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PART 4/27

COMMISSION STAFF WORKING DOCUMENT

Digital Decade 2026 country report

Accompanying the document

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

State of the Digital Decade 2026: Closing structural gaps and mobilising investments for 2030 and beyond

{COM(2026) 288 final} - {SWD(2026) 154 final} - {SWD(2026) 156 final} - {SWD(2026) 157 final}

European Commission

DIGITAL DECADE COUNTRY REPORT 2026

Croatia

Croatia

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Executive summary

Overall, Croatia has strong digital assets in connectivity and selected strategic technology areas, notably fast-improving fixed and mobile coverage and growing engagement in quantum communication and semiconductors. However, it is not fully reaping the benefits of digitalisation across the wider economy, as SMEs continue to lag in basic digital intensity and in the uptake of advanced technologies. Persistent gaps in digital skills and weaknesses in the ICT specialist pipeline also remain significant constraints.

The weaknesses identified in the digitalisation of businesses weigh on Croatia's **competitiveness**, as low and uneven SME digitalisation limits productivity gains, process modernisation and the diffusion of innovation in an economy dominated by smaller firms. Shortages and mismatches in ICT specialist profiles, together with broader gaps in digital skills, also constrain business transformation and the wider adoption of digital tools across sectors.

Croatia can, however, build on several **digital leadership** assets. It is strengthening its position in strategic European technology areas through quantum communication infrastructure and the Croatian Competence Centre for Semiconductors. The country is also improving its connectivity base and building capacities linked to cybersecurity and sovereign digital infrastructure. These strengths will provide a basis for stronger digital sovereignty and technological leadership if they are translated into broader digital upgrading across the economy.

Croatia in the Digital Decade

Croatia demonstrates a substantial level of ambition in its contribution to the Digital Decade, having set 13 national targets out of a possible 14, 77% of which are aligned with the EU 2030 targets. In its national roadmap, Croatia provided 13 trajectory points for 2025 out of 13 analysed. The country is following them moderately well, with 54% considered to be on track. Croatia addressed 88% of the eight recommendations issued by the Commission in 2025 by making some changes through new measures. According to the national roadmap, by the end of 2026, 39% of the measures will come to an end. The total public budget associated with these measures is EUR 106 million, representing 17% of the total public budget outlined in the roadmap.

According to the special Eurobarometer on 'the Digital Decade' 2026, 84% of Croatian people consider that digital policy should have a very high/high priority for the EU in shaping the future of Europeans. They also think that, in the next 10 years, the EU should cooperate with Member States to make digital tools more accessible for everyone, especially vulnerable groups, older people and people with disabilities (91%), reinforce cybersecurity and protection from online threats (91%) and promote digital education and skills programmes (88%). In addition, 84% of Croatian respondents think that the EU should reduce its dependencies on digital solutions from non-EU countries, and 87% think that the EU should prioritise investments in digital infrastructure and services that are developed and controlled in Europe. Meanwhile, 73% would be willing to switch to an EU-based digital service provider even if it means slightly higher costs.

Funding for digital and multi-country projects

Croatia allocates 21% of its total recovery and resilience plan to digital (EUR 1.5 billion). In addition, under cohesion policy, EUR 0.9 billion, representing 10% of the country's total cohesion policy funding, is dedicated to advancing Croatia's digital transformation.

Croatia is a member of the Alliance for Language Technologies European digital infrastructure consortium (EDIC), the Local Digital Twins towards the CitiVERSE EDIC, of the EUROPEUM EDIC and of the IMPACTS EDIC. Croatian entities are indirect partners in the important project of common European interest (IPCEI) on Next Generation Cloud Infrastructure and Services (IPCEI-CIS). Croatia is a participating state in the EuroHPC Joint Undertaking (JU) and of the Chips JU.

Digital Decade KPI (1)	Croatia				EU		Digital Decade target by 2030	
	Last available data (2)	DESI 2026 (year 2025)	Annual progress	National trajectory 2025 (3)	DESI 2026	Annual progress	HR	EU
Fixed Very High-Capacity Network (VHCN) coverage	78.9%	82.7%	4.8%	73.0%	85.5%	3.7%	100.0%	100%
Fibre to the Premises (FTTP) coverage	75.4%	77.9%	3.4%	71.0%	74.1%	7.1%	100.0%	-
Basic 5G coverage	94.2%	97.8%	3.8%	87.9%	96.8%	2.6%	99.0%	100%
Edge Nodes (estimate, new methodology)	-	75	-	-	7451	-	-	10000
SMEs with at least a basic level of digital intensity *	56.0%	57.1%	1.0%	65.0%	71.4%	11.0%	90.0%	90%
Cloud *	40.7%	43.3%	3.1%	53.0%	46.7%	9.5%	75.0%	75%
Artificial Intelligence	11.8%	15.2%	29.2%	14.0%	20.0%	48.0%	20.0%	75%
Data analytics *	51.7%	41.9%	-10.0%	22.0%	39.9%	9.5%	30.0%	75%
AI or Cloud or Data analytics *	65.6%	60.8%	-3.7%	-	63.2%	7.5%	-	75%
Unicorns	2	2	0.0%	2	324	10.2%	4	500
At least basic digital skills *	59.0%	63.4%	3.7%	69.0%	60.4%	4.3%	80.0%	80%
ICT specialists	5.0%	4.9%	-2.0%	4.9%	5.0%	2.0%	7.0%	~10%
eID scheme notification		Yes						
Digital public services for citizens	75.2	75.3	0.2%	80.0	84.6	2.8%	100.0	100
Digital public services for businesses	65.3	67.6	3.5%	80.0	88.6	2.7%	100.0	100
Access to electronic health records	86.6	87.1	0.6%	100.0	86.5	4.6%	100.0	100

(1) See the methodological note for the description of the indicators and other metrics
(2) The latest available data are from DESI 2025 (reference year 2024) except for indicators marked with a star * which come from DESI 2024 (reference year 2023)
(3) National trajectory value for 2025, if set by the country in its Digital Decade national roadmap

A competitive, sovereign and resilient EU based on technological leadership

Croatia is performing increasingly well in connectivity, with progress in VHCN, FTTP and 5G coverage bringing it closer to the EU average. The remaining challenge is concentrated in rural, island and other market-failure areas, where delivery risks have increased, while progress on stand-alone, higher-capacity 5G and the transition from legacy networks remains limited. Croatia is also strengthening its position in strategic technologies, notably through quantum communication and the Croatian Competence Centre for Semiconductors.

On the business side, SMEs with at least a basic level of digital intensity remain a central weakness, with Croatia still below the EU average and progressing too slowly relative to the EU pace. Cloud

computing and AI uptake also remain below the EU average, while data analytics and the overall take-up of advanced technologies have weakened. Croatia is strengthening support through vouchers, EDIHs and AI-related instruments, but support remains fragmented and stronger results among larger firms are not yet translating into broad-based digitalisation across business. Access to later-stage financing also remains limited, constraining the scaling and retention of innovative firms. Croatian enterprises also remain below the EU average in cybersecurity measures, limiting trusted digitalisation and business resilience. Relevant green digital initiatives are emerging, but the use of digital technologies for the green transition is not yet sufficiently systematic across sectors and territories.

Protecting and empowering EU people and society

Croatia's performance in basic digital skills is mixed. The headline result is slightly above the EU average, but remains below the 2030 target and masks deep gaps by age, education and territory, especially among older, less educated and rural populations. The proportion of ICT specialists is around the EU average, but the pipeline remains constrained by weak progression, skills mismatches, retention pressures and insufficient alignment between education and labour market needs.

Digital public services also remain uneven. Services for citizens and access to e-Health records are comparatively stronger, while business-facing and cross-border services remain weaker. Croatia has made progress on interoperability, e-Citizens, the Once-Only Technical System and preparations linked to the European Digital Identity Wallet, but major gaps remain in register integration, practical usability and the interoperability of sectoral services, including in health. Indicators and user experience still point to administrative friction and a weaker contribution of digital public administration to competitiveness than the stronger parts of the system would suggest.

Recommendations

- **Uptake of advanced digital technologies by businesses, especially SMEs:** Accelerate the uptake of AI and other advanced technologies, especially in SMEs and microenterprises, by strengthening awareness, advisory and investment support for cloud computing, AI, data-driven and, where relevant, edge-enabled solutions; target lagging and low-digital-intensity firms; improve progress across vouchers, financial instruments and EDIH services; and promote secure, trustworthy and, where relevant, European solutions.
- **ICT Specialists & Digital skills**: Reduce dropout and improve progression into ICT-related pathways, including for women and girls, better aligning STEM, ICT, VET, higher education and lifelong learning with labour market needs. Improve digital skills by expanding accessible training for older people, low-skilled adults, inactive people and rural communities; improve coordination and monitoring across vouchers, adult learning providers and local delivery channels; reinforce media literacy and critical online information skills.
- **Connectivity**: Strengthen Croatia's connectivity infrastructure by ensuring continuity and financing for gigabit roll-out in rural, island and other commercially unviable areas, also following terminated broadband projects; and advance higher-capacity 5G, including 3.4-3.8 GHz deployment and, where economically justified, stand-alone 5G use cases in underserved and strategic economic areas.
- **Digital public services**: Strengthen Croatia's digital public services by accelerating end-to-end digitalisation and simplifying priority citizen and business services, especially regular business operations; strengthen interoperability and practical application of the once-only principle through better register integration and evidence exchange; improve cross-border usability; and integrate sectoral digital services, also in health, more effectively into wider public digital platforms.
- **Scale-ups and innovative firms**: Strengthen conditions for scaling and retaining innovative firms by improving later-stage finance for high-growth digital and technology-based firms; improve coherence between start-up, scale-up, innovation, commercialisation and growth-finance support; strengthen pathways from research and innovation to high-growth firms; and support access to European pilot lines and specialised infrastructures in strategic technologies, including semiconductors where relevant.
- **Green & Digital:** Strengthen the systematic use of digital technologies for the green transition by developing interoperable environmental, climate and ESG data infrastructures; scale up digital solutions for greening in priority sectors and municipalities; and improve monitoring of both the footprint of digital technologies and the emissions-reduction effects of digital solutions.
- **Cybersecurity and resilience**: Strengthen cybersecurity resilience across enterprises and public institutions by expanding targeted SME support from maturity assessment to implementation follow-up; promote regular risk assessment, security testing, monitoring and secure access practices beyond minimum compliance; accelerate incident-response and resilience capacities, also by developing the Security Operations Centre and national situational awareness; reinforce advisory, training and operational delivery, also through CARNET / NCC-HR; and support the gradual deployment of secure next-generation communication infrastructures, including quantum communication where relevant.

