

ICT usage in enterprises 2024

Enterprises with 10 or more employees

ICT usage in enterprises (It-användning i företag) is an annual survey conducted to measure the usage of various types of ICT systems and ICT-related technologies, as well as the prevalence of e-commerce. The results from the survey are utilized to generate Sweden's official statistics, serving as a basis for decision-making within Sweden and the EU, as well as for debates and research.

The survey consists of the following modules:

- A. Access to and use of internet
- B. E-commerce sales
- C. ICT specialists and skills
- D. ICT security
- E. Artificial intelligence
- F. ICT and the environment
- The form requests information about the situation at the beginning of 2024 and the data for the entire year 2023. If the question pertains the entire year, the year 2023 is explicitly mentioned in the question. If no year is specified, the information is intended to reflect the situation at the beginning of 2024.
- Please note that the provided information should only pertain to the enterprise whose name and corporate identity number are indicated on the form.

Note: This document serves solely as support for the survey. The survey should be answered and submitted through Statistics Sweden's website using the unique login credentials received by the company. The web form adapts based on how you respond to the questions, meaning that not all companies will receive all the survey questions. For more information about the survey, please visit: https://www.scb.se/it-foretag.

Besöksadress



A. Access to and use of internet

1. Indicate and estimate of the percentage of the total number of persons employed who have access to the internet for business.

Include employees who have access to the internet but never use the internet and/or employees that at least sometimes use a computer, mobile phone, or similar, that allows internet access.

If exact information is unavailable, an estimate can be provided.

Share of the enterprise's employees	%
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If 0 %, go to question 14.

A1. Use of a fixed line connection to the internet for business purposes

Refers to connection at your workplace (or on the premises) to the internet that goes via, for example:

- Fixed line telephone network, e.g., DSL, ADSL, VDSL, or SDSL.
- Cable television network.
- Public wireless networks, e.g., public Wi-Fi, hotspots.

Wireless networks (such as Wi-Fi) are regarded as fixed connections, assuming they are connected to a fixed connection.

2. Does your enterprise use any type of fixed line connection to the internet?

Yes

O No

If "No", go to question 5.

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

Note. If you have fixed line connections at multiple addresses, select the speed of the fastest connection. The contracted download speed may be specified on your **invoice**.

Less than 30 Mbit/s
At least 30 but less than 100 Mbit/s
At least 100 but less than 500 Mbit/s
At least 500 but less than 1 Gbit/s
At least 1 Gbit/s

4. Is the speed of the enterprise's fixed connection to the internet usually sufficient for the actual needs of the enterprise?

- Yes
- O No

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A2. Remote access and meetings via the internet

5. Do any of the persons employed have remote access to the following?

Via computers or portable devices such as smartphones.

Remote access	Yes	No
a) E-mail system of the enterprise	0	
b) Documents of the enterprise e.g. files, spreadsheets, presentations charts, photos.	6	
c) Business applications or software of the enterprise e.g. access to accounting, sales, orders, CRM. [1]		

[1] Exclude applications used for internal communication, for example Skype, Teams etc.

6. Does your enterprise conduct remote meetings?

For example, via Skype, Zoom, MS Teams, WebEx.

- Yes
- O No



B. E-commerce sales

E-commerce sales means:

- Customers order/book directly on a website, app, or EDI type of messages using methods specifically
 designed to receive orders. Payment does not have to be made online.
- Internal handling of orders does not need to be automated.

Do not include orders/bookings received via manually written e-mail, telephone, text message or via messages on social media.

E-commerce sections:

Please report web sales in section B1 and EDI sales in section B2. They are defined by the way the customer places the order:

- B1. Web sales: the customer places the order on a website or via an app.
- B2. EDI types of orders: an EDI order is created in the customer's business system and orders are made by business to business (B2B).

B1. Web sales of goods or services

Web sales cover orders, bookings and reservations placed by your customers via:

- Enterprise's websites or apps:
 - Online store (web shop).
 - Web forms.
 - Extranet (web shop or web forms).
 - Booking/reservation applications for services.
 - Apps for mobile devices or computers.
- E-commerce marketplace websites or apps (used by several enterprises for trading goods or services) e.g., Amazon, Booking, Bookatable, Bokadirekt, Foodora.

Note web sales also refers to digital bookings of appointments for e.g., haircut, car service, restaurant table.

Do not include orders/bookings received via manually sent e-mail, telephone, text message or via messages on social media.



7. During 2023, did your enterprise have web sales of goods or services via:

	Yes	No
a) Enterprise's own website / app or joint website / app in your enterprise group, franchise or company chain.		
b) An e-commerce site where several enterprises sell, e.g. Amazon, Booking, Bookatable, Bokadirekt, Foodora.		

