



The Government of the Republic of Serbia

Serbia's AI Ecosystem

Presenting the opportunities with **Artificial Intelligence** in Serbia in 2024.

2024
Belgrade, Serbia



SERBIA HAS BEEN ATTRACTING AI INVESTMENTS

Latest Tech Related stats:



No.1

Country in **Europe** in **growth of services**

For the period 2016 - 2022



No.3

Country in **Europe** in **growth of ICT Export**

For the period 2016 - 2022



x5

ICT Export growth in 6 years, from **€740 million** to **€3.5 billion** in 2023

By far the largest net exporting industry of Serbia



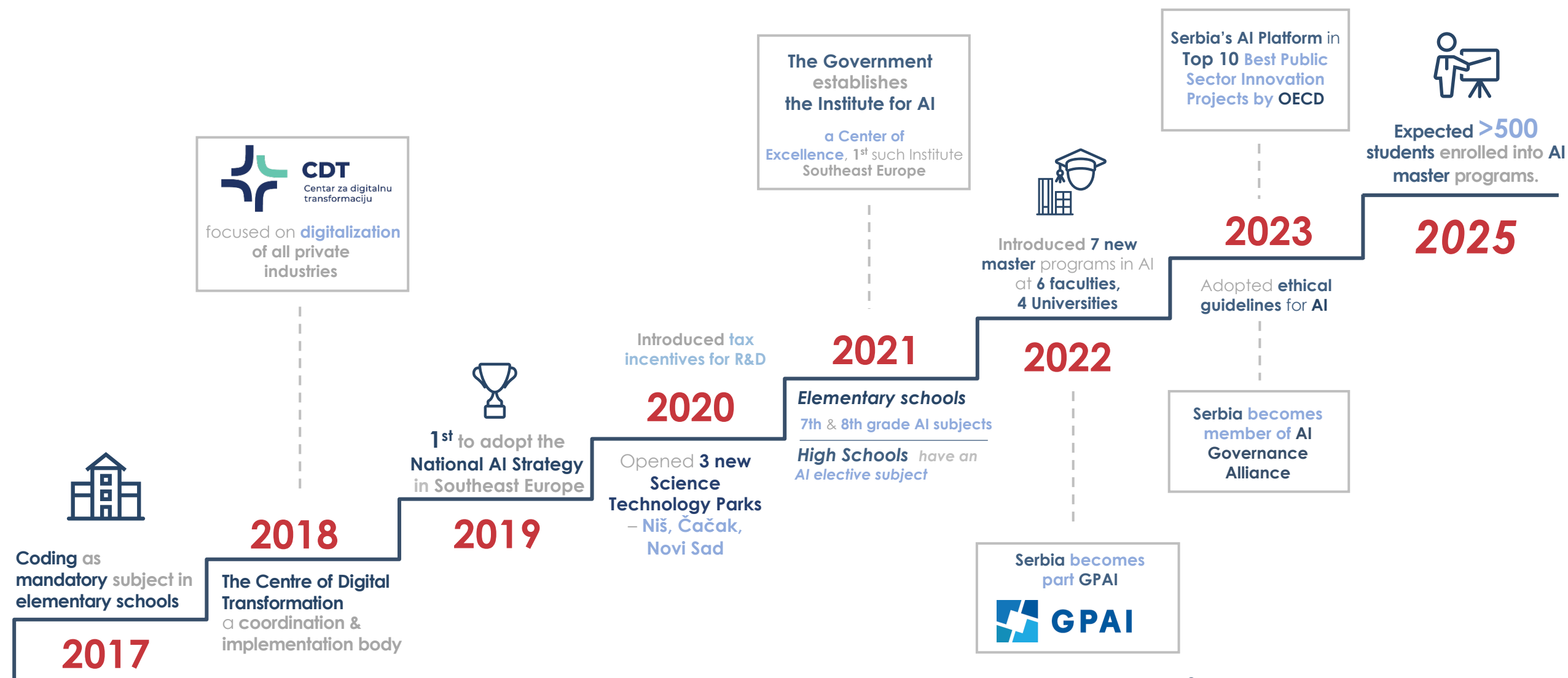
>112k

People employed in the ICT sector

One of the highest growths of ICT employment in Europe



Brief Overview of the AI Road Map in Serbia





Serbia in AI | 2024 development news

Activities 2024



Serbia is **creating the new**
2030

National AI Strategy



Serbia is planning **to invest**
€80 million

*into implementing AI Solutions in the
public sector.*



Serbia **will develop**
AI Regulations

more competitive than those in EU

Serbia joined GPAI in 2022

2022

Serbia becomes part of the Global Partnership on Artificial Intelligence, **GPAI**



GPAI

THE GLOBAL PARTNERSHIP
ON ARTIFICIAL INTELLIGENCE

1

Serbia is one of the
**29 country
members** of GPAI

2

Aims to bridge
the gap
between theory
& practice on AI

3

Supports cutting-
edge research
and applied AI
activities

4

Built around a shared
commitment to the OECD
Recommendation on
Artificial Intelligence AI-
related priorities



BREAKING NEWS | Beginning of 2024

Serbia will chair the
Global Partnership on
Artificial Intelligence
(GPAI) in the **next**
three years!



8 March 2024



Serbia, 29th country
Member of GPAI



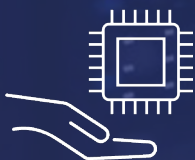
Serbia's National AI supercomputing platform



