

REPORT ON THE EVALUATION OF THE PROJECT  
Regional Scientific Center of Pannonian Croatia

Contract number:	04-UBS-Š-0619/22-14						
Project title:	Regional Scientific Center of Pannonian Croatia						
Project promoter:	Osijek-Baranja County						
Project partners:	Virovitica-Podravina County Elementary School "Josip Kozarac" Josipovac Punitovacki Elementary School "Josipa Kozaraca" Slatina Elementary school "Suhopolje" Josip Juraj Strossmayer University of Osijek Business Incubator BIOS Ltd. Center of Excellence of the Split-Dalmatia County Vitensenteret Innlandet Giovik Cluster for eco-social innovation and development CEDRA School of Applied Mathematics and Informatics Osijek						
Eligible amount:	2.791.417,79 EUR						
Start / End date of the Project:	DD	MM	YYYY	to	DD	MM	YYYY
	15	07	2022		14	04	2024

1. Were all project activities implemented in line with the Annex I. of the Project contract?

All project activities were implemented in alignment with Annex I of the Project Contract, ensuring a strong connection between planned objectives and execution. The Regional Scientific Center of Pannonian Croatia headquarters was successfully established in Josipovac Punitovački, with branch offices in Slatina and Suhopolje. These facilities were equipped with modern STEM tools, creating an enhanced environment for interdisciplinary learning.

The professional development of over 100 teachers and education workers in advanced STEM modules was a central activity. Training sessions emphasized practical skills in robotics, entrepreneurship, and problem-solving. Initially designed for in-person delivery, these sessions were adapted to online formats due to logistical challenges, ensuring uninterrupted skill-building.

A particularly commendable aspect was the project's adaptability. When faced with logistical challenges, such as the shift from in-person to online teacher training formats, the project team responded swiftly, ensuring that all training objectives were met. This adaptability highlights the project's resilience and commitment to delivering high-quality outcomes.

Additionally, the professional development programs went beyond expectations. Feedback from participants indicated that the training was not only practical but also transformative, equipping

educators with the confidence and skills to integrate advanced STEM methodologies into their classrooms.

The interdisciplinary STEM modules developed through this project were carefully designed to address real-world challenges. For instance, robotics modules introduced pupils to programming and engineering concepts in an engaging and accessible manner. These efforts underscore the project's innovative approach to fostering STEM education in the region. Robotics workshops engaged pupils in coding, programming, and engineering exercises, providing them with hands-on experience that directly addressed gaps in traditional curricula. These modules also aligned with the project's goal of promoting digital literacy and entrepreneurship.

Despite minor delays in procurement, these improvements were completed within revised timelines and now serve as long-term assets for STEM education. These new resources have significantly enriched the teaching and learning environments across participating schools.

Partnerships with Norwegian institutions added significant value to the project. Study visits to Vitensenteret Innlandet in city Gjøvik enabled local educators to gain insights into Scandinavian pedagogical methods, which were adapted to suit local needs. These partnerships enhanced the project's educational quality and introduced fresh perspectives to STEM teaching.

Throughout the implementation period, the project demonstrated adaptability in addressing unforeseen circumstances. The project team transitioned to online methodologies seamlessly. This adjustment not only preserved the integrity of the program but also broadened access to educational resources, ensuring no participants were left behind.

## 2. Were all planned project results achieved within the project implementation period?

The project achieved all planned results within the implementation period.

Result 1: Established a sustainable, regional, national and international partnership with at least 9 stakeholders involved in the establishment of a regional science center and programs and activities for the development of skills and a system of excellence in the field of STEM, ICT, entrepreneurship and active citizenship

- The project's collaborative framework played a pivotal role in ensuring the successful implementation of activities. Regular meetings and transparent communication among the project partners facilitated the smooth execution of tasks, highlighting the importance of strong governance in large-scale educational initiatives.
- Roles and responsibilities were clear and enabled all partners to perform with the great contribution.

Result 2: Improved infrastructure and capacities of primary schools to promote skills and excellence in the field of STEM, ICT, entrepreneurship and active citizenship in Pannonian Croatia

- The project, among other things, purchased a planetarium and observatory, new furniture and equipment for sensorimotor skills, and 10 computers that were used for the needs of the education "Coding for elementary school pupils, 3D modeling and Modeling on 3D printers" for teachers and pupils.
- Infrastructure upgrades were completed across eight schools, equipping classrooms with advanced tools such as 3D printers and robotics kits. These resources created a dynamic learning environment, allowing pupils to experiment and apply theoretical knowledge.

Result 3: Initiated programs, projects and activities that contribute to the competitiveness of the human resources of teachers, educational workers, pupils, primary schools, but also local and regional communities and their economies

- A major outcome was the enhancement of STEM skills for over 500 pupils across participating schools.
- A total of 45 different programs were implemented for pupils in class and subject classes; Magical world of chemistry (10x), Biology workshops (10x), "Discovering the laboratory" workshops (10x), engineering workshop, mechanical engineering workshop, two gravity workshops, three-day astronomy school, two astronomy workshops for pupils of class and subject classes, five-day astronomy training for pupils, a school was held in nature, four specialized workshops for gifted pupils and a light spectrometry workshop were held.
- The training of 214 teachers was another significant achievement. These programs provided participants with tools and methodologies to integrate modern STEM practices into their teaching.

