



Confidential

General Statistical Survey National Institute of Science and Technology Policy, MEXT

# Japanese National Innovation Survey 2022 Questionnaire

政府統計

- This survey is conducted as the General Statistical Survey pursuant to the Statistics Act (Act No.53 of 2007).
- **This survey targets all the enterprises, including the enterprises that have never realised any innovations.**
- This survey will be used for statistical purposes only, and will not be used for any purposes that may cause concern to the respondents. Please therefore fill in accurate information.
- **In this survey, "year" refers to "calendar year". For example, "2021" is the period "from 1st January 2021 to 31st December 2021". If information is not available for the calendar year, your response may cover the latest fiscal year defined in your enterprise's accounting.**
- **Please submit a filled-out questionnaire by Monday, 31st October 2022.**
- **Response to this survey is acceptable by using the online response system (<https://www.nistep.go.jp/jnis2022>), as well as by posting a filled-out questionnaire.** Please log in the online response system with your ID and Password above.

Please provide details of a person in charge of responding to this questionnaire.

We may contact with the person if there are any inquiries regarding the information replied on this questionnaire.

Corporate Number (Please fill in the 13 digit "Corporate Number")

|      |          |       |
|------|----------|-------|
| Name | Division | Phone |
|------|----------|-------|

## 1 Enterprise Group<sup>\*1</sup> (as of the end of 2021)

### 1-1 As the end of 2021, was your enterprise part of an enterprise group?

Please tick (✓) one circle ○ where it is applicable.

- Part of an enterprise group with the head office located in **Japan** ○
- Part of an enterprise group with the head office located in a **foreign country** ○
- Stand-alone**, with no part of any enterprise group (no parent and subsidiary) ○

\*1) In this survey, an "enterprise group" of your firm refers to your enterprise as well as a group consisted of your parent company and your subsidiaries. "Parent company" is defined as an enterprise owning a majority of all votes of your enterprise, or one controlling the management of your enterprise. "Subsidiary" is defined as an enterprise a majority of all votes of which is owned by your enterprise, or one the management of which is controlled by your enterprise.

Please answer all the following questions **only for your enterprise**; Do not include results for all other enterprises of the group.

## 2 Persons employed, etc.<sup>\*2</sup>

|   | 2019                           | 2021                           |
|---|--------------------------------|--------------------------------|
| 2-1 N of persons employed   | <input type="text"/>           | <input type="text"/>           |
| 2-2 To 2-1, the ratio of full-time employees or staff <sup>*3</sup>   | approx. <input type="text"/> % | approx. <input type="text"/> % |
| 2-3 To 2-1, the ratio of the persons who completed tertiary education <sup>*4</sup>   | approx. <input type="text"/> % | approx. <input type="text"/> % |
| 2-4 To 2-3, the ratio of the persons who completed master or doctoral course in a graduate school                                       | approx. <input type="text"/> % | approx. <input type="text"/> % |
| 2-5 To 2-3, the ratio of the persons who hold a doctoral degree (completed doctoral course or earned a doctoral degree by dissertation) | approx. <input type="text"/> % | approx. <input type="text"/> % |

\*2) In this survey, "persons employed" refer to all working people who belong to the enterprise. They include those who are loaned or dispatched to a separately managed enterprise such as another company or subcontractor. In contrast, they do not include those who do not receive wages or salaries (including salaries in kind) from the enterprise - the persons who are loaned or dispatched from a separately managed enterprise such as another company or subcontractor - even if they work at the enterprise.

\*3) In this survey "full-time employees or staff" refer to those regular employees who are generally called "full-time employees" or "full-time staff". They do not include those who are called "contract employees", "part-timers", or similar.

\*4) In this survey, "persons who completed tertiary education" refer to those who hold any of the following degrees or titles or equivalent degrees earned in foreign countries: Doctoral Degree (completion of a doctorate course), Master's Degree (completion of a master course), Professional Degree ("Juris Doctor", "Master of Education", "Master (Professional)", etc.) (completion of a program in a law school, a graduate school of teacher education, or a professional graduate school), Bachelor's Degree (graduation from an university, including "professional and vocational university"), Associate Degree (graduation from a junior college, including "professional junior college"), Associate (graduation from a college of technology), Advanced Diploma (graduation from a post-secondary course with more than four years in a specific professional training college) or Diploma (graduation from a post-secondary course with two or three years in a specific professional training college).

