

# Godišnji rad Centra za inovativnost i preduzetništvo Univerziteta u Zenici za 2025.godinu



**Annual work of the Center for Innovation and  
Entrepreneurship of the University of Zenica for 2025**

Zenica januar 2026/ Zenica January 2025

## **Predgovor**

**Poštovana / Poštovani,**

**Pred Vam je Brošura „Godišnji rad Centra za inovativnost i preduzetništvo Univerziteta u Zenici za 2025.godinu“. U godini u kojoj smo napunili 18 godina postojanja i postali punoljetni članovi akademske zajednice u Bosni i Hercegovini, Evropi i Svijetu, realizovali smo brojne aktivnosti zbog čega uostalom i postojimo.**

**Naglasimo, CIP je pod-organizacijska jedinica Univerziteta u Zenici, formirana odlukama Senata i Upravnog odbora iz 2007.godine kao rezultat dobre evropske praxe i iskustava na prvom mjestu Politehničkog univerziteta u Torinu. CIP UNZE nema stalno zaposleno osoblje niti i jednu osobu na budžetu Zeničko-dobojskog kantona. Njega sačinjava osoblje raznih fakulteta koje ima želju da se bori za projekte, da saraduje sa privrednim i poslovnim sektorom, da bude servis zajednice u raznim domenama treće misije visokoškolskih ustanova, da bude most između poslodavaca i fakulteta te da bude mjesto na koje studenti mogu doći sa idejom, pitanjem, primjedbom i dr. a da za to nemaju nikakvu ocjenu. U njemu mogu da rade i ljudi izvan UNZE koji svojim znanjem, dignitetom i strukom mogu pomoći u radu CIP i UNZE.**

**Uz nadu da ćemo u narednim godinama pred Vas izaći sa još većim brojem sadržajnih i kvalitetnih aktuelnosti pozivamo vas na saradnju sa CIP UNZE.**

## **Foreword**

**Dear Sir/Madam,**

**You have before you the Brochure "Annual Work of the Center for Innovation and Entrepreneurship of the University of Zenica for 2025". In the year in which we turned 18 and became full-fledged members of the academic community in Bosnia and Herzegovina, Europe and the World, we have implemented numerous activities, which is why we exist.**

**Let us emphasize that CIP is a sub-organizational unit of the University of Zenica, formed by decisions of the Senate and the Board of Directors in 2007 as a result of good European practice and experiences, first of all, of the Polytechnic University of Turin. CIP UNZE does not have permanent staff or a single person on the budget of the Zenica-Doboj Canton. It is composed of staff from various faculties who have the desire to fight for projects, to cooperate with the economic and business sector, to be a service to the community in various domains of the third mission of higher education institutions, to be a bridge between employers and faculties, and to be a place where students can come with an idea, question, comment, etc. and that they do not have any grade for it. People from outside UNZE can also work in it, who can help the work of CIP and UNZE with their knowledge, dignity and expertise.**

**With the hope that in the coming years we will come before you with an even greater number of substantive and quality current affairs, we invite you to cooperate with CIP UNZE.**

**Vaš CIP tim / Your CIP Team**

## Centar za inovativnost i preduzetništvo (CIP) Univerziteta u Zenici

CENTAR ZA INOVATIVNOST I PREDUZETNIŠTVO je pod-organizacijska jedinica u sastavu Univerziteta u Zenici. U sistemu savremenih univerziteta u Svijetu uloga koju CIP UNZE obavlja je najbliža aktivnostima jedinica za tehnološki transfer (tzv. TTO – Technology Transfer Office) Najvažnije aktivnosti koje je CIP realizuje su:

- ❖ Promocija inovativnosti i preduzetništva unutar studentske i nastavničke populacije,
- ❖ Naučna i stručna "borba" za domaće i inostrane projekte od značaja za razvoj Univerziteta u Zenici i njegovih organizacijskih jedinica,
- ❖ Održavanje i pomoć u održavanju konferencija, savjetovanja, praktikuma (workshop-ova), sajmova i sl.,
- ❖ Povezivanje poslovnog sektora sa akademskim sektorom kroz transfer znanja (know-how transfer);
- ❖ Promocija međunarodne saradnje na projektnom i programskom principu organizacijskih jedinica UNZE i drugih poslovnih subjekata,
- ❖ Promocija međunarodne saradnje na projektnom i programskom principu organizacijskih jedinica UNZE i drugih poslovnih subjekata,
- ❖ Saradnička funkcija između univerziteta i tržišta rada kada je u pitanju

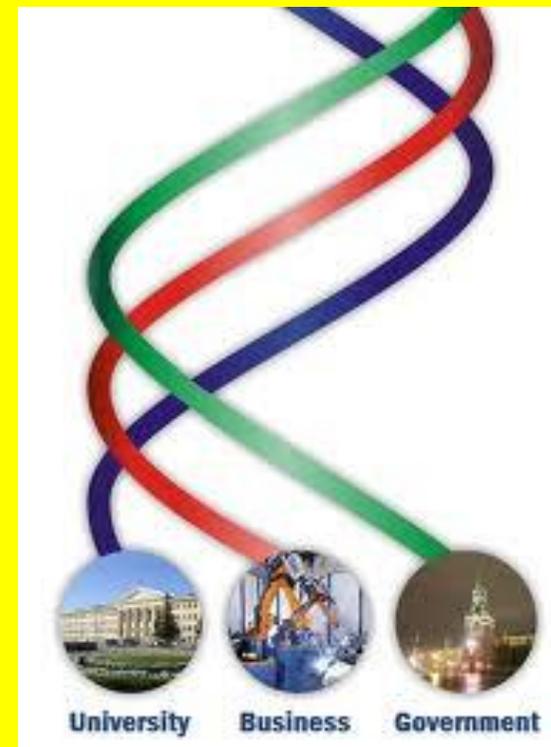


- kreiranje i razvoj novih nastavnih planova i programa te otvaranje novih fakulteta,
- ❖ Razvoj inovativne i preduzetničke aktivnosti unutar studentskog tijela kroz izradu seminarских i diplomskih radova potrebnih privredi regiona,
- ❖ Pomoć u kreiranju istraživanja za magistarske i doktorske disertacije koje su potrebne privredi regiona i BiH,
- ❖ Izrada poslovnih planova od interesa za privredni razvoj i formiranje inovativnih preduzeća kroz razvoj prototipova,
- ❖ Promocija i razvoj informaciono-komunikacijskih tehnologija (IKT) kao važnog segmenta inovativnosti u nastavnom i naučno-istraživačkom radu,
- ❖ Multimedijalne prezentacije, treninzi i seminari različitih sadržaja kao sadržajna dopuna postojećim dodiplomskim i postdiplomskim studijama sa uključivanjem u rad



- najeminentnijih imena iz regiona i Svijeta,
- ❖ Programi podrške razvoju spin-off i spin-out firmi unutar akademske zajednice i pomoć MSP regiona za jači poslovni rast i razvoj,
  - ❖ Pomoć inovatorima i preduzetnim ljudima regiona u konkretizaciji i internacionalizaciji svojih ideja,
  - ❖ Pomoć u klsterskom organizovanju MSP,
  - ❖ Know-how u razvoju Naučno-tehnoloških parkova, tehnoloških parkova i centara izvrsnosti (NTP,TP, EoE) inovacijskih centara, poslovnih zona, inkubatora i transferu tehnologija iz razvijenog svijeta,
  - ❖ Podsticaj mobilnosti studenata i nastavnika kroz rad na konkretnim projektima,
  - ❖ Animacija studenata za programe međunarodnih stipendija i studijskih boravaka izvan UNZE i BiH,
  - ❖ I brojne druge aktivnosti.

Svoju razvojnu misiju Centar za inovativnost i preduzetništvo UNZE izvodi u saradnji sa brojnim kako lokalnim tako i regionalnim partnerima. U saradnji sa lokalnom i regionalnom zajednicom izdvojaju se:



- Razvojna agencija grada Zenice-ZEDA,
- Regionalna agencija za razvoj Srednje Bosne-REZ,
- Stručna služba za razvoj i međunarodne projekte Vlade ZDK,
- Poslovni inkubator i Tehnološki park Zenica,
- Privredna komora Zeničko-dobojskog kantona,
- Privredna komora BiH,
- Poslovna zona PC 96 Vitez,
- Tehnološki park INTERA Mostar,
- Learning Factory laboratorija Fakulteta elektrotehnike, strojarstva i računarstva Split i dr.

kao i univerzitetima iz Kragujevca, Novog Sada, Banja Luke, Mostara, Splita, Ljubljane, Podgorice i Istočnog Sarajeva a kroz realizaciju zajedničkih

programa i projekata.

CIP UNZE je okrenut mlađoj akademskoj populaciji koja kroz rad u ovom Centru treba da stiče iskustvo i reference za rad u naprednijim organizacijskim jedinicama UNZE. On predstavlja mjesto susretanja iskusnih kadrova i oni koji tek stižu naučne i stručne reference.

CIP UNZE je trajno okrenut međunarodnim projektima i saradnji sa ino-partnerima. Od inostranih partnera posebno se izdvajaju:

- ❖ I3P Inkubator Politehničkog univerziteta u Torinu koji je model za osnivanje CIP UNZE,
- ❖ Poslovni inkubator Univerziteta Primorske u Kopru,
- ❖ Tehnološki park Nova Gorica,
- ❖ Tehnološki park Maribor,
- ❖ Prekomurski poslovni inkubator,



- ❖ Tehnološki parkovi Barcelona, TP Valles i NTP Girona u Španiji,
- ❖ Rešica preduzetnička mreža
- ❖ Yildiz Tehnološki park Istanbul,
- ❖ Technopolis Nikšić,
- ❖ Preduzetničko gnijezdo Univerziteta Donja Gorica u Podgorici,
- ❖ Naučno-tehnološki park FTN Novi Sad i dr.

CIP je prva stepenica u naučno-stručnom profilisanju kadrova za rad na većim i ozbiljnijim I&R projektima, mjesto promocije studentskog i nastavničkog viđenja inovativnosti i preduzetništva, mjesto sinergije i susretanja poslodavaca, studenata i nastavnika, sa ciljem razvoja inovativnosti i preduzetništva u svim sferama djelatnosti.

U 2014.godini primili smo i posebno priznanje Ekonomskog fakulteta Univerziteta Istočno Sarajevo za pomoć u razvoju ove visokoškolske organizacije a povodom rođendana EF UIS. Na ovom Univerzitetu smo pokretači konferencije Jahorina biznis forum koja se u kontinuitetu održave svake godine a počev od 2011.te godine.

Naša krilatica rada je:

**CIP UNZE ISTINSKI ŽIVI I RADI U TRIPLE HELIX MODELU !**

Naša adresa je:

**UNIVERZITET U ZENICI  
CENTAR ZA INOVATIVNOST I  
PREDUZETNIŠTVO**  
Fakultetska 3 - Rektorat  
72000 Zenica  
Tel. +387 32 444 421 /  
Tel. +387 32 444 421  
e-mail: [info@cip.unze.ba](mailto:info@cip.unze.ba)  
[www.cip.unze.ba](http://www.cip.unze.ba)



## ***Center for Innovation and Entrepreneurship of the University of Zenica (CIE UNZE)***

CENTER FOR INNOVATION AND ENTREPRENEURSHIP is a sub-organizational unit within the University of Zenica. In the system of modern universities in the World, the role that CIP UNZE performs is closest to the activities of technology transfer units (so-called TTO - Technology Transfer Office). The most important activities that CIP implements are:



- Promotion of innovation and entrepreneurship within the student and teaching population,
- Scientific and professional "fight" for domestic and foreign projects of importance for the development of the University of Zenica and its organizational units,
- Holding and assisting in holding conferences, consultations, workshops, fairs, etc.,
- Connecting the business sector with the academic sector through the transfer of knowledge (know-how transfer);



- Promotion of international cooperation on the project and program principle of the organizational units of UNZE and other business entities,
- Collaborative function between the university and the labor market when it comes to creating and developing new curricula and opening new faculties,
- Development of innovative and entrepreneurial activities within the student body through the preparation of seminar and diploma theses needed by the economy of the region,
- Assistance in creating research for master's and doctoral dissertations needed by the economy of the region and Bosnia and Herzegovina,
- Preparation of business plans of interest for economic development and the formation of innovative companies through the development of prototypes,

- Promotion and development of information and communication technologies (ICT) as an important segment of innovation in teaching and scientific research work,
- Multimedia presentations, trainings and seminars of various contents as a content supplement to the existing undergraduate and postgraduate studies with the inclusion of the most eminent names from the region and the world,



- Support programs for the development of spin-off and spin-out companies within the academic community and assistance to SMEs in the region for stronger business growth and development,
- Assistance to innovators and entrepreneurs in the region in concretizing and internationalizing their ideas,
- Assistance in cluster organization of SMEs,
- Know-how in the development of Science and Technology Parks,



Technology Parks and Centers of Excellence (NTP, TP, EoE) innovation centers, business



zones, incubators and technology transfer from the developed world,

- Encouraging student and teacher mobility through work on specific projects,
- Animation of students for international scholarship programs and study stays outside UNZE and BiH,
- And numerous other activities.

The Center for Innovation and Entrepreneurship of UNZE carries out its development mission in cooperation with numerous local and regional partners. In cooperation with the local and regional community, the following stand out:

- Development Agency of the City of Zenica-ZEDA,
- Regional Development Agency of Central Bosnia-REZ,
- Expert Service for Development and International Projects of the Government of the Canton of Zenica,
- Business Incubator and Technology Park Zenica,
- Chamber of Commerce of Zenica-Doboj Canton,
- Chamber of Commerce of Bosnia and Herzegovina,
- Business Zone PC 96 Vitez,
- Technology Park INTERA Mostar,
- Learning Factory Laboratory of the Faculty of Electrical Engineering, Mechanical Engineering and Computing Split, etc.

as well as universities from Kragujevac, Novi Sad, Banja Luka, Mostar, Split, Ljubljana, Podgorica and East Sarajevo through the implementation of joint programs and projects.

CIE UNZE is permanently focused on international projects and cooperation with foreign partners. Among the foreign partners, the following stand out:

- I3P Incubator of the Polytechnic University of Turin, which is the model for the establishment of CIP UNZE,
- Business Incubator of the University of Primorska in Koper,
- Technology Park Nova Gorica,
- Technology Park Maribor,



- Prekomurje Business Incubator,
- Technology Parks Barcelona, TP Valles and NTP Girona in Spain,
- Rešica Entrepreneurial Network
- Yildiz Technology Park Istanbul,



- Technopolis Nikšić,
- Entrepreneurial Nest of the University of Donja Gorica in Podgorica,
- Science and Technology Park FTN Novi Sad, etc.

CIE is the first step in the scientific and professional profiling of personnel for work on larger and more serious R&D projects, a place for promoting student and teacher views on innovation and entrepreneurship, a place for synergy and meetings of employers, students and teachers, with the aim of developing innovation and entrepreneurship in all spheres of activity.

In 2014, we also received a special recognition from the Faculty of Economics of the University of East Sarajevo for assistance in the development of this higher education organization on the occasion of the EF UIS birthday. At this University, we are the initiators of the Jahorina Business Forum conference, which has been held continuously every year since 2011.



Our motto is:

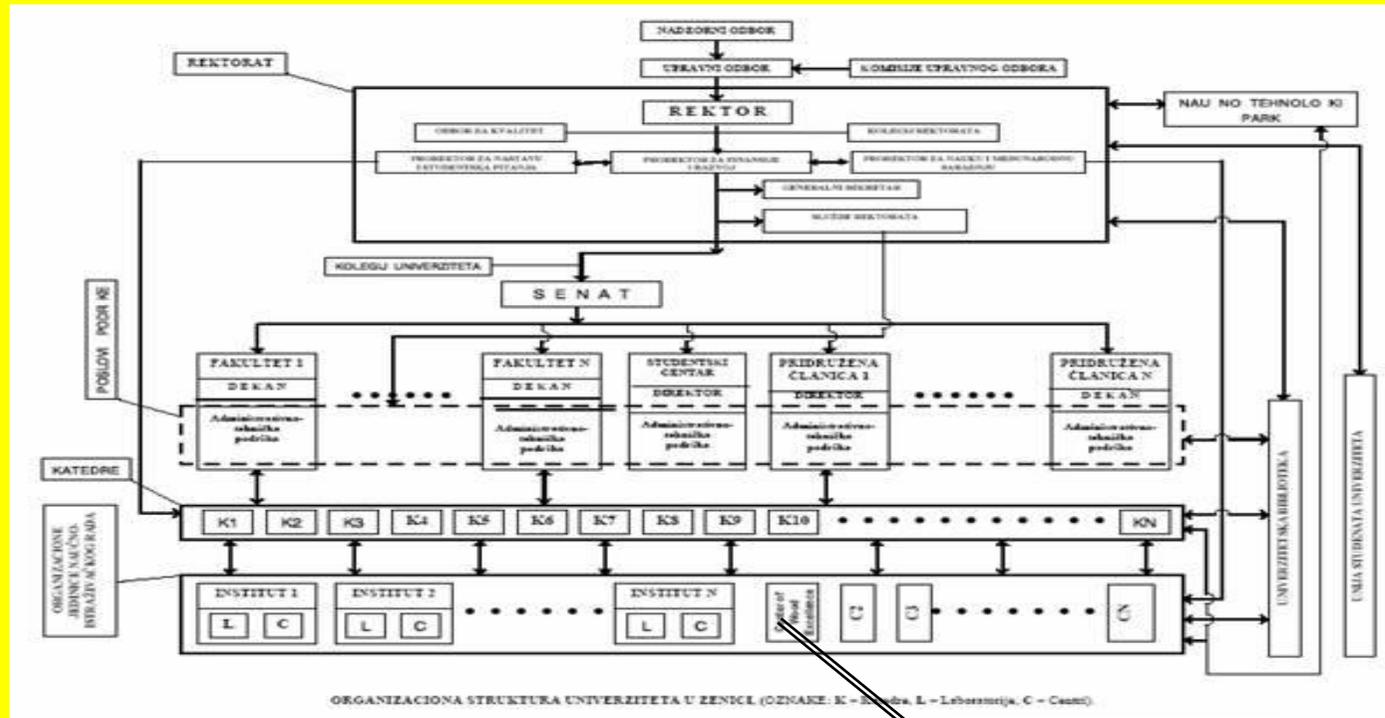
**CIP UNZE TRULY LIVES AND WORKS IN THE TRIPLE HELIX MODEL!**

Our address is:

**UNIVERSITY OF ZENICA  
CENTER FOR INNOVATION AND ENTREPRENEURSHIP  
Fakultetska 3 - Rectorate  
72000 Zenica  
Tel. +387 32 444 421 /  
Tel. +387 32 444 421  
e-mail: [info@cip.unze.ba](mailto:info@cip.unze.ba)  
[www.cip.unze.ba](http://www.cip.unze.ba)**



## Gdje smo u organizacijskoj šemi Univerziteta u Zenici?



CENTAR ZA INOVATIVNOST I  
PREUZETNIŠTVO

**Where are we in the organisational chart of the University of Zenica ?**

## ***Organizacija CIP-a***

U svom sastavu Centar za inovativnost i preduzetništvo ima nekoliko odjela i to:

- ❖ Odjel za preduzetništvo
- ❖ Odjel za poslovni razvoj (istraživanje tržišta, razrada i dizajn prototipova, tehnološko i organizacijsko projektovanje, i dr.)
- ❖ Multimedijalni odjel (sala za multimedijalne prezentacije i obuku)
- ❖ Virtualna biblioteka i
- ❖ Kancelarija za poslovnu podršku (BSO)

## ***CIE Organisation***

The Center for Innovation and Entrepreneurship has several departments, including:

- Entrepreneurship Department
- Business Development Department (market research, development and design of prototypes, technological and organizational design, etc.)
- Multimedia Department (multimedia presentation and training room)
- Virtual Library and
- Business Support Office (BSO)

## **Osoblje CIP UNZE / CIE UNZE staff**

### **Menadžment/Management**

- ❖ Prof.dr Darko Petković, ravnatelj Centra
- ❖ V.a Mr Emir Đulić, sekretar Centra

### **Entrepreneurship Department**

- ❖ **Prof. Dr Džafer Dautbegović, Head of Department**
- ❖ Doc.dr sc.Mustafa Hadžalić, dipl.ing.
- ❖ Mr.sc. Đulić Emir, dipl.ing.
- ❖ Mr.sc.Đenana Čolaković, dipl.ing.
- ❖ Prof.dr.sc. Hazim Bašić, dipl.ing.
- ❖ Prof.dr Fuad Hadžikadunić, dipl.ing.
- ❖ Prof.dr. Omer Beganović, dipl.ing.
- ❖ Prof.dr Marina Jovanović, dipl.ing.
- ❖ Prof.dr Alaudin Brkić, dipl.iur.
- ❖ Prof.dr Raza Sulunahpašić, dipl.ing.
- ❖ Mr.sc.Branka Muminović, dipl. ing.
- ❖ Samir Bijedić, dipl.ing.
- ❖ Ševal Smajić, dipl.ing.
- ❖ Mr.Damir Hodžić, dipl.ing.prof.
- ❖ Nezim Grabovica, dipl.ing. prof.
- ❖ Prof.mr. Jelena Grubor, dizajner
- ❖ Davor Sušić, dipl.ing.

### **Business development department**

- ❖ **prof.dr.Rifet Đogić, dipl.oec. Head of department**

- ❖ prof..dr Almir Alihodžić, dipl.oec.
- ❖ prof.dr.Dženan Kulović, dipl.oec.
- ❖ doc.dr. Sanja Prodanović, dipl.oec.
- ❖ prof.Dr Fuad Klisura, dipl.ing.
- ❖ Sirija Aganović, dipl.ecc.
- ❖ Prof.dr Darko Petković, dipl.ing.
- ❖ Vilić Emir, dipl.ing.arh.
- ❖ Prof.dr Srđan Kujundžić, dipl.oec.

### **Virtual library**

- ❖ Aras Borić, Šef odjela

### **Multimedia center**

- ❖ Kemal Arifović, IT eng.

### **Business Suport Office**

- ❖ Mr.sc.Lamija Subašić, head

The Center is also open to all other representatives of the academic community, UNZE teachers and students, alumni, staff from other BH universities, regions, other employees at UNZE (administrative and technical staff), as well as staff outside UNZE, who can and want to contribute to the development function of the Center with their ideas, knowledge and work..

**BE INNOVATIVE AND ENTERPRISE.....JOIN US!**

## **Referenc lista CIP-a u 2025. godini / CIE reference list in the 2025.**

### **A) Projektne aktivnosti /Project activities**

#### **Projekt 1./ Project 1**

Naslov Title	<b>RTIT - KNOW HOW COMMUNITIES FOR ACCELERATING RTI TRANSFER IN THE DANUBE REGION - RTIT; INTERREG PROGRAMM EU</b>	
Odrednica Status	International Research&Development&Innovation	
Organizacijske jedinice Department	Innovation and Entrepreneurship Centre at the UNZE	
Šef projekta Project chief	Prof.dr Džafer Dautbegović	Napomena:
Projektni tim Project team	Prof.dr Darko Petković, prof.dr Marina Jovanović, prof.dr Raza Sulunahpašić, prof.dr Fuad Hadžikadunić, mr.sc. Emir Đulić, v.a., mr.sc. Djenana Čolaković, prof.dr Karač Aleksandar, v.prof.dr Mustafa Hadžalić, prof.dr Alaudin Brkić, Amer Neimarlija	
Budžet projekta Project budget	2,3 mil euro	
Realizacija projekta Project period	2023-2026	
Rezime projekta Project Summary	<p>New and innovative materials play a key role in the digital and green transition. They unlock new functionalities and significantly improve existing technological solutions. Materials research as a cross-sectional technology is of central importance in almost all manufacturing industries and requires high specialisation and interdisciplinary networks.</p> <p>The Eastern part of the DR contributes with materials production and processing to European value chains. Materials are a key asset in today's times of geopolitical instability. It is one of the most dynamic sectors currently with tremendous technological challenges and high potential for innovations, just to mention some: sustainable, smart &amp; responsive materials, advanced composites, surface engineering, lightweighting or energetically optimised materials. The DR is strong in the production and manufacturing of materials and a key region within the EU to reduce the dependency on markets outside the European continent. The DR countries S4+ strategies reflect that ambition clearly.</p> <p>The existing and emerging technological challenges, the growing need for sustainability and resilience will demand a much higher level of Research, Technology and Innovation (RTI) in materials but foremost a more effective RTI transfer to the business community (push &amp; pull mechanism) in order to not only remain competitive but improve the DR position as key player in materials</p>	

in European value chains.

But why is innovation level low and RTI management and valorisation weak? Why does the innovation support systems and policy makers struggle to find the right policy measures to catch up with the West? Brain drain and lack of qualified professionals, small market sizes, the lack of funding are dominant reasons that are not easy to overcome. But there is also a lack of capacities and knowhow on new push (RTI to market) and pull (market pull of RTI) concepts. But it is not only the administrative/political side to claim for the weak RTI transfer performance. Technology and knowledge management at SMEs is weak too. RTI transfer is not a simple task. The receiving side (SME) needs to understand the RTI and its potential for their business. RTI are novelties, but also full of uncertainty. What will be the impact of introducing a new technology, material, or other innovation within the company?

- 13 partners from 8 countries (MN, AT, DE, SI, HU, BG, BH, UA)
- Representing the business support infrastructure in their regional or country
- Research partner organisations

Novi i inovativni materijali igraju ključnu ulogu u digitalnoj i zelenoj tranziciji. Oni otključavaju nove funkcionalnosti i značajno poboljšavaju postojeća tehnološka rješenja. Istraživanje materijala kao presječna tehnologija od centralne je važnosti u gotovo svim proizvodnim industrijama i zahtijeva visoku specijalizaciju i interdisciplinarnu mrežu.

Istočni dio DR-a doprinosi proizvodnjom i preradom materijala evropskim lancima vrijednosti. Materijali su ključna prednost u današnjim vremenima geopolitičke nestabilnosti. To je jedan od najdinamičnijih sektora koji se trenutno suočava s ogromnim tehnološkim izazovima i velikim potencijalom za inovacije, da spomenemo samo neke: održivi, pametni i responzivni materijali, napredni kompoziti, površinsko inženjerstvo, materijali za smanjenje težine ili energetski optimizirani materijali. DR je jak u proizvodnji materijala i ključna je regija unutar EU za smanjenje ovisnosti o tržištima izvan evropskog kontinenta. Strategije S4+ zemalja DR-a jasno odražavaju tu ambiciju.

Postojeći i novonastali tehnološki izazovi, rastuća potreba za održivošću i otpornošću zahtijevat će mnogo viši nivo istraživanja, tehnologije i inovacija (RTI) u materijalima, ali prije svega efikasniji transfer RTI-a poslovnoj zajednici (mehanizam guranja i povlačenja) kako bi se ne samo ostalo konkurentno, već i poboljšala pozicija DR-a kao ključnog igrača u materijalima u evropskim lancima vrijednosti.

Ali zašto je nivo inovacija nizak, a upravljanje i valorizacija RTI-a slabi? Zašto se sistemi podrške inovacijama i kreatori politika bore da pronađu prave mjere politike kako bi sustigli Zapad? Odliv mozgova i nedostatak kvalifikovanih stručnjaka, mala tržišta i nedostatak finansiranja dominantni su razlozi koje nije lako prevazići. Ali postoji i nedostatak kapaciteta i znanja o novim konceptima guranja (RTI na tržište) i privlačenja (tržišno privlačenje RTI-a). Ali nije samo administrativna/politička strana ta koja

može kriviti za slabe performanse transfera RTI-a. Upravljanje tehnologijom i znanjem u malim i srednjim preduzećima je također slabo. Transfer RTI-a nije jednostavan zadatak. Strana primalac (MSP) mora razumjeti RTI i njegov potencijal za njihovo poslovanje. RTI su novine, ali su i pune neizvjesnosti. Kakav će biti uticaj uvođenja nove tehnologije, materijala ili druge inovacije unutar kompanije?

- 13 partnera iz 8 zemalja (MN, AT, DE, SI, HU, BG, BH, UA)
- Predstavljanje poslovne podrške u svojoj regiji ili zemlji
- Partnerske organizacije u istraživanju

**P 2.**

Već napisani projekt LEARNING FACTORY ustupili smo Mašinskom fakultetu za Aplikaciju na GIZ konkurs i ovaj projekt je 2024.godine prošao evaluaciju i odobren je za finansiranje. Kako smo isključeni iz implementacije projekta to ne znamo trenutni status projekta i realizovane aktivnosti u 2025.godini.

We submitted the already written LEARNING FACTORY project to the Faculty of Mechanical Engineering for application to the GIZ competition, and this project passed the evaluation in 2024 and was approved for funding. Since we were excluded from the implementation of the project, we do not know the current status of the project and the activities implemented in 2025.