A competitive, sovereign and resilient EU based on technological leadership

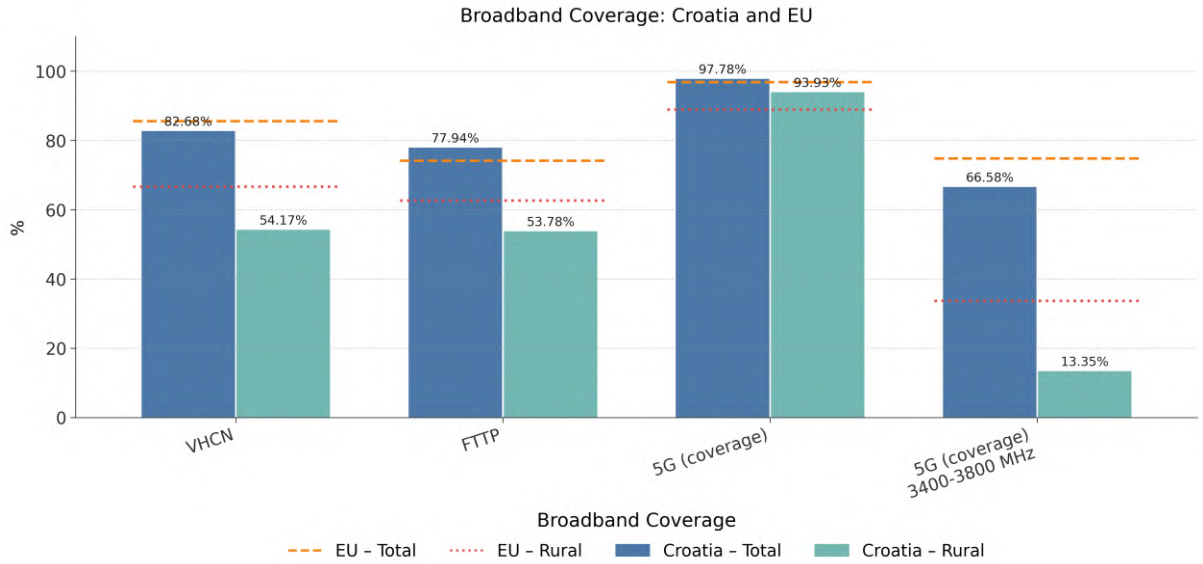
Building technological leadership: digital infrastructure and technologies

Connectivity infrastructure

Performance assessment

In 2025, Croatia achieved a coverage rate of 82.68% by very high-capacity networks (VHCN), below the EU's 85.54%, after an increase of 4.8%. In terms of annual growth, Croatia outperformed the EU (3.7%). In sparsely populated areas, Croatia's VHCN coverage increased to 54.17%, while the EU's coverage reached 66.66%. Croatia's annual growth rate in these areas (10.3%) was significantly higher than the EU's (7.7%). The country is on track according to its trajectory presented in the Digital Decade national roadmap.

Croatia's fibre to the premises (FTTP) coverage increased to 77.94% in 2025, above the EU's 74.13%, after an increase of 3.4%. However, Croatia's annual growth rate was lower than the EU's (7.1%). In sparsely populated areas, Croatia's coverage increased to 53.78%, while the EU's coverage reached 62.61%. Croatia's annual growth rate in these areas (21.0%) was significantly higher than the EU's (6.5%). The country is on track according to its trajectory presented in the Digital Decade national roadmap.



In 2025, Croatia's 5G coverage increased to 97.78%, which was above the EU's 96.79%, after an increase of 3.8%. Croatia's annual growth rate was higher than the EU's (2.6%). The country is on track according to its trajectory presented in the Digital Decade national roadmap. In sparsely populated areas, Croatia's 5G coverage increased to 93.93%, while the EU's coverage reached 88.88%. The annual growth rate in these areas (8.8%) was lower than the EU's (11.7%). Croatia's 5G coverage in the 3.4-3.8 GHz band was 66.58%, which was below the EU's 74.75%. However, the annual growth rate (47.4%) was far above the EU's (10.6%). In sparsely populated areas, coverage in the 3.4-3.8 GHz band increased to 13.35%, while the EU's coverage reached 33.71%. Croatia's annual growth rate in these areas (57.4%) was higher than the EU's (32.9%), but after starting from a very low base.

Croatia has demonstrated strong performance in FTTP and overall 5G coverage, which are both above the EU average, and in the growth of VHCN and especially mid-band 5G. However, VHCN coverage

remains below the EU average, and the main weaknesses are concentrated in sparsely populated areas, especially for VHCN, FTTP and 3.4-3.8 GHz 5G. This suggests that Croatia's main connectivity challenge is no longer aggregate roll-out, but the territorial depth and quality of deployment in the least commercially attractive areas.

The table below provides an overview of VHCN, FTTP and 5G coverage across Croatian NUTS-2 regions. It points to persistent regional disparities, with weaker connectivity conditions concentrated in more sparsely populated and commercially less viable areas.

	VHCN coverage		FTTP Coverage		5G Coverage	
	Overall	Rural	Overall	Rural	Overall	Rural
National coverage	82.68%	54.17%	77.94%	53.78%	97.78%	93.93%
Grad Zagreb	100.00%	100.00%	100.00%	100.00%	99.70%	99.65%
Jadranska Hrvatska	78.93%	52.82%	70.68%	51.83%	99.06%	97.02%
Panonska Hrvatska	69.95%	41.35%	62.49%	41.27%	95.86%	91.73%
Sjeverna Hrvatska	86.81%	74.80%	86.81%	74.79%	95.70%	92.55%

Croatia's take-up of the most advanced connectivity services remains below the EU average. In Croatia, 10.07% of fixed broadband subscriptions have speeds of at least 1 Gbps, after an increase of 73.3% in 2025, and the country remains below the EU average of 26.97%. However, Croatia's annual growth rate was much higher than the EU's (21.2%). In Croatia, 45.36% of the population has 5G SIM cards, after an increase of 30.4% in 2025, and the country remains below the EU average of 55.55%. The annual growth rate for Croatia was also lower than the EU's (56.2%). This indicates that while high-capacity infrastructure is advancing rapidly, take-up still lags behind the EU benchmark.

Policy context and assessment of recommendations

Croatia's connectivity policy remains centred on public support for roll-out in areas with insufficient commercial interest, combined with regulatory measures to reduce deployment costs and an enabling framework for 5G. The main policy issue is no longer the existence of a strategic framework, but whether implementation can be sustained in the remaining rural and market-failure areas[1].

The clearest policy setback in the period is the disruption of publicly supported broadband roll-out. Croatia reported that **17** contracts under the recovery and resilience facility (RRF)-funded investment for broadband infrastructure in areas with insufficient commercial interest have been terminated, meaning that a programme originally designed to provide access to around 700 000 inhabitants and around 124 000 households, would now only deliver for around 40 136 households. Alternative EU or future multiannual financial framework (MFF) financing will be needed if these projects are to continue. This makes continuity of financing and delivery the central outstanding issue for fixed connectivity policy[2].

Discussions with the **Croatian Regulatory Authority for Network Industries** (HAKOM) indicate that commercial fibre investment is continuing, but that rural roll-out remains dependent on subsidies and State-aid-supported projects. National authorities have also stressed that weak business cases in low-density areas may prevent Croatia from reaching full coverage. The policy challenge is therefore increasingly concentrated in the final phase of roll-out rather than in general national momentum.

Some framework conditions have improved. Authorities also referred to new legal changes, including the construction law in force since **1 January 2026**, and to lower duct-access and backhaul prices,

1 Republic of Croatia, National Roadmap for Digital Decade Policy Programme 2030, March 2024.
2 EPRS, Croatia's National Recovery and Resilience Plan: latest state of play, October 2025.

which have reduced some deployment costs. These steps should support further roll-out, but they do not remove the structural weakness of low commercial viability in the most difficult areas. Croatia is also strengthening secure government connectivity infrastructure through the modernisation of state network capacities supporting public administration, interoperability systems and secure access to shared digital services.

There is still no systematic plan for **copper switch-off**. While the regulatory framework is clear, the end date remains unknown, as Hrvatski Telekom has not yet put forward a clear migration plan for legacy networks. HAKOM reported only limited intentions to switch off already-broken lines and indicated that it is preparing guidelines in case operators come forward with plans.

Although Croatia has made progress in gigabit network deployment, administrative and regulatory barriers continue to affect rollout costs. Operational bottlenecks at local level related to planning and permitting may continue to increase deployment complexity and costs, particularly outside commercially attractive areas.

Croatia has assigned all three harmonised pioneer bands, but deployment of the higher-capacity 3.4-3.8 GHz layer remains weaker in rural areas because licence obligations are percentage-based and technology-neutral, allowing operators to rely on lower-frequency bands. Stand-alone 5G also remains largely market-driven, with no clear timetable for commercial deployment. The policy gap is therefore less about basic coverage than about stronger incentives for higher-capacity and more advanced use cases.

2025 recommendation on connectivity / 5G: Accelerate full gigabit networks and 5G coverage, especially by addressing operational bottlenecks (planning, permitting) and expanding mid-band 5G spectrum deployment.
Croatia made some efforts to address the recommendation through new policy actions in 2025. The most relevant steps were continued roll-out measures in non-commercial areas, legal and regulatory changes to improve deployment conditions, and continued work on 5G planning and spectrum implementation. However, progress remains partial. The termination of a substantial share of the subsidised contracts for VHCN deployment in underserved areas created new delivery risks. Furthermore, there is still no copper switch-off plan, and higher-capacity and stand-alone 5G deployment remain limited.

Semiconductors

Croatia's semiconductor policy remains focused on SME support, chip design and access to EU-level infrastructure, rather than on manufacturing scale. The **Croatian Competence Centre for Semiconductors** will start to operate in 2026 as part of the European network of competence centres under the Chips Act and is intended to support SMEs and start-ups by giving them access to design platforms, pilot lines and related services

The centre is designed to support design, characterisation, prototyping and access to European pilot lines, and to feed into a future Croatian semiconductor strategy built on regional and European complementarity. The 2026 picture is therefore one of a framework that has become operational but is still at an early stage and remains primarily enabling and SME-oriented.

Edge nodes

Performance assessment

According to the Edge Observatory, Croatia is estimated to have deployed **75 edge nodes by 2025**. Due to the change in methodology, this figure is not directly comparable with previous estimations.

Policy context and assessment of recommendations

In 2025, Croatia began to frame edge infrastructure more clearly through the lenses of **sovereignty, AI capacity and cloud infrastructure**. The discussions with the authorities and stakeholders linked future edge development to participation in **IPCEI-CIS**, to the expansion of sovereign and open-source-oriented cloud resources, and to the broader build-out of domestic AI-related compute capacity. In this context, **Infobip** joined IPCEI-CIS in February 2025 and presented the project as part of a wider European effort to develop next-generation cloud computing and edge capabilities. At the same time, telecoms operators were described as technically ready to deploy **multi-access edge computing** nodes, although demand from industry remains limited and current use cases, including in transport and logistics, are still mainly pilot-based.

