



# WESTERN BALKANS DIGITAL ECONOMY AND SOCIETY INDEX

# 2025

REPORT

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# Table of Contents

INTRODUCTION	6
EXECUTIVE SUMMARY	7
WB DESI 2025 RESULTS	10
Digital Skills Dimension	10
Digital Infrastructure Dimension	12
Digital Transformation of Businesses Dimension	15
Digitalisation of Public Services Dimension	17
WB DESI PROFILES	20
ALBANIA	20
BOSNIA AND HERZEGOVINA	25
KOSOVO*	30
MONTENEGRO	34
NORTH MACEDONIA	38
SERBIA	43
CONCLUSION	48

\* This designation is without prejudice to positions on status and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence

# List of Figures

Figure 1. Digital skills	10
Figure 2. Internet user skills	11
Figure 3. Advanced skills and development	11
Figure 4. Digital infrastructure	12
Figure 5. Fixed broadband	13
Figure 6. Mobile broadband	14
Figure 7. Edge Nodes	14
Figure 8. Digital transformation of businesses	15
Figure 9. Digital intensity	16
Figure 10. Adoption of advanced digital technologies by businesses	16
Figure 11. E-commerce	17
Figure 12. Digitalisation of public services	18
Figure 13. E-Government	18
Figure 14. E-Health	19





# List of Tables

Table 1 Digital skills indicators, Albania	20
Table 2 Digital infrastructure indicators, Albania	21
Table 3 Digital transformation of businesses indicators, Albania	22
Table 4 Digitalisation of public services indicators, Albania	23
Table 5 Digital skills indicators, Bosnia and Herzegovina	26
Table 6 Digital infrastructure indicators, Bosnia and Herzegovina	26
Table 7 Digital transformation of businesses, Bosnia and Herzegovina	27
Table 8 Digitalisation of public services indicators, Bosnia and Herzegovina	28
Table 9 Digital skills indicators, Kosovo*	30
Table 10 Digital infrastructure indicators, Kosovo*	31
Table 11 Digital transformation of businesses indicators, Kosovo*	32
Table 12 Digitalisation of public services indicators, Kosovo*	33
Table 13 Digital skills indicators, Montenegro	34
Table 14 Digital infrastructure indicators, Montenegro	35
Table 15 Digital transformation of businesses indicators, Montenegro	36
Table 16 Digitalisation of public services indicators, Montenegro	37
Table 17 Digital skills indicators, North Macedonia	38
Table 18 Digital infrastructure indicators, North Macedonia	39
Table 19 Digital transformation of businesses indicators, North Macedonia	40
Table 20 Digitalisation of public services indicators, North Macedonia	41
Table 21 Digital skills indicators, Serbia	43
Table 22 Digital infrastructure indicators, Serbia	44
Table 23 Digital transformation of businesses indicators, Serbia	45
Table 24 Digitalisation of public services indicators, Serbia	46

# INTRODUCTION

The Western Balkans Six (WB6) are continuing their gradual advance in digital development, alongside wider economic reform and European Union (EU) integration efforts. As digitalisation becomes increasingly central to competitiveness, productivity, and public sector performance, tracking how they are translating strategy into practice is more important than ever.

The Western Balkans Digital Economy and Society Index (DESI) 2025 Report provides an updated snapshot of digital progress across the region, focusing on developments observed during 2024. Rather than revisiting established policy frameworks, the report looks at how digitalisation is evolving in practice, where momentum is building, and where structural constraints continue to slow convergence with the EU. Compared with earlier editions, the emphasis shifts from baseline assessment to implementation dynamics and outcomes. The report reflects gradual improvements in data availability and comparability, while acknowledging that data gaps remain in several areas.

The Report is prepared in a context marked by the start of implementation of reform agendas under the EU Growth Plan for the Western Balkans and the Common Regional Market (CRM) Action Plan 2025–2028. These initiatives place digital transformation at the heart of regional integration, investment, and EU convergence, raising expectations for measurable progress in digital skills, digital infrastructure, business adoption of digital technologies, and digital public services.

Following the DESI analytical framework, the report assesses progress across four core dimensions. It examines the development of digital competences among citizens and employees, including the availability of information and communication technology (ICT) expertise needed to support digital transformation. It analyses the state of digital infrastructure, with particular attention to the deployment and uptake of high-capacity fixed and mobile networks. The assessment also considers how far businesses are integrating digital technologies into their operations, including the use of data-driven processes and e-commerce. Finally, the report reviews the digitalisation of public services, focusing on their availability, quality, and effective use by citizens and enterprises.

Overall, the Western Balkans DESI 2025 Report serves as a practical monitoring and policy support tool. It enables policymakers to track progress, identify priority areas for intervention, and support the implementation of the EU Growth Plan and the CRM agenda, while highlighting where further reforms, investment, and capacity building are needed to accelerate digital convergence with the EU.

# EXECUTIVE SUMMARY

The Western Balkans DESI 2025 Report evaluates the state of digital development in the WB6 over the 2023–2024 period, primarily using data from 2024. The assessment follows the EU DESI 2025 methodology, ensuring consistency and comparability with EU benchmarks. Data sources include Eurostat, domestic statistical offices, electronic communications regulators, broadband competence offices, and relevant ministries, complemented where necessary by targeted market and desk research.

Overall, the WB6 continued to make progress in digitalisation in 2024. However, advances remain incremental rather than transformative. Persistent gaps in digital skills, deployment and take-up of high-capacity infrastructure, adoption of advanced digital technologies, and digitalisation of public services continue to limit the region's ability to fully utilise digitalisation as a driver of productivity, competitiveness, and convergence with the EU.

Looking ahead, stronger institutional use of DESI as a policy and monitoring tool, together with further improvements in data availability and quality, will be essential to accelerating progress. Translating strategic objectives into sustained implementation, particularly in skills development, demand stimulation, digital transformation of businesses, and digitalisation of public services, will play a key role in determining how quickly the WB6 can narrow remaining digital gaps and integrate more fully into the European digital economy.

The WB DESI 2025 results are presented across four core dimensions: Digital Skills, Digital Infrastructure, Digital Transformation of Businesses, and Digitalisation of Public Services.

## Digital skills

Digital skills remain one of the most significant structural bottlenecks for digital transformation in the WB6. Although internet use is widespread, with 88% individuals using the internet in 2024, this has not translated into strong digital competence. In 2023, only 33% of the population possessed at least basic digital skills, compared with 56% in the EU, highlighting a substantial gap between connectivity and effective digital participation. Shortages are even more pronounced at the level of advanced digital skills. The share of individuals with above-basic digital skills stood at 9%, far below the EU average of 27%, limiting the ability of the workforce to support more advanced digitalisation across the region.

ICT specialists accounted for only 3% of total employment in the WB6 in 2024, compared with 5% in the EU, pointing to a limited pool of advanced digital professionals. With 22% of enterprises providing ICT training in 2024, broadly in line with the EU average, businesses are increasingly recognising digital skills gaps and taking steps to strengthen the capabilities of their workforce through in-house upskilling.

## Digital Infrastructure

The WB6 has continued to consolidate progress in basic connectivity. In 2024, 91% of households had internet access, approaching the EU average of 94%. This confirms that baseline connectivity is largely in place across the region. However, progress in very high-capacity fixed infrastructure has been more limited, and convergence with EU benchmarks remains gradual.

Take-up of high-speed fixed broadband has increased, with 46% of fixed broadband subscriptions reaching at least 100 Mbps in 2024, yet this remains well below the EU average of 72%. Adoption of gigabit-capable services is still very low, and only 1% of fixed broadband subscriptions in the WB6 were at gigabit speeds,

compared with 22% in the EU. This reflects a combination of factors beyond network availability alone, including affordability considerations, limited differentiation of gigabit retail offers, and lower levels of digital skills, which reduce the perceived benefits of ultra-high-speed connections.

On the supply side, expansion of the high-capacity fixed networks has slowed. Very High Capacity Network (VHCN) coverage stood at 66% of households in 2024, while Fibre to the Premises (FTTP) coverage remained stable at 57%, both figures being substantially below EU levels. This indicates greater utilisation of existing infrastructure rather than large-scale expansion of very high capacity networks.

Mobile connectivity in the WB6 is well-established with very high coverage and widespread use of 4G networks, supporting high levels of mobile internet use. However, the transition to next-generation mobile networks remains slow. By 2025, only 37% of the spectrum designated for 5G pioneer bands had been assigned in the region, compared with 75% in the EU, reflecting continued delays in spectrum allocation. As of 2024, 5G coverage reached only 21% of populated areas, compared with 94% in the EU. Although spectrum assignment in the 5G pioneer bands has progressed across most WB6, allocations remain incomplete, contributing to low adoption of 5G-capable SIMs, at just 4%, compared with 36% in the EU. As a result, the availability and uptake of advanced 5G-enabled services remain constrained despite strong underlying mobile connectivity.

Edge computing infrastructure remains at an early stage in the WB6, with 23 edge nodes reported in 2025 based on data collected from electronic communications operators, compared with 2,257 in the EU in 2024. As the data primarily covers operators in the electronic communications sector, the figure likely represents a conservative estimate of total deployment in the region.

## Digital transformation of businesses

Digital adoption among businesses in the WB6 continues to advance, but progress remains uneven across technologies and firm sizes. In 2024, 59% of SMEs had at least a basic level of digital intensity, compared with 73% in the EU, indicating that while digital tools are increasingly present, they are not yet systematically embedded in core business processes.

In 2023, internal digital integration through Enterprise Resource Planning (ERP) software was reported by 25% of enterprises in the WB6, well below the EU average of 42%. Cloud computing stood at 23%, still behind the EU average of 38%. Data analytics adoption was 29%, nearly closing the gap with the EU. Adoption of artificial intelligence is emerging with 6% of WB6 enterprises using artificial intelligence in 2024, compared with 13% in the EU.

E-commerce continues to represent an area of strength across WB6. In 2024, 24% of SMEs in the WB6 engaged in online sales, slightly above the EU average of 20%. However, the share of turnover generated through online channels remained modest with 8%, compared with 12% in the EU in 2024. This suggests that, for many firms, e-commerce functions primarily as a complementary sales channel rather than a central component of business strategy.

## Digitalisation of public services

Across the WB6, the scope of digital public services has continued to broaden, supported by the rollout of their service portals and incremental improvements in legal frameworks governing electronic identification and trust services. However, these advances have not yet translated into performance levels comparable to those observed in the EU, and significant disparities persist across most indicators of digital public service delivery.

Engagement with online public services remains modest. In 2024, just over half of internet users in the WB6 (54%) used digital channels to interact with public authorities, compared with 75% in the EU. The availability and completeness of digital services for citizens remains particularly limited, with the WB6 achieving an aver-

age score of 53 points, far below the EU average of 82. Digital public services for businesses perform somewhat better, where the WB6 reached an average score of 65, though this still falls behind of the EU benchmark of 86.

Progress is more visible in administrative efficiency, with almost two-thirds of online public administration forms in the WB6 benefiting from pre-filled data, resulting in a score of 65, which is slightly below the EU average of 71. Transparency in service delivery, user involvement, and personal data management continues to lag, with the WB6 recording an average score of 37, compared with 69 in the EU.

User support remains a significant weakness. Online assistance mechanisms, including help sections and chatbots, achieved an average score of 55 in the WB6, far below the EU average of 89. By contrast, mobile accessibility represents a relative strength, with mobile-friendly public service websites in the WB6 achieving an average score of 91, close to the EU benchmark of 96 and reflecting progress in adapting public services to mobile usage patterns.

Access to electronic health records remains particularly limited. In 2025, the WB6 scored 51 on citizens' access to e-health records, significantly below the EU average of 83 for 2024, indicating persistent barriers to the secure and effective use of digital health services.

In summary, while the range of digital public services in the WB6 has expanded, progress remains uneven and largely incremental. Addressing persistent gaps will require a stronger focus on user-centric design, improved support and transparency, and more consistent delivery of high-quality digital services.

# WB DESI 2025 RESULTS

The methodology used to calculate the Western Balkans DESI 2025 indicators follows the EU DESI 2025 framework, ensuring comparability between the digital performance of the WB6 and the EU for the same reference period.

DESI is regularly updated to reflect evolving EU digital policy priorities and technological developments. In its current form, DESI serves as the monitoring framework for the Digital Decade Policy Programme, supporting the assessment of progress towards the EU's 2030 digital targets as reported under the State of the Digital Decade.

The DESI 2025 framework is structured as a dashboard of indicators fully aligned with the Digital Decade objectives. It incorporates all key performance indicators (KPIs) defined in the relevant Commission Implementing Decision for which economy-level data are available or can be reliably estimated.

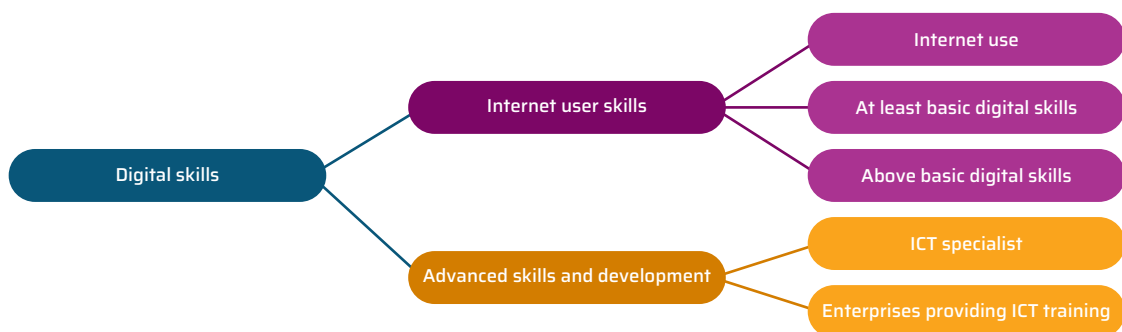
The DESI 2025 dashboard comprises 32 indicators, including 15 core Digital Decade KPIs. To ensure a clear link between indicators and policy objectives, indicators are organised into four dimensions, each subdivided into relevant sub-dimensions that combine KPIs with supporting indicators.

In line with this structure, the Western Balkans DESI 2025 indicators are presented across the four DESI dimensions and their corresponding sub-dimensions, providing a coherent and policy-relevant overview of digital progress in the region.

## Digital Skills Dimension

It measures the skills among the general population needed to take advantage of the possibilities offered by the digital society. Such skills range from basic user skills that enable individuals to communicate online and consume digital goods and services, to advanced skills that empower the workforce to take advantage of technology to increase productivity and economic growth. Also, it measures the number of ICT specialists. The Digital Skills dimension is divided into 2 sub-dimensions, which are further divided into five indicators, as shown in Figure 1.

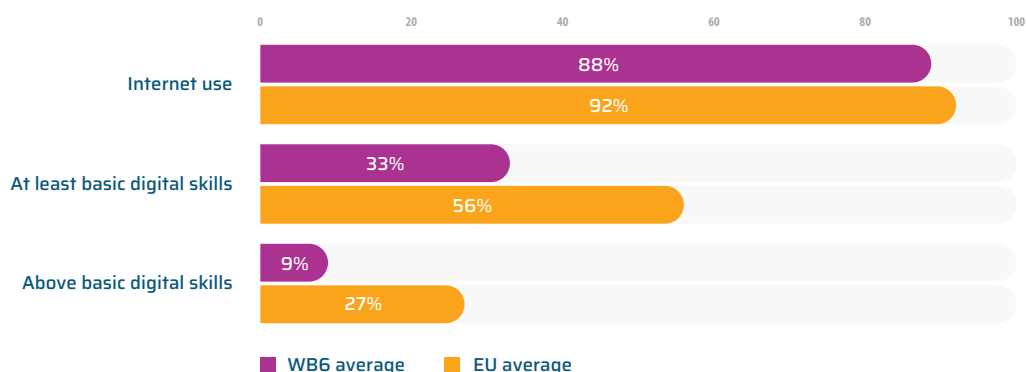
Figure 1. Digital skills



## Internet user skills

Internet user skills indicators cover five key areas of digital competence: information and data literacy, communication and collaboration, digital content creation, safety, and problem-solving. To be considered as having at least basic digital skills overall, a person must be able to perform at least one activity in each of these areas.

**Figure 2.** Internet user skills



**Source:** For the WB6 average: Eurostat, WB DESI 2025 Questionnaire, Market research 2025

For the EU average: EU DESI 2025 visualisation tool

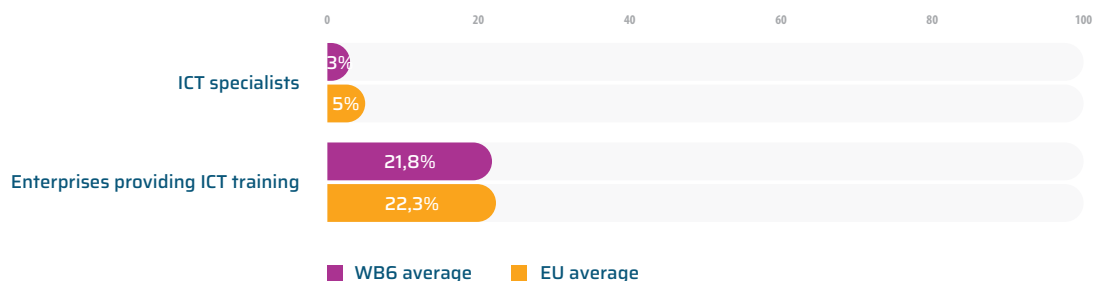
In 2024, 88% of people in the WB6 had used the internet in the past 12 months, yet only 33% possessed at least basic digital skills, well below the EU average of 56%.

