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#### COMMISSION STAFF WORKING DOCUMENT

**Digital Decade 2025 country reports** 

Accompanying the document

Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee and the Committee of the Regions

State of the Digital Decade 2025: Keep building the EU's sovereignty and digital future

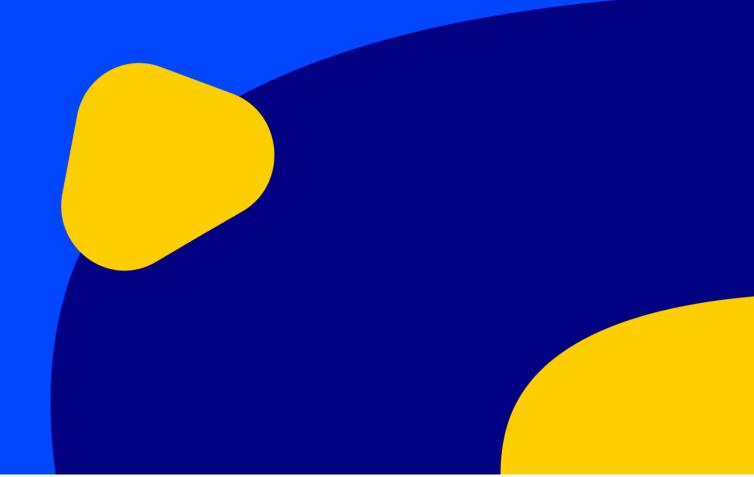
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# DIGITAL DECADE 2025 COUNTRY REPORTS

Sweden



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### **Executive summary**

Sweden continues to seek to be a leading country in digitalisation. Although it has good digital infrastructure, it lags behind on e-Health. Its population scores high in both basic and advanced IT skills. The country is taking several steps to further digitalise its public services and to promote the use of AI.

Sweden shows a moderate level of ambition in its contribution to the Digital Decade having set 13 national targets, 54% of which are aligned with the EU 2030 targets. The country is following its trajectories well with 83% of them being on track (on the basis of the 2024 trajectories defined for 6 KPIs out of 8 analysed). The country is currently revising its national digitalisation strategies and is expected to submit its revised roadmap only later in 2025. Sweden addressed 55% of the 9 recommendations issued by the Commission in 2024, either by implementing significant policy changes (11%) or making some changes (44%) through new measures.

Its fibre and 5G coverage keep increasing; however, connecting the remaining buildings will become increasingly costly. A substantial part of Sweden's Resilience and Recovery Plan was reserved for supporting the expansion of broadband connectivity in rural areas.

	Sweden				EU		Digital Decade target by 2030	
Digital Decade KPI <sup>(1)</sup>	DESI 2024 (year 2023)	DESI 2025 (year 2024)	Annual progress	National trajectory 2024 (3)	DESI 2025	Annual progress	SE	EU
Fixed Very High Capacity Network (VHCN) coverage	88.5%	89.7%	1.4%	-	82.5%	4.9%	98.5%	100%
Fibre to the Premises (FTTP) coverage	83.9%	85.6%	2.0%	-	69.2%	8.4%	98.5%	-
Overall 5G coverage	90.3%	98.6%	9.2%	99.0%	94.3%	5.9%	100.0%	100%
Edge Nodes (estimate)	32	63	96.9%	-	2257	90.5%	-	10000
SMEs with at least a basic level of digital intensity (2)	-	86.6%	-0.2%	-	72.9%	2.8%	95.0%	90%
Cloud	66.0%	-	-	-	-	-	94.0%	75%
Artificial Intelligence	10.4%	25.1%	141.9%	15.4%	13.5%	67.2%	39.5%	75%
Data analytics	35.0%	-	-	-	-	-	56.5%	75%
Al or Cloud or Data analytics	73.1%	-	-	-	-	-	-	75%
Unicorns	39	39	0.0%	44	286	4.4%	64	500
At least basic digital skills	66.4%	-	-	-	-	-	89.7%	80%
ICT specialists	8.7%	8.6%	-1.1%	9.7%	5.0%	4.2%	12.9%	~10%
eID scheme notification		Yes						
Digital public services for citizens	93.3	85.9	-7.9%	87.0	82.3	3.6%	90.0	100
Digital public services for businesses	96.0	90.4	-5.8%	88.7	86.2	0.9%	90.5	100
Access to e-Health records	77.9	77.9	0.0%	75.5	82.7	4.5%	78.5	100

<sup>(1)</sup> See the methodological note for the description of the indicators and other metrics

According to the 2025 special Eurobarometer on the 'Digital Decade', 85% of Swedes consider that the digitalisation of daily public and private services is making their lives easier. On the action of the public authorities, 97% consider it important to counter and mitigate the dissemination of fake news

<sup>(2)</sup> DESI 2025 reports the version 4 of the Digital Intensity Index, that is comparable with the DII value from DESI 2023 (referring to year 2022) for the calculation of the annual progress. It is not comparable to the national trajectory that is based on version 3 of the index.

<sup>(3)</sup> National trajectory value if present in the national roadmap and if the indicator was measured in DESI2025 (year 2024)

and disinformation online. And on competitiveness, 82% consider it important to ensure that European companies can grow and become 'European Champions' capable of competing globally.

## A competitive, sovereign, and resilient EU based on technological leadership

Infrastructure indicators (VHCN, FTTP, 5G) are all above the EU average. 5G coverage, in particular, has increased over recent years, following allocation of the remaining spectrum in the 900 MHz, 2.1 GHz and 2.6 GHz band. However, Sweden indicated in its Roadmap that it will not fully reach the target of 100 % VHCN coverage due to the high cost of connecting the last buildings. Sweden is well advanced in switching off its copper network, which is expected to be completed in 2026. The country excels in promoting an environment conducive for start-ups and has a large number of unicorns given the size of its economy. Since last year, Sweden has made good progress in the use of AI by enterprises. In 2023 Sweden asked an AI Commission to analyse and present proposals for making the best use of AI. Sweden is currently assessing the report, which was presented in November 2024. Cybersecurity is a priority for Sweden as demonstrated by the creation of its National Cybersecurity Centre and the presentation of a new cyber security strategy in March 2025.

