Government

Confidential

Ministry of Internal Affairs and Communications

2017 Communications Usage Trend Survey Form <<For Households>>

◎ This statistics survey has been conducted in accordance with the Statistics Act. The privacy of information collected in this survey will be surely protected. Your accurate and complete answers are appreciated.

(affix address label here)

We will send a ¥500 pre-paid book coupon to households that return the survey by the submission deadline as a token of our appreciation.

If you wish, please provide a telephone number below so that we may contact you if we have further questions about your survey answers.

— —

Please note the following before completing the survey.

1 This survey asks about the communication devices and services you and your household regularly use and when you use them. (Please confirm your name with the address label on the left.) Anyone in your household may complete the survey form.

2 **Words defined in the Glossary are denoted with asterisks (*). Please refer to the Glossary as needed**

3 Please give answers reflecting the situation in your household **on September 30, 2017**.

4 Submit the completed survey to:
Economic Research Office, Information and Communications Bureau, Ministry of Internal Affairs and Communications
2nd Bldg. of the Central Common Government Office, 2-1-2 Kasumigaseki, Chiyoda-ku, Tokyo 100-8786, Japan
　* The survey form may also be obtained and submitted online.
　　For detailed information, please look at "Request for cooperation" enclosed herein.

5 If you have any questions, please contact the survey firm at:
"Communications Usage Trend Survey" Secretariat,
Public Opinion Research Center (contracted by the Ministry of Internal Affairs and Communications)
4-8-6 Sendagaya, shibuya-ku, Tokyo 151-8509, Japan
Tel.: 0120-460-383 (toll free) (Between 10:00 and 17:00, on weekdays)

6 The Ministry of Internal Affairs and Communications has contracted the survey firm above to conduct this survey.

Household section: Please give answers reflecting the situation for your entire household.

Q1 Concerning ownership of communication devices

This question asks about **your household's ownership of devices with communication functions**.
Do not count company-provided devices or devices that you own but have not used even once in the past year.
Does your household own any of the devices 1 through 11 listed below? Please **circle all devices that your household owns**.
For devices 3 through 11, please indicate the number of devices in your household.
Please enter separate answers for conventional mobile phones (feature phones) and smartphones for this and
all subsequent questions in the survey.

1. Fixed-line telephones

2. Fax machines

3. Mobile phones (includes PHS handsets)
   (how many? _____)

4. Smartphones* (how many? _____)

5. Tablets* (iPad, GalaxyTab, etc.)
   (how many? _____)

6. Computers (how many? _____)

7. Wearable devices* (glasses-type, watch-type information devices, etc.)
   (how many? _____)

8. Internet-enabled home game consoles that display video on a television or other monitor (Wii, PlayStation, etc.) (how many? _____)

9. Internet-enabled home game consoles with built-in displays (Nintendo3DS, PSP, etc.) (how many? _____)

10. Internet-enabled portable music players (iPod, etc.)
    (how many? _____)

11. Cooking heaters, refrigerators and other smart appliances available for Internet connection (how many? _____)

12. Others

Q2 **To households using fixed-line telephones**

(1) Do you use a so-called "black telephone" (a metal telephone provided by NTT East or West*)?

Please **circle the one best answer**.

1. Yes	2. No

*The black telephone is a subscribed fixed-line or ISDN (Integrated Services Digital Network) telephone. The telephone uses a number beginning with an area code such as 03 for Tokyo and has features such as the absence of power cables and the availability to be used without any optical fiber line.

(2) To households that answered 1 to (1) above:

As of April 2017, NTT planned to terminate metal telephone contracts in the beginning of 2024 and provide customers unable to soon switch to any other services with a complementary service allowing the existing telephones to be used continuously at the same cost as for metal telephones without any modification. Are you planning to switch from the metal telephone service to any other service?
Please **circle the one best answer** (as planned as of September 2017)**.**

1. Willing to continue using the metal telephone in the future (at least beyond the beginning of 2024)

    a. Willing to change the contract in less than one year from now

    b. Willing to change the contract in one to less than two years from now

    c. Willing to change the contract in two to less than three years

2. Willing to change the contract   d. Willing to change the contract in three to less than four years
    （If you choose to change the contract, circle an option that applies among the six options from a. to f. regarding the timing for the change)

    e. Willing to change the contract in four to less than five years

    f. Willing to change the contract in five to less than six years

(3) **To households that answered 1 to (2) above (i.e.: Willing to continue using the metal telephone in the future (at least beyond the beginning of 2024)):** What are reasons for continuing using the metal telephone you now use (without cancelling the contract or switching to another service)? Please **circle all answers that apply**.

1. The metal telephone service that I use is cheaper than any other service

2. The metal telephone service that I use is qualitatively better than any other service

3. Willing to continue using the telephone that I use now

4. Willing to continue using the telephone number that I use now

5. Any other service is unavailable due to service area restrictions and housing conditions (including difficult modification)

6. Procedures for cancelling the present metal telephone service contract or switching to any other service would take much time or be difficult to understand.

7. Have never considered cancelling the metal telephone service that I use now or switching to any other service

8. Others

(4) **To households that answered 1 to (2) above (i.e.: Willing to continue using the metal telephone in the future (at least beyond the beginning of 2024)):** If the fixed-line telephone service that you use now is planned to end in the future (in or after January 2024), do you think that you would have to use some other fixed-line telephone service? Please **circle the one best answer**.

1. Yes	2. No

Q3 Concerning general Internet usage

(1) **Has anyone in your household used the Internet** (including sending or receiving email, watching Video on demand (VOD)*, browsing Websites, online shopping, etc. from a computer, mobile phone, or other device) **in the past year**? Please **circle the one best answer.**

1. At least one person has used the Internet	2. No one has used the Internet

Note 1:   Do not count the use of email functions, such as SMS,* **sending by an address without @** that are only used between mobile phones or PHS handsets for "sending / receiving email".
Note 2:   Count Internet use from **any kind of device**, including computers, mobile phones, smartphones, or game consoles.
Note 3:   Count Internet use for **any purpose**, including use for work as well as for personal use. Count Internet use from any location, such as at home or outside.
Note 4:   Count Internet use from **any location**, such as at home or outside your home.
Note 5:   **Count Internet use from devices not owned by the household,** such as computers in libraries or Internet cafes.

Please go to Question 6 on Page 4.

(2) **To households that answered 1 to (1) above (i.e., households with at least one Internet user)**:
What device or devices have the Internet user(s) used to access the Internet?
Please **circle all answers that apply**.

1. Computers at home	7. Home game consoles that display video on a television or other monitor (Wii, PlayStation, etc.)
2. Computers outside the home	8. Home game consoles with built-in displays (Nintendo3DS, PSP, etc.)
3. Mobile phones (including PHS handsets)	9. Portable music players (iPod, etc.)
4. Smartphones	10. DVD/Blu-ray disc recorders
5. Tablets	11. Tuners for receiving Internet Protocol TV (like optical fiber TV)
6. TV receivers	12. Tuners for receiving cable TV
	13. Other devices

(3) **To households that answered 1, 5, or 6 to (2) above (i.e., households where computers at home, tablets, or TV receivers are used)**: **What type of connection is used to access the Internet**? Please **circle all answers that apply**.

○Wired:	○Wi-Fi:
1. DSL* (ADSL, etc.) 2. Cable TV (CATV)* 3. Optical fiber (FTTH)* 4. Fixed wireless access (FWA)* 5. Telephone (dial-up) 6. ISDN* Note 1	7. Mobile phone (LTE*, BWA*) (such as an iPhone 5 or newer model, whose service is named "4G," "Xi," or "WiMAX")Note 2 8. Mobile phone (other than 7; such as an iPhone up to iPhone 4S, whose service is named "3G" or "FOMA")Note 2 ●Others 9. Other 10. No Internet connection

Note 1:   If you use ISDN over an optical fiber connection, please circle 3 "Optical fiber (FTTH)."
Note 2:   Circle 7 or 8 **only when the Internet is used by tethering to another device including a computer and a tablet**. Note that tethering here indicates the cases where a stick device is connected to a computer or where a smartphone or another device is connected by Wi-Fi.

Q4 Concerning losses associated with Internet use

To households that answered 1 to Question 3 (1) (i.e., households with at least one Internet user) and which used any of the following devices:

Have you **suffered** any of the following **losses** associated with Internet use **in the past year**? Please **circle all losses** for each access device.

