

**IOT GREEN TRANSFORMATION
FOR ACADEMIC SOCIETY AND
BUSINESS ORIENTED ECOSYSTEM
IN WESTERN BALKANS**

NEWSLETTER

ISSUE no. 4 - AUGUST 2025



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Dear reader,

Welcome to the 4th issue of the IoT-ECO Newsletter, spanning January through July. It's been an extraordinary journey so far, and we're delighted to share this mid-year milestone update with you!

What We've Been Up To?

Over the past months, our project has been buzzing with activity. We've made significant strides in building capacity, promoting innovation, and strengthening regional cooperation.

To all our readers, partners, and supporters—thank you for being part of this journey. Your ideas, expertise, and enthusiasm inspire our work and help us move closer to our vision of a more connected, green, and resilient Western Balkans.

We hope you enjoy this issue and the insights it brings. Here's to more progress and shared successes ahead!

Warm regards,

The IoT-ECO Team

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PROJECT ACTIVITIES

The IoT-ECO project advanced its mission through a series of impactful activities across partner countries. Academic staff and students participated in specialised training sessions and technical workshops focused on IoT applications for green and digital transformation. Dissemination efforts expanded the project's visibility through media coverage, conference presentations, and dedicated outreach events. Cross-border collaboration remained a cornerstone, with partners exchanging expertise and best practices to strengthen the regional IoT ecosystem and sustainable innovation.



➤➤➤ PROMOTION BY INFORMING SESSION OF THE IOT PROJECT DURING THE ALUMNI MEETING AT THE UNIVERSITY OF MONTENEGRO

On February 25, 2025, the University of Montenegro's Faculty of Mechanical Engineering hosted a gathering of its alumni to establish the Faculty's Alumni Club. The event reconnected former students—now entrepreneurs, industry leaders, and experts—who aim to support the faculty's growth and foster collaboration. A highlight was the presentation of the IoT ECO project, showcasing innovation in sustainability through IoT technology. The newly formed Alumni Club sets the stage for ongoing cooperation between alumni, the faculty, and industry, with a shared goal of advancing education, launching new initiatives, and contributing to Montenegro's economic and social development.





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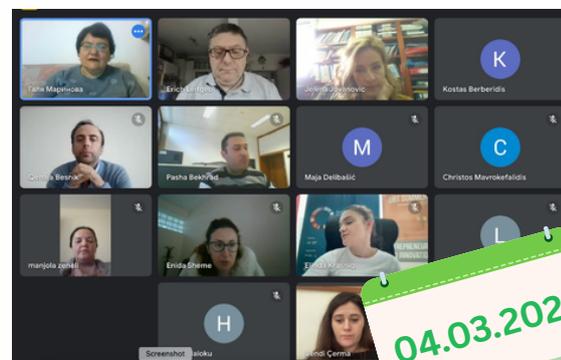
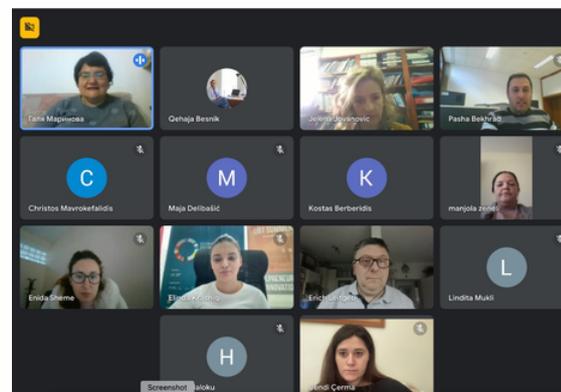


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VIRTUAL MEETING ON WP5.2 & WP5.3

During the meeting, the discussion was about the significant progress made in developing new courses and modules on IoT and green applications, which are being integrated into university curricula across the Western Balkans. Partners presented the design of new syllabi, the launch of pilot courses on IoT and sustainability, inspiring guest lectures from industry experts, and the release of digital learning resources on the IoT-ECO Hub, with accreditation and official approvals already in motion.

The discussion also focused on preparations for Global UBT Fest 2025, scheduled for July 14–18 at the UBT-Dukagjini Center.