Naslov Title	<b>ESTABLISHING A NEW LEARNING ENVIRONMENT THROUGH COOPERATIVE EDUCATION IN THE FIELD OF METALWORKING AND WOODWORKING –LEARNING FACTORY</b>	
Odrednica Status	GIZ BIH Digital	
Organizacijske jedinice Department	Faculty of Mechanical Engineering 50% Wood processing technologies 50% Metal processing technologies Innovation and Entrepreneurship Centre	
Šef projekta Project chief	MF UNZE	Napomena:
Projektni tim Project team	Prof.dr Darko Petković Prof.dr Džafer Dautbegović, mr. Emir Đulić, Amer Neimarlija, BSc	

Budžet projekta	450 000 euro
Nosilac projekta Grantholder	University of Zenica
Realizacija projekta Projekt relisation	2024-2025
Kratki rezime projekta Short summary	<p>The dual model of education in higher education has become one of the top topics in the last decade. Employers' dissatisfaction with the knowledge, competences and skills of graduates was attributed to the burden of higher education institutions, which, in addition to numerous internal problems, also had numerous objective reasons why this was so. Higher education institutions (HEI) in their defense will say: HEI graduates know as much as their colleagues in the West, and we work in much more difficult conditions, and this is confirmed by the fact that many continue their studies at foreign universities or get jobs in foreign companies without any problems. On the other hand, employers repeat: they know the theory very well, but for practical work and application of that knowledge and skills, we spend as much time as their formal education at the university. On such conflicting views, study departments that will have a greater connection with the business sector and provide more appropriate knowledge base and competences for a quick and full entry into the labor market have been discussed for years. The justification for the slowness is the complexity of the organization, the lack of a business environment, the lack of legal legislation, financing problems, etc. But the fact is that this does not justify the key actors for this kind of slowness in implementation. First of all, it is a lack of vision and much more work, effort and sacrifice to organize and develop this type of study. After all, it is much simpler to continue working ex-catedra or online (an even better model because you don't even have to physically visit amphitheaters or classrooms), which is a well-established system that has lasted for decades. Though this project FME UNZE want to develop model of dual education on specific way: 1-2 study years students training and preparation in Learning Factory (LF), 2-3 study years training and preparation in companies in the region and 3-4 study years full practice in companies with possibilities for permanent job. Moreove FME plan to open Student innovation and companies hub as a place for first students company opening and work. This concept will be testing in wood processing industry and metalworking companies.</p> <p>Dualni model obrazovanja u visokom obrazovanju postao je jedna od top tema u posljednjoj deceniji. Nezadovoljstvo poslodavaca znanjem, kompetencijama i vještinama diplomiranih studenata pripisivano je opterećenju visokoškolskih ustanova, koje su, pored brojnih internih problema, imale i brojne objektivne razloge zašto je to bilo tako. Visokoškolske ustanove (VŠU) u svoju odbranu će reći: Diplomci VŠU znaju koliko i njihove kolege na Zapadu, a mi radimo u mnogo težim uslovima, a to potvrđuje i činjenica da mnogi nastavljaju studije na stranim univerzitetima ili bez problema dobijaju posao u stranim kompanijama. S druge strane, poslodavci ponavljaju: teoriju poznaju vrlo dobro, ali za praktičan rad i primjenu tog znanja i vještina, provodimo isto toliko vremena kao i za njihovo formalno obrazovanje na univerzitetu. O takvim suprotstavljenim stavovima, godinama se raspravlja o studijskim odsjecima koji će imati veću vezu sa poslovnim sektorom i obezbijediti prikladniju bazu znanja i kompetencija za brz i potpun ulazak na tržište rada. Opravdanje za sporost je složenost organizacije, nedostatak poslovnog okruženja, nedostatak zakonske regulative, problemi sa finansiranjem itd. Ali činjenica je da to ne opravdava ključne aktere za ovakvu sporost u implementaciji. Prije svega, to je nedostatak vizije i mnogo više rada, truda i odricanja da se organizuje i razvije ova vrsta studija. Uostalom, mnogo je jednostavnije nastaviti raditi ex-catedra ili online (još bolji model jer ne morate ni fizički posjećivati</p>

amfiteatre ili učionice), što je dobro uspostavljen sistem koji traje decenijama. Kroz ovaj projekat, FS UNZE želi razviti model dualnog obrazovanja na specifičan način: 1-2 godine obuke i pripreme studenata u Learning Factory (LF), 2-3 godine obuke i pripreme u kompanijama u regionu i 3-4 godine pune prakse u kompanijama sa mogućnostima za stalni posao. Štaviše, FS UNZE planira otvoriti Studentski centar za inovacije i kompanije kao mjesto za otvaranje prvih studentskih kompanija i rad. Ovaj koncept će se testirati u kompanijama drvoprerađivačke industrije i metaloprerađivačke industrije.

**Pored navedenih projekata CIP je radio i na realizaciji slijedećih projekata koji su već stekli trajni karakter i u kojima učestvuje CIP UNZE:**

**P 3.** Partnerstvo u suorganizaciji XIII međunarodne konferencije **JBF 2024 (Jahorina Business Forum sa temom Vještačka inteligencija i Industrija 4.0)** koju organizuje Ekonomski fakultet Univerziteta u Istočnom Sarajevu sa Ekonomskim fakultetima iz Subotice i Podgorice. (**mart, 2025 Jahorina, Hotel“ Termag i Zgrada EF UIS Pale**). CIP UNZE je ustanovio i organizovao prvu konferenciju prije 15 godina održanu na Jahorini u organizaciji EF UIS i CIP UNZE. Bilo je više od 150 učesnika u nekoliko sekcija sa više 70 prezentiranih radova. Pripremljen je Zbornik radova a svi radovi su prethodno prošli recenziju. Zbornik je dostupan an web stranici Eknomskog fakulteta Univerziteta u Istočnom Sarajevu. **Važno je napomenuti da je jedan od četiri uvodničara (iz Srbije, Turske, SAD i BiH) konferencije bio profesor sa UNZE prof.dr Darko Petković.** Od oktobra 2025.smo započeli pripreme za JBF 2026.godine koji će se održati 26-28.marta 2026 u hotelu Termag.

**P4.** Partnertsvo u projektu: **PROJEKT TRANSFORMACIJE SREDNJEG OBRAZOVANJA U ZDK SAGLASNO POTREBAMA TRŽIŠTA RADA U ODABRANIM OPŠTINAMA ZDK**, CIP UNZE zajedno sa firmama InterProcess i Pobjeda, PERO i dr. srednjim školama iz Tešnja, Maglaja, Zavidovića i Zenica, osnove škole Tešanj, ; (*volonterski projekt finansiran vlastitim ulaganjima*). *U toku je priprema aplikacije za Erasmus+ program VET Inija za srednje škole.*

**P5.** Partnertsvo u projektu: **DIGI-INCLUSION („Smanjenje društvene isključenosti premoštavanjem digitalnih razlika“)** koji se finansira iz Programa Evropske Unije Interreg URBACT IV 2021-2027 (ID Ref. 20303); CIP UNZE and Department for Development and International Projects of Zenica-Doboj Canton; 2023-2025.

**P6.** Partnertsvo u projektu: **GenProcure („Rodna inkluzija u javnim nabavkama“)** koji se finansira iz Programa Evropske Unije Interreg URBACT IV 2021-2027 (ID Ref. 20317), CIP UNZE and Department for Development and International Projects of Zenica-Doboj Canton; 2023-2025.

**P.7. Pripreme za projekt razvoja serijske proizvodnje dostavnog vozila EVO;** Projekt pripreman za GS TM i potencijalne VŠU; Partner JICA Japan; Projekt je fazi mirovanja.

P8. Priprema projekta „**Razvoj koncepta Learning Factory kao modela koji premošćuje jaz između teorijske nastave i dualnog obrazovanja**“, Projekt u fazi pripreme za program Erasmus+; Aplikacija Institut Kemal Kapetanović, Planirana aplikacija u 2026.godine na programe EU.

**In addition to the above projects, CIP has also worked on the implementation of the following projects that have already acquired a permanent character and in which CIP UNZE participates:**

P 3. Partnership in co-organizing the XIII international conference JBF 2024 (Jahorina Business Forum with the topic Artificial Intelligence and Industry 4.0) organized by the Faculty of Economics of the University of East Sarajevo with the Faculties of Economics from Subotica and Podgorica. (March, 2025 Jahorina, Hotel Termag and EF UIS Pale Building). CIP UNZE established and organized the first conference 15 years ago held on Jahorina organized by EF UIS and CIP UNZE. There were more than 150 participants in several sections with more than 70 presented papers. A Proceedings was prepared and all papers were previously reviewed. The Proceedings are available on the website of the Faculty of Economics, University of East Sarajevo. It is important to note that one of the four keynote speakers (from Serbia, Turkey, USA and Bosnia and Herzegovina) of the conference was a professor from UNZE, Prof. Dr. Darko Petković. Since October 2025, we have started preparations for JBF 2026, which will be held on March 26-28, 2026 at the Termag Hotel.

P4. Partnership in the project: PROJECT OF TRANSFORMATION OF SECONDARY EDUCATION IN ZDK ACCORDING TO THE NEEDS OF THE LABOR MARKET IN SELECTED MUNICIPALITIES OF ZDK, CIP UNZE together with the companies InterProcess and Pobjeda, PERO and others. secondary schools from Tešanj, Maglaj, Zavidovići and Zenica, elementary school Tešanj, ; (volunteer project financed by own investments). The application for the Erasmus+ program VET Line for secondary schools is being prepared.

P5. Partnership in the project: DIGI-INCLUSION ("Reducing social exclusion by bridging the digital divide"), which is financed by the European Union Interreg URBACT IV 2021-2027 Program (ID Ref. 20303); CIP UNZE and Department for Development and International Projects of Zenica-Doboje Canton; 2023-2025.

P6. Partnership in the project: GenProcure ("Gender inclusion in public procurement"), which is financed by the European Union Interreg URBACT IV 2021-2027 Program (ID Ref. 20317), CIP UNZE and Department for Development and International Projects of Zenica-Doboj Canton; 2023-2025.

P.7. Preparations for the project to develop the serial production of the EVO delivery vehicle; Project prepared for GS TM and potential universities; Partner JICA Japan; Project is in the dormant phase.

P8. Preparation of the project "Development of the Learning Factory concept as a model that bridges the gap between theoretical teaching and dual education", Project in the preparation phase for the Erasmus+ program; Application by the Kemal Kapetanović Institute, Planned application in 2026 to EU programs.

### **B) Radovi u časopisima /Articles in journals**

Nismo imali radova u časopisima. / We had no papers in journals.

### **C) Radovi na konferencijama/ Conference papers:**

#### **Rad 1 /paper 1**

v. as. Emir Đulić

prof. dr. Darko Petković

v. prof. dr. Aludin Brkić

mr. sc. Damir Hodžić, prof., dipl. inž. maš.

Emir Vilić, prof., dipl. inž. arh.

**ZNAČAJ RAZVOJA “FABRIKA ZA UČENJE – LEARNING FACTORY” KAO KONCEPTA PRIPREME ZA DUALNI OBRAZOVNI PROCES NA PREMISAMA INDUSTRIJE 4.0? / THE IMPORTANCE OF DEVELOPING THE “LEARNING FACTORY” AS A PREPARATION CONCEPT FOR THE DUAL EDUCATIONAL PROCESS ON THE PREMISES OF INDUSTRY 4.0?**

Zbornik radova sa konferencije Jahorina Business Forum- JBF 2025, Urednici: M.Đogo, M.Rebić; ISSN 2303-8969, Vol 15, Industrija 4.0 i Vještačka inteligencija, strane 255-264, (ukupno 550 strana).

## Rad 2

prof. dr. Džafer Dautbegović  
v. as. Emir Đulić  
prof. dr. Darko Petković

### **TEHNOLOŠKI TRANSFER I NJEGOV ZNAČAJ ZA RAZVOJ NACIONALNIH PRIVREDA ? / TECHNOLOGY TRANSFER AND ITS IMPORTANCE FOR THE DEVELOPMENT OF NATIONAL ECONOMIES?**

Zbornik radova sa konferencije Jahorina Business Forum- JBF 2025, Urednici: M.Đogo, M.Rebić; ISSN 2303-8969, Vol 15, Industrija 4.0 i Vještačka inteligencija, strane 255-264, (ukupno 550 strana).

## Rad 3 / Article 3 (Npomena: Uvodni rad na konferenciji ili tzv. Key-note article)

prof. dr. Darko Petković

### **INDUSTRIJA 4.0 – DA LI JE ŽIVIMO U BOSNI I HERCEGOVINI ILI SAMO UČIMO O NJOJ ? / INDUSTRY 4.0 – ARE WE LIVING IT IN BOSNIA AND HERZEGOVINA OR ARE WE JUST LEARNING ABOUT IT?**

Zbornik radova sa konferencije Jahorina Business Forum- JBF 2025, Urednici: M.Đogo, M.Rebić; ISSN 2303-8969, Vol 15, Industrija 4.0 i Vještačka inteligencija, strane 255-264, (ukupno 550 strana).

## Rad 4 /paper 4

prof. dr. Marina Jovanović  
prof.dr Raza Sulunahpašić  
prof.dr Mustafa Hadžalić

### **PERSPEKTIVE ISKORIŠTAVANJA DRVNOG I PLASTIČNOG OTPADA U SREDNJOJ BOSNI - PERSPECTIVE OF UTILIZATION OF OOD AND PLASTIC ASTE IN CENTRAL BOSNIA**

Zbornik radova sa konferencije Jahorina Business Forum- JBF 2025, Urednici: M.Đogo, M.Rebić; ISSN 2303-8969, Vol 15, Industrija 4.0 i Vještačka inteligencija, strane 255-264, (ukupno 550 strana).

## Rad 5 /Article 5

**Međunarodna naučno-stručna konferencija**

**„Savremeni materijali i tehnologije u poslovanju kompanija na području Zapadnog Balkana“, Zenica, BiH, 02 i 03. Oktobar 2025.**

**MODEL “FABRIKA ZA UČENJE – LEARNING FACTORY” KAO REGIONALNI KONCEPT PRIPREME ZA  
OBRAZOVNI PROCES NA PREMISAMA INDUSTRIJE 4.0?**

**THE MODEL OF “LEARNING FACTORY” AS A REGIONAL CONCEPT OF PREPARATION FOR THE  
EDUCATIONAL PROCESS ON THE PREMISES OF INDUSTRY 4.0?**

**prof. dr. Darko Petković;**  
Mašinski fakultet Univerziteta u Zenici  
Fakultetsaka 1, 72000 Zenica

**prof.dr. Ivica Veža**  
FESB Sveučilišta u Splitu  
Ul. Rudera Boškovića 32, 21000, Split

**v. prof. dr. Aludin Brkić**  
UNZE - Institut "Kemal Kapetanović"  
Travnička cesta 7, 72000 Zenica

**doc.dr. Mustafa Hadžalić**  
UNZE - Institut "Kemal Kapetanović"  
Travnička cesta 7, 72000 Zenica

**v. as. Emir Đulić**  
Mašinski fakultet Univerziteta u Zenici  
Fakultetsaka 1, 72000 Zenica

Zbornik sa konferencije je u pripremi. Štampan je Zbornik Apstrakta.

**Rad 6 /Article 6**

**Međunarodna naučno-stručna konferencija**

**„Savremeni materijali i tehnologije u poslovanju kompanija na području Zapadnog Balkana“, Zenica, BiH, 02 i 03. Oktobar 2025.**

prof. dr. Marina Jovanović  
prof.dr Raza Sulunahpašić  
prof.dr Džafer Dautbegović  
prof.dr Darko Petković

**ISTRAŽIVANJE MOGUĆNOSTI ZA PROIZVODNJU WOOD POLYMER COMPOSITE NA PODRUČJU  
ZAPADNOG BALKANA - INVESTIGATING THE POSSIBILITIES FOR WOOD POLYMER COMPOSITE**

## **PRODUCTION IN THE WESTERN BALKAN**

Zbornik sa konferencije je u pripremi. Štampan je Zbornik Apstrakta.

**Rad 7 /Article 7**

*Albania*

*XV International Economic Conference – IEC  
Smart Economy and Shaping the Future with AI  
Faculty of Economics, Universit of Skhodra*

## **DEVELOPMENT OF THE CIRCULAR ECONOMY IN THE CONDITIONS OF A TURBULENT ENVIRONMENT – A CASE STUDY IN BIH**

**Prof.dr. Darko Petković**

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**Prof.dr.DžaferDautbegović**

[dzafer.dautbegovic@unze.ba](mailto:dzafer.dautbegovic@unze.ba)

**v. ass. mr. Emir Đulić**

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Zbornik sa konferencije je u pripremi. Štampan je Zbornik Apstrakta: University of Skhodra „Luigi Gurakchi“, Faculty of Economy, International Economics Conference, Editor: Blerta Dragusha and Eldiana Bashi, December, 2025.

**Rad 8 /Article 8**

*Albania*

*XV International Economic Conference – IEC  
Smart Economy and Shaping the Future with AI  
Faculty of Economics, Universit of Skhodra*

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**Prof.dr. Darko Petković**

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**Rad 9 /Article 9**

*Albania*

*XV International Economic Conference – IEC  
Smart Economy and Shaping the Future with AI  
Faculty of Economics, Universit of Skhodra*

## **THE CRISIS OF UNIVERSITIES OR THE CRISIS OF UNIVERSITY MANAGEMENT IN BOSNIA AND HERZEGOVINA IN THE PROCESSES OF BOLOGNA REFORMS**

**Prof.dr. Darko Petković**

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Zbornik sa konferencije je u pripremi. Štampan je Zbornik Apstrakta: University of Skhodra „Luigi Gurakchi“, Faculty of Economy, International Economics Conference, Editor: Blerta Dragusha and Eldiana Bashi, December, 2025.

**Rad 10 / Article 10**

*Albania*

*XV International Economic Conference – IEC  
Smart Economy and Shaping the Future with AI  
Faculty of Economics, Universit of Skhodra*

## SOLUTION OF NEGATIVE ENVIRONMENTAL ASPECTS AS A PILLAR FOR THE DEVELOPMENT OF CIRCULAR ECONOMY

**Darko Petković<sup>1</sup>, Džafer Dautbegović<sup>1</sup>, Marina Jovanović<sup>2</sup>, Raza Sunulahpašić<sup>2</sup>, Alaudin Brkić<sup>3</sup>**

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<sup>2</sup>Faculty of engineering and natural sciences, university of Zenica, [marina.jovanovic@unze.ba](mailto:marina.jovanovic@unze.ba), [raza.sunulahpasic@unze.ba](mailto:raza.sunulahpasic@unze.ba)

<sup>3</sup>Institute “Kemal Kapetanović”, University of Zenica, [alaudin.brkic@unze.ba](mailto:alaudin.brkic@unze.ba)

Zbornik sa konferencije je u pripremi. Štampan je Zbornik Apstrakta: University of Skhodra „Luigi Gurakchi“, Faculty of Economy, International Economics Conference, Editor: Blerta Dragusha and Eldiana Bashi, December, 2025.

### **D) Organizacija seminara, obuka, konferencija, umrežavanja i dr.**

- ◆ Partnerstvo u organizaciji međunarodne konferencije Jahorina Business Forum, mart, 2025.
- ◆ Obuka studenata UNZE u korištenju software.a Pallet CAD, Na obuci u kompaniji HEZO Doboje koji je zastupnik čuvene kompanije HOMAG za Jugoistočnu Evropu bilo je 12 studenata sa raznih fakulteta UNZE. U decembru 2025. održana je druga obuka na kojoj je bilo novih 5 studenata UNZE koji su dobili besplatno licencno pravo za korištenje ovog poznatog njemačkog software.a.
- ◆ Početak pripreme timova na Politehničkom fakultetu za takmičenje za najbolje poslovne ideje iz sektora IT u maju 2026. u Podgorici. (Napomena: Ranijih godina se naša Katedra za ekološko inženjerstvo takmičila na ovom studentskom festivalu ali je zbog zabrana učešća sada saradnja prebačena na Politehnički fakultet UNZE);
- ◆ Prezentacija Bolonjskog modela studija i dualnog obrazovanja za učenike Gimnazije Tešanj, maj, 2025.
- ◆ Organizacija panela privrednika zajedno sa Institutom Kemal Kapetanović u sklopu Međunarodne konferencije povodom 64. godine rada IKK; Oktobar 2025.
- ◆ Organizacija Okruglog stola za privrednike ZDK i SBK u sklopu Međunarodne konferencije povodom 64. godine rada IKK i projekta RTIT EU Interreg; Oktobar 2025. sa temama o stanju organizacija tehnološkog transfera VŠO-Privreda i Razvoja novih materijala.; Oktobar 2025.

- ◆ Prezentacija Bolonjskog modela studija i dualnog obrazovanja za učenike Gimnazije Zenica, decembar, 2025.

#### **D) Organization of seminars, training, conferences, networking, etc.**

- Partnership in the organization of the international conference Jahorina Business Forum, March, 2025.
- Training of UNZE students in the use of Pallet CAD software. There were 12 students from various UNZE faculties at the training at the HEZO Dobož company, which is the representative of the famous HOMAG company for Southeast Europe. In December 2025, a second training was held, at which there were 5 new UNZE students who received a free license to use this famous German software.
- Start of preparation of teams at the Polytechnic Faculty for the competition for the best business ideas from the IT sector in May 2026 in Podgorica. (Note: In previous years, our Department of Environmental Engineering competed at this student festival, but due to the ban on participation, the cooperation has now been transferred to the Polytechnic Faculty of UNZE);
- Presentation of the Bologna model of studies and dual education for students of the Tešanj Gymnasium, May, 2025.
- Organization of a panel of businessmen together with the Kemal Kapetanović Institute as part of the International Conference on the occasion of 64 years of IKK; October 2025.
- Organization of a Round Table for businessmen of ZDK and SBK as part of the International Conference on the occasion of 64 years of IKK and the RTIT EU Interreg project; October 2025. with topics on the state of technology transfer organizations of Higher Education Institutions-Economy and Development of New Materials.; October 2025.
- Presentation of the Bologna model of studies and dual education for students of the Zenica Gymnasium, December, 2025.

#### **E) Ostale aktivnosti**

- ◆ Studijska posjeta Univerzitetu Boku, Beč, juli 2025.
- ◆ Studijska posjeta NTP Sofija, novembar, 2025.
- ◆ Posjeta Univerzitetu u Skadru i razgovor o potencijalnoj projektnoj saradnji sa fakultetima na pripremi projekta Learning Factory.
- ◆ Posjeta Technopolis Nikšić i razgovori o potencijalnoj saradnji posebno u domeni aditivnih tehnologija, avgust, 2025.

- ◆ Posjeta Biotehničkom fakultetu UCG u kampusu u Podgorici i Baru i razgovori sa timom BTF oko dalje saradnje i potencijalnih zajedničkih projekata;
- ◆ Promocije aktivnosti predstavljanja studija na MF i UNZE kao cjelogodišnji projekt u firmama sa posebnim naglaskom na značaj koji model dualnog obrazovanja ima za firme i zadržavanje mladih u BiH;
- ◆ Pomoć studentima smjera DTD u razvoju preduzetničkih ideja, proizvoda i nastupa;
- ◆ Organizacija seminara u MMC zajedno sa IKK i Službom za razvoj i međunarodne projekte Vlade ZDK na projektu SmartCity EU;
- ◆ Organizacija obuke za ispitivanje zavarenih spojeva zajedno sa IKK u MMC – višednevna obuka ljudi iz poslovnog sektora i UNZE od strane ovlaštene kompanije za ultrazvučna ispitivanja zavarenih spojeva.

### E) Other activities

- Study visit to Boku University, Vienna, July 2025.
- Study visit to NTP Sofia, November 2025.
- Visit to the University of Shkodra and discussion about potential project cooperation with faculties in the preparation of the Learning Factory project.
- Visit to Technopolis Nikšić and discussions about potential cooperation, especially in the field of additive technologies, August 2025.
- Visit to the Biotechnical Faculty of the University of Montenegro on the campuses in Podgorica and Bar and discussions with the BTF team about further cooperation and potential joint projects;
- Promotional activities to present the studies at MF and UNZE as a year-round project in companies with a special emphasis on the importance of the dual education model for companies and retaining young people in BiH;
- Assistance to students of the DTD department in the development of entrepreneurial ideas, products and performances:
- Organization of a seminar at MMC together with IKK and the Service for Development and International Projects of the Government of ZDK on the SmartCity EU project;
- Organization of training for testing welded joints together with IKK in MMC – multi-day training of people from the business sector and UNZE by an authorized company for ultrasonic testing of welded joints.

### F) Oprema

Nije bilo novih nabavki. Kroz pripremljenu aplikaciju tokom 2024. prema GIZ-u očekujemo u 2026. da ćemo obezbijediti dio nove opreme. Za studente smo obezbijedili više od 20 licenci software-a PalettCAD čija je pojedinačna vrijednost nekoliko hiljada euro.

## **F) Equipment**

There were no new purchases. Through the application prepared in 2024 to GIZ, we expect to provide some of the new equipment in 2026. We have provided more than 20 licenses of the PalettCAD software for students, each worth several thousand euros.

### **Rezime plana rada za 2026.godinu:**

- Pokušati da nastavimo naš uspješan rad;
- Pokušati da preživimo jer i pored zabrana um, inovativnost, kreativnost i volja za rad se ne mogu ubiti;
- Pokušati da dalje podstičemo studentsko preduzetništvo i saradnju studenata sa privredom u regiji i šire,
- Pokušati da sarađujemo sa sličnim centrima i osobama sa drugih VŠU u regiji,
- Nastaviit da budemo servis u TT svima na UNZE koji žele da sarađuju sa timom CIP UNZE;
- Nastavak rada na konferencijama JBF, IKK, Connecto i dr.

### **Summary of the work plan for 2026:**

- Try to continue our successful work;
- Try to survive because despite the bans, the mind, innovation, creativity and will to work cannot be killed;
- Try to further encourage student entrepreneurship and cooperation between students and the economy in the region and beyond,
- Try to cooperate with similar centers and people from other universities in the region,
- Continue to be a service in TT to everyone at UNZE who wants to cooperate with the CIP UNZE team;
- Continue to work at conferences JBF, IKK, Connecto, etc.

## **Pregled najvažnijih aktivnosti CIP-a u 2025. godini / Overview of the most important CIE activities in 2025**

### **14.01.2025. CIP UNZE: UČEŠĆE NA KONFERENCIJI INN&TECH U SARAJEVU**

Tradicionalna Osmo konferencija INN&TECH kao i ranijih godina održana je u Sarajevu u Hotelu Hills a u organizaciji Centra za promociju inovativnosti, tehnike i informacionih tehnologija zajedno sa Univerzitetom u Sarajevu i Ministarstvom obrazovanja i nauke kantona Sarajevo. Glavna tema ovogodišnje konferencije bile su vještačka inteligencija i digitalizacija. Bila je to prilika da direktor CIP UNZE predstavi u razgovorima sa širokim

krugom sagovornika projekt RTIT Interreg EU (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u Dunavskom region). Kako se najvažniji ciljevi projekta uklapaju u moto konferencije i rada Centra iz Sarajeva to se dosta razgovoralo kako Ojačati inovativni potencijal MSP u oblasti materijalnih tehnologija, Poboljšati saradnju malih i srednjih preduzeća sa partnerima za istraživanje, tehnologiju i inovacije (RTI) kako bi se bolje prenijeli rezultati istraživanja i tehnologije u materijalne nauke i tehnologije materijala i smanjili rizici za mala i srednja preduzeća u komercijalizaciji RTI, kako poboljšati okvirne uslove i strukturu za RTI transfer u ključnoj tehnološkoj oblasti: materijalima. U vrlo zanimljivim panel diskusijama moglo se dosta čuti i naučiti o sadašnjim mogućnostima vještačke inteligencije u tehničkim naukama, limitima i očekivanjima za budućnost. Vrlo zanimljiva izlaganja imali su uvodničari Jelena Kalinić i prof.dr Kasim Tatić a panel diskusije uspješno je vodio prof.dr Hazim Bašić.

### **14.01.2025. CIP UNZE: PARTICIPATION IN THE INN&TECH CONFERENCE IN SARAJEVO**

The traditional Eighth INN&TECH Conference, as in

previous years, was held in Sarajevo at the Hills Hotel and was organized by the Center for the Promotion of Innovation, Technology and Information Technologies together with the University of Sarajevo and the Ministry of Education and Science of the Sarajevo Canton. The main topic of this year's conference was artificial intelligence and digitalization. It was an opportunity for the director of CIP UNZE to present the RTIT Interreg EU project (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region) in conversations with a wide range of interlocutors. As the



most important goals of the project fit into the motto of the conference and the work of the Center from Sarajevo, there was a lot of discussion on how to strengthen the innovative potential of SMEs in the field of material technologies, improve cooperation of small and medium-sized enterprises with research, technology and innovation (RTI) partners in order to better transfer research and technology results in material sciences and materials technologies and reduce risks for small and medium-sized enterprises in the commercialization of RTI, how to improve the framework conditions and structure for RTI transfer in the key technological area: materials. In very interesting panel discussions, a lot could be heard and learned about the current possibilities of artificial intelligence in technical sciences, limits and expectations for the future. Very interesting presentations were given by the keynote speakers Jelena Kalinić and Prof. Dr. Kasim Tatić, and the panel discussion was successfully led by Prof. Dr. Hazim Bašić.

#### **15.01.2025. CIP UNZE: SASTANAK TIMA CIP UNZE NA PROJEKTU RTIT**

Redovni mjesečni sastanak na projektu RTIT Interreg EU (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u Dunavskom region) održan je na Fakultetu prirodnih nauka i inženjerstva. Pošto je ovo bio prvi sastanak u 2025 godini bilo je najviše riječi o planiranim aktivnostima na projektu RTIT od kojih se izdvajaju aktivnosti mapiranja potencijala drvenog i plastičnog otpada u ZDK i SBK, sagledavanju potencijala za nivo primjene Industrije 4.0 u firmama koje budu predmet mapiranja te napor da se eksperimentalnim putem dođe do prototipne proizvodnje WPC-a od otpadne plastike i drveta. Ovo izlaganje je pripremio šef projekta v.prof.dr Džafer Dautbegović. Nakon toga je prof.dr Darko Petković govorio o značaju diseminacije projekta RTIT a kao odličnu priliku pored svakodnevne saradnje sa privrednicima u ZDK i SBK je učešće na konferencijama od kojih izdvajamo Jahorina Business Forumu 2025 u martu, MNM aprila u Zenici. EMFM 2025 u Beogradu, Kvalitet-Qualit juna 2025 u Neumu te u novembru 2025 Ekološko inženjerstvo u Skadru. Prof.Petković je iskazao interes da se članovi tima sa temama od interesa za RTIT pojave na svakoj od konferencija sa barem po jednim radom. Na kraju sastanka v.a.mr Đulić je prezentirao finansijski izvještaj projekta za 2024.godinu te pozitivnu ocjenu koju je tim CIP UNZE dobio od nosioca projekta Tehnopolisa iz Nikšića i Privredne komore Slovenije. Također, mr Đulić je naglasio značaj učešća u video konferencijama koje će se održati u prvom kvartalu 2025 godine. Prof. Dautbegović je ponovio da su u svim fazama projekta uključeni oni koji mogu dati najveći doprinos u datom radnom paketu a ne čitav sastav tima RTIT.



#### **15.01.2025. CIP UNZE: CIP UNZE TEAM MEETING ON THE RTIT PROJECT**

The regular monthly meeting on the RTIT Interreg EU project (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region) was held at the Faculty of Natural Sciences and Engineering. Since this was the first meeting in 2025, most of the discussion was about the planned activities on the RTIT project, of which the activities of mapping the potential of wood and plastic waste in the ZDK and SBK stand out, considering the potential for the level of application of Industry 4.0 in the companies that are the subject of mapping, and efforts to experimentally achieve prototype production of WPC from waste plastic and wood. This presentation was prepared by the head of the project, Assoc. Prof. Dr. Džafer Dautbegović. After that, Prof. Dr. Darko Petković spoke about the importance of the dissemination of the RTIT project, and as an excellent opportunity, in addition to everyday cooperation with businessmen in ZDK and SBK, is participation in conferences, of which we highlight Jahorina Business Forum 2025 in March, MNM in April in Zenica. EMFM 2025 in Belgrade, Kvalitet-Qualit in June 2025 in Neum and in

November 2025 Ecological Engineering in Shkodra. Prof. Petković expressed interest in having team members with topics of interest for RTIT appear at each of the conferences with at least one paper. At the end of the meeting, Acting M.Dr. Đulić presented the financial report of the project for 2024 and the positive assessment that the CIP UNZE team received from the project leader Tehnopolis from Nikšić and the Chamber of Commerce of Slovenia. Also, M.Dr. Đulić emphasized the importance of participating in video conferences that will be held in the first quarter of 2025. Prof. Dautbegović reiterated that in all phases of the project, those who can give the greatest contribution in the given work package are included, and not the entire composition of the RTIT team.