#### Protecting and empowering EU people and society

Sweden has for several years been a front runner in basic and advanced digital skills. It has the largest share of graduates with a degree in ICT in the EU. In February 2025 Sweden presented a strategy to increase the number of graduates in science and technology. The strategy sets several long-term targets on the share of science students in secondary school and the number of science, technology, engineering and mathematics (STEM) students.

Sweden's ICT landscape is characterised by a high proportion of enterprises providing ICT training and a large share of ICT specialists in total employment. However, the country faces challenges in maintaining growth rates in these areas, particularly in the context of enterprises providing ICT training and the overall number of ICT specialists. The notable exception is the growth rate of female ICT specialists, which is significantly higher than the EU average, indicating a positive trend towards gender diversity in the ICT sector.

Sweden, however, remains below the EU average in online access to electronic health records and is at risk of not meeting the EU target of 100% by 2030.

#### Leveraging digital transformation for a smart greening

Sweden's Recovery and Resilience Plan (RRP) is focused on the green transition, with specific reforms and investments primarily targeting carbon-intensive sectors. To do this, the **RRP** supports local and regional investments to reduce climate emissions and in the transition of industry, energy efficiency in multi-dwelling housing, rail transport and biodiversity.

#### National digital decade strategic roadmap

Sweden did not submit an adjustment to its national Digital Decade roadmap. An adjusted roadmap is expected later in 2025. The initial roadmap is composed of 40 measures with a budget of EUR 3.5 billion, EUR 2.8 billion of which comes from public funding (equivalent to 0.5% of GDP).

#### Funding & projects for digital

Sweden allocates 21% of its total recovery and resilience plan to digital (EUR 674 million)<sup>1</sup>. In addition, under cohesion policy, EUR 230 million, representing 13% of the country's total cohesion policy funding, is dedicated to advancing Sweden's digital transformation<sup>2</sup>.

Sweden is a participating state of the EuroHPC Joint Undertaking (JU) and of the Chips JU.

Sweden is not yet active in the Digital Decade's Best Practice Accelerator<sup>3</sup>.

#### **Digital Rights and Principles**

According to a support study, Sweden has been relative active in implementing the <u>European Declaration on Digital Rights and Principles</u>, with 54 initiatives overall and 15 new initiatives launched in 2024. Sweden is most active in the area of digital education, training and skills and interactions with algorithms and artificial intelligence systems. Less activity has been identified with regards to fair and just working conditions. Measures in the area of solidarity and inclusion appear to have most impact on the ground, in contrast to those addressing freedom of choice.

#### **Recommendations**

- **5G:** Encourage operators to speed up the deployment of 5G stand-alone core networks.
- **Fixed broadband**: Ensure completion of the fibre network.
- eHealth: Continue efforts to increase the availability of electronic health records.
- **Artificial Intelligence:** Continue to encourage the use of AI by enterprises.
- **ICT specialists and advanced skills:** Continue the work to increase the number of STEM graduates.
- Green: Monitor and quantify the emission reductions of the digital solutions deployed.

<sup>&</sup>lt;sup>1</sup> The share of financial allocations that contribute to digital objectives has been calculated using Annex VII to the Recovery and Resilience Facility Regulation. Last data update: 16 May 2025.

<sup>&</sup>lt;sup>2</sup> This amount includes all investment specifically aimed at or substantially contributing to digital transformation in the 2021-2027 Cohesion policy programming period. The source funds are the European Regional Development Fund, the Cohesion Fund, the European Social Fund Plus, and the Just Transition Fund.

<sup>&</sup>lt;sup>3</sup> The Best Practice Accelerator (BPA) is a platform that enables Member States to share successful measures and challenges encountered in their efforts to meet their Digital Decade targets and objectives. Best practices are made available to Member States via the BPA Repository and showcased in regular workshops, currently focused on three thematic clusters: Digital Skills, Green IT, and the Uptake of Digital Technologies.

## A competitive, sovereign and resilient EU based on technological leadership

Sweden's public finances remain strong. It performs well in the areas of innovation, human capital, renewable energy, digitalisation and trade integration. It is also taking further action to strengthen its performance in these areas. The Swedish economy shrank marginally in 2023, following real GDP growth of 2.7% in 2022. After weak economic growth in 2024, the Swedish economy is expected to remain sluggish in 2025 (1.1% GDP growth) before starting to pick up somewhat in 2026 (1.6% GDP growth). Trade and financial market disruptions are set to delay the recovery, given the high degree of openness of the Swedish economy. Inflation is expected to stay just above 2% in 2025 and to fall in 2026. The labour market is set to improve slowly from 2026.

Sweden attaches great importance to the digital sector. In Sweden, the ICT sector represented 6.24% of gross value added in 2022<sup>4</sup>, which has remained stable over recent years and above the EU average of 5.46%, pointing to an overall over-performance by the country. The business sector's R & D expenditure has been consistently high. In the ICT sector, R & D expenditure stood at 28.7% of total R & D business expenditure in 2021. Also, R & D personnel in the ICT sector accounted for 27.45% of total R & D personnel in 2021.

**Sweden's digital economy and society index shows strong coverage in most areas, often exceeding EU averages.** However, growth in some areas lags behind the EU average, indicating potential areas for improvement. Sweden's 5G coverage in sparsely populated areas shows significant growth, while Fibre to the Premises (FTTP) and Very High-Capacity Network (VHCN) coverage growth rates are lower than the EU's. Sweden's 5G spectrum assignment is consistently high, with no growth between 2024 and 2025. Sweden has 39 unicorns and promotes an environment conducive to start-ups.

Sweden appointed an AI Commission in 2023 to analyse and propose measures to make better use of Artificial Intelligence (AI). The deadline set for presenting its report was July 2025; however, the AI Commission decided to present its report before then, in November 2024. The report analysed AI on the basis of three aspects: the essential sectors for further developing AI, skills and governance. It also proposed measures and KPIs for following the progress made on those measures.

According to the 2025 Eurobarometer<sup>5</sup>, 94% of Swedish people think that building efficient and secure digital infrastructures and data processing facilities should be a priority for the public authorities.

#### Building technological leadership: digital infrastructure and technologies

Sweden is continuing to roll out connectivity infrastructure. However, the fibre network is not expected to reach 100% coverage by 2030. Sweden's broadband take-up indicators show a mixed performance compared to the EU average. Sweden leads the way in the share of fixed broadband subscriptions at speeds of 100 Mbps or higher, but lags behind in the share of subscriptions at speeds of 1 Gbps or higher. Sweden's 5G SIM card adoption rate is higher than the EU's, but the growth rate is lower.

