eurostat

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Eurostat metadata

Reference metadata

For any question on data and metadata, please contact: EUROPEAN STATISTICAL DATA SUPPORT

1. Contact

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1.1. Contact organisation	Statistics Netherlands
1.2. Contact organisation unit	Department of Tourism, Culture and Technology
1.5. Contact mail address	Postbus 24500 2490 HA Den Haag Netherlands

2. Statistical presentation

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2.1. Data description

(Metadata report)

Name of the data collection:
ICT-gebruik bedrijven 2016

Data on the usage of Information and Communication Technologies (ICT) in enterprises are survey data. They are collected by the National Statistical Institutes or Ministries and are in principle based on Eurostat's **annual model questionnaires** on **"ICT usage and e-commerce in enterprises"**.
Large part of the data collected is used in the context of the 2011 - 2015 benchmarking framework (endorsed by i2010 High Level Group in November 2009) for the Digital Agenda, Europe's strategy for a flourishing digital economy by 2020. This conceptual framework follows the i2010 Benchmarking Framework which itself followed-up the eEurope 2005 Action Plan.
The aim of the European survey on **"ICT usage and e-commerce in enterprises"** is to collect and disseminate harmonised and comparable information at European level.
Data for this collection are supplied directly from the surveys with no separate treatment.

2.2. Classification system

NACE

2.3. Coverage - sector

(Metadata report)

All economic activities in the scope of Annex I of the Commission Regulation are intended to be included in the general survey, covering enterprises with 10 or more persons employed. These activities are: NACE Rev. 2 sections C, D, E, F, G, H, I, J, L and N, divisions 69-74 and 95.1.

Coverage of enterprises (1-9 persons employed):

In this section, please indicate for the micro-enterprises if all the NACE categories were covered – by introducing an "x" in the column next to the appropriate response; if not which ones were included.

Economic Activity	**Micro-enterprises**			
All NACE Rev. 2 categories covered?	**Yes**		**No**	
If not, which ones were covered?				

2.4. Statistical concepts and definitions

The model questionnaire on ICT usage and e-commerce in enterprises provides a large variety of variables covering among others the following areas:

- General information about ICT systems
- Access to and use of the Internet
- E-commerce and e-business
- Other topics foreseen in the benchmarking frameworks: e-skills, the mobile use of the Internet, cloud computing, social media, software as a service, etc.

The annual model questionnaires and the methodological manual comprise definitions and explanations.

2.5. Statistical unit

(Metadata report)

Statistical Unit

Please indicate the statistical unit used. If it wasn't the "enterprise", as defined in the model survey, please mention the reasons.
The statistical unit used is the business enterprise.

2.6. Statistical population

(Metadata report)

Target Population

As required by Annex I of the Commission Regulation, enterprises with 10 or more persons employed are intended to be covered by the survey.

Coverage of enterprises (1-9 persons employed):
Indicate below what is the scope for the coverage of micro-enterprises in terms of size and if the breakdown in the size classes is provided or not. For each one of the two items below introduce an "x" in the column next to the appropriate response.
If the variable used to define enterprise size was not the number of persons employed, indicate which one was used (number of employees, number of FTE's ...), the reason and the possible impact on results.

Scope in terms of persons employed	**1 to 9 persons employed**		**5 to 9 persons employed**	
Breakdown between size classes [1 to 4] and [5 to 9] persons employed provided?	**Yes**		**No**	
If different size delimitation or different variable was used, please indicate it.				

2.7. Reference area

(Metadata report)
Geographic scope (all enterprises)

Please indicate here if all the territory of the country was considered or if any part of the country was not included. All territory of the country should be covered. In case parts of the country were not included indicate which, the reasons why, and an estimate of the percentage of the target population not covered.
The geographic scope of the survey is the Netherlands (excluding the islands in the Carribean that are part of the Kingdom of the Netherlands).

2.8. Coverage - Time

(Metadata report)
Reference period

In this section please indicate if the reference periods defined in the model questionnaire were followed in the national survey and highlight the differences.
The model questionnaire was followed.

2.9. Base period

Not applicable

3. Statistical processing

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3.1. Source data

(Metadata report)
A) Frame population
A) 1. Description of frame population
In this section please include information concerning the frame population.

a) When was the last update of the Business register that was used for drawing the sample of enterprises for the survey?	1 December 2015
b) When was the sample drawn?	15 December 2015
c) Please indicate if the frame population is the same as, or is in some way coordinated with, the one used for the Structural Business Statistics (different snapshots)	It is not actively co-ordinated.
d) Please describe if different frames are used during different stages of the statistical process (e.g. frame used for sampling vs. frame used for grossing up):	Not applicable.
e) Indicate shortcomings in terms of timeliness (e.g. time lag between last update of the sampling frame and the moment of the actual sampling), geographical coverage, coverage of different subpopulations, data available etc., and any measures taken to correct it, for this survey.	Not applicable.