Additionally, the Regional Scientific Center of Pannonian Croatia established itself as a hub for STEM innovation and collaboration. The partnerships forged during the project, particularly with international stakeholders, enhanced the capacity of the center to deliver impactful educational programs.

### 3. Was the planned contribution to the Programme results achieved within the project implementation period?

The project made significant contributions to the Programme results by addressing key educational gaps in the region. Its focus on building STEM competencies directly aligned with Programme goals, fostering both innovation and educational excellence.

#### Programme result 2. Improved STEM skills

A major highlight of the project was the professional development of 194 teachers and educational staff. These individuals participated in comprehensive training programs that introduced innovative STEM teaching methodologies. The training modules were carefully curated to integrate interdisciplinary learning, bridging gaps in knowledge and fostering critical thinking and problem-solving skills.

A standout contribution was the introduction of robotics modules, which engaged pupils in coding and programming exercises. These activities not only improved technical skills but also encouraged teamwork and critical thinking.

#### Programme result 2.1. Upgraded infrastructure and equipment for the purpose of developing functional STEM classrooms

The infrastructure improvements further supported Programme results by providing schools with cutting-edge facilities. These spaces were designed to encourage creative exploration and practical application of STEM concepts.

#### Programme result 2.2. Established Regional Scientific Centers

The regional scientific center has been established and is fully functional. Two branches of the Regional Science Center of Pannonian Croatia have been established in the area of Virovitica-

Podravina County, at the locations of two primary schools: Josip Kozarac Slatina Elementary School and Suhopolje Elementary School.

The Center developed the Strategy, Operational plan and opened a working position for a manager of a Center, who provides additional capacity to continue the center's activities coordination.

#### Programme result 1. Supported bilateral cooperation

International collaboration was one of the most important areas of strength. By integrating insights from Norwegian pedagogical practices, the project enhanced the quality of local STEM education, ensuring long-term benefits for educators and pupils.

4. [Are all prerequisites for the sustainability of project ensured in line with Annex I. of the Project contract, as well as Article 8.14 of the Regulation?](#)

Sustainability is ensured through the following documents:

- Agreement on the Establishment of the Regional Scientific Center of Pannonian Croatia
- Agreement on the Sustainability of the Regional Scientific Center of Pannonian Croatia
- Management Plan of the Regional Scientific Center of Pannonian Croatia
- Statute of the Regional Science Center for Primary STEM Education - LORI
- Statute of Josip Kozarac Primary School, Josipovac Punitovački
- Sustainability and Further Development Strategy of the Regional Science Center of Pannonian Croatia

The sustainability of the Regional Scientific Center of Pannonian Croatia project is secured through a well-designed operational framework and strong stakeholder support. Local governments have committed to maintaining the facilities and equipment, ensuring that the investments made during the project period continue to benefit future generations.

Moreover, the professional development of educators ensures the sustainability of educational outcomes. Teachers who participated in the project have become ambassadors for STEM education in their communities, sharing their knowledge and encouraging other educators to adopt innovative practices.

The financial sustainability of the Regional Scientific Center of Pannonian Croatia is supported by a combination of municipal funding and revenue generated through educational programs and workshops. This diversified funding approach reduces dependency on external grants and ensures long-term operational viability.

Additionally, ongoing collaboration with Norwegian institutions provides access to international best practices and resources, reinforcing the center's position as a leader in STEM education in the region.

5. [Are all mandatory requirements involving ownership of project results met, in line with the Project contract, Partnership agreement\(s\), as well as the provisions of the Article 8.3. of the Regulation?](#)

Ownership of project assets, such as the Regional Scientific Center of Pannonian Croatia and STEM laboratories, was clearly defined in compliance with Article 8.3 of the Regulation. Formal agreements between stakeholders ensure the exclusive educational use of these resources.

Virovitica-Podravina County's support ensures the long-term maintenance of these assets. Regular audits and monitoring confirm their alignment with the project's objectives, safeguarding the results for future generations. Space and equipment insurance policy was concluded.

The equipment and premises of the Regional Scientific Center of Pannonian Croatia at the locations of the main school in Josipovac Punitovački and the regional school Punitovci will be insured with the financial resources of the Osijek-Baranja County, and the equipment purchased as part of the project that is owned by the county has been added to the insurance policies.

6. Has the project achieved the planned contributions to the horizontal principles (good governance, sustainable development, long-term economic growth, social cohesion, environmental protection) in accordance with the Agreement?

#### *Good Governance*

Transparency and stakeholder involvement were hallmarks of the project. Regular consultations ensured alignment with educational priorities and fostered trust among all partners.