On the public-sector side, a 2025 change in the legal framework for government digital infrastructure now allows public-sector digital capacities to be made available beyond their previous narrow scope. At the same time, new investment is being prepared in the shared services centre / government cloud, including AI capacities, cybersecurity tools, a data lake, an AI sandbox and an AI factory. Taken together, this points to a framework that is becoming more relevant to edge deployment, even if Croatia still lacks a dedicated national strategy or deployment framework specifically for edge nodes.

2025 recommendation on edge nodes: Increase efforts in the area of edge nodes their importance for competitiveness, resilience, sovereignty and climate action.
Croatia has made some efforts to address this recommendation. The most relevant progress lies in the stronger linkage now being made between edge infrastructure, AI capacity, public cloud development and IPCEI-CIS-related activity. However, progress remains partial. Deployment appears limited, demand remains low, and Croatia still lacks a dedicated national strategy, a national target and a deployment framework for edge nodes.

Quantum technologies

Performance assessment

Croatia's quantum profile remains centred mainly on **secure communication infrastructure, research capability and EU-level cooperation**, rather than on broad industrial deployment or domestic quantum hardware manufacturing. The main relevance of the field for Croatia therefore lies less in scale than in whether these early investments can strengthen cybersecurity, resilience and future digital infrastructure.

Policy context and assessment of recommendations

In 2025 and early 2026, Croatia's quantum pathway became more operational through the implementation of **CroQCI**[3], the national quantum communication project carried out by the Croatian Academic and Research Network (CARNET). The roadmap presents CroQCI as Croatia's main quantum measure and links it to the development of experimental quantum communication systems and networks, secure communication technologies, Quantum Key Distribution demonstrations, testing environments, knowledge transfer and training.

Implementation is also moving further into infrastructure deployment. According to the discussions with Croatian stakeholders, Croatia expects **eight locations in Zagreb** to be capable of demonstrating fully functional secure communication by the end of the project, combining a quantum layer, a cryptographic layer and several demonstration use cases. The same discussions also pointed to a

3 https://www.carnet.hr/en/projekt/croqci/.

strong emphasis on education and dissemination, aimed not only at universities and researchers but also at wider user groups.

A further step was the launch in **January 2026** of a new cross-border project with German partners to build a **quantum ground node station** and interconnect Croatian infrastructure with wider European quantum infrastructures. According to the discussions, this project is intended to connect the terrestrial infrastructure built under CroQCI with a future space-based component and to define operational concepts for cross-border quantum interconnection. Croatia is also testing different technological approaches, combining domestically developed systems, including from the Ruđer Bošković Institute, with commercially procured systems.

The main limitation remains the fact that this pathway is still **research- and infrastructure-led**, with only limited evidence so far of broader industrial deployment. Croatia's quantum strategy is therefore becoming more operational, but its immediate value still lies primarily in secure communications, capability building and integration into European infrastructure.

Supporting EU-wide digital ecosystems and scaling up innovative enterprises

SMEs with at least basic digital intensity

Performance assessment

In Croatia, 57.09% of SMEs have at least a basic level of digital intensity after an increase of +1.0% annually between 2023 and 2025, which is below the EU average of 71.39%. In 2023, the figure for Croatia was 55.97%, which was also below the EU average of 57.90%. Despite some progress, Croatia's annual growth rate remains far below the EU's growth rate of 11.0%, meaning that Croatian SMEs continue to lag further behind their EU counterparts. The country is lagging behind compared to its trajectory presented in the Digital Decade national roadmap.

In Croatia, 6.74% of SMEs have a very high digital intensity index after an increase of +20.9% annually between 2023 and 2025, which is below the EU average of 9.07%. In 2023, the figure for Croatia was 4.61%, which is slightly above the EU average of 4.38%. Although Croatia is making progress, its growth rate remains well below the EU's 43.9%, so the country is not keeping pace with the EU average in moving SMEs towards more advanced levels of digital intensity.

Policy context and assessment of recommendations

Less digitalised SMEs limit Croatia's ability to translate digitalisation into broader productivity gains, business upgrading and stronger competitiveness. Croatia's business structure is heavily skewed towards microenterprises, while labour productivity remains below the EU average, business R&D intensity is low, and firms continue to report shortages of skilled staff as one of the main obstacles to investment. In that context, weak digital diffusion across the SME base constrains innovation, scale effects and the development of stronger growth engines beyond tourism[4].

Croatia's policy response in this area has become more substantial, but the support architecture still appears fragmented. The national roadmap links SME digitalisation to regulatory facilitation, administrative simplification, investment support and the wider innovation ecosystem, notably through measures on administrative burden relief for entrepreneurs, additional investment funding in new technologies and the dissemination of EDIH networks. In practice, support continues to rely on

4 European Commission, European Semester, Annex 5: Single market and industry, 2026; European Investment Bank, EIB Investment Survey 2025: Croatia overview, 2025; European Commission, Annex 4: Innovation to business, 2026.

a mix of RRF- and cohesion-backed instruments, including grants, vouchers, EDIHs and financial instruments.

Authorities reported that the main policy effort in 2025 continued to focus on widening SMEs' access to digitalisation support, while gradually shifting towards higher digital maturity. The earlier RRF-backed voucher call of **EUR 9.5 million** aims to support **1 500 SMEs** to develop digital business models and cybersecurity-related capabilities which the authorities reported as being overachieved. The EDIH ecosystem also appears to be gaining operational depth. Croatia has four relevant hubs, and by the end of May 2026 a total of 2 112 decisions for EDIH activities had been issued, with a total service value of EUR 8.68 million. AI4Health.Cro alone had delivered more than 1 800 services to SMEs and public sector organisations in areas such as artificial intelligence, high-performance computing and digital skills for medicine, healthcare and well-being. Two EDIHs have already completed the first phase of implementation, one is due to complete it by the end of June 2026 and one by the end of 2026, with preparations for the second phase already under way. This points to some progress towards a more staged support model, beginning with maturity assessment and then linking businesses to more specialised services[5].

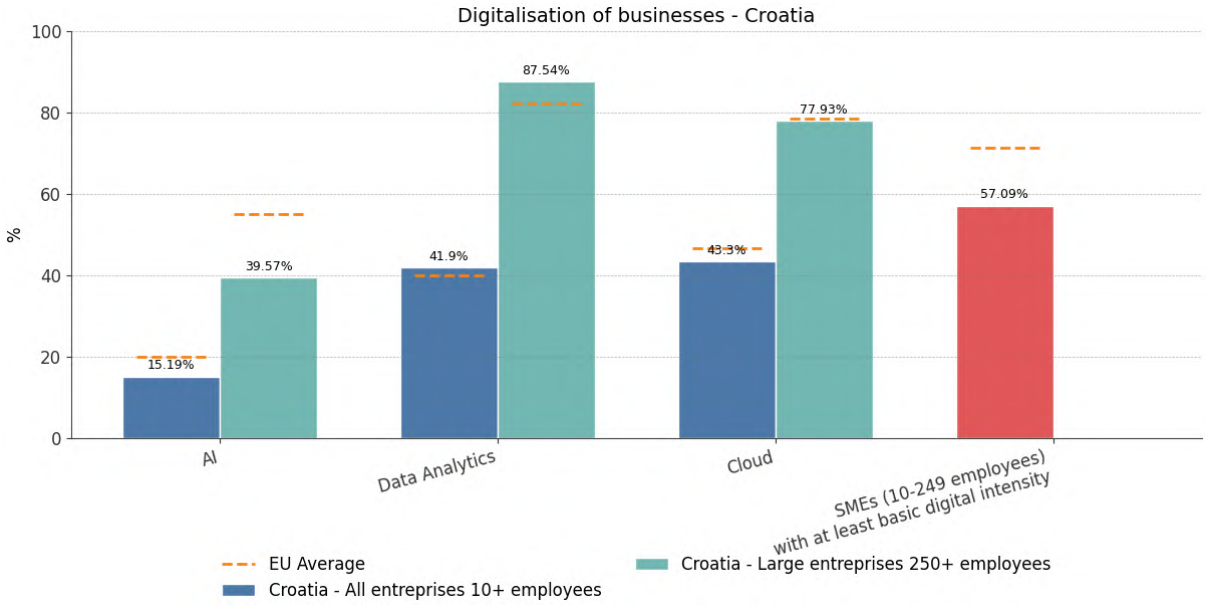
However, the main weaknesses remain unresolved. Stakeholders stressed that support instruments are still fragmented across ministries and agencies, that awareness remains limited, and that Croatia still lacks a sufficiently integrated pathway taking businesses from diagnosis to support, investment and optimisation. This remains particularly problematic in a business structure dominated by microenterprises and smaller firms with limited internal digital capacity.

2025 recommendation on SME digitalisation: Develop targeted programmes and incentives to increase SMEs' adoption of cloud, AI, and data analytics solutions, thereby narrowing the gap between digitally advanced enterprises and those lagging behind.
Croatia made some efforts to address the recommendation through new policy actions in 2025. Croatia complemented the existing support framework with new or reinforced measures to increase digital maturity. In particular, authorities reported: (i) the continuation of voucher-based SME support; (ii) the preparation of a new voucher scheme targeting AI, cybersecurity and more complex digital solutions; and (iii) continued operational support through the EDIH network, including digital maturity assessments and related services for SMEs.

5 European Semester, Annex 5: Single market and industry, 2026; European Investment Bank, EIB Investment Survey 2025: Croatia overview, 2025.

Take-up of advanced technologies

Performance assessment



In Croatia, 41.9% of enterprises have adopted data analytics after a decrease of -10.0% annually between 2023 and 2025, placing the country above the EU average of 39.85%. In 2023, the figure for Croatia was 51.68%, significantly above the EU average of 33.25%. Despite still remaining above the EU average in level terms, Croatia's recent trend is clearly weaker than the EU's, which recorded positive growth over the same period. The country is on track according to its trajectory presented in the Digital Decade national roadmap. Focusing on SMEs, Croatia is at 40.62% after a decrease of -10.5% annually, which is above the EU average of 38.59%. Croatia's recent trend for SMEs is therefore negative, while the EU continued to improve. For large enterprises, Croatia is at 87.54% after an increase of +2.1% annually, surpassing the EU average of 82.03%. However, Croatia's growth rate for large enterprises remains lower than the EU's 6.9%.

In Croatia, 43.3% of enterprises have adopted cloud technologies after an increase of +3.1% annually between 2023 and 2025, placing the country below the EU average of 46.69%. In 2023, the figure for Croatia was 40.73%, slightly above the EU average of 38.97%. Although Croatia started from a somewhat stronger position than the EU average, its growth rate is much lower than the EU's 9.5%, and it has therefore moved into a mild lag. The country is lagging behind compared to its trajectory presented in the Digital Decade national roadmap. For SMEs, Croatia is at 42.33% after an increase of +2.9% annually, also below the EU average of 45.74%. Croatia's growth rate for SMEs is likewise below the EU's 9.7%. For large enterprises, Croatia is at 77.93% after an increase of +8.0% annually, slightly below the EU average of 78.32%. Croatia's growth rate for large enterprises is, however, above the EU's 6.0%.