A) 2. Frame population distribution
Please provide the number of statistical units (enterprises) in the frame population, by size and by economic activity. Optional size classes are to be filled in if applicable.
NOTE:* *PLEASE FILL IN THE RELEVANT INFORMATION IN THE ATTACHED EXCEL FILE (Worksheet: FRAME POPULATION)

(Metadata report)
B) Sampling design - Sampling method

This section includes a description of the sampling method used (e.g. stratified random sample, quota sampling, cluster sampling; one-stage or two-stage sampling). If stratification was used, please indicate which variables were used to stratify, the categories of those variables, in particular for the NACE categories related to the "possible calculation of European aggregates", and the final number of strata. Include also in this section the method used for the determination of the sample size and the method used for sample selection. In particular, mention if any procedures for the coordination or non- overlapping with samples of other surveys was used.
Enterprises with 250 or more persons employed are all included in the gross sample. For enterprises with 10-250 persons employed a random sample is used, stratified by Nace (32) x Size class (6). Sample size is based on prior experiences and cost considerations. For optimal distributon of sample units across the strata, the Neymann allocation method is used. Enterprises that are drawn in other business survey samples have a reduced likelihood of being drawn into the sample of this survey.

(Metadata report)
C) Gross sample distribution
Please provide the number of statistical units (e.g. enterprises) selected for sampling without any posterior correction for misclassification, by size and by economic activity. Optional size classes are to be filled in if applicable.
NOTE:* *PLEASE FILL IN THE RELEVANT INFORMATION IN THE ATTACHED EXCEL FILE (Worksheet: GROSS SAMPLE)

(Quality report)
D) Net sample distribution
Please provide the number of enterprises used for grossing up and tabulation, by size and by economic activity. Optional size classes are to be filled in if applicable.
NOTE:* *PLEASE FILL IN THE RELEVANT INFORMATION IN THE ATTACHED EXCEL FILE (Worksheet: NET SAMPLE)

3.2. Frequency of data collection

Annual. No additional information is requested.

3.3. Data collection

(Metadata report) / (Quality report)
A) Survey period
Please indicate the dates between which the data collection took place, i.e., when the questionnaires were sent out (or the web-questionnaire made available) and when the last filled in questionnaire treated and used for the results was received. Please indicate also the collection dates for the financial sector and the micro-enterprises (if conducted), even if they are the same as the general survey.

Survey / Collection	Date of sending out questionnaires	Date of reception of the last questionnaire treated

General survey	25 February 2016	20 September 2016
Financial sector	25 February 2016	14 September 2016
Micro-enterprises		

(Metadata report)
B) Survey vehicle
*Stand-alone or embedded in another survey. Please introduce an "**x" in the row below.***
In addition, please indicate if the data collection for micro-enterprises was integrated with the general survey, i.e. the same questionnaire was used and the sending out of questionnaires was simultaneous.

General survey:		**Was the collection of micro-enterprises integrated with the general survey?**		
Stand-alone survey	**Embedded in another survey**	**Yes**	**No**	**Not applicable**
x				x

(Metadata report)
C) Survey type

Please give a short description of the survey type (e.g. web survey, face-to-face interviews, self-administered mail survey, telephone interview, combination of techniques, other).
Web survey. Respondents only receive a paper form at their own request. Very few (less than 20) respondents still use a paper form.

(Metadata report)
D) Survey participation

Please indicate if the survey was mandatory or voluntary, by introducing an "x" in the row below.

Mandatory	**Voluntary**
	x

3.4. Data validation

(Metadata report) / (Quality report)

Please inform if the validation program used in Eurostat is also used in your country and which further verifications are carried out before data are transmitted.
Yes.

3.5. Data compilation

(Quality report)
Grossing-up procedures

Please give a description of the extrapolation or weighting procedures used to gross up the number of enterprises, number of persons employed, turnover and purchases in the net sample to the (target) population. Please present the different steps taken or factors applied to the design weighting to take into account the (post)stratification, balancing for unit non-response, etc. Please describe the different categories of questions – if any – that have been grossed up differently (see also the model questionnaire and the Methodological Manual).

- Concerning enterprises: weighting by N_s / n_s,
where,
N_s = number of enterprises in the population in cell s;
n_s = number of enterprises in the sample (net), (respondents) in cell s.

- Concerning employed persons: weighting by E_s / e_s,
where,
E_s = number of employed persons in the population in cell s;
e_s = number of employed persons of the enterprises in the sample (net), (respondents) in cell s.
These are the number of employed persons used for weighting and they do not necessarily correspond to the numbers provided by The Netherlands within the framework of the Structural Business Survey (SBS).
- If there is no response in a certain stratum. The population of this stratum was added to the population of a neighbouring stratum within the same aggregate used for publication.

3.6. Adjustment

Not applicable

4. Quality management

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4.1. Quality assurance

The Methodological Manual provides guidelines and standards for the implementation of the surveys in the Member States. It is updated every year according to the changed contents of the model questionnaires.

4.2. Quality management - assessment

At European level, the recommended use of the annual Eurostat model questionnaire aims at improving comparability of the results among the countries that conduct the survey on ICT usage and e-commerce in enterprises. Moreover, the Methodological Manual provides guidelines and clarifications for the implementation of the surveys in the Member States.
(Metadata report)

Please provide an overall assessment of the national methodology for quality management (if information is available):

5. Relevance

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5.1. Relevance - User Needs

At European level, European Commission users (DG CNECT, DG ENTR, DG MARKT, DG EAC, DG SANCO) are the principal users of the data on "**ICT usage and e-commerce in enterprises**" and contribute in identifying/defining the topics to be covered. Hence, main users are consulted regularly (at hearings, task forces, ad hoc meetings) for their needs and are involved in the process of the development of the model questionnaires at a very early stage. User needs are considered throughout the whole discussion process of the model questionnaires aiming at providing relevant statistical data for monitoring and benchmarking of European policies.
(Metadata report)

Please add information concerning the involvement of users at national level (if available):

At national level figures about the ICT usage of enterprises are required for policy and research. Important stakeholders include the Netherlands ministry of economic affairs. Frequent consultations ensure that Statistics Netherlands is well aware of the policy needs in the Netherlands. Statistics Netherlands makes the microdata that result from this survey accessible to national and international research institutions. These microdata have been anonymised and cannot be linked to any individual enterprise.

