

2014 White Paper on Information and Communications in Japan

Table of Contents

Part 1

Special Theme: The Global Paradigm Shift Caused By ICT

Chapter 1

ICT Proliferation on a Worldwide Scale	2
Section 1 Rapid Worldwide ICT Proliferation	2
Section 2 ICT Proliferation in Developing Nations	2
Section 3 Solving Public Issues with ICT	3
1. Fast rise of mobile money transfer systems in developing countries.....	3
2. MOOCs.....	3
3. Application of mobile phones to the agriculture sector.....	3
4. Growth of mobile health, particularly in Africa.....	4

Chapter 2

Harnessing ICT to Boost Growth and International Competitiveness	5
Section 1 The Importance of ICT as a Growth Engine and Japan's Initiatives	5
1. ICT's impact on Japan's economy.....	5
2. Japan's initiatives toward an ICT-driven economic strategy.....	8
Section 2 The Paradigm Structural Shift in the ICT Industry	10
1. Global structural changes in the ICT industry.....	10
2. Japan's position in the ICT market and global market trends.....	11
Section 3 Directions to Boost International Competitiveness in Japan's ICT Industry	12
1. Current state of and challenges for Japan's international competitiveness.....	12
2. Infrastructure expansion and other joint public-private efforts to boost international competitiveness.....	15

Chapter 3

The Future Society Shaped by Data	17
Section 1 Value Generated by Big Data	17
1. Expanding applications for big data.....	17
2. Ascertaining data distribution volumes.....	17
3. State of big data usage at corporations.....	18
4. Promoting combined geospatial information and ICT usage.....	21
Section 2 Promoting the Use of Open Data	23
1. Open data initiatives by the Japanese government.....	23
2. Awareness of open data among local governments and private corporations.....	24
Section 3 Harmonious Use and Distribution of Personal Data	26
1. Trends in the usage and distribution of personal data.....	26
2. User attitudes on the use of their personal data.....	27

Section 4 Advent of a Real Data-Driven Society	29
1. Signs of changes in data usage.....	29
2. Issues complicating data usage advancement.....	29

Chapter 4

The Social Impact of Rapid ICT Advancement	31
---	----

Section 1 Lifestyle and Work Style Transformations Caused by ICT Advancement	31
1. Lifestyle transformations caused by ICT advancements.....	31
2. Changes in desired work styles and the participation of women.....	35
Section 2 Promoting Further ICT Use and Application	38
1. ICT use and application by government.....	38
2. ICT use and application in town development.....	39
3. ICT use and application in social and economic fields.....	42
Section 3 Construction of Safe and Secure Internet Usage Conditions	44
1. Internet addiction and other new issues and the importance of Internet literacy.....	44
2. Ensuring cyber security.....	48

Part 2 Current State of ICT and Policy Trends

Chapter 5

Current State Of ICT	52
-----------------------------------	----

Section 1 ICT Industry Trends	52
1. Economic size of the ICT industry.....	52
2. ICT industry's economic spillover effects.....	53
Section 2 ICT Industry Operations	54
1. Basic survey on the information and communications industry.....	54
Section 3 Internet Usage Trends	56
1. State of Internet proliferation.....	56
2. Challenges for safe, secure Internet usage.....	57
3. Promoting ICT applications in government services.....	58
Section 4 Cloud Service Usage Trends	61
1. Cloud service usage trends in Japan.....	61
Section 5 Telecommunications Sector	62
1. Telecommunications market.....	62
2. State of telecommunication services provision.....	63
Section 6 Broadcasting Sector	65
1. Broadcasting market.....	65
2. State of broadcasting service use.....	65
Section 7 Radio Spectrum Usage	66
1. State of radio spectrum usage and number of radio stations.....	66
2. Radio surveillance to eliminate interference with key radio communications.....	67
Section 8 Content Market Trends	68
1. State of Japan's content market.....	68
Section 9 Research and Development	72
1. ICT industry research.....	72

2. Technology trading.....	73
3. Number of researchers.....	73

Chapter 6

Outlook for Information and Communications Policies.....	75
Section 1 Comprehensive Strategy Promotions.....	75
1. Promoting a national strategy.....	75
2. Developing cloud services.....	75
3. Boosting productivity with ICT.....	75
Section 2 Developments in Information and Communications Policy.....	75
1. Developments in telecommunications business policy.....	75
2. Developments in broadcasting policy.....	76
3. Developments in radio policy.....	77
4. Handling disputes between businesses in the information and communications field.....	78
5. Ensuring the safety and reliability of infrastructure.....	79
Section 3 Protecting the Safety and Security of Citizens' Livelihoods.....	79
1. Consumer affairs administration in relation to telecommunication services.....	79
2. Promoting ICT applications in the fire, safety, and disaster preparedness field.....	80
Section 4 Improving the Quality of Citizen's Lives and the Natural Environment through ICT Use and Application.....	80
1. Promoting ICT applications in education, medicine, and other fields.....	80
2. Regional development using information and communications infrastructure.....	81
3. Establishing barrier-free information environments.....	81
4. ICT contributions to resolving global environmental problems.....	81
5. Developing ICT personnel.....	81
Section 5 Promoting ICT Applications in Government Services.....	82
1. Promoting e-government.....	82
2. Promoting e-local government.....	82
Section 6 Promoting Research and Development.....	82
1. Promoting research and development strategies.....	82
2. Enhancing and enriching research and development that will drive the next generation.....	83
3. Contributing to green innovation and life innovation.....	83
4. Research and development programs promoting international collaborations in the ICT field.....	83
5. Contributing to more resilient public infrastructure.....	84
6. Other research and development programs.....	84
Section 7 Promoting International Strategies.....	84
1. Priority promotion issues in international policy.....	84
2. Initiatives in international frameworks.....	85
Section 8 Developments in Postal Service Administration.....	85
1. Promoting postal service administration.....	85
2. Promoting postal service administration in the international field.....	86
3. Promoting the correspondence delivery business.....	86
Supporting Data.....	87

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

The 2014 “White Paper on Information and Communications in Japan” (printed and PDF versions) has been made available as open data in principle. Anyone is allowed to freely make secondary use of this report including copying and commercial utilization by indicating the source of this report.

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 2014 “White Paper on Information and Communications in Japan”

Figure number	Title
Figure 1-3-1-1	Transitions in mobile money transfer services worldwide
Figure 1-3-2-1	Spread of organizations offering MOOCs(as of Oct.2013)
Figure 2-2-1-1	Predictions of the global ICT market size and growth rates