<sup>&</sup>lt;sup>4</sup> Most of the indicators mentioned in the country report are explained in the DESI 2025 Methodological Note accompanying the State of the Digital Decade report 2025

<sup>&</sup>lt;sup>5</sup> Special Eurobarometer 566 on 'the Digital Decade' 2025: <a href="https://digital-strategy.ec.europa.eu/en/news-redirect/883227">https://digital-strategy.ec.europa.eu/en/news-redirect/883227</a>

During the past three years, under the Connecting Europe Facility (CEF), a total of 12 Swedish projects have been granted EU funding with coordinating activities for approximately EUR 74.4 million to further develop existing high-capacity infrastructure and establish new infrastructure to strengthen European connectivity. The Swedish Post and Telecom Authority, Post- och Telestyrelsen (PTS), coordinates this.

Sweden is active in the field of critical underwater infrastructure in several capacities, both at national level and in NATO and the EU. One of its roles is to coordinate operators, cable owners and other national agencies. The long-term focus is on building resilience in cross-border communications and strengthening the capacity to repair underwater infrastructure. In connection with recent events in the Baltic Sea, the PTS has been active in coordination efforts at both national and regional level (with neighbouring states). The role played by the PTS in the event of incidents is often to create opportunities to coordinate efforts between national agencies, operators and cable owners, and to support both criminal investigations and repair work to reduce consequences.

#### Connectivity infrastructure

Sweden is at 89.74% of VHCN coverage (2030 national target 98.5%) after a progression of + 1.4% in 2024, still above the EU average of 82.49%. However, Sweden's growth rate of 1.4% lagged behind the EU's 4.9%. For households in sparsely populated areas, Sweden's coverage was 65.22% in 2023 and 69.45% in 2024, both higher than the EU's 55.59% and 61.89% respectively. Sweden's growth rate of 6.5% was lower than the EU's 11.3%.

Sweden has 85.58% of FTTP coverage for all households after a progression of + 2.0% in 2024, still above the EU average of 69.24%. Sweden's growth rate of 2.0% was lower than the EU's 8.4%. For households in sparsely populated areas, Sweden's coverage was 65.22% in 2023 and 69.45% in 2024, both higher than the EU's 52.55% and 58.78% respectively. Sweden's growth rate of 6.5% was lower than the EU's 11.9%.

Sweden has 98.59% 5G coverage (2030 national target 100%) after a progression of + 9.2% in 2024, still above the EU's 94.35%. The country is on track according to its national trajectory. Sweden's growth rate of 9.2% outpaced the EU's 6.0%. For households in sparsely populated areas, Sweden's coverage was 67.03% in 2023, below the EU's 71.10%, but it jumped to 90.35% in 2024, exceeding the EU's 79.57%. Sweden's growth rate of 34.8% was higher than the EU's 11.9%.

Sweden's 5G coverage in the 3.4-3.8 GHz band for all households was 64.5% in 2023, above the EU's 51.06%, and it rose to 74.01% in 2024, still above the EU's 67.72%. Sweden's growth rate of 14.7% was lower than the EU's 32.6%. For households in sparsely populated areas, Sweden's coverage was 5.35% in 2023, below the EU's 15.86%, and it increased to 10.17% in 2024, still below the EU's 26.19%. Sweden's growth rate of 90.1% was higher than the EU's 65.1%. Sweden's 5G spectrum assignment for pioneer bands was 83.89% in both 2024 and 2025, in both higher than the EU's 73.4% and 74.63% respectively. Sweden had no growth between 2024 and 2025, while the EU's growth was 1.7%.

Sweden's broadband take-up indicators display a mixed performance compared to the EU average. In 2023, 93.42% of fixed broadband subscriptions in Sweden were at speeds of 100 Mbps or higher, surpassing the EU's 65.9%. By 2024, this figure rose to 95.22%, still ahead of the EU's 71.88%. However, Sweden's growth rate of 1.9% lagged behind the EU's 9.1%. For subscriptions at speeds of 1 Gbps or higher, Sweden's performance was lower than the EU's. In 2023, only 7.53% of Swedish fixed broadband subscriptions were at this speed, compared to the EU's 18.47%. In 2024, this increased to 9.82%, still below the EU's 22.25%. However, Sweden's growth rate of 30.4% outpaced the EU's 20.5%.

**Sweden's 5G SIM card adoption rate was higher than the EU's.** In 2023, 32.22% of the Swedish population had 5G SIM cards, compared to 21.7% of the EU. By 2024, this figure rose to 50.17%, ahead of the EU's 35.56%. However, Sweden's growth rate of 55.7% was lower than the EU's 63.9%.

#### **VHCN** and FTTP

Sweden's target as regards VHCN coverage is to achieve 98.5% as per the initial roadmap submitted in 2023. Sweden did not provide national trajectory points for 2024 for VHCN coverage or for FTTP coverage in its 2023 roadmap. Given the latest figures and measures in place, the target seems realistic though it falls short of the target of 100% coverage.

Sweden's digital infrastructure is robust, with high coverage rates in most areas. The broadband market is characterised by a few large network operators and a large number of local wholesale network providers; however, today only access to the network of the incumbent provider is regulated. The PTS is currently revising the regulation of the broadband market and expects to present its proposal to regulate the market later this year. Sweden used the Recovery and Resilience Plan to support the expansion of broadband connectivity in rural areas. The country is having a target of 66 100 buildings. The connection cost per household will continue to increase.

The copper switch-off process in Sweden started 20 years ago and is now in its final stage. An estimated 2 % of households remain on the copper network, but they are expected to be switched off by no later than the end of 2026.

5G

Sweden is on track to reach its 100% coverage target before 2030. The roadmap indicated that Sweden would already reach the target of 100% in 2025. Following the recommendation in the 2023 Digital Decade report to allocate the relevant 5G bands, the deployment of the 5G network has made substantial progress. The country's strong 5G coverage and spectrum assignment are notable strengths, but continued investment and innovation will be crucial to keep pace with the EU's advancements.

Satellite broadband accounts for only a small share of broadband subscriptions in Sweden. However, there has been a significant increase in subscriptions since 2022. In June 2024, the number of satellite broadband subscriptions reached approximately 2 700, more than doubling compared to the previous year. Most subscriptions have speeds exceeding 100 Mbps. No public data on the number of satellite subscriptions in December 2024 is yet available.

