Slovenia

The European Union (EU) Coordinated Plan on Artificial Intelligence (AI) is a strategic initiative by the European Commission and EU Member States to promote AI development, investment and co-operation. In 2024, the OECD conducted a survey and interviews to take stock of implementation progress made by the EU Member States in implementing the actions set in the EU Coordinated Plan on AI. Drawing on the information collected, the OECD prepared country notes for each EU Member State. This document presents the country note for **Slovenia**, which summarises key initiatives and implementation progress.

Key messages

- **The National Programme on Artificial Intelligence (2021), Slovenia's national artificial intelligence (AI) strategy, foresees investments of EUR 112 million**, including approximately EUR 65 million in funding from the European Union (EU) Recovery and Resilience Facility (RRF).
- **Initially adopted for a period of five years (2021-26), the strategy is currently undergoing a renewal process, following a monitoring and implementation review**, with renewed emphasis on implementing actions so far not undertaken, partly in response to the unprecedented pace of advancements in AI. This includes stronger focus on the uptake of AI by the public sector and in healthcare, among other areas, as well as new measures, until 2030, in line with priorities under the National Recovery and Resilience Plan (NRRP) and the National Strategic Plan for the Digital Decade.
- **The strategy connects to the broader digital policy and economic development policy framework of Slovenia**, as one of several sectoral strategies under the Digital Slovenia 2030 strategy, which also captures strategic directions for investments in AI-enabling assets, such as data and computing infrastructure (the implementation of which is well underway), with a notable emphasis on high-performance computing (HPC).
- **AI research in Slovenia has a long history and is concentrated on its AI centres of excellence** (including the Jožef Stefan Institute, several universities and the upcoming AI Competence Centre), complemented by thematic research initiatives aiming to share and make use of research infrastructure across the country and with international partners for specific AI--related purposes.
- **AI adoption by the private sector is supported predominantly in the context of broader digitalisation initiatives**, with several programmes also offering specific AI-focused financial and adoption support to start-ups, scale-ups and small and medium-sized enterprises (SMEs). The upcoming AI Competence Centre is set to accelerate AI adoption as a "one-stop shop" by both the private and public sectors.

- **AI, and digitalisation more broadly, are already permeating Slovenia's education system**: Specialised courses and broader university study programmes as well as reform initiatives designed to mainstream digitalisation and AI in primary and secondary education are complemented by specific initiatives for reskilling and upskilling, including of women.
- **Slovenia has already put AI to significant use across relevant sectors**: Pilot cases and established programmes are complemented by additional initiatives to test and develop further use cases, including with regard to energy efficiency and decarbonisation, healthcare, the public sector, mobility as well as agriculture and bioeconomy.

Set enabling conditions for AI development and uptake in the European Union

Acquire, pool and share policy insights

The National programme to promote the development and use of AI in the Republic of Slovenia by 2025 (NpAI) was adopted in May 2021 as the country's national AI strategy. The NpAI has been designed to support research, development and uptake of ethical and trustworthy AI, assuring safety and human rights in a user-centric way that benefits humans and society, based on Slovenia's long-time research experience and capacity in AI.

While Slovenia did not follow a sectoral approach in designing its AI strategy, but rather a horizontal and systemic one, six sectors/priority areas have been identified as the most promising for the use of AI, including: health, Industry 4.0, language technologies and cultural identity, public sector, sustainable food, the environment and spatial planning. The programme sets out ten strategic goals[1] that include support for research and innovation (R&I) projects, establishment of proper data and computational infrastructure, as well as support for reference implementation projects in the six priority areas.

The NpAI was adopted for a period of five years and with an overall budget of EUR 110 million. By November 2024, a monitoring analysis and implementation plan, under the purview of Slovenia's interministerial working group on AI, led by the Ministry of Digital Transformation,[2] estimates investments in AI from 2021 to 2026 will amount to EUR 112 739 424 (including resources from the RRF of EUR 65 316 874).

Following an analysis of the measures implemented, the programme is scheduled to be extended in 2026, with new measures to be added spanning until 2030 (in line with the National Strategic Plan for the Digital Decade, see below).

Next to the NpAI, other national strategies are relevant for AI as well, notably the Digital Slovenia 2030 strategy (Government of Slovenia, 2023[1]), which lays out the priority areas of Slovenia's digital transformation, its action plan for the Digital Slovenia 2030 strategy (Government of Slovenia, 2023[2]), the National Strategic Plan for the Digital Decade (Republic of Slovenia, 2023[3]), as well as dedicated sectoral strategies (including the NpAI), which further define challenges, goals, indicators and measures, including the Gigabit Infrastructure Development Plan 2030 (Republic of Slovenia, 2022[4]) and the Digital Public Services Strategy 2030 (Government of Slovenia, 2023[5]), among others.

Additionally, the Strategy of Digital Transformation of the Economy 2021-2030 aims to increase Slovenia's use of advanced digital technologies,[3] primarily through EUR 56.5 million of funding from the NRRP (Republic of Slovenia, 2022[6]).

Tap into the potential of data and foster critical computing capacity

Slovenia's policies with regard to data and cloud infrastructure are contained both in the NpAI, as well in the aforementioned Digital Slovenia 2023 strategy, closely following the EU data strategy and the EU Open Data Directive, among others, with plans to follow up the establishment of the Open Data Hub of Slovenia (OPSI Hub) with the creation of data spaces in different fields (e.g. manufacturing, environment and space; mobility, health and medicine; finance; energy; agriculture; public administration; skills) for the application of AI, as well as concrete projects to further build out data and computing infrastructure.

Existing and planned HPC resources, partially managed and developed by the Slovenian National Supercomputing Network (SLING), a consortium for the development of grid computing and management of supercomputing infrastructures, are already used for AI purposes, including the DeepFake project,[4] the Development of Slovene in a Digital Environment project[5] and consortium CLARIN.SI,[6] with the future Vega-2 AI Factory envisaged to establish an infrastructure of HPC capacities that will provide AI services, i.e. dedicated access and supercomputing services for AI.