## 3 Total Turnover from Goods or Services (except VAT)<sup>\*5</sup>

|                | 2019                 | 2021                 |
|----------------|----------------------|----------------------|
| Total Turnover | <input type="text"/> | <input type="text"/> |

\*5) Please report "ordinary revenue" if your enterprise is a financial institution. Please report "insurance premiums and other" or "net premiums written" if your enterprise is an insurance company.

## 4 Foundation Year (the year of starting business activities)<sup>\*6</sup>

Of the Christian Era,

\*6) In this survey, "foundation year" refers to the year of starting business activities for your enterprise. If this information is not available, "establishment year" can be used instead. It refers to the year in which the legal personality of your enterprise as of the end of 2021 was entitled by the Commercial and Corporate Registration. In general, "foundation year" sometimes differs from "establishment year".

Please answer all the following questions for **your business during the three years from 2019 to 2021, or your status in 2021.**

## 5 Market Condition

### 5-1 Countries or regions in which the enterprise sold products or delivered services (during the three years from 2019 to 2021)

Please tick (✓) all boxes □ where they are applicable concerning the countries or regions [a] to [f].

| [a]                      | [b]                      | [c]                      | [d]                      | [e]                      | [f]                      |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Japan                    | China                    | ASEAN, Korea, Taiwan     | North America            | EU, EFTA, UK             | Others                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

### 5-2 Number of competitors on goods or services (during the three years from 2019 to 2021)

Please tick (✓) one circle ○ where it is applicable as the number of competitors on goods or services in each of the areas (a) and (b).

|                       | 0                        | 1-4                      | 5-9                      | 10-14                    | 15-49                    | More than 50             |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| (a) Japan             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Foreign countries | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

### 5-3 Factors influencing the competitive situation of goods or services (during the three years from 2019 to 2021)

Please tick (✓) one circle ○ where it is applicable as the degree of impact in each of the factors (a) to (h).

|   | Influenced               |                          |                          | Not Influenced           |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
|   | Influence: High          | Influence: Moderate      | Influence: Low           |                          |
| (a) Quickly <b>outdated</b> goods or services                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Difficult prediction of future <b>technological development</b>         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) <b>Substitution</b> of your goods or services with those of competitors | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (d) Threatened <b>market position</b> due to the entry of new competitors   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (e) Difficult prediction of <b>competitors' actions</b>                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (f) Difficult prediction of <b>change in demand</b>                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (g) Strong <b>competition from abroad</b>                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (h) <b>Price increases</b> leading to loss of clients                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

## 6 Strategies and Knowledge Flows

### 6-1 Strategies for the economic performance<sup>\*7</sup> (during the three years from 2019 to 2021)

Please tick (✓) one circle ○ where it is applicable as the degree of focus in each of the strategies (a) to (j).

|   | Adopted                  |                          |                          | Not adopted              |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
|   | Importance: High         | Importance: Moderate     | Importance: Low          |                          |
| (a) Focus on improving your <b>existing goods or services</b>       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Focus on introducing <b>new goods or services</b>               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) Focus on <b>low-price</b> of goods or services                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (d) Focus on <b>high-quality</b> of goods or services               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (e) Focus on a <b>broad range</b> of goods or services              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (f) Focus on small number of <b>key goods or services</b>           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (g) Focus on satisfaction of <b>established customers</b>           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (h) Focus on reaching out to <b>new customer groups</b>             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (i) Focus on <b>standardised goods or services</b>                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (j) Focus on <b>customer-specific solutions</b> (goods or services) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

\*7) Economic performance refers to the results of corporate activities such as firm size-growth (sales and employment growth), profit margins and return on capital, and market share, etc.