If both 7a) and 7b) = "No" go to question 12.

8. During 2023, what percentage of total turnover was generated by web sales of goods or services? [1]

If exact information is unavailable, an estimate can be provided.

Share of enterprise's total turnover %
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- [1] Web sales cover orders, bookings and reservations placed by your customers via:
 - Enterprise's websites or apps e.g., online store (web shop), web forms, extranet.
 - E-commerce marketplace websites or apps (used by several enterprises for trading goods or services) e.g., Amazon, Booking, Bookatable, Bokadirekt, Foodora.

9. During 2023, what was the percentage breakdown of the value of web sales for the following?

Answer based on the response to question 8. If exact information is unavailable, an estimate can be provided.

Share of web sales via website/app	Percentage	
a) Enterprise's own website/app or joint website/app in your enterprise group, franchise or company chain.	%	
b) An e-commerce site where several enterprises sell, e.g., Amazon, Booking, Bookatable, Bokadirekt, Foodora.	%	
The total sum	%	

Note. The total sum of (a) and (b) should be 100%.



10. During 2023, what was the percentage breakdown of the value of web sales by type of customer?

Svara utifrån svaret på fråga 8. Om exakt uppgift saknas kan en uppskattning göras.

Share of web sales via type of customer	Percentage
a) Sales to private consumers (B2C)	%
b) Sales to other enterprises (B2B) and sales to public sector (B2G)	%
The total sum	%

Note. The total sum of (a) and (b) should be 100%.

11. During 2023, did your enterprise have web sales to customers located in the following geographic areas?

Geographic areas	Yes	No
a) Sweden.		
b) Other EU countries. [1]		
c) Rest of the world.		

[1] In addition to Sweden, the EU consists of Belgium, Bulgaria, Cyprus, Denmark, Estonia, Finland, France, Greece, Ireland, Italy, Croatia, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, the Czech Republic, Germany, Hungary and Austria.

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B2. EDI-type sales

Refers to orders placed by the enterprise's customers via EDI-type messages (Electronic Data interchange):

- Orders are sent from customers' business systems in an agreed format or standard formats suitable for automated processing.
- The order is a file in a format that a computer can process with special software. Examples of EDI format: EDIFACT and of XML format: UBL.
- The file is processed fully or partially automatically. Files in XML format can also be processed manually.
 Include files that went directly into the business system.

Note. customers can possibly send the orders through another enterprise, which technically adapts the orders so that you can receive them.

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C. ICT specialists and skills

14. Does your enterprise employ ICT specialists? [1]

That is, employees whose main tasks involve ICT, such as software support, operation and maintenance of ICT

syst	ems, application development, and website development. For examples of occupate information" [1].		
0	Yes		
0	No	(
If "N	o", answer only question 15b) not 15a).		
[1] Ex	amples of occupational groups, retrieved from the Standard for Swedish Occupational Classification (S	SYK).	
•	Software, web or system developers		
•	M.Sc. information technology, computer technology, hardware, electronics		
	Support technician, IT		
	Data techniques		
•	Network techniques		
•	System technician, IT		
•	Operation technician, data		
•	IT Manager		
•	Service technician, data		
•	Computer repair		
•	Graphic designer		
•	Interactive designer		
•	IT teacher		
•	Network or database administrator		
•	Technical salesman in IT.		
16	During 2022 did valve enterprise provide any type of training (interpr		واويرول ولا (ا
	During 2023, did your enterprise provide any type of training (interna	i or externa	ii) to develo
ICT-	related skills of the persons employed?		
Refe	rs to professionally designed training with internal or external trainer, instructor, or	teacher. Also	o. include
	e training.		
		Yes	No
a) 7	raining for ICT specialist.		
b) 1	raining for other persons employed. [1]		

[1] E.g.



- Training in standard word processing or calculation programs.
- Use of enterprise applications or systems.
- Use of programs or systems to control machines or equipment in industry, commerce, healthcare.

16.	During 202	23, did your enterprise recruit or try to recruit ICT specialists?
Refe	ers to recruitr	ment of employees for whom ICT is the main job.
0	Yes	
0	No	
If "N	o", go to ques	tion 19.
17.	During 202	23, did your enterprise have vacancies for ICT specialists that were difficult to fill?
0	Yes	
0	No	

18. During 2023, did your enterprise have any of the following difficulties to recruit ICT specialists?

Recruitment difficulties	Yes	No
a) Lack of applications.		
b) Applicants' lack of relevant ICT-related qualifications from education and/or training.		
c) Applicants' lack of relevant work experience.		
d) Applicants' salary expectations too high.		

If "No", go to question 19.



19. During 2023, who performed your enterprise's ICT functions?

Refers to support of software; operation and maintenance of IT systems, applications, websites, as well as development of IT systems, etc.