5.2. Relevance - User Satisfaction

At European level, contacts within the Commission, the OECD and other stakeholders give a clear picture about the key users' satisfaction as to the following data quality aspects: accuracy and reliability of results, timeliness, satisfactory accessibility, clarity and comparability over time and between countries, completeness and relevance. Overall users have evaluated positively (good, very good) the data quality on the "**ICT usage and e-commerce in enterprises**".

(Metadata report)

Please add information concerning user satisfaction at national or European level (if available):

No formal user satisfaction assessments are done.

5.3. Completeness

(Metadata report)

A) Questionnaire

Implementation of the mandatory questions in the national questionnaire and adoption of questions for micro-enterprises (Model Questionnaire)

All mandatory charcteristics included in Annex I of the ***Commission Regulation (EU) No 2015/2003 of 10 November 2015*** *are intended to be derived from the general survey, covering enterprises with 10 or more persons employed.*
In the following table in the column ***"General Survey"*** *please indicate any deviation of the question from the recommendation as defined in the model questionnaire, for the general survey.*
*For each question or item, an "****x****" in the column named* ***"Micro-enterprises"*** *would mean that it was included in the national questionnaire addressed to* ***micro-enterprises****.*
The national questionnaire(s) (and an English version, if available,) should be provided in the annex.

		General Survey	**Micro-enterprises**
	Question / Item	**Any deviation from question / item in model questionnaire**	**Question included**
	Module A: Use of computers		
A1.	Does your enterprise use computers? (Filter question) Computers include Personal Computers, portable computers, tablets, other portable devices such as Smartphones.		
	Module 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.		
B2.	Did your enterprise provide any type of training to develop ICT related skills of the persons employed, during 2015? a) Training for ICT specialists Tick "No" if your enterprise didn't employ ICT specialists during 2015. b) Training for other persons employed		
B3.	Did your enterprise recruit or try to recruit ICT specialists, during 2015? (Filter question)		
B4.	During 2015, did your enterprise have vacancies for ICT specialists that were difficult to fill?		
B5	Please indicate who mainly performed the following ICT functions of your enterprise in 2015: (one of the three options: - Mainly own employees incl. those employed in parent or affiliate enterprises - Mainly external supplier - Not Applicable) a) Maintenance of ICT infrastructure (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; Human Resources information management, databases) d) Support for business management software/systems (e.g. ERP, CRM, HR, databases) e) Development of web solutions (e.g. websites, e-commerce solutions) f) Support for web solutions (e.g. websites, e-commerce solutions) g) Security and data protection (e.g. security testing, security software)		
	Module C: Access and use of the Internet		
C1.	Does your enterprise have access to the internet? (Filter question)		
C2.	How many persons employed use computers with access to the internet for business purposes? If you can't provide this value, Please indicate an estimate of the percentage of the total number of persons employed who use computers with access to the internet for business purposes. Computers include Personal Computers, portable computers, tablets, other portable devices such as Smartphones.		
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 (FTTP), cable technology, etc.) (add national examples for public Wi-Fi, WiMax, etc) (Filter question)		
C4.	What is the maximum contracted download speed of the fastest fixed internet connection of your enterprise? (Tick only one) 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		
C5.	Does your enterprise use a mobile broadband connection to the internet via a portable device using mobile telephone networks (3G or 4G)? e.g. via portable computers or other portable devices such as Smartphones		
C7.	How many persons employed use a portable device provided by the enterprise, that allows internet connection via mobile telephone networks, for business purposes? (Filter question) (e.g. portable computers, tablets or other portable devices such as Smartphones) (Please enter a value, field cannot be left blank) If you can't provide this value, Please indicate an estimate of the percentage of the total number of persons employed who use a portable device provided by the enterprise, that allows internet connection via mobile telephone networks, for business purposes? (Filter question) (e.g. portable computers, tablets or other portable devices such as Smartphones) (Please enter a value, field cannot be left blank)		
C8.	Does your enterprise provide the persons employed with portable devices that allow mobile connection to the internet for business use to: 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.)		
C9.	Does your enterprise have a Website? (Filter question)		
C10.	Does the Website have any of the following? 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		
C11.	Does your enterprise use any of the following social media? (not solely used for paid adverts) (add national examples; replace existing examples if necessary) a) Social networks (e.g. Facebook, LinkedIn, Xing, Viadeo, Yammer, etc.) b) Enterprise's blog or microblogs (e.g. Twitter, Present.ly, etc.) c) Multimedia content sharing websites (e.g. YouTube, Flickr, Picasa, SlideShare, etc.) d) Wiki based knowledge sharing tools		
C12.	Do any persons employed have remote access to the enterprise's e mail system, documents or applications?		
C13.	Does your enterprise pay to advertise on the internet? (e.g. adverts on search engines, on social media, on other websites, etc.) (Filter question)		
C14.	Does your enterprise pay to advertise on the internet using any of the following targeted advertising methods? 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		
	Module D: Use of cloud computing services		
D1.	Does your enterprise buy any cloud computing services used over the internet? (Please refer to the definition of cloud computing above, exclude free of charge services.) (Filter question)		
D2.	Does your enterprise buy any of the following cloud computing services used over the internet? (Please refer to the definition of cloud computing above, exclude free of charge services.) 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: (Please refer to the definition of cloud computing above, exclude free of charge services.) a) shared servers of service providers b) servers of service providers exclusively reserved for your enterprise		
	Module F: Invoicing		
F1.	During 2015, did your enterprise issue/send any type of invoices, whether in electronic or in paper form, to: (Filter question) a) other enterprises b) public authorities c) private consumers		
F2.	Of all invoices your enterprise issued/sent to other enterprises or public authorities during 2015, what percentage was issued/sent as: a) Invoices in electronic form, in a standard structure suitable for automated processing (eInvoices)? (EDI (e.g. EDIFACT), XML (e.g. UBL), [please add national examples]) b) Invoices in electronic form, not suitable for automated processing?		