In Croatia, 15.19% of enterprises have adopted AI after an increase of +29.2% annually between 2024 and 2025, placing the country below the EU average of 19.95%. In 2024, the figure for Croatia was 11.76%, which was lower than the EU average of 13.48%. Although Croatia is progressing, its growth rate remains below the EU's 48.0%, so the gap with the EU average has not narrowed decisively. The country is on track according to its trajectory presented in the Digital Decade national roadmap. For SMEs, Croatia is at 14.51% after an increase of +28.3% annually, below the EU average of 18.9%. Croatia's growth rate for SMEs is also below the EU's 49.5%. For large enterprises, Croatia is

at 39.57% after an increase of +39.5% annually, below the EU average of 55.03%. Although Croatia's growth rate for large enterprises exceeds the EU's 33.7%, the level gap remains very large.

In Croatia, 60.84% of enterprises have adopted AI, cloud computing, or data analytics technologies after a decrease of -3.7% annually between 2023 and 2025, placing the country below the EU average of 63.20%. In 2023, the figure for Croatia was 65.59%, above the EU average of 54.70%. Croatia has therefore moved from a stronger to a weaker position in relation to the EU, as its performance declined while the EU average continued to improve. The country is lagging behind compared to its trajectory presented in the Digital Decade national roadmap. For SMEs, Croatia is at 59.85% after a decrease of -4.0% annually, below the EU average of 62.32%. Croatia's recent trend for SMEs is therefore clearly weaker than the EU's +7.7%. For large enterprises, Croatia is at 96.1% after an increase of +3.5% annually, above the EU average of 92.78%. Croatia's growth rate for large enterprises is also slightly above the EU's 3.4%.

Croatia's take-up of advanced technologies shows a distinctly uneven profile. Data analytics remains above the EU average in level terms, but the sharp deterioration since 2023, especially among SMEs, weakens that position. At the same time, Croatia remains below the EU average in cloud computing and AI, and below the EU average in the combined AI-cloud-data analytics indicator. This suggests that Croatia is not yet achieving broad and stable diffusion of advanced digital technologies across its business sector, particularly among SMEs.

Policy context and assessment of recommendations

Croatia's policy response in this area has become more targeted, especially on AI, but the overall support architecture still appears fragmented. The national roadmap links business digitalisation to regulatory simplification, additional investment funding for new technologies and the dissemination of **EDIH networks**. More broadly, support continues to rely on a mix of RRF- and cohesion-backed grants, vouchers, advisory channels and financial instruments.

Authorities reported that in 2025 the policy focus on advanced digital uptake, including AI, became more explicit. Building on the earlier **RRF-backed voucher call** of EUR 9.5 million, a new voucher scheme of EUR 3.92 million is planned for June 2026, explicitly targeting higher digital maturity, including AI uptake, cybersecurity and more complex digital solutions. In parallel, a separate financial instrument for investment in complex digital solutions, referred to as AI Industry 4.0, is being prepared with a value of at least EUR 48 million. The Croatian authorities also highlighted the draft future National Plan for Artificial Intelligence, under which SME digitalisation related to AI is treated as a strategic economic priority, and the SkillUp project, a five-week hybrid programme for SME CEOs covering software, digital solutions and the practical use of AI in business.

The EDIH ecosystem also appears to be maturing. Croatia had four relevant hubs. The roadmap addendum also underlines the role of EDIHs and related support ecosystems in strengthening access to AI, high-performance computing and data-driven tools. This suggests some progress towards a more staged support model, but one that is still stronger on diagnosis and piloting than on broad-based diffusion of advanced technologies.

At the same time, broader business materials points to persistent structural weaknesses. Support remains fragmented, awareness is still limited, and firms – especially SMEs and microenterprises – often lack the internal capacity, managerial capabilities and financial headroom needed to move from initial digitalisation towards sustained adoption of cloud computing, AI and data-driven solutions. In a context of weak productivity, low business R&D and persistent skills shortages, this continues to weigh on the wider business take-up of advanced technologies.

Unicorns, scale-ups and start-ups

Performance assessment

Croatia remains a small player in absolute terms on the unicorn indicator, but the picture is more nuanced than the headline number alone suggests. Croatia had **two unicorns in 2025**, unchanged from the **revised 2024 figure of two**, so there was **no increase over the year.**

Policy context and assessment of recommendations

Croatia remains a small player in absolute terms on the unicorn indicator, but the picture is more nuanced than the headline number alone suggests. Croatia's roadmap nevertheless treats this area as strategically important and links improving access to finance and facilitating the growth of innovative scale-ups, with the explicit objective of contributing to a doubling of unicorns in Europe[6]. The challenge therefore lies less in the complete absence of entrepreneurial dynamism than in the still-limited capacity to convert entrepreneurial and innovation potential into a broader and more durable pipeline of high-growth firms.

The wider innovation-to-business picture supports that interpretation. Croatia's start-up ecosystem is expanding, with Zagreb remaining the main centre of activity and the two existing unicorns continuing to shape the visibility of the national ecosystem. At the same time, the scale-up environment remains shallow. Access to risk capital is still a major obstacle, the financing landscape relies heavily on bank loans and internal funds, and this limits the funding available for start-ups and scale-ups[7]. Authorities and stakeholders have indicated that Croatia's problem is not only unicorn creation but also **unicorn retention**, as firms can progress through the early stages but are then acquired early or move legal and financing structures abroad because domestic growth-stage finance remains too weak. This suggests that Croatia's main bottleneck is no longer the absence of promising firms, but the limited depth of the later-stage financing and scaling conditions that are needed to keep high-growth enterprises anchored and expanding domestically.

The policy framework has strengthened, particularly on access to finance, but it still appears fragmented relative to the scale of the challenge. Under Digital Target 9, which concerns scale-ups, access to finance and unicorns, Croatia's roadmap links this area mainly to joining EDICs and to diversifying capital markets and improving access to alternative financing, with public-sector investment of around EUR 29.9 million planned[8].

This broader policy shift is now supported by a growing set of instruments. **HBOR** has earmarked **EUR 100 million** in its 2025-2029 business strategy for investments in VC/PE funds. The **Croatian Venture Capital Initiative** has already supported more than **120 start-ups** in its first phase and has expanded in its second phase to a total investment potential expected to exceed **EUR 130 million**. In parallel, around **EUR 60 million** is allocated to the Venture Capital Fund under the 2021-2027 competitiveness framework, while additional calls are planned for proof of concept, technology transfer and young researchers' start-up or spin-off companies[9]. Taken together, this points to a more active effort than before to widen the pipeline from research, start-up creation and early-stage finance towards scale-up support.

6 Republic of Croatia, National Roadmap for Digital Decade Policy Programme 2030, March 2024.
7 European Commission, European Semester, Annex 4: Innovation to business – Croatia, 2026.
8 Republic of Croatia, National Roadmap for Digital Decade Policy Programme 2030, March 2024.
9 European Commission, European Semester, Annex 4: Innovation to business – Croatia, 2026.

Strengthening cybersecurity & resilience

Performance assessment

As for the wider digitalisation of businesses, Croatian enterprises remain below the EU average on the implementation of cybersecurity measures. In 2024, 38.73% of enterprises in Croatia used at least five cybersecurity measures, compared with 56.85% in the EU.

Croatia underperformed the EU average on all 11 cybersecurity practices covered by the dataset. The gaps are particularly pronounced in the use of combination authentication mechanisms (2.11% in Croatia vs 39.84% in the EU), ICT risk assessment (18.86% vs 34.10%), ICT security tests (20.67% vs 34.64%), and maintaining log files for incident analysis (27.35% vs 45.16%). Croatia also remains below the EU average in more standard measures such as strong password authentication (71.34% vs 83.69%), encryption techniques (34.39% vs 39.72%), network access control (59.07% vs 65.43%), and data backup to a separate location (78.31% vs 79.23%). The relative gap is somewhat smaller for biometric authentication (14.49% vs 18.27%), but the overall pattern still points to weaker enterprise cyber maturity than in the EU on both basic and more advanced protective measures.

The data also suggest that the main weakness is not confined to one narrow segment of cyber practice. Rather, Croatia performs below the EU average across preventive, monitoring, testing and authentication measures alike. This points to a broad-based resilience gap in the business sector, especially in the more advanced organisational and technical practices that support trusted digitalisation[10].

Policy context and assessment of recommendations

Croatia's policy response in 2025 became more operational and more clearly structured around both compliance and capacity-building. A major step was the implementation of the NIS2-aligned framework through the new **Cybersecurity Act** and the **Cybersecurity Regulation**, which set more detailed obligations for risk management, reporting and identifying essential and important entities. The new framework has standardised cybersecurity requirements more clearly than before and provides a stronger common regulatory baseline. Government reported that, following early NIS2 transposition, Croatia further operationalised the framework through sub-acts, guidance and taxonomies, a new self-assessment and auditing framework for covered entities, the ongoing categorisation of entities under the NIS2 system, stronger public-sector detection and response capabilities, new cyber-crisis management arrangements, and preparatory coordination with related critical-entity requirements and future EU rules.

The institutional architecture is also becoming more substantial. CARNET, in its dual role as National Coordination Centre for Industry, Technology and Research in Cybersecurity (NCC-HR) and national computer emergency response team (CERT) for the public information system, is emerging as a central coordination and implementation node. Its role covers incident management, incident reporting, vulnerability scanning, automated defence and cybersecurity education, alongside growing links to EU initiatives. The deployment of the NCC-HR project, co-financed under the Digital Europe Programme with a total value of EUR 7.87 million and running until 2028, supports cybersecurity skills, stakeholder coordination and cascade funding for innovation.

Support for enterprises, especially SMEs, has also become more visible. Croatia launched its **first grant call for SME cybersecurity projects**, attracting around **180 project proposals**, with projects expected to start around mid-2026 and run into 2027. Existing SME digitalisation support instruments, including the earlier voucher scheme and EDIH support, can also cover cybersecurity-related needs, while the Croatian Employers' Association has set up a **Cybersecurity Coordination** group bringing together

10 Eurostat, Security policy, measures, risks and staff awareness by size class of enterprise, extracted 22 January 2026.

more than **90 members** from business, experts and public institutions to support NIS2 implementation and strengthen public-private cooperation. This gives the policy response a more practical business-facing dimension than before, although authorities and stakeholders alike still point to fragmented instruments and limited resources relative to needs.

Public-sector resilience is also being reinforced, with further work reported on the state information infrastructure and the Shared Services Centre, including clearer procedures for handling cyber incidents, stronger tools for detecting and monitoring threats, preparations for recognised information-security certification, and the gradual development of central response capacities for government systems. Government also reported that a national action plan for the cybersecurity of hospitals and healthcare providers was agreed in mid-2025 between the Ministry of Health and the National Cyber Security Centre and has entered implementation.