Please **circle 7** if you have not suffered any losses.

		Computers (used at home)	Mobile phones (including PHS handsets)	Smartphones
1.	Discovered a computer virus* but not infected	1	1	1
2.	Discovered a computer virus* and at least one incidence of an infection	2	2	2
3.	Received spam* / fraudulent emails*	3	3	3
4.	PhishingNote 1	4	4	4
5.	Illegal accessNote 2	5	5	5
6.	Other (personal information security breach, defamation, etc.)	6	6	6
7.	No losses	7	7	7

Note 1: *Phishing* is a type of fraud in which the attacker fakes emails from a real corporation or a real corporation's Website in order to get the victim to enter his or her PIN or password.
Note 2: *Illegal access* refers to access to a computer by abusing another person's ID and password (illegally using another person's account).

....

Q5 Concerning Internet security measures

To households that answered 1 to Question 3 (1) (i.e., households with at least one Internet user):

Have you taken measures against viruses or illegal access for devices that you use at home such as computers, mobile phones (including PHS handsets), smartphones, and tablets in the past year? Please **circle the one best answer**.

1. Yes	2. No	3. Don't know whether the measures have been taken or not

Supplementary Question: **To households that answered 1 above (i.e., households that have taken measures)**:
What measures have you taken against viruses or illegal access in the past year?
Please **circle all answers that apply**.

> 1. Installed or updated a security program
> 2. Signed up to or updated a security service from a provider or mobile telecom
> 3. Set a password on devices to prevent illegal access from outside or illegal use by outsiders
> 4. Did not connect to the Internet using an unknown or unsecured source
> 5. Set an administrator to check for changing the setting of device or installing suspicious software
> 6. Other measures

Q6 Concerning the use of Internet services using television

(1) **If the following services are available through the use of a TV receiver,** which of them would you like to use?
Please **circle all answers that apply**.

> 1. Video on demand (VOD)* or other streamed programming
> 2. Web uses, such as browsing Websites, posting videos, using forums, social networking services*, online shopping, etc.
> 3. Online gaming*
> 4. Videophone
> 5. Make recording settings or watch recorded programs on smartphones or tablets via a network
> 6. Obtain information related to the current program
> 7. Other
> 8. Have no particular

(2) **To households that answered "6. TV receivers" to Question 3 (2):**
For which purposes do you use the TV receiver?
Please **circle all answers that apply**.

> 1. Video on demand (VOD) or other streamed programming
> 2. Web uses, such as browsing Websites, posting videos, using forums, social networking services, online shopping, etc.
> 3. Online gaming
> 4. Videophone
> 5. Make recording settings or watch recorded programs on smartphones or tablets via a network
> 6. Obtain information related to the current program
> 7. Other

(3) **To households that answered "6. TV receivers" to Question 3 (2):**
Does your household **have the experience of using the hybridcasting function**[Note]?
Please **circle the one best answer**.

1. Used the hybridcasting function	2. Not used the hybridcasting function but planning to do so	3. Neither used the hybridcasting function nor planning to do so

Note: The hybridcasting function refers to a service that indicates information and contents transmitted via the Internet on the broadcast display. You can use this function by pushing the "d" button of the remote controller or by switching to the data broadcast display if your TV receiver is equipped with this function and is connected to the Internet (The word "Hybridcast" is indicated on the display when the function is on).

Q7 Concerning the awareness of 4K TV receivers and plans to use them

(1) Concerning the ownership of a 4K TV receiver and plans to use it, does your household own a 4K TV receiver? Please **circle the one best answer.**

> 1. Owns
> 2. Does not own but willing to own
> 3. Does not own or plan to own
> 4. No idea about whether the TV receiver my household owns is a 4K TV receiver or not.

(2) **To households that answered "2. Does not own but willing to own" or "3. Does not own or plan to own" in (1):**
Does your household **have the experience of using the hybridcasting function**[Note]?
What are reasons for not owning a 4K TV receiver at present? Please **circle all answers that apply**.

> 1. A 4K TV receiver is expensive
>
> 2. There are not any programs or contents that I want to watch with a 4K TV receiver
>
> 3. Don't feel high-definition broadcast to be attractive
>
> 4. Have no plan to purchase any new TV receiver until replacing the receiver that I own at present
>
> 5. No idea about what a 4K TV receivers is

Q8 Concerning the utilization of "My Number Card"

What are purposes for which your household wants to utilize your "Individual Number Card" among the following options?
Please **circle all answers that apply**.

> 1. Utilization for identification
>
> 2. Utilization for convenience store services for issuing seal registration, residence, household registration and other certificates
>
> 3. Utilization for authentication for Internet banking and other online services
>
> 4. Utilization for electronic signatures for preparing electronic files of contracts, etc.
>
> 5. Utilization for checking in to an event
>
> 6. Utilization for other private services

Q9 Concerning your household's members and income

(1) Please indicate **the number of people**, **including yourself,** in your household. ☐ people

(2) **How many of the above number are children aged less than six?** ☐ people

(3) What was your household's **combined annual income last year**?
Please **circle the one best answer**.

1. Less than ¥2 million	4. ¥6 million to less than ¥8 million	7. ¥15 million to less than ¥20 million
2. ¥2 million to less than ¥4 million	5. ¥8 million to less than ¥10 million	8. ¥20 million and over
3. ¥4 million to less than ¥6 million	6. ¥10 million to less than ¥15 million	

<Questionnaire> The following question concerns the answering method for this survey.
If you can respond to this survey on the Internet system display, would you like to respond via the Internet?
Please **circle the one best answer**.

1. Yes	2. No	3. Don't know

Household member section: Please give answers reflecting the situation for each member in your household.

◎ **Each member of your household who is 6 or older** should answer the following questions individually.
The head of the household may fill out answers for younger children or others who may find the questions difficult.

◎ **If there are more than five people in your household who are 6 or older,** please contact us for an additional survey form.

Please indicate the gender and age of each household member **who is 6 or older**.
Survey forms that do not include the gender and ages of each household member will be **considered invalid**. Please make sure to enter such information.

	(Head of household) A	B	C	D
Gender (circle either male or female)	Male Female	Male Female	Male Female	Male Female
Age (fill in the person's age)	___years old	___years old	___years old	___years old

Please answer the following questions separately for each household member.
↓　　↓　　↓　　↓

The following questions are intended for all household members 6 and older.

Q1 Concerning individuals' use of mobile services

(1) The following questions concern **mobile device ownership.**
Do you own any of the devices 1 through 2 listed below?
Please **circle all answers that apply**.
Please enter separate answers for conventional mobile phones (feature phones) and smartphones for this and all subsequent questions **in the survey**.

	A	B	C	D
1. Mobile phones (including PHS handsets)	1	1	1	1
2. Smartphones*	2	2	2	2

(2) **To individuals who circled one of the options in (1):** Which mobile services do you subscribe with **your main mobile terminal**? Please **circle the one best answer**.

	A	B	C	D
1．Using a mobile phone (including a PHS handset) with NTT docomo, au, Softbank or Ymobile services	1	1	1	1
2．Using a mobile phone (including a PHS handset) with MVNO* services (such as low-cost mobile services)	2	2	2	2
3．Using a smartphone with NTT docomo, au, Softbank or Ymobile services	3	3	3	3
4．Using a smartphone with MVNO* services (such as low-cost mobile services)	4	4	4	4

(3) **Concerning the mobile terminal circled in (2)**
How much monthly installment **before consumption tax** do you pay for the terminal?
Please **circle the one best answer**.

	A	B	C	D
1. 1-999 yen	1	1	1	1
2. 1,000-1,999 yen	2	2	2	2
3. 2,000-2,999 yen	3	3	3	3
4. 3,000-3,999 yen	4	4	4	4
5. 4,000- yen	5	5	5	5
6. No such payment after completion of installment payments	6	6	6	6
7. No such payment after a lump-sum payment	7	7	7	7
8. No such payment after a purchase on a "no-installment, no-down payment" (0 yen in lump-sum payment) basis	8	8	8	8
9. Others	9	9	9	9

(4) **Concerning services circled in（2）**
How much did you pay for **mobile services before consumption tax in the latest month (excluding an installment payment for the terminal and a payment for contents)?**
Please **circle the one best answer**.