	(e.g. e-mails, e-mail attachment as pdf, images in TIF, JPEG or other format) c) Invoices only in paper form?		
F3.	Of all invoices your enterprise received during 2015, what percentage was received as: a) Invoices in electronic form, in a standard structure suitable for automated processing (eInvoices)? (EDI (e.g. EDIFACT), XML (e.g. UBL), [please add national examples]) b) Invoices in paper form or in electronic form not suitable for automated processing? (e.g. e-mails, e-mail attachment as pdf, images in TIF, JPEG or other format)		
	Module G: e-Commerce		
G1.	During 2015, did your enterprise receive orders for goods or services placed via a website or "apps"? (excluding manually typed e-mails) (Filter question)		
G2.	Please state the value of the turnover resulting from orders received that were placed via a website or "apps" (in monetary terms, excluding VAT), in 2015. If you can't provide this value, Please indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via a website or "apps", in 2015.		
G3.	Please provide a percentage breakdown of the turnover from orders received that were placed via a website or "apps" in 2015 by type of customer. (estimates in percentage of the monetary values, excluding VAT) a) B2C (Sales to private consumers) b) B2B (Sales to other enterprises) and B2G (Sales to public authorities)	We ask: -B2B -B2G -NL consumers -Consumers in other countries	
G6.	During 2015, did your enterprise receive orders for goods or services placed via EDI-type messages? (Filter question)		
G7.	Please state the value of the turnover resulting from orders received that were placed via EDI-type messages (in monetary terms, excluding VAT), in 2015. If you can't provide this value, Please indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via EDI-type messages, in 2014.		
	Module X: Background information (X1-X3) available in some countries from SBS, the business register or administrative data and thus not to be included; latest available information should be provided		
X1.	Main economic activity of the enterprise, during 2015.		
X2.	Average number of persons employed, during 2015.		
X3.	Total turnover (in value terms, excluding VAT), for 2015.		

(Metadata report)

B) Coverage of the optional questions of the Model Questionnaire

*Indicate which optional questions were included in the national questionnaire. For each question or item, an "**x**" in the column named **"Question included"** means that it was included in the national questionnaire. The column "10+" refers to enterprises with **"10 or more persons employed"** and column **"Micro"** refers to micro-enterprises.*

		Question	included	
	Optional Question / Item	**10+**	**Micr**	**Any deviations from question / item in model questionnaire**
	Module A: Use of computers *(optional questions/items)*			
A2.	How many persons employed use computers for business purposes? If you can't provide this value, Please indicate an estimate of the percentage of the total number of persons employed who use computers for business purposes.	x		
	Module C: Access and use of the Internet *(optional questions/items)*			
C6.	Does your enterprise use a mobile broadband connection to the internet via the following portable devices? a) via portable computer using mobile telephone networks (3G or 4G) e.g. notebook, netbook, laptop, tablet, etc. b) via other portable devices such as Smartphones, using mobile telephone networks (3G or 4G)	x		
C10.	Does the Website have any of the following? g) Advertisement of open job positions or online job application	x		
	Module E: Big data analysis - Optional			
E1.	During 2015, did your enterprise analyse big data from any of the following data sources? (Please refer to the definition of big data above; include big data analysis conducted by external service providers) a) Enterprise's own data from smart devices or sensors (e.g. Machine to Machine -M2M- communications, digital sensors, Radio frequency identification tags RFID , 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	**x**		
E2.	During 2015, who performed big data analysis for your enterprise? a) Enterprise's own employees (incl. those employed in parent or affiliate enterprises) b) External service provider	**x**		
	Module G: e-Commerce *(optional questions/items)*			
G4.	Which of the following means of payment are accepted for sales via a website or "apps"?	x		

	a) Online payment, i.e. payment integrated in the ordering transaction (e.g. credit, debit card, direct debit authorisation, via 3rd party accounts) b) Offline payment, i.e. payment process is not included in the ordering transaction (e.g. cash on delivery, bank transfer, cheque payment, other not online payment)			
G5.	Did any of the following obstacles limit or prevent your enterprise from selling via a website or “apps”? a) The enterprise's goods or services were not suitable for web sales b) Problems in web sales related to logistics (shipping of goods or delivery of services) c) Problems in web sales related to payments d) Problems in web sales related to ICT security or data protection e) Problems in web sales related to the legal framework f) The cost of introducing web sales was, or would have been, too high compared to the benefits	x		
G8.	During 2015, did your enterprise place orders for goods or services via a website, “apps”, or EDI-type messages? (Excluding manually typed e-mails)	x		Orders placed via websites/apps and via EDI are asked in separate questions (see G9/G10).
G9.	During 2015, did your enterprise place orders for goods or services via a website or “apps”?	x		
G10.	During 2015, did your enterprise place orders for goods or services via EDI-type messages?	x		
G11.	During 2015, was the value of the orders that your enterprise placed electronically equal or more than 1% of the total purchases' value? (in monetary terms, excluding VAT)	x		The value in euros is asked, as is the total purchase value.

