

STATEC

Institut national de la statistique
et des études économiques

National registration number (matricule national) :

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Name of the enterprise:

.....

Contact person

E-mail: innovation@statec.etat.lu

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Combined survey on R&D 2022 and Innovation 2020-2022

The aim of this survey is the collection of data concerning your business's innovation activities, as well as data on Research and experimental Development (R&D). This survey is carried out under **Regulation (EU) 2019/2152 of the European Parliament and of the Council on European business statistics** and on the basis of article 2 of the **Law of 10 July 2011 establishing the Institut national de la statistique et des études économiques (STATEC)**.

Under the terms of the Law of 10 July 2011 establishing STATEC, businesses are bound to respond to this questionnaire. According to article 15 of the aforementioned Law, **the refusal to respond to the survey, the refusal to respond within the requested time frame or the intentional delivery of inaccurate or incomplete information is liable to a fine of 251 up to 2.500 euros.**

STATEC guarantees the confidential treatment of the individual data of the enterprises, which are used **exclusively for the compilation of statistics or in the carrying out of scientific studies.**

Please keep a copy of this questionnaire for your own records and return the completed original questionnaire to STATEC **before the date mentioned in the letter** accompanying the survey.

Introduction

Objectives of this survey

The aim of the combined survey on R&D and Innovation activity is to collect data on research and experimental development and innovation activities in Luxembourgish businesses, in order to produce harmonised and comparable statistics in the European Union.

The collected data, especially data on intramural Research and experimental Development, are used for the preparation of national accounts.

Scope

The present survey is aimed at resident businesses carrying out market activities according to the statistical classification of economic activities in the European Community (NACE Rev.2) on or from the Luxembourgish economic territory during the observation period.

The definition of the enterprise unit used in this survey includes resident natural persons, legal persons incorporated under Luxembourgish Law and Luxembourgish branches of legal units incorporated under foreign law.


Please exclude any innovation or R&D activities related to any permanent establishments and subsidiaries located in foreign territories such as foreign branches of a legal unit incorporated under Luxembourgish law.

Please report all items to the best of your ability, estimates are acceptable.

How to respond to this questionnaire

This questionnaire is intended primarily for the owner(s) or manager(s) responsible for R&D and innovation activities of the enterprise.

Due to the specialised nature of each question (e.g. R&D expenditure and personnel, key finance data, etc.), it may be necessary to collaborate with colleagues in different departments.

 Please take into account all of the legal units listed in the “**List of legal units targeted by this survey**”, that was annexed to the letter inviting you to participate in the survey.

The structure of the questionnaire

This questionnaire is divided into eleven sections:

	Section A - General Information
R&D 2022	Section B - Intramural Research and experimental Development
	Section C - Extramural Research and experimental Development
INNOVATION 2020 - 2022	Section D - Innovation
	Section E - Innovation activities and expenditures
	Section F - Factors hampering innovation activities
	Section G - Innovations with environmental benefits
	Section H - Financial support
	Section I - Co-operation
	Section J - Strategies and Business environment
	Section K - Comments and contact coordinates

Section A - General Information

A1. In 2022, was your enterprise part of an enterprise group?

An enterprise 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.

Yes ☐ → Please go to question A2.

No ☐ → Please go to question A4.

A2. In which country is the head office of your group located?

Head office means the 'Ultimate controlling institutional unit of a foreign affiliate' (i.e. the institutional unit, proceeding up a foreign affiliate's chain of control, which is not controlled by another institutional unit).

.....

A3. If the head office is located in Luxembourg, are all of the enterprises of that group located in Luxembourg?

Yes..... ☐ No ☐



Please answer all further questions about your enterprise **only for Luxembourg**.

Exclude any subsidiaries, parent enterprises and foreign branches for the purposes of this survey.

A4. Please provide the estimated percentage of your employees who had a university* degree in 2022?