The above basic digital skills indicator measures proficiency across five key areas: information and data literacy, communication and collaboration, digital content creation, safety, and problem-solving. These advanced skills are crucial for accessing quality employment, remaining competitive in the labour market, and enabling businesses to adopt sophisticated digital solutions. In 2023, only 9% of individuals in the WB6 demonstrated above basic digital skills, compared with the EU average of 27%.

## Advanced skills and development

This sub-dimension assesses the availability of advanced digital skills in the workforce, focusing on the share of ICT specialists and the extent to which enterprises provide ICT training to their employees.

**Figure 3.** Advanced skills and development



**Source:** For the WB6 average: Eurostat, WB DESI 2025 Questionnaire, Market research 2025

For the EU average: EU DESI 2025 visualisation tool

A structural shortage of ICT specialists, already observed across the EU labour market, is also evident in WB6. In 2024, ICT specialists accounted for 3% of total employment in the WB6, compared with 5% in the EU, indicating a persistent gap in advanced digital competences essential for innovation and digital transformation.

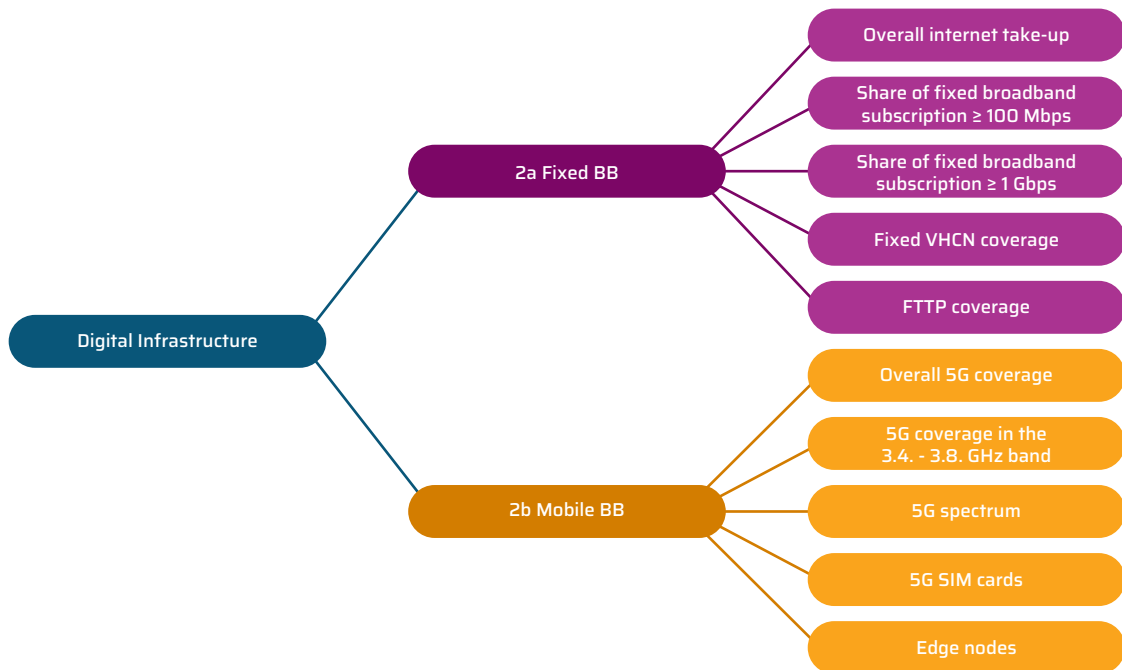
At the same time, 22% of enterprises in WB6 provided ICT training to their employees in 2024, a level broadly in line with the EU average. This suggests that businesses increasingly recognise the importance of upskilling their workforce. ICT training is particularly relevant for non-ICT specialists, as it supports the broader diffusion of digital skills and enhances the effective use of digital technologies in business processes.

Overall, despite widespread internet access across WB6, shortages in digital skills and ICT specialisation continue to constrain the region's capacity to accelerate digital transformation and narrow the gap with the EU.

## Digital Infrastructure Dimension

This dimension encompasses both the supply and demand aspects of fixed and mobile broadband, capturing not only network coverage but also actual usage. The digital infrastructure dimension is structured into two sub-dimensions, each addressing a specific aspect of broadband, and further broken down into ten indicators, as illustrated in Figure 4.

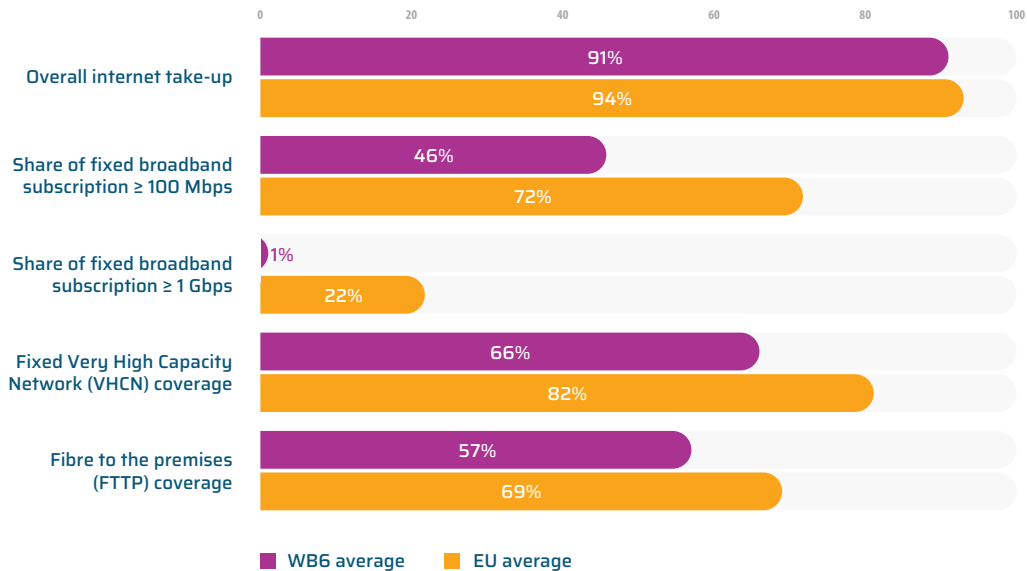
Figure 4. Digital infrastructure



## Fixed broadband

The Fixed Broadband sub-dimension assesses both the coverage and quality of fixed broadband infrastructure. It considers the deployment of technologies such as VDSL, cable DOCSIS 3.1, and fibre, as well as household adoption of high-speed and gigabit-capable connections.

**Figure 5.** Fixed broadband



**Source:** For the WB6 average: WB DESI 2025 Questionnaire, Desk research 2025  
For the EU average: EU DESI 2025 visualisation tool

In 2024, 91% of households in the WB6 had internet access, up from 88% in 2023, indicating continued progress in basic connectivity. Nevertheless, this level remains slightly below the EU average of 94%, indicating that convergence with the EU level is ongoing, but not yet complete.

The WB6 also recorded progress in the deployment and uptake of fixed broadband infrastructure and services. By the end of 2024, 46% of households with fixed broadband subscriptions in the region opted for download speeds of at least 100 Mbps, a level that remains significantly below the EU average of 72%, indicating a persistent gap in the adoption of higher-capacity services.

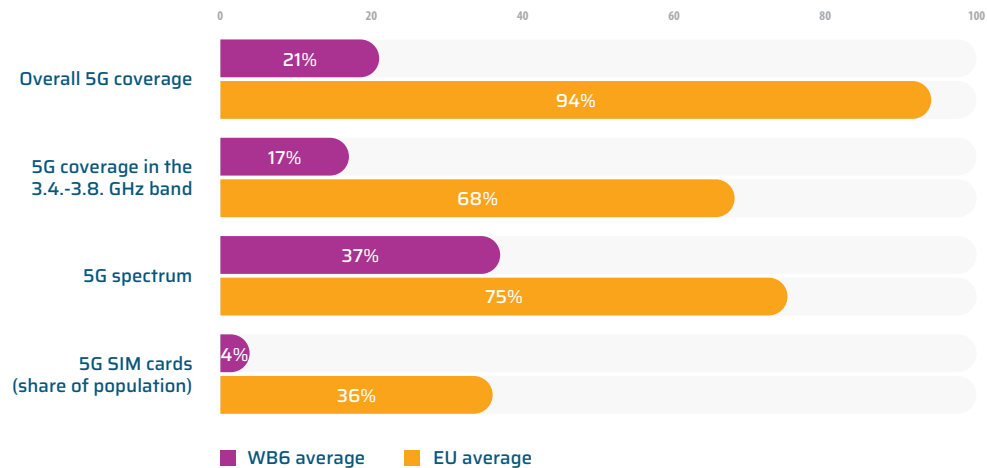
Adoption of gigabit-capable broadband remains particularly limited in the WB6. In 2024, only 1% of households subscribing to fixed broadband subscriptions opted for gigabit speeds, compared with 22% in the EU. This very low uptake reflects a combination of structural and demand-side factors, including constrained availability in some areas, affordability considerations, limited differentiation of gigabit offers in retail markets, and relatively low levels of digital skills among households and small businesses. Together, these factors indicate that weak take-up is not solely a supply-side issue, but is closely linked to broader challenges related to demand, skills, and the effective use of high-capacity connectivity.

With regard to infrastructure deployment, coverage of Fixed Very High Capacity Networks (VHCN) remained stable at 66% of households in 2024, significantly below the EU average of 82%. Similarly, FTTP coverage remained unchanged at 57% of households, compared with 69% in the EU, confirming the absence of substantial progress in expanding the high-capacity fixed networks during the period.

## Mobile broadband

The mobile broadband sub-dimension measures the coverage, performance, and adoption of mobile networks, with a particular focus on 5G, including coverage, spectrum availability, adoption of 5G-capable SIMs, and the deployment of edge computing nodes to assess service accessibility and quality.

**Figure 6.** Mobile broadband



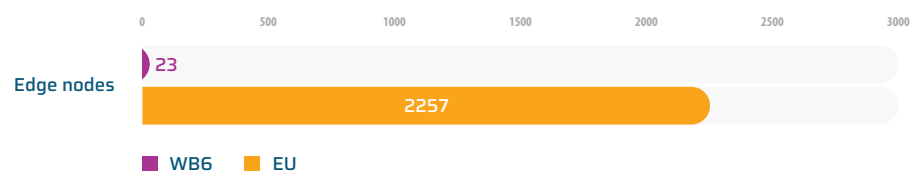
**Source:** For the WB6 average: Eurostat, WB DESI Questionnaire, Market research 2025  
For the EU average: EU DESI 2025 visualisation tool

5G network deployment in the WB6 remains at an early stage across all key indicators. By 2025, only 37% of the spectrum designated for 5G pioneer bands had been assigned in the region, compared with 75% in the EU, reflecting continued delays in spectrum allocation.

As of 2024, overall 5G coverage has increased to 21% of populated areas, which is still far below the EU average of 94%. Coverage in the 3.4–3.8 GHz band, which is essential for high-capacity 5G services, was particularly low at 17% in 2024, compared with 68% in the EU. Uptake remains correspondingly weak, with only 4% of the population using 5G SIM cards, versus 36% in the EU.

Although five of Western Balkans Six had completed spectrum assignments in the designated 5G pioneer bands by the end of 2025, allocations remain incomplete in terms of both frequency bands and total spectrum, continuing to constrain network rollout, service availability, and user adoption relative to EU benchmarks.

**Figure 7.** Edge Nodes



**Source:** For the WB6 average: WB Edge Nodes 2025 Questionnaire  
For the EU average: EU DESI 2025 visualisation tool

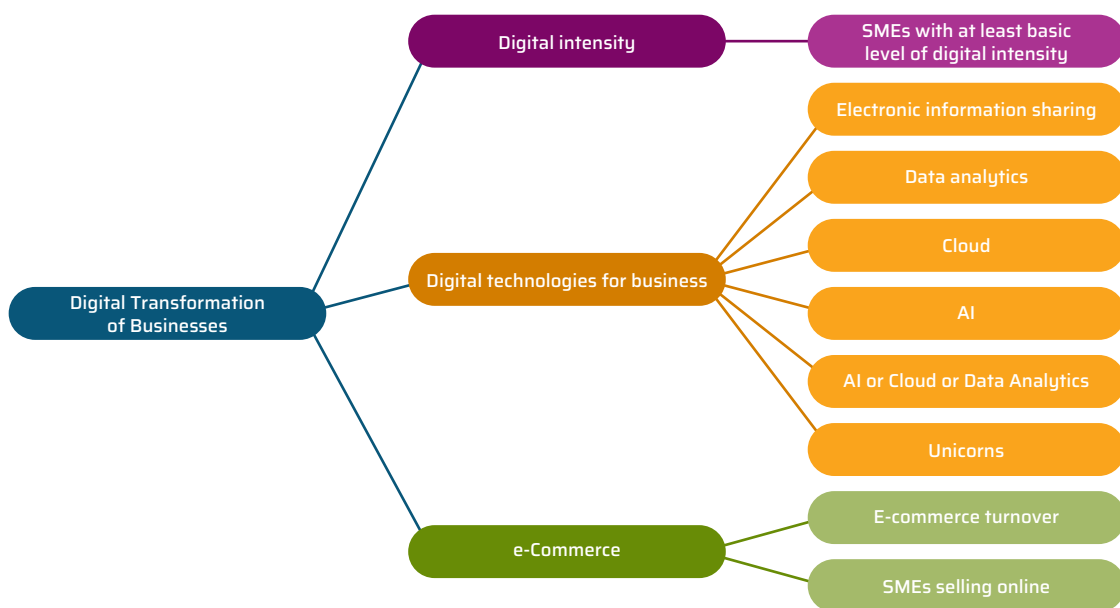
The deployment of edge computing infrastructure in the WB6 remains in its early stages, with edge nodes only gradually emerging across the region. According to data from electronic communications operators, 23 edge nodes were reported in the WB6 in 2025. This remains modes compared to the EU, where 2,257 edge nodes were deployed by 2024. As the data collection focused primarily on operators in the electronic communications sector, the figures may not fully capture edge infrastructure deployed by other market participants, such as independent data centre operators, cloud service providers, or large digital service companies. Consequent-

ly, the reported number of edge nodes should be interpreted as a conservative estimate of the current level of deployment in the region. The relatively small scale of deployment also reflects structural factors, such as smaller market size, fragmented digital ecosystems, and still limited presence of hyperscale cloud providers, which generally drive large-scale edge infrastructure investments in more developed digital markets.

## Digital Transformation of Businesses Dimension

This dimension looks at how businesses, particularly SMEs, adopt digital technologies, emphasising digital intensity and the use of specific tools such as cloud computing, artificial intelligence (AI), social media, data analytics, and e-commerce. The Digital Transformation of Businesses dimension is structured into three sub-dimensions, which are further broken down into nine indicators, as illustrated in Figure 8.

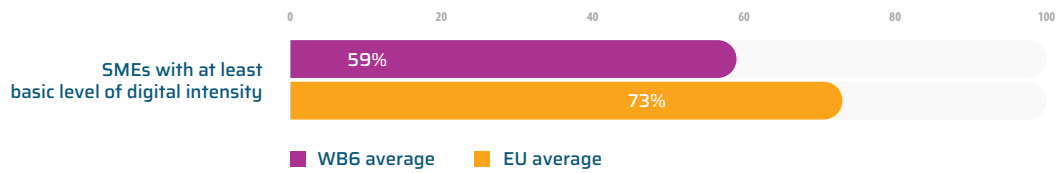
**Figure 8.** Digital transformation of businesses



### Digital intensity

The Digital Intensity sub-dimension measures the extent to which SMEs actively use a selected set of 12 digital technologies<sup>1</sup>. It captures not only whether SMEs adopt digital tools, but also how many different technologies they integrate into their business operations. Higher scores indicate greater digital intensity, ranging from very low (0–3) to very high (10–12). The indicator of SMEs with at least a basic level of digital intensity reflects the share of SMEs using at least 4 out of the 12 digital technologies.

<sup>1</sup> Selected digital technologies include: more than 50% of employees using computers with Internet access for business purposes; maintaining a fixed Internet connection of at least 30 Mb/s; conducting ecommerce sales representing at least 1% of total turnover; ensuring that web sales exceed 1% of turnover with B2C web sales accounting for more than 10% of web sales; implementing documented ICT security measures, practices, or procedures; raising employee awareness of ICT security obligations; using at least three ICT security measures; providing ICT-related training to employees; employing ICT specialists; using any artificial intelligence technology; enabling remote access to email, documents, or business applications; and conducting remote meetings.

