



# Recent developments in the EU survey on ICT usage and e-commerce in enterprises

UNCTAD Working Group on Measuring e-Commerce and  
the Digital Economy, 28-29 November 2022

*EUROSTAT, Unit G4 – Innovation and digitalisation*

# Outline of the presentation

- Background – Community survey on ICT usage and e-commerce in enterprises
- Recent developments in the EU ICT ENT survey
  - e-Commerce
  - Covid-19 impact
  - Artificial Intelligence (AI)
  - Data use and data analytics

# Background – Survey design process

- Annual revisions of the questionnaire and the annual implementing regulation:
  - Policy needs
  - Technology developments
  - Constant quality improvements
  - Cooperation with EU MS and the users
    - Users consultation + 2 Working Groups + 2 Task Force meetings
- Goal: harmonisation across EU Member States
- Balance between relevance and keeping the time series
- Burden limitation (73 questions according to the EBS regulation)
- Data available at the end of the survey year

# Community survey on ICT usage and e-commerce in enterprises – scope

**Economic activity:** Enterprises classified in the following categories of NACE Rev. 2:

- Section C – “Manufacturing”;
- Section D – “Electricity, gas, steam and air conditioning supply”
- Section E – “Water supply, sewerage, waste management and remediation activities”;
- Section F – “Construction”;
- Section G – “Wholesale and retail trade; repair of motor vehicles and motorcycles”;
- Section H – “Transportation and storage”;
- Section I – “Accommodation and food service activities”;
- Section J – “Information and communication”;
- Section L – “Real estate activities”;
- Section M – “Professional, scientific and technical activities”;
- Section N – “Administrative and support service activities”;
- Group 95.1 – “Repair of computers and communication equipment”

**Enterprise size:** Enterprises with 10 or more employees or self-employed persons.

Optional: enterprises with number of employees or self-employed persons between 0 and 9.

# e-Commerce in 2024 EU ICT ENT survey

- New user need: turnover from e-commerce subscriptions sales – *no question introduced.*
- Revisited discussions on standing orders / recurrent payments – *agreement that the revenue received in the reference period, but generated by e-commerce sales in years before the reference period, should be in scope. No explicit instruction will be added in the questionnaire, only a clarifying note will be added in the manual for compilers.*
- No changes in the module compared to recent years

# Covid-19 impact questions in the EU ICT ENT survey

- Not foreseen event, thus not foreseen questions in the implementing regulation defining the scope of the EU surveys in 2020 nor in 2021
- Common acknowledgement of the importance to measure the impact of the pandemic and the relevance of digitalisation in its context
- Important to capture the momentum (no time to wait for the next survey/regulation)