- | | |
|--|--|
| i. 0% to less than 1%..... <input type="checkbox"/> | v. 25% to less than 50%..... <input type="checkbox"/> |
| ii. 1% to less than 5%..... <input type="checkbox"/> | vi. 50% to less than 75%..... <input type="checkbox"/> |
| iii. 5% to less than 10%..... <input type="checkbox"/> | vii. 75% or more <input type="checkbox"/> |
| iv. 10% to less than 25%..... <input type="checkbox"/> | |

* ISCED 2011 levels 5 to 8; Employees who have either completed short-cycle education (at least 2 years), a master's degree (4 years) in a graduate school (engineering, commerce, architecture, translation), a university degree (Licence/Maîtrise, Diplom/Magister/Staatsexamen, Bachelor/Master), or who hold a doctorate / PHD degree.

A5. Approximately, what was the percentage of turnover in 2022 from customers located in:

- | | |
|---|--|
| i. Luxembourg | <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> % |
| ii. Other EU* or EFTA** | <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> % |
| iii. All other countries | <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> % |
| Total turnover for the financial year 2022 | <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> % |

* EU countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Ireland, Latvia, Lithuania, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia, Spain, and Sweden.

** EFTA countries: Iceland, Liechtenstein, Norway, Switzerland.

Section B - Intramural Research and experimental Development

What is Research and experimental Development (R&D)?

R&D is planned, creative work aimed at discovering new knowledge, or developing new or significantly improved products. It also includes R&D projects that have had negative results, in the case that an initial hypothesis failed to be confirmed or a product could not be developed as originally intended. R&D is distinguishable from other activities by the presence of a noticeable element of novelty and by the resolution of scientific or technological uncertainties.

R&D INCLUDES

- **basic research**, aimed at acquiring new knowledge, without any specific immediate commercial applications or uses;
- **applied research**, aimed at solving a specific problem or meeting a specific commercial objective;
- **experimental development**, consisting in the systematic use of research and practical experience to produce new or significantly improved goods, services, or processes.

Activities where there is no appreciable novelty or problem resolution are not considered to be R&D for the purpose of this survey.

R&D EXCLUDES

- routine product testing, design, quality control, and technical services unless they are an integral part of an R&D project;
- analytical projects (statistical analysis, efficiency surveys or market research) of a routine nature, with established methodologies, principles and models;
- literary, artistic, or historical projects, such as films, music, or books and other publications;
- prospecting or exploration for natural resources.

Does R&D include the development of software and Internet applications?

In this survey, report all software R&D as defined here regardless of its end use (internal or external).

R&D in software INCLUDES

- experimental software development or improvement activities that expand scientific or technological knowledge;
- development of new theories and/or new algorithms in the field of computer science;
- creation of new and original encryption or security techniques.

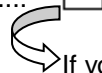
R&D in software EXCLUDES

- software development that does not depend on a scientific or technological advance, such as:
 - supporting or adapting existing systems;
 - adding functionality to existing applications;
 - routine debugging of existing systems and software.
- creation of new software based on known methods and applications, even if these have not been used before by your enterprise;
- conversion or translation of existing software and software languages;
- adaptation of a product for a specific client, unless knowledge which significantly improved the base programme was added in that process.

B1. Based on the aforementioned definition, did your enterprise perform any intramural Research and experimental Development (R&D) projects in 2022?

“Intramural” refers to R&D activities performed within your enterprise (in-house or on-site) during a specific period, whatever the source of funds, to create new knowledge or to solve scientific or technical problems.

Yes..... ☐ No ☐



If you answered **No** → Please go to question **C1**.

B2. Please provide a short description of the intramural R&D projects performed in 2022.

B3. Does your enterprise have a dedicated R&D unit or department?

Yes ☐ No ☐

B4. In your enterprise, how many people were involved in intramural R&D activities in 2022?

Please answer about your enterprise only for **Luxembourg**. Exclude any subsidiaries, parent enterprises and foreign branches for the purposes of this survey.

Please write '0' if no one was involved in a category.