On digital identity, the national deployment of the European Digital Identity Wallet has entered a more operational phase, with contracts already in place and roll-out targeted by the end of 2026 using state budget financing. However, certification remains the key unresolved constraint, since the absence of a common certification scheme and Croatia's inability to develop a viable national scheme alone could delay effective roll-out. The main remaining bottlenecks therefore increasingly appear technical-regulatory rather than strategic.

Recommendation 2025 on Cybersecurity: Develop targeted cybersecurity support programmes for SMEs, expand resilience testing, and strengthen the national capacity to address cyber incidents in the public and private sectors.
Croatia made some efforts to address the recommendation through new policy actions in 2025. The most relevant developments were the implementation and further operationalisation of the NIS2-aligned regulatory framework, establishment of the National Cyber Security Centre, the operational strengthening of CARNET / NCC-HR, the launch of the first grant call for SME cybersecurity projects, the preparation of a new support call for public institutions and municipalities, and the upskilling of public-sector staff linked to future cybersecurity tools and SOC development. However, progress remains partial. The available data confirm that Croatian enterprises remain below the EU average across all measured cybersecurity practices, with especially large gaps in advanced measures such as combined authentication, ICT risk assessment, ICT security testing and logging.

Protecting and empowering EU people and society

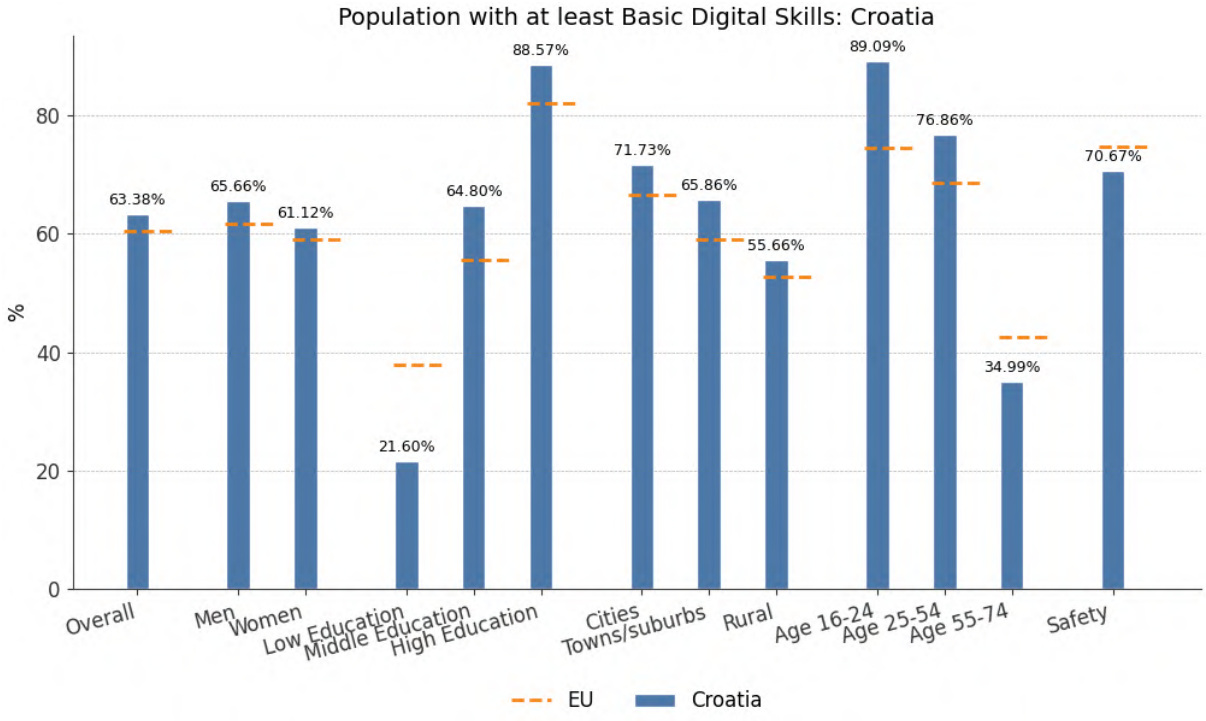
Empowering people and bringing the digital transformation closer to their needs

Equipping people with digital skills

Basic digital skills

Performance assessment

Croatia



In Croatia, 63.38% of individuals aged 16-74 have at least basic digital skills (2030 national target: 80%) after an increase of 3.7% annually since 2023, placing the country above the EU average of 60.39%. In 2023, Croatia reached 58.95%, compared with the EU's 55.56%. However, Croatia's annual growth rate remains below the EU rate of 4.3%. The country is lagging behind compared to its trajectory presented in the Digital Decade national roadmap.

Croatia exhibits a wider **gender gap** than the EU average. In 2025, 65.66% of men and 61.12% of women had at least basic digital skills, a gap of 4.54 percentage points in favour of men, compared with an EU gap of 2.75 percentage points.

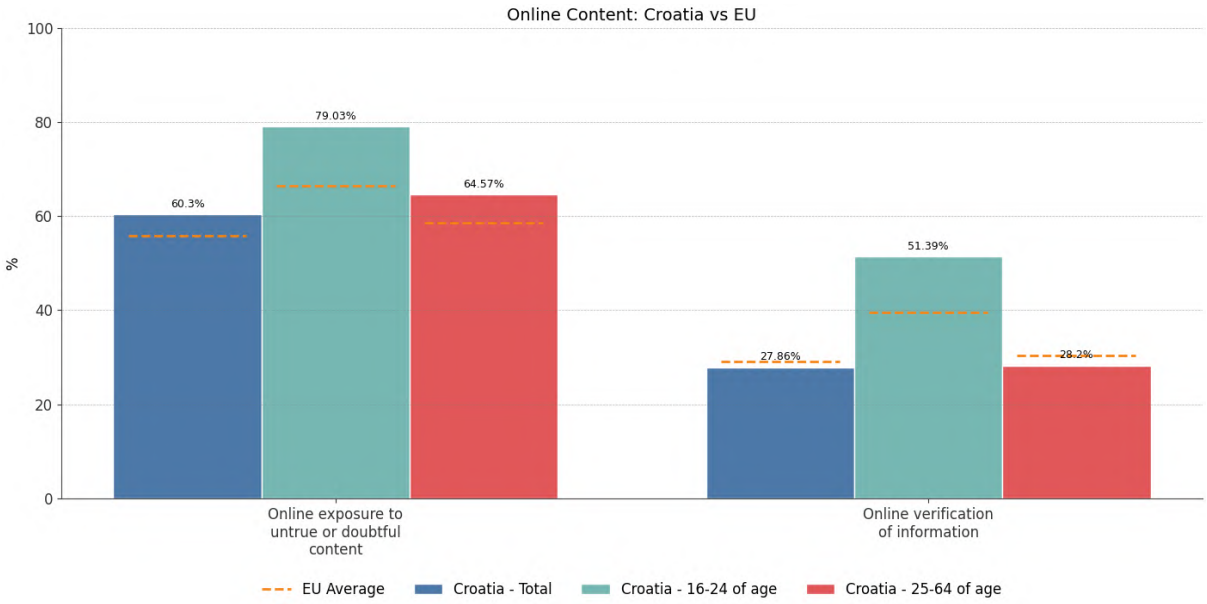
Education level also strongly influences digital proficiency. Only 21.6% of people with no or low formal education have at least basic digital skills, well below the EU average of 37.56%, and the gap relative to the Croatian overall average is 41.78 percentage points, nearly double the EU equivalent.

In rural areas, 55.66% of individuals in Croatia have at least basic digital skills, slightly above the EU average of 52.83%. However, the gap between rural and urban areas in Croatia is 16.07 percentage points, slightly wider than the EU average of 13.67 percentage points.

Young adults aged 16-24 in Croatia demonstrate strong digital skills, with a proficiency rate of 89.09%, which is far above the EU average of 74.55%. By contrast, the older age group of 55-74 has a digital skills rate of 34.99%, which is below the EU average of 42.6%. The gap between the two age groups in Croatia is therefore much wider than the EU average.

In terms of **digital safety skills**, 70.67% of individuals in Croatia have at least basic safety skills, slightly below the EU average of 74.63%.

On the use of **generative AI**, 27.52% of people in Croatia used generative AI tools in 2025, which is below the EU average of 32.66%. For professional purposes, 9.01% of individuals in Croatia used generative AI, which is also below the EU average of 15.36%. Based on the results of the Digital Decade Eurobarometer 2026, the biggest **obstacles to using or using more generative AI tools** are concerns about accuracy or incorrect information (36%), concerns about privacy or data protection (33%) and concerns about potential job losses due to generative AI tools (30%).



In Croatia, 60.3% of individuals were **exposed to untrue or doubtful content online** in 2025, marking an increase of 2.2% annually since 2023, when the figure stood at 57.77%. This places Croatia above the EU average, which rose from 49.25% in 2023 to 55.9% in 2025. Younger individuals aged 16-24 are more exposed, with 79.03% reporting exposure in 2025 compared with 64.57% of those aged 25-64. The gap between the two age groups in Croatia is 14.46 percentage points, nearly double the EU average gap.

However, only 27.86% of individuals in Croatia reported **verifying the truthfulness of online content** in 2025, which is slightly below the EU average of 29.16%. This reflects a modest annual increase of 1.1% from 2023 and a weaker trend than in the EU overall. Among 16-24 year-olds, the verification rate fell from 57.13% in 2023 to 51.39% in 2025, while the EU average for this group increased.

Overall, Croatia's digital skills profile is mixed. The country is above the EU average on the headline basic skills indicator, but growth remains too slow relative to the 2030 target and disparities by age, education and territory remain very large. Performance is also weaker on digital safety, AI use and verification of online content, especially among younger users. At the same time, the Digital Decade Eurobarometer 2026 shows that 79% of Croatians consider that the digitalisation of daily public and private services is making their life easier.

Peoples' perceptions also indicate that they are very concerned about the online environment. According to the Digital Decade Eurobarometer 2026, 91% of Croatians consider that the EU should further strengthen the protection of children and young people online, while 84% agree that online manipulation poses a threat to democratic processes. The online issues with the biggest personal

impact are fake news and disinformation (55%), misuse of personal data (49%) and insufficient protections for minors (36%).

Policy context and assessment

Croatia has a broad policy framework for basic digital skills. The national roadmap combines individuals' digital competencies, workforce upskilling, school digitalisation and higher education digitalisation, with explicit attention to older people, vulnerable groups and territorial inclusion, including rural areas. The wider education and skills framework points in the same direction, with reforms that aim to improve adult learning, skills intelligence and the labour market relevance of training[11].

