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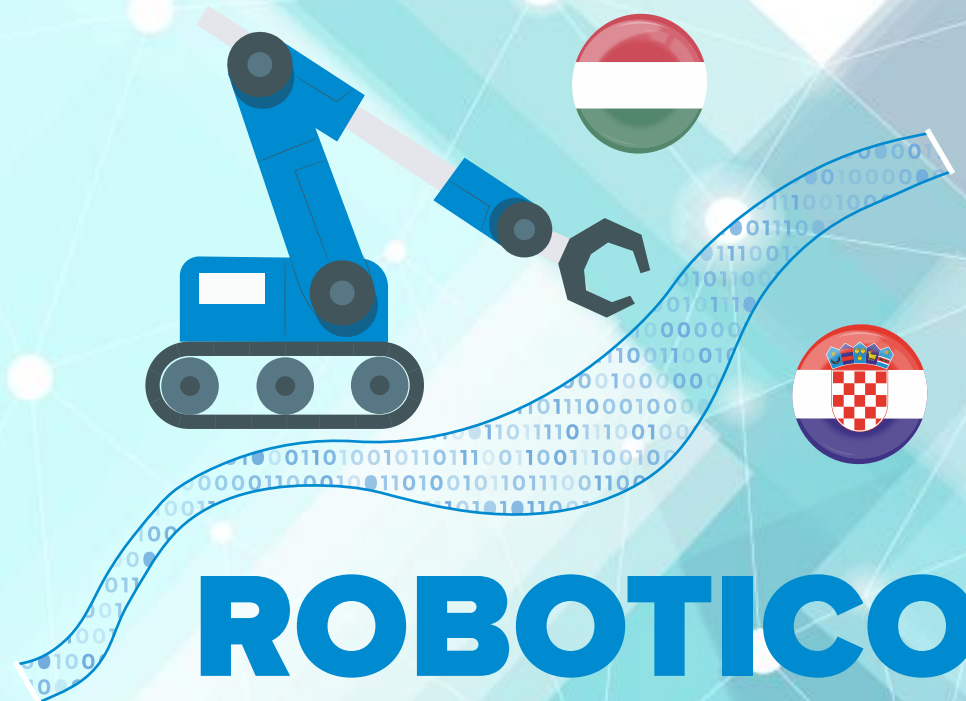
PORA Regional Development Agency of Koprivnica Križevci County provided technical assistance to the lead beneficiary Vocational School Đurđevac and beneficiary Primary school Ferdinandovac in preparation and implementation of the project.



*A cross-border region where rivers connect, not divide*



## ROBOTICO ROBOTics in Interregional COoperation



Vocational School Đurđevac, August 2022.

**PROJECT TITLE:**

ROBOTICO - ROBOTics in Interregional COoperation

**NAME OF THE PROGRAMME:**

Interreg V-A Hungary-Croatia  
Co-operation Programme 2014-2020

**PROJECT ID:**

HUHR/1901/4.1.2/0006

**LEAD BENEFICIARY:**

Vocational school Đurđevac (LB)

**BENEFICIARIES:**

Educational District Centre of Kaposvár –  
Eötvös József Primary School Csurgó (B1)

Primary school Ferdinandovac (B2)

**TOTAL PROJECT VALUE:** 236.922,04 EUR  
**COFINANCED BY EU:** 85%

**PROJECT DURATION:** 20 months: 1.1.2021. – 31.8.2022.

*Web page of the Programme: <http://www.huhr-cbc.com/>*



- Three Open doors days were held in Vocational school Đurđevac in June and August of 2022.



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Three day study trip to Munich to Automatica fare of smart automation and robotics where students and teachers that took part in ROBOTICO project had the opportunity to visit 6 pavilions of the fare where more than 900 companies dealing with industrial and mobile robotics, automation systems and smart solutions for industry, urban environments and households exhibited.



One day study trip to Szigetvar and Zselici Star Park within the 8th camp of robotics in Csurgo. Participants visited Castle Szigetvar and Zselici Star Park (observatory).

## PROJECT SUMMARY:

Project ROBOTICO has involved 3 project partners: Vocational School Đurđevac (LB), Educational District Centre of Kaposvár (Primary School Csurgó) (B1) and Primary School Ferdinandovac (B2). Location of the project implementation were the Koprivnica Križevci County in Croatia and Somogy County in Hungary. Duration of project implementation was 20 months (1.1.2021. – 31.8.2022.). Direct target groups included teachers and students from LB, B1 and B2 schools who also took part in educations and joint workshops. Indirect target groups included families of students, the general public and interested parties that have learned about the project.

To educate the teachers in the related fields of robotics, astronomy, programming and 3D modelling a joint one-week training for teachers was organized by LB in Đurđevac. The new knowledge was then transferred to B1 and B2 primary school students through 8 joint one-week robotic camps held in B1 and B2.