	Number of persons	Number of persons in full time equivalent (FTE)*
i. Researchers	<input type="text"/>	<input type="text"/>
Professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems, and in the management of the projects concerned.	of which females:	<input type="text"/>
ii. Technicians and equivalent staff	<input type="text"/>	<input type="text"/>
Persons whose main tasks require technical knowledge and experience in one or more scientific or technical fields.	of which females:	<input type="text"/>
iii. Other supporting staff	<input type="text"/>	<input type="text"/>
Skilled and unskilled craftsmen, secretarial and clerical staff participating in R&D projects or directly associated with such projects.	of which females:	<input type="text"/>
iv. On-site consultants devoted to R&D	<input type="text"/>	<input type="text"/>

* One FTE may be thought of as one person-year. A person who spends 30% of his or her time in R&D should be considered as 0.3 FTE. A full-time R&D worker employed for 6 months is a 0.5 FTE.

B5. Do you measure intramural R&D, either as a function or as a cost centre, in your cost accounting or general accounting system?

Yes ☐ No ☐

B6. Please specify the amount of the following intramural R&D expenditure items for the financial year 2022:

Please consider the aggregate expenditure of all the legal units listed in the letter accompanying the survey. Exclude any subsidiaries, parent enterprises and foreign branches for the purposes of this survey. Also exclude VAT, amortisation and depreciation, and extramural R&D expenditure.

Please write '0' if you did not have any expenditure.

i. Personnel costs

Gross wages and salaries, perks, social security payments (employer's share) and all associated costs or fringe benefits. Personnel costs should relate to the number of persons in FTE (provided in **B4**).

Researchers.....

EUR									

Technicians and equivalent staff.....

EUR									

Other supporting staff.....

EUR									

ii. Other current expenditure used to support R&D performed

Direct costs of materials, supplies, consumables, equipment, as well as any pro rata administrative and overhead costs to support intramural R&D

EUR									

Services provided by on-site consultants devoted to R&D

EUR									

iii. Gross investments in tangible or intangible fixed assets used in R&D

Gross amount paid for the acquisition of tangible and intangible fixed assets that are used in the performance of R&D.
Please apply the pro-rata costs allocated to R&D.

Land and buildings

Includes land acquired for R&D use (e.g. testing grounds, sites for laboratories and pilot plants) and buildings constructed or purchased for R&D use, including major improvements, modifications and repairs.

EUR									

Instruments and equipment, capitalised computer software

EUR									

iv. Total of intramural R&D expenditure (i.+ii.+iii.)


EUR									

Section C - Extramural Research and experimental Development

- C1. In 2022, did your enterprise engage in any extramural Research and experimental Development (R&D) activities which are intended to benefit your enterprise?**

Extramural R&D refers to the same activities as stated in **Section B** but performed off-site by other enterprises (including affiliated enterprises) or by public or private research organisations.

Yes ☐ No ☒

...  If you answered **No** → *Please go to question D1.*

- C2. How much did your enterprise spend on extramural R&D work in the financial year 2022:**

Exclude VAT and intramural R&D expenditure (already specified under **B6**).

Section D - Innovation

Product innovation

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

Include:

- ✓ significant changes to the design of a good
- ✓ digital goods or services.

Exclude:

- the simple re-sale of new goods and changes of a solely aesthetic nature.

D1. During the three years 2020 to 2022, did your enterprise introduce:

- | | Yes | No |
|---|--------------------------|--------------------------|
| i. New or improved goods | <input type="checkbox"/> | <input type="checkbox"/> |
| Goods are usually tangible objects, but also include downloadable software, music and film, which are considered to be intangible goods. | | |
| ii. New or improved services | <input type="checkbox"/> | <input type="checkbox"/> |
| Services are usually intangible, such as retailing, banking, insurance, educational courses, air travel, consulting, cloud computing, streaming video and streaming music (in contrast to downloadable video and music). | | |

If you answered **No** to both items → Please go to question **D6**.

D2. Please provide a short description of the new or significantly improved goods or services.

D3. Were any of your product innovations (goods or services) during the three years 2020 to 2022:

- | | Yes | No |
|---|--------------------------|--------------------------|
| i. New to your market? | <input type="checkbox"/> | <input type="checkbox"/> |
| Your enterprise introduced a new or significantly improved product onto your market before your competitors. It may have already been available in other markets. | | |
| ii. Only new to your enterprise? | <input type="checkbox"/> | <input type="checkbox"/> |
| Your enterprise introduced a new or significantly improved product that was already available from the competitors in your market. | | |

D4. Using the definitions from question D3, please provide the percentages of the total turnover of your enterprise in the financial year 2022 from:

Please consider the aggregate turnover of all the legal units listed in the letter accompanying the survey.