04.03.2025

SPECIAL VISIT AS AN INFORMING SESSION AT THE COMMUNITY CENTER FOR CHILDREN WITH DISABILITIES IN DURRËS

On March 4, 2025, as part of the IoT ECO project, a special visit took place at the Community Center for Children with Disabilities in Durrës, Albania from the Aleksander Moisiu University team. The children had the opportunity to explore the world of Internet of Things (IoT) and Intelligent Systems through an engaging animated educational video!

They learned how smart devices function in everyday life and how IoT is transforming the world around us. Additionally, they were introduced to the fundamental concepts of Digital Twins, a technology that creates digital replicas of real-world objects for advanced analysis and simulations. In the end we had a Q&A session with the children and their parents.



04.03.2025



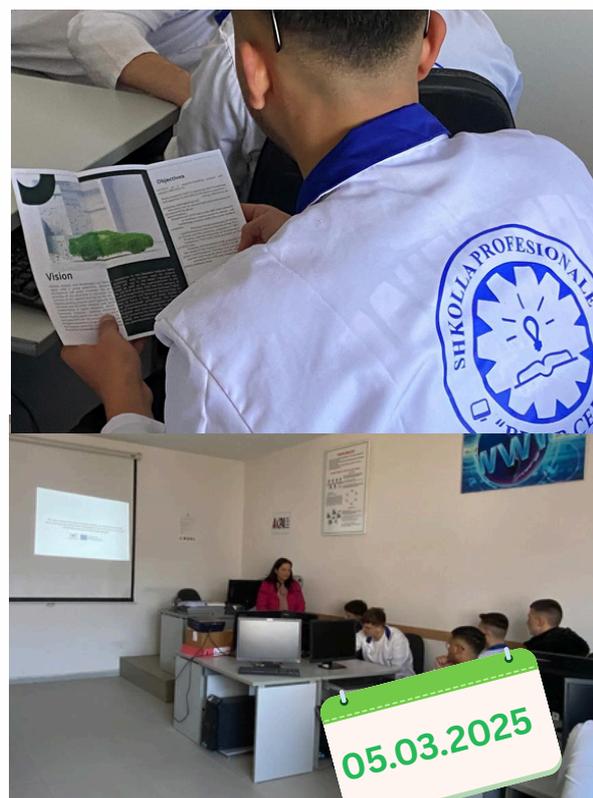
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WORKSHOP DURING THE VISIT TO THE “BEQIR ÇELA” VOCATIONAL SCHOOL - IOT ECO PROJECT

On March 5, 2025, the IoT ECO project organized a visit to the “Beqir Çela” Vocational School in Durrës to introduce students to advanced concepts of the Internet of Things (IoT) and Digital Twins. Through an animated educational video, students explored how smart devices and connected systems shape modern technology and its applications across industries. They also learned how Digital Twins enable precise simulations in engineering and manufacturing, with a special focus on energy efficiency—showing how IoT can reduce consumption and optimize building systems sustainably. Supported by the EU-funded IoT ECO project, the activity brought students closer to cutting-edge technologies and highlighted the role of digital transformation in vocational education.



GUEST LECTURE BY MR BORIS MARKOVIĆ, ELECTRICAL ENGINEER AND OWNER OF COMPANY M-CODE D.O.O

On March 10, 2025, Mr Boris Marković, electrical engineer and owner of company M-Code D.O.O, an esteemed alumna of the Faculty of Electrical Engineering, University of Montenegro, delivered an online guest lecture on the topic The Integration of Drones in IoT Systems. The lecture was organized as part of the course Industrial Engineering led by prof. Aleksandar Vujović and offered students a unique opportunity to learn from a practitioner actively involved in the field. Mr. Marković also highlighted the importance of cross-disciplinary knowledge, emphasizing how electrical engineering, data science, and advanced communication technologies converge to drive the future of IoT-enabled systems.





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»» OPEN LECTURE: DURRËS PORT TOWARDS A SMART PORT

On 11 March, as part of the IoT ECO project and in collaboration with Durres Port Authority, an open lecture was held on the topic "Durrës Port towards a Smart Port." During the presentation, Eng. Vegim Hoti, Head of the Innovation Unit at APD, addressed key topics such as the current status of Durrës Port, existing technologies, steps towards digital transformation, the advantages of a smart port, and successful case studies from international ports.

The presentation particularly focused on the role of IoT in optimizing port operations, cybersecurity, environmental pollution monitoring, and the use of green technologies for a more sustainable port.

In the era we live in, green transformation and digital innovation are the key to enhancing the efficiency, security, and sustainability of ports.