	A	B	C	D
1. 0-999 yen	1	1	1	1
2. 1,000−1,999 yen	2	2	2	2
3. 2,000−2,999 yen	3	3	3	3
4. 3,000−3,999 yen	4	4	4	4
5. 4,000−4,999 yen	5	5	5	5
6. 5,000−5,999 yen	6	6	6	6
7. 6,000−7,999 yen	7	7	7	7
8. 8,000−9,999 yen	8	8	8	8
9. 10,000− yen	9	9	9	9

Q2 Concerning smartphones and IoT*

(1) **To individuals who answered "2. Smartphones" to Question 1 (1):**

How do you use your smartphone?

Please **circle all answers that apply**.

	A	B	C	D
1. Using a smartphone in place of a computer for sending and receiving social media mails	1	1	1	1
2. Using a smartphone in place of a computer for Internet shopping	2	2	2	2
3. Using a smartphone in place of TV, newspapers or a computer for Internet search and checking news	3	3	3	3
4. Using a smartphone in place of TV or a computer for enjoying videos and music	4	4	4	4
5. Using a smartphone as a wearable terminal to check steps walked, blood pressure, meals, etc.	5	5	5	5
6. Using a smartphone in place of cash for card, electronic money and other payments	6	6	6	6
7. Using a smartphone as a sensor to control information devices	7	7	7	7
8. Using a smartphone for fintech and other settlement and remittance services	8	8	8	8

(2) **To individuals who answered "2. Smartphones" to Question 1 (1):**

What services do you want to receive with a smartphone? What services using a smartphone do you want to be expanded?

Please **circle all answers that apply**.

	A	B	C	D
1. Medical and healthcare services using health, chronic disease, medication history and other data	1	1	1	1
2. Education including online lessons	2	2	2	2
3. Railway, bus, station, airport and other transportation information services	3	3	3	3
4. Crime and disaster prevention services using camera and information collection functions	4	4	4	4

Q3 Concerning individual Internet usage

(1) Have you **used the Internet** (including sending or receiving email[Note], watching Video on demand (VOD)*, browsing Websites, online shopping, etc. from a computer, mobile phone, or other device) **in the past year**?

Please **circle the one best answer**.

	A	B	C	D
1. Yes	1	1	1	1
2. No	2	2	2	2

Note 1: Do not count the use of email functions, such as SMS,* **sending by an address without @** that are only used between mobile phones or PHS handsets for "sending / receiving email."

Note 2: Count Internet use from **any kind of device**, including computers, mobile phones, smartphones, or game consoles.

Note 3: Count Internet use for **any purpose**, including use for work as well as for personal use.

Note 4: Count Internet use from **any location**, such as at home or outside the home.

Note 5: **Count Internet use from devices not owned by the household,** such as computers in libraries or Internet cafes.

Supplementary Question: **To all people who have used the Internet**:

What **device or devices have you used** to access the Internet?

Please **circle all answers that apply** regardless of whether or not you own a mobile device.

	A	B	C	D
1. Computers	1	1	1	1
2. Mobile phones (including PHS handsets)	2	2	2	2
3. Smartphones	3	3	3	3
4. Tablets	4	4	4	4
5. TV receivers[Note]	5	5	5	5
6. Home game consoles	6	6	6	6
7. Other devices	7	7	7	7

Note: *TV receivers* (option 5) includes both TV receivers that connect directly to the Internet and the use of the Internet on the screen of a TV receiver via a recorder, tuner, or similar device. Please circle 6 if you used the Internet on the screen of a TV receiver via a home game console. This distinction applies to all subsequent questions.

(2) **To all people who have used the Internet**:

How often do you use the Internet?
Please **circle the one best answer**.

	A	B	C	D
1. Use at least once a day	1	1	1	1
2. Use at least once a week (but not every day)	2	2	2	2
3. Use at least once a month (but not every week)	3	3	3	3
4. Use at least once a year (but not every month)	4	4	4	4

(3) **To all people who have used the Internet**:

Where do you use the Internet?
Please **circle all answers that apply**.

	A	B	C	D
1. Home	1	1	1	1
2. Workplaces[Note 1]	2	2	2	2
3. Schools[Note 2]	3	3	3	3
4. Public facilities (government offices, libraries, community centers, etc.)	4	4	4	4
5. Airports / train stations	5	5	5	5
6. While commuting on public transport	6	6	6	6
7. Internet cafés	7	7	7	7
8. Restaurants, coffee shops, etc. (excluding Internet cafés in option 7)	8	8	8	8
9. Hotels or other accommodations	9	9	9	9
10. Other locations	10	10	10	10

Note 1: *Workplaces* (option 2) includes employed people who work at home and use the Internet and teachers, instructors, etc. who use the Internet at a school.

Note 2: *Schools* (option 3) includes children, students, and university students who use the Internet in classes and elsewhere at elementary schools, junior high schools, high schools, secondary schools, universities, or graduate schools.

Supplementary Question 1: **To people who answered any of 2-10 in (3) above:**
Do you use a public wireless LAN when accessing the Internet outside your home?
Please **circle the one best answer**.

	A	B	C	D
1. Using a public wireless LAN	1	1	1	1
2. Not using a public wireless LAN	2	2	2	2

Supplementary Question 2: **To people who answered 2 to Supplementary Question 1 above:**
Why do you not use public wireless LAN?
Please **circle all answers that apply**.

	A	B	C	D
1. The service area is small or is difficult to find.	1	1	1	1
2. The fee must be paid.	2	2	2	2
3. Concerned about security.	3	3	3	3
4. Cumbersome to switch between public wireless LAN and mobile phone network.	4	4	4	4
5. Transmission speed is slow.	5	5	5	5
6. Difficult to arrange the settings or to obtain registration.	6	6	6	6
7. The device does not have a public wireless LAN function.	7	7	7	7
8. Do not know what public wireless LAN is	8	8	8	8
9. Other reasons	9	9	9	9
10. No particular reason	10	10	10	10

Q4 Concerning the purpose of Internet use

To all people who have used the Internet:

What Internet functions or services have you used in the past year?
Please **circle all answers that apply**.

Please answer Supplementary Questions 1 and 2.

If you circled any of the answers, please answer Supplementary Question 3.

	A	B	C	D
1. Sending and receiving email	1	1	1	1
2. Opening, updating and viewing of, and posting on websites and blogsites	2	2	2	2
3. Using social networking services* (Facebook, Twitter, LINE, mixi, Instagram, etc.)	3	3	3	3
4. Using free calling apps or voice chat sites (Skype, LINE, etc.)	4	4	4	4
5. Using video posting / sharing sites* (Youtube, Niconico Douga, etc.)*	5	5	5	5
6. Using on-demand radio, TV, and movie streaming services	6	6	6	6
7. Using online gaming*	7	7	7	7
8. Entering quizzes and contests, answering questionnaires	8	8	8	8
9. Obtaining free map / traffic information services	9	9	9	9
10. Using free weather forecast	10	10	10	10
11. Using news sites	11	11	11	11
12. Using dictionary and encyclopedia sites	12	12	12	12
13. e-learning (supplementary school lectures/exercises, cram school and university lectures, language lessons, etc.)	13	13	13	13
14. Financial transactions: banking, securities, insurance, etc. transactions over the Internet	14	14	14	14
15. Buying / exchanging digital content: music, audio, video, games, etc.	15	15	15	15
16. Buying / exchanging goods and services: excluding digital content purchases and financial transactions	16	16	16	16
17. Internet auctions*	17	17	17	17
18. Using e-Government, e-Local Government services: online applications, online reports, and online notifications	18	18	18	18
19. Other (using forums* or web album, exchanging digital files: P2P*, etc.)	19	19	19	19

Supplementary Question 1: **To people who answered 3 to Supplementary Question 3 above (i.e., people who use social networking services)**:

For what purposes do you use social networking services?
Please **circle all answers that apply**.

	A	B	C	D
1. To communicate with current friends	1	1	1	1
2. To find information on topics of interest	2	2	2	2
3. To find people who share the same interests or tastes or people with the same concerns or problems, or to broaden social relationships	3	3	3	3
4. To announce my own information or creative work	4	4	4	4
5. To gather or provide information during emergencies or disasters	5	5	5	5
6. To find old friends	6	6	6	6
7. To release stress	7	7	7	7
8. To kill time	8	8	8	8
9. Other	9	9	9	9

Supplementary Question 2: **Which device or devices** do you use to access social networking services?
Please **circle all answers that apply**.