Secured investment of **€30 million EUR**
for a **new Supercomputer**



Selected in **TOP 10 BEST** public sector
innovation projects by OECD
Observatory of Public Service Innovation in **2023**.



Free of charge for universities, institutes, &
start-up companies to **develop AI solutions**



+70 users with more than **300 user**
accounts with **rapidly growing** number of tests

State Data Center, Kragujevac



Serbia's primary goals 2024 - 2027



End of 2023

2024

2026

2027

1. Allocation of funds for expansion Data Centre Kragujevac

2. Construction under way for 3 new STP in Niš, Kruševac, Čačak

3. Ending of BIO⁴ Campus development

4. Issued testing licenses for Autonomous vehicles Level 5

5. Continuous R&D and Investment in Artificial Intelligence

Serbia's most valuable projects

Serbia invests

Serbia Invests

New Science & Technology Park - Kruševac



11.000 m²

Phase 2 of STP Niš



16.200 m²

Phase 2 of STP Čačak



12.800 m²

Opened
€70 million will be earmarked for the construction of 2020 additional science and technology parks



Construction under way for new STP's.

Signed **loan agreement** and a project agreement between the government of the **Republic of Serbia** and the **EBRD secured €80 million**



€70 million is being allocated for the **construction of science parks** in Čačak, Niš and Kruševac

BIO4 Campus



BIO4 stands for **4 key areas**: biomedicine, biotechnology, bioinformatics, and biodiversity



7 Faculties **9** Scientific Institutes **1400** Professors and Researchers **4000** Students **+1000** Ph.D **+300** Laboratories **7** Centers of Excellence

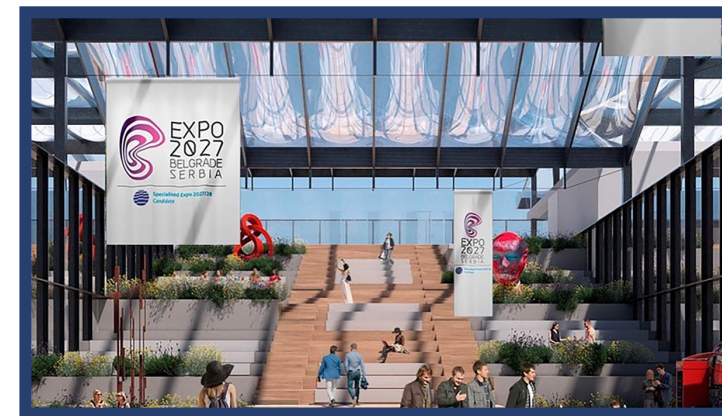


First bioeconomic hub in SEE



Development and use of AI on a **large scale** and foster the development of human capacities, science, and applications.