11.03.2025



12.03.2025

PROMOTION OF THE ERASMUS+ PROJECT ««« IOT-ECO DURING "OPEN DOORS DAY"

"Open Doors Day" is an annual event organized by the University of Montenegro (UOM) to promote its various university units to prospective students and other interested parties. This year, "Open Doors Day" took place on March 12, 2025. The Faculty of Mechanical Engineering, along with other university units, had its own marketing desk where professors, assistants and student presented study programs and other activities of their respective faculties. During the event, the Faculty of Mechanical Engineering showcased all active international projects. In this context, the Erasmus+ project IoT-ECO was presented to the attendees.



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IoT-ECO PROJECT PROMOTION AT CAUCASUS UNIVERSITY'S INTERNATIONAL WEEK!

The IoT-Eco Project had the pleasure of participating in International Week 2025 at Caucasus University, held from March 17–21. We presented the goals and activities of IoT-Eco during the Partner Universities Educational Fair, engaging with both international guests and Caucasus University students. The event brought together 20+ academic and administrative representatives from 15 partner institutions around the world. The official opening was led by Caucasus University President Kakha Shengelia and Vice President Irena Melua, who highlighted the importance of innovation and global collaboration. We are proud to have represented IoT-Eco, contributing to international dialogue and the exchange of ideas for a smarter and more sustainable future!



IoT-ECO PROJECT - INDUSTRY TALK: "IoT APPLICATIONS IN THE ALBANIAN INDUSTRY"

On March 25, the Faculty of Information Technology at the Polytechnic University of Tirana hosted a promotional event of the IoT-ECO Project, featuring industry eGledis Bashaxperts from CCBill, Montal Sh.p.k, and Vodafone Albania. Speakers presented topics on cloud integration, IoT applications in healthcare, and Vodafone's IoT services, offering Master's students in Computer and Electronic Engineering valuable insights into the real-world impact of IoT. The event successfully bridged academia and industry, highlighting the growing role of IoT in shaping Albania's technological future.

25.03.2025

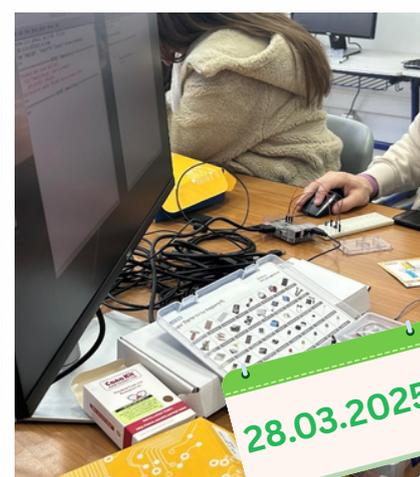


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»» IOT-ECO PROJECT - INVITED LECTURE: “HANDS-ON DEMONSTRATION ON IOT DEVICE CONFIGURATION AND PROGRAMMING WITH RASPBERRY PI”



MSc. Doruntine Berisha held an invited lecture at the Faculty of Electrical and Computer Engineering as part of the IoT-ECO Project. MSc. Doruntine Berisha is an industry expert with many years of experience at 3CIS J.S.C, and also a PhD candidate at University of Prishtina. 3CIS is a leading provider of specialized telecom services across the globe. They provide various services to major telecom carriers via their network of partners and also directly. The event was attended by undergraduate students in their second year of studies at the Information and Communication Technologies (ICT) Bachelor programme. The students showed great enthusiasm for experiencing hands-on practice on IoT system. This activity bridges academia and industry, offering students a closer look at the real-world impact of IoT technologies.

VIRTUAL MEETING DELIVERABLES 5.2 & 5.3 <<<



An online meeting successfully wrapped up the work on New Courses and Invited Lecturers across all partners. A final reminder was shared to ensure that all reports had been updated with the necessary details. The focus was on the upcoming submission deadline.



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»» SPECIAL EDITION PODCAST: GUEST PHD CANDIDATE MANJOLA ZENELI.



New podcast episode produced by Aleksander Moisiu University students and staff—featuring PhD candidate [Manjola Zeneli](#). In this episode, Manjola talks about her involvement in the IoT-ECO Project and how IoT technologies and Digital Twins are creating smarter, more sustainable systems. This is a great example of how young researchers and academic institutions are driving innovation from the ground up—locally and beyond!