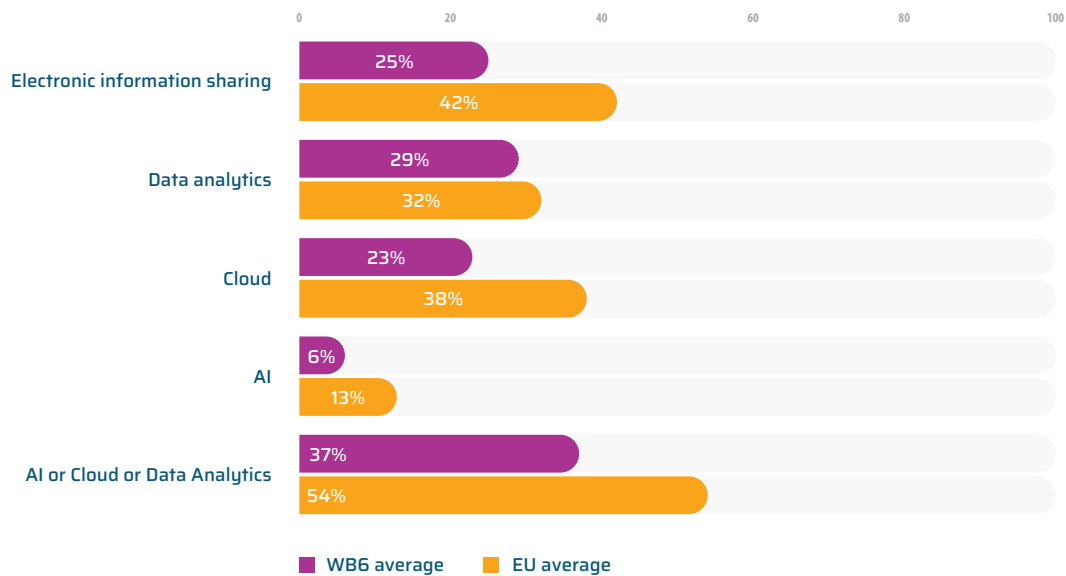
**Figure 9.** Digital intensity

**Source:** For the WB6 average: Eurostat, WB DESI 2025 Questionnaire, Market research 2025  
For the EU average: EU DESI 2025 visualisation tool

In 2024, 59% of SMEs in the WB6 achieved at least a basic level of digital intensity, compared with 73% across the EU.

## Adoption of advanced digital technologies by businesses

The Adoption of advanced digital technologies by businesses sub-dimension assesses how businesses incorporate technologies such as enterprise resource planning, cloud computing, data analytics, and AI into their operations. It measures the overall level of digital transformation in the business sector.

**Figure 10.** Adoption of advanced digital technologies by businesses

**Source:** For the WB6 average: Eurostat, WB DESI 2025 Questionnaire, Market research 2025  
For the EU average: EU DESI 2025 visualisation tool

Enterprise Resource Planning software plays a central role in integrating business operations, allowing companies to exchange information electronically and automate processes across planning, procurement, marketing, sales, customer relationship management, finance, and human resources. In 2023, 25% of enterprises in the WB6 were using ERP systems, compared with 42% in the EU, highlighting a gap in internal digital integration.

Cloud computing enables firms to access software, storage, and databases hosted remotely, reducing the need for costly in-house IT infrastructure. In 2023, 23% of WB6 enterprises used at least one intermediate or advanced cloud service, slightly below the EU average of 38%.

Data analytics allows businesses to extract insights from large datasets using methods such as data mining, text mining, and machine learning. In 2023, 29% of WB6 enterprises applied data analytics tools, approaching the EU average of 32%.

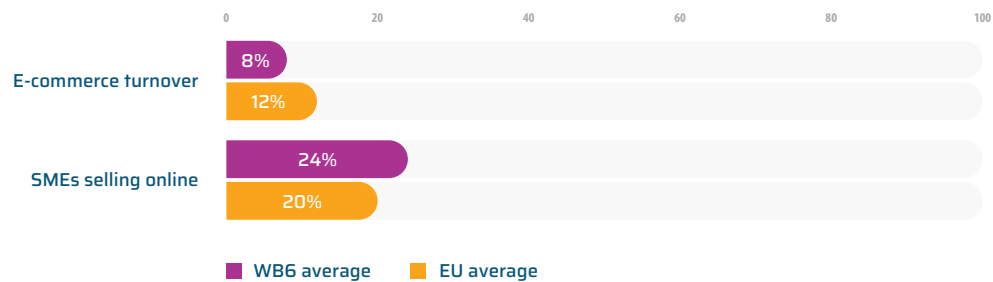
Artificial intelligence, which can include software like image recognition, virtual assistants, or speech and facial recognition, as well as devices such as autonomous robots, self-driving vehicles, and drones, remains less widely implemented. Only 6% of WB6 enterprises reported using at least one AI technology in 2024, compared with 13% in the EU.

The WB6 region still has no unicorn companies, highlighting the ongoing challenges in scaling digital businesses, whereas the EU reported 286 unicorns in 2024, predominantly concentrated in its most digitally mature markets.

## e-Commerce

The e-commerce indicators capture both the number of enterprises conducting online sales through websites, mobile apps, or digital marketplaces, and the share of turnover generated from these sales. This shows not only how many SMEs engage in e-commerce, but also the contribution of online sales to their overall business performance. This provides insight not only into SME participation in e-commerce but also into the relative economic importance of online sales within their overall operations.

**Figure 11.** E-commerce



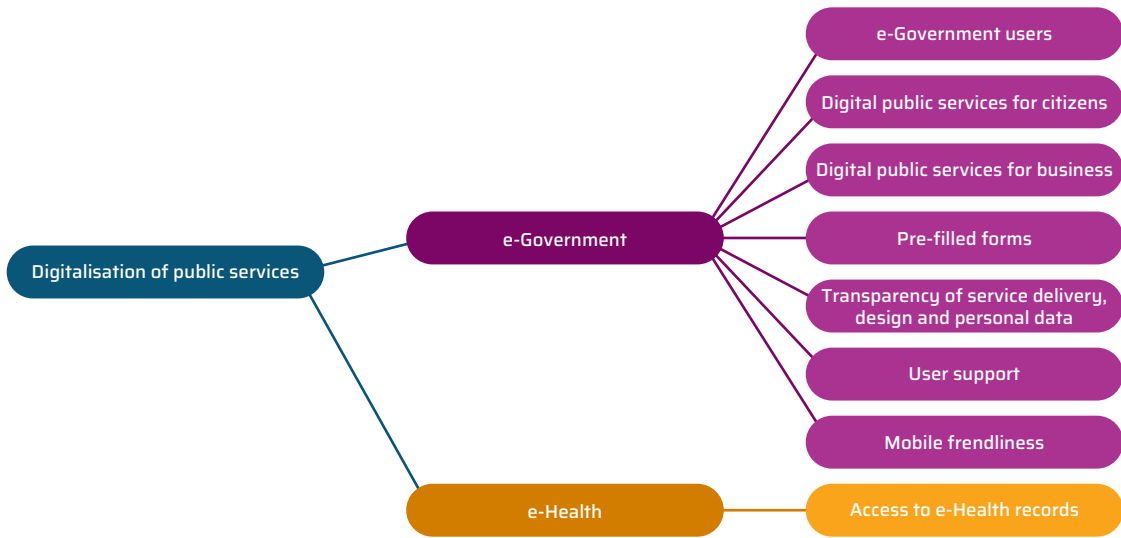
**Source:** For the WB6 average: Eurostat, WB DESI 2025 Questionnaire, Market research 2025  
For the EU average: EU DESI 2025 visualisation tool

In 2024, 24% of SMEs in the WB6 reported conducting online sales, slightly above the EU average of 20%, while the turnover generated from these sales remained relatively low at 8%, compared with 12% in the EU.

## Digitalisation of Public Services Dimension

The Digitalisation of Public Services dimension assesses how extensively digital technologies are integrated in public service delivery, with a focus on improving access, efficiency, and user experience. It captures how effectively public administrations leverage digital tools in serving both citizens and businesses. The dimension is structured around two sub-dimensions, further detailed through eight indicators, as shown in Figure 12.

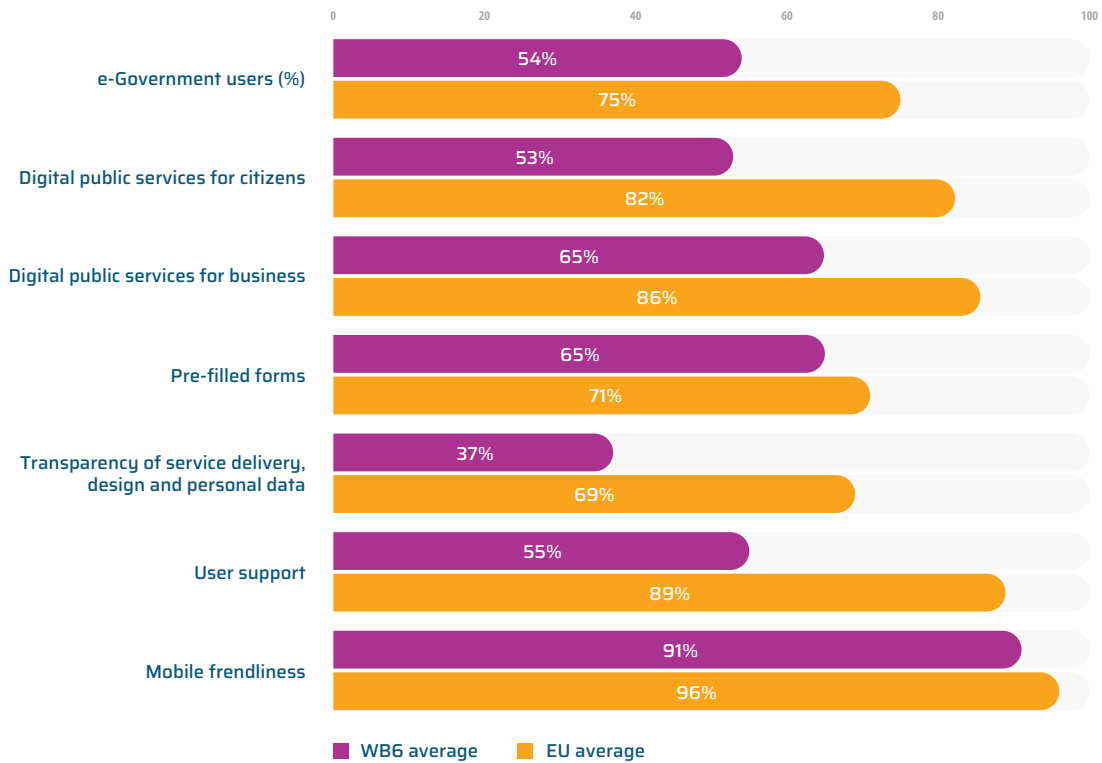
Figure 12. Digitalisation of public services



## e-Government

The e-Government sub-dimension examines how effectively public administrations provide digital services to citizens and businesses, with an emphasis on user-centric design, transparency, and the availability of core digital enablers.

Figure 13. E-Government



Source: For the WB6 average: Eurostat, WB DESI 2025 Questionnaire, Desk research 2025  
 For the EU average: EU DESI 2025 visualisation tool

The e-government users indicator captures the share of individuals who used the internet in the previous 12 months to interact with public authorities. In 2024, the number of internet users interacting with the public administration online in the WB6 reached 54%, which is significantly below the EU average of 75%.

The digital public services for citizens indicator assesses whether services related to key life events, such as career development, education, family matters, health, relocation, small claims procedures, and transport, can be fully completed online, provide adequate information, and are accessible through central public administration portals. In 2025, WB6 scored on average 53 points for this indicator, which is 29 points below the EU average.

The digital public services for businesses indicator evaluates the extent to which services linked to business life events, including business start-up and routine operations, are fully available online with sufficient information and accessible via main government portals. In 2025, the WB6 achieved an average score of 65, notably below the EU average of 86.

The pre-filled forms indicator measures how effectively online administrative forms reuse data already held by public authorities, reducing the need for repeated data entry and minimising errors. In 2025, nearly two-thirds of online forms in the WB6 were pre-filled with existing personal data, compared with an EU average of 71.

The transparency of service delivery, design, and personal data indicator examines how clearly public administrations communicate service processes, involve users in service design, and enable individuals to access and manage their personal data. This indicator reflects openness, user engagement, and trust in digital public services. In 2025, the WB6 averaged 37, well below the EU average of 69.

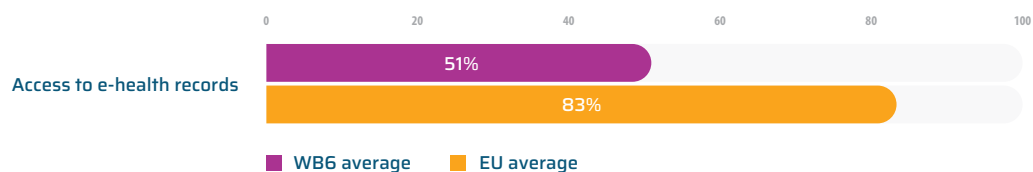
The user support indicator evaluates the availability and quality of online assistance, including help sections, FAQs, contact forms, chatbots, and feedback tools that support users when interacting with government portals. In 2025, the WB6 recorded an average score of 55, compared with an EU average of 89, indicating substantial scope for improvement.

The mobile friendliness indicator assesses how well government websites are optimised for access via smartphones and tablets, including responsive design, mobile navigation, and overall usability. In 2025, WB6 public service websites scored 91, close to the EU average of 96, reflecting continued progress and the growing importance of mobile access in public service delivery.

## E-Health

The e-Health sub-dimension assesses the digitalisation of health services, with a particular focus on citizens' access to electronic health records. It examines four core aspects: the availability of online platforms for accessing health information; the scope of data that can be accessed, such as medical records and prescriptions; the technologies enabling access, including eID systems and mobile applications; and the extent of coverage and equitable access across different population groups and regions.

**Figure 14.** E-Health



**Source:** For the WB6 average: Desk research 2025

For the EU average: EU DESI 2025 visualisation tool

As of 2025, the WB6 had an average score of 51 out of 100 for the indicator Citizens' access to e-health records, notably below the EU average of 83 for 2024.

# WB DESI PROFILES

## ALBANIA

The results for individual DESI indicators for Albania are presented below.

### DIGITAL SKILLS

Indicators from 2023 and 2024 that are included in the Digital skills dimension are given in Table 1.

**Table 1** Digital skills indicators, Albania

Indicator	Albania		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>Internet use</b> % individuals	83.1% 2023	86.1% 2024	<b>88%</b>	<b>92%</b>
<b>At least basic digital skills</b> % individuals	23.3% 2023	23.3% 2023	<b>33%</b>	<b>56%</b>
<b>Above basic digital skills</b> % individuals	7.8% 2023	7.8% 2023	<b>9%</b>	<b>27%</b>
<b>ICT specialists</b> % employees	1.1% 2023	1.0% 2024	<b>3%</b>	<b>5%</b>
<b>Enterprises providing ICT training</b> % enterprises	21.1% 2022	21.8% 2024	<b>22%</b>	<b>22%</b>

**Source:** Eurostat, Institute of Statistics (INSTAT), EU DESI 2025 (for EU average)

In 2024, internet usage reached 86% of the population, broadly in line with the WB6 average, reflecting a high level of internet use among the population. However, this relatively widespread use has not yet translated into comparable levels of digital skills. In 2023, only 23% of individuals aged 16–74 possessed at least basic digital skills in 2023, notably below the WB6 average of 33%, while 8% of individuals had above-basic digital skills, slightly under the regional average of 9%.

The share of ICT specialists in Albania's workforce remained limited in 2024, at 1%, compared with a WB6 average of 3%. On the enterprise side, 22% of firms provided ICT training to their employees in 2022, a level aligned with both the WB6 and EU average of 22% for 2024, suggesting growing awareness among businesses of the importance of workforce upskilling.

Albania continues to place strong strategic emphasis on building the digital skills and competencies required for digital transformation, as demonstrated by its core policy instruments, notably the Digital Agenda for Albania 2022–2026<sup>2</sup> and the Plan for the Sustainable Development of Digital Infrastructure and Broadband 2020–2025<sup>3</sup>. While earlier efforts focused primarily on defining strategic objectives and addressing basic skills gaps, recent developments increasingly emphasise implementation, skills delivery, and labour market relevance.

Albania has expanded practical and targeted initiatives aimed at strengthening digital skills across different population groups. During 2024–2025, new programme rollouts and curriculum updates have supported vocational and professional digital skills, including enhanced ICT training within vocational education and training (VET) centres, initiatives targeting young people and women, and measures aimed at improving digital

<sup>2</sup> Digital Agenda 2022-2026

<sup>3</sup> Plan 2020-2025

competences in rural areas. At the same time, continued investment in school-level digital infrastructure and teacher training has sought to strengthen foundational skills and improve access to quality digital education.