EXPO 2027



"EXPO 2027 BELGRADE" theme - "**Play for Humanity**" in Belgrade from **May 15th to August 15th, 2027**.



The Fair & Expo complex total area of **25ha**, a **total exhibition space** of **230,000m²** gross, & participation from over **100 countries, 2.5 million visitors**



Autonomous bus transport for **EXPO visitors**



Brief overview:

Foreign Direct Investments in Serbia

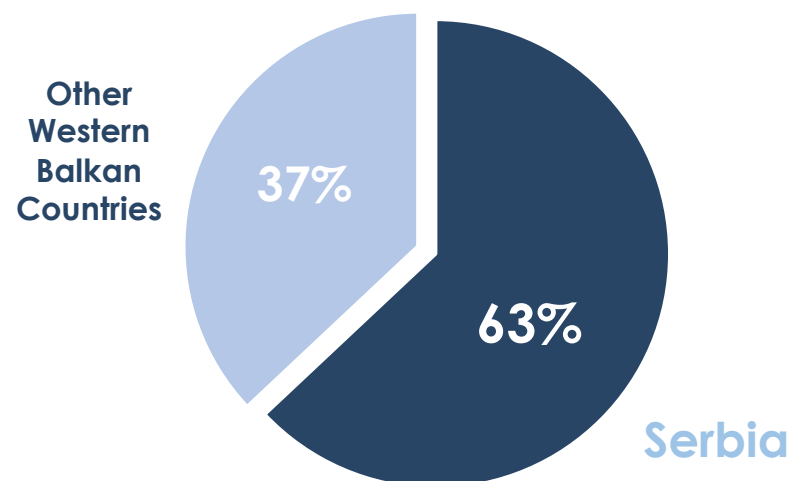
Internationally Recognized



Serbia has had record breaking FDI success

In 2022, Serbia attracted
4.3 billion EUR
in **FDI**

FDI Performance compared
to Western Balkans



FDI increased **4x**
from 2012

Notable Foreign Direct Investment



Notable testimonials about Serbia's R&D Sector



“The **team** in Serbia demonstrated **amazing talent**.

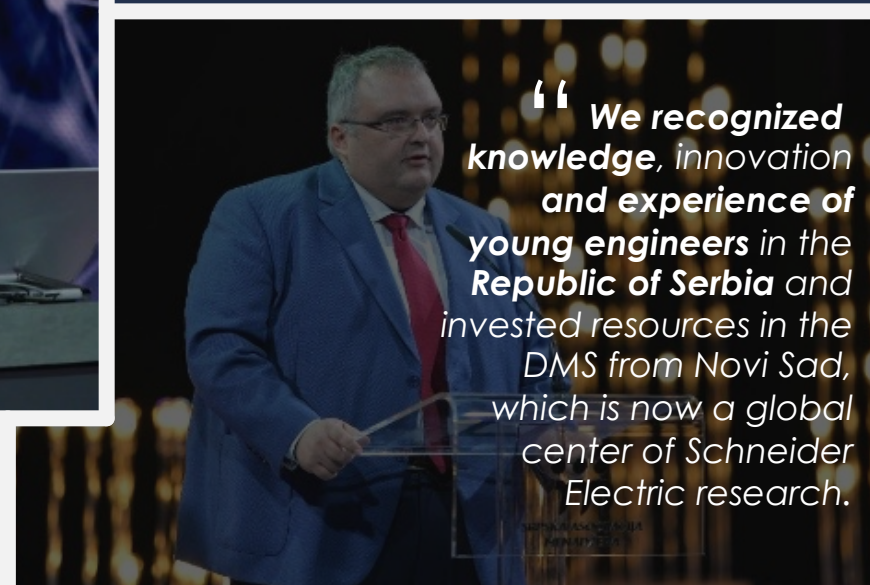
“The **attitude the team** has shown has been an **amazing thing to watch**.