[Click here to listen](#)

»» POLYTECHNIC UNIVERSITY OF TIRANA VISITS UBT FOR FOSTERING COLLABORATION BETWEEN UNIVERSITIES ON IOT



As part of the IoT-ECO Project's dissemination activities, the University for Business and Technology (UBT) hosted a delegation of six academics from the Polytechnic University of Tirana. The visit opened with a welcome from UBT's Rector, Prof. Dr. Edmond Hajrizi, and Dean Dr. Besnik Qehaja, who emphasized the value of regional academic cooperation.

Guests toured UBT's Net Zero Energy Campus, innovation parks, and modern labs, and heard a presentation by PhD student Elton Boshnjaku on green IoT projects. Discussions focused on shared experiences, collaboration between PhD students, and future cooperation in IoT, emerging technologies, joint publications, and conferences.



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IoT-ECO PROJECT WAS PROUDLY PRESENTED DURING THE 55TH ANNIVERSARY CELEBRATION OF MECHANICAL ENGINEERING STUDIES IN MONTENEGRO

The IoT-ECO project was proudly presented during the 55th anniversary celebration of Mechanical Engineering Studies in Montenegro, held on April 15, 2024! Over 300 participants from Montenegro and abroad explored the Faculty's labs and current projects, including IoT-ECO's role in driving green digital transformation. Each guest received a gift package featuring the Faculty's Annual Report, which includes a detailed overview of the project and its role in fostering green digital transformation.



IoT-ECO PROJECT PROMOTION PART OF THE INTERNATIONAL WEEK HOSTED BY THE FACULTY OF BUSINESS AT ALEKSANDĚR MOISIU UNIVERSITY



As part of the International Week hosted by the Faculty of Business at Aleksandër Moisiu University, the IoT-ECO project proudly joined a lineup of academic events focused on innovation, sustainability, and European collaboration. With participants and partners from across Europe, the event created a perfect stage to showcase IoT-ECO's mission: harnessing the Internet of Things for a more sustainable and efficient future. From circular economy strategies to real-world applications in smart environments, our presence underlined the importance of digital transformation in regional development. Stay connected as we continue to foster collaboration, promote green tech, and drive impactful change.



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»» INFO DAY FOR IOT-ECO PROJECT IN THE INTERNATIONAL WEEK HOSTED BY THE FACULTY OF BUSINESS AT ALEKSANDËR MOISIU UNIVERSITY



As part of the Faculty of Business’s dynamic fair at Aleksandër Moisiu University, the IoT-ECO project introduced students to the power of Internet of Things (IoT) in creating eco-friendly, data-driven solutions for everyday challenges.

Visitors explored how smart technologies can improve urban living, enhance sustainability, and open up new career paths in digital innovation and environmental impact.

»» IOT-ECO PROJECT PROMOTION AT SOSE 2025!



The team from Polytechnic University of Tirana (UPT) proudly represented the IoT-ECO project at the 20th Annual System of Systems Engineering Conference (SoSE 2025)!

They showcased how the project is driving green digital transformation in the Western Balkans through smart port solutions, IoT, and edge/cloud technologies. There was sparked great interest from researchers, academics and industry leaders, reinforcing the impact of the IoT-ECO Hub as a model for sustainable innovation.



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➤➤ IOT-ECO PROJECT SHOWCASED AT THE 1ST INTERNATIONAL CONFERENCE ON COMPUTER SCIENCE AND INFORMATION TECHNOLOGY (CSIT® 2025)

The IoT-ECO Project was proudly represented at the 1st International Conference on Computer Science and Information Technology (CSIT® 2025) by staff from Aleksandër Moisiu University of Durrës and the Polytechnic University of Tirana. The team showcased key achievements, including a model ecosystem for IoT in green transformation, innovative curricula for Bachelor and Master programs, and strengthened university–industry collaboration through applied research and IoT services. Their participation underlined the project’s role in equipping students with digital and green skills while fostering knowledge exchange and future cooperation with regional and international partners.



➤➤ IOT-ECO SUMMER ACADEMY AT UBT



The week-long Summer Academy 2025, organized under the Erasmus+ IoT-ECO project, proved to be an inspiring platform for innovation, collaboration, and knowledge exchange. Engaging lectures and discussions highlighted green transformation, digital innovation, and system-of-systems thinking, while roundtables—especially the Round Table on Future Cooperation held on July 17 at UBT Dukagjini Center—brought together partners from Europe and the Western Balkans to sign seven Memoranda of Understanding for future collaboration on smart, sustainable systems.