**2024 recommendation on connectivity infrastructure**: (i) Continue efforts to achieve full Gigabit coverage, starting with the implementation of the national broadband strategy which sets targets for 2025. Meeting the national targets will be a step towards meeting the Digital Decade targets by 2030; (ii) Ensure sufficient access of new players to spectrum for innovative business-to-business (B2B) and business-to-consumer (B2C) applications and encourage operators to speed up the deployment of 5G stand-alone core networks.

In 2024, Sweden made some efforts to address the recommendations through new policy actions. Sweden has continued to deploy fibre. The country is currently preparing a national digitalisation strategy which is expected to provide targets on infrastructure coverage by 2030. Sweden used the Recovery and Resilience Plan to support its fibre deployment. The country is having a target of 66 100 buildings.

The PTS considers demand for 5G stand-alone core networks to be limited at the moment but expects it to pick up before 2030.

#### Semiconductors

In its roadmap, Sweden underlined the importance of its research environment in the production of semiconductors. In 2020, the semiconductor industry in Sweden employed a staff of 2 300 and had a turnover of EUR 420 million. Due to investments made in the 1980s and 1990s in electronics and edge computers, Sweden has an internationally strong position as regards innovation and production knowledge.

The Swedish Agency for Economic and Regional Growth reported in 2024 that Sweden may fall behind and lose its leading position if no further action is taken. Lack of public support, too few researchers in the future and increased international competition are listed are factors. The report argues that Sweden can maintain a strong position in certain targeted sectors in the production of semiconductors rather than having large-scale semiconductors factories that require major public support.

#### Edge nodes

Sweden continues to do well in deploying edge nodes. **It has deployed 63 out of the 2 257 edge nodes deployed in the EU.** This is an increase compared to the 34 edge nodes reported in the previous year.

#### Quantum technologies

Sweden supports the EU target for quantum computing through the Wallenberg Centre for Quantum Technology (WACQT) project, which is due to end in 2030. Chalmers University of Technology coordinates the project with the objective of developing a high-end 100-qubit superconducting quantum computer.

## Supporting EU-wide digital ecosystems and scaling up innovative enterprises

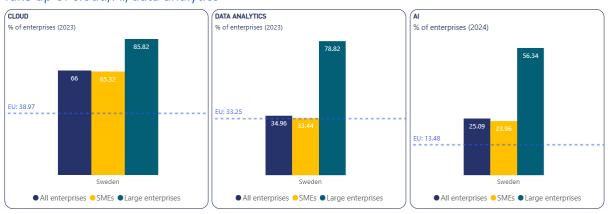
In 2023, Sweden asked an AI Commission to analyse and present proposals to make the best use of AI. The country is currently assessing the report, which was presented in November 2024.

#### SMEs with at least basic digital intensity

In Sweden, 86.56% of SMEs showed at least a basic level of digital intensity (2030 national target 95%) after only a very slight annual decrease - 0.2% between 2022 and 2024. As such, Sweden remained well above the EU average of 72.91%. Additionally, 53.87% of SMEs in Sweden achieved high or very high digital intensity, again far exceeding the EU average of 32.66%. Sweden thus continued to be a very strong performer, at EU level, in terms of the degree of digital intensity of its SMEs.

Sweden has established four European Digital Innovation Hubs (EDIHs) receiving funding from the European Commission's Digital Europe programme and five hubs with the status of Seals of Excellence (SoE) covering a large variety of sectors such as aeronautics, automotive engineering, healthcare, manufacturing and processing and smart city. Several of the EDIHs and some of the SoE in Sweden have been co-financed by the European Regional Development Fund (ERDF) and have been coordinated by the Swedish Agency for Economic and Regional Growth. Additionally, there is small but steady growth of collaboration and networking that strengthens the mediation between the positions of the EDIH stakeholders in Nordic and Baltic countries, where Swedish hubs are active.

#### Take up of cloud/AI/data analytics



According to the latest available data (2023), 73.06% of enterprises in Sweden used AI technologies, sophisticated or intermediate cloud computing services, or performed data analytics, comfortably ahead of the EU average of 54.7%. The uptake among SMEs was, at 72.34%, slightly lower, while large enterprises exhibited a higher engagement rate of 94%. This indicates a difference in uptake of 21.66 percentage points between SMEs and large enterprises in Sweden, which is lower than the EU-level gap of 32.97. Adoption of cloud computing, data analytics, and the three technologies together wase not measured in 2024.

In April 2025, the Swedish Agency for Economic and Regional Growth presented a report on Al competence among SMEs in Sweden. The report concluded that Sweden's SMEs are fairly advanced compared to those of other countries; however, they are still very much in the process of exploring the technology. SMEs are also asking for policy measures to increase understanding of Al among its staff. Al needs to be a clear part of society at large – both for training and for work. Public authorities also play a role in supporting the private sector in taking up Al. The report concluded that there is a lack of long-term measures to support SMEs, that consultants are not yet able to meet the demand for Al services and that SMEs in general do not have the competences to take up Al. The report also made recommendations to address these points.

Sweden's adoption of cloud computing, data analytics, and artificial intelligence technologies exceeded EU averages, with the country demonstrating high uptake across all areas. Although large enterprises had higher adoption rates, particularly in AI and data analytics, SMEs showed strong engagement, particularly in cloud computing. The gap between SMEs and large enterprises, though narrower than the EU-wide disparity, was, though still notable, especially in data analytics. Nonetheless, with SMEs representing approximately 96% of enterprises with 10 or more employees, addressing this technological gap is crucial for fostering inclusive digital transformation and driving Sweden's continued economic growth.

**2024 recommendation on AI/cloud computing/data analytics**: (i) Maintain focus on encouraging the use of AI and big data analytics by enterprises in Sweden.

In 2024, Sweden made efforts to address the recommendations through new policy actions. Several studies have been prepared for the Government and for national authorities to analyse how to better use AI. Sweden has made good progress in the uptake of AI since last year.

#### • Cloud computing

The latest available data shows that, cloud uptake in Sweden was 66% in 2023, which is significantly higher than the EU average of 38.97%. More specifically, SMEs exhibited an uptake of 65.32%, while large enterprises had a higher adoption rate of 85.82%. This translates into a gap in uptake of 20.5 percentage points between SMEs and large enterprises in Sweden, which is lower than the EU–level gap of 31.68 percentage points.

