

GENERAL PART

A1. Was your enterprise part of an enterprise group in 2018?

Yes

No

If your enterprise is part of an enterprise group, please answer all further questions only for its own activities. Exclude the activities of all subsidiaries or parent enterprises (in Estonia or abroad), except when asked specifically.

B1T. In 2016–2018, how important were the following strategies to the economic performance of your enterprise?

Focus on ...

	Degree of importance (Select one from each row)			
	High	Medium	Low	Not important
1a) ... improving your existing goods or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1b) ... introducing new goods or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2a) ... low-price (price leadership)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2b) ... high-quality (quality leadership)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3a) ... a broad range of goods or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3b) ... one or a small number of key goods or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4a) ... satisfying established customer groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4b) ... reaching out to new customer groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5a) ... standardised goods or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5b) ... customer-specific solutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

product = goods or service

B2T. In 2016–2018, which of the following products did your enterprise produce or deliver?

	Yes	No	
Standardised products offered to different users in the same way. This includes mass customisation.	<input type="checkbox"/>	<input type="checkbox"/>	
Goods or services designed and developed specifically to meet the needs of particular users* (customisation**)	<input type="checkbox"/>	<input type="checkbox"/>	<i>If you answered "Yes" to at least one question about customization or co-creation, proceed to question B3VALIK. If you answered "No" to both questions, proceed to question B5.</i>
Goods or services co-created with users; i.e. the user had an active role in the creation of the idea, design and development of the product (co-creation**)	<input type="checkbox"/>	<input type="checkbox"/>	

* A user can be an end customer or an enterprise which uses a product as an intermediate product.

** Co-creation means that the product is designed and developed together with the user, while for customisation the user only informs about his needs. Co-creation does not include customised versions of standard products.

product = goods or service

B3VALIK. Who were the users* of products produced as a result of customization or co-creation**?**

Mark all that are appropriate.

- Private business enterprises
- Public sector organisations
- Individuals or households
- Non-profit organisations

* A user can be an end customer or an enterprise which uses a product as an intermediate product.

** Co-creation means that the product is designed and developed together with the user, while for customisation the user only informs about his needs. Co-creation does not include customised versions of standard products.

B4. Please provide an estimate for the percentage of turnover in 2018 from ...?

Please note that B4A + B4B = 100%

		%
B4A	... products resulting from customization* or co-creation*	
B4B	... standardised products	
		100%

* Co-creation means that the product is designed and developed together with the user, while for customisation the user only informs about his needs. Co-creation does not include customised versions of standard products.

KNOWLEDGE FLOWS

B5. In 2016–2018, did your enterprise ...?

	Yes	No
... claim a copyright	<input type="checkbox"/>	<input type="checkbox"/>
... protected trade secrets	<input type="checkbox"/>	<input type="checkbox"/>

B6T. In 2016–2018, did your enterprise ...?

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

B7. Did your enterprise purchase or license-in patents or other intellectual property rights in 2016–2018?

- Yes
No

If you answered “Yes” to that question, then **from whom?**

Mark all that are appropriate.

- from private business enterprises or individuals
 from public research organisations, universities or other higher education institutions

B8. Did your enterprise purchase technical consultations* from private business enterprises or from public research organisations in 2016–2018?

- Yes
No

** Includes any consulting activity that involves any kind of technical, scientific or engineering information, e.g. engineering services, measurement and testing services, industrial design services, R&D services, certification services, installation, refitting and retrofitting services.*

If you answered “Yes” to that question, then **from whom?**

Mark all that are appropriate.

- from private business enterprises or individuals
 from public research organisations, universities or other higher education Institutions

B9. In 2016–2018, did your enterprise purchase machinery, equipment or software based on ...?

	Yes	No
... the same or improved technology used in your enterprise before	<input type="checkbox"/>	<input type="checkbox"/>
... new technology that was not used in your enterprise before	<input type="checkbox"/>	<input type="checkbox"/>

AWARENESS

B10T. Which of the following channels did your enterprise use in 2016–2018 to acquire knowledge?