(Metadata report)
C) General remarks on the national questionnaire

The General remarks on the national questionnaire section can be filled in with general information about the variables collected. For example, if a variable was collected/verified from administrative sources, other survey, etc. It is noted that X1-X3 variables may be available from SBS, the business register or other administrative sources.
Variable X1 (NACE) is only extracted from the BR. All other variables are asked in the survey. X2 (employed persons) is asked in the survey (reference date 31 December) and also extracted from the BR. The BR data are used for grossing-up some of the other variables. The survey data are used for quality checks. X3 (turnover) is extracted from the tax information (VAT) and also asked on the questionnaire. The survey data are used for processing and weighing purposes. Tax data are used for validation and to fill missing values in the response.

(Metadata report)
D) Additional questions introduced in national questionnaire(s)
In the section on additional questions introduced in the national questionnaireyou can introduce general information on the adoption of additional national questions. In the following table you can provide the designation of these questions and any other additional information on that question you wish to provide.

Additional questions	Additional information
Regional breakdown of sales via websites/apps	NL, EU, rest of the world
Additional categories for sales via websites/apps by type of customer	NL consumers, foreign consumers
Regional breakdown of sales via EDI	NL, EU, rest of the world
Regional breakdown of purchases via EDI	NL, EU, rest of the world

5.3.1. Data completeness - rate

Not requested. Please refer to 5.3 in order to provide any relevant qualitative information.

6. Accuracy and reliability

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6.1. Accuracy - overall

(Quality report)
A) Reliability of breakdowns to be used for the calculation of European aggregates
*Please indicate for both the general survey and for micro-enterprises the breakdowns to be used for the calculation of **European** aggregates that have a **sufficiently high quality** to be released at **national** level by introducing an "**x**" in the column next to the Y/N responses.*
***Note:** In the case there is a grant agreement that foresees that certain breakdowns will be provided with sufficiently high quality to allow their release at **national** level, the following table should reflect the grant agreement ("x" next to "Yes" for the respective breakdowns).*
In the case data for few variables/breakdowns cannot be released - although the particular breakdowns had been taken into account in the sampling design as foreseen in the grant agreement - it is expected that the breakdowns are marked with "Yes", data are accordingly flagged as unreliable and explanations should be provided in point 6.1. (B) (below)
In all cases, data will be evaluated for completeness and compliance with the terms in the grant agreement (if applicable) and the current quality report; additional clarifications may be requested.

Economic Activity	Micro-enterprises				General Survey			
10-12	Yes		No		Yes	x	No	
13-15	Yes		No		Yes	x	No	
16-18	Yes		No		Yes	x	No	
26	Yes		No		Yes	x	No	
27-28	Yes		No		Yes	x	No	
29-30	Yes		No		Yes	x	No	
31-33	Yes		No		Yes	x	No	
45	Yes		No		Yes	x	No	
46	Yes		No		Yes	x	No	
55-56	Yes		No		Yes	x	No	
58-60	Yes		No		Yes	x	No	

61	Yes		No	Yes	x	No	
62-63	Yes		No	Yes	x	No	
77-78+80-82	Yes		No	Yes	x	No	
79	Yes		No	Yes	x	No	
95.1	Yes		No	Yes		No	x

(Quality report)
B) Comments on reliability and representativeness of results and completeness of dataset
These comments should reflect standard errors reported for the indicators and breakdowns in section 6.2.1 (Sampling error - indicators) and the breakdowns for European aggregates, as well as other accuracy measurements. The estimated standard error should not exceed 2pp for the overall proportions and should not exceed 5pp for the proportions related to the different subgroups of the population (for those NACE aggregates for the calculation and dissemination of national aggregates). If problems were found, these could have implications for future surveys (e.g. need to improve sampling design, to increase sample sizes, to increase the response rates etc.).

Comments related to all indicators, breakdowns concerning accuracy (sampling error in 6.2.1, other indicators and breakdowns, breakdowns for European aggregates):

If significant standard errors were found, were data cells in the transmitted dataset flagged as unreliable?	
Yes	No[1]
x	

[1] Please note that if data were not flagged as unreliable they will be released

6.2. Sampling error

(Quality report)
Calculation of the standard error
Various methods can be used for the calculation of the standard error for an estimated proportion. The aim is to incorporate into the standard error the sampling variability but also variability due to unit non-response, item non-response (imputation), calibration etc. In case of census / take-all strata, the aim is to calculate the standard errors comprising the variability due to unit non-response and item non-response.
Please, describe below the approach which you have followed. This information will help Eurostat to evaluate the comparability of the standard errors supplied in the previous section by the different statistical institutes participating in the survey.

a) Name and brief description of the applied estimation approach

The sampling error in the Dutch e-commerce survey is calculated using the Horvitz and Thomson formula.

b) Basic formula

The variance of the mean of a binomial variable *p* within sample cell *i* is calculated as:
Var_i (p) = p_i * (1-p_i) * (1 - n_i / N_i)
where n and N are sample size and population.