### 6-2 Activities concerning intellectual property rights (during the three years from 2019 to 2021)

Please tick (✓) one circle ○ of either "Yes" or "No" in each of the activities (a) to (k) and of the status (l) and (m).

|   | Yes                      | No                       |
|---|--------------------------|--------------------------|
| (a) Apply for a <b>patent</b>   | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Register an <b>industrial design right</b>  | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) Register a <b>trademark</b>   | <input type="checkbox"/> | <input type="checkbox"/> |
| (d) Exercise a <b>copyright</b> (Identify your produced works as your enterprise's rights to others)  | <input type="checkbox"/> | <input type="checkbox"/> |
| (e) Use <b>trade secrets</b> (Ensure legal protections by keeping technical or business information useful for business activities confidential and not publicly known)                 | <input type="checkbox"/> | <input type="checkbox"/> |
| (f) <b>License out</b> its own intellectual property rights (IPRs) (patent, industrial design right, trademark, copy right, trade secrets, etc.) to others                              | <input type="checkbox"/> | <input type="checkbox"/> |
| (g) <b>Sell</b> (or assign) its own IPRs to others  | <input type="checkbox"/> | <input type="checkbox"/> |
| (h) <b>Exchange</b> its own IPRs with others (pooling, cross-licensing, etc.)   | <input type="checkbox"/> | <input type="checkbox"/> |
| (i) Purchase or license-in IPRs from <b>private business enterprises or individuals</b>   | <input type="checkbox"/> | <input type="checkbox"/> |
| (j) Purchase or license-in IPRs from <b>universities or other higher education institutions</b>   | <input type="checkbox"/> | <input type="checkbox"/> |
| (k) Purchase or license-in IPRs from <b>public research organisations</b>   | <input type="checkbox"/> | <input type="checkbox"/> |
| (l) Activities concerning IPRs have been <b>obstructed</b> by relationships with others. (e.g. restriction of patent applications by partner businesses)                                | <input type="checkbox"/> | <input type="checkbox"/> |
| (m) Existing IPRs have <b>not been exercised freely</b> by relationships with others (e.g. restriction of production or sales of products, which have used IPRs, by partner businesses) | <input type="checkbox"/> | <input type="checkbox"/> |

### 6-3 Usage of digitalisation (during the three years from 2019 to 2021)

Please tick (✓) all boxes □ where they are applicable as the purpose of usage in each of the digitalisation [a] to [e]. However, if there is nothing applicable, please tick the box "Not used" only.

| Purpose of usage                    | Used                                 |                                   |   |  |                          | Not used                 |
|-------------------------------------|--------------------------------------|-----------------------------------|---|--|--------------------------|--------------------------|
|                                     | Improving existing goods or services | Introducing new goods or services | Business process automation or cost reduction | Data analysis and collection, or decision-making support | Others                   |                          |
| [a] <b>Internet of Things (IoT)</b> | <input type="checkbox"/>             | <input type="checkbox"/>          | <input type="checkbox"/>                      | <input type="checkbox"/>                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| [b] <b>Cloud computing services</b> | <input type="checkbox"/>             | <input type="checkbox"/>          | <input type="checkbox"/>                      | <input type="checkbox"/>                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| [c] <b>Big data analysis</b>        | <input type="checkbox"/>             | <input type="checkbox"/>          | <input type="checkbox"/>                      | <input type="checkbox"/>                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| [d] <b>Machine learning (AI)</b>    | <input type="checkbox"/>             | <input type="checkbox"/>          | <input type="checkbox"/>                      | <input type="checkbox"/>                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| [e] <b>3D printing</b>              | <input type="checkbox"/>             | <input type="checkbox"/>          | <input type="checkbox"/>                      | <input type="checkbox"/>                                 | <input type="checkbox"/> | <input type="checkbox"/> |

### 6-4 Usage of robotics to replace tasks (during the three years from 2019 to 2021)

Please tick (✓) one circle ○ where it is applicable as the degree of impact in each of the robotics (a) and (b).

|  | Used   |                          |                          | Not used                 |
|--|--|--------------------------|--------------------------|--------------------------|
|  | Extent to which tasks have been substituted or reduced | Extent: High             | Extent: Moderate         |                          |
| (a) <b>Industrial robot</b> (e.g. welding, laser cutting, spray painting robots) | <input type="checkbox"/>                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) <b>Service robot</b> (e.g. surveillance, cleaning, transportation robots)    | <input type="checkbox"/>                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

## 7 New or Improved Goods or Services

### 7-1 New or improved goods or services<sup>\*8</sup> which have been introduced on the market by your enterprise (hereinafter, "product innovation") (during the three years from 2019 to 2021)

