

Enterprises' innovation activity 2020–2022

1 Responding enterprise and contact person

Name of enterprise _____
Address _____
Business ID _____

This survey concerns **your enterprise's activities in Finland.**

If your enterprise is part of an enterprise group

- please answer all further questions about your enterprise only for its own activities in Finland
- exclude the activities of all subsidiaries or parent enterprises

Name of contact person _____
Position in the enterprise _____
Email _____
Telephone _____

Further information

2 Strategies and Business Environment

2.1 During the three years 2020 to 2022, did your enterprise:

	Yes	No
Apply for a patent	<input type="checkbox"/>	<input type="checkbox"/>
Apply for a utility model	<input type="checkbox"/>	<input type="checkbox"/>
Register an industrial design right	<input type="checkbox"/>	<input type="checkbox"/>
Register a trademark	<input type="checkbox"/>	<input type="checkbox"/>
Claim a copyright	<input type="checkbox"/>	<input type="checkbox"/>
Use trade secrets	<input type="checkbox"/>	<input type="checkbox"/>

2.2 During the three years 2020 to 2022, did your enterprise:

	Yes	No
License out its own intellectual property rights (IPRs) to others	<input type="checkbox"/>	<input type="checkbox"/>
Sell its own IPRs (or assign IP rights) to others	<input type="checkbox"/>	<input type="checkbox"/>
Exchange IPRs (pooling, cross-licensing, etc.)	<input type="checkbox"/>	<input type="checkbox"/>

3 Innovation

A **product innovation** is a new or improved good or service that differs significantly from the firm's previous goods or services and which has been introduced on the market.

Exclude

- the simple resale of new goods
- changes of a solely aesthetic nature

3.1 During the three years 2020 to 2022, did your enterprise introduce any:

	Yes	Ei
New or improved goods	<input type="checkbox"/>	<input type="checkbox"/>
New or improved services	<input type="checkbox"/>	<input type="checkbox"/>

If 'No' to both options, go to question 3.5.

3.2 In the three years 2020 to 2022, did your enterprise introduce any new or improved products (goods or services) that were:

	Yes	No
Not previously offered by any of your competitors (and which thus were new to your market)	<input type="checkbox"/>	<input type="checkbox"/>
Identical or very similar to products already offered by your competitors (but new to your enterprise)	<input type="checkbox"/>	<input type="checkbox"/>

3.3 Based on definitions above, please estimate the percentage of your enterprise's turnover in 2022 from products (goods or services) that were in the three years 2020 to 2022:

<u>New or improved products</u> introduced on market that were not previously offered by any of your competitors	_____	%
<u>New or improved products</u> introduced on market that were identical or very similar to products already offered by your competitors	_____	%
<u>Unchanged or only marginally modified</u> products (Includes the resale of new products purchased from other enterprises)	_____	%
Total turnover in 2022	100	%

3.4 Who developed these product innovations?

Tick all that apply

Your enterprise by itself	<input type="checkbox"/>
Your enterprise together with other enterprises or organisations*	<input type="checkbox"/>
Your enterprise by adapting or modifying products originally developed by other enterprises or organisations*	<input type="checkbox"/>
Other enterprises or organisations*	<input type="checkbox"/>

* Include independent enterprises plus other parts of your enterprise group (subsidiaries, sister enterprises, head office, etc.). Organisations include universities, research institutes, non-profits, etc.

A **business process innovation** is a new or improved business process for one or more business functions that differs significantly from the firm's previous business processes, and which has been brought into use by the firm.

3.5 During the three years 2020 to 2022, did your enterprise introduce any of the following types of new or improved processes that differ significantly from your previous processes?

	Yes	No
Methods for producing or developing goods, or providing or developing services	<input type="checkbox"/>	<input type="checkbox"/>
Logistics, delivery, or distribution methods	<input type="checkbox"/>	<input type="checkbox"/>
Methods for information processing or communication	<input type="checkbox"/>	<input type="checkbox"/>
Methods for accounting or other administrative operations	<input type="checkbox"/>	<input type="checkbox"/>
Business practices for organising procedures or external relations	<input type="checkbox"/>	<input type="checkbox"/>
Methods for organising work responsibilities, decision making or human resource management	<input type="checkbox"/>	<input type="checkbox"/>
Marketing methods for promotion, packaging, pricing, product placement, or after sales services	<input type="checkbox"/>	<input type="checkbox"/>

If 'No' to all options, go to question 3.7.