	Yes	No
Conferences, trade fairs or exhibitions	<input type="checkbox"/>	<input type="checkbox"/>
Scientific/technical journals or trade publications	<input type="checkbox"/>	<input type="checkbox"/>
Professional or industry associations	<input type="checkbox"/>	<input type="checkbox"/>
Published patents	<input type="checkbox"/>	<input type="checkbox"/>
Standardisation documents or committees	<input type="checkbox"/>	<input type="checkbox"/>
Social web-based networks or crowd-sourcing*	<input type="checkbox"/>	<input type="checkbox"/>
Open business-to-business platforms or open-source software	<input type="checkbox"/>	<input type="checkbox"/>
Extracting knowledge or design information from goods or services (reverse engineering**)	<input type="checkbox"/>	<input type="checkbox"/>

* Crowd-sourcing is a sourcing model.

** Reverse engineering (RE) is the process by which a man-made object is deconstructed to reveal its design, architecture, or to extract knowledge from the object.

B11T. During 2016–2018, how important to the management of your business were the following methods of organising work?

If you have not used them, choose “Not important”.

	Degree of importance (Select one from each row)			
	High	Medium	Low	Not important
Planned job rotation of staff across different functional areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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"/>
Cross-functional work groups or teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PRODUCT INNOVATION

C1A & C1B. During 2016–2018, did your enterprise introduce any ...?

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

	Yes	No	
... new* goods	<input type="checkbox"/>	<input type="checkbox"/>	<i>If you answered “Yes” to at least one question, proceed to question C2. If you answered “No” to all questions, proceed to question C6T.</i>
... new* services	<input type="checkbox"/>	<input type="checkbox"/>	
... improved** goods	<input type="checkbox"/>	<input type="checkbox"/>	
... improved** services	<input type="checkbox"/>	<input type="checkbox"/>	

* New goods or services differ significantly from the enterprise’s previous products by characteristics or usage.

** Smaller than significant changes are made also in existing products (goods or services). Improvements are when enterprise creates a new, improved version of a previous product, improves its characteristics of use, etc. gradually in a specific direction.

C2. In 2016–2018, were any of the new or improved products* ...?

	Yes	No
... not previously offered by any of your competitors**	<input type="checkbox"/>	<input type="checkbox"/>
... identical or very similar to products already offered by your competitors**	<input type="checkbox"/>	<input type="checkbox"/>

* product = goods or service

** Competitors may be from Estonia as well as from other countries.

C3T. Please estimate the percentage of your enterprise’s total turnover in 2018 from products that were new or improved in 2016–2018?

Please note that:

row 1 + row 2 = 100%

row 1.1 + row 1.2 = row 1

	% of turnover
1. New or improved products	
1.1. Products not previously offered by any of your competitors	
1.2. Products identical or very similar to products already offered by your competitors	
2. Standardised products	

C4AVALIK. Who developed these product innovations?

If your enterprise is part of an enterprise group, the other enterprises may be either enterprises in your group of enterprises as well as enterprises that are not in your enterprise group.

Mark all that are appropriate.

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

C5. How did the new or improved product(s), introduced during 2016 to 2018, meet your enterprise's expectations by the end of 2018?

Please select only one most appropriate.

- Expectations were exceeded
- Expectations were adequately met
- Expectations were met only to some extent
- Expectations were not met at all
- Too early to assess

BUSINESS PROCESS INNOVATION

C6T. During 2016–2018, did your enterprise introduce any of the following types of new processes or improved processes that differ significantly from your previous processes?

	Yes	No	
Methods for producing goods or providing services (including methods for developing goods or services)	<input type="checkbox"/>	<input type="checkbox"/>	<i>If you answered "Yes" to at least one question, proceed to question C7Avalik. If you answered "No" to all questions, proceed to question C9.</i>
Logistics, delivery or distribution methods	<input type="checkbox"/>	<input type="checkbox"/>	
Methods for information processing or communication (ICT)	<input type="checkbox"/>	<input type="checkbox"/>	
Methods for accounting or purchasing operations*	<input type="checkbox"/>	<input type="checkbox"/>	
Business practices for organising procedures or external relations**	<input type="checkbox"/>	<input type="checkbox"/>	
Methods of organising work responsibility, decision making or human resource management***	<input type="checkbox"/>	<input type="checkbox"/>	
Marketing methods for promotion, packaging, pricing, product placement, after sales services, etc.****	<input type="checkbox"/>	<input type="checkbox"/>	

* Includes accounting, auditing, financial and insurance activities, payments; procurements and purchasing.