The variance of *p* for the continuous variables is calculated as:
Var(p) = Sum(N_i * N_i * Var_i(p)) / (N*N)
where the sum is over all sample cells, and N is the total population in all cells.

c) Main reference in the literature

d) How has the stratification been taken into account?

Sample cells are defined as the product of size classes (10 size classes with 10+ employed persons) and NACE classes (using a more detailed stratification than the publication classes demanded by Eurostat; around 38 classes).

e) Which strata have been considered?

All breakdowns for which the data were delivered to Eurostat, but only for the variables that were asked in this section of the QR.

6.2.1. Sampling error - indicators

(Quality report)
Standard error (for selected indicators and breakdowns)
Precision measures related to variability due to sampling, unit non-response (the size of the subset of respondents is smaller than the size of the original sample) and other (imputation for item non-response, calibration etc.) are not (yet) required from the Member states for all indicators. Eurostat will make basic assumptions to compute these measures for all indicators produced (e.g. stratified random sampling assuming as strata the crossing of the variables "Number of Persons Employed" and "Economic Activity" as it was defined in the 3 tables of section 3.1 A2, C, D).
In order to evaluate the reasonability of the assumptions made by Eurostat, we need to compare the estimated standard error computed under these assumptions and those computed by the country, taking into account the real sampling design used and other sources of variability, for at least some of the indicators. We also need to compare these measures not only for the overall population, but also for the several breakdowns, in which case the standard error is commonly higher.
*We kindly ask you to provide in the following table the estimated standard error **in percentage points** for each of the listed indicators. Both aggregates for "possible calculation of **national** aggregates" and for "possible calculation of **European** aggregates" are included in the table.*
Certain cells correspond to optional size classes, and are to be filled in only when these were covered by the survey. In case of confidential data (flag c in data and in the right column of the table below), the estimated proportion and Standard error are left empty.
The first three columns of the table refer as a technical reference to the question and scope in the same terms as used in the Transmission Format.
***NOTE: PLEASE FILL IN THE RELEVANT INFORMATION IN THE ATTACHED EXCEL FILE** (Worksheets starting with STANDARD ERROR)*

6.3. Non-sampling error

Please fill in the sub-concepts below.

6.3.1. Coverage error

See 3.1. A) 1. Known shortcomings of frame population, if any

6.3.1.1. Over-coverage - rate

Not requested

6.3.1.2. Common units - proportion

Not requested.

6.3.2. Measurement error

(Quality report)

Measurement errors related to the survey instrument should be reported here
(for example wrong routing in national questionnaire, processing errors due to coding or data entry, interviewers' bias).

No specific measurement errors are to be reported.

6.3.3. Non response error

See detailed sections below

6.3.3.1. Unit non-response - rate

Response and non-response

(Quality report)

A) Unit response

The following table should be filled in with the number of units (e.g. enterprises), by type of response to the survey and by the percentage of these values in relation to the gross sample size.

Type of response	1-9 persons employed		10 or more persons employed	
	Number	%	Number	%
Gross sample size (as in section 3.1. C)		**100%**	**10,577**	**100%**
1. Response (questionnaires returned by the enterprise)			8,006	75.7%
1.1 Used for tabulation and grossing up (Net sample or Final Sample; as in section 3.1. D)			7,997	75.6%
1.2 Not used for tabulation			9	0.1%
1.2.1 Out of scope (deaths, misclassified originally in the target population, etc.)			0	0.0%
1.2.2 Other reasons (e.g. unusable questionnaire, etc.)			9	0.1%
2. Non-response (e.g. non returned mail, returned mail by post office, etc.)			2,571	24.3%

Comments on unit response, if any

No comments.

(Quality report)

B) Methods used for minimizing unit non-response

Where applicable, give a description of measures taken to reduce the unit non-response: advance notification in the form of a letter or phone call, showing respondents how the data they are providing are being used, system of reminders, etc.

After the initial invitation to fill out the online survey, reminders were sent three times to sample units. Additionally, some 300 targeted enterprises were phoned in a last attempt to persuade them to participate.

(Quality report)

C) Methods used for unit non-response treatment

Indicate the method used to correct for unit non-response (Please put an "x" into the right column of the relevant treatment.)

1. No treatment for unit non-response	
2. Treatment by re-weighting	
2.1 Re-weighting by the sampling design strata considering that non-response is ignorable inside each stratum (the naïve model)	x
2.2 Re-weighting by identified response homogeneity groups (created using sample-level information)	
2.3 Re-weighting through calibration/post-stratification (performed using population information) by the groups used for calibration/post-stratification	
3. Treatment by imputation (done distinctly for each variable/item)	

4. Please briefly describe below the method(s) and the model(s) corresponding to the above or other method(s) used for the treatment of unit non-response. (e.g. Re-weighting using Horvitz-Thompson estimator, ratio estimator or regression estimator, auxiliary variables, etc.)

In practice, we determine the (final) weighting factors of N/n after all response has been received. Therefore in fact we use the net sample (n).

(Quality report)

D) Other comments relating to the unit non-response

If any, please use this box to inform on additional issues on the non-response calculation (e.g. method used in national publications, etc.).

6.3.3.2. Item non-response - rate

(Quality report)

A) Questions or items with item response rates below 90%

If any, identify the items with low response rates (the cut-off value to be used is 90%) and indicate their respective response rates. The item non-response rate should of course be calculated taking into account the routing and filtering in the questionnaire.