With the programme for the development of chips and semiconductors technologies, the Government of Slovenia established a competence centre for chips and semiconductors to foster a supportive environment in the field, 1 of 27 chip competence centres in 24 EU Member States, including Slovenia.

Table 1. Set enabling conditions for AI development and uptake in the European Union: Key initiatives

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
HPC centre at the Institute of Information Sciences (IZUM) (European High Performance Computing Joint Undertaking, EuroHPC JU)/ Vega-2 AI Factory/ HPC RIVR Vega	In process (application approved in March 2025)	Slovenia is setting up an HPC centre with a Vega supercomputer at IZUM, as part of the RIVR cohesion project, which aims to enable research and development (R&D) in machine learning, AI language technologies, image recognition, deep learning, advanced machine modelling and analytics, and big data mining. The HPC RIVR Vega project or Vega-2 AI Factory aims to help Europe compete globally in strategic areas, such as AI, high-performance data analytics (HPDA), personalised medicine, bioengineering, fighting climate change and the development of medicine and new materials (HPC Vega, 2025[7]). The new infrastructure is part of the EuroHPC JU (2024[8]).	EUR 150 million; the project will be financed from 3 sources: 50% from the JU (Digital Europe Programme, DEP), 40% from integral funds, 10% from the European Regional Development Fund (ERDF)
Slovenian National Supercomputing Network (SLING)	2020(-22) (EuroCC) 2023(-25) (EuroCC 2)	National competence centre SLING helps users in their use of HPC to learn about, access and use supercomputing. Its mission is to promote the use of supercomputing capabilities for scientific and industrial research, academia and public service delivery. It was formed in the framework of the EuroCC project National Competence Centres in the framework of EuroHPC and continues its activities in the EuroCC 2 project (SLING, 2024[9]).	Co-funded by the Ministry of Higher Education, Science and Innovation
Data centres in Arnes	2023(-26)	The construction of new data centres for research data and to host future supercomputers is underway, implementing a 2023 action plan for open science, as well as Measure 6.2 "Open science to improve the quality, efficiency and responsiveness of research" from the Slovenian Scientific Research and Innovation Strategy 2030 (ReZrIS30) (Slovenian Community for Open Science, 2023[10]).	EUR 15 million committed budget, (co-funding through the RRF)
Establishment of Next-Generation Information Infrastructure (DRO Next)	2022-2026	The DRO Next project focuses on developing advanced digital infrastructure that will enhance the capabilities for data management and processing at the edge, facilitating the use of edge computing technologies across various sectors, aiming to upgrade the current governmental private cloud (Government of Slovenia, 2022[11]).	EUR 32.1 million (of which EUR 26.5 million under the national RRP)
Slovenian national competence centre for chips and semiconductors, and other support,	2025	As part of the EU Chips JU, Slovenia is envisaging the establishment of a consortium of public registered training organisations, which will manage the role of the competence centre for chips and semiconductors, to be located at the University of Maribor's Faculty of Electrical Engineering and Computer Science (UM FERI) (Republic of	EUR 500 000 per year from national funds, and EUR 500 000 per year from the

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
as part of the Chips Joint Undertaking (Chips JU)		Slovenia, 2024[12]).	Chips JU; funding will be provided for a duration of 4 years
Support for Slovenian companies involved in the Chips JU	2024	Slovenia supports R&I projects within the tenders of the EU Chips JU, as part of the Ministry of Digital Transformation's measures to promote entrepreneurship.	EUR 1.2 million per year from national funds for entrepreneurship support
Support for Slovenian companies involved in Important Project of Common European Interest in Microelectronics and Communication Technologies (IPCEI ME/CT)	2024	This Ministry of the Economy, Tourism and Sport measure aims to support companies involved in IPCEI ME/CT in carrying out R&D activities, including the first industrial deployment of pilot solutions, in the framework of R&D projects in the field of microelectronics, semiconductors, microchips and communication technologies.	EUR 1.5 million (through the RRF)
Internet of Things (IoT) Connectivity Platform	2023	In 2023, an IoT Connectivity Platform pilot project was implemented, intended for users from public administration. Technically it focuses on a key challenge, i.e. how to connect various IoT end devices like sensors, actuators, meters, dedicated devices, buildings, etc. with a single common platform, considering that these end devices may communicate wirelessly or via wired connections, generally using different transmission and data protocols and formats. The purpose of the IoT Connectivity Platform is to provide some sort of common denominator for all these various end devices by enforcing NGSI-LD information model specifications through the use of the FIWARE Context Broker central building block.	EUR 48.2 million (under the RRF)
Establishment of edge node indicators	2023(-25)	Slovenia is in the process of establishing edge node indicators, in accordance with Article 5(1) of Decision (EU) 2022/2481, in collaboration with communication agency networks and services of the Republic of Slovenia.	No dedicated budget
Important Project of Common European Interest on Cloud Infrastructure and Services (IPCEI CIS) project on cloud and edge computing	2024	The first IPCEI on cloud and edge computing, this project targets the development of the first interoperable and openly accessible EU data processing ecosystem, the multi-provider cloud-to-edge continuum. It will develop data processing capabilities, and software and data-sharing tools that enable federated, energy-efficient and trustworthy cloud and edge distributed data processing technologies and related services. Eleven companies from Slovenia are included in the consortium as indirect partners. The Ministry of the Economy, Tourism and Sport has issued a call is to encourage Slovenian companies involved in the IPCEI CIS to carry out R&D activities, including the first industrial deployment of pilot solutions, in the framework of R&D projects in the field of cloud services and data infrastructures (Republic of Slovenia, 2022[13]; 2024[14]).	EUR 5 million (co-funding through the RRF)
Slovenian national strategy in semiconductor technologies and chips until 2030	2024(-30)	The strategy is being conducted under the auspices of the Ministry of Digital Transformation in association with two other ministries – the Ministry of the Economy, Tourism and Sport and the Ministry of Higher Education, Science and Innovation.	Ministry of Digital Transformation: EUR 1.2 million; Ministry of the Economy, Tourism and Sport;: EUR 1.5 million (under the RRF); Ministry of Higher Education, Science and Innovation: EUR 2.25 million for semiconductors and EUR 2.25 million for quantum

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
			technologies for a three-year period (two specified fields not limited to chips and semiconductor technologies)
Programme for the development of chips and semiconductors technologies Čip.si	2025	Slovenia has established a competence centre for chips and semiconductor technologies, to enhance R&D in this sector. Čip.si aims to support SMEs and start-ups by providing resources, training and access to infrastructure such as pilot lines and design platforms (Republic of Slovenia, 2024[12]).	