	A	B	C	D
1. Computers	1	1	1	1
2. Mobile phones (including PHS handsets)	2	2	2	2
3. Smartphones	3	3	3	3
4. Tablets	4	4	4	4
5. Others (home game consoles, etc.)	5	5	5	5

To people who circled any of "14. Financial transactions," "15. Buying/exchanging digital content," "16. Buying/exchanging goods and services, "17. Internet auction" in Q3.To people who answered any of 14-17 to Question 3 above:

This question is to be answered **only by people aged 15 and older**.

Supplementary Question 3:

What payment methods have you used when purchasing goods or making financial transactions on the Internet? Please **circle all answers that apply**.

	A	B	C	D
1. Credit card (excluding use for payment on delivery)Note	1	1	1	1
2. Payment on delivery	2	2	2	2
3. Payment at bank / post office branch or ATM	3	3	3	3
4. Payment at convenience store	4	4	4	4
5. Payment by Internet banking / mobile banking*	5	5	5	5
6. Payment by addition to communication charges / provider charges	6	6	6	6
7. Payment by electronic money (Edy, Suica, etc.)	7	7	7	7
8. Payment by cash remittance by registered mail, money order, personal cheque	8	8	8	8
9. Other	9	9	9	9

Note: This option includes payments by debit cards (cash cards).

The following questions are intended **only for household members 12 and older**.

Q5 Concerning personal ICT skills

Concerning **personal ICT skills, can you perform the following operations** with computers, smartphones, tablets or any other terminals (irrespective of whether you have any terminals)?
Please **circle all answers that apply**.

	A	B	C	D
1. Copying files, copying and pasting letters and charts	1	1	1	1
2. Sending e-mails with pictures or documents being attached	2	2	2	2
3. Simple computation such as addition and subtraction using spreadsheet software including Excel and Open Office	3	3	3	3
4. Preparing documents by using presentation software including PowerPoint and Keynote	4	4	4	4
5. Connecting printers and cameras to computers	5	5	5	5
6. Using the Internet to download and install software	6	6	6	6
7. Exchanging data between computers and other devices (including smartphones and tablets)	7	7	7	7
8. Creating computer programs by using programming languages	8	8	8	8

Q6 Concerning your concerns about using the Internet

To all people who have used the Internet:
Do you have any concerns about using the Internet?
Please **circle the one best answer**.

	A	B	C	D
1. I'm concerned	1	1	1	1
2. Feel rather concerned	2	2	2	2
3. Feel rather unconcerned	3	3	3	3
4. I have no concerns	4	4	4	4

Supplementary Question: **To people who answered 1 or 2 to Question 5 above**:

What specific concerns do you have?
Please **circle all answers that apply**.

	A	B	C	D
1. Concern about leak of personal information and internet use history	1	1	1	1
2. Concern about the reliability of electronic payment means	2	2	2	2
3. Concern about computer virus* infections	3	3	3	3
4. Concerned about the risk of viewing illegal or harmful information.	4	4	4	4
5. Unclear how far to take security measures	5	5	5	5
6. Concern about trouble with communication on social media*, etc.	6	6	6	6
7. Concern about myself or people close to me becoming an Internet addict	7	7	7	7
8. Concern about fraudulent email or fraud using the Internet	8	8	8	8
9. Concern about receiving spam*	9	9	9	9
10. Other	10	10	10	10

Q7 Implementation of security measures

(1) **To people who answered 3 or 4 to Supplementary Question on Question 3 (1) (i.e., smartphone or tablet users)**:
Have you taken **security measures** for using them?
Please **circle the one best answer**.

	A	B	C	D
1. I have taken security measures.	1	1	1	1
2. I have not taken security measures.	2	2	2	2

Supplementary Question: **To people who answered 1 in (1) above (i.e., people who have taken security measures)**:
What specific security measures do you take?
Please **circle all answers that apply**.

	A	B	C	D
1. Keep software updated to the latest version	1	1	1	1
2. Subscribe to security services provided by mobile telecom	2	2	2	2
3. Install anti-virus software	3	3	3	3
4. Take any measures against spam	4	4	4	4
5. Do not download from untrusted app stores	5	5	5	5
6. Download only apps whose terms of use I have read and agreed to	6	6	6	6
7. Set a password lock on my devices	7	7	7	7
8. Refrain from entering personal information	8	8	8	8
9. Do not connect to unknown Wi-Fi networks	9	9	9	9
10. Other	10	10	10	10

(2) **To people who answered 3 or 4 to Supplementary Question on Question 3 (1) (i.e., smartphone or tablet users)**:
Have you experienced any of the following while using your **smartphone** or **tablet**?
Please **circle all answers that apply**.

	A	B	C	D
1. Loss or theft of device	1	1	1	1
2. Infection by a computer virus	2	2	2	2
3. Receive spam / fraudulent email*	3	3	3	3
4. Breach of personal information security (phone number, email address, location information, etc.)	4	4	4	4
5. Phishing*	5	5	5	5
6. See ad displays or emails connected to Web browsing history	6	6	6	6
7. Other	7	7	7	7
8. None of the above	8	8	8	8

This question is intended only for household members 15 and older.

Q4 Engagement in telework

To all people who have used the Internet:

Do you **work for a company or other organization (including a public organization or association but excluding a self-employed business)?** Please **circle the one best answer**.

	A	B	C	D
1. Yes	1	1	1	1
2. No	2	2	2	2

Supplementary Question 1: **To people who answered 1 to Question 4 above**:

Have you **engaged in Telework* Note 1** using the Internet in the past year?

Please **circle all answers that apply**.

	A	B	C	D
1. Engaged in Telework at home	1	1	1	1
2. Engaged in Telework at a satellite office[Note 2]	2	2	2	2
3. Engaged in Telework while out of office (mobile work[Note 3])	3	3	3	3
4. Not engaged in Telework	4	4	4	4

Note 1: Telework refers to working at a location different from the primary location of work. It includes working from home, satellite office work and mobile work.

Note 2: "Satellite office" refers to an office space located in a place different from the primary location of work.

Note 3: "Mobile work" refers to working while out of office for the purpose of sales and other activities.

Supplementary Question 2: **To people who answered 4 to Supplementary Question 1 above**:

Would you like to engage in Telework?

Please **circle the one best answer**.

	A	B	C	D
1. Would strongly like to engage in Telework	1	1	1	1
2. Would rather like to engage in Telework	2	2	2	2
3. Would rather not like to engage in Telework	3	3	3	3
4. Would not like to engage in Telework	4	4	4	4

Supplementary Question 3: **To people who answered 1 or 2 to Supplementary Question 2 above**:

Why do you not engage in Telework using the Internet?

Please **circle all answers that apply**.

(Employer-side reasons)

	A	B	C	D
1. There is not a Telework system at the employer	1	1	1	1
2. The employer cannot make adequate labor management	2	2	2	2
3. Work is not suited to Telework	3	3	3	3
4. The atmosphere at the employer is not favorable for Telework	4	4	4	4
5. It is unclear whether Telework is allowed at the employer	5	5	5	5
6. Others	6	6	6	6

(External or environmental reasons)

	A	B	C	D
7. The Telework business environment (including satellite offices) has not been developed	7	7	7	7
8. There is no adequate ICT systems required for Telework	8	8	8	8
9. Others	9	9	9	9

◎ **This completes the survey questions. Thank you for your participation.**
Please return the completed survey form in the enclosed return envelope.
No postage stamp is required.
Please confirm once again that the gender and ages of each household member have been entered on Page 6 of the survey form before sending in the form.
Survey forms that do not include the gender and ages of each household member will be considered invalid. Please make sure to enter such information.