#### **17.02.2025. CIP UNZE: SASTANAK U FIRMI PERO DOO ZENICA**

Gost CIP UNZE bila je predstavnik kompanije ACCOY iz Madrida gosp. Olivera Milutinović koja je sa predstavnicima CIP-a prof.dr Darkom Petkovićem i prof.dr Džeferom Dautbegovićem obavila razgovor sa direktorom firme PERO gosp. Mladenom Perićem. Tema je bila prezentacija novog materijala u drvenoj industriji čija je trajnost i izdrživost značajno poboljšana a to je tzv. Accoya drvo koje svoje poboljšane osobine duguje specifičnom procesu hemijske zaštite i impregnacije bazirane na korištenju ekološki prihvatljivih materijala i tehnologija. Na bazi projekta RTIT Interreg u kojem učestvuje i CIP UNZE bilo je riječi o ovom materijalu kao i o specifičnostima tehnološkog transfera i ulozi povezivanja visokoškolskih organizacija i poslovnog sektora. Prof.dr Dautbegović je predstavio dosadašnja iskustva tima CIP-a UNZE na razgovorima o razvoju WPC – Wood Polymer Composita i interesu poslovnog sektora za ovim proizvodom u BiH i regiji. Pored gosp. Perića o tehno-ekonomskim parametrima korištenja Accoya-drвета učestvovala je i ing-Andželka Vukojević koja je iskazala potencijalni interes za novim proizvodima u specifičnim građevinskim poduhvatima. Posebno je razgovarano o razlikama i sličnostima WPC i Accoya-drвета s obzirom na slična mjesta primjene, cjenovne karakteristike, mogućnosti proizvodnje, znanju tehnologija i razvoju know-how.

#### **17.02.2025. CIP UNZE: MEETING AT THE COMPANY PERO DOO ZENICA**

The guest of CIP UNZE was the representative of the ACCOY company from Madrid, Ms. Olivera Milutinović, who, together with the representatives of CIP, Prof. Dr. Darko Petković and Prof. Dr. Džefer Dautbegović, had a conversation with the director of the PERO company, Mr. Mladen Perić. The topic was the presentation of a new material in the wood industry whose durability and sustainability have been significantly improved, namely the so-called Accoya wood, which owes its improved properties to a specific process of chemical protection and impregnation based on the use of environmentally friendly materials and technologies. Based on the RTIT Interreg project in which CIP UNZE also participates, there was talk about this material as well as the specifics of technology transfer and the role of connecting higher education organizations and the business sector. Prof. Dr. Dautbegović presented the experiences of the CIP UNZE team so far in discussions on the development of WPC - Wood Polymer Composite and the interest of the business sector in this product in BiH and the region. In addition to Mr. Perić on the techno-



economic parameters of using Accoya wood was also attended by Eng. Anđelka Vukojević, who expressed potential interest in new products in specific construction projects. In particular, the differences and similarities of WPC and Accoya wood were discussed, considering similar areas of application, price characteristics, production possibilities, knowledge of technologies and development of know-how.

### **18.02.2025. CIP UNZE: SASTANAK U FIRMAMA TISA-KOMERC I PROGRAD ŽEPČE**

Tokom boravka predstavnice kompanije ACCOY iz Madrida gosp. Olivera Milutinović i upoznavanja privrednika regije Srednja Bosna sa jednim novim proizvodom koji za njih može biti potencijalno interesantan upriličena je posjeta i kompanijama TISA Komerc i Prograd Žepče a koje se nalaze u Poslovnoj zoni Golubinje. Direktor CIP-a prof.dr Darko Petković je predstavio saradnju sa Šumarskim fakultetom Univerziteta u Beogradu koja je rezultirala među brojnim aktivnostima i ovom posjetom gošće iz Španije. Pored razgovora o planiranim posjetama i nastavi studenata odsjeka DTD u ovom semestru, bilo je riječi i o projektu RTIT u kojem CIP UNZE učestvuje i dosadašnjim rezultatima u knowhow kao i sličnostima i razilkama Accoya drva i WPC-a. Gosp. Milutinović je dala prikaz EU standarda i normi koje ispunjavam ovaj materijal sa naglaskom na trajnost i izdrživost koje

su značajno poboljšane te čonjenici da Accoya drvo svoje poboljšane osobine duguje specifičnom procesu hemijske zaštite i impregnacije bazirane na korištenju ekološki prihvatljivih materijala i tehnologija. Prof.Petković je govorio o specifičnostima tehnološkog transfera i ulozi povezivanja visokoškolskih organizacija i poslovnog sektora. Posebno je razgovarano o razlikama i sličnostima WPC i Accoya-drвета s obzirom na slična mjesta primjene, cjenovne karakteristike, mogućnosti proizvodnje, znanju tehnologija i razvoju know-how. Prof.Petković je iskiristio priliku da zaposlene u Progradu i Tisa-Komrecu pozove na konferenciju JBF 2025 u martu na Jahorini te da još imaju mogućnost da se pojave i sa radovima. U oba sastanka učestvovali su čelni ljudi ovih kompanija E.Badnjar i N.Mujkić sa timovima svojih saradnika.



### **18.02.2025. CIP UNZE: MEETING AT TISA-KOMERC AND PROGRAD ŽEPČE COMPANIES**

During the stay of the ACCOY company representative from Madrid, Ms. Olivera Milutinović, and introducing businessmen from the Central Bosnia region to a new product that could be potentially interesting for them, a visit was also organized to the companies TISA Komerc and Prograd Žepče, which are located in the Golubinja Business Zone. CIP Director Prof. Dr. Darko Petković presented the cooperation with the Faculty of Forestry, University of Belgrade, which resulted in this visit from a guest from Spain, among numerous activities. In addition to discussions about planned visits and teaching of students of the DTD department this semester, there was also talk about the RTIT project in which CIP UNZE participates and the results so far in knowhow as well as the similarities and differences between Accoya wood and WPC. Mr. Milutinović gave

an overview of the EU standards and norms that this material meets, with an emphasis on durability and sustainability, which have been significantly improved, and the fact that Accoya wood owes its improved properties to a specific process of chemical protection and impregnation based on the use of environmentally friendly materials and technologies. Prof. Petković spoke about the specifics of technology transfer and the role of connecting higher education organizations and the business sector. In particular, the differences and similarities of WPC and Accoya wood were discussed,

considering similar places of application, price characteristics, production capabilities, knowledge of technologies and development of know-how. Prof. Petković took the opportunity to invite employees of Prograd and Tisa-Komrec to the JBF 2025 conference in March on Jahorina and that they still have the opportunity to appear with their works. Both meetings were attended by the leaders of these companies, E.Badnjar and N.Mujkić, with their teams of associates.

#### **20.02.2025. CIP UNZE: SASTANCI U FIRMAMA GLOVIS I LIND ZEDA**

Za gošću CIP UNZE a predstavnicu kompanije ACCOY iz Madrida gosp. Olivera Milutinović upriličene su posjete kompanijama GLOVIS i LIND-LAB ZEDA. Naime, ove dvije firme sa bitno različitim djelatnostima su svakako vrlo značajne kako za rad CIP UNZE tako i za privredu čitave regije.

GLOVIS je jedna od rijetkih firmi i šire od BIH koja se bavi proizvodnjom specifičnih kreativnih igrališta za djecu i mlade na otvorenom a LIND-Lab je Nacionalni laboratorij za ispitivanje od drveta. Kako je tema je bila prezentacija novog materijala u drvenoj industriji čija je trajnost i izdržljivost značajno poboljšana što je od velikog značaja i za ove firme koje se susreću u svom radu i sa brojnim novim materijalima a posebno novim zahtjevima kupaca ili korisnika usluga. U tom smislu veliki interes izazvalo je predstavljanje Accoya drveta koje svoje poboljšane osobine duguje specifičnom procesu hemijske zaštite i impregnacije bazirane na korištenju ekološki prihvatljivih materijala i tehnologija. Prof.Petković je na bazi projekta RTIT Interreg u kojem učestvuje i CIP UNZE govorio o materijalu koji ima slično mjesto primjene a to je WPC i na razvoju čije proizvodnje od otpada radi tim CIP UNZE. U tom smislu bilo je riječi o ovom materijalu kao i o specifičnostima tehnološkog transfera i ulozi povezivanja visokoškolskih organizacija i poslovnog sektora. Domaćini iz GLOVIS-a su iskazali potencijalni interes za novim proizvodima u specifičnim građevinskim poduhvatima koje rade u zemljama EU gdje ovaj materijal ima budućnost



Razgovorano je i o smjeru DTD, značaju koji on imma za privrednike u Zenici, regiji i BIH a gosp. Milutinović je iznela svoja iskustva o školovanju na sličnom smjeru Univerziteta u Beogradu i osnovama koje je stekla za rad u sličnoj branši u Španiji. U LIND lab u razgovoru sa direktorom Senadom Pašalićem posebno je bilo riječi o mehaničkim karaketristikama ovog drveta u smislu gradnje objekata za vanjske namjene i značaju ipitivanja proizvoda za izvoz..

#### **20.02.2025. CIP UNZE: MEETINGS IN THE COMPANIES GLOVIS AND LIND ZEDA**

For the guest of CIP UNZE and the representative of the company ACCOY from Madrid, Ms. Olivera Milutinović, visits were organized to the companies GLOVIS and LIND-LAB ZEDA. Namely, these two companies with significantly different activities are certainly very important both for the

work of CIP UNZE and for the economy of the entire region. GLOVIS is one of the rare companies and beyond Bosnia and Herzegovina that deals with the production of specific creative playgrounds for children and young people outdoors, and LIND-Lab is the National Laboratory for Wood Testing. Since the topic was the presentation of a new material in the wood industry whose durability and sustainability have been significantly improved, which is of great importance for these companies that encounter numerous new materials in their work and especially new demands from customers or service users. In this sense, great interest was aroused by the presentation of Accoya wood, which owes its improved properties to a specific process of chemical protection and impregnation based on the use of environmentally friendly materials and technologies. Prof. Petković, based on the RTIT Interreg project in which CIP UNZE also participates, spoke about a material that has a similar application, which is WPC, and the development of whose production from waste is being carried out by the CIP UNZE team. In this regard, there was talk about this material as well as the specificities of technology transfer and the role of connecting higher education organizations and the business sector. The hosts from GLOVIS expressed potential interest in new products in specific construction projects that they operate in EU countries where this material has a future. They also talked about the DTD course, the importance it has for businessmen in Zenica, the region and Bosnia and Herzegovina, and Mr. Milutinović presented her experiences from studying in a similar course at the University of Belgrade and the basics she gained for working in a similar industry in Spain. In LIND lab, in a conversation with director Senad Pašalić, there was a special discussion about the mechanical characteristics of this wood in terms of building buildings for outdoor purposes and the importance of testing products for export.



### **03.03.2025. CIP UNZE: SASTANAK SA DIREKTOROM INSTITUTA KEMAL KAPETANOVIĆ UNZE**

Radeći svestrano na pripremi novih projekata kao i radu na postojećim projektima tim CIP UNZE prof.dr Darko Petković i prof.dr Džafer Dautbegović imali su sastanak sa direktorom Instituta Kemal Kapetanović v.prof.dr Alaudinom Brkićem te njegovim saranikom prof.dr Mustafom Hadžalićem. Prvo je predstavljen rad na projektu RTIT Interreg EU (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u Dunavskom region) u kojem tim CIP-a radi na raznim područjima od kojih izdvajamo: Ojačati inovativni potencijal MSP u oblasti materijalnih tehnologija, Poboljšati saradnju malih i srednjih preduzeća sa partnerima za istraživanje, tehnologiju i inovacije (RTI) kako bi se bolje preneli rezultati istraživanja i tehnologije u materijalne nauke i tehnologije materijala i smanjili rizici za mala i srednja preduzeća u komercijalizaciji RTI. Projektom se želi doprinijeti resursnoj efikasnosti, održivosti i digitalizaciji, ojačati otpornost malih i srednjih poduzeća i evropskih lanaca vrijednosti te doprinijeti resursnom i tehnološkom suverenitetu evropskih malih i srednjih preduzeća. Kako i Institut radi na projektu INDUSTRY 4.0 a koji je dobijen na osnovu natječaja kod Federalnog ministarstva nauke i obrazovanja to je predložena sinergijska saradnja dva projekta a posebno u domeni Industrije 4.0 gdje će timovi raditi na zajedničkim naporima da se na Institutu u budućnosti radi na razvoju koncepta Fabrike za učenje (Learning Factory) koja je jedna od važnih obrazovnih podloga za koncept Industrije 4.0. U tom smislu radiće se na pripremi zajedničke aplikacije kako bi Institut KK došao do ovog važnog projekta a CIP UNZE će pomoći i kod analiza u MSP na dostignuto nivou digitalizacije i primjeni različitih elemenata Industrije 4.0. Na kraju sastanka se razgovaralo o učešću osoblja

na Jahorina Business Forumu 2025 gdje tim Instituta priprema referat zajedno sa drugim učesnicima projekta RTIT sa Fakulteta prirodnih nauka i inženjerstva.

### **03.03.2025. CIP UNZE: MEETING WITH THE DIRECTOR OF THE INSTITUTE KEMAL KAPETANOVIĆ UNZE**

Working comprehensively on the preparation of new projects as well as work on existing projects, the CIP UNZE team, Prof. Dr. Darko Petković and Prof. Dr. Džafer Dautbegović, had a meeting with the Director of the Kemal Kapetanović Institute, Assoc. Prof. Dr. Alaudin Brkić, and his associate, Prof. Dr. Mustafa Hadžalić. First, the work on the RTIT Interreg EU project (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region) was presented, in which the CIP team works in various areas, of which we highlight: Strengthen the innovative potential of SMEs in the field of material technologies, Improve cooperation of SMEs with research, technology and innovation (RTI) partners in order to better transfer research and technology results in material sciences and materials technologies and reduce risks for SMEs in the commercialization of RTI. The project aims to contribute to resource efficiency, sustainability and digitalization, strengthen the resilience of small and medium-sized enterprises and European value chains, and contribute to the resource and technological sovereignty of European small and medium-sized enterprises. Since the Institute is also working on the INDUSTRY 4.0 project, which was awarded based on a tender from the Federal Ministry of Science and Education, a synergistic cooperation of the two projects is proposed, especially in the domain of Industry 4.0, where the teams will work on joint efforts to develop the Learning Factory concept at the Institute in the future, which is one of the important educational foundations for the Industry 4.0 concept. In this regard, work will be done on preparing a joint application so that the KK Institute can reach this important project, and CIP UNZE will also assist in analyzing SMEs at the achieved level of digitalization and the application of various elements of Industry 4.0. At the end of the meeting, the participation of staff in the Jahorina Business Forum 2025 was discussed, where the Institute team is preparing a report together with other participants in the RTIT project from the Faculty of Natural Sciences and Engineering.

### **05.03.2025. CIP UNZE: BOLONJSKI DAN ZA ĐAKE GIMNAZIJE U TEŠNJU**

Višegodišnja saradnja koju CIP UNZE ima sa Gimnazijom Musa Ćazim Ćatić u Tešnju nastavljena je i u 2025.toj godini tradicionalnim predavanjem o Bolonjskom procesu u visokom obrazovanju i značaju preduzetništva i inovativnosti kao „načina života mladih“. Naime, CIP UNZE je godinama a na bazi poziva privrednika iz Tešnja radio sa gimnazijama iz Tešnja, Zavidovića i Maglaja na razvoju koncepta Tehničke gimnazije kao modela koji postoji u zemljama EU i koji se pokazao kao optimalan model za pripremu gimnazijalaca za preduzetničko i inovativno razmišljanje. Nakon razgovora sa direktoricom prof.Jasminom Deljić tim CIP UNZE se uputio u salu gdje su bili svi maturanti Gimnazije u Tešnju i gdje je u jednosatnom predavanju predstavljen



koncept Bolonjskih rješenja (koncepti studija 3+2+3 i +1+3, ECTS sistem prenosa i akumulacije bodova, mobilnost nastavnika i studenata, dodatak diplomama, sistem kvaliteta i dr.) te razgovarano o STEM konceptu na kojem CIP UNZE radi gotovo 20 godina a kroz koji su opremljeni i brojni prostori na UNZE (Idea.lab, Multimedijalni centar, 3D tehnologije i dr.). Nakon prezentacija uslijedila su i brojna pitanja đaka Gimnazije. U analizama koje je radio menadžment Gimnazije prosječno 40-50% maturanata Gimnazije iz Tešnja upisuje tehničke i druge proizvodne fakultete (prehrambene tehnologije, hemijske tehnologije i dr.) što je i jedno od objašnjenja zašto je privreda Tešnja jedan od najboljih reprezentanata privrede BiH.



economy.

#### **05.03.2025. CIP UNZE: BOLOGNA DAY FOR HIGH SCHOOL STUDENTS IN TEŠANJ**

The long-standing cooperation that CIP UNZE has with the Musa Ćazim Ćatić High School in Tešanj continued in 2025 with a traditional lecture on the Bologna Process in higher education and the importance of entrepreneurship and innovation as a "way of life for young people". Namely, for years, based on the invitation of businessmen from Tešanj, CIP UNZE has worked with high schools from Tešanj, Zavidovići and Maglaj on the development of the concept of a Technical High School as a model that exists in EU countries and which has proven to be an optimal model for preparing high school students for entrepreneurial and innovative thinking. After talking with the director, Prof. Jasmina Deljković, the CIP UNZE team headed to the hall where all the graduates of the Gymnasium in Tešanj were and where the concept of Bologna solutions (3+2+3 and +1+3 study concepts, ECTS credit transfer and accumulation system, teacher and student mobility, diploma supplement, quality system, etc.) was presented in a one-hour lecture, and the STEM concept was discussed, which CIP UNZE has been working on for almost 20 years and through which numerous spaces at UNZE have been equipped (Idea.lab, Multimedia Center, 3D technologies, etc.). The presentations were followed by numerous questions from the Gymnasium students. In the analyses conducted by the Gymnasium management, an average of 40-50% of the graduates of the Gymnasium from Tešanj enroll in technical and other production faculties (food technology, chemical technology, etc.), which is one of the explanations why the Tešanj economy is one of the best representatives of the BiH

#### **05.03.2025. CIP UNZE: SASTANCI U KOMPANIJAMA STANDARD PRNJAVOR I OMORIKA RECIKLAŽE DOBOJ**

Nakon sastanaka u poslovnim sistemima u Tešnju tim CIP UNZE nastavio je do Prnjavora gdje je upriličena posjeta fabrici Standard Pranjavor. Ova fabrika je švajcarsko vlasništvo i jedna od najvećih stranih investicija u modernizaciju u BiH u 2024.godini. Predstavnici CIP UNZE prof.dr Darko Petković, prof.dr Džafer Dautbegović i v.a.mr Eir Đulić, obišli su proizvodne pogone hale gdje su upoznati sa tehnološkim procesima nakon čega je slijedio razgovor sa izvršnim direktorom Velišom Malobabićem. U vrlo dugom i iscrpnom razgovoru diskutovalo se o sašanjnoj proizvodnji forme Standard koji je više od 90% orjentisan ka prodajnom lancu IKEA, namjerama za pokretanje dualnog studija u kojem fabrika namjerava aktivno učestvovati te planiranim namjerama menadžmenta iz Švajcarske za ulazak u proizvodnju namještaja koji će imati dizajnreski potpis i biti rađen u

malim serijama. Predstavnici CIP UNZE su predstavili projekt RTIT sa posebnim naglaskom na reciklažne tehnologije u cilju dobijanja WPC proizvoda. Na kraju radnog dana upriličena je posjeta Omorika Reciklaže Doboj. Ova, jedna od najznačajnijih firmi za reciklažne tehnologije plastike u BiH koja predstavlja jednu od ključnih kompanija za CIP u projektu RTIT. Domaćin delegaciji CIP UNZE bila je CoE Mira Stanojević sa timom saradnika. Nakon predstavljanja firme OMORIKA slijedilo je obilazak pogona sa ciljem sagledavanja kako se od otpadne plastike prave proizvodi za akovanje čak i za prehrambeni sektor.

**05.03.2025. CIP UNZE: MEETINGS IN THE COMPANIES STANDARD PRNJAVOR AND OMORIKA RECIKLAZE DOBOJ**



After meetings in business systems in Tešanj, the CIP UNZE team continued to Prnjavor where a visit was organized to the Standard Pranjavor factory. This factory is Swiss-owned and one of the largest foreign investments in modernization in Bosnia and Herzegovina in 2024. Representatives of CIP UNZE, Prof. Dr. Darko Petković,

Prof. Dr. Džafer Dautbegović and V.A.Mr. Eir Đulić, visited the production facilities of the hall where they were introduced to the technological processes, followed by a conversation with the executive director Veliša Malobabić. In a very long and exhaustive conversation, the discussion focused on the current production of the Standard form, which is more than 90% oriented towards the IKEA sales chain, the intentions to launch a dual studio in which the factory intends to actively participate, and the planned intentions of the management from Switzerland to enter the production of furniture that will have a designer signature and be made in small batches. Representatives of CIP UNZE presented the RTIT project with a special emphasis on recycling technologies in order to obtain WPC products. At the end of the working day, a visit was organized to Omorika Reciklaža Doboj. This is one of the most important companies for recycled plastic technologies in Bosnia and Herzegovina, which represents one of the key companies for CIP in the RTIT project. The host of the CIP UNZE delegation was CoE Mira Stanojević with a team of associates. After the presentation of the OMORIKA company, a tour of the plant followed with the aim of seeing how waste plastic is used to make products for packaging, even for the food sector.

### 10.03.2025. CIP UNZE: SASTANAK TIMA CIP UNZE NA PROJEKTU RTIT



Treći sastanak tima u 2025 godini (redovni mjesečni sastanak) na projektu RTIT Interreg EU (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u Dunavskom regionu) održan je u Multimedijalnom centru UNZE. Prva tačka dnevnog reda bila je predstavljanje radova za naučno-stručnu konferenciju Jahorina Business Forum a koji korespondiraju projektu RTIT, pripreme za mapiranje u firmama ZDK i SBK, pripreme za probnu izradu WPC u laboratorijama Instituta KK. Također, bilo je govora i o konferenciji Kvalitet u junu u Neumu za koji se tim RTIT također planira

pojaviti sa radom. Asistent Đulić je obavijestio prisutne da finansijske obaveze UNZE prema članovima tima (troškovi za putovanja) još nisu izmirene. U tom smislu zaključeno je da prof.Dautbegović kao šef tima RTIT obavi razgovor sa šefom Ureda finansija UNZE i prorektorom za finansije i razvoj UNZE.

### 10.03.2025. CIP UNZE: CIP UNZE TEAM MEETING ON THE RTIT PROJECT

The third team meeting in 2025 (regular monthly meeting) on the RTIT Interreg EU project (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region) was held at the UNZE Multimedia Center. The first item on the agenda was the presentation of papers for the scientific and professional conference Jahorina Business Forum, which correspond to the RTIT project, preparations



for mapping in the ZDK and SBK companies, preparations for the trial development of WPC in the laboratories of the KK Institute. There was also talk of the Quality conference in June in Neum, for which the RTIT team also plans to appear with work. Assistant Đulić informed the attendees that UNZE's financial obligations to the team members (travel expenses) have not yet been settled. In this regard, it was concluded that Prof. Dautbegović, as the head of the RTIT team, should hold a meeting with the head of the UNZE Finance Office and the Vice-Rector for Finance and Development of UNZE.

### **27.03.2025. CIP UNZE: UČEŠĆE NA KONFERENCIJI JAHORINA BIZNIS FORUM 2025**

Tradicionalna konferencija Jahorina Biznis Forum održana je od 27 do 29. marta u Hotelu Termag na Jahorini. Konferenciju vodi Ekonomski fakultet Univerziteta Istočno Sarajevo a CIP UNZE je jedan od vodećih suorganizatora. Tema ovogodišnje konferencije je bila Industrija 4.0 i veze sa vještačkom inteligencijom (AI). Počelo je ugodnim druženjem i razgovorima panelista, uvodničara i domaćina, 27.03. uveče u kamin Sali hotela



Termag a nastavljeno Uvodnim referatima po pozivu koje su ove godine imali Darko Petković, Mašinski fakultet Univerziteta u Zenici (Industrija 4.0), Dubravko Čulibrk, direktor Instituta za veštačku inteligenciju Srbije (Veze AI I Industrije 4.0), Murat Dogdubay, prorektor Univerziteta Balikesir, Turska (Turizam I Industrija 4.0), Dejan Bokonjić, dekan Medicinskog fakulteta Univerziteta u Istočnom Sarajevu (Medicina I Industrija 4.0), BiH i Maksim Godovykh, Univerzitet Centralne Floride, USA (Ekonomija I Industrija 4.0). Nakon toga slijedela je panel diskusija Vještačka inteligencija inovacija ili izazov? u kojoj su učestvovali Ivica Veža, Fakultet elektrotehnike, strojarstva i brodogradnje, Split, Hrvatska, Zoran Keković, Fakultet bezbednosti Univerziteta u Beogradu, Srbija; Marko Gavrilović, Mašinski fakultet Univerziteta Beogradu, Srbija, Sanid Muhić, Digital Consulting LABs, BiH I Marko Dubočanin, Silver Bell Group, Srbija. Moderator je bio Dejan Mirčetić, Fakultet tehničkih nauka Univerziteta u Novom Sadu, Srbija. Posle podne su bile 4 sekcije u kojima je svoj rad predstavio I tim CIP UNZE učesnik u projektu RTIT (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u

Dunavskom region) koji je dao komparativni prikaz tehnološkog transfera sa VŠO u region WBC sa poređenjem sa Bavarskim modelom.

### **27.03.2025. CIP UNZE: PARTICIPATION IN THE JAHORINA BUSINESS FORUM 2025 CONFERENCE**

The traditional Jahorina Business Forum conference was held from 27 to 29 March at the Termag Hotel on Jahorina. The conference is led by the Faculty of Economics of the University of East Sarajevo and CIP UNZE is one of the leading co-organizers. The topic of this year's conference was Industry 4.0 and its connection with artificial intelligence (AI). It began with a pleasant gathering and conversations between panelists, keynote speakers and hosts on the evening of March 27th in the fireplace hall of the Termag Hotel, and continued with invited keynote speeches given this year by Darko Petković, Faculty of Mechanical Engineering, University of Zenica (Industry 4.0), Dubravko Čulibrk, Director of the Institute for Artificial Intelligence of Serbia (Links between AI and Industry 4.0), Murat Dogdubay, Vice-Rector of Balikesir University, Turkey (Tourism and Industry 4.0), Dejan Bokonjić, Dean of the Faculty of Medicine, University of East Sarajevo (Medicine and Industry 4.0), BiH and Maksim Godovykh, University of Central Florida, USA (Economy and Industry 4.0). This was followed by a panel discussion Artificial Intelligence: Innovation or Challenges?, in which Ivica Veža, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Split, Croatia, Zoran Keković, Faculty of Security,

University of Belgrade, Serbia; Marko Gavrilović, Faculty of Mechanical Engineering, University of Belgrade, Serbia, Sanid Muhić, Digital Consulting LABs, BiH and Marko Dubočanin, Silver Bell Group, Serbia. The moderator was Dejan Mirčetić, Faculty of Technical Sciences, University of Novi Sad, Serbia. In the afternoon, there were 4 sections in which the CIP UNZE team, a participant in the RTIT project (Knowledge Community Project for Accelerating the Transfer of RTI to the Danube Region), presented its work and gave a comparative overview of technology transfer from higher education institutions to the WBC region with a comparison with the Bavarian model.

### **31.03.2025. CIP UNZE: PREDSTAVLJANJE PROJEKTA RTIT**

U nastavku rada na projektu RTIT Interreg EU a u cilju širokog sagledavanja i upoznavanja partnera sa prvom fazom projekta tim CIP UNZE posjetio je Gimnaziju u Tešnju gdje je sa direktoricom Jasminom Deljkić obavljen razgovor na temu razvoja tehničke gimnazije na kojem radi nekoliko srednjih škola iz ZDK i SBK. Direktorici Deljakić je predstavljen i projekt RTIT - RTIT je projekt konzorcija 13 partnera iz Dunavskog regiona i biće u implementaciji tokom 2024-2026.godine. Ciljevi RTIT su Ojačati inovativni potencijal MSP u oblasti materijalnih tehnologija, Poboljšati saradnju malih i srednjih preduzeća sa partnerima za istraživanje, tehnologiju i inovacije (RTI) kako bi se bolje preneli rezultati istraživanja i tehnologije u materijalne nauke i tehnologije materijala i smanjili rizici za mala i srednja preduzeća u komercijalizaciji RTI, Poboljšati okvirne uslove i strukturu za RTI transfer u ključnoj tehnološkoj oblasti: materijalima. Projektom se želi doprinijeti resursnoj efikasnosti, održivosti i digitalizaciji, ojačati otpornost malih i srednjih poduzeća i evropskih lanaca vrijednosti te doprinijeti resursnom i tehnološkom suverenitetu evropskih malih i srednjih preduzeća.



### **31.03.2025. CIP UNZE: PRESENTATION OF THE RTIT PROJECT**

In continuation of the work on the RTIT Interreg EU project and in order to broadly review and introduce partners to the first phase of the project, the CIP UNZE team visited the Gymnasium in Tešanj, where they had a conversation with the director Jasmina Deljkić on the topic of the development of a technical gymnasium, which is being implemented by several high schools from the ZDK and SBK. Director Deljakić was also presented with the RTIT project - RTIT is a project of a consortium of 13 partners from the Danube region and will be implemented during 2024-2026. The objectives of RTIT are to strengthen the innovative potential of SMEs in the field of material technologies, to improve the cooperation of SMEs with research, technology and innovation (RTI) partners in order to better transfer research and technology results in material sciences and materials technologies and to reduce the risks for SMEs in the commercialization of RTI, to improve the framework conditions and structure for RTI transfer in the key technology area: materials. The project aims to contribute to resource efficiency, sustainability and digitalization, strengthen the resilience of SMEs and European value chains and contribute to the resource and technological sovereignty of European SMEs.