**in % of total turnover
in the financial year 2022**

- | | |
|---|---|
| i. New or significantly improved products introduced during the three years 2020 to 2022 that were new to your market | <div style="border: 1px solid black; width: 100px; height: 20px; display: flex; justify-content: space-between; align-items: center;"><div style="width: 33%;"></div><div style="width: 33%;"></div><div style="width: 33%;"></div></div> % |
| ii. New or significantly improved products introduced during the three years 2020 to 2022 that were only new to your enterprise | <div style="border: 1px solid black; width: 100px; height: 20px; display: flex; justify-content: space-between; align-items: center;"><div style="width: 33%;"></div><div style="width: 33%;"></div><div style="width: 33%;"></div></div> % |
| iii. Products that were unchanged or only marginally modified during the three years 2020 to 2022
Include the resale of new products purchased from other enterprises | <div style="border: 1px solid black; width: 100px; height: 20px; display: flex; justify-content: space-between; align-items: center;"><div style="width: 33%;"></div><div style="width: 33%;"></div><div style="width: 33%;"></div></div> % |

Total turnover for the financial year 2022

For credit institutions: Interests receivable and similar income
For insurance services: Gross premiums written.

1

0

0

 %

D5. Who developed these product innovations?

Please tick all that apply.

- | | |
|--|--------------------------|
| i. Your enterprise alone in Luxembourg | <input type="checkbox"/> |
| ii. Your enterprise together with other enterprises* or organisations** | <input type="checkbox"/> |
| iii. Your enterprise, by adapting or modifying goods or services originally developed by other enterprises* or organisations** | <input type="checkbox"/> |
| iv. Other enterprises* or organisations** | <input type="checkbox"/> |

* Independent enterprises plus other parts of your enterprise group (subsidiaries, sister enterprises, head office, etc.).

** Universities, research institutes, non-profit organisations, etc.

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

	Yes	No
i. Methods for producing goods or providing services , including methods for developing goods or services i.e. processes for any activities that transform inputs into goods or services, including engineering and related technical testing, analysis and certification activities to support production.	<input type="checkbox"/>	<input type="checkbox"/>
ii. Logistics, delivery or distribution methods i.e. processes for transportation and service fulfilment, warehousing and order processing.	<input type="checkbox"/>	<input type="checkbox"/>
iii. Methods for information processing or communication i.e. processes for information and communication systems, including: hardware and software, data processing and database, maintenance and repair, web-hosting and other computer-related information activities.	<input type="checkbox"/>	<input type="checkbox"/>
iv. Methods for accounting or other administrative operations i.e. processes for accounting, bookkeeping, auditing, payments and other financial or insurance activities, procurement, other administrative operations.	<input type="checkbox"/>	<input type="checkbox"/>
v. Business practices for organising procedures or external relations	<input type="checkbox"/>	<input type="checkbox"/>
vi. Methods of organising work responsibility, decision making or human resource management	<input type="checkbox"/>	<input type="checkbox"/>
vii. Marketing methods for promotion, packaging, pricing, product placement or after sales services i.e. processes for advertising, direct marketing, exhibitions and fairs, market research and other activities to develop new markets: pricing strategies and methods, sales and after-sales activities.	<input type="checkbox"/>	<input type="checkbox"/>

D7. Please provide a short description of the new or significantly improved processes or methods.

D8. Who developed these process innovations?

Please tick all that apply.

- | | |
|---|--------------------------|
| i. Your enterprise alone in Luxembourg | <input type="checkbox"/> |
| ii. Your enterprise together with other enterprises* or organisations** | <input type="checkbox"/> |
| iii. Your enterprise, by adapting or modifying processes originally developed by
other enterprises* or organisations** | <input type="checkbox"/> |
| iv. Other enterprises* or organisations** | <input type="checkbox"/> |

* Independent enterprises plus other parts of your enterprise group (subsidiaries, sister enterprises, head office, etc.).