	Yes	No
a) Own employees (including those employed in parent or affiliate enterprises).		
b) External suppliers (e.g. consultants or via service agreements).		

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D. ICT security

Refers to measures, controls, and procedures applied to ICT systems and ICT services to ensure the confidentiality, integrity, and availability of data.

D1. ICT security measures

Refers to measures applied by your enterprise or by another enterprise.

20. Does your enterprise apply any of the following ICT security measures on its ICT systems?

ICT security measures Yes No a) Authentication via strong password (e.g. minimum length, use of numbers and special П characters, changed periodically). b) Authentication via biometric methods used to access the enterprise's ICT system (e.g. authentication based on fingerprints, voice recognition, face recognition). c) Identification based on a combination of at least two other identification methods. [1] d) Encryption of data, documents, or e-mails. [2] e) Data backup to a separate location, including backup to the cloud. f) Network access control to the enterprise's network (i.e. management of user rights in enterprise's network). q) VPN (Virtual Private Network is a technology that extends a private network across a public network to enable secure exchange of data over a public network). h) ICT security monitoring system that allows to detect suspicious activity in the ICT П П systems and alerts the enterprise about it, other than anti-virus software. [3] i) Maintaining log files that enable analysis after ICT security incidents. [4] П i) ICT risk assessment, i.e., periodical assessment of probability and consequences of ICT security incidents. k) ICT security tests (e.g. performing penetration tests, testing security alert system, review of security measures, testing of backup systems).

[1] A combination of e.g., user-defined password, one-time password (OTP), code generated via a security token or received via a smartphone, biometric method (e.g., based on fingerprints, voice, face)).

[2] Information encrypted to prevent unauthorized parties from reading the information. Authorized parties can read the information as usual without checking the encryption.

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[3] Refers to e.g., intrusion detection or prevention systems that monitors users' or devices' behaviour, network traffic.

[4]

- Log files record activities, processes, and incidents that together describe the computer's work.
- Log files can be used to search for errors or to track cyberattacks.
- Log files have corresponding functions for servers, mobile phones etc.

21. Does your enterprise make persons employed aware of their obligations in ICT security related issues in the following ways?

Method of information	Yes	No
a) Voluntary training or internally available information, e.g. information on the intranet.		
b) Compulsory training courses or viewing compulsory material.		
c) By contract, e.g. contract of employment.		

22. Does your enterprise have document(s) on measures, practices or procedures on ICT security?

Documents on ICT security and confidentiality of data cover employee training in ICT use, ICT security measures, the evaluation of ICT security measures, plans for updating ICT security documents, etc.

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O No



D2. Incidents related to ICT operations or ICT security

23. During 2023, did your enterprise experience any ICT related security incident leading to the following consequences?

Consequences	Yes	No
a) Unavailability of ICT services due to hardware or software failures.		
b) Unavailability of ICT services due to attack from outside, e.g. ransomware attacks, Denial of Service attacks.		
c) Destruction or corruption of data due to hardware or software failures.		
d) Destruction or corruption of data due to infection of malicious software or unauthorised intrusion.		
e) Disclosure of confidential data due to intrusion, pharming, phishing attack, intentional actions by own employees.		
f) Disclosure of confidential data due to unintentional actions by own employees.		

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E. Artificial intelligence

Artificial intelligence (AI) refers to systems that use technologies such as: **text mining, computer vision, speech recognition, natural language generation, machine learning and deep learning**. The technology can be used to both collect data and utilize data to predict, recommend, or decide, with varying degrees of autonomy, the best course of action to achieve specific goals.

Artificial intelligence systems can be purely software based, e.g.:

- Chatbots and business virtual assistants based on natural language processing.
- Face recognition systems based on computer vision or speech recognition systems.
- Machine translation software.
- · Data analysis based on machine learning.

Or embedded in devices, e.g.:

- Autonomous robots for warehouse automation or production assembly works.
- Autonomous drones for production surveillance or parcel handling.

24. Does the enterprise use any of the following Artificial Intelligence technologies?

Al technologies	Yes	No
a) AI technologies performing analysis of written language (text mining).		
b) Al technologies converting spoken language into machine-readable format (speech recognition).		
c) Al technologies generating written or spoken language (natural language generation).		
d) Al technologies identifying objects or persons based on images (image recognition, image processing).		
e) Machine learning (e.g. deep learning) for data analysis.		
f) Al technologies automating different workflows or assisting in decision making (Al based software robotic process automation).		
g) Al technologies enabling physical movement of machines via autonomous decisions based on observation of surroundings (autonomous robots, self-driving vehicles, autonomous drones).		

If 24a) – g) = "No", go to question 27.