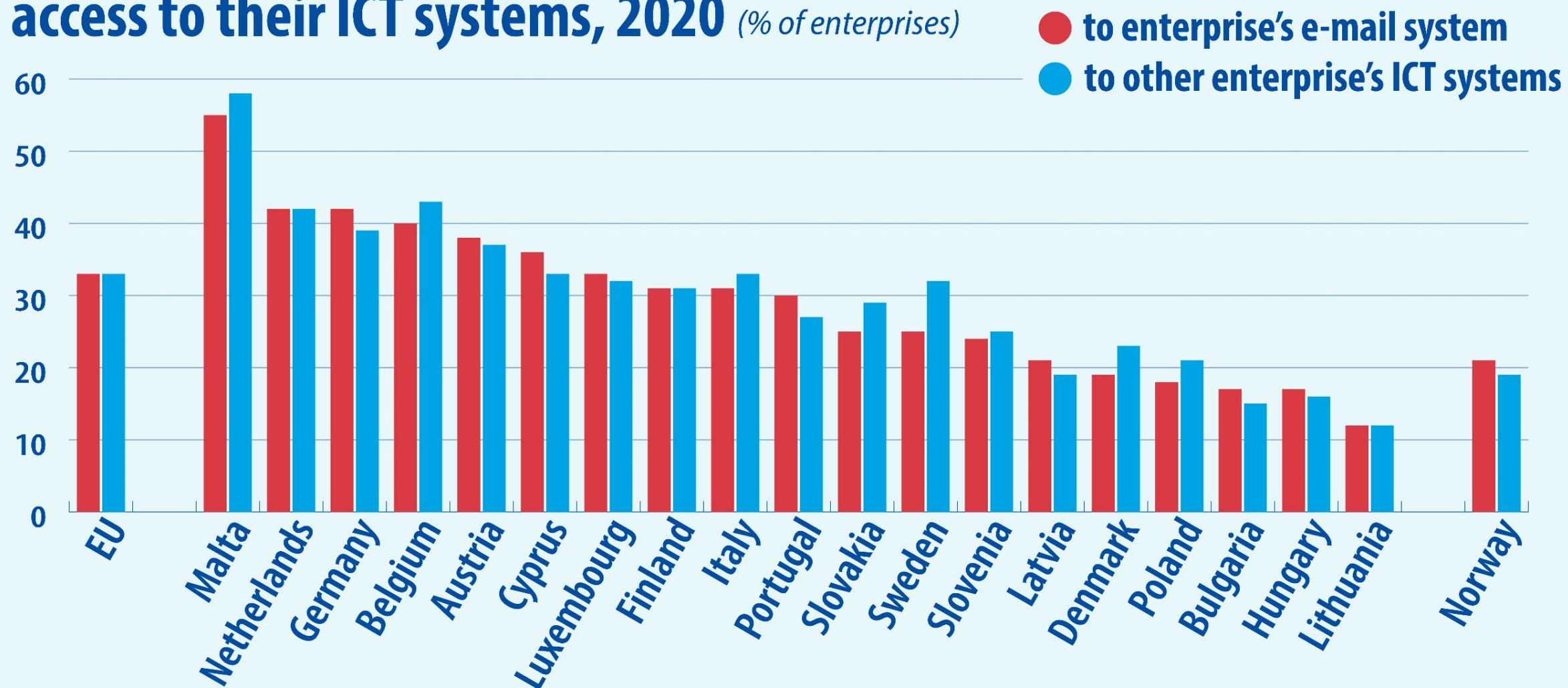
 common EU approach to measuring the impact of Covid-19

- Harmonised module introduced in 2021 survey
- Voluntary

# Covid-19 impact questions in the EU ICT ENT survey

- Did enterprise increase the % of persons employed having remote access to the e-mail system of the enterprise, remote access to other ICT systems of the enterprise, number of remote meetings conducted – *filter question*
- Extent of Covid-19 impact on the above changes
- Did enterprise start or increase e-sales due to Covid-19 pandemic