#### • Data Analytics

**34.96%** of enterprises in Sweden used data analytics in 2023, slightly above the EU average of **33.25%**. More specifically, use of data analytics among SMEs stood at 33.44% (approximately 1 out of 3), while the percentage at 78.82%, was higher for large enterprises (approximately 4 out of 5). This indicates a gap of 45.38 percentage points between SMEs and large enterprises, which is higher than the EU gap of 39.72 percentage points.

#### • Artificial Intelligence

In 2024, 25.09% of enterprises in Sweden were using AI technology, well above the EU average of 13.48% and an impressive increase compared to 2023, when AI uptake was 10.37%. While among SMEs the uptake rate was 23.96%, over half (56.34%) of large enterprises reported using AI technology. This corresponds to a gap of 32.38 percentage points between SMEs and large enterprises, above the EU gap of 28.53 percentage points. Overall, the country is on track according to its national trajectory.

Sweden has taken a number of actions to promote the use of AI. 30 government authorities are actively implementing AI in their work. Sweden has also been active in the discussions on a Nordic AI centre. The purpose of the centre will be to promote the use of AI and funding for common AI projects in the Nordic countries. AI Sweden, which is Sweden's national centre for applied artificial intelligence, will propose possible funding mechanisms. The Nordic Council of Ministers will then decide on the funding.

#### Unicorns, scale-ups and start-ups

Sweden has always had a large number of unicorns relative the size of its economy. The number of unicorns in Sweden increased from 14 in 2019 to 39 in 2024, while in the EU it grew from 108 to 286 during the same period. Sweden has already reached its 2030 national target of 37 unicorns.

#### Strengthening Cybersecurity & Resilience

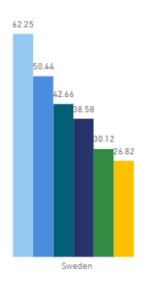
Cybersecurity is a priority for Sweden, as demonstrated by the creation of its National Cybersecurity Centre and the presentation of a new cyber security strategy in March 2025. Overall, the country performs above the EU averages for almost all indicators.

In Sweden, 77.42% of individuals reported taking at least one action to protect their personal data online, which was above the EU average of 69.55%. Significantly, about half of the population (49.45%) engaged in three or more actions (and could therefore be considered as having above-basic digital safety skills). The most common measure was restricting or refusing access to geographical location (62.25%), while checking whether websites where personal data was provided were secure was the least frequent (26.82%).

According to the Digital Decade Eurobarometer 2025, 83% of Swedes think that an improved cybersecurity, better protection of online data and safety of digital technologies would facilitate their daily use of digital technologies. This is a decrease of 10 percentage points compared to last year.

Type of activities to protect personal data online (% of individuals)

- Block or limit cookies
- Check website security where personal data is provided
- Limit access to social media profile or shared content
- Read privacy policy statements
- Refuse use of personal data for advertising
- Restricted/refused access to geographical location



The proportion of enterprises that reported ICT security incidents leading to unavailability of ICT services due to attack from outside (e.g. Ransomware attacks, Denial of Service attacks) remained almost the same between 2022 and 2024, (3.77% in 2022 and 3.70% in 2024). It remains above the EU average (3.43%). However, Swedish enterprises are less prone to incidents related to hardware or software failures (16.09%) than their EU counterparts (17.97%).

In terms of measures, 92.65% of enterprises (close to the EU average of 92.76%) deployed some ICT security measures, but only 67.10% of enterprises made their employees aware of their obligations in ICT security-related issues, which is above the EU average (59.97%).

On the deployment of secure internet standards, by Q3 2024 Sweden lags below the EU average in the roll-out of Internet Protocol version 6 (IPv6) for end users (26%, EU average: 36%), but is above the EU average on the services side (33%, against 17% for the EU). IPv6 is an important protocol as it ensures the scalability, stability, and security of the Internet. The deployment of this new version is increasingly urgent, as traditional IPv4 addresses have long been depleted. Domain Name System Security Extensions (DNSSEC) is also an important standard to be rolled out as it introduces security features to DNS. In Sweden, the DNSSEC validation rate is 88% (Q3 2024), clearly above the EU average of 47%.

In March 2025 Sweden presented its strategy on cyber security for the years 2025-2029, replacing the previous strategy dating from 2017. The strategy underlines the importance of strengthening systematic cybersecurity efforts among all organisations, enhancing knowledge and competence in cybersecurity (including through strengthening research and innovation and addressing skills shortages), and improving the ability to prevent and manage cybersecurity incidents in Sweden.

The Swedish Agency for Economic and Regional Growth conducted in 2022-2023 a pilot project to increase SMEs' awareness and capacity regarding cyber security. This included making funding available for SMEs to buy IT services to increase their cyber security. In September 2024, the Swedish Agency for Economic and Regional Growth published an evaluation of the pilot project and concluded that it had increased cyber security and therefore that funding should continue.

In 2024 the Swedish National Coordination Centre for Research and Innovation in Cybersecurity (NCC-SE) had a call for proposals aimed at small and medium-sized companies for projects that could help strengthen Sweden's capacity and infrastructure in cybersecurity and preparedness. The Swedish node

for accelerating innovation and research in cybersecurity ('the Cybernode') is growing and had over 300 members in February 2025.

## Protecting and empowering EU people and society

## Empowering people and bringing the digital transformation closer to their needs

In general, Sweden's population has a high level of basic ICT skills. In addition, it continues to achieve a high share of ICT graduates. Sweden is taking several measures to facilitate digital access to public services. However, little progress has been made on access to e-Health records and Sweden is therefore falling further behind the EU average.

According to the 2025 Eurobarometer, 95% of Swedes think that accessing public services online will be important for their daily life in 2030. Concerning human support to help access and use digital technologies and services, 85% consider it would improve their daily use of digital technologies, and 94% think public authorities should consider it important to ensure that people receive proper human support to help them adapt to the changes in their lives brought about by digital technologies and services.

#### Equipping people with digital skills Basic Digital Skills

In 2023, a high proportion – 66.44% – of Sweden's population had at least basic digital skills, above the EU average of 55.56%. Although no data is available for 2024, an analysis of the figures across various demographics yields useful insights.