Total turnover: 80% item response rate (for this variable survey information is combined with data from tax services)
Turnover from web sales: 88%
Turnover from EDI-type sales: 88%
Total purchases: 83%
Value of electronic purchases (website): 88%
Value of electronic purchases (EDI)(J9): 86%

(Quality report)

B) Methods used for item non-response treatment

Indicate whether imputations are made for item non-response and give a short description of the methods used. Please see also guidance on this subject in the model questionnaire and the Methodological Manual.

1.No treatment for item non-response	
2.Deductive imputation An exact value can be derived as a known function of other characteristics.	x
3.Deterministic imputation (e.g. mean/median, mean/median by class, ratio-based, regression-based, single donor nearest-neighbour, etc) Deterministic imputation leads to estimators with no random component, that is, if the imputation were to be re-conducted, the outcome would be the same	x
4.Random imputation(e.g., hot-deck, cold-deck etc) Random imputation leads to estimators with a random component, that is, if the imputation were re-conducted, it would have led to a different result	x
5.Re-weighting	

6.Multiple imputation
In multiple imputation each missing value is replaced (instead of a single value) with a set of plausible values that represent the uncertainty of the right value to impute. Multiple imputation methods offer the possibility of deriving variance estimators by taking imputation into account. The incorporation of imputation into the variance can be easily derived based on variability of estimates among the multiply imputed data sets.

7. Please briefly describe below the method(s) and the model(s) corresponding to the above or other method(s) used for the treatment of item non-response.

- Minor adjustments e.g. if a respondent specifies an internet connection but 'forgot' to answer the question if he has internet in the first place, we fill in a 'yes' for the latter question. If a respondent forgot to specify his connection to the internet. He gets the 'average' connection of the respondents who did specify their connection to the internet.
- For e-commerce variables we use a special methodology, also including t-1 data as a source of imputation for individual enterprises.

(Quality report)
C) Other comments relating to the item non-response

Please use this box to inform us of additional issues concerning "non-response" calculation (e.g. method used in national publications, etc.).

For total turn-over, data files received from the Dutch Tax Service are used as an additional source in order to determine the value for respondents who did not answer this question.

6.3.4. Processing error

See detailed sections below

6.3.4.1. Imputation - rate

Not requested - See sections 6.3.3.1 and 6.3.3.2 for unit and item non-response respectively

6.3.5. Model assumption error

Not requested.

6.4. Seasonal adjustment

Not applicable

6.5. Data revision - policy

(Quality report)

Please provide any information concerning data revisions (national policy)

No revisions are planned. Data have a final status from the first time they are published.

6.6. Data revision - practice

(Quality report)

Please provide any information concerning national practices on data revisions

No revisions are planned. Data have a final status from the first time they are published.

6.6.1. Data revision - average size

Not requested.

7. Timeliness and punctuality

Top

See detailed section below.

7.1. Timeliness

See detailed sections below

7.1.1. Time lag - first result

Not applicable

7.1.2. Time lag - final result

(Quality report)
A)*Data are to be delivered to Eurostat in the fourth quarter of the reference year (due date for the finalised dataset is 5th October). European results are released before the end of the same year that the survey is conducted (T=reference year, T+0 for indicators referring to the current year, T+10 months for other indicators referring to the previous year e.g. e-commerce).*

Please report any deviation from the above:

The first delivery was done on 5 October 2016, in accordance with Eurostat's specifications. A revised data file was submitted on 14 October 2016.

(Quality report)
B)Date of release of final national data

Please report the release date of final national data.

The release date is provisionally planned for 30 November. Anyway all figures will be published by 31 December 2016.

7.2. Punctuality

See detailed sections below

7.2.1. Punctuality - delivery and publication

(Quality report)

Please report on the time lag between the actual date of data delivery to Eurostat and the deadline (5th October).

The first delivery was done on 5 October 2016, in accordance with Eurostat's specifications. A revised data file was submitted on 14 October 2016.

8. Coherence and comparability

Top

See detailed section below.

8.1. Comparability - geographical

The model questionnaire is generally used by the countries that conduct the survey on ICT usage and e-commerce in enterprises. Due to (small) differences in translation, in reference periods, in the used survey vehicle, in non-response treatment or different routing through the questionnaire, some results for some countries may be of reduced comparability. In these cases, notes are added in the metadata.
(Quality report)

Please indicate here if you have deviated from the model questionnaire or the concepts described in the Methodological manual that would affect the comparability of data among countries (e.g. different or no filter question, etc)

8.1.1. Asymmetry for mirror flow statistics - coefficient

Not applicable

8.2. Comparability - over time

See detailed section below.

8.2.1. Length of comparable time series

(Metadata report)

Please indicate any changes in the survey from the previous year(s) that may have an impact on the comparability over time of the results delivered to Eurostat (and not particularly those relating to results released only nationally).
In 2016 no substantial changes have been applied.

8.3. Coherence - cross domain

(Metadata report) / (Quality report)

*Please indicate any issues with other statistical data collections in enterprises (using either surveys or administrative sources) that may have an impact on the coherence **across domains**. e.g. use of different statistical units from Structural business survey, economic activities, size classes, reference period, etc*

(Metadata report)

Please indicate any issues with other statistical data collections (using either surveys or administrative sources) that may have an impact on the comparability across domains. e.g. comparability with data from Structural Business Survey

8.4. Coherence - sub annual and annual statistics

Not applicable

8.5. Coherence - National Accounts

Not applicable

8.6. Coherence - internal

Not applicable

9. Accessibility and clarity

Top

See detailed section below.