### **01.04.2025. CIP UNZE: POSJETA FIRMAMA SECOM I PERO RADI MAPIRANJA POTENCIJALA U PROJEKTU RTIT**

Shodno kvartalnom planu rada na EU projektu RTIT upriličene su posjete dvije značajne firme u ZDK: firma SECOM u Visokom i firma PERO Zenica. Cilj je bio prikupljanje podataka iz Upitnika U1, U2 i U3, kojim se žele istražiti načini upravljanja otpadnim sirovinama i materijalni tokovi (U1), stanja načini realizacije tehnološkog transfera (U2), te dostignuti nivo u primjeni modela Industrije 4.0 (U3). Menadžmentima obe kompanije

objašnjen je sadržaj upitnika te način prikupljanja podataka u firmi te naglašeno da je ovo tek prva posjeta i da će tim UNZE ponovo posjetiti firme i detaljno razgovarati o upitnicima sa predstavnicima menadžmenta i tehnološke pripreme. Firma SECOM Visoko se bavi izradom elemenata u gradnji eksterijera i enterijera sa vrlo modernim dizajnom i kvalitetom proizvoda koji imaju kupce u čitavom svijetu. Firma PERO Zenica dominantno je poznata kao veliki trgovački centar za nabavku svega onog što je potrebno u gradnji i opremanju kako stambenih tako i poslovnih objekata. Pored centra u Zenici ima svoje centre u Jajcu, Mostaru, Varešu, Maglaju, Neumu i Mostaru. No ono što je za projekt vrlo bitno je da firma PERO ima i značajne proizvodne kapacitete koji se dominantno bave izradom dijelova enterijera od vještačkih sorti drveta (mediapan, iverica, laminati, OSB ploče, i dr.). U razgovoru sa ecc. Perić Mladenom u firmi PERO domaćinom te dr.sc. CoE Saninom Hasanićem u firmi SECOM prof. Petković je objasnio značaj projekta RTIT EU Interreg programu, predstavio projektne partnere te očekivane rezultate. Poseban naglasak je bio na rad tima CIP UNZE sa ciljem da se na postulatima Cirkularne privrede razvije proizvodnja WPC- drveno plastičnog kompozita bazirana na otpadnoj plastici i drvetu od koje bi svakako i ove firme imale velike koristi.

#### **01.04.2025. CIP UNZE: VISIT TO SECOM AND PERO COMPANIES TO MAPPING POTENTIAL IN THE RTIT PROJECT**

According to the quarterly work plan for the EU RTIT project, visits were organized to two significant companies in the ZDK: the SECOM company in Visoko and the PERO company in Zenica. The goal was to collect data from Questionnaires U1, U2 and U3, which aim to investigate the methods of managing waste raw materials and material flows (U1), the state of the methods of implementing technological transfer (U2), and the level achieved in the application of the Industry 4.0 model (U3). The content of the questionnaire and the method of collecting data in the company were explained to the management of both companies, and it was emphasized that this was only the first visit and that the UNZE team would visit the companies again



and discuss the questionnaires in detail with representatives of management and technological preparation. The SECOM Visoko company manufactures elements in the construction of exteriors and interiors with a very modern design and quality of products that have customers all over the world. The company PERO Zenica is dominantly known as a large shopping center for the purchase of everything needed in the construction and furnishing of both residential and commercial buildings. In addition to the center in Zenica, it has centers in Jajce, Mostar, Vareš, Maglaj, Neum and Mostar. However, what is very important for the project is that the company PERO also has significant production capacities that are predominantly engaged in the production of interior parts from artificial wood varieties (mediaboard, chipboard, laminates, OSB boards, etc.). In a conversation with ecc. Perić Mladen in the company PERO, the host, and dr.sc. CoE Sanin Hasanić in the company SECOM, prof. Petković explained the importance of the RTIT project to the EU Interreg program, presented the project partners and expected results. Special emphasis was placed on the work of the CIP UNZE team with the aim of developing the production of WPC - wood-plastic composite based on waste plastic and wood, based on the postulates of the Circular Economy, from which these companies would certainly benefit greatly.

#### **08.04.2025. CIP UNZE: POSJETA FIRMAMA KONTINENTAL I TAMEX RADI MAPIRANJA POTENCIJALA U PROJEKTU RTIT**

Shodno planiranoj dinamici prikupljanja odataka iz Upitnika U1, U2 i U3, kojim se žele istražiti

načini upravljanja otpadnim sirovinama i materijalni tokovi (U1), stanja načini realizacije tehnološkog transfera (U2), te dostignuti nivo u primjeni modela Industrije 4.0 (U3) upriličine su posjete dvije značajne firme drvoprerađivačkog sektora u Srednjobosanskom kantonu (SBK). Menadžmentima obe kompanije objašnjen je sadržaj upitnika te način prikupljanja podataka u firmi te naglašeno da je ovo tek prva posjeta i da će tim UNZE ponovo posjetiti firme i detaljno razgovarati o upitnicima sa predstavnicima menadžmenta i tehnološke pripreme. Firma Kontinental Kiseljak se bavi izradom prozora, vrata i drugih elemenata u gradnji eksterijera i enterijera sa vrlo specifičnim dizajnom i kvalitetom proizvoda koji imaju kupce u čitavom svijetu. Firma Tamex je također velika kompanija sa prosječno 400-500 zaposlenih koja radi elemente enterijera dominantno za njemačko tržište u vrlo savremenom objektu sa mašinama i tehnologijama najnovijih generacija radeći dominantno program masivnog namještaja. U razgovoru sa ing. Ibreljić Zikretom domaćinom u Tamexu i te brojnom ekipom u Kontinentalu prof. Petković je objasnio značaj projekta RTIT EU Interreg program, predstavio projektne partnere te očekivane rezultate sa posebnim naglaskom na rad tima CIP UNZE sa ciljem da se na postulatima Cirkularne privrede razvije proizvodnja WPC- drveno plastičnog kompozita bazirana na otpadnoj plastici i drvetu od koje bi svakako i ove firme imale velike koristi.

#### **08.04.2025. CIP UNZE: VISIT TO THE COMPANIES KONTINENTAL AND TAMEX TO MAPPING POTENTIAL IN THE RTIT PROJECT**

According to the planned dynamics of collecting data from Questionnaires U1, U2 and U3, which aim to investigate the methods of managing waste raw materials and material flows (U1), the state of methods of implementing technological transfer (U2), and the level achieved in the application of the Industry 4.0 model (U3), visits were made to two significant companies in the wood processing sector in the Central Bosnia Canton (SBK). The management of both companies was explained the content of the questionnaire and the method of collecting data in the company, and it was emphasized that this was only the first visit and that the UNZE team would visit the companies again and discuss the questionnaires in detail with representatives of management and technological preparation. The company Kontinental Kiseljak manufactures windows, doors and other elements in exterior and interior construction with a very specific design and quality of products that have customers all over the world. The Tamex company is also a large company with an average of 400-500 employees that produces interior elements predominantly for the German market in a very modern facility with the latest generation machines and technologies, producing predominantly a solid furniture program. In a conversation with Eng. Ibreljić Zikret, the host at Tamex, and the numerous team at Kontinental, Prof. Petković explained the importance of the RTIT project to the EU Interreg program, presented the project partners and expected results with a special emphasis on the work of the CIP UNZE team with the aim of developing the production of WPC - wood-plastic composite based on waste plastic and wood, based on the postulates of the Circular Economy, from which these companies would certainly benefit greatly.



#### **14.04.2025. CIP UNZE: RADNI SASTANAK TIMA NA PROJEKTU RTIT**

Aprilski sastanak projektnog tima CIP UNZE na projektu RTIT Interreg EU (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u Dunavskom region) održan je na Fakultetu inženjerskih i prirodnih nauka. Bili su prisutni članovi tima prof.dr Darko Petković, prof.dr Džafer Dautbegović, prof.dr Raza

Sulunahpašić, prof.dr Marina Jovanović, v.a mr Emir Đulić i asistent Amar Neimarlija. Težište sastanka bilo je priprema na eksperimentalnoj provjeri izrade WPC proizvoda na Institutu Kemal Kapetanović od sirovina koje će se dobiti na poklon od firme OMORIKA reciklaže Doboj (plastika) i firme Pero doo Zenica (drveno brašno). Na bazi obavljenih razgovora sa CoE Instituta Kemal Kapetanović doc.dr Mustaa Hadžalić obavljene su pripreme da se u jednoj od peći na IKK otopi plastika a onda mješa sa drvenim brašnom i dodacima u posebno pripremljenim kalupima te da se dobijeni proizvodi testiraju na hemijske i mehaničke osobine na IKK: Svi članovi tima su preuzeli obavezu literaturnog pretraživanja svjetskih iskustava sa reciklažom ovih materijala.

#### **14.04.2025. CIP UNZE: WORKING MEETING OF THE TEAM ON THE RTIT PROJECT**

The April meeting of the CIP UNZE project team on the RTIT Interreg EU project (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region) was held at the Faculty of Engineering and Natural Sciences. The team members were Prof. Dr. Darko Petković, Prof. Dr. Džafer Dautbegović, Prof. Dr. Raza Sulunahpašić, Prof. Dr. Marina Jovanović, acting M.A. Emir Đulić and assistant Amar Neimarlija. The focus of the meeting was the preparation for the experimental verification of the production of WPC products at the Kemal Kapetanović Institute from raw materials that will be received as a gift from the company OMORIKA recycling Doboj (plastics) and the company Pero doo Zenica (wood flour). Based on the discussions with the CoE of the Institute Kemal Kapetanović, Assoc. Prof. Mustaa Hadžalić, preparations were made to melt the plastic in one of the furnaces at IKK and then mix it with wood flour and additives in specially prepared molds, and to test the resulting products for chemical and mechanical properties at IKK: All team members undertook the obligation of a literature search of world experiences with the recycling of these materials.



#### **15.04.2025. CIP UNZE: POSJETA FIRMAMA FIS AMBYENTA I TISAL RADI MAPIRANJA POTENCIJALA U PROJEKTU RTIT**

Dvije vrlo značajne firme iz SBK koje je projektni tim posjetio bile su FIS Ambyenta u Vitezu i TISAL u Kačunima kod Busovače. FIS Ambyenta je jedna od najznačajnijih BH poslovnih firmi koja pored brojnih prodajnih centara ima i značajne proizvodne kapacitete. Jedan od njih je FIS Ambyenta koja proizvodi sve od enterijera i eksterijera od drveta za kompletno opremanje enterijera banaka, hotela, stanova i dr. U razgovoru sa domaćinima u svim kompanijama prof.Petković je objasnio značaj projekta RTIT EU Interreg programu, predstavio projektne partnere te očekivane rezultate sa posebnim naglaskom na rad tima CIP UNZE sa ciljem da se na postulatima Cirkularne privrede razvije proizvodnja WPC-drveno plastičnog kompozita bazirana na otpadnoj plastici i drvetu. Objasnio je namjene Upitnika U1, U2 i U3, kojim se žele istražiti načini upravljanja otpadnim sirovinama i materijalni tokovi (U1), stanja načini realizacije tehnološkog transfera (U2), te dostignuti nivo u primjeni modela Industrije 4.0 (U3). Domaćin u FIS Ambyenti je bio ing. Fuad Telalović koji je naglasio korištenje svih materijala u proizvodnji: od masiva do iverice, mediapana, OSB ploča, kože, tekstila, spužvi, metala i dr. Domaćin u Tisalu je bio CoE Mahir Mujić koji je naglasio da pored značajnog programa kućne hemije Tisal predstavlja jednog od najvećih proizvođača proizvoda od plastike u BiH (boce, gajbe i dr.) radeći na savremenim CNC mašinama. S obzirom na nastojanja tima CIP UNZE da dođe do održive proizvodnje drvnoplastičnog polimera WPC od otpadnih sirovina firma TISAL je posebno značajna za projekt RTIT. Naglašeno da je ovo tek prva posjeta ovim povodom i da će tim UNZE ponovo posjetiti firme ponovo i detaljno razgovarati o upitnicima sa predstavnicima menadžmenta i tehnološke pripreme.

#### **15.04.2025. CIP UNZE: VISIT TO FIS AMBYENTA AND TISAL COMPANIES TO MAPPING POTENTIAL IN THE RTIT PROJECT**

Two very important companies from SBK that the project team visited were FIS Ambyenta in Vitez and TISAL in Kačuni near Busovača. FIS Ambyenta is one of the most important BH business companies that, in addition to numerous sales centers, also has significant production capacities. One of them is FIS Ambyenta, which produces everything from interiors and exteriors made of wood for complete interior furnishing of banks, hotels, apartments, etc. In a conversation with the hosts in all companies, Prof. Petković explained the importance of the RTIT project to the EU Interreg program, presented the project partners and expected results with special emphasis on the work of the CIP UNZE team with the aim of developing the production of WPC-wood-plastic composite based on waste plastic and wood based on the postulates of the Circular Economy. He explained the purposes of the Questionnaires U1, U2 and U3, which aim to investigate the methods of waste raw material management and material flows (U1), the state of methods of implementing technological transfer (U2), and the level achieved in the application of the Industry 4.0 model (U3). The host at FIS Ambyenta was Eng. Fuad Telalović, who emphasized the use of all materials in production: from solid wood to chipboard, MDF, OSB boards, leather, textiles, sponges, metals, etc. The host at Tisal was CoE Mahir Mujić, who emphasized that in addition to a significant household chemicals program, Tisal is one of the largest manufacturers of plastic products in Bosnia and Herzegovina (bottles, crates, etc.) working on modern CNC machines. Given the efforts of the CIP UNZE team to achieve sustainable production of wood-plastic polymer WPC from waste raw materials, the TISAL company is particularly important for the RTIT project. It was emphasized that this was only the first visit on this occasion and that the UNZE team would visit the companies again and discuss the questionnaires in detail with representatives of management and technological preparation.



#### **22.04.2025. CIP UNZE: POSJETA FIRMAMA PRVENT INTERIOR I TEAM WOOD VISOKO RADI MAPIRANJA POTENCIJALA U PROJEKTU RTIT**



Aprilska dinamika posjeta firmama u ZDK nastavljena je sa firmama Prevent Interior i TEAM WOOD u Visokom. Obe firme predstavljaju respektabilne proizvođače dominantno masivnog namještaja u kombinaciji sa tekstilom i kožom. U razgovoru sa domaćinima u svim kompanijama prof.Petković je objasnio značaj projekta RTIT EU Interreg programu, predstavio projektne partnere te očekivane rezultate sa posebnim naglaskom na rad tima CIP UNZE sa ciljem da se na postulatima Cirkularne privrede razvije proizvodnja WPC-drveno plastičnog kompozita bazirana na otpadnoj plastici i drvetu. Objasnio je namjene Upitnika U1, U2 i U3, kojim se žele istražiti načini upravljanja otpadnim sirovinama i materijalni tokovi (U1), stanja načini realizacije tehnološkog transfera (U2), te dostignuti nivo u primjeni modela Industrije 4.0 (U3). Naglašeno da je ovo tek prva posjeta ovim povodom i da će tim UNZE ponovo posjetiti firme ponovo i detaljno razgovarati o upitnicima sa predstavnicima menadžmenta i tehnološke pripreme.

#### **22.04.2025. CIP UNZE: VISIT TO THE COMPANIES PREVENT INTERIOR AND TEAM WOOD VISOKO TO MAPPING POTENTIAL IN THE RTIT PROJECT**

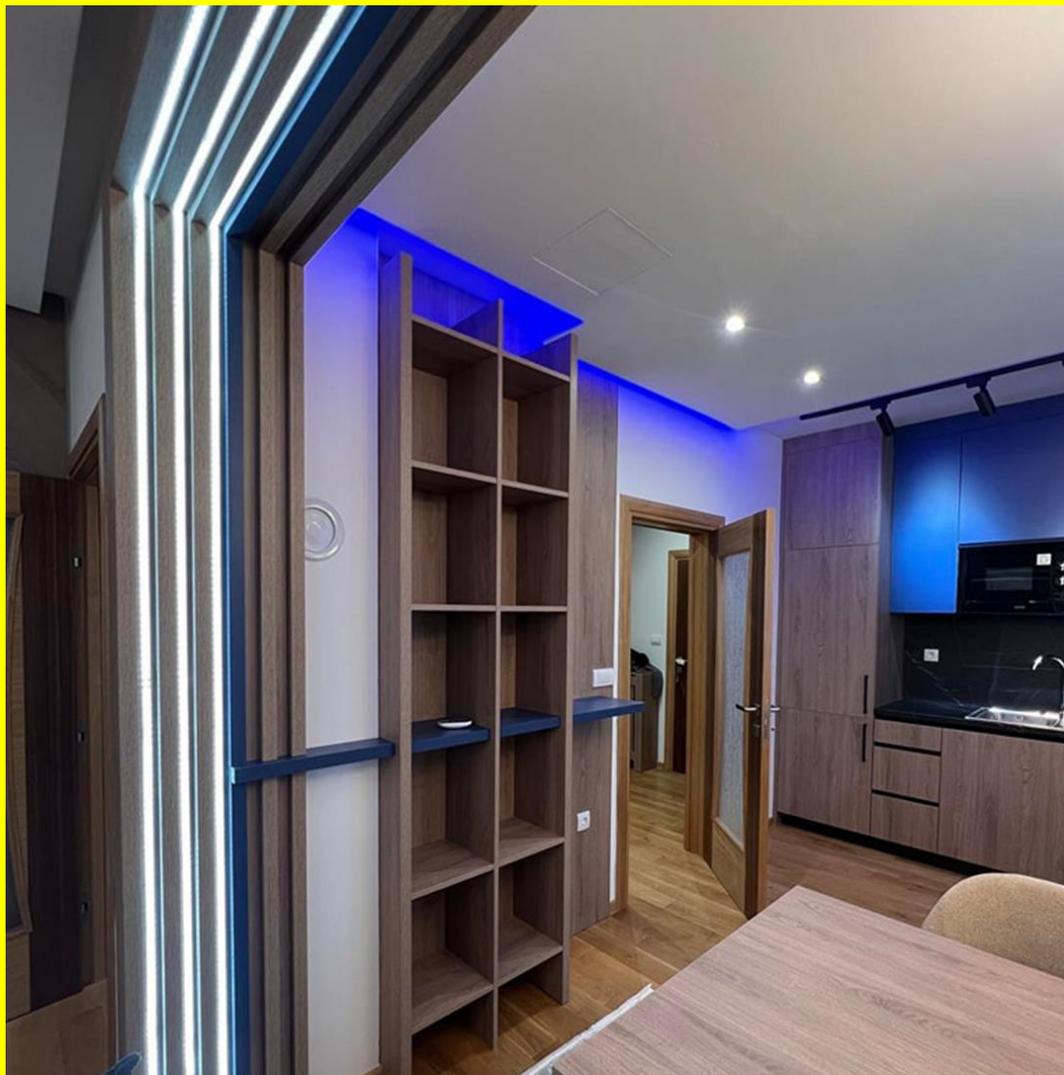
The April dynamics of visits to companies in the ZDK continued with the companies Prevent Interior and TEAM WOOD in Visoko. Both companies represent respectable manufacturers of predominantly massive furniture in combination with textiles and leather. In a conversation with the hosts in all

companies, Prof. Petković explained the importance of the RTIT project to the EU Interreg program, presented the project partners and expected results with special emphasis on the work of the CIP UNZE team with the aim of developing the production of WPC-wood-plastic composite based on waste plastic and wood based on the postulates of the Circular Economy. He explained the purposes of the Questionnaires U1, U2 and U3, which aim to investigate the methods of managing waste raw materials and material flows (U1), the state of methods of implementing technological transfer (U2), and the level achieved in the application of the Industry 4.0 model (U3). It was emphasized that this was only the first visit on this occasion and that the UNZE team would visit the companies again and discuss the questionnaires in detail with representatives of management and technological preparation.

#### **29.04.2025. CIP UNZE: POSJETA FIRMAMA XY I TEAM WOOD FANTASY RADI MAPIRANJA POTENCIJALA U PROJEKTU RTIT**

Aprilska dinamika posjeta firmama u ZDK završena je sa firmama u Drivuši kod Zenice te XY u Buzić Mahali kod Visokog. U razgovoru sa domaćinima u svim kompanijama prof.Petković je objasnio značaj projekta RTIT EU Interreg programu, predstavio projektne partnere te očekivane rezultate sa posebnim naglaskom na rad tima CIP UNZE sa ciljem da se na postulatima Cirkularne privrede razvije proizvodnja WPC-drveno plastičnog kompozita bazirana na otpadnoj plastici i drvetu. Predstavnicima odjela pripreme i menadžmenta Objasnio je namjene Upitnika U1, U2 i U3, kojim se žele istražiti načini upravljanja otpadnim sirovinama i materijalni tokovi (U1), stanja načini realizacije tehnološkog transfera (U2), te dostignuti nivo u primjeni modela Industrije 4.0 (U3). Naglašeno da je ovo tek prva posjeta ovim povodom i da će tim UNZE ponovo posjetiti firme ponovo i detaljno razgovarati o upitnicima sa predstavnicima menadžmenta i tehnološke pripreme. Firma XY u Buzić mahali (Buzić polje) je mlada firma koja postoji tek nekoliko godina no već sada je etablirano ime u BH prostoru izrade namještaja po mjeri i opremanju entejera hotela, bolnica, vila, restorana, stanova i dr. Firma u Drivuši kod Zenice dio je nekadašnjeg sistema Fantasy koji je imao svoj prepoznatljiv dizajn proizvoda a nakon vlasničke transformacije je postao dio TEAM WOOD grupe iz Visokog.

#### **29.04.2025. CIP UNZE: VISIT TO COMPANIES XY AND TEAM WOOD FANTASY TO MAPPING POTENTIAL IN THE RTIT PROJECT**



The April dynamics of visits to companies in the ZDK ended with companies in Drivuša near Zenica and XY in Buziće Mahala near Visoko. In a conversation with the hosts in all companies, Prof. Petković explained the importance of the RTIT project to the EU Interreg program, presented the project partners and expected results with special emphasis on the work of the CIP UNZE team with the aim of developing the production of WPC-wood-plastic composite based on waste plastic and wood based on the postulates of the Circular Economy. He explained to the representatives of the preparation and management department the purposes of the Questionnaires U1, U2 and U3, which aim to investigate the methods of managing waste raw materials and material flows (U1), the state of the methods of implementing technological transfer (U2), and the level achieved in the application of the Industry 4.0 model (U3). It was emphasized that this was only the first visit on this occasion and that the UNZE team would visit the companies again and discuss the questionnaires in detail with representatives of management and technological preparation. The company XY in Buziće Mahala (Buziće Polje) is a young company that has only existed for a few years, but it is already an established name in the Bosnian space for making custom-made furniture and furnishing the interiors of hotels, hospitals, villas, restaurants, apartments, etc. The company in Drivuša near Zenica is part of the former Fantasy system, which had its own recognizable product design, and after the ownership transformation it became part of the TEAM WOOD group from Visoko.

#### **05.05.2025. CIP UNZE: POSJETA FIRMI PERO ZENICA U PROJEKTU RTIT**

Prva majska radna posjeta nekoj firmi u ZDK upriličena je u Zenici u firmi PERO doo. Kod većine zeničana poznata kao trgovačka kompanija no firma PERO je i proizvodna firma u segmentu proizvodnje enterijera za stanovanje. U razgovoru sa direktorom i vlasnikom Perić Mladenom u svim kompanijama prof. Dautbegović i prof. Petković su objasnili značaj projekta RTIT EU Interreg programu. Predstavljeni su projektni partneri te pozvana kompanija za aktivno uključanje u projekt RTIT. Prof. Petković je predstavio očekivane rezultate sa posebnim naglaskom

na rad tima CIP UNZE sa ciljem da se na postulatima Cirkularne privrede razvije proizvodnja WPC-drveno plastičnog kompozita bazirana na otpadnoj plastici i drvetu. Cilj je da ova proizvodnja bude u saglasnosti sa ciljevima održive privrede (EU Green Deal – EU Zeleni plan; Green Agenda for WBC - Zelena agenda za Zapadni Balkan, GHG Protocol- Greenhouse Gas protocol- Protokol o stakleničkim plinovima, CBAM – Carbon Border Adjustment Mechanism – Mehanizam za ugljenično prilagođavanje na granicama – te SDG – Sustainable Development Goals – Ciljevi održivog razvoja). Predstavnicima odjela pripreme objašnjene su namjene Upitnika U1, U2 i U3, kojim se žele istražiti načini upravljanja otpadnim sirovinama i materijalni tokovi (U1), stanja načini realizacije tehnološkog transfera (U2), te dostignuti nivo u primjeni modela Industrije 4.0 (U3).

#### **05.05.2025. CIP UNZE: VISIT TO THE COMPANY PERO ZENICA IN THE RTIT PROJECT**

The first May working visit to a company in the ZDK was organized in Zenica at the company PERO doo. Known to most Zenica residents as a trading company, but the company PERO is also a manufacturing company in the segment of residential interior production. In a conversation with the director and owner Perić Mladen in all companies, Prof. Dautbegović and Prof. Petković explained the importance of the RTIT project to the EU



Interreg program. The project partners were presented and the company was invited to actively participate in the RTIT project. Prof. Petković presented the expected results with special emphasis on the work of the CIP UNZE team with the aim of developing the production of WPC-wood-plastic composite based on waste plastic and wood based on the postulates of the Circular Economy. The aim is for this production to be in line with the goals of a sustainable economy (EU Green Deal; Green Agenda for the Western Balkans, GHG Protocol, CBAM, and SDG). The representatives of the preparation department were explained the purposes of Questionnaires U1, U2, and U3, which aim to investigate the methods of managing waste raw materials and material flows (U1), the state of methods of implementing technological transfer (U2), and the level achieved in the application of the Industry 4.0 model (U3).

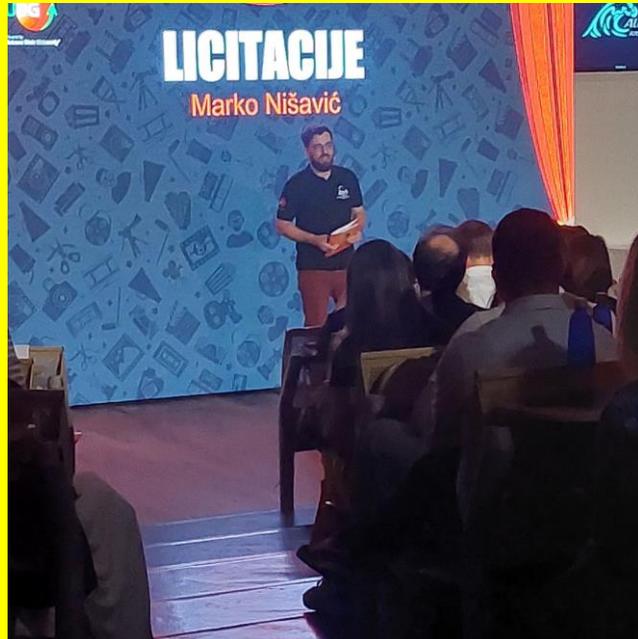
#### **08.05.2025. CIP UNZE: SASTANAK U TP INTERA MOSTAR NA PROJEKTU RTIT**

Radni sastanak timova CIP UNZE i TP Intera na projektu RTIT održan je 8 i 9.05.2025. u prostorima TP Intera u Mostaru. Uz vođenje sastanka Vedrana Šimunovića direktora TP Intera i prof.dr Dautbegović Džafera, šefa tima CIP UNZE na projektu RTIT prvo su predstavljena postignuća dva BH partnera u prvom kvartalu 2025.godine. Prof. Dautbegović je predstavio rezultate sa posebnim naglaskom da se na postulatima Cirkularne privrede razvije proizvodnja WPC-drveno plastičnog kompozita bazirana na otpadnoj plastici i drvetu što je osnova istraživanja i konkretizacije TTO tima CIP UNZE u projektu RTIT. Projektovani cilj je da ova proizvodnja bude u saglasnosti sa ciljevima održive privrede (EU Green Deal – EU Zeleni plan; Green Agenda for WBC - Zelena agenda za Zapadni Balkan, GHG Protocol- Greenhouse Gas protocol- Protokol o stakleničkim plinovima, CBAM – Carbon Border Adjustment Mechanism – Mehanizam za ugljenično prilagođavanje na granicama – te SDG – Sustainable Development Goals – Ciljevi održivog razvoja). Prof.Petković je govorio o realizaciji upitnika koji se rade u privrednim sistemima u BIH sa posebnim osvrtom na sektor drvoprerade. Namjena upitnika U1, U2 i U3, se žele istražiti načini upravljanja otpadnim sirovinama i materijalni tokovi (U1), stanja načini realizacije tehnološkog transfera (U2), te dostignuti nivo u primjeni modela Industrije 4.0

(U3). Tim TP Intera je iskazao žaljenje što rezultati tima CIP UNZE nisu vidljivi i na web stranici UNZE što je jedan od ciljeva TTO i saradnje visokoškolskih organizacija sa privredom.

#### **08.05.2025. CIP UNZE: MEETING AT TP INTERA MOSTAR ON THE RTIT PROJECT**

The working meeting of the CIP UNZE and TP Inter teams on the RTIT project was held on 8 and 9.05.2025. in the premises of TP Inter in Mostar. With the meeting being led by Vedran Šimunović, director of TP Inter, and Prof. Dr. Dautbegović Džafer, head of the CIP UNZE team on the RTIT project, the achievements of the two BH partners in the first quarter of 2025 were first presented. Prof. Dautbegović presented the results with a special emphasis on developing the production of WPC-wood-plastic composite based on waste plastic and wood, which is the basis for the research and concretization of the TTO team of CIP UNZE in the RTIT project, based on the postulates of the Circular Economy. The projected goal is for this production to be in line with the goals of a sustainable economy (EU Green Deal; Green Agenda for WBC, GHG Protocol, CBAM, Carbon Border Adjustment Mechanism, and SDG). Prof. Petković spoke about the implementation of questionnaires that are being conducted in economic systems in BiH with special



emphasis on the wood processing sector. The purpose of questionnaires U1, U2, and U3 is to investigate ways of managing waste raw materials and material flows (U1), the state of ways of implementing technology transfer (U2), and the level achieved in the application of the Industry 4.0 model (U3). The TP Inter team expressed regret that the results of the CIP UNZE team are not visible on the UNZE website, which is one of the goals of TTO and cooperation between higher education organizations and the economy.