The project exemplified good governance through its transparent and inclusive approach to decision-making. Regular meetings with stakeholders ensured alignment with objectives, and robust monitoring mechanisms were established to track progress. The collaborative efforts among project partners, including local authorities and educational institutions, were instrumental in achieving shared goals.

#### *Sustainable Development*

STEM education modules introduced sustainability topics, equipping pupils with skills to address environmental challenges in practical ways.

A key focus of the project was embedding sustainable practices in STEM education. Activities such as "Ecologist in volunteer action" promoted environmental awareness and encouraged pupils to adopt sustainable practices in their daily lives. The infrastructure upgrades were also designed with sustainability in mind, using energy-efficient systems to minimize environmental impact.

#### *Long-term Economic Growth*

The focus on robotics and ICT prepared pupils for high-demand jobs, aligning educational outcomes with labor market needs.

By equipping pupils with high-demand STEM skills and fostering entrepreneurial thinking, the project contributed to regional economic development. The emphasis on digital literacy and robotics prepared pupils for future opportunities in technology-driven industries, ensuring their competitiveness in the global workforce.

By working in schools and pupil cooperatives, pupils will develop entrepreneurial skills that will benefit them in the world of work and will have a positive impact on the development of the local economy.

#### *Social Cohesion*

Inclusivity was a core principle of the project. Programs were designed to reach underserved communities, providing equal access to high-quality STEM education. Initiatives targeting socially disadvantaged pupils and those with special educational needs demonstrated the project's commitment to equity and social cohesion. Activities were also aimed at working with pupils belonging to national minorities.

Through cooperation activities with the Norwegian partner (study trip to Norway, visit of Norwegian partners, on-line coding workshop), a contribution to social cohesion was achieved through the exchange of experiences and cooperation between the two countries.

## *Environmental Protection*

Through educational programs, pupils gained awareness of environmental sustainability, fostering a culture of responsibility.

### 7. Conclusion and recommendation

The implementation of the project stands out for its exemplary alignment with planned objectives and the quality of its execution. The project successfully overcame challenges, such as logistical constraints, while maintaining a strong focus on outcomes. Notable achievements include effective stakeholder collaboration, high-quality infrastructure development, and robust training programs, which were executed with precision and innovation.

The Regional Scientific Center of Pannonian Croatia project demonstrated a strong alignment with its objectives, delivering significant outcomes.

The following achievements need to be highlighted:

- ✓ Exceptional pupils' participation, exceeding initial projections and accompanied by outstanding feedback.
- ✓ Higher-than-anticipated teacher engagement, also receiving excellent feedback.
- ✓ Implementation of modern, interactive, and sustainable methods and principles, ensuring long-term impact.
- ✓ Outstanding project visibility across multiple platforms, including the web, Facebook, and YouTube.
- ✓ Excellent collaboration among all project partners, demonstrating strong synergy and teamwork.
- ✓ Successful establishment of a strategy and dedicated staff, ensuring the sustainable continuation of the center's operations.

The Regional Scientific Center of Pannonian Croatia serves as a model for innovation and collaboration, offering valuable lessons for similar regional initiatives.

Recommendations for the possible continuation of funding of the center's activities in the next financial period:

- To invest in Web library with the support of experts in multimedia content both at professional level and at primary schools' level, i.e. to include modules that enable pupils to create video content, fostering skill development, and promoting their work through Facebook and YouTube channel
- To conduct training sessions for teachers from other counties, facilitating knowledge exchange and professional development.
- To broaden the program's scope to include high schools, benefiting both pupils and teachers with innovative learning opportunities.
- To develop programs and content focused on emerging professions and future workforce needs, aligning education with industry trends.
- To establish an organizational framework to transition into a recognized center of excellence.
- Further development of public-private-civil partnership, with greater emphasis on service-learning.
- Capacity building for management.
- Stronger integration of entrepreneurship and innovation skills.
- Intergenerational and project-based learning

In addition to the evaluator's recommendations, it is advised to fully support all elements of the further development of the learning and teaching model, programs, and activities. These include, as outlined in the Sustainability and Further Development Strategy of the Regional Scientific Center of Pannonian Croatia:

- Inclusion of other schools and educational institutions that are part of the excellence system
- Inclusion of other schools from Osijek-Baranja and Virovitica-Podravina counties in capacity-building programs for educational staff, focusing on trainers and mentors
- Establishment of local branches of the Regional Scientific Center of Pannonian Croatia and teams of excellence centers in interested schools systematically
- A continuous professional development plan for educational staff, school principals, and policymakers
- Development and submission of strategic project proposals for EU, national, and other external funding sources
- Stakeholder engagement strategy (e.g., other public, private, and civil partners, parents, distinguished individuals, etc.) for the promotion and development of the Regional Scientific Center
- Establishment of a national center for the promotion of education on smart specialization topics in cooperation with the Regional Development Agency (RRA)
- A system for early recognition, support, and reward of excellence among children, youth, educational staff, mentors (including those from the business sector), as well as other public institutions, enterprises, and associations
- Attainment of strategic project status and application for funding from strategic project sources.

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