

AI and robotics in the EU: prevalence, perceptions, and company practices

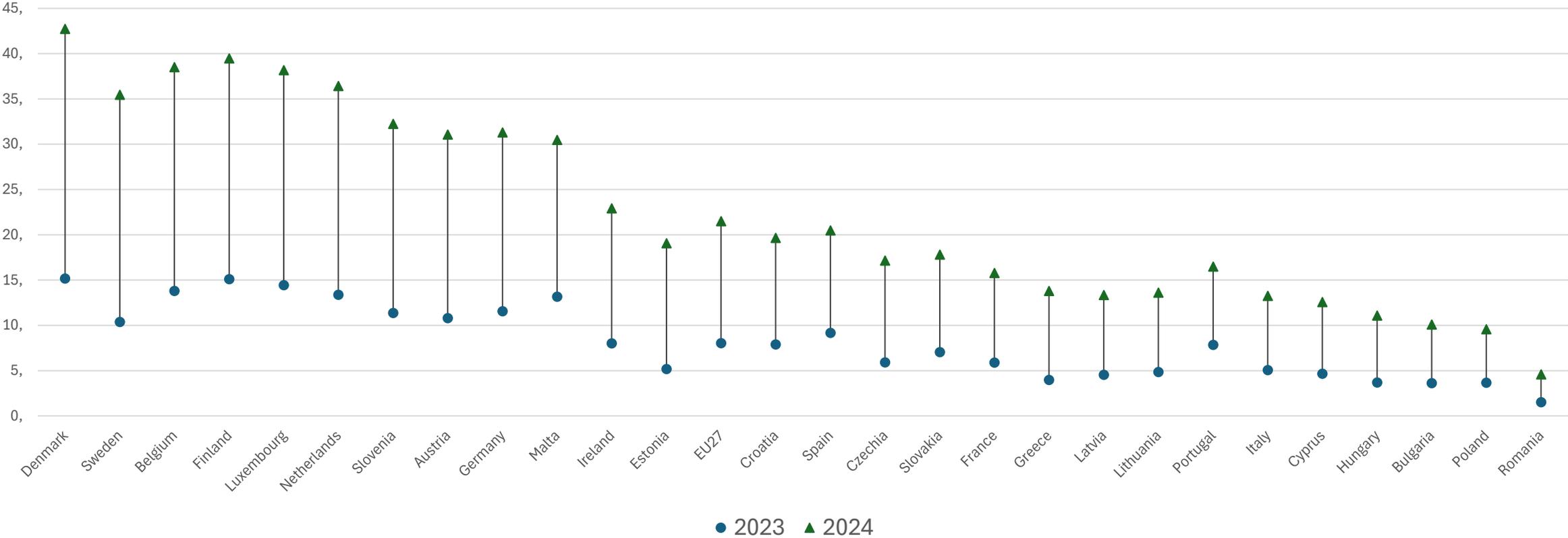
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AI is becoming more widespread in the EU