- Gender Gap: The gender gap in Sweden is narrow and in favour of women, with 65.76% of
  males and 67.15% of females equipped with at least basic digital skills. This equates to a 1.39
  percentage-point (pp) advantage in favour of women, compared with the EU average of
  2.23pp in favour of men.
- Education Level: The level of formal education has a positive correlation with digital skills; 82.38% of those with high formal education have at least basic digital skills, slightly above the EU average of 79.83%. At the lower end, only 48.88% of those with no or low formal education possess such skills, which creates a national gap of 17.56pp, lower than the EU's gap of 21.95pp.
- Living Areas: Urban residents in Sweden exhibit the highest levels of at least basic digital skills at 71.77%, which is significantly above the EU urban average of 62.55%. Rural areas show a score of 52.93%, above the EU average (47.50%). However, the disparity between the national average and rural areas stands at 13.51pp, which is more than the EU average gap of 8.06pp.
- Age Groups: In Sweden, 25 to 34-years olds are the most digitally skilled age group, with a
  proficiency level of 78.01%, which is above the EU average of 70.18% for the same age group.
  Remarkably, the youngest from the 16-24-year-old category have lower digital skills (67.57%)

- than the 25-34, 35-44, and even 45–54-year-old categories. Meanwhile, the 65 to 74 age group shows a proficiency rate of 36.77%, which is higher than the EU average of 28.19%.
- **Digital Skills Index components:** Sweden stands above the EU average in all five domains of the Digital Skills Index. Significantly, the score for problem-solving skills is high, at 96.24%, well above the EU average of 82.53%. The area with the lowest score is safety skills, at 77.42%, although it is still well above the EU average of 69.55%.

In conclusion, Sweden stands out for its overall digital proficiency, particularly in problem-solving skills and among its middle-aged population. However, the gap in digital skills based on education levels indicates areas for potential improvement, especially among those with lower levels of formal education. The digital proficiency of the youngest may also be worth monitoring.

**2024 recommendation on basic digital skills:** Continue efforts to ensure that the population can improve basic skills, in particular, in rural areas.

In 2024, Sweden made progress in addressing the recommendation. The country has improved on this indicator. It has several ongoing measures to improve further, such as *Digitalidag*, a joint initiative guided by the public and private sectors and civil society, which remains an important platform for raising the level of basic digital skills.

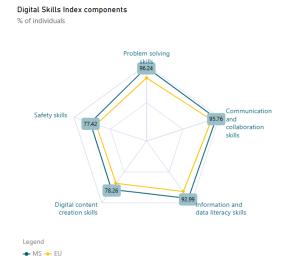
#### ICT specialists

Sweden's performs above the EU average as regards ICT training provision and ICT specialists; however, the EU average is catching up. The country is lagging behind its national trajectory on ICT specialists.

In Sweden 8.6% of ICT specialists are in total employment. Although this figure decreased by-1.1% in 2024, it is still above the EU's 5.0%. However, the growth rate for ICT specialists in Sweden was significantly lower than the EU's 4.2%. This suggests that, while Sweden has a higher proportion of ICT specialists, its growth in this sector is lagging behind the EU.

**Sweden performed very well as female ICT specialists are concerned.** In 2023, 22.8% of ICT specialists in Sweden were women, higher than the EU's 19.4%. By 2024, this figure had increased to 24.0%, compared to the EU's 19.5%. The growth rate for female ICT specialists in Sweden was 5.3%, significantly higher than the EU's 0.5%. This indicates a strong trend towards increasing the representation of women in the ICT sector.

In 2022, 34.23% of Swedish enterprises with 10 or more employees provided ICT training, significantly higher than the EU's 22.37%. Although this figure had decreased to 30.83% by 2024, it was still above the EU's 22.29%. The annual growth rate for enterprises providing ICT training in Sweden was – 5.1%, which is lower than the EU's – 0.2%. This indicates that, while Sweden has a higher proportion of enterprises offering ICT training, the rate of decline in this area is more pronounced than in the EU.



**Demand from the labour market for ICT specialists continues to increase.** Eurostat experimental statistics based on web scraping show that in Sweden, the profiles of 'software and applications developers and analysts' are the most sought after, representing 60.5% of online job advertisements for ICT specialists (58.0% at EU level). The demand for 'Information and communications technology operations and user support technicians' is also above the EU average of 10.4%.

**2024 recommendation on ICT specialists:** (i) finalise the discussions on a national strategy focussing on science, technology, engineering and mathematics (STEM); (ii) take action to ensure that more ICT specialists are women.

In 2024, Sweden made progress in addressing the recommendation. The country has improved on this indicator. In February 2025 Sweden presented a national strategy focussing on science, technology, engineering and mathematics (STEM). The strategy sets several long-term targets for the share of science students in secondary school and the number of STEM students.

#### Key digital public services and solutions – trusted, user-friendly, and accessible to all

Sweden's digital public services for citizens and businesses, except access to e-Health records, perform strongly compared to the EU average. However, while Sweden generally maintains a strong lead in terms of absolute scores, the country's growth rates in these areas lag behind the EU. The share of people using government internet websites or apps in Sweden remained almost unchanged from 2023 (96.44%) to 2024 (96.18%). It was still well above the EU average of 74.71% in 2024.

For digital public services for citizens, Sweden scored 85.94% (2030 national target of 90%) after a decline of – 7.9%, it was still above the EU's 82.32%. In 2023, Sweden's total score was 93.28%, significantly higher than the EU's 79.44. The growth rate for total digital public services for citizens in Sweden was -7.9%, which is lower than the EU's 3.6%. For cross-border digital public services for citizens, Sweden's score was 91.29% in 2023 and 78.68% in 2024, compared to the EU's 68.37% and 71.28%, respectively. Sweden's growth rate of –13.8% in this category is also lower than the EU's 4.3%.

For digital public services for businesses, Sweden scored at 90.43% (2030 national target of 90.5%) in 2024 after a decline of -5.8%, still above the EU average of 86.23%. The growth rate for total digital public services for businesses in Sweden was -5.8%, which is lower than the EU's 0.9%. For cross-border digital public services for businesses, Sweden's score was 94.44% in 2023 and 83.12% in 2024, compared to the EU's 73.13% and 73.76%, respectively. Sweden's growth rate of -12.0% in this category is also lower than the EU's 0.9%.