Cross-border character of the project can be seen through 8 joint robotics camps, 2 joint extracurricular programmes, 3-lingual robotics learning handbook and joint development of robots.

## PROJECT GOALS:

The main goal of the project was popularization of the STEM fields related to robotics (with robotics being an interdisciplinary field teachers and students have learned about mechatronics, astronomy, programming and 3D modelling) through jointly developed extracurricular programmes, joint robotics camps with specialized workshops, knowledge and skill transfer among teachers and students.

LB already had experience in implementation of EU project and in the fields of robotics and programming, which were improved and shared with the project partners. Section for space technology also operates in LB and has good results with a high level of knowledge and that was also one of the reasons for adding astronomy in the project.

ROBOTICO project is the first step towards the introduction of robotics extracurricular classes into the project partners primary schools. Through the development of extracurricular programmes with teaching modules the workshops will continue even after project implementation by using IT and robotics equipment acquired through the project.

- Teachers from all three schools created joint extracurricular programmes for teachers and students that can be used in partner school in the following years, but also in any other primary school that has an interest in the field of robotics.

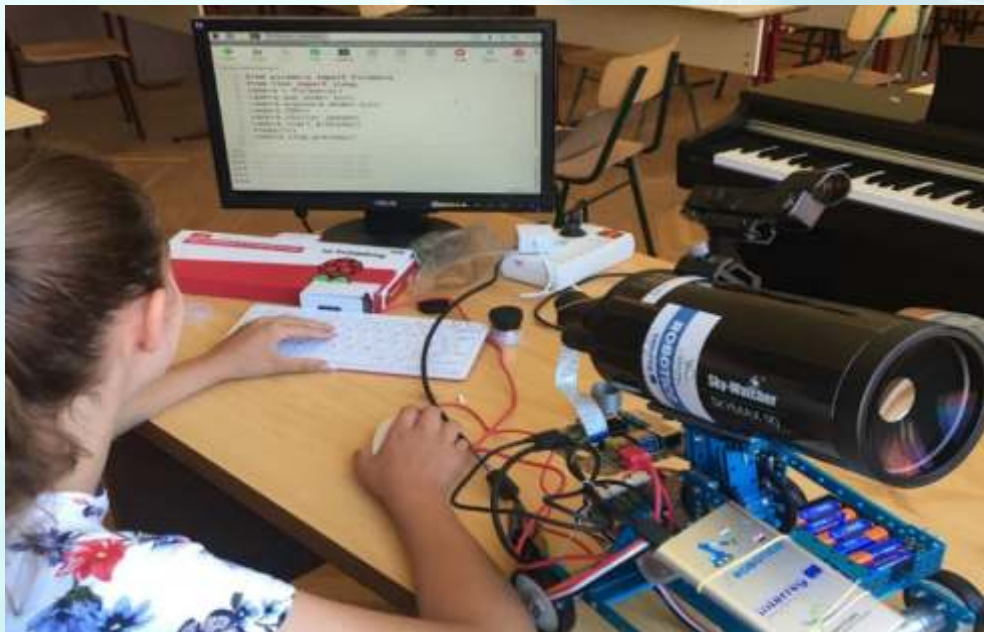
- Teachers from Vocational school Đurđevac created robotics learning handbook that is very useful tool for anyone that wants to start working with students in the field of robotics.

- Three study trips were organized within the project:  
Two day study trip to Rijeka and Zagreb within the 6th camp of robotics in Ferdinandovac. Participants visited Technical museum Zagreb, Planetarium Zagreb, Museum Torpedo and Astronomic Centre Rijeka and Višnja observatory.





- Students and teachers in each school assembled a robot with a telescope and camera programmed to record the sky.



## PROJECT RESULTS:

- The first and most important project result is the increased knowledge of teachers and students that were included in ROBOTICO project.
- IT classrooms of all three project partners were equipped with new IT and robotics equipment.



- To increase the quality of joint teacher training and joint robotic camps, teachers from LB attended certified educations in project related fields.

- In October 2021., a one-week teachers training was held under the organisation of LB for two teachers from B1 and B2 and 3 students from LB. It consisted of work on the equipment procured in the ROBOTICO project, and the main goal was to enable the use of new technologies, Internet of things and astronomy to teachers from primary schools, and later in robotic camps to their students.



Participants were programming micro controllers within the development of IoT system, they also developed mobile applications, learned about 3d modelling, composed mobile robots and robotic arms, worked on CNC machine and learned about the basics of astronomy and work with the telescope.

- The same knowledge was later transferred to primary school students from Csurgó and Ferdinandovac (28 students from each school) as part of 8 joint robotic camps.



Four of them were held in online form in November and December 2021, and four of them were held live in April, May, June and July 2022 in Csurgó and Ferdinandovac.