# Enterprises which increased the share of employees with remote access to their ICT systems, 2020 (*% of enterprises*)

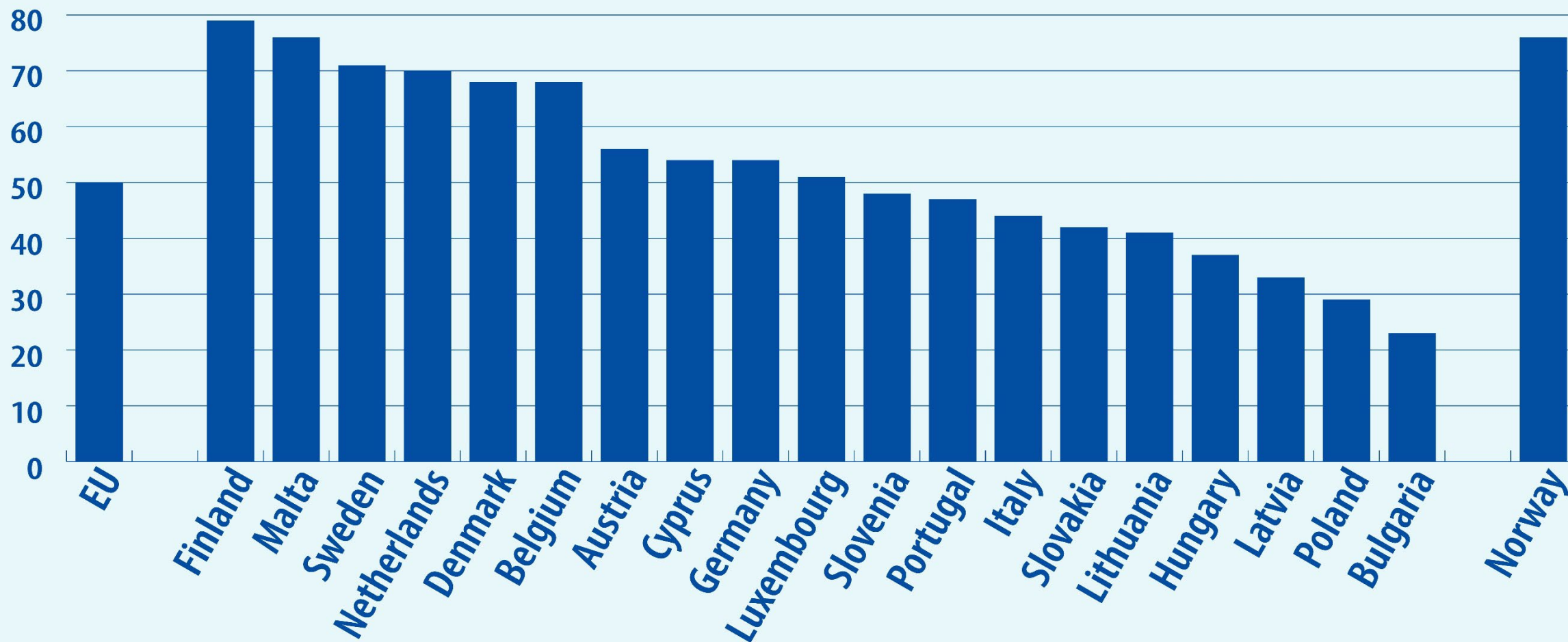


Voluntary data collection. Czechia, Estonia, Ireland, Greece, Spain, France, Croatia, Romania: data not available



# Enterprises which increased the number of remote meetings\*, 2020

(% of enterprises)