In terms of access to e-Health records, Sweden's total score was 77.94% (2030 national target of 78.5%) in both 2023 and 2024, which is lower than the EU's 79.12% and 82.7%, respectively. Sweden's growth rate in this category was 0%, while the EU's growth was 4.5%.

#### e-ID

**Sweden is one of the highest users of e–IDs in the EU.** In 2023, 92.86% of Swedish people have used their e-ID to access online services for private purpose in the last 12 months, which is well above the EU average (41.11%).

**2024 recommendation on e-ID:** Continue efforts to ensure that everyone has access to an e-ID.

In 2024, Sweden made progress in addressing the recommendation. Sweden continues to implement measures to increase the accessibility of e-ID schemes to ensure that all groups have access to an e-ID. One of these measures is the development of a government e-ID.

#### Digitalisation of public services for citizens and businesses

The country is on track according to its national trajectories. Digg (the Agency for Digital Government) presented a report to the government in February 2025 on the way forward to further digitalise public services. The report outlines how to develop the infrastructure called Ena to allow public services to share data and to provide better digital solutions for users. The government is currently assessing the proposals made in the report. The development of a government e-ID should also support measures strengthening access to digital public services.

#### e-Health

Sweden is on track according to its national trajectory; however, it continues to fall behind the EU average in online access to electronic health journals and is at risk of not meeting the EU target of 100% by 2030. Sweden indicated in its roadmap that, on the basis of current trends, it will not meet the target for everyone to be able to access their health records online by 2030.

Regions and municipalities are the primary healthcare providers in Sweden; however, their digital tools are not always interoperable. In December 2024 the government therefore asked Digg and the Swedish eHealth Agency to develop within Ena a coherent infrastructure for access rights and data exchange. Digg and the Swedish eHealth Agency will report back no later than December 2025.

**2024 recommendation on e-Health.** Increase efforts to ensure that everyone can access their health records online by 2030, in line with the requirements under the upcoming European Health Data Space Regulation. In particular (i) make the data type of medical devices/implants, available to citizens in all regions through online access services; (ii) ensure that all data types are made available in a timely manner; and (iii) implement technical functionality with the necessary legal basis for legal guardians and authorised persons to access electronic health data on behalf of others.

In 2024, Sweden made limited progress in addressing the recommendations. Sweden started work to improve this — such as Ena — to allow public services to share data and to provide better digital solutions for users. However, these measures have not yet been fully implemented.

## Building a safe and human centric digital environment and preserving our democracy

In 2024, 12.71 % of people used the internet to participate in consultation, for voting or sharing opinions online. This share is below the EU average and is decreasing (15.56 % in 2022), in contrast to the trend observed at EU level (17.59% in 2022 and 20.45% in 2024).

Individuals encountering hostile and degrading online messages. In 2023, in Sweden, 45.47% of individuals encountered online messages that were considered to be hostile or degrading towards groups on the basis of factors such as political views or religion; this was well above the EU average of 33.5%. Young people (16–24) (57.2%) reported considerably higher exposure than adults (25–64) (47.5%), reflecting a significant age-related gap. Males (45.75%) and females (45.18%) reported nearly identical rates, showing balanced exposure across genders.

Individuals evaluating data, information and digital content. In 2023, 64.65% of individuals in Sweden declared having encountered untrue or doubtful information or content on internet news sites or social media, substantially higher than the EU average of 49.25%. Of those who came across such material, 38.11% checked its truthfulness, demonstrating that a significant proportion of individuals actively verified the accuracy of the content they encountered. Young people (16–24) (74.41%) reported more exposure than adults (25–64) (68.49%), with verification rates being significantly higher among young people (52.19%) than adults (39.66%). Males (66.19%) and females (63.06%) reported similar exposure levels, while verification rates were considerably higher among males (41.74%) than females (34.35%).

According to the Digital Decade Eurobarometer 2025, 95% of Swedes think public authorities should take urgent action to protect children online regarding the negative impact of social media on children's mental health. 96% of Swedes consider it urgent for public authorities to take action to protect children online regarding cyberbullying and online harassment. 90% of Swedes think it is urgent to put in place age assurance mechanisms to restrict age-inappropriate content.

The 2023 data on online interactions in Sweden reveals a concerning picture, with a high proportion of individuals encountering perceived hostile and degrading online messages and potentially misleading information online. However, the data also reveals a promising trend, with many Swedes, particularly the younger generations, actively engaging in fact-checking and verification of online content. To further increase this capacity, sustained efforts are needed to foster a culture of critical thinking and media literacy, empowering individuals to navigate the online landscape in a safe and informed manner.

The 2025 Eurobarometer shows that 92% of Swedes think that public authorities should prioritise shaping the development of Artificial Intelligence and other digital technologies to ensure that they respect our rights and values. It is above the EU average (83%) that has also increased, reflecting the growing interest of the citizens at this respect.

## Leveraging digital transformation for smart greening

Sweden's Recovery and Resilience Plan (RRP) is focused on the green transition, with specific reforms and investments primarily targeting carbon-intensive sectors. The RRP supports local and regional investments to reduce climate emissions, the transition of industry, energy efficiency in multi-dwelling housing, rail transport and biodiversity.

7.47 % of Swedes consider eco-design important when purchasing a device. This is below the EU average of 12.04 %.

According to the Digital Decade Eurobarometer 2025, 76% of Swedes consider digital technologies important to help fight climate change (standing slightly above the EU average of 74% and showing an increment of four percentage points since last year), while 90% of the Swedes think that ensuring that digital technologies serve the green transition should be an important action for public authorities (above the EU average of 80%).

**2024 recommendations on smart greening:** Develop a coherent approach to twinning the digital and green transitions. First, promote improvements in the energy and material efficiency of digital infrastructures, in particular data centres. Second, support the development and deployment of digital solutions that reduce the carbon footprint in other sectors, such as energy, transport, buildings, and agriculture, including the uptake of such solutions by SMEs.

Monitor and quantify the emission reductions of the digital solutions deployed, following the relevant EU guidance and with the support of the methodology developed by the European Green Digital Coalition, with a view to developing future policy and attracting relevant financing.

In 2024, Sweden made limited progress in addressing the recommendations. Sweden has yet to start this work.