3.6 Who developed these process innovations?

Tick all that apply

- Your enterprise by itself
- Your enterprise together with other enterprises or organisations*
- Your enterprise by adapting or modifying processes originally developed by other enterprises or organisations*
- Other enterprises or organisations*

* Include independent enterprises plus other parts of your enterprise group (subsidiaries, sister enterprises, head office, etc.). Organisations include universities, research institutes, non-profits, etc.

Innovation activity includes all developmental, financial, and commercial activities, undertaken by an enterprise, which are intended to result in an innovation.

Research and Development (R&D) comprises creative and systematic work undertaken in order to increase the stock of knowledge and to devise new applications of available knowledge.

3.7 During the three years 2020 to 2022, did your enterprise have any of the following types of innovation activities?

Research and Development (R&D):	Yes	No
<u>In-house</u> research and development (R&D) activities*	<input type="checkbox"/>	<input type="checkbox"/>
If yes, did your enterprise perform in-house R&D during the three years 2020 to 2022:		
Continuously (your enterprise had permanent R&D staff)	<input type="checkbox"/>	
Occasionally (as needed only)	<input type="checkbox"/>	
<u>Contract-out R&D to other enterprises</u> (include enterprises in your own group) or to public or private research organisations (including higher education institutions)**	<input type="checkbox"/>	<input type="checkbox"/>
Innovation activities that did not lead to any innovation introduced during 2020 to 2022:	Yes	No
<u>Ongoing</u> innovation activities at the end of 2022***	<input type="checkbox"/>	<input type="checkbox"/>
<u>Abandoned or suspended</u> innovation activities****	<input type="checkbox"/>	<input type="checkbox"/>
Completed innovation activities not leading to the introduction of an innovation in your enterprise*****	<input type="checkbox"/>	<input type="checkbox"/>

* R&D in Finland undertaken by your enterprise to create new knowledge or solve scientific or technical problems. From expenditure point of view in-house R&D covers current expenditures including labour costs and capital expenditures on buildings and equipment specifically for R&D.

** Including contracted-out R&D from abroad.

*** The innovation activity was not completed at the end of 2022 and will be continued in 2023.

**** The innovation activity was discontinued during 2020 to 2022 either with plans to resume the activity later ('suspended activity') or without such plans ('abandoned activity').

***** The innovation activity was completed at the end of 2022 but has not resulted in any implemented innovation in your enterprise by the end of 2022, e.g. because it concerned only a part of a product or process, or because the implementation is foreseen to happen later, or the implementation is taking place in another enterprise.

If 'no' to all options in questions 3.1, 3.5, and 3.7, go to question 3.10.

3.8 How much did your enterprise spend on innovation and research and development (R&D) in 2022?

* The question refers only to the **year 2022**, not the three-year period 2020 to 2022

* Please tick 'none' for all categories if your enterprise did not have any expenditure on innovation and/or R&D in 2022

Expenditure on R&D and innovation in 2022

R&D performed in-house*

(Include current expenditures including labour costs and capital expenditures (buildings, machinery, equipment, software etc.) specifically for R&D)

_____ 000 € none

R&D contracted out to others**

(Including enterprises in own enterprise group)

_____ 000 € none

All other innovation expenditures* (i.e. excluding R&D)**

Includes

- own personnel working on innovation,
- services, materials and supplies purchased from others for innovation,
- capital goods for innovation (such as acquisition of machinery, equipment, software, IPRs, buildings), and
- other expenditures for innovation

_____ 000 € none

* R&D in Finland undertaken by your enterprise to create new knowledge or solve scientific or technical problems.

** Contracted-out R&D to other enterprises (include enterprises in your own group), or to public or private research organisations, or to universities or other organisations, including abroad.

*** All other activities related to the development of products and processes. Including

- Acquisition of machinery equipment, software, IPRs or buildings for innovation activities other than R&D
- Acquisition of external knowledge for innovation activities other than R&D (e.g. patents, licenses, trademarks)
- Product design of goods, service design, preparation of production/distribution for innovation activities other than R&D
- Training and professional development for innovation activities other than R&D (e.g. employee training or continued education)
- Marketing of innovations (marketing activities directly related to innovations, including market research)

3.9 Which of the following best describes why your enterprise did not have more innovation activities during the three years from 2020 to 2022:

Tick one box only

A **lack of resources** prevented us from having more innovation activities (e.g. lack of finance, qualified personnel, material)

We decided not to have more innovation activities due to **other reasons than a lack of resources** (e.g. strategic reasons; not the right time to innovate; other priorities; risks too high; low expected returns)

We had no further innovation activities because there was **no need**

Go to question 3.11.