Mr. Rohan Kumar, Corporate Vice President, Azure Data, **Microsoft**



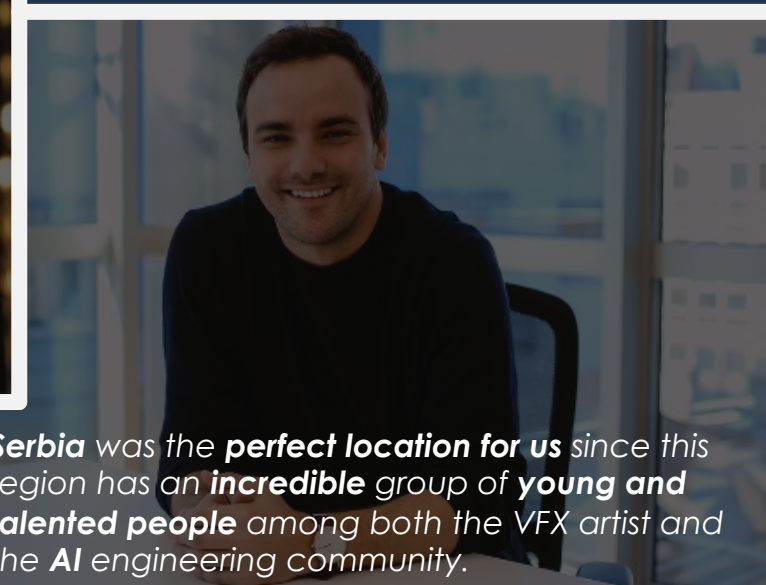
“We recognized **knowledge, innovation and experience of young engineers** in the **Republic of Serbia** and invested resources in the DMS from Novi Sad, which is now a global center of Schneider Electric research.



Mr. Dragoljub Damjanovic, General Manager, **Schneider Electric Serbia**



“Serbia was the **perfect location for us** since this region has an **incredible group of young and talented people** among both the VFX artist and the AI engineering community.



Mr. Nikola Todorovic, **Wonder Dynamics**



Brief overview:

AI ecosystem in Serbia



The Government of the Republic of Serbia

1st

Corporate
sector



The Government of the Republic of Serbia

2nd

Start-up
sector



The Government of the Republic of Serbia

3rd

Public
sector



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The Government of the Republic of Serbia

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sector



Established state of the art R&D infrastructure for the future

Serbia's R&D centers by Industry



Schneider Electric NS DMS - Producing **software** enabling **big savings** in **power distribution**

2005



Creating **cutting-edge technology** for **Microsoft 365**

2010



ContiTech Fluid - production of **hose** and **pipng lines**

R&D Center Novi Sad contributing to as **digitalization**, **autonomous** and **safe driving**, & **electro mobility**

everseen

Developing **4th gen AI-driven** computer vision **solutions**

2020



Opened a **software development centre** to **provide better services** and support to **users in the wider region**



WARGAMING.NET
LET'S BATTLE

Providing **key services** and **potential development** of new products of the **World of Tanks** and **World of Warships** franchises



Acquired **Nordeus** - The **games company** behind **Top Eleven**, **Heroic & Golden Boot**



RIVIAN

Latest in 2022



Acquired **3Lateral** - Developing **technologies** for **digitalization of humans**

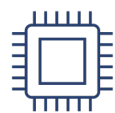


Microsoft

Arrived in 2003



Celebrating
20 years on
the market



Government of Serbia is using **Microsoft technologies** leading to modernization of applications & infrastructure with increased security.