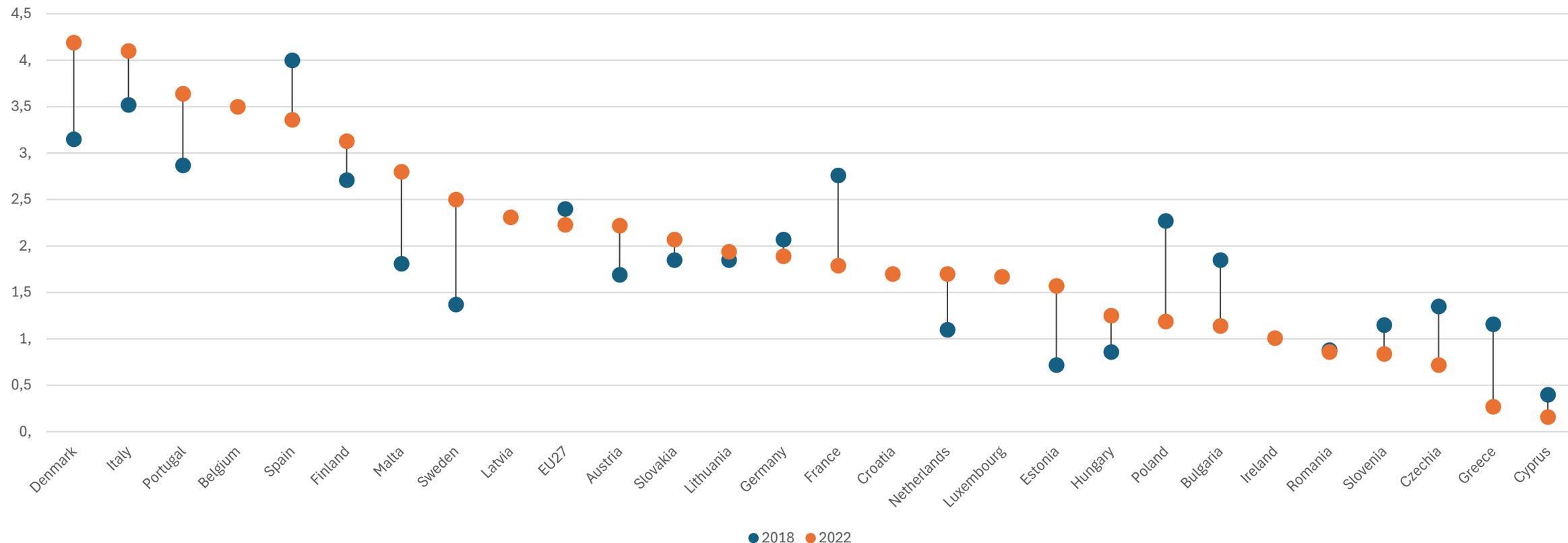
Share of enterprises which use at least one AI system in the EU



Source: Own calculations, Eurostat ICT survey.

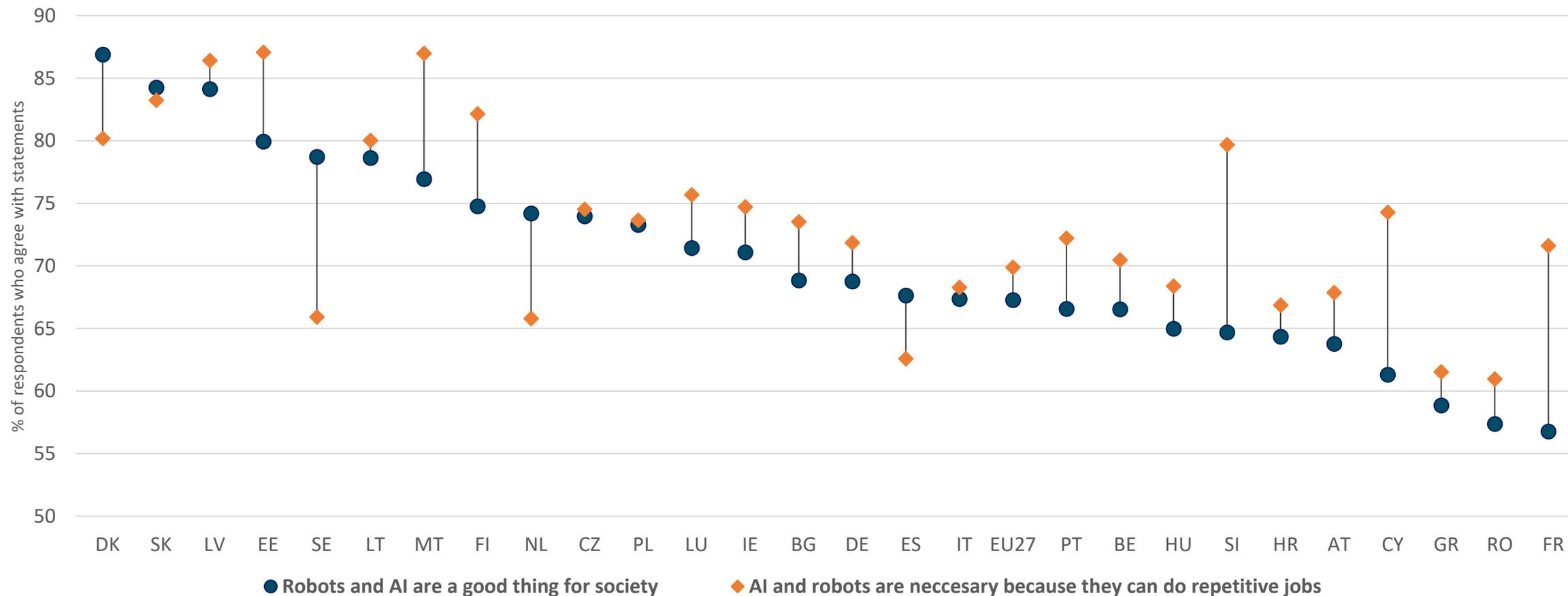
...while the use of service robots is stagnating