Please tick (✓) one circle ○ of either "Yes" or "No" in each of (a) and (b). If the answer is "Yes", please tick (✓) a box □ regarding the one for responding to COVID-19 where it is applicable in (a) and (b), respectively.

| New or improved products which have been introduced on the market: | Yes                          |                          | No                       |
|--|------------------------------|--------------------------|--------------------------|
|  | of which respond to COVID-19 |                          |                          |
| (a) <b>Good</b> (including digital goods)                          | <input type="checkbox"/>     | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) <b>Service</b> (including digital services)                    | <input type="checkbox"/>     | <input type="checkbox"/> | <input type="checkbox"/> |

\*8) In this survey, "a new or improved good (service)" refers to the one that differs significantly from your enterprise's previous goods (services) and that has been introduced on the market. The new or improved good (service) means the good (service) that is **new to the firm**. It includes the one that differs significantly from your enterprise's previous good (service) even if it is the same one as the good (service) that has already been introduced on the market by other enterprises.

Please turn over.

Please fill in 7-2 to 7-4 if any answer in 7-1 (a) or (b) is "Yes". Please go to 8-1 if all of the answers in 7-1 (a) and (b) are "No".

**7-2 Who developed new or improved goods or services** (during the three years from 2019 to 2021)  
Concerning the good or service for which any answer in 7-1 (a) or (b) is "Yes", please tick (✓) all boxes  where they are applicable in [a] to [d].

- [a] Your enterprise **by itself**
- [b] Your enterprise **together with other enterprises or organisations**<sup>\*9</sup>
- [c] Your enterprise by **adapting or modifying** products originally developed by other enterprises or organisations
- [d] **Other enterprises or organisations**

\*9) "Other enterprises or organisations" include other enterprises within your enterprise group (subsidiaries, firm that control the whole enterprise group etc.), universities, public research institutions, and non-profit organisations, etc. as well as other enterprises managed separately.

**7-3 Novelty of and turnover from new or improved goods or services** (in 2021)  
Concerning all the goods or services for which any answer in 7-1 (a) or (b) is "Yes", please tick (✓) one circle  of either "Yes" or "No" in each of (x) and (y), and fill in the proportions of turnover in 2021, respectively. Please fill in (x-1) and (x-2) if the answer in (x) is "Yes".

|  | Yes<br>(During the three years from 2019 to 2021) | No                    | Proportion in total<br>(in 2021) |
|--|---|-----------------------|----------------------------------|
| (x) New or improved goods or services introduced on the market by your enterprise that were <b>not previously offered by any of your competitors</b> (new-to-market products)                            | <input type="radio"/>                             | <input type="radio"/> | <input type="text"/> %           |
| (y) New or improved goods or services introduced on the market by your enterprise that were <b>identical or very similar to products already offered by your competitors</b> (only new-to-firm products) | <input type="radio"/>                             | <input type="radio"/> | <input type="text"/> %           |
| (z) <b>The other goods or services</b> except (x) and (y) above (including unchanged or only marginally modified products, and the resale of products purchased from other enterprises)                  | (z)=100-[(x)+(y)]                                 |                       | <input type="text"/> %           |
| Total turnover in 2021   |   |                       | <input type="text"/> %           |

|  | Yes                   | No                    |
|--|-----------------------|-----------------------|
| (x-1) First product or service in <b>the world</b> | <input type="radio"/> | <input type="radio"/> |
| (x-2) First product or service in <b>Japan</b>     | <input type="radio"/> | <input type="radio"/> |

**7-4 Average lifetime of the most important product** (during the three years from 2019 to 2021)  
Concerning the good or service for which any answer in 7-1 (a) or (b) is "Yes", how long is the average lifetime of your enterprise's most important product (good or service) until replaced with newer product? Please tick (✓) one circle  where it is applicable as the average lifetime.

| (a)                   | (b)                                   | (c)                   | (d)                   | (e)                   | (f)                   |
|-----------------------|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| less than 6 months    | 6 months or more and less than 1 year | 1-3 years             | 4-6 years             | 7-9 years             | 10 years or more      |
| <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**8 New or Improved Business Process**