#### **09.05.2025. CIP UNZE: UČEŠĆE NA BERZI PREDUZETNIČKIH IDEJA U PODGORICI**

Finale višemjesečnog takmičenja za najbolje poslovne ideje studenata regije Zapadnog Balkana održano je na Univerzitetu Donja Gorica – UDG u Podgorici uz izvanrednu organizaciju prof. Marka Nišavića, šef Preduzetničkog gnijezda na UDG i profesora na EF UDG. Učestvovalo je više od 60 timova sa fakulteta i cijele regije WBC uz sajmsku prezentaciju srednjih škola iz Crne Gore (njih 25). U finalu je u prepunom amiteatru UDG-a predstavljeno 20 najboljih preduzetničkih ideja koji su imali priliku da u limitiranom vremenu bez upotrebe ikakvih dodatnih prezentacija predstave svoju ideju/projekt nakon čega je tim privrednika/ sponzora licitirao i odabrao 10 najboljih koji su imali dodatne prezentacije. U toj finalnoj prezentaciji voditelj takmičenja prof.Nišavić je još jednom pokazao kako se VŠO može potpuno transformisati u razvoju novih

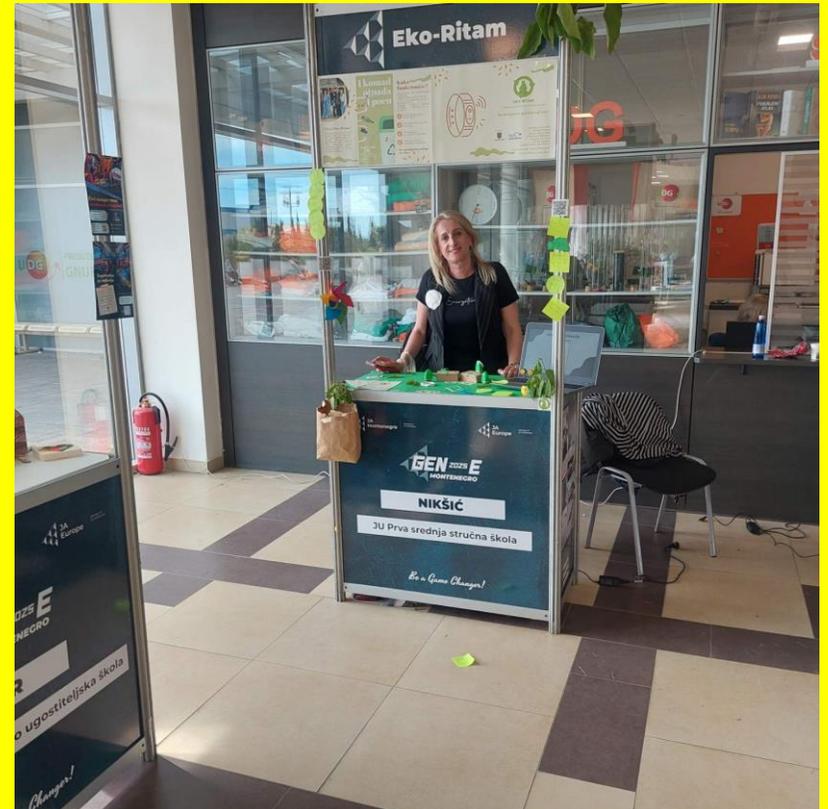
modela predstavljanja poslovnih ideja i tehnološkog transfera koji je jedinstven na prostoru Zapadnog Balkana. Nažalost ovaj model ostaje u najvećoj mjeri nepoznat na UNZE koji je ranijih godina sa timovima sa Mašinskog i Plitehničkog fakulteta učestvovao na berzama preduzetničkih ideja u Crnoj Gori (Cetinje, Miločer, Podgorica i dr.). Ovo je i veliko iskustvo za tim CIP UNZE kao model koji treba da bude predstavljen na projektu RTIT. U razgovoru prof.Petkovića sa prof.Nišavićem i rektorom UDG-a prof.Vukotićem naglašen je značaj ovakvih dešavanja za razvoj dodatnih kompetencijala studenata koje klasični modeli nastave ne daju. Tokom preduzetničkih dana ostvarena je saradnja i sa Tehničkom školom u Nikšiću kao potencijalnom partneru TŠ Bilmišće u Zenici i CIP UNZE u nekom od projekta VET Erasmus+.

#### **09.05.2025. CIP UNZE: PARTICIPATION IN THE ENTREPRENEURIAL IDEAS EXCHANGE IN PODGORICA**

The finals of the multi-month competition for the best business ideas of students from the Western Balkans region were held at the University of Donja Gorica - UDG in Podgorica with the excellent organization of Prof. Marko Nišavić, head of the Entrepreneurial Nest at UDG and professor at EF UDG. More than 60 teams from faculties and the entire WBC region participated, with a fair presentation by high schools from Montenegro (25 of them). In the finals, the 20 best entrepreneurial ideas were presented in the packed UDG auditorium, who had the opportunity to present their idea/project in a limited time without using any additional presentations, after which a team of businessmen/sponsors bid and selected the 10 best ones who had additional presentations. In that final presentation, the competition leader, Prof. Nišavić, once again showed how a higher education institution can be completely transformed in the development of new models of presenting business ideas and technology transfer, which is unique in the Western Balkans. Unfortunately, this model remains largely unknown at UNZE, which in previous years, with teams from the Faculty of Mechanical Engineering and the Faculty of Civil Engineering, participated in entrepreneurial idea exchanges in Montenegro (Cetinje, Miločer, Podgorica, etc.). This is also a great experience for the CIP UNZE team as a model that should be presented at the RTIT project. In a conversation between Prof. Petković, Prof. Nišavić and the Rector of UDG, Prof. Vukotić, the importance of such events for the development of additional student competencies that classical teaching models do not provide was emphasized. During the entrepreneurial days, cooperation was also established with the Technical School in Nikšić as a potential partner of the Bilmišće Technical School in Zenica and CIP UNZE in one of the VET Erasmus+ projects.

#### **10.05.2025. CIP UNZE: SASTANCI U OMORIKA RECIKLAŽE DOBOJ NA PROJEKTU RTIT**

U nastavku rada na projektu RTIT Interreg EU (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u Dunavskom region) a u cilju konkretizacije proizvodnje probnih uzoraka WPC prof.Petković je boravio u kompaniji Omorika Reciklaže Doboj. U ovoj jednoj od najznačajnijih firmi za reciklažene tehnologije plastike u BiH sa CoE Mirom Stanojević je razgovarano o tehnologijama za dobijanje WPC u vakum pećima na IKK Univerziteta u Zenici što predstavlja jednu od ključnih ideja tima CIP UNZE u projektu RTIT. Prof. Petković je objasnio koncept tehnološkog transfera na kojem se radi te ponudio menadžmentu Omorike da budu dio tima UNZE na razvoju ovog proizvoda



te da učestvuju sa svojim tehnologizima i u studijskim aktivnostima na projektu. Za početno ispitivanje sjedinjavana otpadne plastike i mediapana kompanija Omorika je obezbijedila veću količinu pripremljene otpadne plastike sa IKK UNZE. Probna livenja su planirana za Institut Kemal Kapetanović UNZE.



### **10.05.2025. CIP UNZE: MEETINGS AT OMORIKA RECIKLAŽE DOBOJ ON THE RTIT PROJECT**

In continuation of the work on the RTIT Interreg EU project (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region) and in order to concretize the production of WPC test samples, Prof. Petković visited the company Omorika Reciklaže Doboj. In this one of the most important companies for recycled plastic technologies in Bosnia and Herzegovina, CoE Mira Stanojević discussed technologies for obtaining WPC in vacuum furnaces at the IKK of the University of Zenica, which represents one of the key ideas of the CIP UNZE team in the RTIT project. Prof. Petković explained the concept of technological transfer being worked on and offered the Omorika management to be part of the UNZE team in the development of this product and to participate with their technologists in the study activities on the project. For the initial testing of combined waste plastic and MDF, the Omorika company provided a larger quantity of prepared waste plastic from IKK UNZE. Trial castings are planned for the Kemal Kapetanović Institute, UNZE.

### **13.05.2025. CIP UNZE: UČEŠĆE NA SEMINARU "LEARNING FACTORY – FABRIKA ZA UČENJE" NA SVEUČILIŠTU U SPLITU KROZ PROJEKT RTIT**

Fakultet elektrotehnike, strojarstva i brodogradnje FESB Sveučilišta u Splitu bio je domaćin Godišnje konferencije u seminaru na temu Fabrika za učenje (Learning Factory) za Hrvatsku i susjedne zemlje. Seminar je otvoren u 9 h dana 14.05.2025. u Laboratoriju „Tvornice za učenje“, C417 uz uvodne riječi dobrodošlice od strane organizatora. Nakon toga je Prof. emer. dr. sc. Ivica Veža „Tvornica za učenje@FESB kao član i osnivač IALF“ dao izlaganje „Od inicijative do svjetske organizacije“ nakon čega je Izv. prof. dr. sc. Nikola Gjeldum, predstavio „Tvornice za učenje@FESB: postignuća i vizija daljnjeg razvoja potaknutog ExCurS projektom“. Nakon njega su gosti iz Rijeke Izv. prof. Sandro Doboviček, mag. ing. I Elvis Krulčić predstavili temu „Osnivanje koncepta tvornice za učenje na RITEH, Rijeka – trenutna istraživanja, izazovi te osluškivanje potreba gospodarstva“. Prvi sudionik izvan Hrvatske bio je Prof. dr. sc. Željko Stojkić sa temom „Learning factory na FSRE-u, Mostar, -

novi ciklus decentraliziranog razvoja tvornice za učenje uz snažnu potrebu i potporu iz gospodarstva“. Nakon podnevne pauze u poslepodnevnom radu je izv. prof. dr. sc. Marko Mladineo predstavio izlaganje „Hrvatska prerađivačka industrija na putu prema Industrij 4.0 / 5.0“ a dr. sc. Nataša Tošanović „Koncept Smart factory – FSB, Zagreb“ te dr. sc. Marina Crnjac Žižić temu „Integracija Hands-On edukacije za Human-Centric Digital Twin u okruženje tvornice za učenje“. Slijedilo je zatim predstavljanje ostalih sudionika i dosadašnjeg stanja sličnih razvojnih

koncepta laboratorija i potencijalnih novih tvornica za učenje u Hrvatskoj i Bosni i Hercegovini. Ispred tima UNZE govorili su ispred CIP UNZE prof.dr Darko Petković i prof.dr Džafer Dautbegović a ispred IKK prof.dr Mustafa Hadžalić. Oni su predstavili potencijale IKK da u budućnosti razvija koncept LF a prof.Dautbegović je posebno govorio o Interreg RTIT projektu i značaju cirkularne privrede u budućem razvoju LF koncepta na UNZE. U večernjim satima obavljeno je zatvaranje seminara uz završnu riječ i prijedloge potencijalnih zajedničkih aktivnosti te neobavezno druženje i razgledavanje opreme laboratorija C417 („Tvornice za učenje@FESB“).

### **13.05.2025. CIP UNZE: PARTICIPATION IN THE LEARNING FACTORY SEMINAR AT THE UNIVERSITY OF SPLIT**

The Faculty of Electrical Engineering, Mechanical Engineering and Shipbuilding FESB of the University of Split hosted the Annual Conference and Seminar on the topic of Learning Factory for Croatia and neighboring countries. The seminar opened at 9 a.m. on May 14, 2025. in the "Learning Factory" Laboratory, C417 with opening words of welcome from the organizers. After that Prof. emer. Ph.D. sc. Ivica Veža "Factory for learning@FESB as a member and founder of IALF gave a presentation "From initiative to world organization" after which Assoc. prof. Ph.D. sc. Nikola Gjeldum, presented "Factories for learning@FESB: achievements and vision of further development stimulated by the ExCurS project". After him, guests from Rijeka Izv. prof. Sandro Dobovicek, mag. Eng. And Elvis Krulčić presented the topic "Establishing the concept of a learning factory at RITEH, Rijeka - current research, challenges and listening to the needs of the economy". The first participant from outside Croatia was Prof. Ph.D. sc. Željko Stojkić with the topic "Learning factory at FSRE, Mostar, -

a new cycle of decentralized development of the learning factory with a strong need and support from the economy". After a midday break in the afternoon work, associate professor Marko Mladineo presented the presentation "Croatian manufacturing industry on the way to Industry 4.0 / 5.0" and dr. sc. Nataša Tošanović "Smart factory concept - FSB, Zagreb" and dr. sc. Marina Crnjac Žižić on the topic "Integration of Hands-On Education for Human-Centric Digital Twin in the learning factory environment". This was followed by the presentation of the other participants and the current state of similar development concepts of laboratories and potential new learning factories in Croatia and Bosnia and Herzegovina. In front of the UNZE team, Prof. Dr. Darko Petković and Prof. Dr. Džafer Dautbegović and Prof. Dr. Mustafa Hadžalić spoke in front of the IKK. They presented the potential of IKK to develop the LF concept in the future, and Prof. Dautbegović spoke in particular about the Interreg RTIT project and the importance of the circular economy in the future development of the LF concept at UNZE. In the evening, the closing of the seminar took place with a closing speech



and proposals for potential joint activities, as well as an optional meeting and viewing of the equipment of laboratory C417 ("Factories for learning@FESB").

#### **14.05.2025. CIP UNZE: SASTANAK SA DEKANOM FESB SVEUČILIŠTA U SPLITU**

Tokom studijskog boravka na Fakultetu elektrotehnike, strojarstva i brodogradnje FESB Sveučilišta u Splita rukovoditelj Centra za inovativnost i preduzetništvo Univerziteta u Zenici prof.dr Darko Petković imao je sastanak sa dekanom prof.dr Branimirom Lelom oko potencijalnih zajedničkih projekata koji bi se mogli realizovati. Najprije je bilo govora o saradnji sa Learning Factory Laboratorijom sa kojom je već dogovoren zajednički probni prototipni proces ekstrudiranja otpadne plastike i drveta sa ciljem dobijanja Wood Polymer Composita a kroz projekt RTIT Interreg EU. Iz samog engleskog termina WPC ili naše riječi drvno-plastični kompozit, WPC materijal se sastoji od dvije glavne komponente: drva i plastike. Obe komponente u načelu su polimeri, ali vrlo različiti porijeklom, strukturom i svojstvima. Polimerna matrica u WPC-u tvori kontinuiranu fazu okružujući drveni dio. Polimeri teže smanjivanju i bubrenju s temperaturom, ali upijaju malo vlage i mogu biti dobri izolatori pri sprečavanju prodora vlage u dobro napravljenom kompozitu. Drvo sadrži polimere poput lignina, celuloze i hemiceluloze. Jeftinije je, tvrđe i jače od sintetskih polimera čineći ga korisnom ispunom u kompozitopolimera čineći ga korisnom ispunom u kompozitu. Druga tema razgovora bila je saradnja sa kompanijom GS TM iz



Travnika i Rame na cilju razvoja serijske proizvodnje Eco električnog dostavnog vozila u saradnji sa inostranim partnerima. Prof.dr.em. Ivica Veža je pokrenuo i pitanje saradnje na razvoju Learning Factory (LF) koncepta na Univerzitetima u Zenici i Istočnom Sarajevu kao i potencijalni zajednički nastup na razvoju LF centra na Njemačko-turskom univerzitetu u Istanbulu. Prof.Veža je istakao da centralni dio BIH ima niz vrlo interesantnih fabrika te zavidan industrijski potencijal koji je teško pronaći i u Hrvatskoj te naglasio da ova saradnja može biti vrlo dobar izvor buduće saradnje naših univerziteta.

#### **14.05.2025. CIP UNZE: MEETING WITH THE DEAN OF FESB UNIVERSITY IN SPLIT**

During his study stay at the Faculty of Electrical Engineering, Mechanical Engineering and Shipbuilding, FESB, University of Split, the head of the Center for Innovation and Entrepreneurship of the University of Zenica, prof. Dr. Darko Petković, had a meeting with the dean, prof. Dr. Branimir Lela, regarding potential joint projects that could be implemented. First of all, there was talk of cooperation with the Learning Factory Laboratory, with which a joint trial prototype process of extruding waste plastic and

wood has already been agreed with the aim of obtaining Wood Polymer Composite through the RTIT Interreg EU project. From the English term WPC or our word wood-plastic composite, WPC material consists of two main components: wood and plastic. Both components are basically polymers, but very different in origin, structure and properties. The polymer matrix in WPC forms a continuous phase surrounding the wood part. Polymers tend to shrink and swell with temperature, but they absorb little moisture and can be good insulators in preventing moisture penetration in a well-made composite. Wood contains polymers such as lignin, cellulose and hemicellulose. It is cheaper, harder and stronger than synthetic polymers, making it a useful filler in composites. The second topic of discussion was cooperation with the company GS TM from Travnik and Rama on the development of serial production of the Eco electric delivery vehicle in cooperation with foreign partners. Prof.dr.em. Ivica Veža also raised the issue of cooperation in

the development of the Learning Factory (LF) concept at the Universities of Zenica and East Sarajevo, as well as a potential joint appearance in the development of the LF center at the German-Turkish University in Istanbul. Prof. Veža pointed out that the central part of Bosnia and Herzegovina has a number of very interesting factories and an enviable industrial potential that is difficult to find in Croatia, and emphasized that this cooperation can be a very good source of future cooperation between our universities.

#### **17.05.2025. CIP UNZE: POSJETA SAJMU INTERIO U SARAJEVU**

Tradicionalni sajam enterijera i opreme za unutrašnja uređenja održan je u dvorani Zetra u Sarajevu. Na njemu je učestvovao i tim CIP UNZE sa ciljem diseminacije rješenja i prikaza stanja na projektu RTIT Interreg EU (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u Dunavskom region). Naime drvnoplastični kompoziti (WPC) su vrlo interesantan materijal za enterijere a ima primjenu i eksterijerima pa ovakvi sajmovi su najbolja prilika za razgovore sa potencijalnim proizvođačima kao i korisnicima. Ovaj model razgovora i istraživanja je sigurno jedan od najkvalitetnijih načina da se uobličiti marketinško istraživanje potencijala proizvodnje WPC.a u BIH. U tom smislu razgovarano je sa predstavnicima brojnih kompanija iz BIH koji rade sa vještačkim drvnim sortimentima kao i arhitektonskim studijima koji su najveći korisnici materijala kao što je WPC. Posebno vrijeme tokom posjete odvojeno je za posjetu i razgovor na štandu firme ALBENTTO Akvić iz Zenice koju je predstavljao mr Almir Akvić, nekadašnji asistent odsjeka DTD, koji je učestvovao sa novim proizvodnim programom koji se nalazi u razvojnoj fazi.

#### **17.05.2025. CIP UNZE: VISIT TO THE INTERIO FAIR IN SARAJEVO**



The traditional interior and interior design equipment fair was held in the Zetra hall in Sarajevo. The CIP UNZE team also participated in it with the aim of disseminating solutions and presenting the

status of the RTIT Interreg EU project (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region). Namely, wood-plastic composites (WPC) are a very interesting material for interiors and have applications in exteriors, so such fairs are the best opportunity for conversations with potential manufacturers and users. This model of conversation and research is certainly one of the best ways to shape marketing research on the potential of WPC production in Bosnia and Herzegovina. In this sense, discussions were held with representatives of numerous companies from Bosnia and Herzegovina that work with artificial wood assortments as well as architectural studios that are the largest users of materials such as WPC. Special time during the visit was set aside for a visit and conversation at the stand of the ALBENTTO Akvic company from



Zenica, represented by Almir Akvić, M.Sc., former assistant of the DTD department, who participated with a new production program that is in the development phase.



#### **21.05.2025. CIP UNZE: SASTANAK U FIRMI GS TM TRAVNIK**

U sklopu različitih iskustava koje tehnološki transfer ima danas u BiH posebno mjesto zauzima njemačka kompanija GS TM sa sjedištem u Travniku. Kompanija koja postoji tek dvadesetak godina u BiH stigla je od 400 000 eura godišnje proizvodnje do danas respektabilnih cca 40 miliona eura i gotovo 900 zaposlenih. Tema razgovora sa gosp. S.Koepruner, direktoricom i vlasnicom je bila potencijalna saradnja sa Fakultetom elektrotehnike, strojarstva i brodogradnje (FESB) u Splitu kao i CIP UNZE na razvoju serijske proizvodnje Eco električnog dostavnog vozila u saradnji sa inostranim partnerima. Ovo je dogovoreno na fonu posjete pro.Petkovića i Dautbegovica fakultetu u Splitu i razgovora sa dekanom FESB prof.Branimirom Lelom. Naglašeno je da se timovi FESB i CIP UNZE trebaju u skorije vrijeme pojaviti u Travniku i Rama kako bi se upoznali sa proizvodnim procesima i pslovnim modelom fabrike nakon čega bi se išlo na konkretizaciju saradnje..

#### **21.05.2025. CIP UNZE: MEETING AT THE COMPANY GS TM TRAVNIK**

Among the various experiences that technological transfer has today in BiH, a special place is occupied by the German company GS TM with headquarters in Travnik. The company, which has existed for only twenty years in Bosnia and Herzegovina, has grown from 400,000 euros in annual production to today's respectable approx. 40 million euros and almost 900 employees. The topic of conversation with Mr. S. Koepruner, director and owner, was a potential collaboration with the Faculty of Electrical Engineering, Mechanical Engineering and Shipbuilding (FESB) in Split as well as CIP UNZE on the development of serial production of Eco electric delivery vehicles in cooperation with foreign partners. This was agreed on the background of Prof. Petković and Dautbegović's visit to the Faculty in Split and a conversation with the Dean of FESB Prof. Branimir Lela. It was emphasized that the FESB and CIP UNZE teams should appear in Travnik and Rama in the near future in order to familiarize themselves with the production processes and business model of the factory, after which the cooperation would be concretized.

#### **22.05.2025. CIP UNZE: SASTANAK TIMA CIP UNZE NA PROJEKTU RTIT**

Majski sastanak tima RTIT u 2025.godini na projektu RTIT Interreg EU (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u Dunavskom region) održan je na Mašinskom fakultetu. Teme su bile: Održani seminar u Splitu na Fakultetu elektrotehnike, strojarstva i brodogradnje Sveučilišta u Splitu i rezultati učešća tima (Izvjestolac prof.Dautbegović), priprema sirovina i doprema plastičnog otpada iz fabrike Omorika (izvjestilac prof.Petković), finansijsko stanje na projektu (mr Đulić), martovsko učešće na seminaru RTIT u Budimpešti (prof.Dautbegović) te plan za juni i juli 2025 (prof.Petković). Najviše pažnje pobudila je inormacija da je sa FESB Split dogovoreno na njihovom simulacionom uređaju probno ekstrudiranje WPC-a, zajednički nastup prema kompaniji GS TM Rama i Travnik te izrada seta seminara koji bi se zajednički organizovali (FESB – CIP UNZE). U planu je da tim FESB zajedno sa CIP UNZE posjeti GS TM Rama i dogovori elemente projektne saradnje. Asistent Đulić je pored finansijskog stanja na projektu prezentirao i pripremljene radove za konferenciju Kvalitet 2025 u Neumu. Prof.Petković je naglasio da saradnja sa FESB Split pored tehnološkog transfera dobre prakse (koncept Learning Factory) nudi i širenje projektne mreže saradnje sa Uni Istanbul (German-Turkih University) te ulazak još nekih zemalja Balkana u ovu projektnu priču.

### **22.05.2025. CIP UNZE: MEETING OF THE CIP UNZE TEAM ON THE RTIT PROJECT**

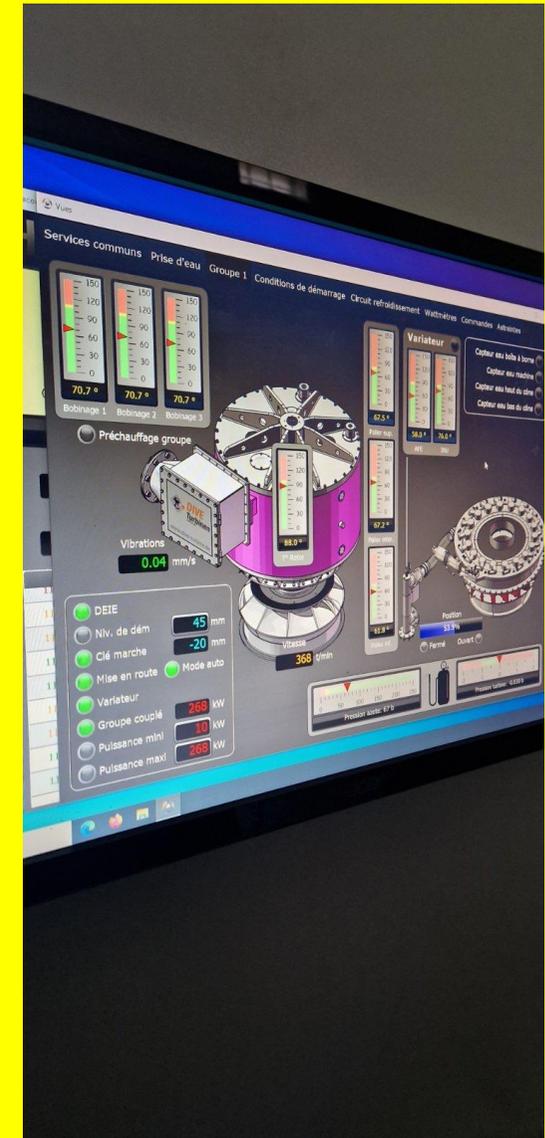
The May meeting of the RTIT team in 2025 on the RTIT Interreg EU project (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region) was held at the Faculty of Mechanical Engineering. The topics were: The seminar held in Split at the Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture of the University of Split and the results of the team's participation (Rapporteur Prof. Dautbegović), preparation of raw materials and delivery of plastic waste from the Omorika factory (Rapporteur Prof. Petković), financial status of the project (Mr. Đulić), March participation in the RTIT seminar in Budapest (Prof. Dautbegović) and the plan for June and July 2025 (Prof. Petković). The most attention was attracted by the information that an agreement was reached with FESB Split to conduct a trial extrusion of WPC on their simulation device, to make a joint appearance at the GS TM Rama and Travnik companies, and to develop a set of seminars that would be jointly organized (FESB – CIP UNZE). The plan is for the FESB team, together with CIP UNZE, to visit GS TM Rama and agree on the elements of project cooperation. In addition to the financial status of the project, Assistant Đulić also presented the papers prepared for the Quality 2025 conference in Neum. Prof. Petković emphasized that cooperation with FESB Split, in addition to the technological transfer of good practice (the Learning Factory concept), also offers the expansion of the project network of cooperation with Uni Istanbul (German-Turkish University) and the entry of some other Balkan countries into this project story.

### **26.05.2025. CIP UNZE: PROBNO TOPLJENJE UZORAKA NA IKK NA PROJEKTU RTIT**

Majski nastavak aktivnosti na projektu RTIT nastavljen je na Institutu Kemal Kapetanović gdje je za potrebe eksperimentalnog dijela rada i istraživanja vezivanja otpadne plastike i otpadnog drvenog brašna izvršeno topljenje i sjedinjavanje ova dva materijala. Naime, na bazi dostavljenih različitih vrsta otpada koji se uglavnom generišu u BiH a koje je pripremila kompanija Omorika Prnjavor te drvenog brašna od otpada krojnice namještaja firme PERO u Zenici pripremljeni su odgovarajući sortimenti te pripremljeni adekvatni kalupi za livenje. Eksperimentalni dio je vodio prof.dr Mustafa Hadžalić uz podršku prof.dr Džafera Dautbegovića i prof.dr Marine Jovanović. Praktičan eksperimentalni dio pratila je i grupa studenata Politehničkog fakulteta na predmetu Projektovanje tehnoloških procesa.

### **26.05.2025. CIP UNZE: TRIAL MELTING OF SAMPLES AT IKK ON THE RTIT PROJECT**

The May continuation of activities on the RTIT project continued at the Kemal Kapetanović Institute, where, for the needs of the experimental part of the work and research on the bonding of waste plastic and waste wood flour, the melting and combining of these two materials was carried out. Namely, on the basis of the delivered various types of waste that are mainly generated in Bosnia and Herzegovina and prepared by the Omorika Prnjavor company and wood flour from the furniture cutting department of the PERO company in Zenica, appropriate assortments were prepared and adequate molds for casting were prepared. The experimental part was led by Prof. Dr. Mustafa Hadžalić with the support of Prof. Dr. Džafer Dautbegović and Prof. Dr. Marina Jovanović. The practical experimental part was also attended by a group of students from the Polytechnic Faculty in the course Design of Technological Processes.



#### **28.05.2025. CIP UNZE: SASTANAK U KOMPANIJI A&F JAJCE**

Odlična saradnja sa poslovnim sektorom u BiH u raznim domenama rada CIP UNZE nastavljena je i sa firmom A&F koju vodi i čiji je većinski vlasnik nekadašnji student MF UNZE ing. Fahrudin Joldić. Uz prigodne poklone izdanja knjiga CIP UNZE koje je prof.Petković dao za biblioteku fabrike AF predstavljen je projekt RTIT Interreg EU (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u Dunavskom regionu). Prof.Petković je predstavio današnju situaciju UNZE kada je domena tehnološkog transfera u pitanju te govorio o održanom seminaru u Splitu na Fakultetu elektrotehnike, strojarstva i brodogradnje Sveučilišta u Splitu, te plan za juni i juli 2025. Prof.Petković je naglasio da saradnja sa FESB Split pored tehnološkog transfera dobre prakse (koncept Learning Factory) nudi i širenje projektne mreže saradnje sa Uni Istanbul (German-Turkish University) te ulazak još nekih zemalja Balkana u ovu projektnu priču. Sa ing. Joldićem razgovarano je i o sadašnjoj problematici ljudskih resursa koji sprečavaju dalji razvoj i širenje proizvodnje u brojnim kompanijama među kojima je i A&F. U tom smislu prof.Petković je pozvao ing. Joldića da bude promotor upisa đaka u Jajcu na fakultete UNZE i dalje školovanje u Zenici. Također, su dogovoreni model nastave koji će se predstaviti studentima IV godine UNZE koji će tradicionalno imati nastavu u junu 2025.u fabrici A&F. Kao socijalno odgovorna kompanija koja na razne načine brine o socijalnom okruženju i pomaže umjetsnost ing. Joldić je pozvao tim CIP UNZE da u julu budu na otvorenju izložbe slika akademskog slikara M.Popaje koji uživa punu podršku kompanije AF.

#### **28.05.2025. CIP UNZE: MEETING AT THE A&F COMPANY JAJCE**

Excellent cooperation with the business sector in Bosnia and Herzegovina in various domains of CIP UNZE's work continued with the company A&F, which is led and majority owned by a former student of MF UNZE, Eng. Fahrudin Joldić. Along with the occasional gifts of CIP UNZE book editions that Prof. Petković gave for the AF factory library, the RTIT Interreg EU project (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region) was presented. Prof. Petković presented the current situation of UNZE when it comes to the domain of technology transfer and spoke about the seminar held in Split at the Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture of the University of Split, and the plan for June and July 2025. Prof. Petković emphasized that cooperation with FESB Split, in addition to the technology transfer of good practices (Learning Factory concept), also offers the expansion of the project network of cooperation with Uni Istanbul (German-Turkish University) and the entry of some other Balkan countries into this project story. With Eng. Joldić, the current problem of human resources that prevent further development and expansion of production in numerous companies, including A&F, was also discussed. In this sense, Prof. Petković invited Eng. Joldić to be a promoter of the enrollment of students in Jajce at UNZE faculties and further education in Zenica. Also, a teaching model was agreed upon that will be presented to the 4th year students of UNZE who will traditionally have classes in June 2025 at the A&F factory. As a socially responsible company that cares about the social environment and supports art in various ways, Eng. Joldić invited the CIP UNZE team to attend the opening of the exhibition of paintings by academic painter M. Popaja in July, which enjoys the full support of the AF company.