Overall, these developments indicate a gradual shift from policy design towards more implementation-focused initiatives. While digital skills levels and the availability of ICT specialists remain relatively modest, continued and targeted efforts are important to expand participation and strengthen the outcomes of Albania's digital transformation.

## DIGITAL INFRASTRUCTURE

Indicators from 2023 and 2024 that are included in the Digital infrastructure dimension are given in Table 2.

**Table 2** Digital infrastructure indicators, Albania

Indicator	Albania		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>Overall internet take-up</b>	97.7%	98.2%	<b>91%</b>	<b>94%</b>
% households	2023	2024		
<b>Share of fixed broadband subscription ≥ 100 Mbps</b>	28.4%	42.5%	<b>46%</b>	<b>72%</b>
% households	2023	2024		
<b>Share of fixed broadband subscription ≥ 1 Gbps</b>	0.8%	2.16%	<b>1%</b>	<b>22%</b>
% households	2023	2024		
<b>Fixed Very High Capacity Network (VHCN) coverage</b>	66%*	69%*	<b>66%</b>	<b>82%</b>
% households	2023	2024		
<b>Fibre to the premises (FTTP) coverage</b>	66%**	69%**	<b>57%</b>	<b>69%</b>
% households	2023	2024		
<b>Overall 5G coverage</b>	0.0%	0.0%	<b>21%</b>	<b>94%</b>
% populated areas	2023	2024		
<b>5G coverage in the 3.4. - 3.8. GHz band</b>	0.0%	0.0%	<b>17%</b>	<b>68%</b>
% populated areas	2023	2024		
<b>5G spectrum</b>	0.0%	20%	<b>37%</b>	<b>75%</b>
% of total harmonised 5G spectrum	2023	2024		
<b>5G SIM cards</b>	0.0%	0.0%	<b>4%</b>	<b>36%</b>
% of total population	2023	2024		
<b>Edge nodes</b>	N/A	4	<b>23</b>	<b>2,257</b>
Number of deployed edge nodes		2025		

**Source:** AKEP (Electronic and Postal Communications Authority), Ministry of Infrastructure and Energy, Eurostat, EU DESI 2025 (for EU average)

\*VHCN coverage includes the number of households subscribing to FTTH/FTTB

\*\*FTTP coverage includes the number of households subscribing to FTTH/FTTB

Albania's very high capacity network infrastructure in 2024 was largely FTTP-based, with 69% of households subscribing to fibre. Internet adoption is high, with approximately 98% of households connected in 2024, placing Albania above the EU average in terms of internet connectivity. Uptake of higher-speed fixed broadband is also increasing, as almost 43% of households with a fixed broadband subscription used connections of at least 100 Mbps in 2024, up from 28% in 2023. Although adoption of ultra-fast broadband has grown rapidly in relative terms in 2024, the share of households subscribing to speeds of at least 1 Gbps remains well below the EU average, reflecting affordability and demand-side constraints observed across the whole Western Balkans region.

A major milestone in mobile connectivity was achieved in November 2024, when Albania completed its first 5G spectrum assignment in the 3.4–3.8 GHz band. Two mobile network operators each acquired 120 MHz of spectrum, while one 40 MHz block remained unsold. The licences include coverage obligations requiring operators to reach 55% of the population by 2027 and 85% by 2030, with priority given to urban areas and key infrastructure. However, the 700 MHz band, one of the 5G pioneer bands, remains occupied by audiovisual media services and was not included in the auction, which may constrain the pace of economy-wide 5G coverage, particularly in rural and less densely populated areas.

Broadband development in Albania has been shaped by the Plan for Sustainable Development of Digital Infrastructure and Broadband 2020–2025, which established the main policy objectives for universal broadband coverage of households, businesses, and public institutions. As the plan approached the end of its implementation period, its targets, particularly the expansion of fibre-based networks, provision of high-speed connectivity to schools and hospitals, deployment of 5G in major urban and strategic areas, and the promotion of public Wi-Fi access, continue to provide the reference framework for ongoing investments. At the same time, the focus is increasingly shifting from target-setting towards implementation, monitoring of results, and preparation of the next strategic cycle.

In support of these objectives, Albania is advancing several broadband infrastructure initiatives. These initiatives include projects aimed at improving connectivity in rural and underserved areas, supported by the Western Balkans Investment Framework (WBIF), as well as the development of a new Broadband Atlas. This atlas will map last-mile infrastructure, service availability, and investment gaps, combining domestic resources and ITU technical expertise to accelerate project implementation. It will provide a comprehensive and up-to-date overview of Albania's digital infrastructure, with a strong focus on last-mile connectivity, including detailed information on end-user locations, service demand and availability, coverage by fixed and mobile operators, and 'white areas' lacking adequate service.

## DIGITAL TRANSFORMATION OF BUSINESSES

Indicators from 2023 and 2024 that are included in the Digital transformation of businesses dimension are given in Table 3.

**Table 3** Digital transformation of businesses indicators, Albania

Indicator	Albania		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>SMEs with at least basic level of digital intensity</b>	27%	40.9%*	<b>59%</b>	<b>73%</b>
% SMEs	2023	2024		
<b>Electronic information sharing</b>	38.8%	38.8%	<b>25%</b>	<b>42%</b>
% enterprises	2023	2023		
<b>Data analytics</b>	33.4%	33.4%	<b>29%</b>	<b>32%</b>
% enterprises	2023	2023		
<b>Cloud</b>	22.9%	22.9%	<b>23%</b>	<b>38%</b>
% enterprises	2023	2023		
<b>Artificial intelligence</b>	12.1%	9.2%	<b>6%</b>	<b>13%</b>
% enterprises	2023	2024		
<b>AI or Cloud of Data analytics</b>	38.5%	38.5%	<b>37%</b>	<b>54%</b>
% enterprises	2023	2023		
<b>Unicorns</b>	0	0	<b>0%</b>	<b>286</b>
Number of unicorns	2023	2024		
<b>e-Commerce turnover</b>	7%	9.5%	<b>8%</b>	<b>12%</b>
% SMEs	2022	2024		
<b>SMEs selling online</b>	20%	24.5%	<b>24%</b>	<b>20%</b>
% SMEs	2023	2024		

**Source:** Eurostat, Institute of Statistics (INSTAT), EU DESI 2025 (for EU average), EU DESI 2024 (for EU average)

\*Due to a methodological change, the 2024 data are not fully comparable with 2023

In 2024, almost 41% of SMEs in Albania reached at least a basic level of digital intensity, below the WB6 average of 59% and the EU average of 73%. This indicates a moderate level of digital adoption among small and medium-sized enterprises, broadly in line with regional trends.

In 2023, enterprises in Albania outperformed the WB6 average in several key digital transformation indicators. Electronic information sharing was used by 39% of enterprises, compared to a WB6 average of 25%, while 33% of enterprises applied data analytics, exceeding the regional average of 29%. The use of more advanced digital solutions also stood out, with 23% of enterprises using cloud services, broadly in line with regional trends. In 2024, 9% of enterprises employed AI tools, notably higher than the WB6 average of 6%.

E-commerce adoption among SMEs was comparatively strong. In 2024, 24% of SMEs in Albania engaged in online sales, matching the WB6 average and exceeding the EU average of 20%. Turnover generated from online sales accounted for nearly 10% of total turnover, slightly below the EU average of 12%, but above the WB6 average of 8%, suggesting that online channels play a growing role in business activity.

In 2025, Albania approved a revised version of the Business and Investment Development Strategy 2021–2027<sup>4</sup>, strengthening its focus on SME development, innovation, and digital transformation as part of broader efforts to align with EU integration objectives. This updated strategy emphasises digital and green transformation alongside investment attraction, SME competitiveness and human capital development, and formalises institutional roles for implementation.

## DIGITALISATION OF PUBLIC SERVICES

Indicators from 2023 and 2024 that are included in the Digitalisation of public services dimension are given in Table 4.

**Table 4** Digitalisation of public services indicators, Albania

Indicator	Albania		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>e-Government users</b>	78.5%	88.6%	<b>54%</b>	<b>75%</b>
% internet users	2023	2024		
<b>Digital public services for citizens</b>	36	50*	<b>53</b>	<b>82</b>
Score 0-100	2023	2025		
<b>Digital public services for businesses</b>	66	62*	<b>65</b>	<b>86</b>
Score 0-100	2023	2025		
<b>Pre-filled forms</b>	65	66*	<b>65</b>	<b>71</b>
Score 0-100	2023	2025		
<b>Transparency of service delivery, design and personal data</b>	30	33*	<b>37</b>	<b>69</b>
Score 0-100	2023	2025		
<b>User support</b>	59	59*	<b>55</b>	<b>89</b>
Score 0-100	2023	2025		
<b>Mobile friendliness</b>	95	95*	<b>91</b>	<b>96</b>
Score 0-100	2023	2025		
<b>Access to e-health records</b>	40	40*	<b>51</b>	<b>83</b>
Score 0-100	2025	2025		

**Source:** Eurostat, desk research, EU DESI 2025 (for EU average)

\*Calculated based on desk research from 2025

The use of e-government services in Albania has expanded rapidly, reaching 89% of the population in 2024. This uptake is substantially higher than both the WB6 average of 54% and the EU average of 75%. This strong uptake is closely linked to the central role of the e-Albania portal, which serves as a single point of access for citizens and businesses and currently provides around 95% of all public services (1,277 services). The scale of digital service delivery has increased substantially over time, with approximately 3.43 million registered users and a cumulative total of around 58 million services delivered through the platform. Usage continues to grow, with 17 million services provided in 2025 alone, compared with 15.2 million in 2024.

Albania also demonstrates a comparatively strong performance in the re-use of administrative data, notably through the availability of pre-filled forms, where its results slightly surpass the WB6 average. The re-use of administrative data is well advanced, supported by an interoperability platform connecting multiple public registries and enabling real-time data exchange. This allows a significant share of application data to be pre-filled automatically, reducing administrative burden for users. User-centric features, including integrated support channels, feedback mechanisms, and mobile-friendly service design, further contribute to accessibility and ease of use.

4 <https://qbz.gov.al/share/BmpDqyOGT9Kkl4doU-vrYQ>

At the same time, some structural gaps persist. Despite the breadth and intensity of service use, Albania continues to lag behind the regional average in certain aspects of service scope and sophistication, particularly in digital public services for citizens and access to electronic health records. This suggests that further progress is needed to complement high levels of uptake with improvements in service depth, quality, and coverage across all sectors.

Albania's Digital Agenda 2022–2026 provides the strategic framework for the continued digitalisation of public administration and the expansion of online services for citizens and businesses, with a strong focus on interoperability, digital identity, and secure data exchange. Full implementation continues to depend on the adoption of the Law on Electronic Identification and Trust Services, which remains pending. Once adopted, the law is expected to align Albania's framework with the EU eIDAS Regulation, establishing a harmonised Digital Identity and Trust Services system and enabling secure electronic identification and trust services across public and private sectors<sup>5</sup>.

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<sup>5</sup> <https://www.ecoi.net/en/file/local/2132150/albania-report-2025.pdf?utm>

# BOSNIA AND HERZEGOVINA

Reform Agenda of Bosnia and Herzegovina was formally approved by the European Commission in December 2025. The Agenda recognises digital transition as an objective and includes measures that touch on key DESI dimensions such as digital infrastructure, digitalisation of businesses, and digital public services:

## 1. Digital Connectivity (Mobile & Fixed Broadband Infrastructure)

Improving fixed and mobile connectivity is central to the Reform Agenda, reflecting the role of high-capacity networks in supporting economic competitiveness. Priority measures focus on:

- Accelerating broadband deployment, particularly high-capacity networks in underserved and rural areas
- Preparing for advanced mobile networks, including steps to enable future 5G deployment
- Reducing deployment barriers through administrative reforms and improved access to physical infrastructure

These measures aim to reduce the digital divide, improve network performance, and create more favourable conditions for private investment.

## 2. Digitalisation of Public Administration

Key reforms include:

- Expanding e-government services, increasing reliance on secure digital connectivity for service delivery to citizens and businesses
- Improving interoperability of public registers and systems, supported by reliable and resilient digital networks
- Encouraging greater digital service uptake, indirectly supporting demand for high-capacity broadband and mobile networks

Together, these initiatives are expected to strengthen the economic case for infrastructure investment by increasing usage intensity and network traffic.

## 3. Integration of Digital Technology by Businesses

The Reform Agenda introduces measures to support the digitalisation of SMEs and the adoption of digital tools across businesses, including financial and technical support programmes at the entity level.

## 4. Regulatory and Market Framework

The Reform Agenda acknowledges that fragmented governance and inconsistent regulation have constrained digital infrastructure development. Priority reforms focus on:

- Strengthening the regulatory framework for electronic communications, enhancing market access and predictability
- Improving coordination among competent authorities, including clearer allocation of responsibilities for permitting, infrastructure access, and oversight
- Enhancing institutional and regulatory capacity, particularly within bodies responsible for electronic communications and digital markets

These measures aim to increase investor confidence, reduce regulatory uncertainty, and support more efficient and competitive digital infrastructure markets.

The results for individual DESI indicators for Bosnia and Herzegovina are presented below.

## DIGITAL SKILLS

Indicators from 2023 and 2024 that are included in the Digital skills dimension are given in Table 5.

**Table 5** Digital skills indicators, Bosnia and Herzegovina

Indicator	Bosnia and Herzegovina		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>Internet use</b> % individuals	82.5% 2023	85.9% 2024	<b>88%</b>	<b>92%</b>
<b>At least basic digital skills</b> % individuals	30.1% 2023	30.1% 2023	<b>33%</b>	<b>56%</b>
<b>Above basic digital skills</b> % individuals	6.9% 2023	6.9% 2023	<b>9%</b>	<b>27%</b>
<b>ICT specialists</b> % employees	2% 2023	2.3% 2024	<b>3%</b>	<b>5%</b>
<b>Enterprises providing ICT training</b> % enterprises	15.9% 2022	18.1% 2024	<b>22%</b>	<b>22%</b>

*Source: Eurostat, Agency for Statistics of Bosnia and Herzegovina, EU DESI 2025 (for EU average)*

In 2024, Bosnia and Herzegovina recorded relatively strong results across most digital skills indicators, with internet usage reaching 86% of the population, almost in line with the WB6 average. In 2023, the share of individuals with at least basic digital skills of 30% remained slightly below the regional average. The proportion of ICT specialists in total employment also remained slightly below the WB6 average, highlighting room for improvement in translating education outcomes into labour market integration. Notably, 18% of enterprises provided ICT training in 2024, slightly below the WB6 average of 22%.

Since the last report, the strategic framework for digital skills in Bosnia and Herzegovina has remained unchanged, guided by several strategic documents and coordinated initiatives at different administrative levels. In the Federation of Bosnia and Herzegovina, the Development Strategy 2021–2027<sup>6</sup> emphasises strengthening digital competencies, particularly through the education system, to support economic and social development. In Republika Srpska, the Agency for Information Society drives ICT adoption, providing training, certification, and lifelong learning programmes to enhance digital skills across multiple sectors. Together, these efforts demonstrate sustained strategic attention to digital skills and workforce readiness, even in the absence of a single, unified domestic strategy.

## DIGITAL INFRASTRUCTURE

Indicators from 2023 and 2024 that are included in the Digital infrastructure dimension are given in Table 6.

**Table 6** Digital infrastructure indicators, Bosnia and Herzegovina

Indicator	Bosnia and Herzegovina		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>Overall internet take-up</b> % households	81.6% 2023	84.2% 2024	<b>91%</b>	<b>94%</b>
<b>Share of fixed broadband subscription ≥ 100 Mbps</b> % households	24.1% 2023	25.2% 2024	<b>46%</b>	<b>72%</b>
<b>Share of fixed broadband subscription ≥ 1 Gbps</b> % households	0.00% 2023	0.00% 2024	<b>1%</b>	<b>22%</b>
<b>Fixed Very High Capacity Network (VHCN) coverage</b> % households	46.9% 2023	57.4% 2024	<b>66%</b>	<b>82%</b>
<b>Fibre to the premises (FTTP) coverage</b> % households	28.1% 2023	37.0% 2024	<b>57%</b>	<b>69%</b>
<b>Overall 5G coverage</b> % populated areas	0.0% 2023	0.0% 2024	<b>21%</b>	<b>94%</b>
<b>5G coverage in the 3.4. - 3.8. GHz band</b> % populated areas	0.0% 2023	0.0% 2024	<b>17%</b>	<b>68%</b>

6 [https://parlamentfbih.gov.ba/v2/userfiles/file/Materijali%20u%20proceduri\\_2021/Strategija%20razvoja%20BiH%202021-2027\\_bos.pdf](https://parlamentfbih.gov.ba/v2/userfiles/file/Materijali%20u%20proceduri_2021/Strategija%20razvoja%20BiH%202021-2027_bos.pdf)

Indicator	Bosnia and Herzegovina		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>5G spectrum</b>	0.0%	0.0%	<b>37%</b>	<b>75%</b>
% of total harmonised 5G spectrum	2023	2024		
<b>5G SIM cards</b>	0.0%	0.0%	<b>4%</b>	<b>36%</b>
% of total population	2023	2024		
<b>Edge nodes</b>	N/A	5	<b>23</b>	<b>2,257</b>
Number of deployed edge nodes		2025		

**Source:** RAK (Communications Regulatory Agency), Agency for Statistics of Bosnia and Herzegovina, EU DESI 2025 (for EU average)

In 2024, Bosnia and Herzegovina showed progress across several digital infrastructure indicators compared to 2023. In 2024, 84% of individuals used the internet, slightly below the WB6 average of 91%. In 2024, coverage of very high capacity networks increased to 57% of households, up from 47% in 2023, but remained below the regional average of 66%. FTTP coverage reached 37% in 2024, up from 28% in 2023, but still notably below the WB6 average of 57%. Uptake of high-speed fixed broadband remains limited despite network availability. Fixed broadband subscriptions with speeds of at least 100 Mbps remained modest at 25% of households subscribing to fixed broadband, well below the regional average of 46%. Adoption of ultra-fast broadband services of 1 Gbps or more is very low, reflecting persistent challenges in affordability and expanding demand. These trends highlight that availability alone is not sufficient, but targeted measures are needed to make high-speed broadband more accessible and attractive to households.