**8-1 New or improved business processes**<sup>\*10</sup> which have been implemented within your enterprise (hereinafter, "business process innovation") (during the three years from 2019 to 2021)  
Please tick (✓) one circle  of either "Yes" or "No" in each of (a) to (g). If the answer is "Yes", please tick (✓) a box  regarding the one for responding to COVID-19 where it is applicable in (a) to (g), respectively.

| New or improved processes which have been implemented within your enterprise:                                     | Yes                   |                              | No                    |                       |
|---|-----------------------|------------------------------|-----------------------|-----------------------|
|   |                       | of which respond to COVID-19 |                       |                       |
| (a) <b>Methods for producing goods or providing services</b> (including methods for developing goods or services) | <input type="radio"/> | <input type="checkbox"/>     | <input type="radio"/> | <input type="radio"/> |
| (b) <b>Logistics, delivery or distribution methods</b>  | <input type="radio"/> | <input type="checkbox"/>     | <input type="radio"/> | <input type="radio"/> |
| (c) <b>Methods for information processing or communication</b>  | <input type="radio"/> | <input type="checkbox"/>     | <input type="radio"/> | <input type="radio"/> |
| (d) <b>Methods for accounting or other administrative operations</b>  | <input type="radio"/> | <input type="checkbox"/>     | <input type="radio"/> | <input type="radio"/> |
| (e) <b>Business practices for organising procedures or external relations</b>                                     | <input type="radio"/> | <input type="checkbox"/>     | <input type="radio"/> | <input type="radio"/> |
| (f) <b>Methods of organising work responsibility, decision making or human resource management</b>                | <input type="radio"/> | <input type="checkbox"/>     | <input type="radio"/> | <input type="radio"/> |
| (g) <b>Marketing methods for promotion, packaging, pricing, product placement or after sales services</b>         | <input type="radio"/> | <input type="checkbox"/>     | <input type="radio"/> | <input type="radio"/> |

\*10) In this survey, "a new or improved business process" refers to a new business process for one or more business functions that **differs significantly** from your enterprise's previous business processes and that has been brought into use in your enterprise. The new or improved business process means the business process that is **new to your firm**. It includes the one that differs significantly from your enterprise's previous business process even if it is the same one as the business process that has already been implemented in other enterprises.

Please fill in 8-2 if any answer in 8-1 (a) to (g) is "Yes". Please go to 9-1 if all of the answers in 8-1 (a) to (g) are "No".

**8-2 Who developed new or improved business process** (during the three years from 2019 to 2021)  
Concerning the business process for which any answer in 8-1 (a) to (g) is "Yes", please tick (✓) all boxes  where they are applicable in [a] to [d].

- [a] Your enterprise **by itself**
- [b] Your enterprise **together with other enterprises or organisations**<sup>\*11</sup>
- [c] Your enterprise by **adapting or modifying** products originally developed by other enterprises or organisations
- [d] **Other enterprises or organisations**

\*11) "Other enterprises or organisations" include other enterprises within your enterprise group (subsidiaries, firm that control the whole enterprise group etc.), universities, public research institutions, and non-profit organisations, etc. as well as other enterprises managed separately.

**9 New or Improved Product or Business Process with Environmental Benefits**

**9-1 Introduction/implementation of new or improved product or business process with environmental benefits** (during the three years from 2019 to 2021)  
Concerning the environmental benefits (a) to (j) related with the product innovation (new or improved good or service which has been introduced on the market)<sup>\*8</sup> or business process innovation (new or improved business process which has been implemented within your enterprise)<sup>\*10</sup>, please tick (✓) one circle  where it is applicable as the contribution to environmental protection.

| New or improved good or service which has been introduced on the market or new or improved business process which has been implemented within your enterprise with the following environmental benefit obtained during the consumption or use by the end user: | Relevant product innovation or business process innovation |                       | None                  |
|--|--|-----------------------|-----------------------|
|  | Contribution to environmental protection                   | Significant           |                       |
| (a) <b>Reduced energy use or CO<sub>2</sub> 'footprint'</b>  | <input type="radio"/>                                      | <input type="radio"/> | <input type="radio"/> |
| (b) <b>Reduced soil, noise, water, or air pollution</b>  | <input type="radio"/>                                      | <input type="radio"/> | <input type="radio"/> |
| (c) <b>Facilitated recycling</b> of product after use  | <input type="radio"/>                                      | <input type="radio"/> | <input type="radio"/> |
| (d) <b>Extended product life</b> through longer-lasting, more durable, or easier-to-repair products  | <input type="radio"/>                                      | <input type="radio"/> | <input type="radio"/> |