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TECHNOLOGY CORNER: TURNING DATA INTO CLIMATE ACTION

The urgency of the climate crisis has put sustainability at the heart of global priorities, and the Internet of Things (IoT) is a powerful driver of this shift. By connecting devices that collect and analyse real-time data, IoT helps reduce energy use, optimise resource management, improve transport efficiency, and enable the circular economy. Its real strength lies in turning data into action—optimising factory energy use, adjusting irrigation instantly, responding to air quality alerts, or rerouting fleets to cut emissions.



In 2025, these capabilities are advancing rapidly: AI-powered IoT (AIoT) is now used in over 80% of enterprise deployments, edge computing is enabling faster, low-energy responses, 5G networks are unlocking large-scale smart city and industrial applications, and stronger regulations are guiding secure, sustainable adoption. Within IoT-ECO, these advances are being applied to ports, supply chains, agriculture, and tourism to accelerate the Western Balkans' green transition and support EU Green Deal goals.





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The IoT-ECO project contribution to the Green Transformation of the Western Balkans



*Written by: Assoc. Prof. Dr. Galia Marinova,
Technical University of Sofia, Project Coordinator*

The IoT-ECO project started December 1 st , 2022 with a consortium of 9 universities: Technical University of Sofia, Bulgaria – Coordinator, Technical University of Graz, Austria, University of Patras, Greece and 6 HEIs from the Western Balkans: 2 from Albania - University “Aleksander Moisiu”, Durres and Polytechnic University of Tirana, 2 from Kosovo: University of Pristina and University for Business and Technology, and 2 from Montenegro – University of Montenegro and Mediterranean University of Podgorica. The project has 3 associate partners: Port of Durres Authority, Innovation Fund of Montenegro and CREA-KO SHKP. The project enters in the last trimester and will be completed December 1 st , 2025.

Three years of intensive work of the consortium led to tangible achievements:

An IoT-ECO Hub was developed, and the consortium was trained to implement it.

Teaching materials dedicated to the implementation of the IoT technology for green transformation were developed and made available at the IoT-ECO Hub - more than 30 new lectures, 20 new practical assignments, 5 tutorials.



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- **3 Virtual models** – Digital Twins – Demonstrators were developed: Port of Durres (by UAMD, UPT), UBT Campus (by UBT, UP) and UoM Campus (by UoM, UNIMED).
- **10 new courses and 3 updated courses were development**, accredited and probated in UAMD, UPT, UP, UBT, UoM and UNIMED. Three new modules, implementing the new courses, were proposed.
- **9 Invited guest lecturers** from companies and associate partners were organized.
- **More than 100 students/teachers** and staff took part of the exchange of experience. 231 students (84F, 147 M) followed, took exams and evaluated the new and updated courses in the academic year 2024/2025.
- **More than 670 students** will have studied them by the completion of the project.

The Consortium organized multiple events:

2 events for exchange of experience from EU countries were organized in TU-Graz and University of Patras.

An **IoT-ECO Summer School** was organized in July 2025 in UBT and UP, Kosovo in order to probate the newly developed IoT-ECO modules. More than 200 students attended the IoT-ECO Summer School and received certificates.

16 dissemination events – open days, info-days and a webinar for people with disabilities were organized to demonstrate the achievements of the IoT-ECO project and to motivate people to contribute to the green transformation of their environment.

9 Memorandums of understanding were signed between the project consortium and companies in Kosovo and Albania, to implement and cooperate for the sustainability of the project results.

The achievements of the IoT-ECO project led to the integration of the IoT-ECO technologies for green transformation in the academic curricula, provided teachers, students and researchers with the necessary materials, virtual models-prototypes and demonstrators to illustrate the topic, attracted the attention of the society on it and motivated companies and administration to support it and to maintain the sustainability of the project. The final Closing event of the IoT-ECO project will be held in the Technical University of Sofia, Bulgaria, in September 2025.

101083018 (IOT-ECO)ERASMUS-LS, ERASMUS-EDU-2022-CBHE-STRAND-2

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PROJECT DURATION:
1.12.2022-30.11.2025

Overall budget:780,951.00 Eu



»»» OUR PARTNERS AND ASSOCIATED PARTNERS



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