Share of enterprises which use service robots



Source: Own calculations, Eurostat ICT survey.

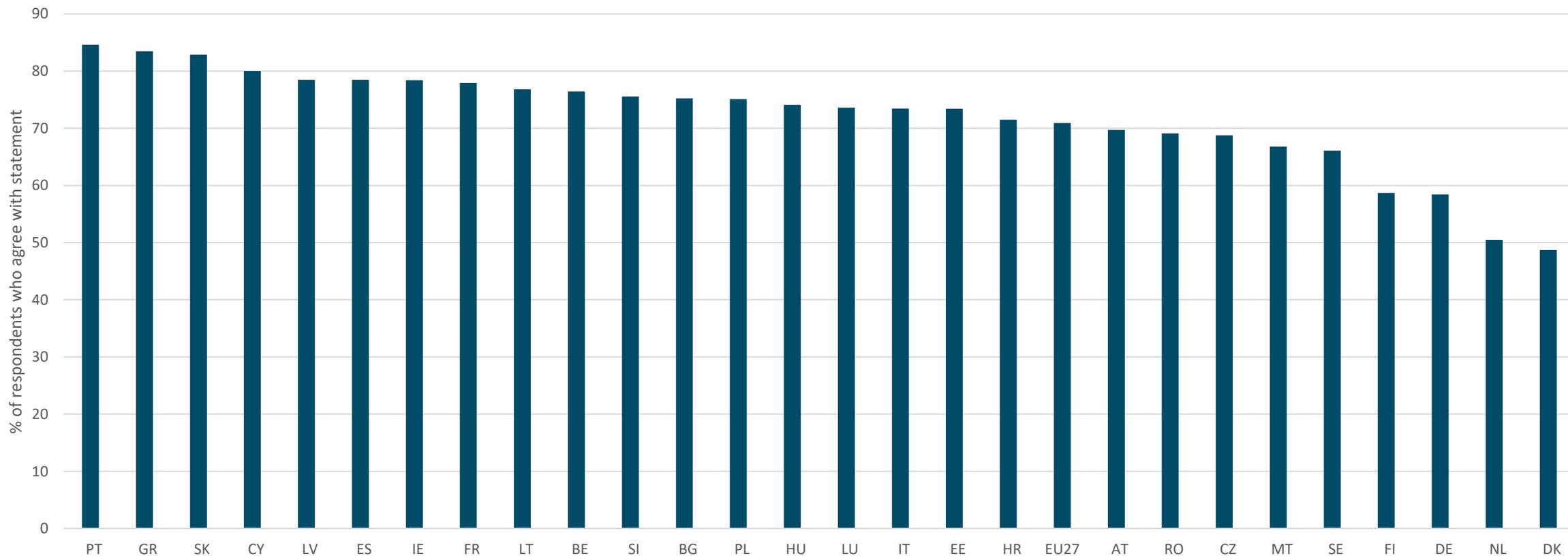
Robots and AI generally perceived positively in the EU



Source: Own calculations, Eurobarometer Survey 554.