Glossary

Index	Term	Definition
4	4K TV receiver	The 4K TV receiver is equipped with a display device with at least 3,840 active pixels horizontally and at least 2,160 pixels vertically to display 4K video signals (4K-enabled TV) and also with a function to receive 4K broadcast signals (4K TV)
B	Blog	Short for Weblog. A blog is a regularly updated Website with sequential articles much like a diary and comments posted about articles.
	BWA	Short for Broadband Wireless Access. BWA is a generic name for data communication services that use wireless (radio waves) in place of cables to convey signals. Examples include mobile WiMAX (UQ WiMAX from UQ Communications) and AXGP from Wireless City Planning.
C	Cable TV (CATV)	Refers to the application of cable TV cabling for Internet access.
	Computer virus	A program designed to damage or destroy a computer system. Computer viruses infect files via other files or email in order to reach and attack a computer system.
D	DSL	Short for Digital Subscriber Line. DSL permits existing phone lines to be used for high-speed Internet access with technologies that enables high-speed transmissions over phone lines. Variants include ADSL, VDSL, HDSL, and SDSL.
F	Forum	An Internet bulletin board service. When a user posts a message to a forum, all members of the forum can view the message. Other members can post replies to the original message.
	Fraudulent email	A type of scam involving sending fraudulent invoices randomly by email and demanding payment, or email with similar fraudulent demands.
	FWA	Short for Fixed Wireless Access. FWA is a system that involves installing an antenna at the subscriber's premises to connect wirelessly with the telecom's base station antenna.
I	Internet auction	A service that acts as an intermediary, in the form of an auction, between people wishing to buy and sell goods over the Internet.
	Internet banking, mobile banking	A service that provides bank transfers, balances, and other bank procedures via the Internet essentially 24 hours a day. Mobile banking services allow users to access the same banking procedures from mobile phones and other mobile devices via the Internet.
	IoT	Short for Internet of Things. The IoT technology enables everything from vehicles to appliances to be connected to the Internet to communicate with each other.
	ISDN	Short for Integrated Service Digital Network. ISDN is a general name for a digital communication network that integrates telephone, fax, telex, data communications, and other services.
L	LTE	Short for Long Term Evolution. Also called 4G, LTE is a mobile communication standard for high-speed data communications. Examples include Xi from NTT docomo, 4G LTE from au and Softbank 4G LTE from Softbank.
M	MVNO	Short for Mobile Virtual Network Operator. It is an operator that provides its own mobile services by leasing networks from a mobile operator with a government license to use a radio frequency, instead of acquiring such a licensee on its own. In this survey, MVNOs are mobile operators other than NTT docomo, au, Softbank and Ymobile.
O	Online gaming	Games that use the Internet so that multiple players can share in the same game experience.
	Optical fiber (FTTH)	A data communication service capable of very fast transmission speeds that uses optical fiber. Optical fiber is a cable made from glass fibers that is used as the transmission path for optical communications.

Index	Term	Definition
P	P2P	Short for Peer to Peer. P2P is the sharing of files between many computers via the Internet.
	Phishing	A type of fraud in which the attacker fakes emails from a real corporation or a real corporation's Website in order to get the victim to enter his or her PIN or password.
S	Smart appliances	Household electric appliances such as refrigerators or air-conditioner units with connectivity to the Internet or other networks.
	Smartphone	A mobile phone with the additional functionality of a personal portable information device. In addition to voice calls, smartphones can browse the Web, send and receive email, and view and create documents. Smartphones have open-source operating systems, and users are free to add apps as they like.
	SMS	Short for Short Message Service. SMS are services that send and receive short text messages and other information between mobile phones.
	Social media	Media where users create and distribute information, such as blogs, social networking sites, and video-sharing sites. Social media are distinctive in having various mechanisms to encourage users to connect with each other and to see connections visually.
	Social networking service (SNS)	Services that create social networks through exchanges via the Internet. Representative services include Facebook, Twitter and LINE.
	Spam	Email for promotional or advertising purposes sent to users without their consent.
T	Tablet	A flat portable information device that has a touch LCD panel for its visual display and is operated by finger touches. Leading tablets are Apple's iPad and Samsungs Galaxy Tab.
V	Video posting and sharing site	A Website on the Internet that allows users to post videos and share them for other users to view. Examples include YouTube, Dailymotion, and Niconico Douga.
	VOD	Short for Video On Demand. VOD is a service that steams video content as instructed by the user.
W	Wearable devices	Information devices which can be worn and carried. Examples include the glasses type and the watch type.

Confidential

Government

Ministry of Internal Affairs and Communications
2017 Communications Usage Trend Survey Form <<For Businesses>>

◎ This statistics survey has been conducted in accordance with the Statistics Act. The privacy of information collected in this survey will be surely protected. Your accurate and complete answers are appreciated.

(affix address label here)	Department / section of the respondent	
	Name of the respondent	
	Contact phone number	

Please note the following before completing the survey.

1 Please give answers reflecting the situation at your company **on September 30, 2017**, except where noted otherwise.

2 Submit the completed survey to: Economic Research Office, Information and Communications Bureau,
Ministry of Internal Affairs and Communications (MIC)
2nd Bldg. of the Central Common Government Office, 2-1-2 Kasumigaseki,
Chiyoda-ku, Tokyo 100-8786, Japan
*The survey form may also be obtained and submitted online.
For detailed information, please look at "Request for cooperation" enclosed herein.

3 If you have any questions, please contact the survey firm at:
"Communications Usage Trend Survey" Secretariat,
Public Opinion Research Center (contracted by MIC)
4-8-6 Sendagaya, Shibuya-ku, Tokyo 151-8509, Japan
Tel.: 0120-460-383 (toll free) (Between 10:00 and 17:00, on weekdays)

4 The Ministry of Internal Affairs and Communications has contracted the survey firm above to conduct this survey.

5 **Words defined in the Glossary are denoted with asterisks (*). Please refer to the Glossary as needed.**

Q1 Please answer questions about Internet connection at your company

What **Internet access connection or connections** does your company have? Please **circle all answers that apply.** Circle 10 if your company does not have Internet access.

1. Telephone (dial-up)	5. Fixed wireless access (FWA)*	9. Other
2. ISDN* Note	6. BWA access service*	10. No Internet access
3. Cable TV*	7. DSL*	
4. Optical fiber* (FTTH)	8. Leased line	

Note: If you use ISDN over an optical fiber connection, please circle 4 "Optical fiber (FTTH)."

Q2 The following questions concern your company's provision of information via the Internet.

(1) Does your company **have a Website**? Please **circle the one best answer**.

1. Yes	2. No

Supplementary Question: To **companies that have a Website**: What is **the purpose or application** of your Website?
Please **circle all answers that apply.**

1. Publicize / promote products or events	4. Accept applications or notifications	7. Collect consumers' ratings and opinions
2. Provide periodic information	6. Electronic public notices and financial statements	8. Other
3. Company profile / recruiting		

Supplementary Question 2: To **companies that use social media services**:
Is your Website compliant with the JIS X 8341-3:2016 standards regarding Web content accessibility*?
Please **circle the one best answer.**

1. It is compliant with Conformity Level AA
2. It is compliant with Conformity Level A
3. It is not compliant with Conformity Level A
4. No idea about whether our Website is compliant with JIS X 8341-3:2016

(2) Does your company **use** private **social media services***? Please **circle the one best answer**.

1. Yes	2. No

Supplementary Question 1: To **companies that use social media services**: For what **purpose or application** do you use social media?
Please **circle all answers that apply.**

1. Publicize / promote products or events	5. Accept applications or notifications
2. Marketing (excluding introduction or advertisement of goods or events)	6. Electronic public notices and financial statements
3. Provide periodic information	7. Collect consumers' ratings and opinions
4. Company profile / recruiting	8. Other

Q3 The following questions concern your company's usage of e-commerce.

(1) Does your company **use the Internet**[Note] **to make purchases or sales**? Please **circle all answers that apply**.

1. Make purchases from other companies over the Internet	3. Sell to consumers over the Internet (with services intended for computers)	5. None of the above
2. Sell to other companies over the Internet	4. Sell to consumers over the Internet (with services intended for mobile phones or smartphones)	

Note: This question includes both purchases made over the public Internet and purchases made over TCP/IP (the communication protocol used on the Internet*) networks, such as TCP/IP leased lines*.

Supplementary Question: To **companies that sell to consumers over the Internet**:
Which model or models do you use to sell to consumers? Please **circle all answers that apply**.

1. E-store (own site)	3. Sales broker	5. Other
2. E-store (store in an e-mall)	4. Online trading	

(2)   Does your company **use Internet advertising**? Please **circle the one best answer**.
        Circle 13 if your company does not use Internet advertising.

1. Yes	2. No

Supplementary Question 1: To **companies that answered 1 to (2) above**:
        To what medium do you give priority for advertisement? Please circle all answers that apply.

1. Internet (Website, etc.)	3. Mail (mail magazines, DM ad, etc.)
2. Internet (Web ads, etc.)	4. SNS services (Twitter, Facebook, etc.)