** Universities, research institutes, non-profits, etc.

Section E - Innovation activities and expenditures

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

E1. During the three years 2020 to 2022, did your enterprise engage in the following innovation activities?

Research and experimental Development (R&D):

- i. **Intramural R&D** activities undertaken by your enterprise to increase the stock of knowledge for developing new and improved products and processes. Please refer to **Section B** - for the detailed definition of this item.

If you answered **Yes**, how was R&D performed during the three years 2020 to 2022:

Continuously i.e. your enterprise had permanent R&D staff in-house

Occasionally i.e. as needed only

Yes

No

☐
☐
☐
☐

- ii. **Extramural R&D**, same activities as above, but performed by other enterprises (including enterprises or subsidiaries within your group) or by public or private research organisations, purchased by your enterprise.

☐
☐

Innovation activities that did not lead to any innovation introduced during 2020 to 2022:

- iii. **Ongoing innovation activities** at the end of 2022

☐
☐

- iv. **Abandoned or suspended** before completion

☐
☐

- v. **Completed** innovation activities not leading to the introduction of an innovation in your enterprise

☐
☐

The innovation activity was completed at the end of 2022 but has not resulted in the introduction of an innovation by the end of 2022, e.g. because it concerned only a part of a new or improved product or business process, or because the introduction is foreseen to happen later.

If you answered **No** to all items in questions **D1, D6 and E1** → Please go to question **F2**.

Otherwise → Please go to question **E2**.

E2. In your enterprise, how many people were involved in innovation activities in 2022?

Please, **exclude** R&D activities.

Please answer about your enterprise only for **Luxembourg**. Exclude any subsidiaries, parent enterprises and foreign branches for the purposes of this survey.

Please write '0' if no one was involved in a category.

	Number of persons	Number of persons in full time equivalent (FTE)*									
i. R&D personnel.....	Already provided in question B4	Already provided in question B4									
ii. Personnel conducting innovation activities, excluding R&D personnel	<table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table>				<table border="1"> <tr> <td></td> <td></td> <td></td> <td>,</td> <td></td> <td></td> </tr> </table>				,		
			,								

* One FTE may be thought of as one person-year. A person who spends 30% of his or her time in innovation activities should be considered as 0.3 FTE. A full-time worker employed for 6 months is a 0.5 FTE.

E3. How much did your enterprise spend on innovation and research and experimental development (R&D) in the financial year 2022 only?

Innovation activities cover current expenditures (including labour costs, outsourced activities, and other related costs) as well as capital expenditures on buildings and equipment.

Please consider the aggregate expenditure of all the legal units listed in the letter accompanying the survey. Please estimate if you lack precise accounting data.

Please write '0' if you did not have any expenditure in 2022.

i. Intramural R&D *Already provided in question B6.*

ii. Extramural R&D *Already provided in question C2.*

iii. All other innovation expenditures, i.e. excluding R&D.....

Of which:

Category	Value (EUR)
Acquisition of intangible assets	10.0
Other innovation expenditures	1.0

Of which:

Personnel costs for employees engaged in innovation activities, excluding cost of any R&D personnel

Personnel costs should relate to the number of persons in full time equivalent (FTE) provided in **E2 ii**.

EUR

Services, materials, supplies purchased from others for innovation.....

Product design, service design, preparation of production / distribution

EUR

Product design, 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, i.e. marketing activities, including market research, directly related to innovations.

Capital goods for innovation
Acquisition of machinery equipment, software, external knowledge,
Intellectual Property Rights (e.g. patents, licenses, trademarks) or
buildings for innovation activities other than R&D.