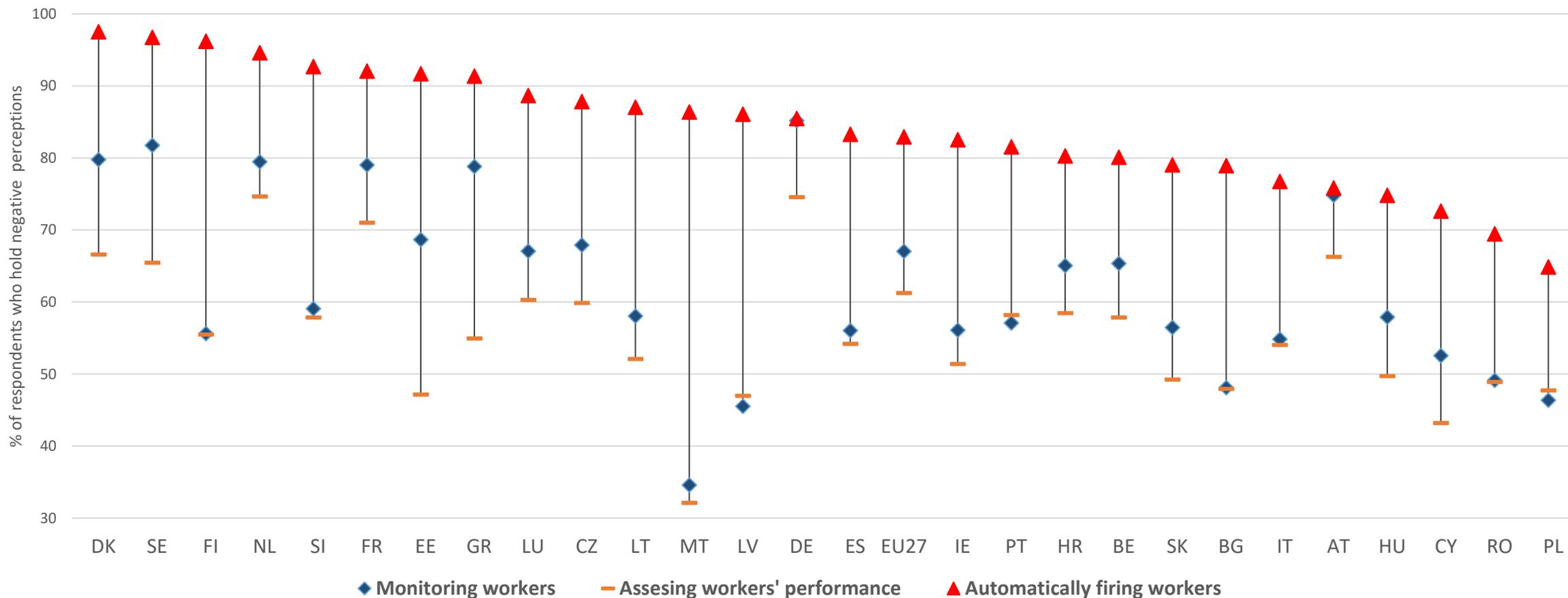
Fears of job loss as a result of robots and AI remain

Due to the use of Robots and Artificial Intelligence, more jobs will disappear than new jobs will be created



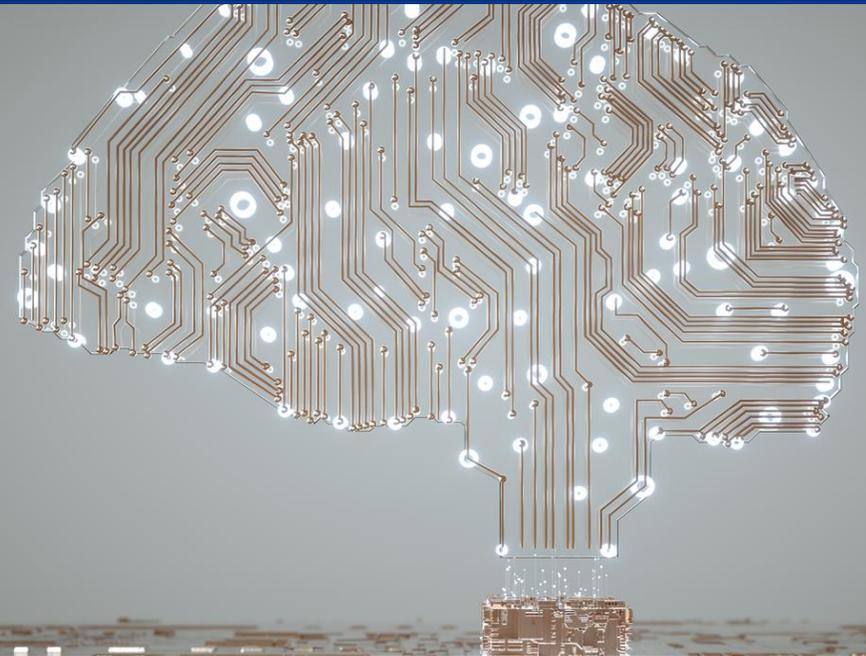
Source: Own calculations, Eurobarometer Survey 554.