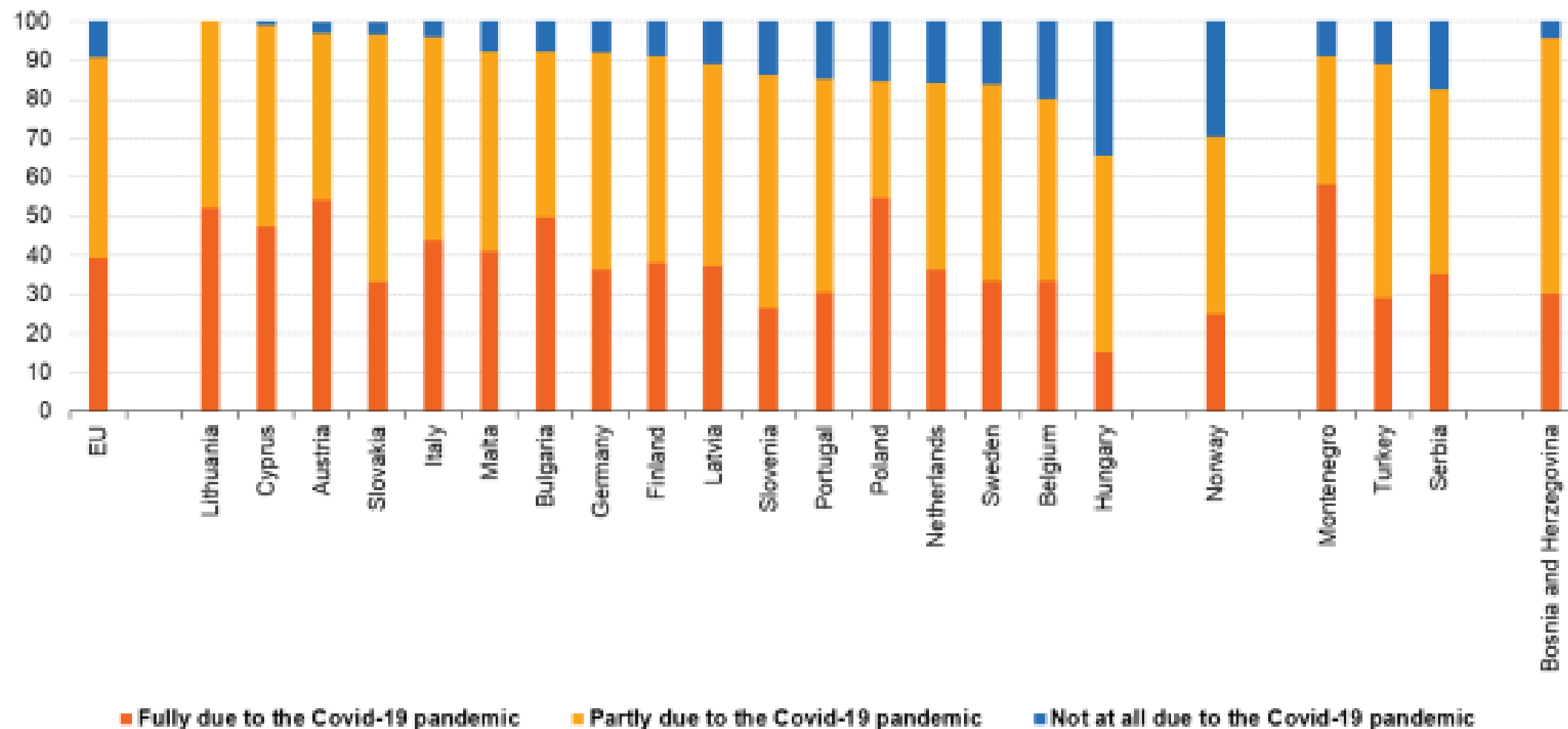


\* conducted by the enterprise

Voluntary data collection. Czechia, Estonia, Ireland, Greece, Spain, France, Croatia, Romania: data not available.

## Enterprises with an increase in the remote access to the e-mail system of the enterprise due to the Covid-19 pandemic, 2020

(% enterprises which increased the share of employees having remote access to their e-mail system)