25. Does your enterprise use Al-based software or systems for any of the following purposes?

Purpose	Yes	No
a) Use of AI for marketing or sales. [1]		
b) Use of AI for production or service processes. [2]		
c) Use of AI for organisation of business administration processes. [3]		
d) Use of AI for logistics. [4]		
e) Use of AI for IT security. [5]	0	
f) Use of AI for accounting, controlling or finance management. [6]		
g) Use of AI for research and development (R&D) or innovation activity. [7]		

[1]

- · Customer profiling, price optimisation, personalised marketing offers, market analysis based on machine learning.
- Chatbots based on natural language processing for customer support.
- · Autonomous robots for orders processing.

[2]

- Predictive maintenance based on machine learning.
- Tools to classify products or find defects in products based on computer vision.
- Autonomous drones for production surveillance, security or inspection tasks.
- Assembly works performed by autonomous robots.

[3]

- Business virtual assistants based on machine learning and/or natural language processing.
- Data analysis or strategic decision-making, e.g. risk assessment based on machine learning.
- Planning or business forecasting based on machine learning.
- Human resources management based on machine learning or natural language processing, e.g. pre-selection screening of candidates, employee profiling or job performance analysis.

[4]

- Autonomous robots for pick-and-pack solutions in warehouses.
- Route optimisation based on machine learning.
- Autonomous robots for parcel shipping, tracking, distribution, and sorting.
- Autonomous drones for parcel deliveries.

[5]

- Facial recognition based on computer vision for authentication of ICT users.
- Detection and prevention of cyberattacks based on machine learning.

[6]

• Machine learning to analyse data as an aid in financial decision-making.

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Klostergatan 23
Solna strandväg 86
E-post: scb@scb.se
Momsregnummer: SE202100083701

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- Invoice processing based on machine learning.
- Machine learning or natural language processing for bookkeeping.

[7]

 Analysis of data for conducting research, solving research-related problems, developing a new or improved product/service based on machine learning.

26. How did your enterprise acquire the Artificial Intelligence software or systems that it uses?

Method of acquisition	Yes	No
a) They were developed by own employees (including those employed in parent or affiliate enterprise).	i i	
b) Commercial software or systems were modified by own employees (including those employed in parent or affiliate enterprise).		
c) Open-source software or systems were modified by own employees (including those employed in parent or affiliate enterprise).		
d) Commercial software or systems ready to use were purchased (including examples where it was already incorporated in a purchased item or system).		
e) External providers were contracted to develop or modify them.		

27. Has your enterprise ever considered using any of the Artificial Intelligence technologies listed in question 24?

Click on "Show more information'	to see what i	is listed in question	24. [1]
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Yes

O No

If "No", go to question 29.

[1]

- Text mining.
- Speech recognition.
- Natural language generation.
- Image recognition, image processing.
- Machine learning e.g. deep learning.
- Al-based automation of different workflows or Al-based decision making.
- Autonomous robots, self-driving vehicles, autonomous drones

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28. What are the reasons for your enterprise not to use any of the Artificial Intelligence technologies listed in question 24?

Click on "Show more information" to see what is listed in question 24. [1]

Reasons	Yes	No
a) The costs seem too high.	П	
b) There is a lack of relevant expertise in the enterprise.		
c) Incompatibility with existing equipment, software, or systems.		
d) Difficulties with availability or quality of the necessary data.		
e) Concerns regarding violation of data protection and privacy.		
f) Lack of clarity about the legal consequences (e.g., liability in case of damage caused by the use of Artificial Intelligence).		
g) Ethical considerations.		
h) Artificial Intelligence technologies are not useful for the enterprise.		

[1]

- · Text mining.
- Speech recognition.
- Natural language generation.
- Image recognition, image processing.
- Machine learning e.g. deep learning.
- Al-based automation of different workflows or Al-based decision making.
- Autonomous robots, self-driving vehicles, autonomous drones



F. ICT and the environment

29. Does your enterprise apply any measured to affect the following?

	Yes	No
a) Amount of paper used for printing and copying.		
b) Energy consumption of the ICT equipment.		

30. Does your enterprise consider environmental impact of ICT services, or ICT equipment when selecting them?

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- Yes
- O No

31. What does your enterprise do with ICT equipment when it is no longer used?

Refers to e.g., computers, monitors, mobile phones.

Measures	Yes	No
a) It is disposed of in electronic waste collection/recycling or returned to the retailer to dispose of.		
b) The ICT equipment is kept in the enterprise in order to be used as spare parts or in fear of disclosing sensitive information.		
c) It is sold, returned to a leasing enterprise, or donated.		



G. Any remarks and time required

Remarks	
	it take to compile and provide the requested information?
	tively works to reduce the time that enterprises and organizations spend on pro re, we appreciate it if you respond to our voluntary question.
Hours	
Minutes	