Supplementary Question 2: To **companies that answered 1 to (2) above**:
        What are target devices/terminals? Please circle all answers that apply.

1. Computers	5. Internet-enabled TV receivers
2. Mobile phones (including PHS handsets)	6. Other devices (game consoles, etc.)
3. Smartphones	7. Leave it to ad agents to select devices
4. Tablets	

Supplementary Question 3: To **companies that answered 1 to (2) above**:
        Why do you use Internet advertising? Please **circle all answers that apply**.

1. Easy to measure advertising effects	4. Able to provide information over a wide area
2. Inexpensive ad prices	5. Indirect effects through SNS services are high
3. Able to target ads to the needs of individual consumers	

Supplementary Question 4: How effective in general was Internet advertising regarding the reasons cited in response to
        Supplementary Question 3? Please **circle the one best answer**.

1. Very effective	4. Has negative effect
2. Somewhat effective	5. No idea about effectiveness
3. Not so effective	

Q4 The following questions concern your company's introduction and usage of IoT and AI.

(1) Has your company introduced IoT[Note 1] or AI[Note 2] systems or services?
Please **circle the one best answer**.

		IoT(Collection of digital data through networks)		
		Has introduced	Has not introduced but is considering introducing	Has not introduced or planned to introduce
AI (data analysis)	Has introduced	1	4	7
	Has not introduced but is considering introducing	2	5	8
	Has not introduced or planned to introduce	3	6	9

Note 1: The IoT here means that various things (including not only information and communications devices like computers, smartphones and tablets but also sensors, office equipment, home appliances, industrial machines, crime/disaster-preventing equipment, vehicles, etc.) are connected via the Internet, LANs and other networks to allow their states to be collected and accumulated

Note 2: The AI (artificial intelligence) here means learning, inferring, knowing, judging, etc. through data analysis.

(2) To **companies that answered "has introduced IoT" or "has not introduced but is considering introducing IoT" to (1) above**
Which system or service has your company introduced or been considering introducing?
Please **circle all answers that apply**.

1. Smart meter energy management system

2. Physical security equipment

3. Image authentication control

4. Systems or services using GPS, mobile phone or any other localization function
5. Computer management with wearable devices

6. Healthcare equipment (X-ray or supersonic)

7. Electronic tags
   (RFID (Radio Frequency Identification) tags)

8. Non-contact IC cards
   (NFC (Near Field Communication) cards, etc.)
9. Equipment with additional network functions
   (network cameras, sensors, etc.)
10. Smart lighting equipment

11. Industrial robots (including AI-controlled robots, unmanned robots and automatic fault detectors)
12. Monitoring cameras

13. Cellular modules for automobiles

14. Drones

15. Others

(3) To **companies that answered "has introduced IoT" to (1) above**
How does your company utilize collected and accumulated data?
Please **circle one number that applies** to each of "Improvement of existing business operations" and "Development/deployment of new products/services"

	Improvement of existing business operations	Development/deployment of new products/services
Positively utilizing	1	1
Utilizing to some extent	2	2
Not utilizing but considering utilizing	3	3
No plan to utilize	4	4
No idea	5	5

(4) To **companies that answered "Has not introduced or planned to introduce IoT" to (1) above**
What are reasons for refraining from introducing IoT? Please **circle all answers that apply**.

1. Insufficient communication infrastructure for the IoT introduction

2. We don't know laws, reuglations or rules for using or inroducing IoT

3. Business models after the IoT introduction are unclear

4. IoT introduction and operation costs

5. No human resources are available for using IoT

6. We don't know what IoT is

Q5   The following questions concern your company's use of cloud computing.

(1)   Does your company **use cloud computing** (the cloud)^Note? Please **circle the one best answer**.

1. Used company wide	3. Not used, but plan to use
2. Used by some offices or divisions	4. Not used, and have no plans to use
	5. Do not understand cloud services

Note: Cloud computing is a technology that provides, as a service, users with network-based computer assets when needed and in the amount needed via broadband or other Internet connection methods. An example is software as a service* (SaaS) provided by application service providers* (ASP).

(2)   To **companies that answered either 1 or 2 to (1) above**:
Which specific **cloud computing services** does your company **use**? Please **circle all answers that apply**.

1. Server applications	8. Sharing information with business partners	14. Order taking and sales
2. File storage / data sharing	9. Sales support	15. Purchasing
3. Data backups	10. R&D related	16. Production management, distribution management, store management
4. Internal information sharing / portal	11. System development and Website construction	
5. Email		17. Billing and payment systems
6. Schedule sharing	12. e-Learning	18. Authentication systems
7. Project management	13. Payroll, financial accounting, HR	19. Other

(3)   To **companies that answered either 1 or 2 to (1) above**:
Why do you use cloud computing services? Please **circle all answers that apply**.

1. Costs are lower than existing systems	7. Improve operational stability and availability
2. No need to have internal asset and storage systems	8. The Same services are available irrespective of location or equipment
3. Quick response capability, such as upgrading system capacity	
4. Easy system scalability	9. Useful as a backup at the time of disaster
5. Reliability of services and security against information leaks are high	10. Other
6. Offered by system vendor	

(4)   To **companies that answered either 1 or 2 to (1) above**:
What impact has cloud computing had on the purposes given above? Please **circle the one best answer**.

1. Very beneficial	3. Not very beneficial	5. Do not know the impact
2. Somewhat beneficial	4. Negative impact	

(5)   To **companies that answered 4 to (1) above**:
Why does your company not use cloud computing services? Please **circle all answers that apply**.

1. Considerable cost to retool existing systems when introducing cloud services	6. Information theft and other security concerns
	7. No legal system in place
2. Cloud services would hinder corporate compliance	8. Not necessary
3. Increase in communication costs	9. Do not see the advantages, not convinced by the advantages
4. Cannot customize applications to suit needs	
5. Concerns about network stability	10. Other

Q6 The following question concerns your company's introduction of telework.

(1) Has your company **introduced Telework**[Note]? Please **circle the one best answer**.
(**If your company has introduced Telework, circle all answers of a, b, and c that your Telework includes**.)

> 1. Have introduced Telework (a Working from home   b Satellite office work   c Mobile work)
>   (Please answer questions (2), (3), and (4) below)
>
> 2. Not introduced, but have specific plans to introduce telework
> 3. Not introduced, and have no specific plans to introduce telework
>   (Please answer question (5) below)

Note: *Telework* is a working arrangement where the worker works in a location physically separate from the company's building but with nearly the same work environment as in the company's building by means of communication networks. Depending on the worker's work location, telework is called **working from home, satellite office work (where the worker works at an office that is not the original work place), or mobile work (where the worker, such as a salesperson, works using a mobile information device while out of the office)**.

To **companies that answered 1 to (1) above**.

(2) **What percentage of your employees use Telework**? Please **circle the one best answer**.

> 1. Less than 5 percent
> 2. 5 percent to less than 10 percent
> 3. 10 percent to less than 30 percent
> 4. 30 percent to less than 50 percent
> 5. 50 percent to less than 80 percent
> 6. 80 percent or more

(3) **What were the purposes of introducing Telework** at your company?
Please **circle all answers that apply**.

> 1. Raise efficiency (productivity) of routine business processes
> 2. Improve creativity of creative, value-added business processes
> 3. Provide healthy, comfortable lives for workers
> 4. Reduce office costs
> 5. Reduce workers' travel times
> 6. Increase customer satisfaction
> 7. Attract better employees
> 8. Support people who have difficulty using public transportation (physically disabled, older people, pregnant women, etc.)
> 9. Counter global warming by lowering CO2 emissions through transportation alternatives
> 10. Conserve energy and electricity
> 11. Prepare for business continuity in the event of emergencies (earthquakes, super-flu outbreaks, etc.)
> 12. Other

(4) What has been the overall **impact** of Telework on the purposes given in (3) above?
Please **circle the one best answer.**

> 1. Very beneficial
> 2. Somewhat beneficial
> 3. Not very beneficial
> 4. Negative impact
> 5. Do not know the impact

(5) To **companies that answered 3 to (1) above**:
Please **circle all reasons why you have not introduced** telework?