The most important operational instrument in 2025 remained the voucher system. The scheme aims to award 40 000 vouchers by the end of June 2026, including at least 12 000 for long-term unemployed, inactive people and young people not in employment or education. According to the European Centre for the Development of Vocational Training (Cedefop), 298 providers were offering voucher-funded training by February 2026, mainly in formal adult education leading to micro- or partial qualifications[12]. Authorities reported that 5 444 people had been included in the basic digital skills stream, mostly from vulnerable categories such as the long-term unemployed, not in education, employment or Training (NEETs) and inactive people, and that financing is expected to continue beyond the RRF phase through the support of the European Social Fund (ESF) until 2029. The roadmap also presents the voucher system as a basis for the future development of lifelong learning and individual learning accounts[13].

The policy debate is increasingly moving towards last-mile inclusion. Authorities have indicated that older people, especially those aged 65+, require physical and place-based delivery rather than standard online provision. They referred to local digital hubs in different counties, discussion of a memorandum of understanding to strengthen them, and interest in Slovenia's mobile 'Digital Heroes' model for reaching rural populations on site. They also stressed the need for a more unified and measurable platform across ministries and schemes so that outreach and outcomes can be tracked more systematically[14].

Croatia is also linking basic digital skills more explicitly to media literacy, online safety and resilience against information manipulation. In October 2024, the Agency for Electronic Media launched the Točnotako.hr platform as a central national fact-checking website. In parallel, the 8th Media Literacy Days, organised with the support of the Electronic Media Agency and UNICEF, reached more than 37 000 individuals in 2025. HAKOM also participated, together with CARNET and the Safer Internet Centre, in the 2025 Safer Internet Day conference. Furthermore, HAKOM's 2026 information integrity materials indicate that during the 2024-2025 electoral period, the regulator set up direct communication channels with major online platforms and supported coordination with the State

11 European Commission, Education and Training Monitor 2025 – Croatia, 17 September 2025.
12 European Commission, Introduction of vouchers for developing green and digital skills, accessed 1 April 2026; Cedefop, Croatia: micro-credentials become a key feature of adult training, 11 February 2026.
13 Republic of Croatia, National Roadmap for Digital Decade Policy Programme 2030, March 2024].
14 Croatian Regulatory Authority for Network Industries (HAKOM), The 4th International Conference 'Accessible Future' Held: Digital Inclusion Should Not Be Merely 'Good Practice', but a Standard, 9 June 2025.

Electoral Commission, civil society and other relevant actors. Croatia's participation in the ADMO / EDMO ecosystem adds a more structured link to research, fact-checking and media literacy work[15].

2025 recommendation on basic digital skills: Intensify targeted action to bridge the digital skills divide across age, education, and rural-urban populations.
Croatia made some efforts to address this recommendation through new policy actions in 2025. The most relevant developments were the scaling of voucher-based provision for basic digital skills, including the targeted participation of vulnerable groups, the stronger focus on local and place-based outreach for older and rural populations, and the emergence of a more explicit media literacy and information resilience strand. However, progress remains partial. The deepest gaps remain concentrated in the very groups identified in the recommendation, while participation in adult learning is still low, territorial provision remains uneven, and the current delivery model is not yet sufficiently scaled or coordinated to close these divides decisively.

ICT specialists

Performance assessment

In 2025, Croatia's proportion of ICT specialists in total employment was 4.9% (2030 national target: 7%), up from 4.3% in 2023, and close to the EU average of 5.0%. The level is broadly in line with the EU. The country is on track according to its trajectory presented in the Digital Decade national roadmap.

The proportion of Croatian women who are ICT specialists is improving, but the wider pipeline remains mixed. In 2024, women accounted for 21.5% of ICT specialists in Croatia, compared with the EU's 19.5%. In the same year, ICT graduates represented 5.6% of all graduates. Also in 2024, 6.5% of enterprises recruited or tried to recruit personnel with ICT specialists' skills.

Policy context and assessment of the recommendation

Croatia's policy debate on ICT specialists and advanced digital skills is increasingly shaped by an upstream pipeline problem. Croatia has relatively strong participation in STEM-oriented VET, but tertiary attainment remains below the EU average, completion rates remain a concern, and the system does not yet translate educational participation into a sufficiently large and stable pool of advanced digital talent. The 2025 *Education and Training Monitor* notes that enrolments in natural science and ICT have increased, but also that Croatia still has one of the lowest proportions in the EU of doctoral students in ICT and needs more graduates in ICT, mathematics and related fields[16]. The new GOAL project confirms that Croatian authorities now see study guidance, student progression and higher education completion as central policy issues[17].

Croatia's national roadmap provides a broad framework for ICT specialists and advanced digital skills, combining measures to increase the number of ICT specialists, improve labour market alignment, strengthen STEM and ICT study pathways, support research and technological infrastructure, and improve women's participation in the field. The total planned public investment linked to this target

15 Agency for Electronic Media, Pokrenuta središnja nacionalna platforma za fact-cheking, 18 October 2024, UNICEF Croatia, Over 37 000 individuals took part in the 8th Media Literacy Days! 26 May 2025, Croatian Regulatory Authority for Network Industries (HAKOM), Conference "Search for a Better Internet 2025" Brings Together Experts and Children, 11 February 2025.
16 European Commission, Education and Training Monitor 2025 – Croatia, 2025; Ministry of Science, Education and Youth, Guidance on Achieving Learning and Increasing Higher Education Completion (GOAL) – public launch, 14 January 2026; OECD, Education and Skills in Croatia, 6 June 2025.
17 European Commission, Education and Training Monitor 2025 – Croatia, 2025; Ministry of Science, Education and Youth, Guidance on Achieving Learning and Increasing Higher Education Completion (GOAL) – public launch, 14 January 2026; OECD, Education and Skills in Croatia, 6 June 2025.

is EUR 176.5 million[18] and the recent policy response focuses more explicitly on guidance, dropout rates, retention and labour market alignment[19].

The Ministry of Science, Education and Youth is implementing an **OECD-supported technical assistance project**, launched in September 2025, with two main strands: stronger educational and career guidance and improved higher education completion. Higher education institutions often do not have enough candidates with suitable competence for STEM and ICT studies, while dropout rates remain high. The project uses student tracking data to identify at-risk students and support progression, while the Ministry is also working with the rectors' conference on recommendations to increase study places in shortage fields and has encouraged the accreditation of new programmes, including in AI and mechatronics. Supply-side measures have also been reinforced through STEM and ICT scholarships, performance agreements with universities, new graduate tracking tools, a key reform introducing new legislation governing the promotion and recruitment of STEM and ICT researchers, and wider efforts to align study provision more closely with labour market needs. In early 2025, Croatia reported 4 149 grants were provided for the purposes of a) scholarships in STEM and ICT studies, b) young researches programmes, c) mobility scheme, d) start-up/spin-off companies of young researches, e) tenure track programme, and f) entrepreneurship traineeships, while performance agreements were signed with all nine public universities in November 2025[20].

At the same time, skills supply is only one part of the challenge. Employers framed the issue around three pillars: **schools, lifelong learning and retention**. Discussions with authorities and stakeholders stressed the importance of the voucher system, micro-qualifications and faster development of occupational and qualification standards. On retention, the message was more explicit: Croatia needs not only to train more specialists, but also to keep them. This is consistent with evidence that the emigration of young and highly skilled people has been a major driver of population decline, while growth in high-skilled employment has remained relatively weak[21].

Migration and attraction policies are therefore becoming more relevant to the ICT specialist agenda. Croatia amended its **Foreigners Act** in March 2025 to make it easier to hire and retain non-EU nationals. European Migration Network Croatia materials show that the reform extended the validity of stay-and-work permits to three years and aligned Croatia with the revised EU Blue Card framework. In the ICT sector, the rules are more flexible because they allow relevant skills and work experience to be recognised, even without a formal higher education qualification. Authorities have also referred to efforts to attract more foreign students into English-language STEM and ICT programmes, pointing to a more realistic policy approach that combines domestic pipeline measures with attraction measures[22].

The policy framework recognises gender participation, but the available evidence still points to a relatively limited set of concrete measures. The roadmap includes a dedicated measure on implementing the declaration on women in the digital world and fostering greater representation of women in ICT. Authorities have also referred to the continuation of the ***Girls in ICT*** **initiative**, now expanded to two additional cities, although they acknowledged that it is still too early to observe

18 Ministry of Science, Education and Youth, Guidance on Achieving Learning and Increasing Higher Education Completion (GOAL) – public launch, 14 January 2026].

19 Republic of Croatia, National Roadmap for Digital Decade Policy Programme 2030, March 2024.

20 Republic of Croatia, Addendum to the National Roadmap – overview of main policies, measures and actions taken/planned, January 2025; European Commission, Annex 13: Education and skills, 2026.

21 Cedefop, Croatia: micro-credentials become a key feature of adult training, 11 February 2026; OECD, OECD Reviews of Labour Market and Social Policies: Croatia 2025, 17 December 2025.

22 European Migration Network Croatia, Annual Report on Migration and Asylum in the Republic of Croatia 2024 – National Report, 2026; European Migration Network / OECD, Labour migration in times of labour shortages, 31 December 2025.

measurable results. The issue is therefore clearly recognised, but the current response remains more gradual and awareness-oriented than transformative.

2025 recommendation on ICT specialists and advanced skills: Expand training, upskilling, and retention programmes for ICT specialists, strengthen alignment with labour market needs, and tackle brain drain to safeguard Croatia's digital talent pipeline.
Croatia made some efforts to address this recommendation through new policy actions in 2025. The most relevant developments were the launch of the OECD-supported project on career guidance and reducing the dropout rate for STEM and ICT studies, continued STEM/ICT support for scholarships, mobility, traineeships in businesses, and development of entrepreneurial skills of researchers and students, wider use of lifelong learning and voucher instruments, accreditation of new study programmes, and a more explicit policy debate on retention and attraction, also through migration instruments. However, progress remains partial. The available evidence still points to a narrow and fragile domestic talent pipeline, a persistent mismatch between education and labour market needs, continued retention concerns, and only early-stage progress on targeted gender measures.

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

Performance assessment

In 2025, Croatia's total digital public services score for citizens (which covers both national and cross-border users) reached 75.34/100 points. This represents a 0.2% increase compared with 2024. As such, Croatia is below the EU average of 84.64/100 points. The country is lagging behind compared to its trajectory presented in the Digital Decade national roadmap. When looking specifically at digital public services for national citizens, Croatia reached 95.68/100 points in 2025. This is above the EU average of 94.01/100 points, although it marks a 0.9% decrease from 2024. However, the performance of cross-border digital public services for citizens is far weaker, with a score of 55.0/100 points, which is substantially below the EU average of 75.28/100 points. Compared with 2024, this reflects a 2.2% increase.

Citizen-related life events that score particularly well include Transport (95.0), Family (87.50), and Studying (87.50). Conversely, Starting a small claims procedure (50.0), Health (60.0), and Career (72.37) show the most room for improvement. For national citizens' digital public services, the results across the different levels of government were 88.37/100 points for central government services and 100.0/100 points for local government services. No regionally provided government services were landscaped for Croatia.