Make the European Union the right place: Excellence from lab to the market

Build and mobilise research capacities, and fund and scale innovative ideas and solutions for AI (support to start-ups and SMEs)

With AI research dating back to the 1970s, Slovenia has five centres of excellence in AI across the country, including the Jožef Stefan Institute, the Faculty of Computer and Information Science of the University of Ljubljana, the Faculty of Electrical Engineering of the University of Ljubljana, the Faculty of Electrical Engineering and Computer Science of the University of Maribor and one at the University of Nova Gorica, as well as the International Research Centre on Artificial Intelligence (IRCAI). While AI research is concentrated at these institutions, several initiatives aim to make use of and share research infrastructure for AI initiatives across the country and with international partners.

Several initiatives to bring AI from Slovenia's research base to the market are underway, often in the context of building digital capabilities in start-ups, scale-ups and SMEs, with other areas of digitalisation next to AI also playing a role in existing innovation programmes (Republic of Slovenia, 2022[15]).

The upcoming multi-stakeholder AI Competence Centre is set to play a key role in supporting research, development and implementation of AI technologies across various sectors, and to support both companies and the public sector in AI adoption.

Table 2. Make the European Union the right place: Excellence from lab to the market: Key initiatives

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
AI Competence Centre	2024(-29)	The Ministry of Digital Transformation is seeking to establish an AI Competence Centre, with the aim to advance AI development and application within Slovenia, serving as an implementation tool for the NpAI. Objectives include improving AI expertise, fostering innovation, supporting economic growth and integrating AI across various sectors. It will focus on research, development and practical implementation of AI technologies to benefit various industries and public services, but also serve as a one-stop shop for AI adoption support for SMEs. Designed to be run by consortium (with a public call launched in December 2024), key stakeholders will be from academia, industry and government (Republic of Slovenia, 2024[16]).	EUR 2 million per year (with possible support from private sources)
Alliance for Language Technologies European Digital Infrastructure	2024	Slovenia participates in ALT-EDIC, which aims to address the lack of European language data available for training AI solutions. The goal of this joint initiative is to develop a shared EU infrastructure in the field of language technologies. This will result in the creation of large language models for EU regional and official languages. The aim is to use these	EUR 27 000 plus in-kind contribution of the use of HPC Vega (EUR 41 000)

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
Consortium (ALT-EDIC)		models to promote the development of advanced AI models capable of understanding and generating human-like language.	and HPC Maister (EUR 375 000) per year
Networked Local Digital Twins towards the CitiVERSE European Digital Infrastructure Consortium (LDT CitiVERSE EDIC)	2024	The LDT CitiVERSE EDIC initiative aims to connect existing local digital twins across Europe, laying the foundation for the EU CitiVERSE. Local digital twins are virtual representations of a city's physical assets, processes and systems. These digital twins use data, analytics and AI to create real-time simulation models that reflect the cities they represent. The CitiVERSE project focuses on developing generative AI applications in Smart Cities, including simulations that address (among other things) the impact of changing traffic conditions on air quality, decarbonisation and congestion. Additionally, it explores AI-based generative virtual reality applications to enhance citizen interaction (e.g. to simplify consultations and understanding of planned urban changes).	EUR 15 000 per year
EUROPEUM European Digital Infrastructure Consortium (EDIC)	2024	The multi-country project of the European Blockchain Partnership and the European Blockchain Services Infrastructure takes the legal form of an EDIC. It also aims to support cross-border co-operation among public authorities in the field of decentralised technologies, facilitate the interoperability of solutions with other technologies, including at the protocol, smart contract and application levels and contribute to better conditions for innovation. This EDIC will support co-operation with other blockchain initiatives or initiatives in other technology fields such as cloud computing, AI, data spaces or cybersecurity and other EDICs, as appropriate.	EUR 150 000
SMASH project	2023(-28)	The aim of SMASH, an innovative, intersectoral, career-development training programme, is to attract 50 excellent postdoctoral researchers from all over the world, including Slovenian researchers abroad, who will use machine learning, AI and the Vega supercomputer to conduct research in various fields of science and humanities. The project is run by the University of Nova Gorica and its partners, the University of Ljubljana, the Jožef Stefan Institute, the Slovenian Environment Agency and IZUM, and is co-funded by the Horizon Europe R&D programme (Marie Skłodowska-Curie COFUND Actions) (SMASH, 2024[17]). In this context, the Ministries of Higher Education, Science and Innovation and of Digital Transformation co-financed two projects: i) defining a mechanism for attracting foreign and returning local experts to strengthen Slovenia's position in global digitisation trends; ii) creating an analytical model for the evaluation of policy measures in the field of the return of educated Slovenes.	Total eligible costs of the SMASH project: EUR 9.95 million, of which EUR 5.18 million are national funds
Digital Transformation of Robotic Factories of the Future (DIGITOP)	2023	The main goal of the DIGITOP programme is the introduction of advanced digital technologies, such as robotics, AI, information and communication technologies (ICT), Industry 4.0 and 5.0, into manufacturing companies for the automation and optimisation of production processes. The programme includes nine R&D projects, which are at various stages of technological readiness, and focuses on the theme of digital transition and strategic autonomy (DIGITOP, 2024[18]). The DIGITOP programme is realised through a public call for co-funding of longer-term large collaborative R&I programmes (Technical Readiness Level 3-6) of the Ministry of Higher Education, Science and Innovation (ARIS, 2023[19]).	Budget committed for the listed initiatives: EUR 39 million (national, RRF, EU Cohesion Fund), for which EUR 17.8 million from the RRF have been allocated
PoVeJMo	2023(-26)	The PoVeJMo programme supports research on adaptive natural language processing with large-scale language models and is realised through a public call for co-funding of longer-term large collaborative R&I programmes (Technical Readiness Level 3-6) of the Ministry of Higher Education, Science and Innovation (CJVT, 2023[20]; ARIS, 2023[19]).	
Gravity	2024(-27)	The Ministry of Higher Education, Science and Innovation and the Ministry of Digital Transformation (co)funding the implementation of four projects of consortia of researchers focused on innovative and impactful research (hereafter referred to as "Gravity projects"), one project in each of the following thematic areas scoring Technical Readiness Level 1/2-4/5 on the Technological Development Level scale: AI, semiconductor, language technologies, quantum technologies (ARIS, 2024[21]).	