Bosnia and Herzegovina currently lacks an updated domestic broadband strategy to guide the deployment of next-generation networks, enhance rural connectivity, and support the rollout of 5G networks. A draft Broadband Strategy for 2026–2030 has been prepared, but formal adoption is still pending.

The 5G spectrum auction is planned for 2027–2028, yet progress is constrained by several factors, including the continued occupation of key spectrum bands (700 MHz and 3.5 GHz) and limited regulatory and strategic readiness. Complementing these efforts, a new Law on Electronic Communications is under preparation. The legislation is expected to transpose the European Electronic Communications Code (EECC) and partially implement selected provisions of the Gigabit Infrastructure Act (GIA), with adoption targeted by the end of 2026.

## DIGITAL TRANSFORMATION OF BUSINESSES

Indicators from 2023 and 2024 that are included in the Digital transformation of businesses dimension are given in Table 7.

**Table 7** Digital transformation of businesses, Bosnia and Herzegovina

Indicator	Bosnia and Herzegovina		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>SMEs with at least basic level of digital intensity</b>	43.2%	48.6%*	<b>59%</b>	<b>73%</b>
% SMEs	2023	2024		
<b>Electronic information sharing</b>	24.3%	24.3%	<b>25%</b>	<b>42%</b>
% enterprises	2023	2023		
<b>Data analytics</b>	29.9%	29.9%	<b>29%</b>	<b>32%</b>
% enterprises	2023	2023		
<b>Cloud</b>	18.1%	18.1%	<b>23%</b>	<b>38%</b>
% enterprises	2023	2023		
<b>Artificial intelligence</b>	5.3%	6.4%	<b>6%</b>	<b>13%</b>
% enterprises	2023	2024		
<b>AI or Cloud of Data analytics</b>	38.6%	38.6%	<b>37%</b>	<b>54%</b>
% enterprises	2023	2023		
<b>Unicorns</b>	0	0	<b>0</b>	<b>286</b>
Number of unicorns	2023	2024		
<b>e-Commerce turnover</b>	9.2%	11.2%	<b>8%</b>	<b>12%</b>
% SMEs	2023	2024		
<b>SMEs selling online</b>	22.7%	23.9%	<b>24%</b>	<b>20%</b>
% SMEs	2023	2024		

**Source:** Eurostat, Agency for Statistics of Bosnia and Herzegovina, EU DESI 2024 (for EU average), EU DESI 2024 (for EU average)

\*Due to a methodological change, the 2024 data are not fully comparable with 2023.

In 2024, almost half of SMEs in Bosnia and Herzegovina achieved at least a basic level of digital intensity, but still lag behind the WB6 average of 59%.

The adoption of advanced digital technologies in Bosnia and Herzegovina has shown notable progress and generally aligns with WB6 averages. In 2023, the use of electronic information sharing remained in line with regional trends, with 24% of enterprises adopting such systems. The uptake of cloud solutions increased significantly, reaching 18% in 2023, up from just 7% in 2021, while 30% of enterprises employed data analytics. In 2024, 6% of enterprises had integrated AI technologies into their operations, matching the regional average.

E-commerce also represents a relative strength. In 2024, 24% of SMEs sold products or services online, exceeding the EU average of 20% and matching the WB6 average. Online sales accounted for 11% of total turnover, significantly above the WB6 average of 8%, indicating a stronger contribution of online channels to business revenues.

Several international and regional programmes are supporting technology uptake among enterprises. The Go Digital initiative<sup>7</sup>, led by the EBRD in partnership with the EU and GIZ, continues to assist SMEs in Bosnia and Herzegovina in adopting digital technologies through a combination of financial support and technical assistance. In parallel, Digital Innovation Hubs are being developed to act as central support points for businesses, while ongoing policy efforts aim to create a more cohesive and business-friendly digital environment. Nevertheless, fragmented regulatory frameworks and the absence of a unified economy-wide strategy continue to pose challenges to the effective scaling of digital transformation

## DIGITALISATION OF PUBLIC SERVICES

Indicators from 2023 and 2024 that are included in the Digitalisation of public services dimension are given in Table 8.

**Table 8** Digitalisation of public services indicators, Bosnia and Herzegovina

Indicator	Bosnia and Herzegovina		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>e-Government users</b>	34.8%	43.3%	<b>54%</b>	<b>75%</b>
% internet users	2023	2024		
<b>Digital public services for citizens</b>	50	51*	<b>53</b>	<b>82</b>
Score 0-100	2023	2025		
<b>Digital public services for businesses</b>	59	60*	<b>65</b>	<b>86</b>
Score 0-100	2023	2025		
<b>Pre-filled forms</b>	78	78*	<b>65</b>	<b>71</b>
Score 0-100	2023	2025		
<b>Transparency of service delivery, design and personal data</b>	28	29*	<b>37</b>	<b>69</b>
Score 0-100	2023	2025		
<b>User support</b>	52	52*	<b>55</b>	<b>89</b>
Score 0-100	2023	2025		
<b>Mobile friendliness</b>	88	89*	<b>91</b>	<b>96</b>
Score 0-100	2023	2025		
<b>Access to e-health records</b>	0	0*	<b>51</b>	<b>83</b>
Score 0-100	2025	2025		

**Source:** Eurostat, desk research, EU DESI 2025 (for EU average)

\*Calculated based on desk research from 2025

In the Digital public services dimension, Bosnia and Herzegovina shows strong performance in areas such as pre-filled forms, digital public services for citizens and businesses, and mobile-friendliness. At the same time, it lags slightly behind the WB6 average in e-government uptake, with 43% of users compared to the regional average of 54%, and exhibits weaker performance in user support and transparency of service delivery. As of the end of 2025, no functional system existed for citizens to access or manage their electronic health records.

<sup>7</sup> <https://www.ebrd.com/home/what-we-do/focus-areas/digitalisation/go-digital-in-bosnia-and-herzegovina.html>

The ongoing lack of alignment in policy and legal frameworks between the entities contributes to a fragmented digital services environment and remains a significant constraint to the development of key digital services. This fragmentation affects the rollout of electronic identification and trust services, the mutual recognition of electronic signatures, and the interoperability of government data systems, thereby limiting the efficiency, scalability, and cross-institutional use of digital public services.

During the reporting period, no progress was made towards adopting a Law on Electronic Identity and Trust Services for electronic transactions, which would create a unified supervisory framework aligned with the EU Digital Identity Framework. Similarly, challenges related to the interoperability and cross-entity recognition of electronic signatures persist.

At the institutional level, the Agency for Identification Documents, Registers and Data Exchange (IDDEEA) has taken a prominent role in digital transformation, including the launch of an advanced qualified electronic signature service that facilitates secure digital interaction with both public institutions and the private sector, laying a foundation for broader digital adoption and service delivery.

Overall, Bosnia and Herzegovina still lacks a coordinated domestic strategy and action plan for e-government, with limited interoperability across institutions and no comprehensive framework fully aligned with EU standards<sup>8</sup>.

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8 <https://westernbalkans-infohub.eu/wp-content/uploads/2025/11/bosnia-and-herzegovina-report-2025.pdf?utm>

## KOSOVO\*

The results for individual DESI indicators for Kosovo\* are presented below.

### DIGITAL SKILLS

Indicators from 2023 and 2024 that are included in the Digital skills dimension are given in Table 9.

**Table 9** Digital skills indicators, Kosovo\*

Indicator	Kosovo*		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>Internet use</b>	95.0%	97.4%	<b>88%</b>	<b>92%</b>
% individuals	2020	2024		
<b>At least basic digital skills</b>	37.7%	37.7%*	<b>33%</b>	<b>56%</b>
% individuals	2025	2025		
<b>Above basic digital skills</b>	9.8%	9.8%*	<b>9%</b>	<b>27%</b>
% individuals	2025	2025		
<b>ICT specialists</b>	1.8%	1.8%	<b>3%</b>	<b>5%</b>
% employees	2024	2024		
<b>Enterprises providing ICT training</b>	1.1%	13.6%*	<b>22%</b>	<b>22%</b>
% enterprises	2020	2025		

**Source:** Eurostat, Kosovo\* Agency of Statistics, market research, EU DESI 2025 (for EU average)

\*Calculated based on market research 2025

In 2024, 97% of individuals were using the internet, well above both the WB6 and EU averages, providing a strong basis for digital participation and skills development. In 2025, nearly 38% of individuals aged 16–74 possessed at least basic digital skills, while around 10% had above-basic competencies. In 2024, ICT specialists represented almost 2% of total employment, slightly below the WB6 average of 3%. The proportion of enterprises offering ICT training reached nearly 14% in 2025, a significant rise from just 1% in 2020, although it remains below the WB6 and EU average of 22% in 2024.

Kosovo\* has continued to expand its strategic and programmelevel efforts to strengthen digital skills across the population. While a single overarching domestic strategy on digital skills remains under development, commitments and sectoral strategies increasingly integrate digital competence objectives. The Development Strategy 2030<sup>9</sup> highlights the link between technology, education, and economic development, emphasising digital skills as a cornerstone for sustainable and inclusive growth. Complementing this, the Digital Agenda 2030<sup>10</sup> sets a long-term vision for digital transformation, with a focus on enhancing citizens' digital competencies and modernising the education system through technology integration, aiming to equip 80% of adults with basic digital skills by 2030. The Education Strategy 2022–2026<sup>11</sup> further supports this goal through a dedicated digital education pillar, promoting digital learning platforms, development of e-content, and teacher upskilling to ensure students acquire essential digital skills from an early age.

Several initiatives continue to support digital skills development and workforce readiness in Kosovo\*. The Youth-Focused Digital Academy<sup>12</sup> and the UNDP Digital Skills Programme<sup>13</sup> provide targeted training in areas such as cybersecurity, software testing, and AI, helping young people acquire skills in demand on the labour market. Complementing these, the Skills for Sustainable Jobs<sup>14</sup> project strengthens vocational education and training, integrating ICT components to better align skills with labour market needs and foster a digitally competent workforce. Meanwhile, Innovation and Training Park (ITP) Prizren<sup>15</sup> has emerged as a key hub for skills

9 <https://kryeministri.rks-gov.net/wp-content/uploads/2023/11/NDSP-2030-dokumenti-i-dizajnuar.pdf>

10 <https://me.rks-gov.net/wp-content/uploads/2023/07/Digital-Agenda-of-Kosovo-2030.docx>

11 <https://masht.rks-gov.net/wp-content/uploads/2022/11/03-Strategja-e-Arsimit-2022-2026-Eng-Web.pdf>

12 <https://osfwb.org/project/youth-focused-digital-academy-empowering-the-next-generation-for-the-digital-economy/?utm>

13 <https://www.undp.org/kosovo/stories/kosovos-digital-skills-programme-empowers-youth-future-jobs>

14 <https://digital-skills-jobs.europa.eu/en/inspiration/good-practices/skills-sustainable-jobs-kosovo-project-luxembourg?utm>

15 <https://itp-prizren.com/>

development and entrepreneurship, offering training and events that connect learners with industry needs and emphasise digital skills, inclusion, and innovation.

These combined efforts demonstrate Kosovo\*'s comprehensive approach to building digital skills across the population, equipping both individuals and the workforce to engage in a competitive, innovation-driven digital economy.

## DIGITAL INFRASTRUCTURE

Indicators from 2023 and 2024 that are included in the Digital infrastructure dimension are given in Table 10.

**Table 10** Digital infrastructure indicators, Kosovo\*

Indicator	Kosovo*		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>Overall internet take-up</b>	98.6%	99.0%	<b>91%</b>	<b>94%</b>
% households	2023	2024		
<b>Share of fixed broadband subscription ≥ 100 Mbps</b>	84%	83.8%	<b>46%</b>	<b>72%</b>
% households	2023	2024		
<b>Share of fixed broadband subscription ≥ 1 Gbps</b>	N/A	4.8%	<b>1%</b>	<b>22%</b>
% households		2024		
<b>Fixed Very High Capacity Network (VHCN) coverage</b>	42.0%	42.0%	<b>66%</b>	<b>82%</b>
% households	2024	2024		
<b>Fibre to the premises (FTTP) coverage</b>	30.0%	30.0%	<b>57%</b>	<b>69%</b>
% households	2024	2024		
<b>Overall 5G coverage</b>	0.0%	70%*	<b>21%</b>	<b>94%</b>
% populated areas	2023	2024		
<b>5G coverage in the 3.4. - 3.8. GHz band</b>	N/A	65%*	<b>17%</b>	<b>68%</b>
% populated areas		2024		
<b>5G spectrum</b>	16.7%	16.7%	<b>37%</b>	<b>75%</b>
% of total harmonised 5G spectrum	2023	2024		
<b>5G SIM cards</b>	0.0%	13%	<b>4%</b>	<b>36%</b>
% of total population	2023	2024		
<b>Edge nodes</b>	N/A	2	<b>23</b>	<b>2,257</b>
Number of deployed edge nodes		2025		

**Source:** ARKEP (Authority of Electronic and Postal Communications), Kosovo\* Agency of Statistics, EU DESI 2025 (for EU average)

\*Share of population

In 2024, Kosovo\* demonstrated strong performance in broadband uptake, with internet access reaching 99% of households, surpassing both the WB6 average of 91% and the EU average of 94%. Among fixed broadband subscribers in 2024, 84% opted for speeds of at least 100 Mbps, well above the WB6 average of 46%, while nearly 5% of fixed broadband subscriptions were with speeds of at least 1 Gbps, compared with just 1% in WB6. Despite this strong uptake, in 2024 very high capacity network coverage stood at 42% of households and FTTP coverage at 30% of households, below the regional averages.

In mobile connectivity, Kosovo\* launched commercial 5G services in 2024, achieving coverage for 70% of the population, above the regional average. Coverage in the 3.5 GHz band reached 65%, with 13% of the population using 5G SIM cards. However, the limited assignment of 5G spectrum continues to constrain further expansion and full utilisation of next-generation mobile networks.

Kosovo\* continues to build on its strategic framework for digital infrastructure. The Digital Agenda 2030 remains a core policy commitment, with a focus on achieving gigabit connectivity for key socio-economic sectors, including public institutions, academic centres, and schools, throughout the jurisdiction by 2026. Complementary strategic frameworks, such as the Government Programme 2021–2025<sup>16</sup> and the Kosovo\* Development Strategy 2030, also highlight the essential role of fixed broadband and 5G mobile networks in advancing the digital economy.

16 <https://masht.rks-gov.net/wp-content/uploads/2022/06/Programi-i-Qeverise-se-Kosoves-2021-2025.pdf>

According to the 2025 European Commission report<sup>17</sup>, Kosovo\* continues to face challenges in the development of high-speed broadband infrastructure, including limited private sector investment capacity and an outdated cable network that constrains further upgrades and improvements in connection speeds. While the legislative framework for broadband cost reduction is largely aligned with the EU Broadband Cost Reduction Directive, administrative burdens related to construction works persist due to incomplete harmonisation of legislation. The report highlights the need for Kosovo\* to complete alignment with the European Electronic Communications Code and adopt a new Law on Electronic Communications, and ensure compliance with the EU Gigabit Infrastructure Act, to foster a more predictable and investmentfriendly environment for deployment of high-capacity networks.

## DIGITAL TRANSFORMATION OF BUSINESSES

Indicators from 2023 and 2024 that are included in the Digital transformation of businesses dimension are given in Table 11.

