

ACT I · CONTEXT

CARNET

CROATIAN ACADEMIC AND RESEARCH NETWORK

Building the Digital Infrastructure of Knowledge

So every Croatian learner can thrive in the 21st century.

Jasminka Maravić, PhD

Head of Research Unit · Sector for Development and Application of Technologies and Innovations in Education — CARNET

CARNET

Croatia's Education System

ACT I · SLIDE 2 — The ecosystem CARNET serves

Croatia educates

400,000+

pupils across 2,547 schools — and CARNET connects every single one.

Pre-school

Ages 0–6 · Voluntary

88.2% coverage
Target 85% ✓

Primary School

Ages 6–14 · Compulsory · 8 yrs

400K+ pupils
36,970 tested Gr.4

Secondary School

Ages 14–18 · Gym + Vocational

447 schools
~34,500 State exam 2025

Higher Education

Universities + Polytechnics

115 institutions
653 Erasmus+ pupils

The world changed. Education must too.

01

Access for All

Every pupil — in Zagreb or on a remote island — deserves equal access to quality digital learning.

02

Quality & Relevance

Schools need modern infrastructure, up-to-date content and data-driven quality measurement.

03

Skills for the Future

Young Croatians must graduate with digital, AI and critical-thinking competencies to compete globally.

What is CARNET?

ACT II · SLIDE 4 — Croatia's central digital education institution

"By developing innovations, advanced infrastructure and services, we empower and connect the educational & research community and protect the digital space and identity of the Republic of Croatia."



Public Institution

Founded 1991. Established by Government Decree 1995. Owned by Croatia via the Ministry of Science, Education & Youth (MZOM).



Network Operator

Manages the national WAN connecting all schools, universities and research bodies. 2×100 Gb/s uplink to GÉANT.



National Authority

Operates National CERT. Manages the .hr top-level domain. Hosts the National Cybersecurity Coordination Centre (NCC).

VISION "Technology tailored to people."

From a project to a national institution.

Croatia's first
academic network

CARNET founded

1991

Croatia's
cybersecurity
authority

National CERT

2012

EUR 84M NPOO — all
7 universities

e-University

2022

1995

Public institution

Government Decree
— permanent public
body

2015

e-Schools launch

EUR 212M — every
school digitalised

2024

onwards

AI Sector &

www.hr

AI R&D unit · www.hr
portal · quantum pilot

CARNET at a Glance

ACT II · SLIDE 6 — The numbers that define a national institution

70+

Services

Education · security · multimedia

100%

Schools connected

Every primary & secondary in Croatia

2×100 Gb/s

Link to GÉANT

Pan-European R&E network

9

Sectors

From AI to cybersecurity

EUR 305M+

Active projects

[BrAln](#) · [e-Univ](#) · [CISOO](#) · [NCC](#) (NKS)...

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National CERT

Croatia's cybersecurity authority

e-Schools (2015 – 2023)

Every school. Digitally transformed. EUR 219 million.

2,400+

Schools

8 yrs

Duration

53,500+

Teachers trained

450,000+

Students reached



Digitally Mature School

First national framework for measuring school digital maturity — infrastructure, pedagogy, leadership and community. Now a European benchmark.



Teacher Revolution

50,000+ teachers trained in EU DigComp digital competencies. Continuous CPD embedded as permanent school culture. Teaching scenarios shared nationally.



End-to-End Digitalisation

e-Register (e-Dnevnik), e-Certificate, e-Enrolment. All school admin processes digital. Parents access grades in real time.

Digitalising the whole vertical



e-University

Digital transformation of higher education

EUR 84M

NPOO 2021–2026

- All 7 Croatian public universities modernised
- Digital teaching infrastructure & learning tools
- THECUC conference series for HE community
- dot.hr portal: central EdTech knowledge hub
- Largest ever HE investment in Croatian history



CISOO

Comprehensive digitalisation of education

EUR 9M

ESF+ · 85% EU / 15% Croatia

- New e-services across all education levels
- Digital registers · certificates · enrolment
- Partners: MZOM · AZVO · MPUDT
- Hybrid cloud for scale & resilience
- Consistent data architecture nationwide

AI & Innovation

ACT III · SLIDE 9 — CARNET at the frontier of educational AI



BrAIN project — 2023 - 2029

wellbeing · AI literacy · responsible deployment · algorithmic transparency · system of smart recommendations

BrAIIn

200+

Implementing AI
curriculum

3 AI-literacy curricula developed
2 for primary schools
1 for high schools
Implemented in more than 200 schools

Source: CARNET BrAIIn project 2024/25 · 8,043 pupils



ATTEND I & II

Assistive technologies for pupils with Special
Educational Needs

Award
winning
project



www.hr Portal

Central EdTech knowledge hub

Live 2026



CroQCI

Quantum communication infrastructure

EU Funded

National Stakeholder Collaboration

ACT IV · SLIDE 10 — CARNET as the central digital hub

Ministry of Science, Education and Youth MZOM

Policy, funding & legislative framework

Educational agencies - AZOO & ASOO

Teacher CPD · curriculum · pedagogical support

University Computing Centre - Srce

HPC infra · research data · Moodle collaboration

Schools

2000+ primary · 400+ secondary · daily e-Dnevnik users

Agency for Science and HE AZVO

CISOO partner · quality assurance · accreditation

National Center for External Evaluation of Education NCVVO

National assessments · State Matura · analytics

Ministry of Justice, Public Administration and DT - MPUDT

e-Government alignment · digital ID · cross-sector

Universities

14 public univ. · e-University partners · AAI@EduHr

Integrating Croatia into the global knowledge network

GÉANT

Global R&E Network

- 2×100 Gb/s uplink — backbone of CARNET
- Access to pan-EU research infrastructure
- Shared services: eduroam, eduGAIN
- Participation in GÉANT governance

NREN Networks

40+ National R&E Networks

- Bilateral cooperation with 40+ NRENs
- TERENA General Assembly participation
- Best-practice exchange programmes
- Technical peering agreements

EuroQCI & NCC (NKS)

Quantum & Cybersecurity

- NCC — National Coord. Centre (NIS2)
- EuroQCI quantum network pilot
- EU cybersecurity R&D funding access

EU European Commission

EU Programmes & Policy

- Erasmus+ projects
- Horizon Europe research projects
- NIS2 Cybersecurity Directive compliance
- Digital Education Action Plan alignment

What comes next for Croatian education?



AI Literacy for All

CARNET will introduce comprehensive approach to AI competencies in teacher education, parents' education and the school curricula.



Quantum & Next-Gen Infra

CroQCI will position Croatia within the emerging European quantum infrastructure landscape, contributes to EU digital sovereignty, and prepares the country for next-generation ultra-secure communications technologies.



Full-Day School Rollout

CDŠ moves from evaluation to nationwide implementation by 2027. Every Croatian child in a full-day, digitally equipped learning environment.

CARNET — Croatia's digital education backbone.

Central infrastructure connecting every school, university and research institute in Croatia

EUR 305M+ in landmark EU projects: e-Schools · e-University · CISOO · ATTEND · BrAln

GÉANT · Erasmus+ · CroQCI — Croatia integrated into the global knowledge network

BrAln · www.hr (DOT) — building tomorrow's learning ecosystem today

PERFORMANCE DASHBOARD

EUR 219M

e-Schools

EUR 84M

e-University

100 %

Schools online

50,000+

Teachers trained

100%
schools

E-Register

200+

Schools in BrAln

3 AI
curricula

EUR 9M

CISOO project

**Thank you for
your attention!**

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