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
R&D projects for smart specialisation and specific economic objectives		In line with the Slovenian Sustainable Smart Specialisation Strategy for Advanced Technologies, R&D projects on Technical Readiness Level 3-6 are supported.	
R&D projects for ICT and specific economic purposes	2022(-23)	In 2022, the Ministry of the Economy, Tourism and Sport issued a public call for proposals R&D projects for specific objectives: contributing to the green transition, increasing investment in R&D, increasing productivity (including material and energy productivity) and strengthening the competitiveness of the economy, from which 95 R&D projects by consortia of companies received co-funding. Eighteen projects are based on the use of AI (Republic of Slovenia, 2022[22]). The field of AI has been included in the ICT programme and partially in the other 9 programmes of the Ministry of the Economy, Tourism and Sport.	
Pilot demonstration projects		Twenty-one consortia were funded to implement pilot demonstration projects focusing on the circular economy to achieve the environmental objectives and targets in the Integrated National Energy and Climate Plan of the Republic of Slovenia (NEPN). Three projects are based on the use of AI (Spirit Slovenia, 2024[23]).	
Digital Innovation Hub Slovenia (DIH Sovenia)	2019	Slovenia's national DIH is a one-stop shop for support for the digitalisation of SMEs, offering vouchers to increase digital competences, for preparing digital strategy, digital marketing and cybersecurity.	EUR 22 million (2019-24)
European Digital Innovation Hubs (EDIHs)		The two EDIHs in Slovenia have dedicated services to help AI start-ups and scale-ups access financing. • Smart, Resilient and Sustainable Communities (SRC) supports state and local governments and SMEs in testing products, solutions and components in a real environment and upgrading their digital processes and associated business models, while aligning growth opportunities with the United Nations Sustainable Development Goals, offering support with HPC, AI, cybersecurity, robotics and blockchain technologies, targeting the manufacturing and public services sectors (SRC-EDIH, 2024[24]). • DIGI-SI seeks to foster the digital transformation of SMEs, start-ups, scale-ups and public administration in four strategic priority areas: agrifood, health, tourism and manufacturing, offering support related to AI, cybersecurity, HPC, advanced digital skills included, targeting food producers, healthcare, tourism and manufacturing (EC, 2024[25]).	EUR 2.9 million (SRC – with 50% EU funding, 25% national funding and 25% own funding); EUR 3.3 million (for DIGI-SI, same distribution as above)
Digital transformation incentives programme of the Slovene Enterprise Fund	2021	With the digital transformation incentives (among other programmes), the Slovene Enterprise Fund offers grants or blended financing (combination of repayable and non-repayable funds) to micro businesses and SMEs, in line with EU guidelines on implementing development incentive programmes (SEF, 2024[26]; Republic of Slovenia, 2021[27]).	EUR 30 million through the ERDF
P2 subsidies for start-ups	2024	The P2 programme, managed by the Ministry of the Economy, Tourism and Sport and implemented through the Slovene Enterprise Fund, focuses on co-financing the launch of innovation-driven companies, and helps accelerate the development and commercialisation of their innovative products, including those related to AI (Republic of Slovenia, 2024[28]).	EUR 2.1 million (64% EU funds, 36% Slovenian national funds)
P4D grants for digital transformation	2021(-27)	In co-operation with the Slovene Enterprise Fund, the Ministry of the Economy, Tourism and Sports offers grants up to EUR 100 000 for digital transformation of SMEs, which also include transformation with the use of advanced technologies (also AI).	EUR 15.8 million through the ERDF
High-technology equity financing programme	2021(-27)	After a similar programme in 2014-20 led by the Slovene Enterprise Fund, the SID Bank supports innovative and high-technology start-ups and scale-ups with equity financing (seed capital and convertible loans).	EUR 15 million through the ERDF
Slovene Early Stage Innovation Fund	2024-2029	This Slovene Enterprise Fund equity financing scheme seeks to provide equity capital to innovative micro, small and medium-sized companies, which contribute to the green and digital transitions and support the growth of innovative globally oriented start-up and scale-up companies.	EUR 25 million (of which EUR 15 million from the EU Cohesion Fund under the Multiannual Financial Framework)

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
			+ EUR 10.7 million of private funding

Ensure AI technologies work for people

Nurture talent and improve the supply of skills necessary to enable a thriving AI ecosystem

While Slovenia's AI centres of excellence provide university courses in AI-relevant disciplines,[7] AI also plays an important role in primary and secondary education. On the basis of the Slovenian Digital Education Action Plan 2021-27 (Republic of Slovenia, 2021[29]), a reform of the education system in Slovenia is underway through the National Programme for Education for the Period 2023-2033 (Republic of Slovenia, 2023[30]), with digital and basic computer science and technology competencies taking an important role in secondary school curricula. AI is also being specifically promoted throughout Slovenia's education system (primary, secondary, tertiary and professional), including in other (non-ICT) subjects, and with specific initiatives on upskilling professionals, particularly women.