**Table 11** Digital transformation of businesses indicators, Kosovo\*

Indicator	Kosovo*		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>SMEs with at least basic level of digital intensity</b>	14.3%	14.3%	<b>59%</b>	<b>73%</b>
% SMEs	2024	2024		
<b>Electronic information sharing</b>	18%	19.2%*	<b>25%</b>	<b>42%</b>
% enterprises	2022	2025		
<b>Data analytics</b>	32.4%	32.4%	<b>29%</b>	<b>32%</b>
% enterprises	2023	2023		
<b>Cloud</b>	5.6%	5.6%	<b>23%</b>	<b>38%</b>
% enterprises	2023	2023		
<b>Artificial intelligence</b>	1.0%	1.0%	<b>6%</b>	<b>13%</b>
% enterprises	2024	2024		
<b>AI or Cloud of Data analytics</b>	6.7%	6.7%	<b>37%</b>	<b>54%</b>
% enterprises	2023	2023		
<b>Unicorns</b>	0	0	<b>0</b>	<b>286</b>
Number of unicorns				
<b>e-Commerce turnover</b>	4.0%	7%*	<b>8%</b>	<b>12%</b>
% SMEs	2022	2025		
<b>SMEs selling online</b>	4.8%	2.6%	<b>24%</b>	<b>20%</b>
% SMEs	2022	2024		

**Source:** Kosovo\* Agency of Statistics, market research, EU DESI 2025 (for EU average), EU DESI 2024 (for EU average)

\*Calculated based on market research from 2025

In 2024, digital adoption among SMEs in Kosovo\* remained limited. Only 14% of SMEs reached at least a basic level of digital intensity, well below the WB6 average of 59%.

In 2023, the uptake of advanced digital technologies was generally low. Cloud computing and Enterprise Resource Planning systems remained below regional averages. Data analytics performed relatively better, with 32% of enterprises using it in 2023, slightly above the regional average of 29%. Adoption of artificial intelligence stood at just 1% in 2024, compared to 6% in the WB6. E-commerce activity also remained modest, with only 3% of SMEs selling online in 2024.

Digital transformation in Kosovo\* is supported by several strategic frameworks that aim to accelerate technology adoption and strengthen the digital economy. The Digital Agenda 2030 sets ambitious targets for the uptake of cloud computing, AI, and big data technologies among companies. The adoption of the Law on Electronic Identification and Trust Services, aligned with the EU's eIDAS Regulation, represents a key step in strengthening trust and security in digital transactions across both public and private sectors.

<sup>17</sup> [https://www.ecoi.net/en/file/local/2132161/kosovo-report-2025.pdf?utm\\_source](https://www.ecoi.net/en/file/local/2132161/kosovo-report-2025.pdf?utm_source)

Overall, the broader digital transformation of businesses in Kosovo\* still has room for improvement. Targeted support is needed to boost the adoption of cloud computing, artificial intelligence, and e-commerce solutions, while strategic initiatives should be leveraged to help close the gap with the rest of the region.

## DIGITALISATION OF PUBLIC SERVICES

Indicators from 2023 and 2024 that are included in the Digitalisation of public services dimension are given in Table 12.

**Table 12** Digitalisation of public services indicators, Kosovo\*

Indicator	Kosovo*		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>e-Government users</b>	17.5%	59%	<b>54%</b>	<b>75%</b>
% internet users	2023	2024		
<b>Digital public services for citizens</b>	50	50*	<b>53</b>	<b>82</b>
Score 0-100	2023	2025		
<b>Digital public services for businesses</b>	61	62*	<b>65</b>	<b>86</b>
Score 0-100	2023	2025		
<b>Pre-filled forms</b>	59	59*	<b>65</b>	<b>71</b>
Score 0-100	2023	2025		
<b>Transparency of service delivery, design and personal data</b>	33	33*	<b>37</b>	<b>69</b>
Score 0-100	2023	2025		
<b>User support</b>	49	49*	<b>55</b>	<b>89</b>
Score 0-100	2023	2025		
<b>Mobile friendliness</b>	60	85*	<b>91</b>	<b>96</b>
Score 0-100	2023	2025		
<b>Access to e-health records</b>	36	37*	<b>51</b>	<b>83</b>
Score 0-100	Q1 2025	Q4 2025		

**Source:** Eurostat, desk research, EU DESI 2025 (for EU average)

\*Calculated based on desk research from 2025

Digital interaction between public authorities and users in Kosovo\* was strong, with 59% of internet users accessing e-government services in 2024, above the WB6 average of 54%. Kosovo\* also performed well in key digital public services indicators, including digital public services for citizens and businesses, pre-filled forms, user support, transparency of service delivery, and mobile friendliness, with scores close to or slightly below the WB6 averages. However, performance remains weaker in terms of citizens' access to e-health records.

The e-Government Strategy 2023–2027<sup>18</sup> continues to guide reforms in digital governance in Kosovo\*, aiming to modernise public administration and improve the delivery of services to citizens and businesses. It emphasises the development of interoperable systems, a coherent digital infrastructure, and user-centric service design across government bodies. Citizens and businesses now have access to several hundred services through the e-Kosova portal, and municipalities have launched initiatives to bring more services online and improve transparency. Despite this progress, only around 10% of listed public services are fully available online, and challenges remain in re-designing services, implementing the once-only principle, and enhancing institutional capacity for digital service delivery<sup>19</sup>.

Under the broader Digital Agenda 2030, Kosovo\* has set ambitious targets to have 50% of public services available online by 2027 and all key services fully digitalised by 2030, with digital service design increasingly organised around citizens' life events to simplify interaction with public institutions.

<sup>18</sup> <https://mpb.rks-gov.net/Uploads/Documents/Pdf/EN/2700/e-Government%20Strategy%20Kosovo%202023-2027.pdf>

<sup>19</sup> [https://www.oecd.org/en/publications/western-balkans-competitiveness-outlook-2024-kosovo\\_ff74ae0e-en/full-report/component-15.html?utm](https://www.oecd.org/en/publications/western-balkans-competitiveness-outlook-2024-kosovo_ff74ae0e-en/full-report/component-15.html?utm)

## MONTENEGRO

The results for individual DESI indicators under DESI dimensions for Montenegro are presented below.

### DIGITAL SKILLS

Indicators from 2023 and 2024 that are included in the Digital skills dimension are given in Table 13.

**Table 13** Digital skills indicators, Montenegro

Indicator	Montenegro		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>Internet use</b> % individuals	88.3% 2023	88.9% 2024	<b>88%</b>	<b>92%</b>
<b>At least basic digital skills</b> % individuals	52% 2023	52% 2023	<b>33%</b>	<b>56%</b>
<b>Above basic digital skills</b> % individuals	10.5% 2023	10.5% 2023	<b>9%</b>	<b>27%</b>
<b>ICT specialists</b> % employees	2.7% 2024	2.7% 2024	<b>3%</b>	<b>5%</b>
<b>Enterprises providing ICT training</b> % enterprises	23.7% 2022	29.0% 2024	<b>22%</b>	<b>22%</b>

**Source:** Eurostat, Statistical Office of Montenegro (MONSTAT), EU DESI 2025 (for EU average)

In 2024, internet usage in Montenegro reached 89%, exceeding the WB6 average and confirming a high level of digital participation among the population. In 2023, Montenegro stood out in the region in terms of digital skills, with 52% of individuals possessing at least basic digital skills, significantly above the WB6 average of 33%, while the share of individuals with above-basic digital skills also remained slightly above the regional level. The availability of ICT specialists in the labour market is strong, with ICT specialists accounting for nearly 3% of total employment in 2024. Enterprise engagement in skills development is also notable, with 29% of enterprises providing ICT training to their employees in 2024, exceeding both the WB6 and EU average of 22%, indicating a proactive response by businesses to evolving ICT skills needs.

These results are underpinned by a well-developed strategic framework supporting digital skills development. Strengthening digital competencies and expanding the pool of ICT professionals is a core objective of the Digital Transformation Strategy of Montenegro 2022–2026<sup>20</sup>, which places skills development at the centre of the economy's digital transformation.

Implementation efforts have continued through a range of targeted initiatives. The Digital Academy<sup>21</sup> has further consolidated its role as a central platform for education, coordination, and stakeholder engagement, supporting the development of digital and leadership skills among public sector employees, students, and vulnerable groups. Its activities increasingly focus on practical skills delivery and cross-sector cooperation. In parallel, implementation of the Education System Digitalisation Strategy 2022–2027<sup>22</sup> has progressed, with continued emphasis on integrating digital tools into teaching and learning, strengthening digital literacy, and improving equitable access to digital education across regions and population groups.

<sup>20</sup> <https://www.gov.me/en/documents/59dcab9b-b0e8-48b7-830b-6e4eab690521>

<sup>21</sup> <https://digitalnaakademija.me/>

<sup>22</sup> <https://www.unicef.org/montenegro/media/22611/file/Education%20System%20Digitalization%20Strategy.pdf>

## DIGITAL INFRASTRUCTURE

Indicators from 2023 and 2024 that are included in the Digital infrastructure dimension are given in Table 14.

**Table 14** Digital infrastructure indicators, Montenegro

Indicator	Montenegro		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>Overall internet take-up</b>	81.3%	84.5%	<b>91%</b>	<b>94%</b>
% households	2023	2024		
<b>Share of fixed broadband subscription ≥ 100 Mbps</b>	63.1%	70.0%	<b>46%</b>	<b>72%</b>
% households	2023	2024		
<b>Share of fixed broadband subscription ≥ 1 Gbps</b>	0.11%	0.15%	<b>1%</b>	<b>22%</b>
% households	2023	2024		
<b>Fixed Very High Capacity Network (VHCN) coverage</b>	79.2%	79.2%	<b>66%</b>	<b>82%</b>
% households	2023	2024		
<b>Fibre to the premises (FTTP) coverage</b>	74%	74.0%	<b>57%</b>	<b>69%</b>
% households	2023	2024		
<b>Overall 5G coverage</b>	85.4%	94%*	<b>21%</b>	<b>94%</b>
% populated areas	2023	2024		
<b>5G coverage in the 3.4 - 3.8 GHz band</b>	64%**	64%**	<b>17%</b>	<b>68%</b>
% populated areas	2023	2023		
<b>5G spectrum</b>	66.7%	66.7%	<b>37%</b>	<b>75%</b>
% of total harmonised 5G spectrum	2023	2024		
<b>5G SIM cards</b>	12.4%	21.5%	<b>4%</b>	<b>36%</b>
% of total population	2023	2024		
<b>Edge nodes</b>	N/A	4	<b>23</b>	<b>2,257</b>
Number of deployed edge nodes		2025		

**Source:** EKIP (Agency for Electronic Communications and Postal Services), Eurostat, desk research, EU DESI 2025 (for EU average)

\* Share of population

\*\* Calculated based on desk research <https://cms.law/en/int/expert-guides/cms-expert-guide-to-5g-regulation-and-law/montenegro>

Montenegro continues to demonstrate strong performance in the deployment of high-capacity fixed networks. In 2024, very high capacity network coverage stood at 79% of households, broadly in line with the EU average of 82% and well above the WB6 average of 66%. This level of coverage is largely driven by FTTP deployment, which covered 74% of households, exceeding both regional and EU benchmarks.

High-speed broadband take-up reflects this solid digital infrastructure base. In 2024, 70% of households with a fixed broadband subscription used connections offering speeds of at least 100 Mbps, approaching the EU average of 72% and substantially outperforming the WB6 average of 46%. Overall household internet penetration reached 85% in 2024, still below the WB6 average of 91%, and pointing to existing demand-side or affordability constraints. As elsewhere in the region, subscriptions to gigabit-speed services remain marginal in 2024.

In mobile connectivity, Montenegro has achieved strong progress in the rollout of 5G networks. By 2024, 5G coverage reached 94% of the population, while almost 22% of individuals were using 5G SIM cards. This combination of extensive coverage and growing take-up places Montenegro at a more advanced stage of 5G deployment and adoption compared with most of the WB6.

The regulatory and policy framework for electronic communications in Montenegro has continued to evolve, laying stronger foundations for investment in digital infrastructure. Policy focus is increasingly shifting towards the facilitation of infrastructure deployment and investment. The Montenegro Broadband Development Plan 2025–2029<sup>23</sup> provides a comprehensive strategic framework to guide the expansion of high-capacity broadband networks. It sets out a vision with strategic and operational objectives to extend broadband access, modernise existing infrastructure, and support next-generation technologies, including gigabit broadband and 5G connectivity. The plan specifically targets gaps in coverage, particularly in rural and underserved areas, while creating favourable conditions for network rollout through a mix of public and private sector engagement. Alignment with the EU Gigabit Infrastructure Act<sup>24</sup> is also emerging as a key short-term objective, focusing on

23 <https://wapi.gov.me/download/674a72d5-7f7e-4ec4-b66b-e311e2ddd7c2?version=1.0>

24 [https://enlargement.ec.europa.eu/document/download/a41cf419-5473-4659-a3f3-af4bc8ed243b\\_en?filename=Montenegro%20Report%202024.pdf](https://enlargement.ec.europa.eu/document/download/a41cf419-5473-4659-a3f3-af4bc8ed243b_en?filename=Montenegro%20Report%202024.pdf)

reducing administrative barriers, improving access to physical infrastructure, and accelerating civil works coordination. Together, these initiatives reflect a shift from pure regulatory alignment towards more implementation-oriented measures aimed at achieving gigabit connectivity and ensuring long-term network resilience.

## DIGITAL TRANSFORMATION OF BUSINESSES

Indicators from 2023 and 2024 that are included in the Digital transformation of businesses are given in Table 15.

**Table 15** Digital transformation of businesses indicators, Montenegro

Indicator	Montenegro		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>SMEs with at least basic level of digital intensity</b> % SMEs	63.9% 2023	64.8%* 2024	<b>59%</b>	<b>73%</b>
<b>Electronic information sharing</b> % enterprises	42.2% 2023	42.2% 2023	<b>25%</b>	<b>42%</b>
<b>Data analytics</b> % enterprises	46.0% 2023	46.0% 2023	<b>29%</b>	<b>32%</b>
<b>Cloud</b> % enterprises	28.0% 2023	28.0% 2023	<b>23%</b>	<b>38%</b>
<b>Artificial intelligence</b> % enterprises	5.6% 2023	7.9% 2024	<b>6%</b>	<b>13%</b>
<b>AI or Cloud of Data analytics</b> % enterprises	58.3% 2023	58.3% 2023	<b>37%</b>	<b>54%</b>
<b>Unicorns</b> Number of unicorns	0	0	<b>0</b>	<b>286</b>
<b>e-Commerce turnover</b> % SMEs	8.8% 2023	8.8% 2023	<b>8%</b>	<b>12%</b>
<b>SMEs selling online</b> % SMEs	26.4% 2025	26.4% 2025	<b>24%</b>	<b>20%</b>

**Source:** Eurostat, Statistical Office of Montenegro (MONSTAT), market research, EU DESI 2025 (for EU average), EU DESI 2024 (for EU average)

\*Due to a methodological change, the 2024 data are not fully comparable with 2023.

Montenegro consistently outperforms the WB6 averages across all indicators of business digital transformation. By 2024, nearly 65% of SMEs had at least a basic level of digital intensity, surpassing the regional average of 59%. Adoption of advanced technologies is also high. In 2023, 46% of companies used data analytics, while 28% utilised cloud computing. Digital information exchange is widespread, with 42% of enterprises using online channels to share data, matching the EU average and significantly exceeding the WB6 average of 25%. E-commerce adoption is similarly strong, with SMEs performing well across key indicators.

The Digital Transformation Strategy 2022–2026 provides the policy framework for advancing digital adoption in both the public and private sectors. A central pillar is the Law on Electronic Identification and Electronic Signature, which governs the use of eID and electronic signatures, guarantees recognition of foreign electronic IDs, and fully aligns with the EU eIDAS Regulation, ensuring interoperability with European digital frameworks.

Practical support for SMEs is provided through the EU Digital Innovation Hub (DIH) initiative<sup>25</sup>, which offers access to technology, expertise, and funding. These hubs allow companies to pilot solutions such as AI, big data, and IoT in a controlled, low-risk environment. Complementing these efforts, the Strategy for the Development of MSMEs 2023–2026<sup>26</sup> focuses on enhancing SMEs' digital capabilities and competitiveness by facilitating access to digital tools and promoting the adoption of advanced technologies across key economic sectors.

<sup>25</sup> <https://european-digital-innovation-hubs.ec.europa.eu/edih-catalogue/montedih>

<sup>26</sup> <https://www.gov.me/dokumenta/3e145aba-089d-40bf-8bbb-6e7a91b3e873>

## DIGITALISATION OF PUBLIC SERVICES

Indicators from 2023 and 2024 that are included in the Digitalisation of public services dimension are given in Table 16.

**Table 16** Digitalisation of public services indicators, Montenegro

Indicator	Montenegro		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>e-Government users</b> % internet users	48.4% 2023	37.5% 2024	<b>54%</b>	<b>75%</b>
<b>Digital public services for citizens</b> Score 0-100	53 2023	50* 2025	<b>53</b>	<b>82</b>
<b>Digital public services for businesses</b> Score 0-100	37 2023	63* 2025	<b>65</b>	<b>86</b>
<b>Pre-filled forms</b> Score 0-100	24 2023	49* 2025	<b>65</b>	<b>71</b>
<b>Transparency of service delivery, design and personal data</b> Score 0-100	38 2023	38* 2025	<b>37</b>	<b>69</b>
<b>User support</b> Score 0-100	66 2023	66* 2025	<b>55</b>	<b>89</b>
<b>Mobile friendliness</b> Score 0-100	80 2023	91* 2025	<b>91</b>	<b>96</b>
<b>Access to e-health records</b> Score 0-100	74 2025	74* 2025	<b>51</b>	<b>83</b>

**Source:** Eurostat, desk research, EU DESI 2025 (for EU average)

\*Calculated based on desk research from 2025

In 2024, only 37.5% of internet users in Montenegro actively used e-government services, well below the WB6 average of 54%. Performance also remains weaker than the regional average in key areas such as the use of pre-filled forms and the availability of digital public services for both citizens and businesses. At the same time, Montenegro shows comparatively stronger results in user support, transparency of service delivery, mobile-friendly public service websites, and access to electronic health records, indicating a more balanced level of maturity across qualitative aspects of digital public services.