Launched the **Global Skills Initiative** & **60,000 people** in Serbia have **benefited** from this type of **digital skills education**



Azure Team, working on **Azure AI platform** in **Belgrade** develops the **most significant data processing services** - the Microsoft Cloud.



Partnered with **NGO Petlja** in **2017**, to **promote coding education for children** helping young people in Serbia develop new skills



RIVIAN

Arrived in 2022



Employing **200**
engineers



Development the **vehicle software, ADAS & enterprise technologies**



American electric vehicle producer Rivian opens technology center in Serbia's capital Belgrade



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3rd

Public
sector



Award-winning

*“Belgrade - Novi Sad
Ecosystem is in*

Top 10

*“European Ecosystems
in Affordable Talent”
by **Startup Genome.**”*





Over 150 Start-ups in Serbia use AI as core tech

IT Ecosystem in Serbia



8

universities



4

Science
Technology Parks

15

startup centers



5

IT clusters



20+

co-working hubs

There are **600 Start-ups** in Serbia



>25%

use AI as their core
technology

>200

use data science

Recycling



All-natural insulation
liner for the
transportation of
food products



Creating digital
solutions for
beverage packs
recycling

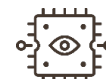


Creating
biodegradable
materials from
mushrooms

Computer Vision, Sensors



High tech B2B partner in the
innovation & new electronics
products development

MACHINES
CAN SEE

Deep technology company
focusing on computer vision
(AI) & big data



Focused on
advanced
robotics projects,
with collaborative
& traditional
industrial robots



Transforming ADAS
validation & AV training
through software platform
automating & streamlining
the validation & training
process



Creating tech
solutions through
innovative
algorithms and
software

Energy



Data tracking,
management and
exploitation tool
for smart electrical
grids



Ensuring faster workflow &
automation through the
new gen solutions in the
energy & construction
industry



Digitizes energy
providers with data
science models to
distinguish different load
patterns



Helps partners develop
meaningful data solutions and
functional data strategies for
challenging business problems



Typhoon HIL

Leader in the ultra-high-fidelity
controller-Hardware-in-the-Loop (C-
HIL) simulation for power electronics,
micro grids, & distribution networks.



PCDUHVAT

Development of global
transformation solutions:
(modular) wind turbines,
wind-sun hybrid
renewable energy
devices, etc.



Optimized Production & Intelligent Decision

Helps oil companies and new
energy transition companies to
prevent the risk and accidents
with Machine Learning