Table 3. Ensure AI technologies work for people: Key initiatives

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
Using generative AI for and in education	2024	The Ministry of Education, Science and Sport has published this public call for proposals with regard to the use of generative AI for and in education, including content development for primary and secondary school, in line with the with the NRRP and within the development area of smart, sustainable and inclusive growth (Republic of Slovenia, 2024[31]).	Overall budget for the measures described here: EUR 10.3 million, with funding both from national sources and the RRF (approximately EUR 9.3 million)
Digital competences and basic knowledge of computer and information science	2023, 2024(-26)	The Ministry of Education, Science and Sport has run two public tenders to carry out experimental projects for the development and verification of digital competences and basic knowledge of computer and information science in innovative departments or groups at educational institutions (Republic of Slovenia, 2023[32]; 2024[33]).	
Training for children and young people to strengthen digital competences and to promote natural sciences and technical professions	2023, 2024	The Ministry of Digital Transformation co-funds training for children and young people to strengthen digital competences and encourage and promote science and technology careers. The 2023-24 project, included AI content in Part B: Advanced digital technologies. A further public call is expected in the third quarter of 2024 with a special lot dedicated to AI (Republic of Slovenia, 2023[34]).	
Pumice	2022(-24)	The Ministry of Digital Transformation co-funds the project, the goal of which it is to develop educational content and examples of AI use in various subjects and activities in primary and secondary schools, with a focus on practical demonstrations of AI's usefulness in teaching subject content, e.g. Slovenian language, history, chemistry, biology, art (Pumice, 2022[35]).	
Reform of Higher Education for a Green and Resilient Transition to Society 5.0	2022(-26)	In the framework of this reform, guidelines for the education of professionals and a proposed implementation plan were prepared, including pilot projects in the field of digital transition to improve digital competences for digital transformation ("Promoting the development and use of advanced digital skills [AI, blockchain, cybersecurity, etc.]" and "Raising the pedagogical digital competences of educators in higher education"). The reform also provides a framework for the implementation of micro-credentials that will enable higher education to respond rapidly to short- and medium-term needs for competencies in different fields (includes the field of AI - funding for the field of AI is	The project was funded through the RRF, but the amount allocated to AI in the overall project cannot be determined at this stage

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
		still to be determined) (Republic of Slovenia, 2022[36]; Republic of Slovenia, 2022[37]).	
Requalification of women in ICT professions	2023	As part of the National Strategic Plan for the Digital Decade, the Ministry of Digital Transformation has launched an initiative aimed at requalifying women over the age of 18 in the field of ICT. For further information, see Box 1.	EUR 2.95 million (overall), with EUR 22 000 focused on AI
Training of professional and managerial staff in education	2023(-26)	The Ministry of Education launched a public call for training of professional and managerial staff in education to strengthen competences for sustainable development and financial literacy as well as digital competences, which includes the field of AI (Republic of Slovenia, 2022[38]).	Co-funding through the RRF

Box 1. In focus: Slovenia's special initiatives in AI education

Requalification of women in ICT professions

As part of the National Strategic Plan for the Digital Decade, the Ministry of Digital Transformation has launched an initiative aimed at requalifying women over the age of 18 in the field of ICT.

The initiative offers both short-term (15-hour) and long-term (24-hour) training programmes for various ICT professions, including:

- cybersecurity specialist
- data analyst
- IT support specialist
- IT project manager
- UX designer
- AI specialist.

The primary goal of this initiative is to enhance digital literacy, encourage greater interest among women in ICT careers and provide training that would enable participants to pursue careers in the ICT sector. The initiative achieved positive results, with over 500 women participating in the training programmes. Women over the age of 18 could apply without any additional requirements. Many of these participants reported an increased interest in digital technologies and pursuing careers in this field.

A total of 23 training sessions were conducted as part of the initiative, including 4 specifically focused on AI. The AI specialist training programme was completed by 89 participants. The AI specialist curriculum training included several key topics: the fundamentals of AI and its primary applications, future development opportunities, as well as the basics of machine learning, deep learning and neural networks. Longer training programmes had to include additional topics, e.g. understanding algorithms for data analysis.

In addition to these training programmes, the initiative also featured events specifically focused on ICT skills for women. These events aimed to showcase various ICT roles, career paths and opportunities for education and certification. They also offered networking opportunities within the ICT community, job search support and options for further training, mentorship and ongoing support.

The initiative, in place since 2023, is financed through the national budget with EUR 2.95 million, with approximately EUR 22 000 focused on AI.

Build strategic leadership in priority sectors

Slovenia is already using AI in several sectors and has further plans to harness AI for strategic sectoral goals, such as: for efficient energy use and decarbonisation (as put forth in its strategic document on energy efficiency and use of renewables in the economy (Republic of Slovenia, 2022[39])); through the development of algorithmic tools in for the public sector and the upskilling of public servants (Government of Slovenia, 2022[40]; 2024[41]); in the mobility sector, notably in traffic monitoring; in agriculture, bioeconomy and rural development, where further AI use cases are being explored in addition to existing pilot initiatives; in forestry, where specific funding for machine-learning-based research projects is available; as well as in healthcare.

Additionally, Slovenia is participating in ten projects[8] funded by the DEP, focusing on AI, contributing approximately EUR 1 million in addition to the EU contribution of EUR 2 million.[9]

State of AI in healthcare

Slovenia was an early adopter of health data governance, with its National Healthcare Database Act (*Zakon o zbirkah podatkov s področja zdravstvenega varstva*) first introduced in 2000 and last updated in 2020 to reinforce data protection and create high-quality, interoperable datasets for primary and secondary use. This robust data infrastructure lays the foundation for co-ordinated AI initiatives in healthcare (European Health Information Portal, 2024[42]; TEHDAS, 2023[43]). Through the NpAI, Slovenia prioritises patient data security, ethical AI governance and privacy to ensure the responsible development of AI-driven initiatives in healthcare (Republic of Slovenia, 2020[44]). The establishment of the International Research Centre on Artificial Intelligence (IRCAI) further fosters international collaboration, promoting sector-specific nodes for ethically AI-guided applications across industries, including in healthcare (IRCAI, 2024[45]).