Croatia's total digital public services score for businesses (covering both national and cross-border businesses) was 67.61/100 points in 2025, which was below the EU average of 88.59/100 points. This represents a 3.5% increase from 2024. The country is lagging behind compared to its trajectory presented in the Digital Decade national roadmap. The business-related life event scoring particularly well is Business Start-Up (70.0), whereas Regular Business Operations (65.2) shows the most room for improvement. Notably, Croatia's cross-border digital public services score for businesses reached 37.5/100 points in 2025, reflecting a 15.38% increase compared with 2024. These results are again way below the EU average of 78.37/100 points. On the other hand, digital public services for businesses available to national users in Croatia scored 97.73/100 points. This represents a 0.4% decrease since 2024 and places the country slightly below the EU average of 98.81/100 points.

Overall, across the two Digital Decade KPIs, Croatia's digital public services for citizens indicator performs better than its counterpart for businesses. This stronger performance is underpinned by

digital public services for national citizens, which forms the most mature component of the KPI, while digital public services for cross-border users remains less developed. Recent progress in the citizens KPI has been driven primarily by improvements in cross-border digital public services, while the stronger increase in the businesses KPI is also largely due to the cross-border component, despite its persistently low level. While life events such as Transport, Family and Studying perform best, lower-scoring areas such as Starting a small claims procedure, Health and Career do not yet exhibit the same level of maturity. Overall, both Digital Decade KPIs and their underlying components lag behind EU levels, with cross-border digital public services representing the most persistent area of underperformance. A similar pattern appears across government tiers, where central government services show more room for improvement than local ones.

Croatia's access to e-Health records reached a score of 87.08 after an increase of 0.6%, placing the country slightly above the EU average of 86.51. The country is lagging behind compared to its trajectory presented in the Digital Decade national roadmap.

Policy context and assessment of recommendations

Croatia's policy approach is framed by a broader public administration transformation agenda. The national roadmap links the target on digital public services to improving the state information infrastructure, standardising and digitalising public services, stronger digital capacities, a centralised customer support system, a mobile digital platform and digital identity development. The wider public administration reform agenda similarly treats digitalisation as one of the main pillars of state modernisation[23].

Croatia continues the development of its State Information Infrastructure framework as a common interoperability and digital governance layer for public administration, including shared authentication services, interoperability platforms, common registers, shared cloud infrastructure and secure data exchange mechanisms. Within this framework, the national Shared Services Centre (CDU) provides centralised government cloud and shared platform services for public administration bodies, supporting interoperability, operational resilience and more cost-efficient deployment of digital public services.

Authorities have indicated that they are increasingly trying to move from isolated services towards integrated life-event and business-situation services. They have also linked further progress to interoperability, the data lake, public register upgrades and shared infrastructure. The expansion of the e-Citizens ecosystem, including the mobile application and the continued growth of mobile public services, was also highlighted.

On interoperability, Croatia has continued to strengthen both technical and institutional arrangements. Authorities have referred to around 450 million transactions over the Government Service Bus contracts related to the implementation or improvement of public registers, which were financed by the RRF, and an interoperability network with designated officials in institutions. All digital services are consolidated on the national e-Citizens platform and Croatia has integrated 19 out of 21 relevant Annex II procedures in the Single Digital Gateway Regulation (SDGR) through the national once-only technical system (OOTS) platform, with further expansion planned after June 2026[24].

For businesses, the policy direction is increasingly tied to simplification and competitiveness. Work continues on reducing administrative burdens, improving better-regulation tools and further digitalising procedures relevant to creating and expanding businesses. Croatia is also continuing

23 Republic of Croatia, National Roadmap for Digital Decade Policy Programme 2030, March 2024.
24 Annex 7: Effective institutional framework – Croatia, 2026.

reforms on local administrative capacity and functional cooperation between local government units, which matters for the territorial consistency of service delivery[25].

On digital identity, Croatia has moved from general preparation to a more operational phase. Since 2024, authorities have reported ongoing expansion of the digital ID ecosystem, including strong uptake of the Certilia mobile application and remote qualified electronic signatures. Authorities have also stated that a specific government decision launched the implementation of the national or European wallet, that contracts are in place, and that the aim is to implement the wallet by the end of 2026 using state budget financing. At the same time, discussions with the authorities identified certification as the main unresolved issue. In particular, the absence of a common certification scheme and Croatia's inability to develop a viable national scheme alone could delay effective roll-out.

On e-Health, policy is centred on consolidation and further integration. Authorities indicated that the central platform in the government cloud has been stable for about a year, that the health portal is already part of e-Citizens, and that technical work is under way to integrate the mobile health functionality into the main e-Citizens mobile application. They also confirmed plans to migrate more functionalities to the newer interoperable architecture over the coming years. These remaining gaps also reflect the need for stronger cross-sectoral cooperation, as some of the unresolved elements fall within the social-policy sector. In particular, fuller implementation will require making the relevant social-policy register technically available through the Government Service Bus and connecting those geriatric nursing homes that are required to exchange specified clinical documents with the central health platform.

2025 recommendation on e-Health: Put in place a comprehensive legal and technical framework to give authorised individuals access to electronic health data on behalf of others; make medical imaging accessible to individuals via the national online health access service; and ensure that all healthcare providers, including geriatric nursing homes and mental health facilities, are connected and actively supplying data.
Croatia has continued to implement existing and upgraded e-Health measures. The most relevant developments were the stabilisation of the central e-Health platform in the government cloud, broad access to electronic health records through the health portal and e-Citizens, ongoing migration of functionalities to new interoperability standards, and preparations to integrate health functionalities into the main e-Citizens mobile application. However, progress remains partial. Delegated access remains incomplete beyond access for minor children; legal guardians cannot yet be fully supported due to missing register integration, and geriatric nursing homes are not directly connected as institutions.

2025 recommendation on digital public services: Strengthen the interoperability and user-friendliness of public services to encourage people and businesses to use them more.
Croatia has made some efforts to address this recommendation. The most relevant measures were the continued development of e-Citizens and its mobile application, further implementation of interoperability and public register upgrades, progress on OOTS and SDGR-related work, the preparation of a central customer support platform and additional digital tools for the business

25 European Commission, Annex 7: Effective institutional framework – Croatia, 2026; European Commission, European Semester 2026.

environment. However, progress remains partial. Business-facing digital public services remain clearly below the EU average, cross-border business services remain weak, and the broader evidence still points to persistent administrative friction.

Leveraging digital transformation for a smart greening

In Croatia, the ICT sector's air emissions are high, but the recycling of electronic equipment performs strongly. Sectoral data on the air emissions recently published by Eurostat show that the ICT sector in Croatia emitted **33.8 kg CO_2 eq per capita**, which is above the EU average of **22.8 kg CO_2 eq** (data from 2022). **ICT manufacturing accounted for 20.7%** of those emissions, which is above the EU average of **18.2%**. The ICT sector however represented **0.71%** of air emissions in the total economy, which is above the EU average (**0.35%**). As much as **90.23%** of ICT-related waste collected (corresponding to two categories of waste electrical and electronic equipment) are recycled or prepared for reuse. It is one of the strongest performances in the EU (EU average: **80.23%**). According to the **Digital Decade Eurobarometer 2026**, **56%** of Croatian people consider that green digital technologies (e.g. energy-saving techs) will have the most positive impact in the next 10 years. It is the second-most-cited digital technology after digital health.

The message emerging from discussions with the authorities is no longer the lack of relevant initiatives, but rather that Croatia still lacks a sufficiently coherent national framework linking digitalisation to climate and environmental objectives through common indicators, systematic monitoring, quantified impact and structured scale-up[26].

The main structural weakness appears to be the still-incomplete move from project logic to system logic. Croatia has relevant green digital elements in place, including the digitalisation of energy infrastructure, digital monitoring in water management, emerging smart city applications and the growing use of digital tools for local environmental planning. However, the available evidence still points to limited system-wide monitoring of the emissions-reduction effects of digital solutions, the current lack of a fully developed national green digital roadmap, and only partial integration of digital tools into wider climate and circular-economy governance. At the same time, Croatia's wider climate and decarbonisation challenges are not marginal: climate adaptation implementation remains uneven, water resilience is under strain, transport emissions are rising strongly, and circular-economy performance remains weak[27].

A first important strand is the continued use of digital tools in energy, mobility and environmental infrastructure. The national roadmap for the Digital Decade links the green transition to the digitalisation of public water supply and sewerage systems through supervisory management systems, geographic information systems and more accurate records and metering; and to the digital monitoring of waste flows through the waste management information system. The same document also links the electronic toll system, transport-flow data collection and rail IT upgrades to improved

26 Council of the European Union, Annex to the Council Implementing Decision amending Implementing Decision of 28 July 2021 on the approval of the assessment of the recovery and resilience plan for Croatia, 11 November 2025, link; Ministry of Economy, Integrated National Energy and Climate Plan for the Republic of Croatia for the Period 2021–2030, March 2025, link.

27 Annex 10: Climate adaptation, preparedness and environment – Croatia, 2026; European Commission, Annex 8: Industry decarbonisation, circularity and climate mitigation – Croatia, 2026.

traffic and mobility management with positive environmental effects. In parallel, the updated National Energy and Climate Plan refers to the development of a 'smart gas network' with advanced digital systems, sensors, monitoring devices and information solutions, including a new optical communication cable laid alongside hydrogen-related infrastructure[28].

A second important strand is the emergence of more explicit data- and platform-based approaches for local greening. The most concrete example is the **State Register of Green Infrastructure**, which by late 2025 was presented by the Ministry of Physical Planning, Construction and State Assets as an established stand-alone physical planning information system module that enables the collection of green infrastructure data, the recording of the baseline, the monitoring of growth trends, and the registration of the coverage of local green urban renewal strategies and the projects identified in them. The same ministry also reported continuous training in 2024 and 2025 for municipal and city officials responsible for using the system[29].

The wider implementation picture, however, remains uneven. Authorities point to many relevant initiatives, but also to limited scale, uneven municipal capacity and incomplete national coordination. This is visible in several ways: local projects often emerge through EDIH experimentation or targeted calls rather than through a unified national deployment framework; adaptation implementation remains uneven at subnational level; and in industry decarbonisation and circular economy the broader policy toolkit still faces permitting, capacity and coordination bottlenecks[30].

A third relevant strand comes from experimentation and the infrastructure layer. EDIH Adria reports that the demand-responsive transport model tested on Cres was able to reduce waiting times by 40-60%, shift demand away from private cars, and reduce operator costs by around 30%, illustrating the potential of digital solutions in mobility where local conditions and implementation capacity are favourable. At the same time, the European Commission's LIFE project page for LIFE4GREENBROADBAND shows that the telecoms infrastructure project combines solar installations, free cooling systems and smart energy management with targets including 120 solar installations, 200 free cooling solutions, annual renewable energy production of more than 510 MWh, annual energy savings of 1 210 MWh and annual CO_2 reductions of more than 400 tonnes in the Croatian telecoms network[31].