Start-up sector supported through **Science Technology Parks**

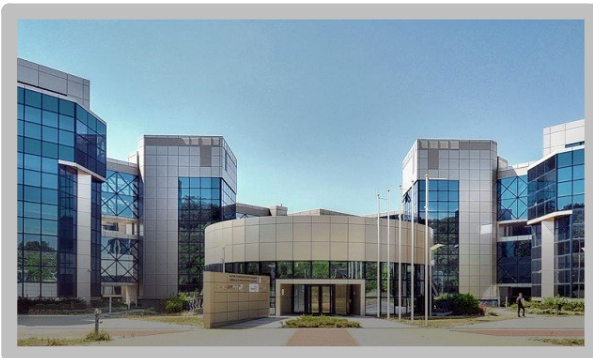
Belgrade



SCIENCE TECHNOLOGY PARK
Belgrade

Opened
in **2015**

16.4 K m²



Čačak



НАУЧНО
ТЕХНОЛОШКИ
ПАРК
ЧАЧАК

Opened
in **2020**

3.6 K m²



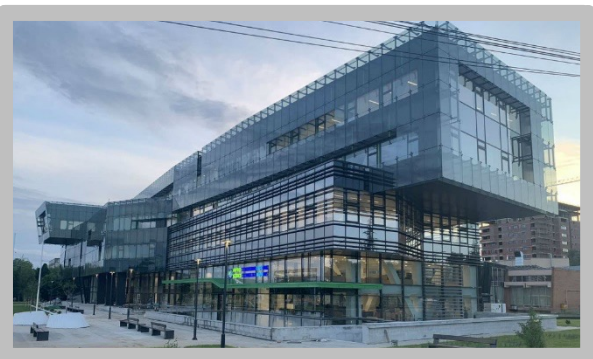
Niš



НАУЧНО
ТЕХНОЛОШКИ
ПАРК
НИШ

Opened
in **2020**

4.2 K m²



Novi Sad



НАУЧНО
ТЕХНОЛОШКИ
ПАРК
НОВИ САД

Opened
in **2020**

30 K m²





Construction of STP's

New Science & Technology Park - Kruševac



11.000 m²

Phase 2 of STP Niš



16.200 m²

Phase 2 of STP Čačak



12.800 m²

Construction is under way for additional science and technology parks with a €70 million investment.



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Serbia growing **public sector initiatives** in **AI**



Researched topics



**Deep Computer
Vision & Remote
Sensing**



**Pharma and
Healthcare
sector**



**Natural
Language
processing**



**Real – time
data-driven
decision making**



**Well-being of
citizens, Smart
Cities, Ecology**

Successful implementations

**Founded
in 2021**



**Accredited
in 2022**



**In 2 big
cities**



**53
researchers**



**With 33
PhD's**



**20
associates**



3

**International
research projects**

4

Patent applications

2

**National research
projects**

13

**Projects with
corporate entities**

2

Horizon projects

7

**Projects with
public institutions**



Brief overview:

Business environment in Serbia

Cost-efficient



Government initiatives focused on AI development



Established, highly advanced
public-private collaboration

AI Institute

53

Researchers

Innovation
Fund

12

AI projects
ongoing

Science
Fund

+200

*published
research
papers*

Government as the
AI ecosystem accelerator



Infrastructure & subsidies for AI
research, development, business
operations



Serbia ranks 46th out of 172 countries
in **Government AI Readiness Index**
2020



Serbia is the best ranking country
in the **SEE** by the Government AI
Readiness Index



Serbia as an **emerging tech hub of Europe**

Closing the gap



EU accession in process



No visa regime, simplifying international business travel



Customs-free access to **1.3 billion** consumers



More freedom for **local government** to offer **support**

Customs free access to **2.7 B** consumers worldwide

China – Serbia FTA

First FTA of its kind between China and a nation from CEE.



EU + EFTA + UK Trade Agreements



EAEU + Turkey Free Trade Agreement

The only country in Europe to have the Euroasian Economic Union free trade agreement



CEFTA Free Trade Agreement



Generalized System of Preferences

Serbian unique trade agreement expand even beyond European and Asian continental routes



ICT sector general stats

#1

**ICT AS A SERBIAN
NET EXPORTER INDUSTRY**

ICT Export



jumped X5
since 2016



Approx.

40%

more affordable AVG cost of an
ICT (IT) empoloyee
compared to Western Europe

Serbia is **enabling regulation**

Companies can benefit from **two regulatory sandboxes** already in place:

FinTech sandbox

Innovative **payment solutions** can be **tested** within a limited market **without regular prior registration**.



MedTech sandbox

Unregistered medical devices can be **imported for R&D** on a fast track procedure, if the company is settled in one of **Science Technology Parks**



Autonomy sandbox

Issued a **permit** for the **testing of Autonomous vehicles**, autonomy **level 3** – there must be a driver at the driver seat of the vehicle.