### 30.05.2025. CIP UNZE: UČEŠĆE NA KONFERENCIJI "NEDELJA CIRKULARNE PRIVREDE U ZAPADNOM BALKANU" U SARAJEVU

Evropska kuća u Sarajevu bila je domaćin seminara Praktična cirkularna ekonomija u sklopu Nedelje cirkularne privrede za Zapadni Balkan. Nakon pregleda stanja CEW (Circular Econom Week), inicijativa i praksi CEW u ekonomiji MSP u



BIH koji je dala Ajla Sijarić iz organizacije CENER 21 Sarajevo, govorilo se o Cirkularnoj ekonomiji u MSP (od ideje do prakse) u okviru koje su se predstavile firme Biona and Beyond (Vladimir Grabovac), Bosman (Sunija Jahić) i Sugar on Top (Edina Hadžić). Nakon toga u sesiji 2 bilo je govora o projektima koji oblikuju cirkularnu budućnost te su predstavljeni projekti Circular DigiBuild (Faruk Ceric, SERDA), We,circular (Amir Huljić, VTK) i GreenTEX (Amela Ikić-Suljagić, SERDA). Na kraju radnog dijela održana je panel diskusija u kojem su učestvovali Senad Zekić iz Federalnog ministarstva energije, rudarstva i industrije, Adnan Tatlić\_Holjan iz Razvojne Banke FBiH, Vladimir Grabovac iz firme Biona i prof.dr Darko Petković, CIP UNZE. Bila je ovo lijepa prilika da prof..Petković predstavi projekt RTIT u programu Interreg kao i rad tima na razvoju drvnoplastičnih kompozita kao direktan primjer cirkularne privrede. Moderator panela je bila Esma Manić.

### 30.05.2025. CIP UNZE: PARTICIPATION IN THE CONFERENCE "CIRCULAR ECONOMY WEEK IN THE WESTERN BALKANS" IN SARAJEVO

The European House in Sarajevo hosted the seminar Practical Circular Economy as part of the Circular Economy Week for the Western Balkans. After an overview of the state of CEW (Circular Economy Week), CEW initiatives and practices in the SME

economy in Bosnia and Herzegovina given by Ajla Sijarić from the organization CENER 21 Sarajevo, there was a discussion on the Circular Economy in SMEs (from idea to practice) within which the companies Biona and Beyond (Vladimir Grabovac), Bosman (Sunija Jahić) and Sugar on Top (Edina Hadžić) were presented. After that, in session 2, there was a discussion on projects that shape the circular future and the projects Circular DigiBuild (Faruk Ceric, SERDA), We,circular (Amir Huljić, VTK) and GreenTEX (Amela Ikić-Suljagić, SERDA) were presented. At the end of the working session, a panel discussion was held with the participation of Senad Zekić from the Federal Ministry of Energy, Mining and Industry, Adnan Tatlić\_Holjan from the Development Bank of the Federation of Bosnia and Herzegovina, Vladimir Grabovac from the Biona company and Prof. Dr. Darko Petković, CIP UNZE. This was a great opportunity for Prof. Petković to present the RTIT project in the Interreg program as well as the team's work on the development of wood-plastic composites as a direct example of the circular economy. The panel moderator was Esma Manić.





### 07.06.2025. CIP UNZE: UČEŠĆE NA SEMINARU U PROJEKTU RTIT U BEČU

U vremenu 03.06.2025. (utorak) do petka 06.06.2025. predstavnici CIP UNZE učestvovali su u projektu EU Interereg RTIT (Knowhow Communities for Accelerating RTI - Transfer in the Danube Region). Domaćin seminara bio austrijski Tulln, odnosno Kompetenzzentrum Holz GmbH; Bereich Massivholz & Holzverbundwerkstoffe; c/o UFT Universitäts- und Forschungszentrum Tulln Konrad-Lorenz-Straße 24,3430 Tulln/Donau, Austria. Riječi dobrodošlice u srijedu 04.06. ujutro upriličio je Dr. Christian Hansmann (Area Manager Wood Materials Technologies, Wood Kplus) te Univ.-Prof. Dr. Johannes Konnerth (Professor at Institute of Wood Technology and Renewable Materials, BOKU University), zatim projekt lider Anđela Nikčević (IEC Tehnopolis). Nakon toga predstavljen je akcioni plan od strane Krune Ratković, IEC Tehnopolis Nikšić. O obavezama učesnika nakon sastanka u Tulln-u na planu rada na Akcinom planu govorili su Željka Kelkedi and Žiga Lampe, iz Slovenačke privredne komore (CCIS). U narednoj sekciji predstavljena su tri rada po pozivu i to D 2.2.1 Transnational roll out plans (15 min each plus discussion): - Advanced Materials (Barbara Giehmann, BI), Biobased Materials (Lea Ranacher, WK+) i Sustainable Materials (Kristijan Radiković, NIC). Poslepodnevni rad je započeo sa 15 minutnim (demo plan) prezentacijama kako slijedi: - BH: Nedeljko Milosavljevic (INTERA) – hybrid,- HU: Zoltán Orbán/Katalin Dudás Kószó (UP MIK) – hybrid, - BG: Boyko Todorov (ARC Fund), ME: Anđela Nikčević (IEC Tehnopolis) i- SI: Kristijan Radiković (NIC) a nakon toga slijedila je diskusija o učešću MSP u realizaciji demo plana. Prof.Petković i prof.Dautbegović su predstavili plan saradnje sa MSP kroz istraživanje četiri segmenta: a) Način kako sada MSP sarađuju sa akademskom

zajednicom i kako se tranfer tehnologija odvija; b) Istraživanja primjene Industrije 4.0 u firmama drvnog sektora ZDK i SBK, c) Istraživanje i mapiranje potencijala materijalnih tokova MSP za proizvodnju WPC – Wood Polimer Composite i d) Razvoj tehnologija za proizvodnju WPC od otpadnih materijala u BIH te razvoj metoda cirkularne privrede. U tom dijelu vođena je živa rasprava o modelima tehnološkog transfera (TT) u zemljama učesnicima projekta sve do 18 h kada je upriličena satna šetnja gradom u pratnji prof. Dr. Erik van Herwijnen. U četvrtak cjelodnevni rad započeo je predstavljanjem Komptenc centra K+Drvo u Tulln koji je dio TP Tulln a ujedno i dio BOKU Univerziteta Beč. Prvo je slijedila prezentacija Trends and Visions in Wood Materials Technologies” a posle Lab Tour realizovana od Dr. Christian Hansmann. U poslepodnevnim satima Anđela Nikčević, IEC Tehnopolis i Žiga Lampe, CCIS – GZS vodili su diskusiju o potencijalnim novim oblicima saradnje, nove projektne obaveze te upravljanje projektom i finansijski bilans stanja. U toku puta po



povratku u BIH predstavnici CIP UNZE su imali radnu posjetu Univerzitetu u Mariboru i Privrednoj komori Štajerske koje je upriličio Žiga Lampe.



#### **07.06.2025. CIP UNZE: PARTICIPATION IN THE SEMINAR IN THE RTIT PROJECT IN VIENNA**

From 03.06.2025. (Tuesday) to Friday 06.06.2025. representatives of CIP UNZE participated in the EU Interereg RTIT project (Knowhow Communities for Accelerating RTI - Transfer in the Danube Region). The host of the seminar was Tulln, Austria, namely Kompetenzzentrum Holz GmbH; Bereich Massivholz & Holzverbundwerkstoffe; c/o UFT Universitäts- und Forschungszentrum Tulln Konrad-Lorenz-Straße 24,3430 Tulln/Donau , Austria. Welcome words on Wednesday 04.06. morning were given by Dr. Christian Hansmann (Area Manager Wood Materials Technologies, Wood Kplus) and Univ.-Prof. Dr. Johannes Konnerth (Professor at the Institute of Wood Technology and Renewable Materials, BOKU University), followed by project leader Anđela Nikčević (IEC Tehnopolis). After that, the action plan was presented by Kruna Ratković, IEC Tehnopolis Nikšić. The obligations of the participants after the meeting in Tulln on the work plan on the Action Plan were discussed by Željka Kelkedi and Žiga Lampe, from the Slovenian Chamber of Commerce (CCIS). In the next section, three papers were presented by invitation, namely D 2.2.1 Transnational roll out plans (15 min each plus discussion): - Advanced Materials (Barbara Giehmann, BI), Biobased Materials (Lea Ranacher, WK+) and Sustainable Materials (Kristijan Radikovič, NIC). The afternoon work began with 15-minute (demo plan) presentations as follows: - BH: Nedeljko Milosavljevic (INTERA) – hybrid, - HU: Zoltán Orbán/Katalin Dudás Kószó (UP MIK) – hybrid, - BG: Boyko Todorov (ARC Fund), ME: Anđela Nikčević (IEC Tehnopolis) and - SI: Kristijan Radikovič (NIC) and this was followed by a discussion on the participation of SMEs in the implementation of the demo plan. Prof. Petković and Prof. Dautbegović presented the plan of cooperation with SMEs through research into four segments: a) The way SMEs currently cooperate with the academic community and how technology transfer takes place; b) Research into the application of Industry 4.0 in wood sector companies in the ZDK and SBK, c) Research and mapping of the potential of SME material flows for the production of WPC – Wood Polymer Composite and d) Development of technologies for the production of WPC from waste materials in BIH and the development of circular economy methods. In this part, a lively discussion was held on the models of technology transfer (TT) in the countries participating in the project until 6 pm, when a one-hour walk through the city was organized, accompanied by Prof. Dr. Erik van Herwijnen. On Thursday, the whole day's work began with the presentation of the K+Drvo Competence Center in Tulln, which is part of TP Tulln and also part of BOKU University of Vienna. First followed the presentation "Trends and Visions in Wood Materials Technologies" and then a Lab Tour realized by Dr. Christian Hansmann. In the afternoon, Anđela Nikčević, IEC Tehnopolis and Žiga Lampe, CCIS - GZS led a discussion on potential new forms of

cooperation, new project obligations, project management and financial balance sheet. During the return trip to Bosnia and Herzegovina, representatives of CIP UNZE had a working visit to the University of Maribor and the Styrian Chamber of Commerce, organized by Žiga Lampe.

#### **12.06.2025. CIP UNZE: NOVI EKSPERIMENT - IZRADA PROBNIH UZORAKA WPC NA PROJEKTU RTIT**

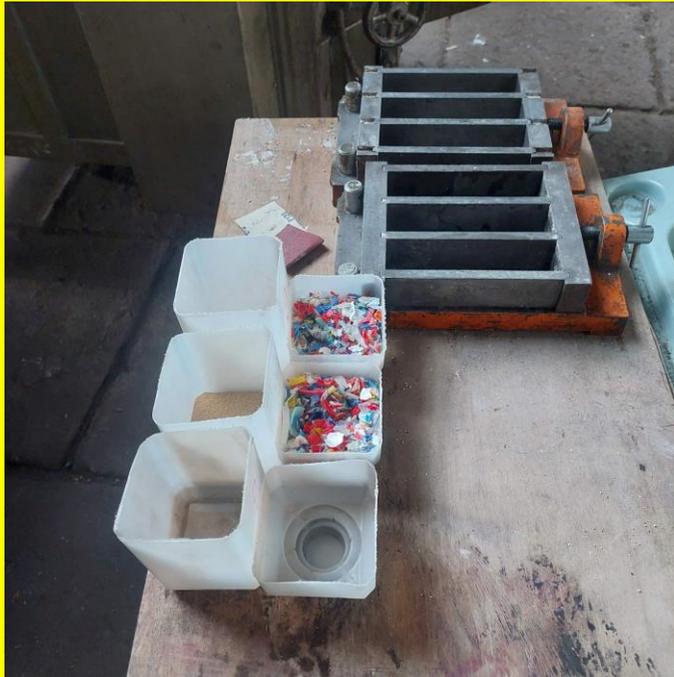
Nakon detaljnih priprema na pokušaju dobijanja probnih uzoraka Wood Polymer Composita od otpadnih sirovina iz BIH radni tim je pristupio i pripremama za livenje probnih uzoraka. U laboratorijama Instituta Kemal Kapetanović (IKK) a prisutni su bili članovi tima prof.dr Darko Petković, prof.dr Džafer Dautbegović i prof.dr Marina Jovanović. Drvno-plastični kompoziti (eng. wood-polymer composites, WPC) su u novije vrijeme postali hit materijal u gradnji kako eksterijera tako i enterijera. Koriste se kako u izgradnji, konstrukcijama i industriji namještaja. Iako ne sasvim nov materijal jer istorijski razvoj drvnoplastičnih kompozita seže u rani dio dvadesetog vijeka. Međutim, drvno-plastični kompoziti u tom vremenu su se rijetko koristili zbog nepoznavanja odnosa između drva i plastike. Prvi industrijski eksperiment obavljen je 1983. godine, i izveden je u američkoj kompaniji „American Woodstock“ koja ih je odlučila iskoristiti za izradu enterijera automobila. Naredna faza u istraživanju drvno-plastičnih kompozita počela je 1991. kada je održana prva internacionalna konferencija vezana za WPC materijale. Kasnih 1990-tih godina u Sjevernoj Americi WPC ubrzano raste na tržištu, a najčešće ga koriste kao vanjske podove. Iz samog engleskog termina WPC ili naše riječi drvno-plastični kompozit, WPC materijal se sastoji od dvije glavne komponente: drva i plastike. Obe komponente u načelu su polimeri, ali vrlo različiti porijeklom, strukturom i svojstvima. Polimerna matrica u WPC-u tvori kontinuiranu fazu okružujući drveni dio. Polimeri teže smanjivanju i bubrenju s temperaturom, ali upijaju malo vlage i mogu biti dobri izolatori pri sprečavanju prodora vlage u dobro napravljenom kompozitu. Drvo sadrži polimere poput lignina, celuloze i hemiceluloze. Jeftinije je, tvrđe i jače od sintetskih polimera čineći ga korisnom ispunom u kompozitopolimera čineći ga korisnom ispunom u kompozitu. Zbog povećane proizvodnje drvna sirovina se u današnje vrijeme troši u velikoj mjeri. Način ljudskog života ima kao posljedicu onečišćenje okoliša, stoga je recikliranje postalo važan faktor u rješavanju problema zbrinjavanja otpada. Zbrinjavanje otpada vrši se u svrhu njegove ponovne upotrebe, a sastoji se od prikupljanja, izdvajanja, prerade i izrade novih proizvoda. Kako je rečeno tokom posljednjih nekoliko desetljeća provedeno je mnogo istraživanja kako bi se stvorio netoksičan drveni kompozit i upravo je drvno plastični kompozit (WPC) jedan od takvih materijala. Drvno plastični kompozit jedan je od primjera modernih materijala, dobivenih spajanjem dviju supstanci koje su najčešće produkti recikliranja. Radi se o plastici i drvu. Drvo se danas primjenjuje za izradu mnogobrojnih proizvoda, a prilikom njegove prerade ostaje otpadni materijal koji nema značajnu svrhu. Taj „otpadni materijal“ može se iskoristiti za izradu drvno plastičnih kompozita. Plastični materijal također je pogodan za recikliranje, a njegova je najčešća primjena u proizvodnji ambalažnih materijala te se uz to može pronaći u graditeljstvu, tekstilnoj industriji, medicini i sl.



#### **12.06.2025. CIP UNZE: NEW EXPERIMENT - PRODUCTION OF WPC TRIAL SAMPLES ON THE RTIT PROJECT**

After detailed preparations for the attempt to obtain trial samples of Wood Polymer Composite from waste raw materials from Bosnia and Herzegovina, the working team began preparations for casting trial samples. In the laboratories of the Kemal Kapetanović Institute (IKK), the team members Prof. Dr. Darko Petković, Prof. Dr. Džafer Dautbegović and Prof. Dr. Marina Jovanović were present. Wood-plastic composites (WPC) have recently become a hit material in the construction of both exteriors and interiors. They are used in construction, structures and the furniture industry. Although not entirely new materials, because the historical development of wood-plastic composites dates back to the early twentieth century.

However, wood-plastic composites were rarely used at that time due to lack of knowledge of the relationship between wood and plastic. The first industrial experiment was carried out in 1983, and was carried out in the American company "American Woodstock", which decided to use them for the manufacture of car interiors. The next phase in the research of wood-plastic composites began in 1991, when the first international conference on WPC materials was held. In the late 1990s, WPC rapidly grew in the market in North America, and it is most often used as outdoor flooring. From the English term WPC or our word wood-plastic composite, WPC material consists of two main components: wood and plastic. Both components are basically polymers, but very different in origin, structure and properties. The polymer matrix in WPC forms a continuous phase surrounding the wooden part. Polymers tend to shrink and swell with temperature, but they absorb little moisture and can be good insulators in preventing moisture penetration in a well-made composite. Wood contains polymers such as lignin, cellulose and hemicellulose. It is cheaper, harder and stronger than synthetic polymers making it a useful filler in composite polymers making it a useful filler in composite. Due to increased production, wood raw material



is being consumed to a large extent nowadays. The way of human life results in environmental pollution, therefore recycling has become an important factor in solving the problem of waste disposal. Waste disposal is carried out for the purpose of its reuse, and consists of collection, separation, processing and creation of new products. As mentioned, a lot of research has been done over the last few decades to create a non-toxic wood composite, and wood plastic composite (WPC) is one such material. Wood-plastic composite is one of the examples of modern materials, obtained by combining two substances that are most often products of recycling. It's about plastic and wood. Today, wood is used to make many products, and during its processing, waste material remains that has no significant purpose. This "waste material" can be used to make wood-plastic composites. Plastic material is also suitable for recycling, and its most common application is in the production of packaging materials, and it can also be found in construction, textile industry, medicine, etc.

#### **20.06.2025. CIP UNZE: INTENZIVIRANJE PROJEKTOG TIMA ZA MAPIRANJE POTENCIJALA U ZDK I SBK IZ PROJEKTA RTIT**

Multimedijalni odjel Centra za inovativnost i preduzetništvo bio je mjesto sastanka projektnog tima projekta RTIT kojem je predsjedavao še tima prof.dr Džafer Dautbegović. Kako je nastavni proces u smislu održavanja predavanja i vježbi završen to se otvara prostor u vrijeme ispita za jači projektni angažman u firmama sa ciljem sagledavanja materijalnih tokova drveta i plastike (Upitnik 1), kao i načina tehnološkog transfera (Upitnik 2) te

dostignutog nivoa u primjeni modela Industrije 4.0 (Upitnik 3). Upitnike koje je pripremio i objasnio prof.Petković, član tima, treba u narednom periodu hitno pažljivo iščitati i spremi se za diskusije i pojašnjenja kod firmi a onda biti spreman ponovo doći i biti stalno na usluzi osobama iz firmi koje će raditi na davanju odgovora i podataka. Izvršena je i lokacijska podjela posla tako da će ekipa prof.Jovanović, prof.Sulunahpašić-mr Đulić-asist Neimarlija biti zaduženi za firme u Zenici, Vitezu i Busovači a prof.Petković i prof.Dautbegović će preuzeti druge opštine ZDK i SBK. Nakon završetka radova u SBK i ZDK projektni tim planira da sa Agencijom PREDA Prijedor uradi i isti posao u Republici Srpskoj. Preliminarna lista firmi data je u tabeli 1.

Tabela 1. Lista firmi za istraživanja u projektu RTIT

**Sektor firme drvoprerade**

<b>Zeničko-dobojski kanton ZDK</b>	<b>Srednjobosanski kanton SBK</b>	<b>Republika Srpska</b>
1. Krivaja TMK Zavidovići 2. Prevent Interior Visoko 3. SECOM Visoko 4. Nansi Žepče 5. PERO Zenica 6. Interprocess Tešanj 7. ARTISAN Tešanj 8. Prograd Žepče 9. Team Wood Visoko 10. Nostro Jelah 11. XY Tukulić –Kakanj 12. Holand Wood Tešanj 13. Intera Olovo 14. Glovis Zenica 15. Domus Arredi Zenica 16. Fantasy Zenica 17. EN EM Doboju Jug 18. Tarket Ilijaš	1. Kontinental Kiseljak 2. MS Wood Fojnica 3. Tamex Busovača 4. FIS Ambyenta Vitez 5. Mlakić Vitez 6. Divan Vitez 7. Promo Donji Vakuf 8. Paletara Busovača 9. Paletara Travnik 10. Palavra furminiri Bila 11. Carlato Bila 12. Nobil Bila 13. Luksor Turbe 14. Malak Janja (Donji Vakuf) 15. Orman OSB Kačuni	1. Standard Prnjavor 2. Vrbas Banja Luka 3. GMP Enterijeri Banja Luka 4. Podromanija Sokolac 5. Perić Pale 6. Savox Vlasenica 7. Vladušić Mokro 8. Stanex Bijeljina 9. Mahagonij Ist-Sarajevo 10. Parketi Terket Vlasenica 11. Klaster drvoprerade PREDA Prijedor

**Sektor firme plastike**

<b>BIH FBiH / RS</b>	<b>Ostale firme i organizacije od interesa za projekt</b>	
1. Alba BH Zenica 2. Tisal Busovača 3. Klaster plastičara BIH Gračanica 4. Omorika Prnjavor 5. Derubis Yahcts Vitez	1. Min.privrede ZDK 2. Min.privrede SBK 3. Sveučilište Split –LF Lab 4. Projektni partneri RTIT 5. TP Intera Mostar	

**20.06.2025. CIP UNZE: INTENSIFICATION OF THE PROJECT TEAM FOR MAPPING POTENTIAL IN ZDK AND SBK FROM THE RTIT PROJECT**

The Multimedia Department of the Center for Innovation and Entrepreneurship was the meeting place of the RTIT project team, chaired by the team's chairman, Prof. Dr. Džafer Dautbegović. As the teaching process in terms of lectures and exercises has been completed, space opens up during the

exam period for stronger project engagement in companies with the aim of examining the material flows of wood and plastic (Questionnaire 1), as well as the methods of technology transfer (Questionnaire 2) and the level achieved in the application of the Industry 4.0 model (Questionnaire 3). The questionnaires prepared and explained by Prof. Petković, a member of the team, should be urgently read carefully in the coming period and prepared for discussions and clarifications with companies, and then be ready to come again and be constantly at the service of people from companies who will work on providing answers and data. The location division of work has also been carried out so that the team of Prof. Jovanović, Prof. Sulunahpašić-Mr Đulić-Assistant Neimarlija will be in charge of the companies in Zenica, Vitez and Busovača, and Prof. Petković and Prof. Dautbegović will take over the other municipalities of ZDK and SBK. After completing the works in SBK and ZDK, the project team plans to do the same work in Republika Srpska with the PREDA Prijedor Agency. A preliminary list of companies is given in Table 1.

Table 1. List of companies for research in the RTIT project

**Wood processing sector**

<b>Zenica Dobož Canton ZDK</b>	<b>Central Bosnia Canton SBK</b>	<b>Republic of Srpska</b>
1. Krivaja TMK Zavidovići 2. Prevent Interior Visoko 3. SECOM Visoko 4. Nansi Žepče 5. PERO Zenica 6. Interprocess Tešanj 7. ARTISAN Tešanj 8. Prograd Žepče 9. Team Wood Visoko 10. Nostro Jelah 11. XY Tukulić –Kakanj 12. Holand Wood Tešanj 13. Intera Olovo 14. Glovis Zenica 15. Domus Arredi Zenica 16. Fantasy Zenica 17. EN EM Dobož Jug 18. Tarket Ilijaš	1. Kontinental Kiseljak 2. MS Wood Fojnica 3. Tamex Busovača 4. FIS Ambyenta Vitez 5. Mlakić Vitez 6. Divan Vitez 7. Promo Donji Vakuf 8. Paletara Busovača 9. Paletara Travnik 10. Palavra furminiri Bila 11. Carlato Bila 12. Nobil Bila 13. Luksor Turbe 14. Malak Janja (Donji Vakuf) 15. Orman OSB Kačuni	12. Standard Prnjavor 13. Vrbas Banja Luka 14. GMP Enterijeri Banja Luka 15. Podromanija Sokolac 16. Perić Pale 17. Savox Vlasenica 18. Vladušić Mokro 19. Stanex Bijeljina 20. Mahagonij Ist-Sarajevo 21. Parketi Terket Vlasenica 22. Klaster drvoprerade PREDA Prijedor

**Plastic processing sector**

<b>BIH FBiH / RS</b>	<b>Other companies interesting for Projects</b>	
6. Alba BH Zenica 7. Tisal Busovača 8. Klaster plastičara BIH	6. Min.privrede ZDK 7. Min.privrede SBK 8. Sveučilište Split –LF Lab	

Gračanica	9. Projektni partneri RTIT	
9. Omorika Prnjavor	10. TP Intera Mostar	
10. Derubis Yahcts Vitez		

### 23.06.2025. CIP UNZE: RADNI SASTANAK TIMA NA PROJEKTU RTIT

Junski sastanak projektnog tima CIP UNZE na projektu RTIT Interreg EU (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u Dunavskom region) održan je na Fakultetu inženjerskih i prirodnih nauka. Razgovaralo se samo u sadržaju upitnika 1, 2 i 3, te otklanjanju nedoumica članova tima oko odgovora na pitanja i šta ako s eodgovor vrednosno nalazi između dvije ocjene. Također, bilo je pitanja kako vrednovati različita odjeljenja jedne tvornice jer sistemi jedne tvornice često su nekompatibilni tako da jedan dio (npr. logistika i priprema imaju ocjenu 4 a proizvodnja 3, skladištenje i otprema 2). Prof.Petković je naglasio da idemo sa srednjom ocjenom primjene neke tehnologije za firmu a ne najvišim postignućem jer se često tako dobija pogrešna slika o stanju firme. Također, prof.Petković naglasio intenziviranje popune upitnika 1, 2 i 3 u firmama ZDK konkretno u Zenici (Domus Aredi, Boha, Glovis i dr.).Prof. Dautbegović je ponovo govorio o značaju cirkularne privrede gdje je na prvom mjestu reciklaža sopstvene otpadne plastike i drveta. Ponovo je bilo riječi o dinamici posjeta firmama u Zenici i Vitezu u toku septembra kako bi se do konferencije u Sofiji imalo najviše obavljenih mapiranja. Prof.Dautbegović je govorio o problematici naplate potraživanja iz projekta za putovanja osoblja jer je put u Beč finansirana vlastitim sredstvima članova tima. Članovima tima predstavljena su iskustva iz Tullna sa seminara koji je održan početkom juna.



### 23.06.2025. CIP UNZE: WORKING MEETING OF THE TEAM ON THE RTIT PROJECT

The June meeting of the CIP UNZE project team on the RTIT Interreg EU project (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region) was held at the Faculty of Engineering and Natural Sciences. The discussion was limited to the content of questionnaires 1, 2 and 3, and the removal of doubts of team members regarding the answers to the questions and what if the answer falls between two grades. There were also questions about how to evaluate different departments of a factory because the systems of a factory are often incompatible so that one part (e.g. logistics and preparation have a grade of 4 and production 3, warehousing and shipping 2). Prof. Petković emphasized that we go with the average grade of the application of a technology for the company and not the highest achievement because this often gives a wrong picture of the state of the company. Also, Prof. Petković emphasized the intensification of filling out questionnaires 1, 2 and 3 in ZDK companies, specifically in Zenica (Domus Aredi, Boha, Glovis, etc.). Prof. Dautbegović spoke again about the importance of the circular economy, where recycling of own waste plastic and wood is in the first place. The dynamics of visits to companies in Zenica and Vitez during September were discussed again in order to have the most mapping completed by the conference in Sofia. Prof. Dautbegović spoke about the issue of collecting receivables from the project for staff travel, because the trip to Vienna was financed by the team members' own funds. The team members were presented with experiences from Tulln from the seminar held in early June.

## 09.07.2025. CIP UNZE: SASTANAK RADNOG TIMA VEZAN ZA PROBLEMATIKU MAPIRANJA POTENCIJALA U PROJEKTU RTIT

Na Fakultetu inženjerskih i prirodnih nauka Univerziteta u Zenici održan je prvi julski sastanak projektnog tima na projektu RTIT. Prof. Jovanović je iskazala određene probleme vezane za upitnike u smislu da pojedina pitanja imaju sličan karakter odgovora. Prof. Petković je naglasio da je želja upravo to da se vidi konzistentnost odgovora različitih ljudi u firmama koji najčešće odgovaraju na ovakve upitnike, posebno U1 i U2, dok U3 je urađen po identičnoj metodologiji koje su razvile kolege sa Fakulteta strojarstva, elektrotehnike i brodogradnje u Splitu koji su vodili ova istraživanja za Industriju 4.0 u Hrvatskoj. Također, prof. Petković je naglasio značaj timskog nastupa CIP UNZE u firmama jer to pored ozbiljnosti u firmama garantuje i uključenost najkompetentnijih ljudi iz MSP. Prezentiran je dosadašnji učinak u realizaciji mapiranja dat u tabeli 1.



Tabela 1/2. Stanje realizacije mapiranja potencijala firmi u BIH / Realisation

### Sektor drvoprerađe ZDK / Wood processing sector

r.b.	Firma /Comp.	Upitnici /Questinary	Urađeno /realised	Izvršilac /Person
1.	Secom Visoko	U1, U2, U3 dostavljeni	U1	DP
2.	HY Buzić Polje	U1, U2, U3 dostavljeni		DP
3.	Prevent Interior Visoko	U1, U2, U3 dostavljeni	U1	DP
4.	InterProcess Tešanj	U1, U2, U3 dostavljeni	U1	DP
5.	PERO Zenica	U1, U2, U3 dostavljeni	U1	DP, DžD
6.	Prograd Žepče	U1, U2, U3 dostavljeni		DP, DžD
7.	Nostro Tešanj	U1, U2, U3 dostavljeni		DP, DžD
8.	Nansi Žepče	U1, U2, U3 dostavljeni	U1	DP, DžD
9.	TMK Zavidovići	U1, U2, U3 dostavljeni	U1	DP

### Sektor drvoprerađe SBK

r.b.	Firma	Upitnici	Urađeno	Izvršilac
1.	FIS Ambyenta	U1, U2, U3 dostavljeni		DP
2.	Kontinental Kiseljak	U1, U2, U3 dostavljeni		DP
3.	Tamex Busovača	U1, U2, U3 dostavljeni		DP
4.	Nobil Bila	U1, U2, U3 dostavljeni		DP
5.	Palavra furniri Bila	U1, U2, U3 dostavljeni		DP

## 09.07.2025. CIP UNZE: WORKING MEETING OF THE TEAM ON THE RTIT PROJECT

The June meeting of the CIP UNZE project team on the RTI Interreg EU project (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region) was held at the Faculty of Engineering and Natural Sciences. The discussion was limited to the content of questionnaires 1, 2 and 3, and the removal of doubts of team members regarding the answers to the questions and what if the answer falls between two grades. There were also questions about how to evaluate different departments of a factory because the systems of a factory are often incompatible so that one part (e.g. logistics and preparation have a grade of 4 and production 3, warehousing and shipping 2). Prof. Petković emphasized that we go with the average grade of the application of a technology for the company and not the highest achievement because

this often gives a wrong picture of the state of the company. Also, Prof. Petković emphasized the intensification of filling out questionnaires 1, 2 and 3 in ZDK companies, specifically in Zenica (Domus Aredi, Boha, Glovis, etc.). Prof. Dautbegović spoke again about the importance of the circular economy, where recycling of own waste plastic and wood is in the first place. The dynamics of visits to companies in Zenica and Vitez during September were discussed again in order to have the most mapping completed by the conference in Sofia. Prof. Dautbegović spoke about the issue of collecting receivables from the project for staff travel, because the trip to Vienna was financed by the team members' own funds. The team members were presented with experiences from Tulln from the seminar held in early June.