> 1. Work is not suited to telework
> 2. Difficult to advance work operations
> 3. Do not see the advantage of introducing telework
> 4. Difficult to assess employees
> 5. Impedes office / internal communications
> 6. Shifts burden to other employees
> 7. No requests from union or employees
> 8. Concern about information security breaches
> 9. Impedes handling customers and other external entities
> 10. Too expensive
> 11. Troublesome to introduce an HR system
> 12. Difficult to calculate wages
> 13. Have not moved to digital documents
> 14. Other
> (   )

(6) **What does your company think are factors required for diffusing rural Telework*?**
Please **circle all answers that apply**.

<Inhouse measures>
1. Labor management improvement   2. Business environment development 3. ICT system improvement   4. Other

<National and local government measures and support>
5. Telework diffusion and encouragement campaigns (seminars, leaflets, etc.)
6. Supporting/subsidizing companies introducing telework
7. Matching between companies and local governments accepting them
8. Supporting the development of satellite offices and other business bases
9. Supporting the operation of satellite offices and other business bases
10. Training teleworkers (seminars, training, etc.)
11. Other support measures by national or local governments

*Rural telework uses rural satellite offices, etc. for doing urban business operations.

Q7   The following questions concern how to train and secure ICT human resources
(1)   Does you company have enough ICT human resources? If no, what kinds of ICT human resources are short?
Please **circle all answers that apply.**

1. Network engineers	5. IoT system engineers at user companies
2. System development engineers	6. IoT system and other security engineers
3. Data scientists	7. Others
4. SDN/NFV (Software Defined Network/Network Function Virtualization) human resources	8. No human resources shortage

(2)   To companies that circled any of 1 to 7 in (1). What measures has your company taken to secure ICT human resources?
Please **circle all answers that apply.**

1. Employment of new Japanese graduates	7. Outsourcing (overseas)
2. Employment of experienced Japanese	8. Crowdsourcing
3. Employment of new foreign graduates	9. Development of flexible work styles including telework (to maintain employment or prevent employees from leaving jobs)
4. Experienced foreigners	
5. Inhouse human resources training	10. Other
6. Outsourcing (domestic)	

(3)   What does your company think are capabilities required for human resources sought for AI proliferation?
Please **circle all answers that apply.**

1. Challenging spirit, independence, activeness, insight and other human qualities	4. Information-collecting, problem-solving, logical thinking and other business performance capabilities
2. Inventiveness and creativity	5. Language, understanding, expression and other basic skills
3. Communication, coaching and other human relations capabilities	6. Others

Q8   The following questions ask companies that use ICT networks (intranets, inter-company networks*, the Internet, etc.) about their security measures.

(1)   Have any **security breaches occurred** in the past year in the use of ICT networks at your company?
Please **circle all answers that apply**. **Circle 10 if no security breaches occurred.**

1. Have received targeted emails[Note 1]	6. DoS (DDoS) attack* [Note 3]
2. Discovered a computer virus* but not infected	7. Website defacement
3 Discovered a computer virus and at least one incidence of an infection	8. Data breach due to theft or negligence
4 Illegal access[Note 2]	9. Other losses
5 Used as a spam* bot or zombie	10. No breaches

Note 1:   Unlike spam that is sent to random recipients, targeted email , which often has virus attachments, is sent to a specific organization or person with the objective of stealing confidential information.
Note 2:   Illegal access means infiltrating a company or individual's computer system without permission and causing system failures or making use of the system without authorization.
Note 3:   DoS attack is an attack where the attacker sends massive amounts of packets to a server to bring down a system or disrupt services.

Supplementary Question: To **companies that answered 1 to (1) above**:
What happened as a result of receiving targeted emails? Please **circle the one best answer**.

1. Targeted emails reached an employee's device and there was at least one incidence of a computer virus infection
2. Targeted emails reached an employee's device, but there were no computer virus infections
3. Anti-virus programs and other measures blocked all targeted emails before reaching any device

(2)   **What measures** has your company taken **for data security and anti-virus protection on ICT networks**?
Please **circle all answers[Note 1] that apply.**

1. Establish security policies	12. User authentication by means of authentication technologies
2. Security audits	13. Encrypt data or networks
3. Outsource security management	14. Line monitoring
4. Training for employees	15. Install and maintain firewalls
5. Install anti-virus programs on computers and other devices (operating system, software, etc.)	16. Use proxy servers*, etc.
6. Install anti-virus programs on servers	17. Install and maintain intrusion detection systems (IDS)* [Note 2]
7. Apply security patches* for operating systems	18. Install and maintain Web application firewalls
8. Construct anti-virus walls at external access points	19. Other measures
9. Establish manuals on responding to viruses	20. No particular measures
10. Control access with IDs, passwords, etc.	
11. Maintain access logs	

Note 1:   Regardless of your answer to 3. "Outsource security management", circle all applicable answers even if the measures are implemented in part with the use of external suppliers or external services.
Note 2:   Includes intrusion protection systems (IPS).

Supplementary Question: To **companies that answered 1 to (2) above**:
Does your company's security policies have **rules on the use of smartphones in work operations**?
Please **circle the one best answer**.

1. Prohibit all use	4. Permit the use of both company-supplied smartphones and personal smartphone
2. Permit use of only company-supplied smartphones	5. Have no specific rules
3. Permit use of personal smartphones for work operations	

(3) Does your company plan to increase inhouse security personnel?
Please **circle all answers that apply**.

1. CISO (Chief Information Security Officer), etc.
2. System division manager
3. System manager
4. System operator
5. Incident response personnel
6. Operation, CSIRT (Computer Security Incident Response Team) and SOC (Security Operation Center) personnel
7. Other human resources
8. No plan to do so

(4) **What measures** has your company taken **against targeted email**?
Please **circle all answers that apply**.

1. Training for employees
2. Install anti-virus programs on computers and other devices (operating system, software, etc.)
3. Install anti-virus programs on servers
4. Apply security patches for operating systems
5. Construct anti-virus walls at external access points
6. Enhance access controls for servers and other devices that store sensitive data
7. Maintain access logs
8. Line monitoring
9. Use proxy servers,* etc.
10. Install and maintain intrusion detection systems (IDS)[Note]
11. Share information between organizations and divisions
12. Install a sender policy framework (SPF)*
13. Other measures
14. No particular measures

Note: Includes intrusion protection systems (IPS).

Q9 The following questions concern data utilization at your company.

(1) Does your company utilize or plan to utilize personal data (customer information, registered information, etc.) gained from services, etc. for developing and providing services? Please **circle the one best answer**.

Note: Data utilization in this question includes data provision to other companies (third parties).

1. Already utilizing positively
2. Utilizing to some extent
3. Not utilizing but considering utilizing
4. No plan to utilize
5. No idea

Supplementary Question: To **companies that answered 1, 2 or 3 to (1) above**:
For what purposes does your company utilize or want to utilize personal data?
Please **circle all answers that apply**.

1. Inhouse utilization for expanding or enhancing existing business operations and models
(In all business stages including product planning, production, distribution/sales and after-sale services)
2. Inhouse utilization for creating new business operations and models (within the industry or sector to which your company belongs)
(In all business stages incuding product planning, production, distribution/sales and after-sale services)
3. Inhouse utilization for creating new business operations and models (to expand into other industries, sectors or layers)
(In all business stages including product planning, production, distribution/sales and after-sale services)
4. Providing data to other companies (selling data, etc.)
5. Others

(2) Please **circle all answers that apply** about challenges and obstacles assumed at present and for the future regarding the treatment and utilization of personal data

1. The definition of personal data is unclear (It is difficult to decide if specific data are persona data or not)
2. Personal data collection and management costs are increasing
3. Incident risks and social responsibilities regarding personal data management are great (data leaks, etc.)
4. Reputation risks accompanying personal data treatment (repercussion from consumers even if legal problems are not involved, etc.)
5. Lack of personal data utilization methods in business operations, unclear cost-effectiveness
6. Shortage of human resources for treating (processing, analyzing, etc.) data
7. Others
8. No particular challenge or obstacle

Q10 The following question concerns issues associated with ICT network (intranets, inter-company networks, the Internet, etc.) usage and issues preventing ICT network usage.
What issues do you see associated with usage of ICT networks?
For companies that do not use ICT networks, what issues are preventing you from using ICT networks?
Please **circle all answers that apply**.