3.10 Which of the following best describes why your enterprise had no innovation activities during the three years from 2020 to 2022?

Tick one box only

- A **lack of resources** prevented us from innovating. (e.g. lack of finance, qualified personnel, material)
- We decided not to innovate due to **other reasons than a lack of resources** (e.g. strategic reasons; not the right time to innovate; other priorities; risks too high; low expected returns)
- We had no innovation activities because there was **no need for innovation**

3.11 During the three years 2020 to 2022, did your enterprise co-operate* with other enterprises or organisations?

Co-operation occurs when two or more participants agree to take responsibility for a task or series of tasks and information is shared between the parties to facilitate the agreement.

- | | Yes | No |
|---|--------------------------|--------------------------|
| a) On R&D | <input type="checkbox"/> | <input type="checkbox"/> |
| b) On other innovation activities (excluding R&D) | <input type="checkbox"/> | <input type="checkbox"/> |
| c) On any other business activities | <input type="checkbox"/> | <input type="checkbox"/> |

If 'yes' to either option a) or b), go to question 3.12 on innovation co-operation partners. Otherwise go to section 4.

3.12 Please indicate the type of innovation cooperation partner by location

Tick all that apply

Type of innovation co-operation partner	Finland	Other EU* or EFTA**	All other countries
Business enterprises outside your enterprise group			
Consultants, commercial labs, or private research institutes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suppliers of equipment, materials, components, or software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enterprises that are your clients or customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enterprises that are your competitors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other enterprises	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enterprises within your enterprise group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Universities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Universities of applied sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government or public research institutes***	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clients or customers from the public sector****	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-profit organisations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clients or customers from the private sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

* The Member States of the European Union (EU) are Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Italy, Ireland, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia, Spain, and Sweden.

** Iceland, Liechtenstein, Norway, Switzerland *** Including VTT Technical Research Centre of Finland Ltd.

**** The public sector includes government owned organisations such as local, regional, and national administrations and agencies, schools, hospitals, and government providers of services such as security, transport, housing, energy, etc.

4 Business finance

4.1 During the three years from 2020 to 2022, did your enterprise try to obtain the following types of funding?

	Try to obtain funding			If your enterprise obtained funding, was this partly or fully used for R&D or other innovation activities?	
	Yes, successfully obtained some funding of this type	Yes, tried, but not successful	No	Yes	No
Equity finance (finance provided in exchange for a share in the ownership of the enterprise)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Debt finance (finance that the enterprise must repay)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.2 During the three years from 2020 to 2022, did your enterprise receive any public financial support from the following levels of government?

Include financial support via grants, subsidised loans, and loan guarantees. Exclude revenues from public sector procurement contracts.*

	If your enterprise received financial support, was part of this used for R&D or other innovation activities?	
	Yes	No
Local or regional authorities	<input type="checkbox"/>	<input type="checkbox"/>
National government (e.g. Business Finland)	<input type="checkbox"/>	<input type="checkbox"/>
EU Programme for Research and Innovation (Horizon 2020, Horizon Europe)	<input type="checkbox"/>	<input type="checkbox"/>
Other financial support from an EU institution	<input type="checkbox"/>	<input type="checkbox"/>

* The public sector includes government owned organisations such as local, regional, and national administrations and agencies, schools, hospitals, and government providers of services such as security, transport, housing, energy, etc.

4.3 During the three years from 2020 to 2022, did your enterprise use tax incentives or allowances for the following purposes?

	Yes	No
Tax credits or allowances for R&D or other innovation activities (Deduction granted for R&D carried out together with a research organisation)	<input type="checkbox"/>	<input type="checkbox"/>
Tax credits or allowances for all other types of activities	<input type="checkbox"/>	<input type="checkbox"/>

If your enterprise did not have any innovation activity during 2020 to 2022, i.e. the answer is 'no' to all questions 3.1, 3.5, and 3.7, go to question 6.1. Otherwise go to section 5.