** Includes strategic and general management. Application of new principles in external relations.

*** Includes personnel recruitment, training, workplace organisation, payroll management.

**** Includes direct marketing (telemarketing), fairs, market research, customer support.

C7Avalik. Who developed these process innovations?

If your enterprise is part of an enterprise group, the other enterprises may be either enterprises in your group of enterprises as well as enterprises that are not in your enterprise group.

Mark all that are appropriate.

- 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

C8. How did the new or improved processes introduced during 2016–2018 meet your enterprise’s expectations by the end of 2018?

Please select only one most appropriate.

- Expectations were exceeded
- Expectations were adequately met
- Expectations were met only to some extent
- Expectations were not met at all
- Too early to assess

INNOVATION, AND RESEARCH AND DEVELOPMENT (R&D)

C9. In 2016–2018, did your enterprise ...?

	Yes	No	
... completed activities on product* or process innovation	<input type="checkbox"/>	<input type="checkbox"/>	<i>If you answered “Yes” to at least one question, proceed to question C10. If you answered “No” to all questions, proceed to question C12A.</i>
... ongoing innovation activities at the end of 2018	<input type="checkbox"/>	<input type="checkbox"/>	
... abandoned innovation activities	<input type="checkbox"/>	<input type="checkbox"/>	
... contract-out R&D** to other enterprises (include enterprises in your own group) or to public or private research organisations	<input type="checkbox"/>	<input type="checkbox"/>	
... in-house research and development (R&D**) activities	<input type="checkbox"/>	<input type="checkbox"/>	

** product = goods or service*

*** Research and development (R&D) is systematic activity to acquire new knowledge or use knowledge available for the development of new applications. The main part of R&D is often design of prototypes.*

If your company had in-house R&D in 2016–2018, was R&D in your enterprise occasional or continuous?

- Occasionally
- Continuously, your enterprise had permanent R&D staff

C10. In 2018, did your enterprise have any of the following types of expenditure* on innovations, and research and development (R&D)?

		Amount of expenses in whole numbers	There were no expenses	
C10A	R&D performed in-house	_____ €	<input type="checkbox"/>	
C10B	R&D contracted out (including enterprises in own enterprise group)	_____ €	<input type="checkbox"/>	
C10C	All other innovation expenditures (excluding R&D)*	_____ €	<input type="checkbox"/>	<i>If you had such expenses, also answer questions C10E, C10G and C10I. If you answered „There were no expenses” proceed to question C11A.</i>

* Expenditure on services may include product development, services planning, preparation of innovations (excl. R&D), training, professional development, marketing, etc.

If your enterprise had all other innovation expenditures (except R&D expenditure) in 2018, what were these expenditures?

		Amount of expenses in whole numbers	There were no expenses
C10E	Expenditures on own personnel working on innovation	_____ €	<input type="checkbox"/>
C10G	Expenditures on services, materials, supplies purchased from others for innovation	_____ €	<input type="checkbox"/>
C10I	Expenditures on fixed assets for innovation (acquisition of machinery, equipment, software, IPRs, buildings etc.)	_____ €	<input type="checkbox"/>

C11A. Please estimate, how would your enterprise's innovation expenditures* change in 2019 compared to 2018?

Please select only one most appropriate.

- Increase, approximately by _____ %
- Stay about the same (+/- 5%)
- Decrease, approximately by _____ %
- No innovation expenditures expected
- Don't know

* total innovation expenditures = R&D + other innovation expenditures

C11B. Please estimate, how would your enterprise's innovation expenditures* change in 2020 compared to 2019?

Please select only one most appropriate.