In its pursuit of AI integration in healthcare, Slovenia has launched several forward-looking projects such as the Supporting Health Data Access Bodies in Slovenia (SI-SUD) to enhance interoperability and create secure data environments to facilitate cross-border health data flows, in alignment with the European Health Data Space standards (Institute of Oncology Ljubljana, 2023[46]; NIJZ, 2024[47]). The Central Registry of Patient Data (CRPD) also supports cross-border data sharing through the National Contact Point for eHealth (SiNCP), while initiatives like the Slovenian Genome Project and participation in the EU Genomic Data Infrastructure (GDI) showcase Slovenia's alignment with broader EU strategies. Another key initiative, the Digital Skills for Healthcare Transformation (DS4Health), aims to upskill healthcare professionals by providing specialised digital health education, equipping them with the right tools to leverage the potential of digital health technologies and data (DS4Health, 2023[48]).

Table 4. Build strategic leadership in priority sectors: Key initiatives

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
Climate and environment			
SMASH – Machine Learning in Climate Research	2023(-28)	As part of the SMASH project (see above) (SMASH, 2024[49]), a key research area is machine learning in climate research, which encompasses the following subfields: • extreme weather events • the role of anthropogenic and natural aerosols and their complex mixtures on climate • air pollution source identification • long-term atmospheric prediction using machine learning.	See above, exact amount for this research area cannot be determined
Pilot projects to enhance energy	2022	As part of its strategic document on energy efficiency and the enhancement of the use of renewables in the economy, Slovenia had foreseen three measures –	EUR 200 000 (through the RRP)

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
efficiency and the enhancement of the use of renewables in the economy		pilot projects – which involve the use of advanced digital technologies (including AI) in business processes to achieve more environmentally friendly and sustainable development: i) a peer-to-peer marketplace for renewables; ii) RMV (recording, measurement and verification of emissions) with the purpose of improving the ETS system; and iii) a digital solution for BIM (building information modelling) - circular construction. As a tool, green corporate e-identity was proposed in the form of a web service on the Energy Agency website (Republic of Slovenia, 2022[39]).	for the implementation of the strategy
Renewable energy for the supercomputer/ data centre in Arnes	2025	The new data centres in Arnes (see above), which are set to host a supercomputer, will receive electricity (5-7 megawatts) from a nearby hydroelectric plant. Additionally, the municipality of Maribor plans to use the heat of the supercomputer to heat a nearby part of town. No concrete plan has been made as the type of supercomputer is not yet known.	See above regarding the data centres/ supercomputer; exact amount regarding heat use and power cannot be specified
NetZeroCities	2023(-25)	The municipalities of Kranj, Ljubljana and Velenje are participating in the two-year NetZeroCities pilot programme to test and implement innovative approaches for promoting urban decarbonisation, with each of the cities using data-driven approaches and digital platforms (NetZeroCities, 2024[50]).	EUR 1.5 million through the Horizon Europe programme
Data warehouse for the creation of the energy information system EnergIS		The purpose of the project by the Ministry of the Environment, Climate and Energy is to integrate selected existing energy-related data from current information systems and offer a flexible and scalable platform (data warehouse) for efficient storage, integration, analysis, management, search and display of this data (Government of Slovenia, 2023[51]).	EUR 370 000
HIDRA	2023	The Slovenian Environment Agency has established the HIDRA system, in which deep neural networks are used for sea level and coastal flood forecasting.	Not Report
DS2 – DataSpace, DataShare 2.0	2023	This Horizon Europe project aims to provide a modular software infrastructure to connect data sources (data spaces/data silos/data lakes) together for the purpose of cross-sector data sharing. The Innovation Technology Cluster (ITC), a Slovenian business support organisation, is co-ordinating the implementation of a Green Deal pilot use case, with the goal of establishing direct communication with residents, local stakeholders and policymakers by providing real-time data about air pollutants and greenhouse gas emissions, with additional explanatory data and information around root causes and impacts of most influential localised agricultural, traffic, industrial and household (heating) activities (DS2, 2023[52]).	Slovenian partners for DS2 are funding the programme as follows (shares financed through Horizon Europe in parentheses): ITC: EUR 349 000 (100%); City of Murska Sobota EUR 163 000; Total DS2 budget: EUR 7.6 million
		Health	
Supporting Health Data Access Bodies in Slovenia (SI-SUD)	2023(-26)	The National Institute of Public Health started this project with the objective of enabling secondary use of data by developing four digital capabilities: a data access management system, a national metadata catalogue, a processing environment and quality labelling (Onko-i, 2023[53]).	Not reported
Developing eHealth for a Healthier Society in Slovenia	2022(-27)	This project will elaborate a way to implement a unified electronic health record (EHR), as well as design a national telemedicine framework and revise the legislation to enable better oversight of the eHealth system and to streamline data flows for better patient care and informed policy making (EC, 2024[54]).	Not reported
Bled Institute for Leadership in Digital Transformation and Artificial Intelligence (BILDAI)	2023	BILDAI, established by the IEDC - Bled School of Management in collaboration with Roche Slovenia, is dedicated to unlocking the transformative potential of AI and digitalisation. BILDAI's primary mission is to cultivate leaders who are not only prepared to navigate the challenges of this new era but also empowered to shape its future.	Not reported