From a macroeconomic and competitiveness perspective, Croatia's green transition increasingly depends on better coordination between digital, climate and industrial policy. Without a more integrated framework, digital-for-greening tools risk remaining concentrated in pilots, sector-specific systems and stronger local ecosystems, with more limited effects on economy-wide resource efficiency, implementation capacity and competitiveness. This concern is consistent with wider institutional analysis indicating that research and innovation in the digital and green space remain limited and that only 9.5% of domestic patents are in environment-related technologies[32].

28 Ministry of Economy, Integrated National Energy and Climate Plan for the Republic of Croatia for the Period 2021–2030, March 2025.
29 Ministry of Physical Planning, Construction and State Assets, "Otvorene prijave na završnu radionicu 'Registar zelene infrastrukture'", 19 September 2025.
30 Annex 10: Climate adaptation, preparedness and environment – Croatia, 2026; European Commission, Annex 8: Industry decarbonisation, circularity and climate mitigation – Croatia, 2026.
31 EDIH Adria, Digital transformation of transport on the island of Cres with the support of EDIH Adria, 31 March 2025; European Commission, LIFE 3.0 – LIFE20 CCM/HR/001616: Reducing CO2 emissions of the electronic communications network by implementing free cooling and solar power solutions.
32 Croatian National Bank, CNB's macroeconomic projections for Croatia – December 2025, 22 December 2025; Economist Intelligence Unit, One-click report: Croatia, 23 January 2026; European Commission, Annex 7: Effective institutional framework – Croatia, 2026.

Annex I: National roadmap analysis

Croatia's national Digital Decade strategic roadmap

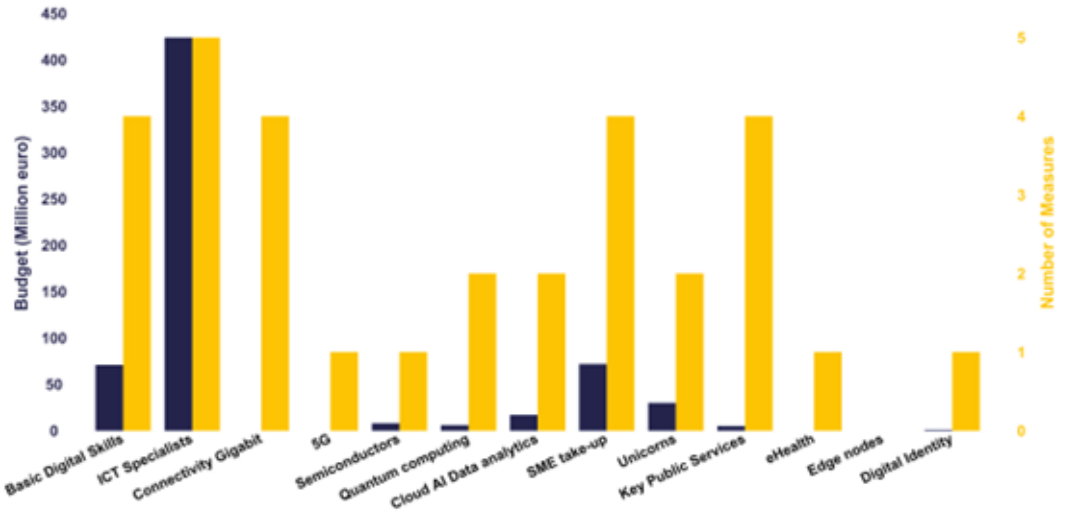
Croatia submitted an adjustment to its national roadmap in January 2025, 4 recommendations. The adjustment clarified the national approach, updated 5G coverage targets, and refined the measures set, without fundamentally revising the strategic directions. It also improved alignment with the Digital Decade objectives, enhanced stakeholder consultations, and updated links to policy.

- **Targets:** Croatia partially addressed the recommendation to raise ambition. The 2030 target for overall 5G coverage remains aligned with the EU target (100%), while a new mid-band 5G coverage target (75% by 2030) was set. This is below the EU ambition but reflects national circumstances. No changes were made to targets for ICT specialists or AI/data analytics adoption. A target for edge node deployment, required under the Digital Decade, is still missing.
- **Measures:** The measure repository was strengthened, with updated and more detailed descriptions across connectivity, skills, AI/data, cloud computing, and digital public services. However, no fully new measures were introduced.
- **Digital rights and principles:** The mapping of measures to the Digital Decade objectives and the European Declaration on Digital Rights and Principles was improved.
- **Consultation:** The stakeholder consultation process was improved, including a kick-off conference in September 2024 and continuous coordination with relevant state bodies and associations, such as the Croatian Employers' Association and the Croatian Chamber of Economy.

While Croatia's adjusted roadmap covers most of the Digital Decade targets, the absence of a target for edge node deployment highlights an important gap. Overall, the Croatian roadmap includes 31 measures with a budget of EUR 635 million (equivalent to 0.74% of GDP).

Croatia's adjustment improves the structure and clarity of the roadmap. The strengthened measure descriptions, improved mapping to objectives, and update of 5G targets are positive developments. However, the lack of new measures, the limited ambition for key digital transformation areas such as AI / data adoption and ICT specialists, and the absence of an edge node target remain significant challenges. Funding levels also remain modest relative to the scale of needs, notably for AI, cloud computing, and rural connectivity. While the adjustment confirms a solid baseline, further efforts are needed to maintain momentum, particularly in driving the twin transition, SME digitalisation, and the adoption of advanced technologies.

Measures and budget in the national roadmap[33]



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

Annex II: Funding, economic impacts & Multi-Country Projects

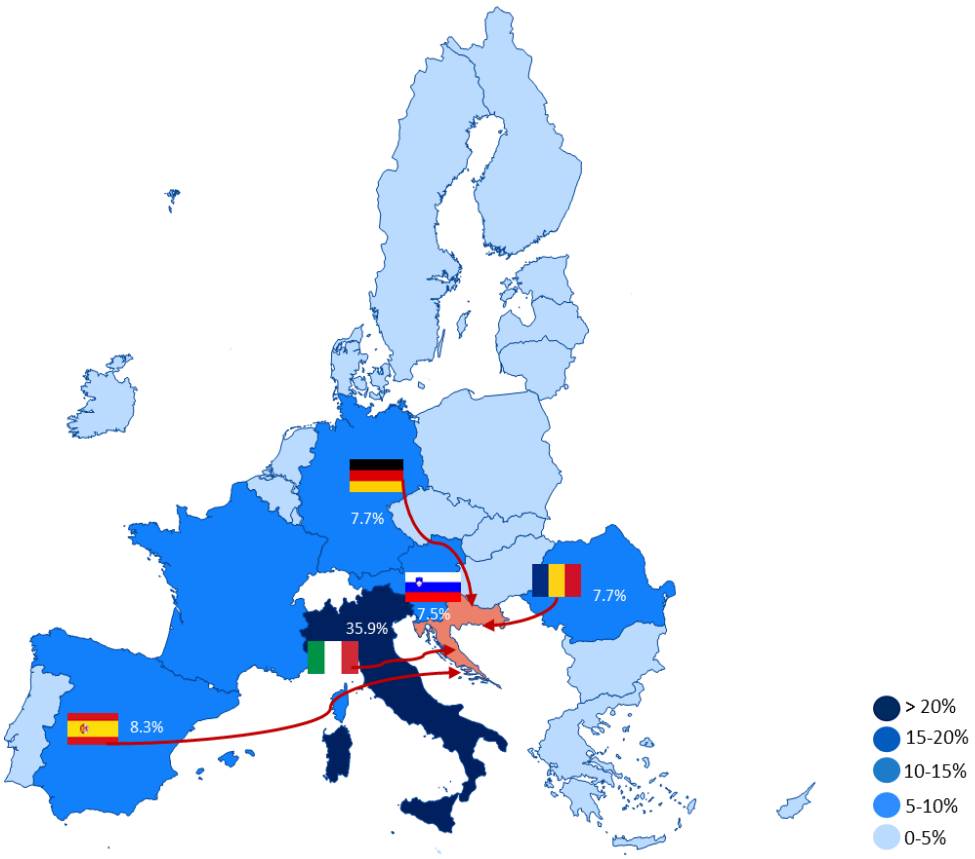
Croatia

Country results from the study 'Assessing the Economic Impact of Digital Investments under the Recovery and Resilience Facility'

A modelling study conducted by the European Commission services, with the FIDELIO model, assesses the economic impact of the digital component of the RRF. As of November 2025, the digital part of the Recovery and Resilience Plan of Croatia was evaluated to EUR 1.44 billion with EUR 179 million for digital infrastructures, EUR 179 million for digital skills, EUR 205 million for the digitalisation of businesses, EUR 293 million for the digitalisation of public services, and EUR 582 million for other digital priorities.

The total economic impact of RRF digital measures is estimated to EUR 1.23 billion for the national economy. Of this, EUR 1.11 billion stems from the direct effects of Croatia's own RRP and EUR 0.12 billion corresponds to spillover effects from the implementation of other EU Member States' plans. Croatia benefited the most from spillover effects from RRPs of Italy (EUR 43 million), Spain (EUR 10 million), Romania (EUR 9 million). The most impacted sectors are ICT Services (EUR 293 million), Manufacturing (EUR 216 million), and Trade (EUR 138 million).

RRF spillover effects to Croatia



Funding from the Recovery and Resilience Facility (RRF) & Cohesion Policy

Croatia allocates 21% of its total recovery and resilience plan to digital objectives (EUR 1.5 billion)[34]. In addition, under cohesion policy, EUR 0.9 billion, representing 10% of the country's total cohesion policy funding, is dedicated to advancing Croatia's digital transformation[35].

Multi-Country Projects

Croatia is a member of the Alliance for Language Technologies EDIC, the Local Digital Twins towards the CitiVERSE EDIC, of the EUROPEUM EDIC and of the IMPACTS EDIC. In addition, Croatia is a member of the consortium that aims to set up the EDIC in the area of cybersecurity skills and it is also supporting the setting up of the EDIC in the area of agri-food. Croatian entities are indirect partners in the IPCEI on Next Generation Cloud Infrastructure and Services (IPCEI-CIS). Croatia is a participating state of the EuroHPC Joint Undertaking (JU) and of the Chips JU.

34 The proportion of financial allocations that contribute to digital objectives has been calculated using Annex VII to the Recovery and Resilience Facility Regulation. Last data update: 23 April 2026.
35 This amount includes all investment specifically aimed at or substantially contributing to the digital transformation in the 2021-2027 Cohesion policy programming period. The source funds are the European Regional Development Fund (including Interreg), the Cohesion Fund, the European Social Fund Plus, and the Just Transition Fund.