Employing & Setting up the Business in Serbia is Cost-efficient

Business entity



Corporate Income
Tax credit worth

30%

of the investment in a
startup



Tax credit for private
individuals **investing in VC
fund** with annual income tax
worth

50% of the
investment



Employee **share plans**
**taxed only on
capital gains**

at the moment of sale



**70% lower
tax**

for foreigners &
Serbian repats



15

free zones with
**Value Added Tax
exemptions**

for energy consumptions

Employment



40% less to
**employ ICT talent in
Serbia** than in
Western Europe



Revenue tax is **3%**
from **IP developed in
Serbia** instead of
normal 15%



Deduct **1/2** of
actual R&D costs, pay
**less in enterprise
revenue tax**



**70% lower tax
base for R&D jobs**
salary equal or higher
than the national
average for **5 years**



**10 year
tax holiday** for
large
investments



Top talent pool for AI development of the future

Rich supply of home-grown talent



36% STEM graduates



AI embedded in **K-12 education programs**, mandatory in **7th & 8th** grades



500 students expected to **enroll by 2025** at **AI University programs**

5 year Savings per position with
70% lower tax base

1

Junior **Product Manager**

25,700€

2

Medior **Full-Stack Developer**

39,200€

3

Senior **Team Lead**

79,800€



Automotive Excellence | 2023

June, 2023

Serbia makes **crucial steps** towards **autonomous driving**

2023

Serbia **issued 2 licenses** for testing **Level 3** autonomous vehicles

Nov 2023

Serbia **passed the legislation for testing of Level 4** Autonomous vehicles

2024

Serbia **starts preparing the legislation** for testing of **Level 5** autonomous vehicles



"Serbia becomes **one of the first European countries** to **test autonomous transport solutions**, together with the USA and Israel, and stands as a **leader in the development of artificial intelligence** in the region."

Ana Brnabić,
Prime Minister of the Republic of Serbia



Test **LEVEL 4 Autonomous** vehicles in **Serbia** in **early 2024**

*In 2024, Serbia will be amongst the few who have **allowed** testing of **Level 3 & Level 4** Autonomous vehicles on **public roads***

Serbia



...and



Germany



France



Finland



Netherlands



Sweden



United Kingdom

Why test Autonomous driving in Serbia?



Simple & Efficient process of **permit approval** for **Autonomous testing**

2

testing **permits given** (more in 2024)



Testing in live traffic in Capital of Serbia - **Belgrade**

Level 5

Continuous Development of **regulations** for **Level 5** throughout **2024**

Key Automotive industry facts

#1

FDI sector in Serbia

70%

Lower tax base for **R&D jobs**

100 K

Employees in automotive industry (Jan 2023)



No visa regime, simplifying international business travel

Continental



RIVIAN

TOYO TIRES



YURA

LINGLONG TIRE

FCA
FIAT CHRYSLER AUTOMOBILES



BOSCH



The Government of the Republic of Serbia

Let's talk AI

2024.
Belgrade, Serbia



Incentives overview - 70% lower tax for R&D jobs

IT industry Salary overview

Level	Position	Net salary starting from (EUR)	Total Costs (Gross 2) (EUR)	Total Costs after incentive (Gross 2) (EUR)	Savings Per Month (EUR)	Savings over 5 years
Junior	Backend Developer	900€	1,448€	1,064€	384€	23,016€
	Product/Project Manager	1,000€	1,612€	1,184€	429€	25,716€
	Full-stack developer	900€	1,448€	1,064€	384€	23,016€
	Frontend developer	700€	1,119€	826€	294€	17,619€
Medior	Backend Developer	1,500€	2,434€	1,780€	654€	39,212€
	Product/Project Manager	1,500€	2,434€	1,780€	654€	39,212€
	Full-stack developer	1,500€	2,434€	1,780€	654€	39,212€
	Frontend developer	1,500€	2,434€	1,780€	654€	39,212€
	Team Lead	3,000€	4,899€	3,570€	1,329€	79,770€
Senior	Backend Developer	2,500€	4,260€	3,028€	1,232€	73,902€
	Product/Project Manager	2,500€	4,260€	3,028€	1,232€	73,902€
	Full-stack developer	2,500€	4,260€	3,028€	1,232€	73,902€
	Frontend developer	2,500€	4,260€	3,028€	1,232€	73,902€
	Team Lead	3,000€	4,899€	3,570€	1,329€	79,770€

5 year Savings per Position