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
Development of an eHealth Strategy (2022-2027)	2022	The project aims to develop an eHealth strategy and investment plan that will outline the objectives and priorities for the development of eHealth in Slovenia for the period 2022-27. It details the introduction of a single HER, the creation of a national telehealth framework and the amendment of related legislation to enable better oversight of the eHealth system and to streamline the flow of data for better patient care and informed policy making.	Not Reported
Public sector			
'The Tray" (*Pladenj*)	2018(-25)	In December 2023, the platform *Pladenj* ("the tray"), a common central data exchange platform to facilitate seamless data and document exchange across diverse systems and life events within the public administration, has since 2018 employed advanced AI machine learning techniques (to distribute network traffic for rush hour events between the application servers and their visitors) and was upgraded to support cross-border exchanges in alignment with the EU Single Digital Gateway Regulation, serving as Slovenia's national part of the Once-Only Technical System (Government of Slovenia, 2024[55]).	An investment of EUR 0.5 million (co-financed by EU funds), with annual maintenance costs of EUR 100 000
Use of AI in business intelligence system 'The Box" (*Skrinja*)	2026(-29)	The Ministry of Digital Transformation is planning to introduce AI-based predictive analytics into the business intelligence system *Skrinja* ("the box"), which is used by different public authorities to analyse data about their policy area, such as public sector salaries, public tenders and administrative procedures, supporting real-time data-driven decisions in public administration (Government of Slovenia, 2024[56]).	Approximately EUR 0.5 million via the ERDF
Strengthening the Digital Skills of Civil Servants	2023	This Administrative Academy programme (under the Ministry of Public Administration) aims to improve the competencies of civil servants in core digital skills, including specialised skills on AI. The Scrinia content of the programme is designed in accordance with the OECD Framework for Digital Talents and Skills in the Public Sector. The implementation of the programme is co-financed by the Republic of Slovenia, the Ministry of Public Administration and the European Union - NextGenerationEU from the RRF under the measure "Modernisation of the digital environment of public administration" (Republic of Slovenia, 2023[57]).	Total amount of funding for the programme: EUR 3.5 million; the amount allocated to AI in the overall project cannot be determined at this stage
Single horizontal AI platform	2025(-27)	The Ministry of Digital Transformation has developed the pilot prototype Semantic Analyser (*Semantični analizator*), an open-source tool using AI techniques to process natural language. Building on these experiences, a single horizontal AI platform is planned for development to facilitate the processing of both public and non-public data. The platform will be modular, flexible, scalable and upgradeable, ensuring adaptability to the diverse needs and requirements of individual authorities. Additionally, it will support seamless integration with various applications within public administration, operating within the governmental cloud infrastructure (Republic of Slovenia, 2024[58]).	Approximately EUR 1 million via the ERDF
Creation of a hybrid cloud to combine registers such as the AJPES register	NI	This project aims to create a hybrid cloud that will combine registers such as the AJPES register, the register of the Financial Administration of the Republic of Slovenia (FURS) and, for example, court registers, with the aim of simplifying procedures for businesses in relation to the Ministry of Economic Development and Technology.	EUR 2.5 million
AI use in processing value added tax (VAT) returns	2023	FURS uses advanced AI technologies (models for the use of predictive analytics in the implementation of business processes) in the process of acceptance of VAT returns. By using predictive analytics, FURS aims to increase the effectiveness of controls, both in terms of the number and of additional identified irregularities (Starič, 2023[59]).	A component of a broader ongoing project
Mobility			
NetZeroCities	2023(-25)	In the context of the NetZeroCities projects (see above), the city of Kranj is upgrading its existing digital platform with public transport and traffic related data, by integrating data sources available from contracted operators and other existing sources, and by installing additional equipment, allowing for more accurate measurements. The pilot will develop a Mobility as a Service (MaaS) mobile application (NetZeroCities, 2024[50]).	EUR 500 000 (digital platform - city of Kranj budget); EUR 1.5 million – funding for the MaaS mobile application (EU funds – Pilot Cites)

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
Support to Strategic Research Innovation Partnership SRIP ACS+	2024	Following a public call in the context of Slovenia's smart specialisation strategy, the Ministry of Higher Education, Science and Innovation supports SRIPs. One of the selected entities is ACS, a business network in the Slovenian engineering and manufacturing industries as well as partners from R&D institutions and other services in the supply chains that create and deliver products and services for the automotive industry The associated ACS+ AV Living Lab is a real-world testing environment for autonomous vehicles, serving as a platform for testing and developing automated transport technologies and smart mobility solutions (Republic of Slovenia, 2023[60]).	EUR 703 000 (to the ACS)
National Traffic Management Centre (NTMC)	2015(-16) (preliminary); 2022 (NAPCORE project)	The NTMC gathers, analyses and processes all available information on road and traffic conditions. The purpose of the NTMC is to serve primarily as a data warehouse for all accessible traffic data, and to provide all necessary services within the scope of Intelligent Transport Systems (ITS) as well as information necessary for traffic control and management. It became operational through the Coordination of National Access Points (NAPCORE), financed by the Ministry of Infrastructure (Republic of Slovenia, 2022[61]; 2022[62]).	EUR 159 000
Digitisation of Railway and Road Infrastructure – Digitisation of Road Traffic	2021(-25)	This investment project, led by the Ministry of Infrastructure, focuses on the digitisation of road traffic, aiming to ensure interoperability, more efficient management and enhanced safety. The objective is to provide reliable information on the traffic system to improve the acquisition and exchange of traffic data regarding the condition of the traffic infrastructure and vehicle movement in real time (DARS, 2021[63]).	EUR 19.4 million, of which approximately EUR 12.05 million are expected to come from the RRF
DARS AI	2024	This project led by DARS, the Motorway Company of the Republic of Slovenia, aims to introduce AI to predict congestion and accidents on motorways. An internal strategy for the use of machine learning models in motorway traffic management is currently in development, with all machine learning projects are linked to the NTMC.	EUR 500 000
Agriculture/forestry/rural development			
Green.Dat.AI	2023	Green.Dat.AI, a Horizon Europe R&I project, develops energy-efficient large-scale data analytics services, ready-to-use in industrial AI-based systems, while reducing the environmental impact of data management processes, demonstrating the efficiencies of the new analytics services in four industries (smart energy, smart agriculture/agrifood, smart mobility, smart banking) and six different application scenarios (pilots), leveraging the use of EU data spaces. ITC, a Slovenian business support organisation, is responsible for the co-ordination and implementation of two pilots in Slovenia: i) smart farming optimisation through digital twins; and ii) smart water management (Green.Dat.AI, 2024[64]).	Slovenian partners for Green.Dat.AI funds (shares financed through Horizon Europe in parentheses): ITC: EUR 277 000 (100%) University of Maribor: EUR 375 000 (100%) Waboost: EUR 195 000 (70%) Sunesis: EUR 190 000 (70%); Total Green.Dat.AI budget: EUR 6.7 million
Area Monitoring System (AMS)		The Agency for Agricultural Markets and Rural Development has deployed the AMS, a software-supported system which monitors and determines, with the help of processed satellite images (Sentinel and commercial providers), what is happening on agricultural land and the actual state of agricultural areas over a certain period. The system employs machine learning algorithms to analyse the state of agriculture surface (Republic of Slovenia, 2021[65]). In early 2024, a special project group was established at the Ministry of Agriculture, Forestry and Food to examine the possibilities regarding the introduction and development of digitisation and AI in the field of agriculture, both from an administrative and purely technological point of view, and the possibility of integrating both, and to evaluate potential for other types of applications of AMS, including in agricultural production, especially when integrated with commercial digital and AI solutions.	EUR 2.3 million through the RRF
BRinging Artificial INtelligence	2024(-26)	As part of the Interreg Danube Region transnational programme, BrAIn - seeks to increase competitiveness of SMEs in the Danube Region through extensive knowledge and technology transfer of AI solutions in the areas of	EUR 235 000 (funded by the ITC up to 20%, 80%