#### **25.07.2025. CIP UNZE: SASTANAK I RADNA POSJETA FIRMI TISAL BUSOVAČA NA PROJEKTU RTIT**

Radni tim projekta RTIT (prof.Petković, prof.Dautbegović, v.a.mr Đulić) boravio je u višečasovnoj posjeti firmi TISAL u Busovači i u razgovoru sa izvršnim direktorom Mahirom Mujićem saagledao nekoliko važnih aspekata buduće saradnje. Prvi dio odnosio se na potencijalnu proizvodnju Wood Polymer Composite-a koje tim CIP UNZE istražuje u projektu RTIT. U tom smislu CoE Mujić je upriličio vrlo sadržajan obilazak fabrike u kojem su se predstavnici CIP UNZE mogli upoznati sa različitim fazama nastanka otpada od plastike, njegovim formama, oblicima, mehaničkim karakteristikama i dr. Direktor Mujić je posebnu pažnju posvetio i drvenom otpadu posebno raznim vrstama paleta koje firma svakodnevnom ima te problemima koje i druge firme u Busovači imaju u rukovanju i odlaganju ove vrste otpada. U tom smislu se razgovaralo o tehno-ekonomskoj isplativosti nabavke uređaja za drobljenje i sitnjenje paleta kao i opciji da se na regionalnom nivou ovaj problem rješava kao dio šireg pristupa problematici upravljanja otpadom i deponijama. Dogovoreno je da se istraže potencijalne projektne mogućnosti da se ovakvi uređaji nabave kroz neke EU projekte u BiH. Nakon toga slijedio je obilazak procesnih prostora hemijskog dijela fabrike a na kraju i mašina za proizvodnju plastike gdje je firma Tisal preporučila za potencijalni alat za ekstrudiranje WPC –a uključivanje firme GS Mold iz Kraljeva kao jednog od najboljih proizvođača alata za obradu plastike u regiji. U tom smislu je definisano da se prilikom novembarske posjete Univerzitetu u Sofiji u sklopu projekta RTIT planira i posjeta i razgovori u ovoj fabrici u Kraljevu. Na kraju posjete dogovoreno je da se saradnja intenzivira po okončanju godišnjih odmora u avgustu.

#### **25.07.2025. CIP UNZE: MEETING AND WORKING VISIT TO TISAL BUSOVAČA COMPANY ON THE RTIT PROJECT**

The RTIT project working team (prof. Petković, prof. Dautbegović, v.a.mr Đulić) paid a multi-hour visit to the TISAL company in Busovača and, in a conversation with the executive director Mahir Mujić, reviewed several important aspects of future cooperation. The first part related to the potential production of Wood Polymer Composite, which the CIP UNZE team is researching in the RTIT project. In this sense, CoE Mujić organized a very informative tour of the factory in which representatives of CIP UNZE could learn about the different stages of plastic waste generation, its forms, shapes, mechanical characteristics, etc. Director Mujić also paid special attention to wood waste, especially the various types of pallets that the company has on a daily basis, and the problems that other companies in Busovača have in handling and disposing of this type of waste. In this regard, the techno-economic feasibility of purchasing a device for crushing and shredding pallets was discussed, as well as the option to solve this problem at the regional level as part of a broader approach to waste management and landfills. It was agreed to explore potential project opportunities to purchase such devices through some EU projects in BiH. This was followed by a tour of the process areas of the chemical part of the factory and finally the plastics production machines, where the Tisal company recommended the inclusion of the GS Mold company from Kraljevo for a potential WPC extrusion tool as one of the best manufacturers of plastic processing tools in the region. In this regard, it was defined that during the November visit to the University of Sofia as part of the RTIT project, a visit and discussions at this factory in Kraljevo are planned. At the end of the visit, it was agreed to intensify cooperation after the end of the annual holidays in August.

#### **27.08.2025. CIP UNZE: RADNI SASTANAK TIMA NA PROJEKTU RTIT**

Nakon kolektivnog godišnjeg odmora na UNZE radni tim RTIT Interreg EU (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u Dunavskom region) održao je redovni avgustovski sastanak u bašti Instituta Kemal Kapetanović. Bili su prisutni članovi tima prof.dr Darko Petković, prof.dr Džafer Dautbegović, prof.dr Raza Sulunahpašić, prof.dr Marina Jovanović i v.a mr Emir Đulić. Prof. Dautbegović je pozdravi sve članove tima i poželio uspješan nastavak rada u zimskom semestru te istakao da cilj projekta nije samo razvoj novog proizvoda (WPC) od otpadnih sirovina nego širenje mreže partnera kako u EU, tako i poslovnih sistema i najpolije veće uključivanje studenata u sam projekt. To se može ostvariti i kroz diplomske radove, master teze, saradnju sa drugim univerzitetima koji se bave sličnom problematikom i dr. Prof. Petković je govorio o intenziviranju mapiranja i istakao da će to biti težište aktivnosti u septembru 2025. Bilo je govora i o zajedničkoj nastavi u poslovnim sistemima čime bi se mreža firmi sa kojima CIP UNZE saraduje dodatno proširila i ojačala.



#### **27.08.2025. CIP UNZE: WORKING MEETING OF THE TEAM ON THE RTIT PROJECT**

After the collective annual vacation at UNZE, the RTIT Interreg EU working team (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region) held its regular August meeting in the garden of the Kemal Kapetanović Institute. The team members were Prof. Dr. Darko Petković, Prof. Dr. Džafer Dautbegović, Prof. Dr. Raza Sulunahpašić, Prof. Dr. Marina Jovanović and Acting M.A. Emir Đulić. Prof. Dautbegović greeted all team members and wished them a successful continuation of their work in the winter semester, emphasizing that the goal of the project is not only to develop a new product (WPC) from waste raw materials, but also to expand the network of partners in both the EU and business systems and, most importantly, to involve students more in the project itself. This can also be achieved through diploma theses, master theses, cooperation with other universities dealing with similar issues, etc. Prof. Petković spoke about intensifying mapping and emphasized that this would be the focus of activities in September 2025. There was also talk of joint teaching in business systems, which would further expand and strengthen the network of companies with which CIP UNZE cooperates.



#### **04.09.2025. CIP UNZE: RADNI SASTANAK TIMA NA PROJEKTU RTIT**

Septembarski sastanak projektnog tima CIP UNZE na projektu RTIT Interreg EU (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u Dunavskom region) održan je na Fakultetu inženjerskih i prirodnih nauka. Bili su prisutni članovi tima prof.dr Darko Petković, prof.dr Džafer Dautbegović, prof.dr Raza Sulunahpašić, prof.dr Marina Jovanović, v.a mr Emir Đulić i asistent Amar Neimarlija. Težište sastanka bilo je priprema na ekspertimentalnoj provjeri izrade WPC proizvoda na Institutu Kemal Kapetanović od sirovina koje će se dobiti na poklon od firme OMORIKA reciklaže Doboj (plastika) i firme Pero doo Zenica (drveno brašno). Na bazi obavljenih razgovora sa CoE Instituta Kemal Kapetanović doc.dr Mustaa Hadžalić obavljene su pripreme da se

u jednoj od peći na IKK otopi plastika a onda mješa sa drvenim brašnom i dodacima u posebno pripremljenim kalupima te da se dobijeni proizvodi testiraju na hemijske i mehaničke osobine na IKK: Svi članovi tima su preuzeli obavezu literaturnog pretraživanja svjetskih iskustava sa reciklažom ovih materijala. Teme radnog sastanaka su bile pripreme narednih aktivnosti koje se trebaju provesti u okviru projekta gdje je prof. Petković posebno naglasio intenziviranje popune upitnika 1, 2 i 3 u firmama ZDK konkretno u Zenici (Domus Aredi, Boha, Glovis i dr.). Također najavljeni su konferencije u Zenici, Podgorici, Sofiji, Skadru te organizacije Webinarja za privrednike krajem septembra. Naglašena je i pokazana je saradnja sa kompanijom TISAL Busovača i Omorika Doboj sa kojima se preliminarno pregovora o projektima Cirkularne privrede gdje je na prvom mjestu reciklaža sopstvene otpadne plastike i drveta. Posebno se govorilo značaju diseminacije projekta RTIT i članovi tima su pozvani da pripremaju i ažuriraju informacije o aktivnostima tehnološkog transfera koje bi se trebale naći na web stranici CIP-a i projekta RTIT. Prof. Petković je iskazao interes da se članovi tima sa temama od interesa za RTIT pojave na svakoj od konferencija sa barem po jednim radom. Utvrđena je dinamika posjeta firmama u Zenici i Vitezu u toku septembra kako bi se do konferencije u Sofiji imalo najviše obavljenih mapiranja. Prof. Dautbegović je govorio o problematici naplate potraživanja iz projekta za putovanja osoblja, nabave promo materijala i drugog te iskazao namjere ponovnog razgovora sa menadžmentom UNZE.

#### **04.09.2025. CIP UNZE: WORKING MEETING OF THE TEAM ON THE RTIT PROJECT**

The September meeting of the CIP UNZE project team on the RTIT Interreg EU project (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region) was held at the Faculty of Engineering and Natural Sciences. The team members were Prof. Dr. Darko Petković, Prof. Dr. Džafer Dautbegović, Prof. Dr. Raza Sulunahpašić, Prof. Dr. Marina Jovanović, acting M.A. Emir Đulić and assistant Amar Neimarlija. The focus of the meeting was the preparation for the experimental verification of the production of WPC products at the Kemal Kapetanović Institute from raw materials that will be received as a gift from the company OMORIKA recycling Doboj (plastic) and the company Pero doo Zenica (wood flour). Based on the discussions with the CoE of the Institute Kemal Kapetanović, Assoc. Prof. Mustaa Hadžalić, preparations were made to melt the plastic in one of the furnaces at the IKK and then mix it with wood flour and additives in specially prepared molds, and to test the resulting products for chemical and mechanical properties at the IKK: All team members undertook the obligation to conduct a literature search of world experiences with the recycling of these materials. The topics of the working meetings were the preparations for the next activities to be carried out within the project, where Prof. Petković particularly emphasized the intensification of the completion of questionnaires 1, 2 and 3 in companies of the ZDK, specifically in Zenica (Domus Aredi, Boha, Glovis, etc.). Conferences in Zenica, Podgorica, Sofia, Shkodra and the organization of Webinars for businessmen at the end of September were also announced. The cooperation with the companies TISAL Busovača and Omorika Doboj, with which preliminary negotiations are underway on Circular Economy projects, where recycling of own waste plastic and wood is in the first place, was emphasized and demonstrated. The importance of the dissemination of the RTIT project was particularly discussed and team members were invited to prepare and update information on technology transfer activities that should be found on the CIP and RTIT project websites. Prof. Petković expressed interest in team members presenting at least one paper on topics of interest to RTIT at each conference. The dynamics of visits to companies in Zenica and Vitez during September were determined in order to have the most mapping done by the





conference in Sofia. Prof. Dautbegović spoke about the issue of collecting receivables from the project for staff travel, purchasing promotional materials and other things, and expressed his intentions to talk again with the management of UNZE.

#### **10.09.2025. CIP UNZE: POSJETA FIRMI TISAL NA PROJEKTU RTIT**

Članovi tima prof.dr Darko Petković, prof.dr Džafer Dautbegović, i v.a mr Emir Đulić bili su u radnoj posjeti firmi TISAL Busovača. I dosadašnja saradnja sa firmom TISAL kako u projektu RTIT te sementu nastave bila je odlična a nakon obilaska pogona sa izvršnim direktorom Mahirom Mujićem otvorene su nove potencijalne projektne prilike. Naime, na prvom mjestu riječ je o projektima Cirkularne privrede gdje je na prvom mjestu reciklaža sopstvene otpadne plastike i drveta. CoE Tisala je pokazao timu CIP UNZE probleme koje imaju kako sa otpadnom plastikom u raznim fazama procesa tako i sa otpadnim drvenim paletama i dr. Razgovaralo se o potencijalno novom EU projektu kojim bi se ovakva problematika rješila za brojne firme u SBK. TISAL je dio EZ grupacije koja postoji od 1989 godine.

Na tržištu postoji sa tri različita ali međusobno povezana proizvodna programa: higijena, kozmetika i ambalaža. U okviru programa "GLANZ", "ELLA", "LILLA", "TISAL", "DAILY" i "CITRAL" nalazi se 41 proizvod za široku potrošnju u 135 različitim pakovanja. Plasman i distribuciju proizvoda obavlja se na kompletnoj teritoriji BiH, kao i na teritoriji Hrvatske, Srbije, Slovenije, Gane, Švicarske, Crne Gore, Švedske i Saudijske Arabije. Poseban akcenat u kompaniji daju na razvoj tehnologije, stalno uvođenje novih proizvoda, kao i permanentno usavršavanje postojećeg kadra. Visoke standarde kvaliteta, kao i zavidan dizajn proizvoda, poduzeće održava zahvaljujući poslovnim i prijateljskim vezama s poznatim svjetskim proizvođačima srodnih djelatnosti. Sirovine koje se koriste u proizvodnji su isključivo EU porijekla što garantuje visok stepen kvaliteta proizvoda, sukladnost sa Standardima i Direktivama Evropske Unije što pridonosi uklanjanju štetnih tvari za okoliš, kancerogenih materija i alergeni faktora.

#### **10.09.2025. CIP UNZE: VISIT TO TISAL ON THE RTIT PROJECT**

Team members Prof. Dr. Darko Petković, Prof. Dr. Džafer Dautbegović, and Assitant M.Sc. Emir Đulić paid a working visit to the TISAL company in Busovača. The previous cooperation with TISAL, both in the RTIT project and in teaching, was excellent, and after a tour of the plant with Executive Director Mahir Mujić, new potential project opportunities were opened. Namely, first of all, we are talking about Circular Economy projects, where the recycling of our own waste plastic and wood is the first priority. CoE Tisala showed the CIP UNZE team the problems they have with waste plastic in various stages of the process, as well as with waste wooden pallets, etc. They discussed a potentially new EU project that would solve this problem for numerous companies in the SBK. TISAL is part of the EZ group, which has existed since 1989. It operates on the market with three different but interconnected production programs: hygiene, cosmetics and packaging. Within the "GLANZ", "ELLA", "LILLA", "TISAL", "DAILY" and "CITRAL" programs, there are 41 consumer products in 135 different packages. The placement and distribution of products is carried out throughout the territory of Bosnia and Herzegovina, as well as in the territories of Croatia, Serbia, Slovenia, Ghana, Switzerland, Montenegro, Sweden and Saudi Arabia. The company places special emphasis on the development of technology, the constant introduction of new products, as well as the permanent training of existing personnel. The company maintains high quality standards, as well as enviable product design, thanks to business and friendly ties with well-known global manufacturers of related industries. The raw materials used in production are exclusively of EU origin, which

guarantees a high level of product quality, compliance with European Union Standards and Directives, which contributes to the removal of environmentally harmful substances, carcinogenic substances and allergenic factors.

#### **16.09.2025. CIP UNZE: POSJETA I RAZGOVORI U GS TM RAMA**

Dana 16.09.2025. u tvornici GS Rama održan je sastanak vodstva ove tvornice i GS TMT Travnik s delegacijama Centra za inovativnost i preduzetništvo Univerziteta u Zenici (CIP UNZE) i Fakulteta elektrotehnike, strojarstva i brodogradnje Sveučilišta u Splitu (FESB SUS). Razgovaralo se o tehnološkom razvoju, robotizaciji proizvodnje te drugim elementima potencijalne saradnje VŠO i privrede. Iz CIP UNZE i FESB su bili prisutni:

- □ Prof.dr. sc. Darko Petković- Centar za inovativnost i preduzetništvo; Univerzitet u Zenici (CIP UNZE).
- Prof. dr. sc. Džafer Dautbegović- Mašinski fakultet; Univerzitet u Zenici,
- Prof. dr. sc. Branimir Lela- dekan Fakulteta elektrotehnike, strojarstva i brodogradnje Split; Sveučilište u Splitu,
- □ Prof. dr. sc. Silvestar Šesnić- Prodekan za znanost Fakulteta elektrotehnike, strojarstva i brodogradnje Split; Sveučilište u Splitu,
- □ Prof. dr. sc. Ivica Veža- profesor na Fakultetu elektrotehnike, strojarstva i brodogradnje Split; Sveučilište u Splitu,

Na sastanku je ispred domaćina bila i gosp. Snježana Köpruner, vlasnik i direktor sa timom saradnika. Sastanku se pridružio i načelnik općine Prozor-Rama dr. Jozo Ivančević, gospodina Marko Babić, generalni konzul Republike Hrvatske u Mostaru te počasni mađarski konzul u BiH. Gosp. Koepruner je učesnicima radnog sastanka uputile riječi pozdrava izražavajući svoje uvjerenje kako će zajedničkim radom uspostaviti najbolji razvojni sistem. Profesor Petković i njegov tim CIP UNZE ima višegodišnju suradnju sa GS TMT Travnik gdje radi više od 50 inženjera UNZE, također imaju dio zajedničke nastavne, prakse i projekata i to traje već par godina. Tu su još TS i KS Travnik i Zenica, a u GS Rama uključena je Srednja škola Prozor. Prof.dr. Darko Petkovic, inicijator susreta je naglasio da smo o potencijalnoj projektnoj suradnji CIP UNZE i FESB Split sa GS TMT. Teme su bile mogućnosti istraživanja serijske proizvodnje dostavnog vozila Evo u pogonima GS TMT te suradnja s potencijalnim ino-partnerima na ovom poslu. Zatim daljnji razvoj robotizacije i automatizacije u proizvodnim pogonima GS TM. Razgovarano je i o stalnom obrazovanju zaposlenih kompanije, stipendiranje mladih iz Rame, Travnika i regije za rad u poslovnom sistemu GS TM, pravci daljeg razvoja kompanije, potencijalna sudjelovanja u RDI projektima EU te druge teme od zajedničkog interesa.“



#### **16.09.2025. CIP UNZE: VISIT AND CONVERSATIONS IN GS TM RAMA**

On 16.09.2025. in the GS Rama factory, a meeting was held between the management of this factory and the GS TMT Travnik with delegations from the Center for Innovation and Entrepreneurship of the University of Zenica (CIP UNZE) and the Faculty of Electrical Engineering, Mechanical Engineering and Shipbuilding of the University of Split (FESB SUS). They discussed technological development, robotization of production and other

elements of potential cooperation between the Higher Education Institutions and the economy. The following were present from CIP UNZE and FESB:

- Prof. dr. sc. Darko Petković - Center for Innovation and Entrepreneurship; University of Zenica (CIP UNZE).
  - Prof. Ph.D. sc. Džafer Dautbegović - Faculty of Mechanical Engineering; University of Zenica,
  - Prof. Ph.D. sc. Branimir Leladean of the Faculty of Electrical Engineering, Mechanical Engineering and Shipbuilding Split; University of Split,
  - Prof. Ph.D. sc. Silvestar Šesnić - Vice Dean for Science at the Faculty of Electrical Engineering, Mechanical Engineering and Shipbuilding Split; University of Split,
  - Prof. Ph.D. sc. Ivica Veža - professor at the Faculty of Electrical Engineering, Mechanical Engineering and Shipbuilding Split; University of Split,
- At the meeting, Mr. was in front of the host. Snježana Köpruner, owner and director with a team of associates. The mayor of Prozor-Rama, dr. Jozo Ivančević, Mr. Marko Babić, Consul General of the Republic of Croatia in Mostar and Honorary Hungarian Consul in BiH. Mr. Koepruner addressed the participants of the working meeting with words of greeting, expressing their belief that by working together they will establish the best development system. Professor Petković and his team CIP UNZE have a multi-year collaboration with GS TMT Travnik where more than 50 UNZE engineers work, they also have a part of joint teaching, practice and projects and this has been going on for a couple of years. There are also TS and KS Travnik and Zenica, and Prozor High School is included in GS Rama. Prof. Dr. Darko Petkovic, the initiator of the meeting, emphasized that we are talking about potential project cooperation between CIP UNZE and FESB Split with GS TMT. The topics were the possibilities of researching serial production of the Evo delivery vehicle in GS TMT plants and cooperation with potential foreign partners in this work. Then the further development of robotization and automation in GS TM production plants. The discussion also included continuing education of company employees, scholarships for young people from Rama, Travnik and the region to work in the GS TM business system, directions for further development of the company, potential participation in EU RDI projects and other topics of common interest.

### **13.09.2025. RADNE AKTIVNOSTI NA PROJEKTU EU INTEREG RTIT U TP INTERA MOSTAR U DANE 11/12.09.2025.**

U dane 11. i 12.09. 2025. kao članovi projektnog tima CIP UNZE na projektu RTIT Interreg EU (Projekt Zajednice znanja za ubrzanje prenosa RTI-a u Dunavskom region) boravili su pro.dr Darko Petković i prof.dr Džafer Dautbegović. Teme radnih seminara i sastanaka su bile pripreme narednih aktivnosti koje se trebaju provesti u Zenici, Mostaru, Podgorici, Sofiji te organizacije Webinar za privrednike. Prvog dana nakon predstavljanja učesnika (sa CIP strane prof.Petković i Dautbegović a TP Intera mr Vedran Šimunović direktor TP, Mateja Bošnjak, projekt menadžer i Marija Lovrić, projekt koordinator) bilo je govora o realizaciji aktivnosti CIP UNZE u periodu od poslednjeg seminara u Beču (juli 2025). Prof.Petković je predstavio tri upitnika koja su u fazi realizacije u firmama ZDK i SBK i to Upitnik 1 - Upitnik o materijalnim tokovima preduzeća, Upitnik 2 – Načini tehnološkog transfera i saradnje i Upitnik 3 – Dostignuti nivo drvnog i sektora plastike u BIH u primejni Industrije 4.0. Nakon ovog predstavljanja prof.Petković je prezentirao pilot studiju za 6 kompanija drvnog sektora koja je pripremljena za sastanak u Podgorici dok se na U2 i U3 aktivno radi. Prof.Dautbegović je isto ovo prezentirao za sektor plastike te elemente reciklažnih tehnologija iz ovog domena. U razgovoru naravno najviše riječi bilo je o planiranim aktivnostima na projektu RTIT od kojih se izdvajaju aktivnosti cjelovitog mapiranja potencijala drvenog i plastičnog otpada sa posebnim osvrtom na vještačke sorte drveta (mediapan, iverica, i sl.) u ZDK i SBK. Također, projektni tim radi na sagledavanju potencijala za nivo primjene Industrije 4.0 u firmama koje budu predmet mapiranja te čini napore da se eksperimentalnim putem dođe do prototipne proizvodnje WPC-a od otpadne plastike i drveta. Predstavljeni su i radovi sa tematikom iz projekta koji su bili na konferenciji Kvalitet 2025 u Neumu. Naglašena je i pokazana je saradnja sa kompanijom TISAL Busovača i Omorika Doboj sa kojima se preliminarno pregovora o projektima Cirkularne privrede gdje je na prvom mjestu reciklaža sopstvene otpadne plastike i drveta.

Drugog dana pripreman je plan diseminacije projekta RTIT. Problematika prikaza aktivnosti tima CIP UNZE je riješena tako da će sve naredne i već realizovane aktivnosti biti date na domeni CIP-UNZE u rubrici Aktuelnosti čime će ih tim TP Intera moći koristiti za projektne potrebe. Posebno se govorilo značaju diseminacije projekta RTIT. Tim CIP UNZE je to aktivno radio kroz svakodnevnu saradnju sa privrednicima u ZDK i SBK. Pored toga bilo je i više radova na konferencijama kao što su Jahorina Business Forumu 2025 u martu, EMFM 2025 u Beogradu, Kvalitet-Qualit juna 2025 u Neumu te oktobru konferencija Instituta Kemal Kapetanović a u decembru 2025 Ekološko inženjerstvo u Skadru. Prof. Petković je iskazao interes da se članovi tima sa temama od interesa za RTIT pojave na svakoj od konferencija sa barem po jednim radom. Pokrenuto je i pitanja sekcije projekta RTIT na konferenciji Instituta Kemal Kapetanović u oktobru 2025 koju bi vodili CIP UNZE i TP Intera. Na kraju drugog radnog dana prof. Dautbegović, kao šef tima UNZE, je govorio o finansijskim problemima na projektu. I pored svih problema finansijski izvještaj projekta za prvu polovinu 2025. godine te pozitivnu ocjenu koju je tim CIP UNZE dobio od nosioca projekta Tehnopolisa iz Nikšića i Privredne komore Slovenije.



### **13.09.2025. WORK ACTIVITIES ON THE EU INTEREG RTIT PROJECT IN TP INTERA MOSTAR ON 11/12.09.2025.**

On 11 and 12.09. 2025, as members of the CIP UNZE project team, Prof. Dr. Darko Petković and Prof. Dr. Džafer Dautbegović visited the RTIT Interreg EU project (Knowledge Community Project for Accelerating the Transfer of RTI in the Danube Region). The topics of the work seminars and meetings were the preparation of the next activities to be carried out in Zenica, Mostar, Podgorica, Sofia and the organization of Webinars for business people. On the first day, after the presentation of the participants (from the CIP side Prof. Petković and Dautbegović and TP Intera MSc Vedran Šimunović, TP Director, Mateja Bošnjak, Project Manager and Marija Lovrić, Project Coordinator), there was a discussion on the implementation of CIP UNZE activities in the period since the last seminar in Vienna (July 2025). Prof. Petković presented three questionnaires that are in the implementation phase in companies in ZDK and SBK, namely Questionnaire 1 - Questionnaire on material flows of the company,

Questionnaire 2 - Methods of technology transfer and cooperation and Questionnaire 3 - The achieved level of the wood and plastics sector in BIH in the application of Industry 4.0. After this presentation, Prof. Petković presented a pilot study for 6 companies in the wood sector that was prepared for the meeting in Podgorica while work is actively underway on U2 and U3. Prof. Dautbegović also presented this for the plastics sector and elements of recycling technologies from this domain. Of course, the conversation focused on the planned activities of the RTIT project, of which the activities of comprehensive mapping of the potential of wood and plastic waste stand out, with special emphasis on artificial wood varieties (mediaboard, chipboard, etc.) in ZDK and SBK. The project team is also working on assessing the potential for the level of application of Industry 4.0 in the companies that will be the subject of mapping and is making efforts to experimentally achieve prototype production of WPC from waste plastic and wood. Papers on the topic of the project that were at the Quality 2025 conference in Neum were also presented. Cooperation with the company

TISAL Busovača and Omorika Doboј was emphasized and demonstrated, with which preliminary negotiations are underway on Circular Economy projects where recycling of own waste plastic and wood is in the first place.

On the second day, a dissemination plan for the RTIT project was prepared. The issue of presenting the activities of the CIP UNZE team was resolved so that all subsequent and already implemented activities will be given in the CIP-UNZE domain in the News section, which will allow the TP Inter team to use them for project needs. The importance of disseminating the RTIT project was particularly emphasized. The CIP UNZE team actively did this through daily cooperation with businessmen in the ZDK and SBK. In addition, there were several papers at conferences such as Jahorina Business Forum 2025 in March, EMFM 2025 in Belgrade, Kvalitet-Qualit in June 2025 in Neum, and the Kemal Kapetnović Institute conference in October and the Ecological Engineering conference in Shkodra in December 2025. Prof. Petković expressed interest in having team members with topics of interest to RTIT appear at each of the conferences with at least one paper. The issue of the RTIT project section at the Kemal Kapetanović Institute conference in October 2025, which would be led by CIP UNZE and TP Intera, was also raised. At the end of the second working day, Prof. Dautebgović, as the head of the UNZE team, spoke about the financial problems of the project. Despite all the problems, the project's financial report for the first half of 2025 and the positive assessment that the CIP UNZE team received from the project leader Tehnopolis from Nikšić and the Slovenian Chamber of Commerce.



#### **15.09.2025. CIP UNZE: MAPIRANJE POTENCIJALA DRVNOG SEKTORA U ZDK I SBK U PROJEKTU RTIT – FIRMA BOHA ZENICA**

Prema dogovoru na sastanku projektnog tima, održanog 09. 09. 2025. članice projektnog tima prof. dr. Marina Jovanović i prof. dr. Raza Sunulahpašić su posjetile tokom mjeseca septembra nekoliko privrednih subjekata u središnjoj Bosni. Prva posjeta je bila 15. 09. 2025. poduzeću BOHA d.o.o. Zenica koje se bavi proizvodnjom tapaciranog namještaja i ima preko 50 zaposlenika. U razgovoru sa suvlasnikom firme Harunom Begagićem i glavnim inženjerom proizvodnje Huseinom S. dobijeni su podaci da oni ne vrše zasebno odvajanje otpada od rezanja punog drveta i ploča. Namjena ovih mapiranja potencijala u srednjoj Bosni (ZDK i SBK) je da se dođe do što kvalitetnijih podataka o količinama materijala koji se odbacuju iz proizvodnje kao drveni otpad od vještačkih sortimenata drveta (iverica, mediapan, laminati, i dr.). Ovi proizvodi predstavljaju potencijalno značajan proizvod za cirkularnu privredu i razvoj drvnoplastičnih polimera i osnova su za studije ekonomičnosti potencijalne proizvodnje, tehnološke obrade i dr. a koje tim CIP UNZE istražuje u okviru projekta RTIT Interreg EU.

#### **15.09.2025. CIP UNZE: MAPPING THE POTENTIAL OF THE WOOD SECTOR IN ZDK AND SBK IN THE RTIT PROJECT – BOHA ZENICA COMPANY**

According to the agreement at the project team meeting held on 09. 09. 2025, project team members Prof. Dr. Marina Jovanović and Prof. Dr. Raza Sunulahpašić visited several businesses in central Bosnia during the month of September. The first visit was on 15. 09. 2025 to the company BOHA d.o.o. Zenica, which produces upholstered furniture and has over 50 employees. In a conversation with the co-owner of the company Harun Begagić and the chief production engineer Husein S., information was obtained that they do not separate waste from cutting solid wood and boards. The purpose of these potential mappings in central Bosnia (ZDK and SBK) is to obtain the highest quality data on the quantities of materials that are discarded from production as wood waste from artificial wood assortments (chipboard, MDF, laminates, etc.). These products represent a potentially significant product for the circular economy and the development of wood-plastic polymers and are the basis for studies of the economics of potential production, technological processing, etc., which the CIP UNZE team is investigating within the framework of the RTIT Interreg EU project.