5 Environmental innovations

An innovation with environmental benefits is a new or improved product or process of an enterprise that generates lower environmental impacts, compared to the enterprise's previous products or processes, and that has been made available to potential users or brought into use. The environmental benefit can be the primary objective of the innovation or a by-product of other objectives.

The environmental benefits of an innovation can occur during the production of a good or service, or during its consumption or use by the end user of a product. The end user can be individual, another enterprise, the government, etc.

5.1 During the three years 2020 to 2022, did your enterprise introduce innovations with any of the following environmental benefits, and, if yes, was their contribution to environmental protection rather significant or insignificant?

Environmental benefits obtained <u>within your enterprise</u>	Yes, significant	Yes, but insignificant	No
Reduced material or water use per unit of output	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduced energy use or CO ₂ 'footprint' (i.e. reduced total CO ₂ emission)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduced soil, light, noise, water, or air pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Replaced a share of materials with less polluting or hazardous substitutes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Replaced a share of fossil energy with renewable energy sources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recycled waste, water, or materials for own use or sale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Protection of bio-diversity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental benefits obtained <u>during the consumption or use of a good or service by the end user</u>	Yes, significant	Yes, but insignificant	No
Reduced energy use or CO ₂ 'footprint'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduced air, water, soil, light or noise pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facilitated recycling of product after use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extended product life through longer-lasting, more durable, or easier-to-repair products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Protection of bio-diversity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6 Collaboration and connections between enterprises and universities, universities of applied sciences or research institutes

Collaboration between enterprises and research organisations refers to organised, active cooperation, as well as other transfer of know-how, collaboration and goal-oriented interaction or communication.

Research organisations refer to both domestic and foreign **universities, universities of applied sciences and research institutes**.

6.1 During 2020 to 2022, did your enterprise cooperate with the following research organisations?

	Universities	Universities of applied sciences	Research institutes	No cooperation
<u>Innovation cooperation</u> (active participation of R&D and other innovation projects, exclude pure contracting out of work)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Other cooperation</u> than innovation cooperation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If 'No cooperation' to both options, go to question 6.3.

6.2 What results have your enterprise's cooperation with research organisations led to during 2020 to 2022 or is expected to lead to by the end of 2024?

Tick all that apply

	Uni- versi- ties	Universities of applied sciences	Research institutes	Result not relevant
Strengthening the knowledge base and competence including patents and other IPR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An overview of future trends and markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Introduction of a new technology, method, or device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New or improved products (goods or services)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to, or progress on, international markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Widening of cooperation with research organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Participation in international research and innovation programmes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other results, what _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6.3 How have the forms and the meaning of research organisation cooperation developed from the point of view of your enterprise during the years 2020 to 2022 compared to before?

	Importance increased	Importance stayed unchanged	Importance decreased	No cooperation
Contracted out R&D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Joint development or co-creation of innovations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education cooperation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use of research organisation's research infrastructure and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demo, piloting, or product testing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internships or graduation theses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recruitment of new experts to your enterprise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some else, what? _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7 Skills and competence required by the enterprise

7.1 Which competence areas were important for your enterprise's innovation activity in 2020 to 2022 and did your enterprise have sufficient competence in these areas?

	Importance of competence areas in your enterprise in 2020 to 2022					Skills and competence at the needed level in your enterprise in 2020 to 2022	
	Not important (1) Highly important (5)					Yes	No
	1	2	3	4	5		
Research and development, and the development and utilisation of technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Business competence, new business models	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utilisation of digitalisation and data (including programming, cyber security)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills related to creative work (e.g. visualisation, audiovisual content, communication and design)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cooperation and networking skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Knowledge of markets and customer needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anticipation and utilisation of major social changes (e.g. climate change)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management and organisation of innovation activity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utilisation of intellectual property rights (patents and other IPR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Something else, what?? _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8 Information about the enterprise

8.1 In 2022, was your enterprise part of

	Yes	No
a) an enterprise group* with the head office located in Finland	<input type="checkbox"/>	<input type="checkbox"/>
If yes: Are all of the enterprises of that group located in Finland	<input type="checkbox"/>	<input type="checkbox"/>
b) an enterprise group* with the head office located abroad	<input type="checkbox"/>	<input type="checkbox"/>
If yes: Country in which the head office is located _____		

* A group consists of two or more legally defined enterprises under common ownership. Each enterprise in the group can serve different markets, as with national or regional subsidiaries, or serve different product markets. The head office is also part of an enterprise group.