- Increase, approximately by _____ %
- Stay about the same (+/- 5%)
- Decrease, approximately by _____ %
- No innovation expenditures expected
- Don't know

* total innovation expenditures = R&D + other innovation expenditures

FUNDING

C12A. Did your enterprise try to obtain or obtained funding in exchange for shares* in the ownership of the enterprise in 2016–2018?

Please select only one most appropriate.

- Did not try
- Tried, but not successfully
- Yes, successfully obtained some funding

* Shares do not include bonds.

If your enterprise obtained funding in exchange for shares, then **was at least part of the funding used for R&D or other innovation activities?**

- Yes
- No

C12B. During 2016–2018, did your enterprise try to or obtained funding in the form of loans*?

Please select only one most appropriate.

- Did not try
- Tried, but not successfully
- Yes, successfully obtained some funding

* Including sale of bonds, overdraft, leasing. This does not include supplier credit.

If your enterprise obtained funding in the form of loans, then **was at least part of the funding used for R&D or other innovation activities?**

- Yes
- No

C13. During 2016–2018, did your enterprise receive any financial support from ...?

	Yes	No	If you answered "Yes", then was at least part of the funding used for R&D or other innovation activities?
... a local authority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... national government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... EU Horizon 2020 Programme for Research and Innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... other financial support from a European Union institution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CO-OPERATION

C14. During 2016–2018, 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.

	Yes	No	
... on research and development (R&D)	<input type="checkbox"/>	<input type="checkbox"/>	<i>If you answered "Yes" to at least one of the two questions, proceed to question C151. If you answered "No" to all questions, proceed to question C16T.</i>
... on other innovation activities (excluding R&D)	<input type="checkbox"/>	<input type="checkbox"/>	
... in any business activities other than innovation and R&D	<input type="checkbox"/>	<input type="checkbox"/>	

C151. Please indicate the innovation co-operation partners of your enterprise in Estonia.

Choose all that are appropriate.

- Private business enterprises (outside your enterprises/outside your enterprise group)
- Enterprises within your enterprise group
- Universities or other higher education institutions
- Government or public research institutes (excluding your customers)
- Clients or customers from the public sector
- Non-profit organisations
- Co-operation partner is located neither in Estonia

If the innovation co-operation partners of your enterprise include enterprises from the private sector in Estonia, please specify **which?**

Choose all that are appropriate.

- Consultants, commercial labs, or private research institutes
- Suppliers of equipment, materials, components or software
- Enterprises that are your clients or customers
- Enterprises that are your competitors
- Other enterprises

C152. Please indicate the innovation co-operation partners of your enterprise from other EU or EFTA* countries.

Choose all that are appropriate.

- Private business enterprises (outside your enterprises/ outside your enterprise group)
- Enterprises within your enterprise group
- Universities or other higher education institutions
- Government or public research institutes (excluding your customers)
- Clients or customers from the public sector
- Non-profit organisations
- Co-operation partner is located neither in other EU or EFTA countries

If the innovation co-operation partners of your enterprise include private sector enterprises from other EU or EFTA* countries, please specify **which?**

Choose all that are appropriate.

- Consultants, commercial labs, or private research institutes
- Suppliers of equipment, materials, components or software
- Enterprises that are your clients or customers
- Enterprises that are your competitors
- Other enterprises

** EFTA – Iceland, Norway, Switzerland, Liechtenstein*

C153. Please indicate the innovation co-operation partners of your enterprise from outside Estonia, EU or EFTA countries.

Choose all that are appropriate.

- Private business enterprises (outside your enterprises/ outside your enterprise group)
- Enterprises within your enterprise group
- Universities or other higher education institutions
- Government or public research institutes (excluding your customers)
- Clients or customers from the public sector
- Non-profit organisations
- Co-operation partner is not located outside Estonia, EU or EFTA countries

If the innovation co-operation partners of your enterprise include private sector enterprises from outside Estonia, EU or EFTA countries, please specify **which**?

Choose all that are appropriate.

- Consultants, commercial labs, or private research institutes
- Suppliers of equipment, materials, components or software
- Enterprises that are your clients or customers
- Enterprises that are your competitors
- Other enterprises

OBSTACLES

C16T. During 2016–2018, has any of the following types of legislation or regulation* affected your enterprises' innovation activities?

Please select only one from each row.

	Facilitated innovation activities	Prevented, hampered or increased costs of innovation activities	Had no effect / not relevant
Product safety, consumer protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intellectual property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employment, worker safety or social affairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

** Take into consideration the legislation in force in Estonia, in the European Union as well as outside the European Union.*

C17T. During 2016–2018, how important were the following factors in hampering your enterprises' innovation activities?

Please estimate regardless of whether the innovation was completed, abandoned, or there was no innovation.

	Degree of importance <i>(Select one from each row)</i>			
	High	Medium	Low	In not an obstacle
Lack of internal finance for innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of credit or private equity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difficulties in obtaining public grants or subsidies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Innovation involves high costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of skilled employees within your enterprise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of collaboration partners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of access to external knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uncertain market demand for your ideas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Too much competition in your market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Different priorities within your enterprise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BASIC INFORMATION ON YOUR ENTERPRISE

D4. What was the percentage of turnover in 2018 by groups of customers?

Please note that D4A + D4B + D4C = 100%

		%
D4A	Turnover from customers located in Estonia	
D4B	Turnover from customers located in EU and EFTA countries	
D4C	Turnover from customers located in other countries	
		100%

D6T. Did your enterprise spend on the following items in 2018?

That expenditure made by the enterprise on all its activities, not only innovation related expenditure, is asked here.

	Amount of expenses in whole numbers	There were no expenses
Purchase of machinery, equipment, buildings and other fixed assets	_____ €	<input type="checkbox"/>
Marketing, brand building, advertising (including in-house costs and purchased services)	_____ €	<input type="checkbox"/>
Training own staff	_____ €	<input type="checkbox"/>
Product design (including in-house costs and purchased services)	_____ €	<input type="checkbox"/>
Software development, database work and data analysis (including in-house costs and purchased services)	_____ €	<input type="checkbox"/>
Registering, filing and monitoring own Intellectual Property Rights (IPRs) and purchasing or licensing IPRs from others	_____ €	<input type="checkbox"/>

ENTERPRISE GROUP

Questions D8EE to D9 should be answered only by those enterprises which were part of an enterprise group in 2018.

D8EE. During 2016-2018, did your enterprise engage in any of the following activities with one or more enterprises of your enterprise group in Estonia?

If there are no more enterprises located in Estonia in your group, please answer "None of those".

Mark all that are appropriate.

Inflows from other enterprises in your group ...

- Technical knowledge
- Financial resources
- Personnel
- In-sourcing of business activities
- None of those

Outflows to other enterprises in your group ...

- Technical knowledge
- Financial resources
- Personnel
- Out-sourcing of business activities
- None of those

D8OTH. During 2016–2018, did your enterprise engage in any of the following activities with one or more enterprises of your enterprise group located outside Estonia?

If there are no more enterprises located outside Estonia in your group, please answer “None of those”.

Mark all that are appropriate.

Inflows from other enterprises in your group abroad ...

- Technical knowledge
- Financial resources
- Personnel
- In-sourcing of business activities
- None of those

Outflows to other enterprises in your group abroad ...

- Technical knowledge
- Financial resources
- Personnel
- Out-sourcing of business activities
- None of those

D9. During 2016–2018, did your enterprise try to obtain funding or received funding in the form of intra-group loans?

Please select only one most appropriate.

- Did not try
- Tried, but not successfully
- Yes, successfully obtained some funding

If your enterprise obtained funding in the form of intra-group loan, then **was at least part of the funding used for R&D or other innovation activities?**

- Yes
- No

B12. Did your enterprise have separate accounting for monitoring costs of innovations, developments or grants?

- Yes
- No

COMPLETING THE QUESTIONNAIRE

Please estimate how much time you spent on filling out the questionnaire (incl. time spent on reading the instructions, collecting and preparing data).

_____ hours
_____ minutes

If you wish to comment on the questionnaire or your answers, write the comment here.

**You have reached the end of the questionnaire.
Thank you!**