### **Annex I – National roadmap analysis**

#### Sweden's national Digital Decade strategic roadmap

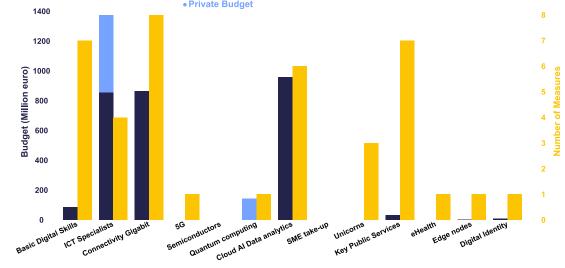
Sweden did not submit an adjustment to its national Digital Decade roadmap. An adjusted roadmap is expected later in 2025.

The initial roadmap is composed of 40 measures with a budget of EUR 3.5 billion, comprising EUR 2.8 billion from public budgets (equivalent to 0.5% of GDP).

The measures include EUR 288 million for extending VHCN 2025-2030, EUR 142.53 million to the Wallenberg Centre for Quantum Technology, EUR 40 million per year until 2029 for Strategic Innovation Programmes to support research and innovation on sustainable solutions.

Measures and budget in national roadmap<sup>6</sup>

## Private Budget



In 2024, the Commission recommended that Sweden add to the national roadmap the missing targets for edge nodes and, where there are several trajectories for one target, select the most likely trajectory.

<sup>&</sup>lt;sup>6</sup> When referring to national roadmaps, the data used in this report are those declared by the Member States in their national roadmaps, on the basis of the Commission's guidance (C(2023) 4025 final). Data might reflect possible variations in reporting practices and methodological choices between Member States. No systematic assessment of the extent to which Member States followed the guidance was carried out.

## Annex II – Factsheet on multi-country projects (MCPs) and funding

#### Multi-country projects and best practices

Sweden is a participating state of the EuroHPC Joint Undertaking (JU) and of the Chips JU.

Sweden is not yet active in the Digital Decade's Best Practice Accelerator<sup>7</sup>.

#### **EU** funding for digital policies in Sweden

Sweden allocates 21% of its total **R**ecovery and **R**esilience **P**lan to digital (EUR 674 million)<sup>8</sup>. In addition, under cohesion policy, EUR 230 million (representing 13% of the country's total cohesion policy funding), is dedicated to advancing Sweden's digital transformation<sup>9</sup>. According to JRC estimates, EUR 858 million directly contribute to achieving Digital Decade targets (of which EUR 650 million comes from the **RRF** and EUR 208 million from cohesion policy funding)<sup>10</sup>. Most of this funding is for the deployment of VHCN in sparsely populated parts of Sweden, with the country reporting having a target of 66 100 buildings in rural areas in the **RRP**. Moreover, a significant part of the EU funding is dedicated to raising basic digital skills and increasing the number of ICT graduates.

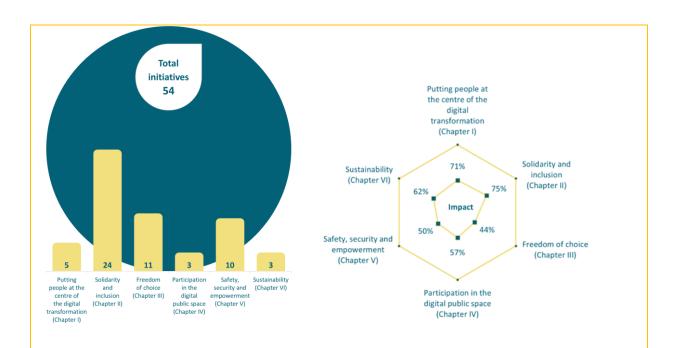
<sup>&</sup>lt;sup>7</sup> The Best Practice Accelerator (BPA) is a platform that enables Member States to share successful measures and challenges encountered in their efforts to meet their Digital Decade targets and objectives. Best practices are made available to Member States via the BPA Repository and showcased in regular workshops, currently focused on three thematic clusters: Digital Skills, Green IT, and the Uptake of Digital Technologies.

<sup>&</sup>lt;sup>8</sup> The share of financial allocations that contribute to digital objectives has been calculated using Annex VII to the Recovery and Resilience Facility Regulation. Last data update: 16 May 2025.

<sup>&</sup>lt;sup>9</sup> This amount includes all investment specifically aimed at or substantially contributing to digital transformation in the 2021-2027 Cohesion policy programming period. The source funds are the European Regional Development Fund, the Cohesion Fund, the European Social Fund Plus, and the Just Transition Fund.

<sup>&</sup>lt;sup>10</sup> Joint Research Centre, Nepelski, D. and Torrecillas, J. Mapping EU level funding instruments 2021-2027 to Digital Decade targets – 2025 update, Publications Office of the European Union, Luxembourg, 2025, JRC141966. Last data update: 10 March 2025.

## **Annex III – Digital Rights and Principles**<sup>11</sup>



#### **Activity on Digital Rights and Principles (figure 1)**

Sweden has been relative active in implementing digital rights and principles, with 54 initiatives overall and 15 new initiatives launched in 2024, showing significant progress towards its commitments. Sweden is most active in the areas of Digital education, training and skills (II) and Interactions with algorithms and artificial intelligence systems (III). There is room for improvement, especially with regards to Fair and just working conditions (II) where less activity has been identified.

#### **Impact of Digital Rights Initiatives** (figure 2)

Quantitative impact indicators, developed by the support study, illustrate the level of implementation of digital rights initiatives on the ground. Based on available data, they estimate the impact of measures implemented by key stakeholders in Sweden (mainly national government) and how these are perceived by citizens.

The indicators suggest that **Sweden is most successful in implementing commitments related to Solidarity and inclusion (II)**. Sweden should review and strengthen efforts in areas where the impact of digital rights initiatives appears to be limited despite relative activity, notably on Freedom of choice (III).

According to the Special Eurobarometer 'Digital Decade 2025', 48% of citizens in Sweden think that the EU protects their digital rights well (a 2% decrease since 2024). This is above the EU average of 44%. Citizens are particularly confident about getting freedom of assembly and of association in the

<sup>&</sup>lt;sup>11</sup> Based on a study to support the Monitoring of the Implementation of the Declaration on Digital Rights and Principles, available <a href="here">here</a>. For a more detailed country factsheet accompanying the study, click <a href="here">here</a>.

digital environment (78%, above the EU average of 59%). They are most worried that their right to a safe digital environment and content for children and young people is not well protected (63%, above the EU average of 48%).