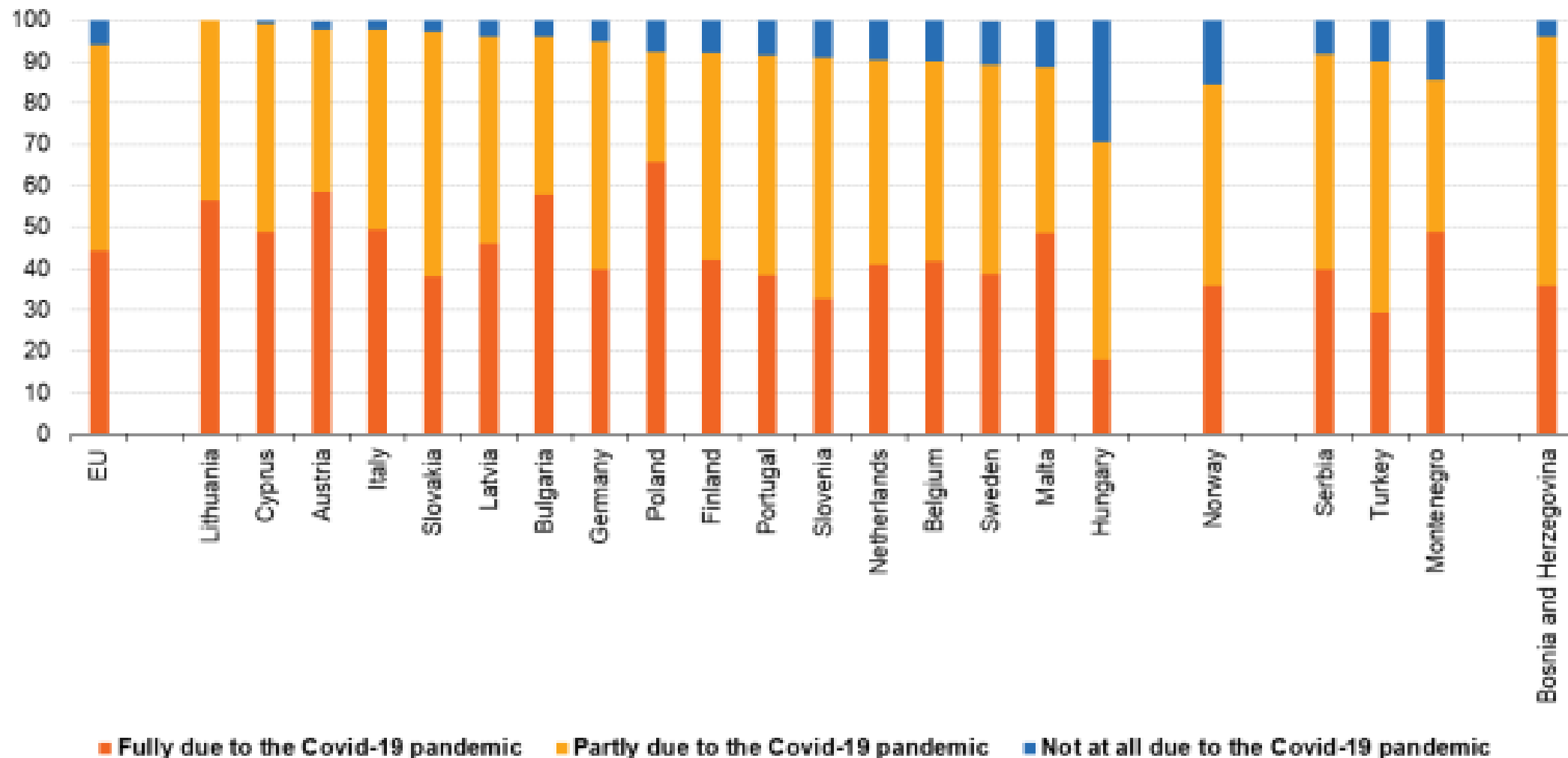


Voluntary data collection. Czechia, Estonia, Ireland, Greece, Spain, France, Croatia, Romania: data not available

Source: Eurostat (online data code: isoc\_e\_cvd)

## Enterprises with an increase in the remote access to their ICT systems other than e-mail due to the Covid-19 pandemic, 2020

(% enterprises which increased the share of employees having remote access their ICT systems other than e-mail)



Voluntary data collection. Czechia, Estonia, Ireland, Greece, Spain, France, Croatia, Romania: data not available

Source: Eurostat (online data code: isoc\_e\_cvd)

29-03-2022



Restrictions in mobility caused by the COVID-19 pandemic forced many enterprises to increase or even shift towards digital technologies in their activities. This emphasised the potential digital technologies have for improving the economic resilience of businesses.

In 2020, 33% of EU enterprises increased the proportion of employees with remote access to the company's e-mail system; and the same percentage (33%) increased the proportion of employees with remote access to other ICT systems.

Among the EU Member States, Malta registered the highest shares of enterprises that increased remote access to the enterprise's e-mail system (55%) or ICT systems other than e-mail (58%), followed by Belgium (40% and 43%, respectively). In contrast, the lowest share of enterprises that increased remote access to the company's e-mail system or other ICT systems (12%) was registered in Lithuania.

Enterprises  
access

## Impact of COVID-19 on the use of ICT in enterprises

Statistics Explained

- " In 2020, 33% of EU enterprises increased the share of staff having remote access to their e-mail or other ICT system. "
- " During 2020, 91% of EU enterprises that increased remote access to their e-mail systems for their employees, did so at least partly due to COVID-19. "
- " During 2020, 94% of EU enterprises that increased remote access to their ICT systems for their employees, did so at least partly due to COVID-19. "
- " In 2020, 50% of EU enterprises increased the number of remote meetings, of which 97% did so at least partly due to COVID-19. "