| New or improved good or service which has been introduced on the market or new or improved business process which has been implemented within your enterprise with the following environmental benefit obtained within your enterprise: | Relevant product innovation or business process innovation |                       | None                  |
|---|--|-----------------------|-----------------------|
|   | Contribution to environmental protection                   | Significant           |                       |
| (e) <b>Reduced material or water use per unit of output</b>   | <input type="radio"/>                                      | <input type="radio"/> | <input type="radio"/> |
| (f) <b>Reduced energy use or CO<sub>2</sub> 'footprint'</b>   | <input type="radio"/>                                      | <input type="radio"/> | <input type="radio"/> |
| (g) <b>Reduced soil, noise, water, or air pollution</b>   | <input type="radio"/>                                      | <input type="radio"/> | <input type="radio"/> |
| (h) <b>Replaced a share of materials with less polluting or hazardous substitutes</b>   | <input type="radio"/>                                      | <input type="radio"/> | <input type="radio"/> |
| (i) <b>Replaced a share of fossil energy with renewable energy sources</b>  | <input type="radio"/>                                      | <input type="radio"/> | <input type="radio"/> |
| (j) <b>Recycled waste, water, or materials for own use or sale</b>  | <input type="radio"/>                                      | <input type="radio"/> | <input type="radio"/> |

**10 Activities for Realising the Product Innovation (7-1) or the Business Process Innovation (8-1) (Innovation Activities)**

**10-1 Types of activities conducted by your enterprise for realising the product innovation (7-1) or the business process innovation (8-1) (hereinafter, "innovation activities")** (during the three years from 2019 to 2021)  
Please tick (✓) one circle  of either "Yes" or "No" in each of (a) to (g). Please fill in (g-1) and (g-2) if the answer in (g) is "Yes".

|   | Yes                   | No                    |
|---|-----------------------|-----------------------|
| (a) <b>Engineering, design and other creative work activities</b> (e.g. activities to alter the shape, appearance or usability of goods or services)  | <input type="radio"/> | <input type="radio"/> |
| (b) <b>Marketing and brand equity activities</b> (e.g. market research and launch advertising for the introduction of new or significantly improved products or services onto your enterprise's market) | <input type="radio"/> | <input type="radio"/> |
| (c) <b>IP-related activities</b>  | <input type="radio"/> | <input type="radio"/> |
| (d) <b>Employee training activities</b>   | <input type="radio"/> | <input type="radio"/> |
| (e) <b>Software development and database activities</b>   | <input type="radio"/> | <input type="radio"/> |
| (f) <b>Acquisition or lease of building, equipment, machine, or other tangible assets</b>   | <input type="radio"/> | <input type="radio"/> |
| (g) <b>Research and experimental development (R&amp;D) activities</b> (including performing in-house R&D and contract-out R&D to others)  | <input type="radio"/> | <input type="radio"/> |

|  | Yes                   | No                    | Expenditures in 2021<br>(in 2021) |
|--|-----------------------|-----------------------|-----------------------------------|
| (g-1) <b>R&amp;D performed in-house</b>  | <input type="radio"/> | <input type="radio"/> | <input type="text"/> M Yen        |
| (g-2) <b>R&amp;D contracted out to others</b> (including other enterprises in your enterprise group) | <input type="radio"/> | <input type="radio"/> | <input type="text"/> M Yen        |

**10-2 Innovation activities that did not lead to the product innovation (7-1) or the business process innovation (8-1)** (during the three years from 2019 to 2021)  
Please tick (✓) one circle  of either "Yes" or "No" in each of (a) to (c).

|  | Yes                   | No                    |
|--|-----------------------|-----------------------|
| (a) <b>Ongoing activities</b> as of the end of 2021 <sup>*12</sup> | <input type="radio"/> | <input type="radio"/> |
| (b) <b>Abandoned or suspended activities</b> <sup>*13</sup>        | <input type="radio"/> | <input type="radio"/> |
| (c) <b>Completed activities</b> <sup>*14</sup>                     | <input type="radio"/> | <input type="radio"/> |

\*12) "Ongoing activities" are innovation activities that were not completed as of the end of 2021 and will be continued in 2022.