Montenegro has put in place a comprehensive framework for digitalising public services, designed to expand online service availability while supporting the broader digital transformation of the economy. The Law on Electronic Government provides the legal basis for modernising public administration, enabling more efficient service delivery for both citizens and businesses. In parallel, the Digital Transformation Strategy 2022–2026 complements the Public Administration Reform Strategy 2022–2026<sup>27</sup> in the field of e-government, emphasising the development of digital services through the eUprava portal and promoting greater interoperability and transparency of public data.

Usage of digital services continues to grow, supported by institutional efforts to raise awareness and strengthen capacity for eservice delivery. Montenegro has adopted the Public Services Digitalisation Plan 2025–2027<sup>28</sup>, which sets out the rollout of 162 additional online services, including electronic submissions for employment records and social benefits, further enhancing accessibility and convenience. At the local level, initiatives such as the e-Podgorica portal demonstrate tangible progress in municipal digital service delivery, providing 24/7 access to key procedures and contributing to the wider modernisation of public administration.

<sup>27</sup> <https://www.gov.me/en/documents/0aaa040b-0413-46b6-a8c7-5b2c10cdc9dc>

<sup>28</sup> <https://www.gov.me/dokumenta/3e3e7217-c2e2-401d-b073-6d1770fc67b5>

## NORTH MACEDONIA

The results for individual DESI indicators under DESI dimensions for North Macedonia are presented below.

### DIGITAL SKILLS

Indicators from 2023 and 2024 that are included in the Digital skills dimension are given in Table 17.

**Table 17** Digital skills indicators, North Macedonia

Indicator	North Macedonia		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>Internet use</b> % individuals	84.4% 2023	90.8% 2024	<b>88%</b>	<b>92%</b>
<b>At least basic digital skills</b> % individuals	34.6% 2021	38.1%* 2025	<b>33%</b>	<b>56%</b>
<b>Above basic digital skills</b> % individuals	8.2% 2021	8.5%* 2025	<b>9%</b>	<b>27%</b>
<b>ICT specialists</b> % employees	2.3% 2020	3.3% 2024	<b>3%</b>	<b>5%</b>
<b>Enterprises providing ICT training</b> % enterprises	11.2% 2022	16.4%* 2025	<b>22%</b>	<b>22%</b>

**Source:** Statistical Office of North Macedonia, market research, EU DESI 2025 (for EU average)

\*Calculated based on market research from 2025

North Macedonia demonstrated a strong performance in digital skills. Around 38% of individuals aged 16–74 had at least basic digital skills in 2025, while almost 9% possessed above-basic competencies, providing a solid foundation for further digital development. Internet usage was widespread, reaching nearly 91% of the population in 2024, surpassing the WB6 average of 88% and approaching the EU average of 92% and indicating broad digital inclusion.

In 2024, ICT specialists accounted for 3% of total employment, in line with the WB6 average. Enterprise engagement in skills development also remains relatively weak, with only 16% of enterprises providing ICT training in 2025, below the regional average of 22% in 2024.

North Macedonia has reinforced its strategic approach to digital skills development within the broader digital transformation agenda. The ICT Development Strategy 2030<sup>29</sup> places strong emphasis on strengthening digital competencies as a foundation for economic growth and innovation. The strategy highlights the development of both basic and advanced skills, including in areas such as programming, data-driven technologies, and emerging digital applications.

These efforts are complemented by North Macedonia's participation in EU-supported programmes, including Digital Skills for Jobs and the European Digital Innovation Hub (DIH) network, which provides training, mentoring, and access to digital tools for individuals, SMEs, and public institutions.

Taken together, these initiatives reflect a more structured and coordinated effort to equip citizens with the skills required to adapt to the evolving demands of a digital economy.

<sup>29</sup> <https://portal.mdt.gov.mk/post-body-files/strategija-za-razvoj-na-ikt-smart-mk-2030-file-mBdU.pdf>

## DIGITAL INFRASTRUCTURE

Indicators from 2023 and 2024 that are included in the Digital infrastructure dimension are given in Table 18.

**Table 18** Digital infrastructure indicators, North Macedonia

Indicator	North Macedonia		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>Overall internet take-up</b>	88.0%	90.8%	<b>91%</b>	<b>94%</b>
% households	2023	2024		
<b>Share of fixed broadband subscription ≥ 100 Mbps</b>	7.8%	14.5%	<b>46%</b>	<b>72%</b>
% households	2023	2024		
<b>Share of fixed broadband subscription ≥ 1 Gbps</b>	0.1%	0.1%	<b>1%</b>	<b>22%</b>
% households	2023	2024		
<b>Fixed Very High Capacity Network (VHCN) coverage</b>	68.7%	72.6%	<b>66%</b>	<b>82%</b>
% households	2023	2024		
<b>Fibre to the premises (FTTP) coverage</b>	36.6%	36.6%	<b>57%</b>	<b>69%</b>
% households	2024	2024		
<b>Overall 5G coverage</b>	76.2%	97.0%*	<b>21%</b>	<b>94%</b>
% populated areas	2023	2024		
<b>5G coverage in the 3.4 - 3.8 GHz band</b>	N/A	78.0%	<b>17%</b>	<b>68%</b>
% populated areas		2024		
<b>5G spectrum</b>	38.9%	38.9%	<b>37%</b>	<b>75%</b>
% of total harmonised 5G spectrum	2023	2024		
<b>5G SIM cards</b>	N/A	15.8%	<b>4%</b>	<b>36%</b>
% of total population		2024		
<b>Edge nodes</b>	N/A	2	<b>23</b>	<b>2,257</b>
Number of deployed edge nodes		2025		

**Source:** AEK (Agency for Electronic Communications)/BCO (Broadband Competence Office), Statistical Office of North Macedonia, EU DESI 2025 (for EU average)

\*Share of population

As of 2024, internet access in North Macedonia was widespread, with almost 91% of households connected, reflecting a high level of basic connectivity. Also, substantial progress was made in the development of next-generation broadband infrastructure. In 2024, very high capacity network coverage reached near 73% of households, exceeding the WB6 average of 66%, while FTTP coverage stood at nearly 37% of households.

Despite this strong infrastructure rollout, demand-side uptake of high-speed broadband services in North Macedonia remains comparatively low. In 2024, only 15% of households with a fixed broadband subscription opted for services with speeds of at least 100 Mbps, well below the WB6 average of 46%. Uptake of ultra-fast broadband services ( $\geq 1$  Gbps) also remained limited, reflecting a broader regional trend. This gap between network availability and adoption suggests that affordability, rather than digital skills, which are comparatively strong, remains the primary barrier. Addressing pricing, income constraints, and the perceived value of high-speed broadband will be essential to boost adoption.

Next-generation mobile connectivity continues to perform strongly. By 2024, 5G population coverage reached 97%, positioning North Macedonia among the regional leaders. North Macedonia assigned 5G spectrum in the 700 MHz and 3.5 GHz bands in 2022. A subsequent spectrum award process in the 700 MHz and 3.5 GHz bands, completed in January 2026, brought an additional mobile operator into the market, further strengthening competition and supporting network expansion.

North Macedonia has further strengthened its strategic framework for connectivity through the adoption of a new ICT Development Strategy 2030, which updates and complements the revised North Macedonia Operational Broadband Plan 2019–2029<sup>30</sup> and provides a more integrated, EU-aligned policy framework for the digital transformation. The Operational Broadband Plan remains the principal instrument for broadband implementation and investment planning, aligning with the objectives of the EU Digital Agenda by setting concrete targets for network deployment and service uptake. The Plan targets universal 5G coverage by 2029, guaranteeing minimum download speeds of 100 Mbps and ensuring that at least half of all household broad-

30 <https://portal.mdt.gov.mk/post-body-files/strategija-za-nacionalen-operativen-brodbend-plan-file-1H2g.pdf>

band subscriptions meet this speed. In addition, all public institutions are expected to be connected via symmetrical broadband links of at least 1 Gbps. Building on this foundation, the ICT Strategy 2030 places a stronger emphasis on the role of broadband infrastructure as an enabler of digital public services, digital skills development, innovation, and private-sector growth, explicitly linking connectivity objectives with the EU Digital Decade 2030 targets.

The legal framework for electronic communications is largely aligned with EU requirements, including the European Electronic Communications Code (EECC) and the Broadband Cost Reduction Directive (BCRD). Preparatory work is underway for further alignment with the Gigabit Infrastructure Act (GIA) with the adoption of the relevant legislation foreseen in 2026.

Overall, North Macedonia has achieved strong progress in broadband infrastructure deployment, especially in the expansion of very high capacity network coverage. However, continued policy efforts will be required to translate widespread network availability into higher adoption of high-speed broadband services and to ensure affordability for households and businesses.

## DIGITAL TRANSFORMATION OF BUSINESSES

Indicators from 2023 and 2024 that are included in the Digital transformation of businesses dimension are given in Table 19.

**Table 19** Digital transformation of businesses indicators, North Macedonia

Indicator	North Macedonia		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>SMEs with at least basic level of digital intensity</b> % SMEs	58.1% 2022	47.8%* 2025**	<b>59%</b>	<b>73%</b>
<b>Electronic information sharing</b> % enterprises	19.2% 2025	19.2% 2025	<b>25%</b>	<b>42%</b>
<b>Data analytics</b> % enterprises	23.2% 2025	23.2% 2025	<b>29%</b>	<b>32%</b>
<b>Cloud</b> % enterprises	27.2% 2025	27.2% 2025	<b>23%</b>	<b>38%</b>
<b>Artificial intelligence</b> % enterprises	5.6% 2025	5.6% 2025	<b>6%</b>	<b>13%</b>
<b>AI or Cloud of Data analytics</b> % enterprises	45.2% 2025	45.2% 2025	<b>37%</b>	<b>54%</b>
<b>Unicorns</b> Number of unicorns	0	0	<b>0</b>	<b>286</b>
<b>e-Commerce turnover</b> % SMEs	6% 2022	8.6%* 2025	<b>8%</b>	<b>12%</b>
<b>SMEs selling online</b> % SMEs	8.1% 2022	23.3%* 2025	<b>24%</b>	<b>20%</b>

**Source:** Market research, EU DESI 2025 (for EU average), EU DESI 2024 (for EU average)

\*Calculated based on market research from 2025.

\*\* Due to a methodological change, the 2025 data are not fully comparable with 2022.

Enterprises in North Macedonia are increasingly embracing advanced digital technologies. By 2025, 23% were using data analytics, 27% had implemented cloud services, and nearly 6% had adopted artificial intelligence. Nearly half of SMEs had at least a basic level of digital intensity in 2025, creating a solid base for continued technological uptake.

E-commerce is also growing, with 23% of SMEs selling online in 2025, generating nearly 9% of their total turnover.

North Macedonia has launched a range of strategic initiatives to advance the digital transformation of businesses, with a strong emphasis on supporting SMEs. Building on the growing adoption of digital technologies and the solid base of digital skills, these efforts aim to strengthen competitiveness, innovation, and the uptake of advanced digital solutions.

The Smart Specialisation Strategy 2024–2027<sup>31</sup> marks a key step, targeting sectors such as smart agriculture, manufacturing, energy, and digital services to align innovation with economic needs. The Development Strategy 2024–2044<sup>32</sup> complements this by outlining a long-term vision emphasising competitiveness, innovation, and inclusive growth, establishing digital transformation as a key driver of economic growth.

At the regulatory level, the Law on Electronic Documents, Electronic Identification, and Trusted Services was amended to enhance the legal framework for e-identification and electronic signatures. However, existing tools remain less user-friendly and are not free of charge for citizens. Further efforts are needed to fully align with the new EU Digital Identity Framework (eIDAS 2.0) and the ePrivacy Directive, ensuring secure, interoperable, and accessible digital services for both businesses and individuals<sup>33</sup>.

## DIGITALISATION OF PUBLIC SERVICES

Indicators from 2023 and 2024 that are included in the Digitalisation of public services dimension are given in Table 20.

**Table 20** Digitalisation of public services indicators, North Macedonia

Indicator	North Macedonia		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>e-Government users</b>	23.7%	38.3%	<b>54%</b>	<b>75%</b>
% internet users	2024	2024		
<b>Digital public services for citizens</b>	38	49*	<b>53</b>	<b>82</b>
Score 0-100	2023	2025		
<b>Digital public services for businesses</b>	54	56*	<b>65</b>	<b>86</b>
Score 0-100	2023	2025		
<b>Pre-filled forms</b>	73	75*	<b>65</b>	<b>71</b>
Score 0-100	2023	2025		
<b>Transparency of service delivery, design and personal data</b>	27	28*	<b>37</b>	<b>69</b>
Score 0-100	2023	2025		
<b>User support</b>	50	51*	<b>55</b>	<b>89</b>
Score 0-100	2023	2025		
<b>Mobile friendliness</b>	91	91*	<b>91</b>	<b>96</b>
Score 0-100	2023	2025		
<b>Access to e-health records</b>	73	74*	<b>51</b>	<b>83</b>
Score 0-100	Q1 2025	Q2 2025		

**Source:** Eurostat, desk research, EU DESI 2025 (for EU average)

\*Calculated based on desk research from 2025

In 2024, the adoption of e-government services in North Macedonia remained limited, with only 38% of the population engaging with public services online, below the WB6 average of 54%. In 2025, the lag in the delivery of digital services for both citizens and businesses, as well as in providing comprehensive user support, has continued. At the same time, North Macedonia performed relatively well in the re-use of information across administrations, particularly through pre-filled forms, and maintained high standards of mobile accessibility, making services easier to navigate on smartphones and tablets. Access to electronic health records also exceeded the regional average in 2025.

North Macedonia has implemented several strategic initiatives to modernise public services, focusing on enhancing efficiency, transparency, and engagement with citizens. At the core of these efforts is the ICT Development Strategy 2030, which aims to foster a data-driven approach within government institutions, supporting the creation of secure, centralised e-services and the adoption of digital tools to simplify administrative procedures. In parallel, the Strategy for Public Administration Reform 2023–2030<sup>34</sup> complements these objectives

31 <https://westernbalkans-infohub.eu/wp-content/uploads/2024/05/EN-S3-MK-20.12.2023.docx>

32 [https://www.nrs.mk/content/NDS%206.11.2024\\_EN.pdf](https://www.nrs.mk/content/NDS%206.11.2024_EN.pdf)

33 [https://enlargement.ec.europa.eu/document/download/267b368e-6b55-4a42-bb72-6395593de4da\\_en?filename=north-macedonia-report-2025.pdf&prefLang=nl](https://enlargement.ec.europa.eu/document/download/267b368e-6b55-4a42-bb72-6395593de4da_en?filename=north-macedonia-report-2025.pdf&prefLang=nl)

34 [https://mioa.gov.mk/content/Strategija%20RJA\\_MK%2003.pdf](https://mioa.gov.mk/content/Strategija%20RJA_MK%2003.pdf)

and outlines reforms in policy-making, institutional structures, and operational processes, all designed to ensure that public services are accessible, high-quality, and responsive to the needs of citizens and businesses.

A notable development in 2024 was the introduction of a digital identity wallet, a mobile application enabling citizens to store electronic versions of official credentials, such as ID cards and driver's licenses, for secure access to public and private services. The 2025 amendments to the Law on Electronic Documents, Electronic Identification, and Trust Services aim to align the legal framework with the updated EU Digital Identity and Trust Services Regulation (eIDAS 2.0), including provisions for a European Digital Identity Wallet<sup>35</sup>. Full implementation, however, will require further technical measures and regulatory guidance to improve usability and accessibility for all users.

A redesigned e-services portal, launched in late 2024, added roughly 100 new online services. The upgraded portal also extends services to businesses, offering a simplified user interface and a wider range of services. To further strengthen digital public services, North Macedonia should continue aligning with the European Interoperability Framework and the Interoperable Europe Act, ensuring secure, seamless, and citizen-centric access to public administration services<sup>36</sup>.

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35 [https://enlargement.ec.europa.eu/document/download/267b368e-6b55-4a42-bb72-6395593de4da\\_en?filename=north-macedonia-report-2025.pdf&prefLang=nl](https://enlargement.ec.europa.eu/document/download/267b368e-6b55-4a42-bb72-6395593de4da_en?filename=north-macedonia-report-2025.pdf&prefLang=nl)

36 <https://www.ecoi.net/en/file/local/2132157/north-macedonia-report-2025.pdf?utm>

## SERBIA

The results for individual DESI indicators under DESI dimensions for Serbia are presented below.