Section F - Factors hampering innovation activities

F1. 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

- i. A lack of resources prevented us from having more innovation activities ☐
e.g. lack of finance, qualified personnel, material
- ii. We decided not to have more innovation 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
- iii. We had no further innovation activities because there was no need for innovation ☐

Please go to question G1

F2. 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

- i. A lack of resources prevented us from innovating ☐
e.g. lack of finance, qualified personnel, material
- ii. 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
- iii. We had no innovation activities because there was no need for innovation. ☐

Please go to question H1

Section G - Innovations with environmental benefits

An innovation with environmental benefits is a new or improved product or business process of an enterprise that generates positive or lower negative 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 an individual, another enterprise, the government, etc.

G1. 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?

Please tick one box per row.

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

If you answered **No to all options** → Please go to question **H1**.

Otherwise → Please go to question **G2**.

G2. During the three years 2020 to 2022, how important were the following factors in driving your enterprise's decisions to introduce innovations with environmental benefits?

Please tick one box per row.

	High	Medium	Low	Not relevant
i. Existing environmental regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Existing environmental taxes, charges or fees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Environmental regulations or taxes expected in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Government grants, subsidies or other financial incentives for environmental innovations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. Current or expected market demand for environmental innovations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vi. Improving your enterprise's reputation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vii. Voluntary actions or initiatives for environmental good practice within your sector.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
viii. High cost of energy, water or materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ix. Need to meet requirements for public procurement contracts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section H - Financial support

H1. During the three years 2020 to 2022, did your enterprise obtain the following types of funding?

	Yes, successfully obtained some funding of this type	Tried, but not successful	No
i. Equity finance Finance provided in exchange for a share in the ownership of your enterprise.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Debt finance..... Finance that your enterprise must repay.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you answered **Yes** to one of the options → Please go to question **H2**.

Otherwise → Please go to question **H3**.

H2. If your enterprise obtained funding, was this used (partly or fully) for R&D or other innovation activities?

	Yes	No
i. Equity finance Finance provided in exchange for a share in the ownership of your enterprise.	<input type="checkbox"/>	<input type="checkbox"/>
ii. Debt finance Finance that your enterprise must repay.	<input type="checkbox"/>	<input type="checkbox"/>

H3. During the three years 2020 to 2022, did your enterprise receive any public financial support from the following levels of government?

<u>From Luxembourg</u>	Yes	No
i. R&D subsidies from the Ministry of the Economy, R&D loan from SNCI, R&D loans from similar institutions	<input type="checkbox"/>	<input type="checkbox"/>
ii. Other financial support from Luxembourgish ministries or government agencies	<input type="checkbox"/>	<input type="checkbox"/>
<u>From the European Union (EU)</u>		
iii. EU Horizon 2020 Programme for Research and Innovation	<input type="checkbox"/>	<input type="checkbox"/>
iv. Other financial support from a EU institution	<input type="checkbox"/>	<input type="checkbox"/>

If you answered **No** to all items → Please go to question **H5**

Otherwise → Please go to question **H4**

H4. If your enterprise received financial support, was this used (partly or fully) for R&D or other innovation activities?

From Luxembourg

Yes

No

i. R&D subsidies from the Ministry of the Economy, R&D loan from SNCI, R&D loans from similar institutions

☐☐

ii. Other financial support from Luxembourgish ministries or government agencies

☐☐

From the European Union (EU)

iii. EU Horizon 2020 Programme for Research and Innovation

☐☐

iv. Other financial support from a EU institution

☐☐

H5. During the three years 2020 to 2022, did your enterprise use any tax incentives or allowances for the following purposes?

Yes

No

i. R&D or other innovation activities

☐☐

ii. Any other types of activities

☐☐

Section I - Co-operation

I1. During the three years 2020 to 2022, did your enterprise co-operate with other enterprises or organisations?

Co-operation is active participation with other enterprises or organisations. Partners do not need to commercially benefit. Exclude pure outsourcing with no active co-operation.

	Yes	No
i. On R&D.....	<input type="checkbox"/>	<input type="checkbox"/>
ii. On other innovation activities excluding R&D.....	<input type="checkbox"/>	<input type="checkbox"/>
iii. On any other business activities	<input type="checkbox"/>	<input type="checkbox"/>

If you answered **Yes** to either option **i. or ii.** → Please go to question **I2**.

Otherwise → Please go to question **J1**.