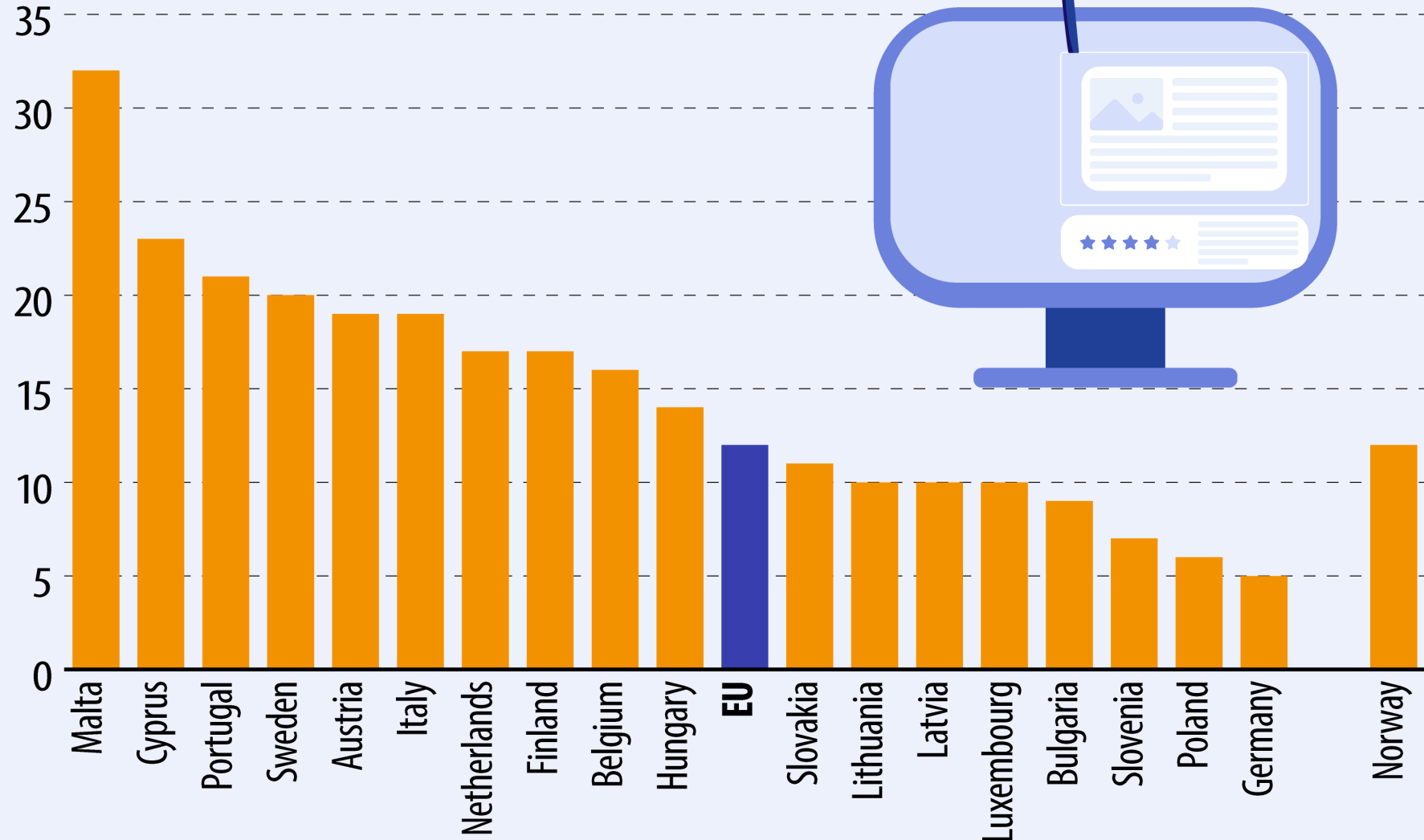
Data extracted in March 2022  
No planned article update

Enterprises which increased the share of employees with remote access to their ICT systems, 2020 (% of enterprises)



# Enterprises which due to COVID-19 pandemic started or increased efforts to sell goods or services online, 2020

(% of enterprises)



Voluntary data collection. Czechia, Denmark, Estonia, Ireland, Greece, Spain, France, Croatia, Romania: data not available

# Enterprises which, due to Covid-19 pandemic, started or increased efforts to sell goods or services via internet, by economic activity, EU, 2020 (% enterprises)



Note: Voluntary data collection. Czechia, Denmark, Estonia, Ireland, Greece, Spain, France, Croatia, Romania: data not available

Source: Eurostat (online data code: isoc\_e\_cvd)

Home > Products Eurostat News > Online sales efforts on the rise due to the pandemic

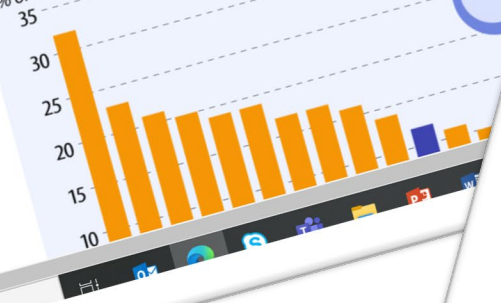
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Eurostat data show how enterprises dealt with the constraints of COVID-19 control measures, with 12% of the EU enterprises in 2020, the COVID-19 pandemic prompted them to start or increase efforts to sell goods or services over the internet. In 2020, among the EU Member States with available data, the highest share of enterprises that started or increased efforts to sell online due to the pandemic was recorded in Malta (32%), followed by Cyprus (23%) and Portugal (21%). In contrast, the lowest share of enterprises were registered in Germany (5%), Poland (6%) and Slovenia (7%).