9.1. Dissemination format - News release

(Quality report)
National dissemination of results

Please indicate if there was any news release for dissemination of results or if any release is foreseen. If possible, provide links or attach News releases.	
News releases:	Links
A news article about big data analysis is planned for week 45 (7 - 13 November). Several more media releases may follow. These have not been planned yet.	

9.2. Dissemination format - Publications

(Quality report)
National dissemination of results

Please indicate if there was any publications for dissemination of results or if any publication is foreseen. If possible, provide links or attach publication.	
Publications:	Links
- Online database Statline http://statline.cbs.nl/ (figures are published in November/December 2016). - Our publication on the digital economy and science and technology, "*ICT, kennis en economie 2017" ("ICT, knowledge and the economy 2017")*. This will be published in Dutch in June 2017. The publication will be released as a PDF file (free of charge) at www.cbs.nl. - Possibly a small article on our website, or some tweets will be released to accompany these publications.	http://statline.cbs.nl www.cbs.nl

9.3. Dissemination format - online database

See detailed section 9.3.1

9.3.1. Data tables - consultations

(Quality report)
Results for selected variables collected in the framework of this survey are available for all participating countries on Information society of Eurostat website.

National data tables/databases:	Links
Online database Statline http://statline.cbs.nl/ (figures are published in November/December 2016).	http://statline.cbs.nl/

9.4. Dissemination format - microdata access

Not applicable

9.5. Dissemination format - other

Not requested.

9.6. Documentation on methodology

(Quality report)

Please report on the availability of documents that are referred to as national reference metadata files, methodological papers, summary documents or other important handbooks, if any.

9.7. Quality management - documentation

(Quality report)

Please provide information about national quality management documentation or studies (if available).

9.7.1. Metadata completeness - rate

Not requested.

9.7.2. Metadata - consultations

Not requested.

10. Cost and Burden

Top

(Quality report)
In the 2010 survey one optional question on response burden("Time needed to fill out the questionnaire") was included. On the basis of 19 countries that had asked this question, it took on average 40 minutes to fill out this questionnaire (ranging from less than 20 to more than 80 minutes).

Please provide updated relevant information, if available.

11. Confidentiality

Top

11.1. Confidentiality - policy

(Metadata report) / (Quality report)

Regulation (EC) No 223/2009 on European statistics (recital 24 and Article 20(4)) of 11 March 2009 (OJ L 87, p. 164), stipulates the need to establish common principles and guidelines ensuring the confidentiality of data used for the production of European statistics and the access to those confidential data with due account for technical developments and the requirements of users in a democratic society.

Please provide any relevant information concerning the national policy on confidentiality related to the survey on ICT usage and e-commerce in enterprises e.g. minimum number of enterprises for breakdowns, etc.

Statistics Netherlands is legally bound to apply strict confidentiality rules concerning the dissemination of statistical results. These rules are fully applied to the figures published as a result of this survey on the ICT use of enterprises. We cannot report any details on the methods we use, but they assure that no statistical information can be linked to any individual person or enterprise/organisation.

11.2. Confidentiality - data treatment

Data are transmitted via eDamis (encrypted) and delivered to a secure environment where they are treated. National Statistical Institutes are requested to add flags for confidentiality in case results must not be disclosed.

(Quality report)

Please provide any relevant information about national rules for treatment of confidential data or anonymisation.

Statistics Netherlands is legally bound to apply strict confidentiality rules concerning the dissemination of statistical results. These rules were fully applied to the figures published as a result of this survey on the ICT use of enterprises. We cannot report any details on the methods we use, but they assure that no statistical information can be linked to any individual person or enterprise/organisation.

12. Comment

Top

(Quality report)
Problems encountered and lessons to be learnt

These comments can relate to methodological issues as well as to the questionnaire itself (item construction, clarity of definitions to respondents, routing and filtering, etc.)

1) The survey questionnaire increasingly needs to be filled out by more than one person within the enterprise. ICT managers (the original target respondents of this survey) tend to leave the e-commerce module empty, or suggest that Statistics Netherlands contact the respondent's financial department separately for this module. Similar issues rise for e.g. analysing big data (R&D department), online advertising (marketing department) etc.
2) The statistical quality of the module on e-commerce relies on the effort and commitment of the respondents at the financial department of enterprises. They report that questions are hard to answer and very burdesome. Especially the results regarding quantitative aspects of this module are far from optimal for this reason.

(Quality report)

Other comments, if any

(Metadata report) / (Quality report)
Annexes
Note: *Please also provide the annexes in a computer-readable format and in English* ***(Files can be attached using the button "Add file")***
Please add **"x"** if files are attach to the current report

(Metadata report) **Questionnaire in national language**	**x**
(Metadata report) **Questionnaire in English (if available)**	
(Metadata report) **National reports on methodology (if available)**	
(Quality report) **Analysis of key results, backed up by tables and graphs in English (if available)**	

(Metadata report / Quality report)>
Other annexes
Please give an overview of other annexes (whether or not referred to in the preceding sections of this report)

Related metadata

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Annexes

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ICT ENTR 2016 Metadata Report Excel tables NL
ICT ENTR 2016 Questionnaire NL
ICT ENTR 2016 Metadata Report NL Filled