1. Difficulties in establishing security measures
2. Rising operational and management costs
3. Lack of operational and administrative personnel
4. Difficulties in restoring operations after a fault
5. Concern about protection of copyrights and intellectual property
6. Concern about virus infections
7. Difficulties in achieving benefits from network adoption
8. Difficulties in quantifying benefits of network adoption
9. Concern about the reliability of authentication technology
10. Concern about the reliability of electronic payments
11. Low security awareness among employees
12. High communication charges
13. Low communication speeds
14. Other
15. No particular issues

Q11 The following questions concern ICT usage at the time of disaster

Has your company taken the following ICT measures based on a BCP (Business Continuation Plan) at the time of emergency like disaster? Please **circle all answers that apply**.

1. Backing up data
2. Securing information system redundancy
3. Securing communication circuit redundancy
4. Digitizing data
5. Using cloud computing service
6. Has not prepared a BCP but decided to do so
7. Has not prepared or planned to prepare a BCP

Q12 The following questions concern the administrative sector's measures required for promoting companies' ICT utilization.

(1) What measures does your company want national and local governments to take?
Please **circle all answers that apply**.

1. Online administrative procedures	6. Developing system standards, etc.
2. Opening national government data	7. Securing consistency between national and local government measures
3. Opening local government data	
4. Developing data distribution infrastructure (information banks, etc.)	8. Training and securing human resources
	9. Promoting "My Number Card" diffusion
5. Resolving the digital divide	10. Improving ICT user protection and information literacy

(2) To **companies that answered 2 and/or 3 to (1) above:**
What kind of data does your company want national or local governments to open?
Please **circle all answers that apply**.

1. Maps, land features, geology	7. Statistical data
2. Transportation	8. Environment/energy
3. Disaster prevention	9. Tourism
4. Crime prevention	10. Education
5. Urban planning/construction	11. Various public facilities
6. Healthcare, nursing care, welfare	12. Others

(3) To **companies that answered 2 and/or 3 to (1) above:**
What measures does your company think should be taken by national or local governments to enable ordinary people to easily utilize open data on the Internet? Please **circle all answers that apply**.

1. Improving data accuracy	4. Publishing data in machine-readable formats to enable processing through automatic cooperation of data
2. Improving data-updating schedules and frequency	
3. Implementing secondary data utilization rules allowing data to be freely edited or processed	5. Others

<Questionnaire> The following question concerns the answering method for this survey.

Would you like to respond to this survey online (via the Internet)?

Please **circle the one best answer**.

1. Yes	2. No	3. Don't know

The final questions concern general aspects of your company.

You may attach a copy of your annual financial statement in lieu of completing the answers on this form if the financial statement contains the same information as the questions. Please underline the relevant sections in the financial statement.

F1   What is the capitalization value (sum of investments and funds) of your company?

Please **circle the one best answer**.

1. Less than ¥10 million	4. ¥50 million to less than ¥100 million	7. ¥1 billion to less than ¥5 billion
2. ¥10 million to less than ¥30 million	5. ¥100 million to less than ¥500 million	8. ¥5 billion or more
3. ¥30 million to less than ¥50 million	6. ¥500 million to less than ¥1 billion	

F2   What are the **annual sales**[Notes1,2] of your company? Please indicate your annual sales to **the nearest million yen**.

[   ] million yen

Note 1:   Please enter your FY 2016 sales (the year April 2016 through March 2017). If this is difficult to calculate, please enter the most recently calculated annual sales.

Note 2:   Companies in the banking industry, please enter your income before tax; life insurance companies, please enter your insurance contributions, etc.; and non-life insurance companies, please enter your net premiums written.

F3   What is the **operating profit**[Notes1,2] of your company? Please indicate your operating profit to **the nearest million yen**.

[   ] million yen

Note 1:   Please enter your FY 2016 operating profit (the year April 2016 through March 2017). If this is difficult to calculate, please enter the most recently calculated annual operating profit.

Note 2:   Companies in the banking industry, please enter your net operating profit; life insurance companies, please enter your basic profits; and non-life insurance companies, please enter your underwriting profit.

F4   What are the **labor costs**[Note] of your company? Please indicate your labor costs to **the nearest million yen**.

[   ] million yen

Note: Please enter your FY 2016 labor costs (the year April 2016 through March 2017). If this is difficult to calculate, please enter the most recently calculated annual labor costs.

F5   What are the **deprecation costs**[Note] of your company? Please indicate your deprecation costs to **the nearest million yen**.

[   ] million yen

Note: Please enter your FY 2016 deprecation costs (the year April 2016 through March 2017). If this is difficult to calculate, please enter the most recently calculated annual deprecation costs.

F6   What is the **amount of** your company's **fixed assets**[Note]? Please indicate your deprecation costs to **the nearest million yen**

[   ] million yen

Note: Please fill in the amount of fixed assets as of the end of FY 2016. If it is difficult to identify the amount as of the end of FY 2016, please fill in the amount as of the end of the most recent fiscal year for which the figure is available.

F7   How many **full-time employees**[Note] does your company have?

[   ] employees

Note: Full-time employees: This is the number of full-time employed people at your company as of September 1, 2017 or the nearest payroll deadline date. This definition includes people called temporary workers, day laborers, or part-time workers with employment contracts longer than one month and includes people employed on the date of the survey who worked 18 days or more in both Jluly and August 2017.

◎ **This completes the survey questions. Please <u>return the completed survey form in the enclosed return envelope. No postage stamp is required.</u>**

Thank you for your participation.

Glossary

Index	Term	Definition
A	ASP	Short for Application Service Provider. An ASP is a business that provides customers with business applications over the Internet.
B	BWA	Short for Broadband Wireless Access. BWA is a generic name for data communication services that use wireless (radio waves) in place of cables to convey signals. Examples include mobile WiMAX (UQ WiMAX from UQ Communications) and AXGP from Wireless City Planning.
C	Cable TV (CATV)	Refers to the application of cable TV cabling for Internet access.
	Computer virus	A program designed to damage or destroy a computer system. Computer viruses infect files via other files or email in order to reach and attack a computer system.
D	DoS (DDoS)	DoS is short for Denial of Service. It is a type of attack where the attacker sends massive amounts of data to the target computer or router to disrupt the normal operation of the targeted business or organization's systems.
	DSL	Short for Digital Subscriber Line. DSL permits existing phone lines to be used for high-speed Internet access with technologies that enables high-speed transmissions over phone lines. Variants include ADSL, VDSL, HDSL, and SDSL.
F	FWA	Short for Fixed Wireless Access. FWA is a system that involves installing an antenna at the subscriber's premises to connect wirelessly with the telecom's base station antenna.
I	IDS	Short for Intrusion Detection System. An IDS monitors communication lines and notifies an administrator when it detects a network intrusion.
	Inter-company network	Refers to a communication network that connects to another or other companies.
	Intranet	Refers to a communication network on the same premises or a communication network between the head office and branch offices or work sites of the same company.
	ISDN	Short for Integrated Service Digital Network. ISDN is a general name for a digital communication network that integrates telephone, fax, telex, data communications, and other services.
J	JIS X 8341-3:2016	JIS X 8341-3:2016 is officially called "Guidelines for older persons and persons with disabilities—information and communications equipment, software and services— Part 3: Web content," aiming to allow all people including older persons and persons with disabilities to use Web content irrespective of terminals, Web browsers, support technologies, etc. The guidelines provide for standards for three levels of accessibility – Level A, Level AA and Level AAA – that Web content should meet.
L	Leased line	A communication service that directly connects a specific network segment with a line reserved for the client's sole use.
O	Optical fiber (FTTH)	A data communication service capable of very fast transmission speeds that uses optical fiber. Optical fiber is a cable made from glass fibers that is used as the transmission path for optical communications.
P	Protocol	A protocol is a set of predetermined conventions that allows computers to communicate via a network.

Index	Term	Definition
	Proxy server	A proxy server is a computer placed at the boundary of the Internet and a corporate or other internal network. This computer connects to the Internet as a "proxy" for computers in the internal network that cannot directly access the Internet.
S	SaaS	Short for Software as a Service. SaaS is a mechanism that provides the functions of software applications to customers as needed over a network.
	Security patch	A program distributed to repair another software program when a security hole is discovered in the program.
	Social media	Media where users create and distribute information, such as blogs, social networking sites, and video-sharing sites. Social media are distinctive in having various mechanisms to encourage users to connect with each other and to see connections visually.
	Spam	Email sent in massive volumes indiscriminately without regard for any attribute the recipients. Spam has become a problem because of the traffic it places on the public Internet.
	SPF	Short for Sender Policy Framework. SPF is a technology that prevents falsification of an email sender's address.