Negative perceptions about AI for intrusive purposes



Source: Own calculations, Eurobarometer Survey 554.

Job quality & AI use Insights from case studies



What is job quality? And why is it important?

Physical environment

Posture-related (ergonomic)
Ambient (vibration, noise
temperature)
Biological and chemical

Work intensity

Quantitative demands
Pace determinants and
interdependency
Emotional demands

Working time quality

Duration
Atypical working time
Working time arrangements
Flexibility

Social environment

Adverse social behaviour
Social support
Management quality

Skills and discretion

Cognitive dimension
Decision latitude
Organisational participation
Training

Prospects

Employment status
Career prospects
Job security
Downsizing

Earnings



Job transformation rather than destruction...

Automated warehouse



For operators:

- Tasks simplification (cognitive underload & skills underutilisation)
- Physical demands remain
- Training: focus on safe technology use

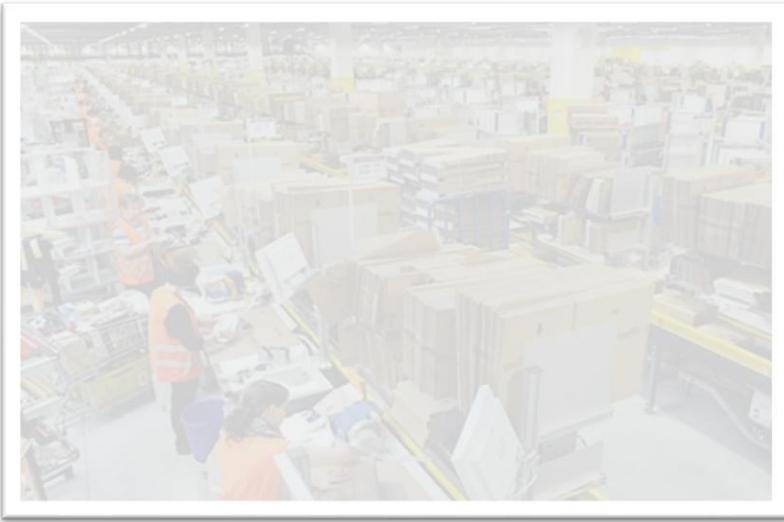
For managers:

- Greater reliance on data-driven decision-making and system

* Employment levels the same as in non automated warehouses

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Highly automated manufacturing site



For shopfloor workers:

- Increased job complexity, high cognitive load
- Training: on-the-job, narrowly focused on specific technologies

* Employment levels unchanged after relocation to new high-tech facility

Job (re) design: different approaches from case studies

- Top-down job redesign: Management-led initiatives that selectively automate tasks to maintain critical human oversight.
- Bottom-up job crafting: Worker-led adjustments using AI to offload tedious tasks, though overdependence on automation may risk skill loss.
- Job co-design and job (re)design via co-determination

What's holding us back?



1. Need to rethink the way training and reskilling is organised and delivered.
2. Greater emphasis needed on job redesign strategies.
3. Limited worker involvement.
4. No ethical thinking and human centricity in technology design and implementation.

Looking ahead: new Eurofound research on AI

- 2024 European Working Conditions Survey (EWCS)
 - new indicators: wearables, cobots, gen AI, collaborative work platforms, algorithmic management, ...
- Secondary analysis on algorithmic management and impact on job quality
- Case studies on algorithmic management

