Development of telecommunications business policy	64
2. Development of broadcasting policy	65
3. Development of radio policy	65
4. Handling of disputes between businesses in the fields of information and communications	66
5. Ensuring safety and reliability of infrastructure	67
Section 4 Ensuring Citizens' Lives Are Safe and Secure	67
1. Consumer administration in relation to telecommunications services	67
2. Promotion of computerization in the fire safety and disaster preparedness field	68
Section 5 Improving the Quality of Citizen's Lives and the Natural Environment through ICT utilization	68
1. Promotion of ICT in the fields of education, medicine, etc.	68
2. Regional development utilizing information and communications Infrastructure	68
3. Promotion of Content Distribution	68
4. Establishment of a barrier-free information environment	69
5. ICT contributions for global environmental problems	69
6. Development of ICT personnel	69
Section 6 Promotion of Computerization of Government Services	69
1. Promotion of e-government	69
2. Promotion of e-local government	69
Section 7 Promotion of Research and Development (R&D)	70
1. Promotion of Research and Development Strategy	70
2. Research and Development which Leads the Next Generation	70
3. Contribution to green innovation and life innovation	70
4. ICT International Cooperation Promotion Research and Development Program	71
5. Strengthening disaster resilience of communication and broadcast infrastructure	71
6. Other research and development programs	71
Section 8 Promotion of International Strategy	72
1. Priority promotion issues in international policy	72
2. Initiatives in international frameworks	72
Section 9 Development of Postal Service Administration	73
1. Promotion of postal service administration	73
2. Promotion of postal service administration in the international field	73
3. Promotion of correspondence delivery business	73

“White Paper on Information and Communications in Japan” as open data

The 2013 “White Paper on Information and Communications in Japan” (printed, HTML and PDF versions) has been made available as open data in principle. Anyone is allowed to freely make secondary use of this report by indicating the source, including copying and commercial utilization.

The following figures are exceptions to free secondary use, as third parties other than the Ministry of Internal Affairs and Communications could hold copyrights or any other rights to them. Take care to refrain from infringing third parties’ rights when using these figures.

List of figures for exceptional treatment in the 2013 “White Paper on Information and Communications in Japan”

Figure number	Title
Figure 1-2-1-3	Number of venture capital investment targets, investment value and investment stages
Figure 1-2-2-1	Analysis of growth potential in global ICT market layers