\*13) "Abandoned or suspended activities" are innovation activities that were discontinued either with plans to resume the activity later (suspended activity) or without such plans (abandoned activity).

\*14) "Completed activities" are innovation activities that were **completed** as of the end of 2021 but has **not lead** to the product innovation (7-1) or the business process innovation (8-1) by the end of 2021.

Please fill in 10-3 and 10-4 if any answer in 10-1 or 10-2 is "Yes". Your answer to the questionnaire will be closed if all of the answers in 10-4 are "No".

**10-3 Public financial support received by your enterprise for innovation activities** (during the three years from 2019 to 2021)  
Please tick (✓) one circle  of either "Yes" or "No" in each of (a) to (c).

|   | Yes                   | No                    |
|---|-----------------------|-----------------------|
| (a) Public financial support <sup>*16</sup> from <b>local public authorities</b> <sup>*15</sup>   | <input type="radio"/> | <input type="radio"/> |
| (b) Public financial support from the <b>state (national government, national government administrative organs, or incorporated administrative agencies)</b> <sup>*17</sup> | <input type="radio"/> | <input type="radio"/> |
| (c) <b>Tax credits</b> from the state or local public authorities   | <input type="radio"/> | <input type="radio"/> |

\*15) In this survey, "local public authorities" include prefectural governments, municipal governments, and the institutes that are established, funded, and administered by prefectural or municipal governments.

\*16) In this survey, "financial support" includes grants, subsidies, subsidised loans, and loan guarantees (contracts of indemnity for losses). On the other hand, it excludes payment for activities under contract by institutes in the public sector.

\*17) In this survey, "the state (national government, national government administrative organs, incorporated administrative agencies, etc.)" includes the Cabinet Office, ministries, agencies, incorporated administrative agencies, such as the Japan Science and Technology Agency (JST), the New Energy and Industrial Technology Development Organization (NEDO), the National Institute of Information and Communications Technology (NICT), and the institutions, such as the Development Bank of Japan (DBJ) and the Japan Finance Corporation (JFC).

**10-4 Public financial support received by your enterprise for innovation activities** (during the three years from 2019 to 2021)  
Please tick (✓) one circle  of either "Yes" or "No" in each of (a) to (c).

|   | Yes                   | No                    |
|---|-----------------------|-----------------------|
| (a) Co-operation in <b>R&amp;D activities</b> (10-1 (g))                              | <input type="radio"/> | <input type="radio"/> |
| (b) Co-operation in <b>other innovation activities</b> (10-1 (a)-(f)) (excluding R&D) | <input type="radio"/> | <input type="radio"/> |

Please fill in 10-5 if any answer in 10-4 (a) or (b) is "Yes". Your answer to the questionnaire will be closed if all of the answers in 10-4 are "No".

**10-5 Types and countries or regions of co-operation partner** (during the three years from 2019 to 2021)  
Concerning the activities for which any answer in 10-4 (a) or (b) is "Yes", please tick (✓) all boxes  where they are applicable in the types and countries or regions of co-operation partner. However, if there is nothing applicable, please tick the box "None" only.

|  | Applicable               |                          |                          |                          |                          |                          | None                     |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|  | Japan                    | China                    | ASEAN, Korea, Taiwan     | North America            | EU, EFTA, UK             | Others                   |                          |
| [a] <b>Other enterprises in your enterprise group</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Other enterprises out of your enterprise group</b>  |                          |                          |                          |                          |                          |                          |                          |
| [b] <b>Consultants, commercial labs, or private research institutes</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| [c] <b>Suppliers of equipment, materials, components or software</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| [d] <b>Clients or customers that are private enterprises</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| [e] <b>Competitors</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| [f] <b>Other private enterprises</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| [g] <b>Universities or other higher education institutions</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Government or public research institutes</b> (e.g. national research and development agencies, and public experiment and research organisations; excluding the cases when those are clients or customers) |                          |                          |                          |                          |                          |                          |                          |
| [h] <b>Government or public research institutes</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| [i] <b>Clients or customers in the public sector</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| [j] <b>Private non-profit organisations</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |