STATEC

Institut national de la statistique et des études économiques

Luxembourg

National registration number (matricule national):

Name of the enterprise:

………………………………………………………

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Survey on the usage of information and communication technologies by enterprises - 2018

The aim of this survey is the collection of data concerning enterprises in order to compile statistics on their usage of Information and Communication Technologies (ICT). This survey is carried out under **Regulation (EC) N°808/2004 of the European Parliament and of the Council of 21 April 2004 concerning Community statistics on the information society** and of the **Law of 10 July 2011 organising 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 the survey

The aim of this survey is to collect data on the usage of information and communication technologies (ICT) by Luxembourgish enterprises. The collected data are used in the production of harmonized and comparable statistics across the European Union. They are therefore an essential tool for national and European policy makers to measure progress towards the goals concerning the adoption and use of ICT, such as the "Digital Agenda for Europe" of the European Commission.

The results of previous surveys are available on the Luxembourgish Statistics Portal (**http://www.statistiques.public.lu/en/enterprises/**), under « Science and technology\TIC - Enterprises ».

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 or Luxembourgish branches of legal units incorporated under foreign law.

Please exclude any activities relating to any permanent establishments and subsidiaries located in foreign territories such as foreign branches of a legal unit incorporated under Luxembourgish law.

Where not otherwise specified, please consider as reference the current situation (year 2018). The reference period for the percentages of sales/orders data is financial year 2017. 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 ICT manager or a senior professional in the ICT department of your enterprise. In any case the respondent should not be someone with responsibilities only in accounting.

The survey is divided into several sections. Each section contains questions about various aspects of ICT at your enterprise. Due to the specialised nature of each question (e.g. financial indicators, human resources records etc.), it may be necessary to collaborate with colleagues in different departments to answer the questions.

ⓘ 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 nine sections:

Section A - General information

Section B - ICT specialists and skills

Section C - Access and use of the internet

Section D - Use of cloud computing services

Section E - Use of 3D printing

Section F - Big data analysis

Section G - Invoicing

Section H - e-Commerce

Section I - Comments and contact coordinates

Disclaimer: References to third-party brands, products and trademarks are for the sake of clarification and are not intended to promote the use of such products.

Section A - General information

A1. Is 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..................... ☐

No .... ☐

A2. Does your enterprise use computers?

Computers include Personal Computers, nettops, portable computers (e.g. laptops, notebooks, netbooks), other portable devices like smartphones, Personal Digital Assistants (PDA).

Yes..................... ☐ ➔ *Please go to question B1.*

No .... ☐ ➔ *Please go to question I1.*

Section B - ICT specialists and skills

B1. Does your enterprise employ ICT specialists?

ICT specialists are employees for whom **ICT is the main job**. For example, to develop, operate or maintain ICT systems or applications.

Yes..................... ☐

No .... ☐

B2. Did your enterprise provide any type of training to develop ICT related skills of the persons employed, during 2017?

	Yes	No
a. Training for ICT specialists Tick No if your enterprise didn't employ ICT specialists during 2017.	☐	☐
b. Training for other persons employed	☐	☐

B3. Did your enterprise recruit or try to recruit ICT specialists, during 2017?

Yes..................... ☐ ➔ *Please go to question B4.*

No .... ☐ ➔ *Please go to question B5.*

B4. During 2017, did your enterprise have vacancies for ICT specialists that were difficult to fill?

Yes..................... ☐

No .... ☐

B5. Please indicate who mainly performed the following ICT functions of your enterprise in 2017:

	Mainly own employees incl. those employed in parent or affiliate enterprises	Mainly external supplier	Not applicable
	(Please tick one box per row)		
a. Maintenance of ICT infrastructure .... e.g. servers, computers, printers, networks	☐	☐	☐
b. Support for office software .... e.g. word processors, spreadsheets, etc.	☐	☐	☐
c. Development of business management software/systems ...... e.g. **ERP** - Enterprise Resource planning used to manage resources by sharing information among different functional areas such as accounting, planning, production, marketing; **CRM** software application for managing information about customers; **H**uman **R**esources information management, databases Exclude purchases of pre-packaged software.	☐	☐	☐
d. Support for business management software/systems .... e.g. ERP, CRM, HR, databases	☐	☐	☐
e. Development of web solutions .... e.g. development of your enterprise's website, apps, e-commerce solutions, etc.	☐	☐	☐
f. Support for web solutions... e.g. support of your enterprise's website, apps, e-commerce solutions, etc. Exclude hosting your enterprise's website.	☐	☐	☐
g. ICT security and data protection .... e.g. security testing, training on security, resolving ICT security incidents, etc. Exclude upgrades of pre-packaged software.	☐	☐	☐

Section C - Access and use of the internet

C1. **Does your enterprise have access to the internet?**

Yes..................... ☐ ➜ *Please go to question C2.*

No .... ☐ ➜ *Please go to question E1.*

C2. **Indicate the number of persons employed who used computers with access to the internet at least once a week for business purposes.**

Please consider the aggregate number of persons from all the legal units listed in the letter accompanying the survey.

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

persons

Use of a fixed broadband connection to the internet for business purposes

C3. **Does your enterprise use DSL or any other type of fixed broadband connection to the internet?**

(e.g. ADSL, SDSL, VDSL, fiber optics technology (FTTH), cable technology, public Wi-Fi (e.g. HotCity), WiMax etc.)

Yes..................... ☐ ➜ *Please go to question C4.*

No .... ☐ ➜ *Please go to question C5.*

C4. **What is the maximum contracted download speed of the fastest fixed internet connection of your enterprise?**

(Please tick one box only)

a. Less than 2 Mbit/s .... ☐

b. At least 2 but less than 10 Mbit/s .... ☐

c. At least 10 but less than 30 Mbit/s .... ☐

d. At least 30 but less than 100 Mbit/s .... ☐

e. At least 100 Mbit/s.. ☐

Use of a mobile connection to the internet for business purposes

A **mobile connection to the internet** means the usage of portable devices connecting to the internet through mobile telephone networks and not Wi-Fi. Enterprises provide portable devices to the persons employed, and paying for all or at least up to a limit, the subscription and the use costs.

C5. **Does your enterprise provide <u>portable devices</u> that allow a <u>mobile</u> connection to the internet using mobile telephone networks, for business purposes?**

e.g. via portable computers or other portable devices like smartphones

Yes..................... ☐ ➔ *Please go to question C6.*

No .... ☐ ➔ *Please go to question C8.*

C6. **Indicate the number of persons employed who use a <u>portable device</u> provided by the enterprise, that allows internet connection via mobile telephone networks, for business purposes?**

Please consider the aggregate number of persons from all the legal units listed in the letter accompanying the survey.

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

☐☐☐☐   persons

C7. **Does your enterprise provide <u>portable devices</u> that allow <u>mobile</u> connection to the internet using mobile telephone networks, for business use to:**

	Yes	No
a. Access the enterprise's e-mail system?	☐	☐
b. Access and modify enterprise's documents?	☐	☐
c. Use dedicated business software applications?	☐	☐

(e.g. for orders or sales management, ERP (Enterprise Resource Planning) related applications, etc.)

Use of a website

C8. **Does your enterprise have a website?**

Yes..................... ☐ ➔ *Please go to question C9.*

No .... ☐ ➔ *Please go to question C10.*

C9. Does the website have any of the following?

		Yes	No
a.	Description of goods or services, price lists	☐	☐
b.	Online ordering or reservation or booking, e.g. shopping cart	☐	☐
c.	Possibility for visitors to customise or design online goods or services	☐	☐
d.	Tracking or status of orders placed	☐	☐
e.	Personalised content in the website for regular/recurrent visitors	☐	☐
f.	Links or references to the enterprise's social media profiles	☐	☐
g.	Advertisement of open job positions or online job application	☐	☐
h.	Pages that show the process 'Corporate Social Responsibility' or 'sustainable development' of your enterprise	☐	☐

Other use of the internet

C10. Does your enterprise pay to advertise on the internet?

(e.g. adverts on search engines, on social media, on other websites, etc.)

Yes.................... ☐ ➔ *Please go to question C11.*

No .... ☐ ➔ *Please go to question D1.*

C11. Does your enterprise pay to advertise on the internet using any of the following targeted advertising methods?

		Yes	No
a.	Based on webpages' content or keywords searched by users	☐	☐
b.	Based on the tracking of internet users' past activities or profile	☐	☐
c.	Based on the geolocation of internet users	☐	☐
d.	Any other method of targeted advertising on the internet not specified above	☐	☐

Section D - Use of cloud computing services

Cloud computing refers to **ICT services** that are used over the internet to access software, computing power, storage capacity etc., **where the services have all of the following characteristics:**
- are delivered from **servers** of service providers
- can be easily **scaled** up or down (e.g. number of users or change of storage capacity)
- can be used **on-demand by the user**, at least after the initial set up (without human interaction with the service provider)
- are **paid** for, either per user, by capacity used, or they are pre-paid.

Cloud computing may include connections via Virtual Private Networks (VPN).

Please **exclude** free of charge services.

D1. Does your enterprise buy any cloud computing services used over the internet?

Please exclude free of charge services.

Yes.................... ☐ ➔ *Please go to question D2.*

No .... ☐ ➔ *Please go to question E1.*

D2. Does your enterprise buy any of the following cloud computing services used over the internet?

	Yes	No
a. E-mail (as a cloud computing service)	☐	☐
b. Office software (e.g. word processors, spreadsheets, etc.) (as a cloud computing service)	☐	☐
c. Hosting the enterprise's database(s) (as a cloud computing service)	☐	☐
d. Storage of files (as a cloud computing service)	☐	☐
e. Finance or accounting software applications (as a cloud computing service)........	☐	☐
f. Customer Relationship Management (CRM, software application for managing information about customers) (as a cloud computing service)	☐	☐
g. Computing power to run the enterprise's own software (as a cloud computing service)..	☐	☐

D3. Does your enterprise buy any cloud computing services delivered from:

	Yes	No
a. **Shared servers** of service providers?..	☐	☐
b. **Servers** of service providers **exclusively reserved for your enterprise**?	☐	☐

Section E - Use of 3D printing

Use of 3D printing aka additive layer manufacturing refers to the use of special printers either by the enterprise itself or the use of 3D printing services provided by other enterprises for the creation of three-dimensional physical objects using digital technology.

E1.   During 2017, did your enterprise use 3D printing:

		Yes	No
a.	Using your enterprise's 3D printers? Include use of rented or leased 3D printers.	☐	☐
b.	Using printing services provided by other enterprises? Include printing services provided by parent or affiliate enterprises.	☐	☐

If you answered **No to both items** ➔ *Please go to question **F1**.*
Otherwise ➔ *Please go to question **E2**.*

E2.   During 2017, did your enterprise use 3D printing for any of the following:

		Yes	No
a.	Prototypes or models for **sale**	☐	☐
b.	Prototypes or models for **internal use**	☐	☐
c.	Goods for **sale** excluding prototypes or models (e.g. moulds, tools, parts of goods, semi-finished goods, etc.)	☐	☐
d.	Goods to be used in your enterprise's **production process** excluding prototypes or models (e.g. moulds, tools, parts of goods, semi-finished goods, etc.)	☐	☐

Section F - Big data analysis

Big data are generated from activities that are carried out electronically and from machine-to-machine communications (e.g. data produced from social media activities, from production processes, etc.)

Big data typically have characteristics such as:

- Significant **volume** referring to vast amounts of data generated over time.
- **Variety** referring to the different format of complex data, either structured or unstructured (e.g. text, video, images, voice, docs, sensor data, activity logs, click streams, coordinates, etc.).
- **Velocity** referring to the high speed at which data is generated, becomes available and changes over time.

Big data analysis refers to the use of techniques, technologies and software tools for analysing **big data** extracted from your own enterprise's data sources or other data sources.

F1.   During 2017, did your enterprise analyse <u>big data</u> from any of the following data sources?

Include big data analysis conducted by external service providers.

	Yes	No
a. Enterprise's own data from smart devices or sensors .... (e.g. Machine to Machine - M2M - communications, digital sensors, Radio frequency identification tags RFID[1], etc.) (in the context of big data)	☐	☐
b. Geolocation data from the use of portable devices .... (e.g. portable devices using mobile telephone networks, wireless connections or GPS) (in the context of big data)	☐	☐
c. Data generated from social media .... (e.g. social networks, blogs, multimedia content sharing websites, etc.) (in the context of big data)	☐	☐
d. Other big data sources not specified above..	☐	☐

Please specify here:

> If you answered **<u>No to all items</u>** ➜ *Please go to question G1*.
> Otherwise ➜ *Please go to question F2*.

F2.   During 2017, who performed big data analysis for your enterprise?

	Yes	No
a. **Enterprise's own employees**... (including those employed in parent or affiliate enterprises)	☐	☐
b. **External service provider**	☐	☐

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[1] A **Radio Frequency identification - RFID** tag is a device that can be applied to or incorporated into a product or an object and transmits data via radio waves.

Section G - Invoicing

There are invoices in **paper form** and **electronic form**.

Invoices in **electronic form** are of two types:

- **E-invoices** are electronic invoices in a standard structure **suitable for automatic processing** (EDI (e.g. EDIFACT), XML (e.g. UBL)). They may be directly exchanged between suppliers and customers, via service operators or via an electronic banking system.
- **Invoices** in electronic format **not suitable for automatic processing** *(e.g. e-mails, e-mail attachment as PDF, images in TIF, JPEG or other format).*

If you cannot provide the exact percentages an approximation will suffice.

G1. **Of all invoices your enterprise issued/sent during 2017, what percentage was issued/sent as:**

Include also invoices sent via intermediaries (e.g. accountants, e-invoice service providers, etc.).

   a. **Invoices in electronic form**, in a standard structure **suitable for automated processing** (**e-invoices**)? .... |___|___|___|%

   Excluding the transmission of PDF files.
   (EDI (e.g. EDIFACT), XML (e.g. UBL), etc.)

   b. **Invoices in electronic form**, **not suitable** for automated processing? .... |___|___|___|%

   Including the transmission of PDF files.
   (e.g. emails, images in TIF, JPEG or other format)

   c. Paper invoices? .... |___|___|___|%

   Total number of invoices sent (a.+b.+c.) | 1 | 0 | 0 |%

*If you answered **"0"** to item **a.** ➔ Please go to question **G3**.
Otherwise ➔ Please go to question **G2**.*

G2. **During 2017, did your enterprise issue/sent e-invoices in a standard structure suitable for automated processing, to:**

	Yes	No
a. Private consumers (B2C)	☐	☐
b. Other enterprises (B2B)	☐	☐
c. Public authorities (B2G)	☐	☐

G3. **Of all invoices your enterprise received during 2017, what percentage was received as:**

   a. Invoices in electronic form, in a standard structure **suitable for automated processing** (**e-invoices**)? .... |___|___|___|%
   Excluding the transmission of PDF files.
   (EDI (e.g. EDIFACT), XML (e.g. UBL), etc.)

   b. Invoices in electronic form, **not suitable for automated processing**? .... |___|___|___|%
   Including the transmission of PDF files.
   (e.g. emails, images in TIF, JPEG or other format)

   c. Paper invoices? .... |___|___|___|%

   Total number of invoices received (a.+b.+c.) | 1 | 0 | 0 |%

Section H - e-Commerce

An **e-Commerce transaction** is the sale or purchase of goods or services conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders.

The payment and the ultimate delivery of the goods or services do not necessarily have to be conducted online.

e-Commerce transactions **exclude** orders made by manually typed e-mail messages.

Web sales

Web sales are sales made via an online store (web shop, e-commerce marketplace[2]), via web forms on your enterprise's website or extranet, or via "apps"[3].

H1. **During 2017, did your enterprise <u>receive orders</u> for goods or services placed via a <u>website or "apps"</u>?**

Please exclude manually typed e-mails.

Yes.................... ☐ ➔ *Please go to question H2.*

No .... ☐ ➔ *Please go to question H7.*

H2. **Please state the value of the turnover resulting from <u>orders received</u> that were placed via a website or "apps" (in monetary terms, excluding VAT), in financial year 2017.**

Please consider the aggregate turnover (as defined in the statutory annual accounts) 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.

☐☐☐☐☐☐☐☐☐ EUR

H3. **During 2017, via which websites or "apps" did your enterprise <u>receive</u> orders for goods or services?**

	Yes	No
a. via your enterprise's website or "apps" .... (including those of parent or affiliate enterprises, extranets)	☐	☐
b. via an e-commerce marketplace website or "apps" used by several enterprises for trading products .... (e.g. Booking, eBay, Amazon, Amazon Business, Alibaba, Rakuten, etc.)	☐	☐

If you answered **<u>Yes to both items</u>** ➔ *Please go to question H4.*

Otherwise ➔ *Please go to question H5.*

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[2] The term '**e-commerce marketplace**' refers to websites or apps used by several enterprises for trading products (*e.g. Booking, eBay, Amazon, Amazon Business, Alibaba, Rakuten, etc.*). *Amazon Business* is a marketplace on *Amazon.com* that is addressed to B2B commercial transactions. E-commerce marketplaces are different from e-commerce platforms (*e.g. Shopify, WooCommerce, Magento, Bigcommerce, etc.*). The latter provide scalable, self-made online solutions for business that would like to set up their own e-commerce website.
[3] **App(s)**. A mobile app, short for mobile application or just app, is application software designed for a specific purpose (e.g. entertainment, shopping, etc.), downloaded and used on computers depending on their operating system (e.g. portable devices such as tablets, smartphones, etc.).

H4. **What was the percentage breakdown of the total turnover (excluding VAT) from <u>orders received</u> that were placed via a website or "apps" in financial year 2017 (refer to the amount provided in H2) for the following:**

a. via your enterprise's website or "apps"? .... ▯|▯|▯ %
(including those of parent or affiliate enterprises, extranets)

b. via an e-commerce marketplace website or "apps" used by several enterprises for trading products? .... ▯|▯|▯ %
(e.g. Booking, eBay, Amazon, Amazon Business, Alibaba, Rakuten, etc.)

Total (a.+b.)
This percentage refers to the amount indicated in question **H2**. `1｜0｜0` %

H5. **Please provide a percentage breakdown of the total turnover from <u>orders received</u> that were placed via a website or "apps" in financial year 2017 (refer to the amount provided in H2), by geographic areas:**

a. Luxembourg .... ▯|▯|▯ %

b. Belgium, France, Germany, Netherlands .... ▯|▯|▯ %

c. Other EU countries .... ▯|▯|▯ %

d. Rest of the world .... ▯|▯|▯ %

Total (a.+b.+c.+d.)
This percentage refers to the amount indicated in question **H2**. `1｜0｜0` %

H6. **Please provide a percentage breakdown of the total turnover (excluding VAT) from <u>orders received</u> that were placed via a website or "apps" in financial year 2017 (refer to the amount provided in H2), by type of customer:**

a. B2C (Business-to-consumer, sales to private consumers) .... ▯|▯|▯ %

b. B2B (Business-to-business, sales to other enterprises) .... ▯|▯|▯ %

c. B2G (Business-to-government, sales to public authorities) .... ▯|▯|▯ %

Total (a.+b.+c.)
This percentage refers to the amount indicated in question **H2**. `1｜0｜0` %

EDI-type sales

EDI-type sales are sales made via EDI-type messages. EDI (Electronic Data Interchange) meaning:
- in an agreed or standard format suitable for automated processing (EDI (e.g. EDIFACT), XML (e.g. UBL), etc.
- without the individual messages being typed manually.

H7. **During 2017, did your enterprise <u>receive orders</u> for goods or services via EDI-type messages?**

Please exclude manually typed e-mails.

Yes..................... ☐ ➔ *Please go to question **H8**.*

No .... ☐ ➔ *Please go to question **H10**.*

H8. **Please state the value of the turnover (in monetary terms, excluding VAT) resulting from <u>orders received</u> via EDI-type messages, in financial year 2017.**

Please consider the aggregate turnover (as defined in the statutory annual accounts) 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.

EUR

H9. **Please provide a percentage breakdown of the total turnover from <u>orders received</u> via EDI-type messages in 2017, by geographic areas:**

a. Luxembourg .... ☐☐☐ %

b. Belgium, France, Germany, Netherlands.. ☐☐☐ %

c. Other EU countries... ☐☐☐ %

d. Rest of the world .... ☐☐☐ %

Total (a.+b.+c.+d.)
This percentage refers to the amount indicated in question **H8**. | **1 | 0 | 0** %

Web or EDI purchases

These can be considered purchases made via any of the following ways:

- via an online store (web shop) or via web forms on a website or an extranet of another enterprise, via "apps";
- via EDI-type messages (EDI: Electronic Data Interchange) which means messages in an agreed or standard format suitable for automated processing (EDI (e.g. EDIFACT), XML (e.g. UBL), etc.),
- without the individual messages being typed manually.

Purchases of goods or services include the value of all goods and services purchased during the accounting period for resale or consumption in the production process, excluding capital goods the consumption of which is registered as consumption of fixed capital.

H10. During 2017, did your enterprise place orders for goods or services via:

Please exclude manually typed e-mails.

	Yes	No
a. A website or "apps"?	☐	☐
b. EDI-type messages?	☐	☐

If you answered **No to both items** ➔ *Please go to question I1.*
Otherwise ➔ *Please go to question H11.*

H11. What was the percentage of the total purchases that resulted from orders placed electronically (via a website, "apps" or EDI-type messages), in 2017 (excluding VAT).

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

☐|☐|☐ **%**

H12. Please provide a percentage breakdown of the total turnover from orders placed electronically (via a website, "apps" or EDI-type messages) in 2017, by geographic areas:

a. Luxembourg	☐|☐|☐ %
b. Belgium, France, Germany, Netherlands	☐|☐|☐ %
c. Other EU countries	☐|☐|☐ %
d. Rest of the world	☐|☐|☐ %

Total (a.+b.+c.+d.)
This percentage corresponds to the proportion of purchases indicated in question **H11**. 1|0|0 %

I1. In the box below, please write any additional comments that you would like to make:

I2. How long did it take to complete this questionnaire?

| | Hours | | | Minutes

I3. Please indicate the department(s) in your business that provided the information:

ICT .... ☐   Management .... ☐

Finance / Accounting .... ☐   Other .... ☐

Human resources.................... ☐

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   ....

Website   http:// ....

_____   _____   _____
(location)   (date)   (signature)

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