### Enterprises which due to COVID-19 pandemic started or increased efforts to sell goods or services online, 2020

(% of enterprises)



FOR SALE

# Impact of COVID-19 on e-sales of enterprises

Statistics Explains

" During 2020, the Covid-19 pandemic prompted 12 % of EU enterprises to start or increase efforts to sell online. "

" The share of enterprises that started or increased efforts to sell online in 2020 due to the Covid-19 pandemic was highest in accommodation related activities. "

Data extracted in March 2022  
No planned article update

For decades, digital technologies have been enabling enterprises to transform or even expand their business. For many enterprises, the restrictions introduced due to the Covid-19 pandemic pressed them to either switch to the internet as a new channel of sales, or to increase efforts to sell their goods or services online, highlighting the potential of digital technologies to increase the economic resilience of businesses. This article presents the results of a special module of the 2021 survey on ICT usage and e-commerce in enterprises. The module was introduced to measure the impact of the restrictions put in place to combat the Covid-19 pandemic on the use of digital technologies by enterprises. It was introduced on a voluntary basis and 19 Member States included it, at least partially, in their national survey on ICT usage and e-commerce in enterprises. The presented EU aggregates are based on the results of those Member States.

## Enterprises started or increased efforts to sell goods or services via internet

# AI in the 2023 EU ICT ENT survey

- Small revisions based on feedback from 2021 module:
  - Use of AI technologies by enterprises (by type of technology) – *filter question*
  - Use of AI by purpose (for marketing or sales, production **or services** processes, organisation of business administration processes **or management**, management of enterprises, logistics, ICT security, ~~human resources management or recruiting,~~ **accounting, controlling or finance management, research and development (R&D) or innovation activity (excluding research on AI)**)
  - Source of AI used (developed by own employees, commercial modified by own employees, open-source modified by own employees, commercial ready to use, external providers contracted to develop or modify)
  - Reasons for not using AI – *for non-users*



# AI in the 2024 EU ICT ENT survey



- New additional questions to fulfil new user needs:

- **Do the AI technologies used by your enterprise process data on individuals?**

Examples of data on individuals (e.g. employees, job applicants, and customers): sex, age, racial or ethnic origin, facial images, record of purchases, occupation and address.

- **Does your enterprise have any measures in place to check the results generated by AI technologies for possible biases based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation?**

Examples of measures to check for possible bias:

- analysing the output of the machine learning model
- examining the dataset that was used to train the machine learning model
- data augmentation (which involves techniques to artificially generate additional data points from existing data, i.e. synthetic data)

# Data module in the 2023 EU ICT ENT survey

- Use of business software:
  - Enterprise Resource Planning (ERP) software,
  - Customer Relationship Management (CRM) software,
  - Business Intelligence (BI) software
- Data sharing:
  - Does your enterprise share data electronically with suppliers or customers within the supply chain (e.g. via websites or apps, EDI-systems, real-time sensors or tracking)?

# Data module in the 2023 EU ICT ENT survey

## Data analytics:

- Performing data analytics by own employees
- Performing data analytics on data from the following sources:
  - data from transaction records such as sale details, payments records
  - data about customers such as customer purchasing information, location, preferences, customer reviews, searches
  - data from social media, incl. from your enterprise's own social media profiles
  - web data (e.g. search engine trends, web scraping\* data)
  - location data from the use of portable devices or vehicles data from smart devices or sensors
  - government authorities' open data
  - satellite data (e.g. satellite imagery, navigation signals, position signals)

# Data module in the 2023 EU ICT ENT survey

## Data analytics:

- External enterprise or organisation performing data analytics for the enterprise

## Data trading:

- Selling (access to) any of its own data (*e.g. data about your enterprise's customers' preferences, data from your enterprise's smart devices or sensors*) – optional
- Purchasing (access to) any data (*e.g. data about other enterprise's customers' preferences, data from other enterprise's smart devices or sensors*) – optional

# Thank you



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