### DIGITAL SKILLS

Indicators from 2023 and 2024 that are included in the Digital skills dimension are given in Table 21.

**Table 21** Digital skills indicators, Serbia

Indicator	Serbia		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>Internet use</b> % individuals	85.2% 2023	87.3% 2024	<b>88%</b>	<b>92%</b>
<b>At least basic digital skills</b> % individuals	33.6% 2023	33.6% 2023	<b>33%</b>	<b>56%</b>
<b>Above basic digital skills</b> % individuals	11.3% 2023	11.3% 2023	<b>9%</b>	<b>27%</b>
<b>ICT specialists</b> % employees	4.3% 2023	4.3% 2024	<b>3%</b>	<b>5%</b>
<b>Enterprises providing ICT training</b> % enterprises	22.2% 2022	26.8% 2024	<b>22%</b>	<b>22%</b>

*Source: Eurostat, Statistical Office of Serbia (RZS), EU DESI 2025 (for EU average)*

Serbia demonstrates a comparatively strong position across key digital skills indicators. In 2024, internet usage among individuals reached 87%, providing a solid foundation for digital participation. In 2023, the share of individuals with at least basic digital skills stood at 34%, broadly in line with the WB6 average, while the proportion with above-basic digital skills reached 11%, exceeding the regional average, but remaining well below the EU level of 27%.

At the advanced end of the skills spectrum, Serbia performs notably well. ICT specialists accounted for 4% of total employment in 2024, well above the WB6 average of 3%, indicating a relatively strong capacity to support advanced digital activities. This strength is further reflected in enterprise behaviour, with 27% of enterprises providing ICT training to their employees in 2024, exceeding both the WB6 and EU average of 22%, suggesting that businesses are actively investing in workforce ICT upskilling. Combined with a high output of ICT graduates, which exceeds the EU average, these trends indicate a robust digital talent pipeline. Overall, Serbia's key challenge lies less in the supply of advanced skills and more in extending digital competencies across the wider population and ensuring effective integration of skilled labour into the domestic digital economy.

At the strategic level, Serbia continues to place strong emphasis on digital skills as a core enabler of its digital transformation. The framework is anchored in the Strategy for Development of Information Society and Information Security 2021–2026<sup>37</sup>, which focuses on strengthening digital competences among citizens, upskilling public and private sector employees, and modernising digital infrastructure in education. In parallel, the Industrial Policy Strategy 2021–2030<sup>38</sup> supports the transition towards a more skills-based and innovation-driven economy, explicitly recognising digital skills as a key driver of productivity and competitiveness.

Implementation has progressed under this framework with a growing emphasis on operational delivery, re-skilling, and closer alignment with labour market needs. This is reflected in labour market and education initiatives targeting upskilling and reskilling, including short-cycle training programmes, employer-led ICT training schemes, and the expanded use of digital tools in vocational and higher education. These measures translate strategic priorities into more concrete mechanisms for skills delivery and signal a gradual shift from strategy formulation to consolidation and execution.

<sup>37</sup> <https://mtt.gov.rs/extfile/sr/35315/Information%20Society%20and%20InfoSec%20Strategy%202021-2026111.pdf>

<sup>38</sup> <https://privreda.gov.rs/sites/default/files/documents/2021-08/Industrial-Policy-Strategy-2021-2030.pdf>

Together, these efforts highlight the increasing role of enterprises, innovation ecosystems, and public–private cooperation in addressing digital skills needs.

## DIGITAL INFRASTRUCTURE

Indicators from 2023 and 2024 that are included in the Digital infrastructure dimension are given in Table 22.

**Table 22** Digital infrastructure indicators, Serbia

Indicator	Serbia		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>Overall internet take-up</b>	85.4%	88.9%	<b>91%</b>	<b>94%</b>
% households	2023	2024		
<b>Share of fixed broadband subscription ≥ 100 Mbps</b>	49.5%	54.6%	<b>46%</b>	<b>72%</b>
% households	2023	2024		
<b>Share of fixed broadband subscription ≥ 1 Gbps</b>	0.3%	0.5%	<b>1%</b>	<b>22%</b>
% households	2023	2024		
<b>Fixed Very High Capacity Network (VHCN) coverage</b>	71%	73.2%	<b>66%</b>	<b>82%</b>
% households	2023	2024		
<b>Fibre to the premises (FTTP) coverage</b>	69.8%	72.2%	<b>57%</b>	<b>69%</b>
% households	2023	2024		
<b>Overall 5G coverage</b>	0%	0%	<b>21%</b>	<b>94%</b>
% populated areas	2023	2024		
<b>5G coverage in the 3.4 - 3.8 GHz band</b>	0%	0%	<b>17%</b>	<b>68%</b>
% populated areas	2023	2024		
<b>5G spectrum</b>	0%	65.8%	<b>37%</b>	<b>75%</b>
% of total harmonised 5G spectrum	2023	2025		
<b>5G SIM cards</b>	0%	0%	<b>4%</b>	<b>36%</b>
% of total population	2023	2024		
<b>Edge nodes</b>	N/A	6	<b>23</b>	<b>2,257</b>
Number of deployed edge nodes		2025		

**Source:** RATEL (Regulatory Authority for Electronic Communications and Postal Services), EU DESI 2025 (for EU average)

Serbia continues to strengthen its digital infrastructure, with steady progress across key fixed connectivity indicators. In 2024, overall internet take-up reached 89% of households, confirming sustained growth in basic connectivity, but still slightly below the WB6 average of 91%, showing potential for further expansion of household connectivity.

In 2024, Serbia performed strongly in high-capacity fixed networks. Coverage of fixed very high capacity networks exceeded 73% of households, significantly above the WB6 average of 66%. This performance is supported by the continued expansion of fibre networks; in 2024 fibre to the premises coverage reached 72% of homes, which is above the EU average of 69% and notably higher than the WB6 average of 57%. In 2024, Serbia exceeded the regional average in high-speed fixed broadband adoption, with nearly 55% of subscriptions offering speeds of at least 100 Mbps, compared to the WB6 average of 46%. However, as elsewhere in the region, the adoption of gigabit-speed subscriptions remains marginal, pointing to demand-side constraints such as affordability, use-case maturity, and limited differentiation of retail offers.

In next-generation mobile connectivity, Serbia has moved from preparatory phases towards implementation. The completion of the 5G spectrum auction in December 2025 represents a key milestone in digital infrastructure development, laying the foundation for the wider deployment of next-generation mobile services.

Digital infrastructure developments are supported by an updated strategic framework. The Strategy for Development of Electronic Communications System in Serbia 2024–2027<sup>39</sup> places a strong focus on reducing territorial disparities in connectivity, particularly in rural and underdeveloped areas. Its implementation is supported by the Programme for Development of Broadband Communication Infrastructure in Rural and Underdevel-

39 <https://pravno-informacioni-sistem.rs/eli/rep/sgrs/vlada/strategija/2024/70/1/reg>

oped Areas 2024–2026<sup>40</sup>, which targets connectivity for schools, public institutions, local communities, and approximately 152,000 households.

Together, these measures shift policy emphasis from network availability alone towards service quality, affordability, and access, while promoting competition and the uptake of fibre and 5G technologies.

## DIGITAL TRANSFORMATION OF BUSINESSES

Indicators from 2023 and 2024 that are included in the Digital transformation of businesses dimension are given in Table 23.

**Table 23** Digital transformation of businesses indicators, Serbia

Indicator	Serbia		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>SMEs with at least basic level of digital intensity</b> % SMEs	49.2% 2023	85.6%* 2024	<b>59%</b>	<b>73%</b>
<b>Electronic information sharing</b> % enterprises	22.4% 2023	22.4% 2023	<b>25%</b>	<b>42%</b>
<b>Data analytics</b> % enterprises	24.8% 2023	24.8% 2023	<b>29%</b>	<b>32%</b>
<b>Cloud</b> % enterprises	28.4% 2023	28.4% 2023	<b>23%</b>	<b>38%</b>
<b>Artificial intelligence</b> % enterprises	1.8% 2023	7.0% 2024	<b>6%</b>	<b>13%</b>
<b>AI or Cloud of Data analytics</b> % enterprises	38.8% 2023	38.8% 2023	<b>37%</b>	<b>54%</b>
<b>Unicorns</b> Number of unicorns	0	0	<b>0</b>	<b>286</b>
<b>e-Commerce turnover</b> % SMEs	5.3% 2023	5.4% 2024	<b>8%</b>	<b>12%</b>
<b>SMEs selling online</b> % SMEs	28.4% 2023	30.2% 2024	<b>24%</b>	<b>20%</b>

**Source:** Eurostat, Statistical Office of Serbia (RZS), EU DESI 2025 (for EU average), EU DESI 2024 (for EU average)

\*Due to a methodological change, the 2024 data are not fully comparable with 2023.

Serbia demonstrates relatively strong digital intensity among SMEs, with 86% of enterprises achieving at least a basic level of digital maturity, surpassing the WB6 and EU averages. This indicates that SMEs in Serbia are comparatively well-positioned to leverage digital tools.

In terms of the adoption of core digital technologies, results are mixed. In 2023, 22% of enterprises had implemented ERP systems for electronic information sharing, slightly below the WB6 average. Uptake of data analytics reached 25%, marginally below the regional average of 29%, while cloud adoption stood at 28%, exceeding the WB6 average of 23%. Notably, artificial intelligence adoption is showing rapid growth, with 7% of enterprises using at least one AI technology in 2024, up from just 1% in 2023, signalling a positive trajectory in advanced digital technology uptake.

Despite these improvements, the integration of digital channels into business operations remains limited. In 2024, 30% of SMEs engaged in e-commerce, yet online sales turnover remains relatively low, indicating that e-commerce continues to play a supplementary rather than a primary role in revenue generation. This suggests that while SMEs in Serbia are increasingly digitally capable, targeted support is needed to translate technological adoption into meaningful business impact, particularly through digital marketing, e-commerce strategies, and the scaling of high-value digital services.

Serbia's digital transformation is supported by a comprehensive set of strategic initiatives aimed at fostering innovation and accelerating the digitalisation of businesses. The Industrial Policy Strategy 2021–2030<sup>41</sup> emphasizes the digitalisation of industry as a key driver of competitiveness, providing a mix of education pro-

40 <https://pravno-informacioni-sistem.rs/eli/rep/sgrs/vlada/uredba/2024/68/1/reg>

41 <https://privreda.gov.rs/sites/default/files/documents/2021-08/Industrial-Policy-Strategy-2021-2030.pdf>

grammes, advisory services, financial incentives, and measures to strengthen digital security. The Smart Specialisation Strategy 2020–2027<sup>42</sup> places a priority on the ICT sector, targeting advanced technologies such as big data, AI, IoT, cloud computing, and blockchain, with a strong focus on enhancing public administration and promoting data-driven decision-making.

In parallel, Serbia has advanced its artificial intelligence agenda with the adoption of a new Strategy for Development of Artificial Intelligence 2025–2030<sup>43</sup>, which builds on past efforts and broadens focus on legislative alignment, skills development, research infrastructure, and the adoption of AI across public and private sectors.

Digital transformation of businesses in Serbia is supported by a broad set of strategic and programme-level initiatives. EU-backed hubs such as the S4AI\_HUB<sup>44</sup> and the Capital Innovation Point Serbia (CIPS)<sup>45</sup> provide onestop support for SMEs adopting advanced digital technologies such as AI, automation, and cybersecurity, along with bespoke consulting and networking opportunities. Domestic support programmes delivered by the Centre for Digital Transformation (CDT)<sup>46</sup> offer expert analysis, strategy development, and non-refundable grants to help companies implement digital tools and improve competitiveness.

Together, these strategies and initiatives provide a sound framework that not only drives technological adoption and innovation but also strengthens the competitiveness and resilience of Serbia's businesses in a rapidly evolving digital economy.

## DIGITALISATION OF PUBLIC SERVICES

Indicators from 2023 and 2024 that are included in the Digitalisation of public services dimension are given in Table 24.

**Table 24** Digitalisation of public services indicators, Serbia

Indicator	Serbia		WB DESI 2025	EU DESI 2025
	DESI 2024	DESI 2025		
<b>e-Government users</b>	52.4%	58.5%	<b>54%</b>	<b>75%</b>
% internet users	2023	2024		
<b>Digital public services for citizens</b>	62	69*	<b>53</b>	<b>82</b>
Score 0-100	2023	2025		
<b>Digital public services for businesses</b>	83	87*	<b>65</b>	<b>86</b>
Score 0-100	2023	2025		
<b>Pre-filled forms</b>	61	62*	<b>65</b>	<b>71</b>
Score 0-100	2023	2025		
<b>Transparency of service delivery, design and personal data</b>	62	63*	<b>37</b>	<b>69</b>
Score 0-100	2023	2025		
<b>User support</b>	51	54*	<b>55</b>	<b>89</b>
Score 0-100	2023	2025		
<b>Mobile friendliness</b>	96	96*	<b>91</b>	<b>96</b>
Score 0-100	2023	2025		
<b>Access to e-health records</b>	84	84*	<b>51</b>	<b>83</b>
Score 0-100	2024	2025		

**Source:** Eurostat, desk research, EU DESI 2025 (for EU average)

\*Calculated based on desk research from 2025

42 [https://pametnaspecijalizacija.mpn.gov.rs/wp-content/uploads/2021/06/Strategija-pametne-specijalizacije\\_EN\\_WEB.pdf](https://pametnaspecijalizacija.mpn.gov.rs/wp-content/uploads/2021/06/Strategija-pametne-specijalizacije_EN_WEB.pdf)

43 <https://www.srbija.gov.rs/tekst/en/149169/strategy-for-the-development-of-artificial-intelligence-in-the-republic-of-serbia.php>

44 <https://s4ai.rs/en/>

45 <https://european-digital-innovation-hubs.ec.europa.eu/sr/node/110819>

46 <https://cdt.org.rs/>

Across most indicators of digital public service delivery, Serbia continued to surpass the WB6 average. E-government usage reached 59% of internet users in 2024, above the regional average of 54%, reflecting widespread use of online public services by citizens.

Serbia demonstrated particularly strong performance in the quality and accessibility of digital services. In 2025, the score for digital public services for citizens reached 69, well above the WB6 average of 53, while services for businesses scored 87, exceeding both the WB6 average of 65 and the EU average of 86. Mobile friendliness was also a strength, with a score of 96, surpassing the WB6 average of 91 and aligning with the EU benchmark. Transparency in service delivery and the protection of personal data reached a score of 63, well above the WB6 average of 37 and nearing the EU average of 69. Access to e-health records also showed strong results, with Serbia achieving a score of 84, well above the WB6 average of 51 and slightly above the EU average of 83.

Nonetheless, certain areas offer room for improvement. User support scored 54 in 2025, slightly below the WB6 average, indicating the need to improve help and guidance for service users. Pre-filled forms scored 62, slightly under the regional average of 65, indicating potential to further streamline processes and enhance data reuse across public administration.

Serbia has steadily advanced the digitalisation of public services through a combination of strategic initiatives, legal frameworks, and operational programmes. The Programme for Development of e-Government 2023–2025<sup>47</sup> sets out key objectives to strengthen interoperability among public systems, broaden the range of services offered through the e-Uprava portal, and promote the use of digital ID and trust services.

At the heart of Serbia's digital public service infrastructure is the e-Uprava portal, serving as the main access point for citizens and businesses to online public services. Recent improvements have prioritised mobile-friendly design, simplified navigation, and an overall better user experience to support wider adoption and engagement.

Newer initiatives are helping to broaden the reach and capacity of digital public services in Serbia. The eGovernment for All project<sup>48</sup> targets local governments, providing technical support and capacity building to bring e-services closer to citizens, especially outside major urban centres.

These initiatives reflect Serbia's evolving approach to digital public service delivery and administrative modernisation, combining capacity building at the local level with innovation support across the public sector to improve service accessibility, efficiency, and user experience.

47 <http://mduls.gov.rs/wp-content/uploads/Program-razvoja-elektronske-uprave-23-25-u-RS-ENG-FINAL.docx>

48 <https://www.undp.org/serbia/news/egovernment-all-new-project-launched-advance-digital-capacity-local-governments?utm>

# CONCLUSION

The DESI indicators provide an invaluable tool for tracking digital progress and benchmarking performance both within the region and against the EU. Individual DESI indicators highlight specific areas where each WB6 can enhance its performance compared to other WB6 peers and the EU. The WB6 have already committed to using DESI indicators to monitor advancements across key pillars of digital transformation and to allow comparisons of digital developments within the region and with the EU.

A key component of this effort is strengthening data collection and comparability. While significant progress has been made in designating institutions responsible for gathering the necessary data, there are still notable data gaps, particularly regarding the indicators within the Digital transformation of businesses dimension. Additional challenges persist from the limited coverage of WB6 in various ad-hoc studies conducted by the European Commission, underscoring the need for independent market research and desk research mechanisms to ensure comprehensive data collection.

Establishing a standardised data collection process aligned with Eurostat and the EU DESI methodology will ensure data consistency and reliability across WB6, enabling more accurate and timely data reporting, which is crucial for informed decision-making in the region.



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