I2. Please indicate the type of innovation co-operation partner by location:

Luxembourg Other EU* or EFTA** All other countries

Please tick all that apply.

i. Private business enterprises outside your enterprise group			
a. Consultants, commercial labs, or private research institutes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Suppliers of equipment, materials, components or software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Enterprises that are your clients or customers.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Enterprises that are your competitors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Other enterprises.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Enterprises within your enterprise group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Universities or other higher education institutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Government or public research institutes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. Clients or customers from the public sector***	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vi. Non-profit organisations.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

* EU countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Ireland, Latvia, Lithuania, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia, Spain and Sweden.

** EFTA countries: Iceland, Liechtenstein, Norway, Switzerland.

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

Section J - Strategies and Business environment

J1. During the three years 2020 to 2022, how would you describe the competitive environment on the main market you were operating in?

- | | | | |
|---------------------------|--------------------------|--------------------------|--------------------------|
| i. No competition..... | <input type="checkbox"/> | iii. Quite intense | <input type="checkbox"/> |
| ii. Not very intense..... | <input type="checkbox"/> | iv. Very intense..... | <input type="checkbox"/> |

J2. To what extent do the following factors describe the competitive environment on the main market?

Please tick one box per row.

	High	Medium	Low	Not relevant
i. Your position on the market is influenced by new entrants.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Products/services are getting outdated.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Technological developments are difficult to predict.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Price competition / small margins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. Competition in quality and variety of goods and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

J3. During the three years 2020 to 2022, how important were the following strategies to the economic performance of your enterprise?

Please tick one box per row.

	High	Medium	Low	Not important
i. Improving your existing goods or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Introducing new goods or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Low-price (price leadership)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. High-quality (quality leadership)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. A broad range of goods or services.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vi. One or a small number of key goods or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vii. Satisfying established customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
viii. Approaching new customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ix. Standardised goods or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
x. Customer-specific solutions.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

J4. During the three years 2020 to 2022, how important to the management of your business were the following methods of organising work?

Please tick one box per row.

	High	Medium	Low	Not important
i. Planned job rotation of staff across different functional areas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Regular brainstorming sessions for staff to think about improvements that could be made within the business.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Cross-functional work groups or teams (combined across different working areas for functions)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Periodic monitoring of performance indicators of your firm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. Evaluation of individual (or employee) job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vi. Facilitating work-life balance of employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

J5. During the three years 2020 to 2022, how important were the following factors related to climate change for your business?

Please tick one box per row.

	High	Medium	Low	Not important
i. Government policies or measures related to climate change ..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Increasing customer demand for products that help mitigate or adapt to climate change (e.g. low-carbon products)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Increasing costs or input prices resulting from climate change (e.g. higher insurance fees, higher prices for water, adaptation of processes or facilities).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Impacts of extreme weather conditions (e.g. damages / disturbances)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. Internal corporate policies aimed at reducing the CO2 footprint (e.g. commitments to achieve net-zero greenhouse gas emissions)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Intellectual Property Rights (IPRs)

J6. During the three years 2020 to 2022, how important were the following methods to protect your enterprise's knowledge or innovations?

Please tick one box per row.

	High	Medium	Low	Not relevant
<u>Formal methods</u>				
i. Patents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Registration of design patterns.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Trademarks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Copyright	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Strategic methods</u>				
v. Secrecy, including non-disclosure agreements.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vi. Complexity of design	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vii. Lead-time advantage on competitors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section K - Comments and contact coordinates

K1. In the box below, please write any additional comments that you would like to make:

K2. How long did it take to complete this questionnaire?

Hours

Minutes

K3. Please indicate the department(s) in your business that provided the information:

R&D.....	<input type="checkbox"/>	Human resources.....	<input type="checkbox"/>
Finance / Accounting.....	<input type="checkbox"/>	Management	<input type="checkbox"/>
IT	<input type="checkbox"/>	Other	<input type="checkbox"/>

Please provide details of the person we should contact if we have any queries regarding the information returned on this questionnaire.

Name Phone

Position E-mail

(location)

(date)

(signature)

Thank you for completing the questionnaire, your response is important.