Name	Start year (period covered)	Short description (main goals)	Funding (including EU funding use)
towards SMEs (BrAIn)		manufacturing, agrifood and healthcare. Slovenia's ITC is managing the agrifood area (Interreg Danube Region, 2024[66]).	Interreg Danube Region); Total BrAIn budget: EUR 1.88 million
e-Farming, Food and Forestry Project under the RRF	2024	The digitalisation project under the NRRP consists of eight sub-projects and includes the establishment of the National Food Institute.	Total estimated cost for implementing the project: EUR 28 728 878, of which funding from the RRP is expected to cover EUR 24 055 040
Strategic plan for the common agricultural policy for the 2023–2027 period (CAP Strategic Plan 2023-2027)	2023(-27)	The strategic plan foresees support for investment in machinery, equipment with modern IT solutions, precision agriculture and sectoral interventions in fruit and vegetable growing for promoting digitalisation by introducing AI and machine learning into the production and processing process (MKGP, 2023[67]).	EUR 1.2 billion from the European Agricultural Guarantee Fund and the European Agricultural Fund for Rural Development for a period of five years

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Notes

[1] The ten strategic goals are : i) building a dynamic ecosystem of stakeholders for research, innovation and deployment of AI; ii) ensuring proper education and strengthening of human resource; iii) supporting R&I in the field of AI; iv) deploying reference AI solutions in business, the public sector, public and state administration and society; v) establishing the technical infrastructure for AI research, development and deployment; vi) strengthening security through the use of AI; vii) increasing public trust in AI; viii) ensuring an appropriate legal and ethical framework; ix) strengthening international co-operation; and x) establishing a national AI observatory in Slovenia

[2] Established in 2023, following several institutional changes.

[3] These include AI, the IoT, big data, blockchain, HPC, quantum computing and fifth-generation cellular network technology (5G).

[4] The DeepFake project helps to identify images created using AI in the fight against digital fraud.

[5] The Development of Slovene in a Digital Environment project aimed to meet the needs for computer products and services in the field of language technologies for the Slovene language, for research organisations, companies and the general public. With a broad national consortium, the project has successfully brought the applied use of a range of language technologies, machine learning techniques and AI to the Slovenian space.

[6] CLARIN.SI is the Slovene national consortium of European research infrastructure CLARIN. Its goal is to support research communities from humanities, social sciences and other language-related disciplines with language resources and technologies, and expertise and knowledge transfer. Its vision is to broaden the scope of technological solutions for language studies, with the emphasis on Slovene and other South Slavic languages, as well as encourage cross-disciplinary co-operation.

[7] This includes: the Jožef Stefan International Postgraduate School and knowledge technologies, intelligent systems and robotics study modules at the Jožef Stefan Institute; various courses in AI, machine learning and knowledge discovery in data as well as an intelligent information solutions study module and an independent study data science programme at the Faculty of Electrical Engineering and Computer Science, University of Maribor; and special data science and cognitive science master's programmes at the Faculty of Computer and Information Science of the University of Ljubljana.

[8] These projects include: 5dculture: Data Space for Cultural Heritage (5dculture, 2025[329]); CIRPASS-2: Digital Product Passport (CIRPASS, 2025[330]); DATES: Preparatory actions for the European data space for tourism (DATES, 2025[331]); DOME: A marketplace for federated cloud-to-edge based services (DOME, 2024[332]); DS4Skills: Preparatory actions for the data space for skills (DS4Skills, 2024[333]); DS4SSCC: Preparatory actions for the data space for smart communities (DS4SSCC, 2025[334]); DS4SSCC-DEP: Data space for smart communities (DS4SSCC, 2025[334]); GDI: Federated European infrastructure for genomics data (GDI, 2022[335]); TEMS: Data space for media; and UNDERPIN: Data space for manufacturing.

[9] The main focuses of these projects include the development of digital products and passports, enabling the circular economy, establishing a marketplace for federated cloud-to-edge services, and creating innovative solutions using AI. A significant part of these projects is also dedicated to the establishment and development of data spaces in various sectors, such as cultural heritage, tourism, skills, smart communities, genomics, media and manufacturing.