**16.09.2025. CIP UNZE: MAPIRANJE POTENCIJALA DRVNOG SEKTORA U ZDK I SBK U PROJEKTU RTIT – FIRME GLOVIS, ORLANDO, DOMUS AREDI I ALMY**

U cilju sagledavanja količina i sortimenata otpadnog drveta kao i nivoa primjene koncepta Industrije 4.0 radni tim CIP UNZE (prof. Jovanović i prof. Sulunahpašić) su posjetile firme GLOVIS, Domus Aredi i Orlando. Prva firma u cjelodnnevnoj radnoj psojeti bila je firma GLOVIS d.o.o. Zenica koja se bavi proizvodnjom opreme za dječja igrališta, vrtiće i slično. Zbog nemogućnosti dogovora za sastanak ostavljeni su upitnici gospođi Azri Ahmić koje su trebali popuniti i poslati. Iz razgovora sa predstavnicima menadžmenta saznalo se da se oni bave uglavnom preradom punog drveta i da nemaju puno otpada u vidu drvnog brašna od vještačkih sortimenata drveta Isti dan su ostavljeni upitnici i gospođici Amelini iz firme DOMUS ARREDI

Zenica. Obavljena je posjeta i firmi ORLANDO d.o.o. koja se bavi proizvodnjom namještaja. U razgovoru s direktorom Ernadam Alićem doznaje se da im je sirovina 90 % puno drvo, tako da nemaju veće količine otpadnog drvnog brašna od vještačkog drveta. Također je obavljena posjeta reznom centru firme Almy Baucentar Zenica koji se bave uslugama rezanja i kantanja ploča za pločasti namještaj. Razgovor je vođen s Kenanom Sinanovićem, voditeljem Baucentra. Oni imaju značajnu količinu otpadnog brašna i na stroju za rezanje ploča (oko 2 vreće 80x100 cm tjedno) i na stoju za kantanje (oko 2 vreće tjedno). Gotovo sav taj otpad odvozi firma ALBA Zenica.



### **16.09.2025. CIP UNZE: MAPPING THE POTENTIAL OF THE WOOD SECTOR IN ZDK AND SBK IN THE RTIT PROJECT – COMPANIES GLOVIS, ORLANDO, DOMUS AREDI AND ALMY**



In order to assess the quantities and assortments of waste wood as well as the level of application of the Industry 4.0 concept, the CIP UNZE working team (prof. Jovanović and prof. Sulunahpašić) visited the companies GLOVIS, Domus Aredi and Orlando. The first company in the all-day working visit was the company GLOVIS d.o.o. Zenica, which manufactures equipment for children's playgrounds, kindergartens and the like. Due to the impossibility of arranging a meeting, questionnaires were left with Ms. Azra Ahmić, which they were supposed to fill out and send. From the conversation with the management representatives, it was learned that they mainly process solid wood and that they do not have a lot of waste in the form of wood flour from artificial wood assortments. On the same day, questionnaires were also left with Ms. Amelina from the company DOMUS ARREDI Zenica. A visit was also made to the company ORLANDO d.o.o., which manufactures furniture. In a conversation with the director Ernad Alić, it was learned that their raw material is 90% solid wood, so they do not have large amounts of waste wood flour from artificial wood. A visit was also made to the cutting center of the company Almy Baucentar Zenica, which provides services for cutting and binning panels for panel furniture. The conversation was held with Kenan Sinanović, the manager of Baucentar. They have a significant amount of waste flour both on the panel cutting machine (about 2 bags 80x100 cm per week) and

on the binning stand (about 2 bags per week). Almost all of this waste is transported by the company ALBA Zenica.

### **19.09.2025. CIP UNZE: MAPIRANJE POTENCIJALA DRVNOG SEKTORA U ZDK I SBK U PROJEKTU RTIT – FIRME INTER-COM, DAJIĆ I AE TIMBER**

Prilikom posjete firmi INTER-COM d.o.o. Zenica koja se između ostalog bavi i rezanjem ploča za pločasti namještaj. Razgovor je vođen s direktorom Safetom Škaljićem, menadžerom prodaje Naidom Šabanović i voditeljem proizvodnje pločastog namještaja Damirom Hasakovićem. Doznaje se da na tjednoj bazi imaju po slobodnoj procjeni oko 4 vreće otpadnog drvnog brašna i da je mjesečni ulaz na rezaoni oko 200 ploča (dimenzije ploče oko 2x2,8 m). Nakon toga obavljen je posjet firmi AE TIMBER d.o.o. Zenica koja se skoro isključivo bavi rezanjem i kantiranjem ploča za pločasti namještaj. Razgovor je vođen s direktorom Amarom Kadićem. Firma je osnovana krajem 2023. godine i ima manje od 10 zaposlenika. Posjeduju 2 CNC raskrajača za rezanje ploča i jednu kantaricu. Sav otpad (nemaju precizne podatke o količini) u vidu drvnog brašna za sada odvozi firma ALBA Zenica, ali su kupili stroj za izradu briketa za loženje koje će praviti od mješavine drvene piljevine i drvnog brašna. Isti dan je posjećena i firma DAJIĆ d.o.o. Zenica koja se također bavi rezanjem ploča. U razgovoru s gospodinom Dajićem dolazi se do saznanja da firma ima samo 2 zaposlenika i manje količine drvnog brašna koje daje fizičkim licima koja to koriste kao prostirku za pilad. Mapiranje su obavile prof. Jovanović i Sulunahpašić.

### **19.09.2025. CIP UNZE: MAPPING THE POTENTIAL OF THE WOOD SECTOR IN ZDK AND SBK IN THE RTIT PROJECT – COMPANIES INTER-COM, DAJIĆ AND AE TIMBER**

During a visit to the company INTER-COM d.o.o. Zenica, which, among other things, is engaged in cutting boards for panel furniture. The conversation was held with the director Safet Škaljić, sales manager Naida Šabanović and the head of panel furniture production Damir Hasaković. It was learned that they have about 4 bags of waste wood flour on a weekly basis, according to a free estimate, and that the monthly input to the cutting plant is about 200 boards (board dimensions about 2x2.8 m). After that, a visit was made to the company AE TIMBER d.o.o. Zenica, which is almost exclusively engaged in cutting and edging boards for panel furniture. The conversation was held with the director Amar Kadić. The company was founded at the end of 2023 and has less than 10 employees. They have 2 CNC cutters for cutting boards and one bin. All waste (they do not have precise data on the quantity) in the form of wood flour is currently being transported by the company ALBA Zenica, but they have purchased a machine for making briquettes for heating, which they will make from a mixture of wood sawdust and wood flour. The same day, the company DAJIĆ d.o.o. Zenica, which also deals with cutting boards, was also visited. In a conversation with Mr. Dajić, it was learned that the company has only 2 employees and small quantities of wood flour that it provides to individuals who use it as bedding for chickens. The mapping was carried out by Prof. Jovanovic and Sulunahpaišić.

**25.09.2025. CIP UNZE: MAPIRANJE POTENCIJALA DRVNOG SEKTORA U ZDK I SBK U PROJEKTU RTIT – FIRME INTER-COM, DAJIĆ I AE TIMBER**

Dana 25. 09. 2025. godine u radnoj posjeti tima CIP UNZE (prof. Jovanovic i prof.Sulunahpasic) posjećena je firma AMBYENTA FIS Vitez. Domaćin je bio Ivan Strukar, direktor divizije AMBYENTA. Doznaje se da oni imaju najveće količine drvene prašine koju uglavnom sakupljaju u kontejner i da otprilike napune oko 3 kontejnera mjesečno. Iz kontejnera se brašno istresa na asfaltiranu podlogu koja se nalazi u sredini između okolnih proizvodnih objekata. Dio ovog otpada otkupljuje firma SELMANEX Kiseljak, a dio STAMAL Kreševo. Ostatak ostaje neiskorišten na deponiji. AMBYENTA posjeduje i značajne količine plastičnog otpada: plastične korpe za voće i druga plastika i različite vrste najlona.

Isti dan je obavljena posjeta i firmi CONTEGO d.o.o. Vitez koja se već 10 godina bavi rezanjem ploča za pločasti namještaj i imaju 4 raskrajača za rezanje ploča i 4 kantarice od kojih su jedan krivolinijski raskrajač i jedna krivolinijska kantarica. U razgovoru sa zastupnikom firme Bahrudinom Bešom doznaje se da firma ima značajne količine otpadnog drvnog brašna (50 do 70 kg dnevno) koje sakupljaju ili odlažu u natkriveni bunker. Za odvoz nakupljnog brašna plaćaju vanjske firme (EURODOM, IGM HASKIĆ).



### **25.09.2025. CIP UNZE: MAPPING THE POTENTIAL OF THE WOOD SECTOR IN ZDK AND SBK IN THE RTIT PROJECT – COMPANIES INTER-COM, DAJIĆ AND AE TIMBER**

On 25. 09. 2025, the CIP UNZE team (prof. Jovanovic and prof. Sulunahpasic) visited the company AMBYENTA FIS Vitez during a working visit. The host was Ivan Strukar, director of the AMBYENTA division. It was learned that they have the largest amounts of wood dust, which they mainly collect in a container and that they fill approximately 3 containers per month. The flour is poured out of the container onto the asphalt surface located in the middle between the surrounding production facilities. Part of this waste is purchased by the company SELMANEX Kiseljak, and part by STAMAL Kreševo. The rest remains unused in the landfill. AMBYENTA also has significant amounts of plastic waste: plastic fruit baskets and other plastics and various types of nylon.

On the same day, a visit was made to the company CONTEGO d.o.o. Vitez, which has been cutting panels for panel furniture for 10 years and has 4 panel cutters and 4 pallets, one of which is a curved cutter and one curved pallet. In a conversation with the company's representative Bahrudin Beša, it was learned that the company has significant quantities of waste wood flour (50 to 70 kg per day) that they collect or store in a covered bunker. External companies (EURODOM, IGM HASKIĆ) pay for the removal of the accumulated flour.

### **30.09.2025. WEBINAR NA PROJEKTU EU INTEREG RTIT**

Tehnološki park INTERA Mostar i Centar za inovativnost i preduzetništvo Univerziteta u Zenici bili su organizatori Webinara koji je održan 30.09.2025.godine na temu stanja tehnološkog transfera i povezanosti akademskog sektora i poslovne zajednice. U webinaru je učestvovalo više od 30 učesnika iz kompanija i sektora visokog obrazovanja iz BiH. Goste je pozdravio i dao uvodne napomene direktor TP Intera Vedran Šimunović nakon čega je moderator Nedeljko Milosavljević pozvao uvodničara prof.dr Darka Petkovića iz CIP UNZE da iznese svoja iskustva u tehnološkom transferu: kako se on nekada odvijao i kakva je situacija danas. U petnaestminutnom izlaganju prof.Petković je prvo govorio o stanju VŠO i RDI Institucija koje su imale dominantnu ulogu u vremenu do 1990 u sistemu TT ka velikim poslovnim sistemima i danas kada dominira sektor MSP i potpuno drugačije poslovne relacije. Dosta je bilo riječi i o samom projektu RTIT koji analizira različite modalitete TT te nastojanjima tima CIP UNZE da kroz konkretnu saradnju sa poslovnim sistemima iz sektora plastike i drvoprerade dođe do tehnologije proizvodnje drveno-plastičnih kompozita na bazi otpadnih sirovina i na taj način u naš poslovni sektor učini značajan tehnološki transfer jednog proizvoda koji na ovaj način se uobičajeno ne radi. Ispred UNZE u webinaru su učestvovali pored prof.Petkovića i profesorice Jovanović i Sulunahpašić te v.a. Đulić a ispred TP Intera mr Vedran Šimunović direktor TP, Mateja Bošnjak, projekt menadžer i Marija Lovrić, projekt koordinatorka. Pored vrlo korisnih informacija koje su se mogle čuti tokom webinara za projektni tim UNZE je vrlo značajno što su tokom ovog webinara proširili listu potencijalnih partnera na razvoju WPC.

### 30.09.2025. WEBINAR ON THE EU INTEREG RTIT PROJECT

The INTERA Technology Park Mostar and the Center for Innovation and Entrepreneurship of the University of Zenica were the organizers of the Webinar that was held on 30.09.2025 on the topic of the state of technology transfer and the connection between the academic sector and the business community. More than 30 participants from companies and the higher education sector from BiH participated in the webinar. The guests were greeted and given introductory remarks by the Director of TP Inter Vedran Šimunović, after which the moderator Nedeljko Milosavljević invited



the introductory speaker, Prof. Dr. Darko Petković from CIP UNZE, to present his experiences in technology transfer: how it used to take place and what the situation is today. In a fifteen-minute presentation, Prof. Petković first spoke about the state of higher education and RDI institutions that had a dominant role in the period up to 1990 in the TT system towards large business systems and today when the SME sector and completely different business relations dominate. There was also a lot of talk about the RTIT project itself, which analyzes various modalities of TT, and the efforts of the UNZE CIP team to, through concrete cooperation with business systems from the plastics and wood processing sectors, achieve the technology for producing wood-plastic composites based on waste raw materials and thus make a significant technological transfer of a product that is not usually made in this way to our business sector. In addition to Prof. Petković, the webinar was attended by Professors Jovanović and Sulunahpašić and V.A. Đulić, and on behalf of TP Inter, M.Sc. Vedran Šimunović, Director of TP, Mateja Bošnjak, Project Manager and Marija Lovrić, Project Coordinator. In addition to the very useful information that could be heard during the webinar, it is very important for the UNZE project team that they expanded the list of potential partners in the development of WPC during this webinar.

## **02.10.2025. UČEŠĆE CIP UNZE NA NAUČNO-STRUČNOJ KONFERENCIJI POVODOM 64 GODINE RADA INSTITUTA KEMAL KAPETANOVIĆ UNZE**

U čast 64 godine postojanja Instituta Kemal Kapetanović održana je međunarodna naučno-stručna konferencija „Stanje i izazovi proizvodnje i prodaje savremenih materijala“. Uz pozdravna obraćanja brojnih gostiju konferencija je započela sa uvodnim referatima koje su podnijeli prof.dr Zdekna Zovko-Brodarac, sa Metalurškog fakulteta iz Siska, Prof.dr Branislav Marković sa Metalurškog fakulteta u Boru te prof.dr Omer Beganović sa IKK UNZE. U dvije sekcije prezetirani su radovi pristigli za ovu konferenciju a među njima i radovi na temu Fabrika za učenje (Learning Factory) koji je prezetirao prof.dr Ivica Veža sa FESB Split rađen sa timom CIP i IKK UNZE te rad na temu razvoja drveno plastičnih polimera iz projekta RTIT koji je radio tim CIP UNZE a prezentovala prof.dr Raza Hadžalić. Održane su i tri sekcije sa privrednicima koje su vodili prof.dr Darko Petković, prof.dr Džafer Dautbegović i Mr Branka Muminović a u kojim su učestvovalе firme iz BiH (Euro-Roal, Euro-Metali-Doboj jug, Inženjering-Jelah, Hifa Oil Tešanj, Pobjeda-livnica Turbe, Elker Ljubija, Orazo Bijeljina, Institut za zavarivanje Tuzla, TRC Petrovaradin, i dr.). Na kraju radnog dana održana je svečana sjednica IKK te podjeljena priznanja zaslužnim. Organizatori konferencije su bili IKK UNZE, CIP UNZE, fakulteti iz Beograda, Siska, Bora i Kragujevca, te privredne komore FBiH i ZDK.

## **02.10.2025. PARTICIPATION OF CIP UNZE IN THE SCIENTIFIC AND EXPERT CONFERENCE ON THE OCCASION OF 64 YEARS OF WORK OF THE KEMAL KAPETANOVIĆ INSTITUTE UNZE**

In honor of the 64th anniversary of the Kemal Kapetanović Institute, an international scientific and expert conference "State and Challenges of Production and Sales of Modern Materials" was held. With welcoming speeches from numerous guests, the conference began with introductory papers presented by Prof. Dr. Zdekna Zovko-Brodarac, from the Faculty of Metallurgy in Sisak, Prof. Dr. Branislav Marković from the Faculty of Metallurgy in Bor, and Prof. Dr. Omer Beganović from the IKK UNZE. The papers submitted for this conference were presented in two sections, including papers on the topic of the Learning Factory presented by Prof. Dr. Ivica Veža from FESB Split, done with the CIP and IKK UNZE team, and a paper on the topic of the development of wood-plastic polymers from the RTIT project done by the CIP UNZE team and presented by Prof. Dr. Raza Hadžalić. Three sections with businessmen were also held, led by Prof. Dr. Darko Petković, Prof. Dr. Džafer Dautbegović and Mr. Branka Muminović, and in which companies from BiH participated (Euro-Roal, Euro-Metali-Doboj jug, Inženjering-Jelah, Hifa Oil Tešanj, Pobjeda-livnica Turbe, Elker Ljubija, Orazo Bijeljina, Welding Institute Tuzla, TRC Petrovaradin, etc.). At the end of the working day, a ceremonial session of the IKK was held and awards were given to the deserving. The organizers of the conference were IKK UNZE, CIP UNZE, faculties from Belgrade, Sisak, Bor and Kragujevac, and the chambers of commerce of the Federation of Bosnia and Herzegovina and the ZDK.





### 03.10.2025. OKRUGLI STO SA POSLOVNOM ZAJEDNICOM NA PROJEKTU EU INTEREG RTIT

Nakon održanog Webinara koji su zajednički organizovali Tehnološki park INTERA Mostar i Centar za inovativnost i preduzetništvo Univerziteta u Zenici a u okviru Interreg RTIT održan je i Okrugli sto na temu Saradnja akademske zajednice i poslovnog sektora. Okrugli sto je održan u okviru konferencije „Stanje i trendovi proizvodnje i prodaje savremenih materijala“ koja je održana povodom 64 godine postojanja Instituta Kemal Kapetanović Univerziteta u Zenici. U čitaonici Instituta pred više od 30 učesnika iz poslovnog i akademskog sektora iz regije Centralna BiH moderator Okruglog stola prof.dr Džafer Dautbegović je najprije predstavio projekt RTIT EU Interreg, projektne partnere, te glavne projektne probleme, izazove i rješenja do kojih je projektni tim došao. O modalitetima saradnje u lancu

stvaranja novih vrijednosti govorio je prof.Petković koji je naglasio tri ključne misije visokoškolskih i istraživačkih organizacija: Prva koja se odnosi na nastavno-naučni proces, druga koja se odnosi na elemente NIR-a i stručnog rada i 3M koja pokriva sve ostale elemente rada VŠO i RDI. U vrlo sadržajnim razgovorima svih učesnika tokom diskusije nekoliko tema se iskristalisalo kao zaključci kojima treba težiti u budućoj saradnji sektora VŠO i RDI i poslovnog sektora:

- Nastavni proces više povezati sa realnim poslovnim sektorom kako bi se omogućilo i postiglo što brže uključivanje diplomanata u proces rada;
- Promovisati dualne studije u svim onim oblastima za koje se one mogu kvalitetno i sadržajno organizovati;
- Istraživanja na magistarskom i doktorskom studiju po ugledu na inostrana iskustva vezati za konkretna istraživanja od kojih će koristi imati BH poslovni sektor i čiji će rezultat biti konkretna rješenja i tehnologije a ne materijal koji će biti za arhive i biblioteke;
- Vratiti sistem stipendiranja mladih koji će tu stipendiju morati da odrade u BiH kao model koji bi uz povlaštenu stanogradnju doprinio da školovana i obučena radna snaga ostane u BiH;
- Vratiti se na stari sistem povezanosti akademskog sektora i poslovne zajednice koji je podrazumijevao mnogo jaču i svestraniju saradnju: od nastave do istraživanja jer sadašnji sistem potpune odvojenosti ne vodi nikud;
- Raditi na razvoju legislative za dualni studij kao i za rješavanje obaveza onih koji se školuju u BiH a nastavljaju radnu karijeru vani.
- Značaj u istraživanjima posebno posvetiti temama koje su danas naglašeno aktuelne kao što je održivi razvoj i zelena proizvodnja i dr.

U razgovoru su poseban doprinos aktivnoj diskusiji dali predstavnici firmi GS TM Travnik, Prograd Žepče, Manako Kakanj, Alloy Wheels Jajce, VIK Zenica, JP Šume ZDK, Institut Kemal Kapetanović i



dr. Na kraju Okruglog stola i diskusija koje su trajale gotovo 2.5 h v.a. mr Emir Đulić je predstavi Akcioni plan u okviru Interreg projekta RTIT.



### **03.10.2025. ROUND TABLE WITH THE BUSINESS COMMUNITY ON THE EU INTEREG RTIT PROJECT**

After the Webinar held jointly organized by the INTERA Mostar Technology Park and the Center for Innovation and Entrepreneurship of the University of Zenica and within the framework of Interreg RTIT, a Round Table was held on the topic of Cooperation between the Academic Community and the Business Sector. The Round Table was held as part of the conference "State and Trends in Production and Sales of Modern Materials" which was held on the occasion of the 64th anniversary of the Kemal Kapetanović Institute of the University of Zenica. In the Institute's reading room, in front of more than 30 participants from the business and academic sectors from the Central BiH region, the moderator of the Round Table, Prof. Dr. Džafer Dautbegović, first presented the RTIT EU Interreg project, project partners, and the main project problems, challenges and solutions that the project team came up with. Prof. Petković spoke about the modalities of cooperation in the chain of creating new values, emphasizing three key missions of higher education and research organizations: The first one, which refers to the teaching-scientific process, the second one, which refers to the elements of NIR and professional work, and the 3M, which covers all other elements of the work of higher education and RDI. In the very meaningful conversations of all participants during the discussion, several topics emerged as conclusions that

should be pursued in future cooperation between the higher education and RDI sectors and the business sector:

- Connect the teaching process more closely with the real business sector in order to enable and achieve the fastest possible inclusion of graduates in the work process;
- Promote dual studies in all areas for which they can be organized in a quality and meaningful way;
- Link research at master's and doctoral studies, following the example of foreign experiences, to specific research that will benefit the BH business sector and the result of which will be concrete solutions and technologies, rather than material that will be for archives and libraries;
- Restore the scholarship system for young people who will have to work out the scholarship in BiH as a model that, along with preferential housing construction, would contribute to the educated and trained workforce remaining in BiH;
- Return to the old system of connections between the academic sector and the business community, which implied much stronger and more versatile cooperation: from teaching to research, because the current system of complete separation leads nowhere;
- Work on developing legislation for dual studies as well as for resolving the obligations of those who are educated in BiH and continue their working careers abroad.
- Special attention should be paid to research topics that are currently highly relevant, such as sustainable development and green production, etc.

Representatives of the companies GS TM Travnik, Prograd Žepče, Manako Kakanj, Alloy Wheels Jajce, VIK Zenica, JP Šume ZDK, Kemal Kapetanović Institute, etc. made a special contribution to the active discussion during the conversation. At the end of the Round Table and the discussion, which lasted almost 2.5 hours, Emir Đulić, MA, presented the Action Plan within the Interreg RTIT project.

#### **16.10.2025. SASTANAK RADNOG TIMA NA PROJEKTU EU INTEREG RTIT**

Tim CIP UNZE održao je redovni mjesečni sastanak na projektu koji je vodio prof.dr Džafer Dautbegović, šef tima UNZE na projektu. Prof.Dautbegović je zahvalio članovima tima na aktivnom učešću na konferenciji povodom 64 godine postojanja Instituta Kemal Kapetanović na kojem su članovi tima imali i dva rada koji su na direktnom fonu tehnološkog transfera i inovativnosti koji se istražuje u okviru RTIT Interreg EU (Knowhow Communities for Accelerating RTI - Transfer in the Danube Region, RTIT>> project). Bilo je riječi i o nastavku aktivnosti na projektu te planiranom seminaru u novembru na Univerzitetu u Sofiji. Prof. Petković je posebno govorio o Webinaru i okulom stolu organizovanom od strane CIP UNZE te još jednom naglasio obavezu nastavka rada tima CIP UNZE na još jačem povezivanju nastavnog procesa sa realnim poslovnim sektorom kako bi se omogućilo i postiglo što brže uključivanje diplomanata u proces rada; permanentnom promovisanju dualnih studija u svim onim oblastima za koje se one mogu kvalitetno i sadržajno organizovati; istraživanjima na magistarskom i doktorskom studiju po ugledu na inostrana iskustva kojim će se povezati konkretna istraživanja od kojih će koristiti imati BH poslovni sektor te naglasio značaj u istraživanjima koji posebno treba posvetiti temama koje su danas naglašeno aktuelne kao što je održivi razvoj i zelena proizvodnja i dr. Bilo je govora i o konferenciji u decembru koju organizuje Ekonomski fakultet Univerziteta u Skadru (Albanija) na koji su pozvani članovi CIP UNZE te značaju da se sa radovima koji su značajni i za projekt RTIT pojave i članovi CIP UNZE.

#### **16.10.2025. WORKING TEAM MEETING ON THE EU INTEREG RTIT PROJECT**

The CIP UNZE team held a regular monthly project meeting led by Prof. Dr. Džafer Dautbegović, head of the UNZE team on the project. Prof. Dautbegović thanked the team members for their active participation in the conference on the occasion of the 64th anniversary of the Kemal Kapetanović Institute, at which the team members also presented two papers that are directly related to technology transfer and innovation, which is being researched within the RTIT Interreg EU (Knowhow Communities for Accelerating RTI - Transfer in the Danube Region, RTIT>> project). There was also talk of continuing project activities and the planned seminar in November at the University of Sofia. Prof. Petković spoke in particular about the Webinar and round table organized by CIP UNZE and once again emphasized the obligation of the CIP UNZE team to continue its work on even stronger connections between the teaching process and the real business sector in order to enable and achieve the fastest possible inclusion of graduates in the work process; permanent promotion of dual studies in all those areas for which they can be organized in a quality and meaningful way; research at master's and doctoral studies based on foreign experiences that will connect specific research that will benefit the BH business sector, and emphasized the importance of research that should be especially devoted to topics that are highly topical today, such as sustainable development and green production, etc. There was also talk of a conference in December organized by the Faculty of Economics of the University of Shkodra (Albania), to which members of CIP UNZE were invited, and the importance of members of CIP UNZE also appearing with works that are also important for the RTIT project.

#### **18.10.2025. CIP UNZE: POSJETA SAJMU KNJIGA U BEOGRADU**

U širokom krugu aktivnosti koje CIP UNZE radi uvijek u godišnjem planu i kalendaru je i posjeta eminentnim sajmovima knjiga u Sarajevu i Beogradu. Tradicionalni Beogradski sajam knjiga ove godine je bio u nedelji 12-20.10.2025. i kao i uvijek ponudio je brojne događaje. Na sajmu sa za vikend 18-19.10.2025. bile organizovano i brojne zeničke srednje škole ali nažalost organizovanog dolaska studenata nije bilo. U posjeti štandovima i izlagačima sajma prof.Petković i prof.Dautbegović zajedno sa prof.Hodžićem iz Tehničke škole Zenica su konstatovali da je broj izlagača tehničkih

knjiga mnogo manji nego nekada iako je broj naslova koji tretiraju tehniku nije manji. U tom smislu su ekonomski fakulteti preuzeli primat čak i u domeni održive privrede, alternativnih izvora energije, reciklažnih tehnologija i sl. Zanimljiv je bio i broj naslova koji tretiraju savremenu arhitekturu, produkt dizajn, dizajn enterijera i eksterijera, razvoj proizvoda i dr. Beletristika je naravno, kao i prethodnih godina, imala primat u broju izdavača kao i štandova.



### **18.10.2025. CIP UNZE: VISIT TO THE BOOK FAIR IN BELGRADE**

Among the wide range of activities that CIP UNZE always carries out in its annual plan and calendar is a visit to the eminent book fairs in Sarajevo and Belgrade. The traditional Belgrade Book Fair this year was held in the week of 12-20.10.2025. and, as always, offered numerous events. Numerous high schools from Zenica were also organized at the fair on the weekend of 18-19.10.2025, but unfortunately

there was no organized arrival of students. During a visit to the stands and exhibitors of the fair, Prof. Petković and Prof. Dautbegović, together with Prof. Hodžić from the Technical School of Zenica, noted that the number of exhibitors of technical books is much smaller than before, although the number of titles that treat technology is not smaller. In this sense, the faculties of economics have taken over the primacy even in the domain of sustainable economy, alternative energy sources, recycling technologies, etc. Also interesting was the number of titles dealing with contemporary architecture, product design, interior and exterior design, product development, etc. Fiction, of course, as in previous years, had the upper hand in the number of publishers and stands.



### **30.10.2025. RTIT: CIP UČEŠĆE NA SAJMU MAŠINA I ALATA ZA DRVOPRERADU HEZO U DOBOJU**

Aktivno radeći na modelu povezivanja poslovnih sistema i procesa sa akademskim sektorom i nastavnim procesom, tim CIP UNZE je zajedno menadžmentom kompanije HEZO mašine organizovao jednodnevnu obuku za nove mašine i alate studenata različitih fakulteta UNZE. Po završetku redovne nastave na svojim fakultetima studenti koji su imali interes i bili slobodni, njih 12 sa Mašinskog i Politehničkog fakulteta je sa timom CIP-a (prof. Petković, prof. Dautbegović, prof. Hadžalić) je krenuo put Doboja gdje su u odlično uređenom sajamskom prostoru imali priliku da vide novi CENTATEQ P-110, obradni centar sa 5 osa i dosta pomoćne opreme, novi Sateq S-200, CNC

raskrajač, Drillteq V-200, CNC tiplerica sa automatskom izmjenom alata, te novi Edgeteq S -200 i S-380, nove kantarice. Sve mašine su iz proizvodnog programa renomirane kompanije HOMAG. Pored prezentacija tehnoloških procesa na svakoj od mašina studenti su imali priliku da se upoznaju i sa savremenim sistemima prenosa i skladištenja materijala (firma Schmalz), električnim alatima (firma Mafell), posebnim ručnim brusilicama (firma Houfek), te mašinama za formatiziranje (firma Altendorf). Posebnu pažnju studenata privukla je prezentacija software-a PaletteCAD koji je predstavio zastupnik za BiH gosp. Saša Vuksan, koji je za svih 12 studenata sa UNZE obezbijedio besplatne licence za ovaj software koji će u narednom periodu dobiti i drugi zainteresovani studenti UNZE. Uz stručno vođenje domaćina studenti su imali priliku da vide i čitav niz alata za obrade u drvnom sektoru (CMT, ItaTools, BUP i dr.). Povratak studenata sa ove fakultativne nastave organizovan je u večernjim satima.



### **30.10.2025. RTIT: CIP PARTICIPATES IN THE HEZO WOODWORKING MACHINERY AND TOOLS FAIR IN DOBOJ**

Actively working on a model for connecting business systems and processes with the academic sector and teaching processes, the CIP UNZE team, together with the management of the HEZO machine company, organized a one-day training on new machines and tools for students from various UNZE faculties. After the end of regular classes at their faculties, students who were interested and free, 12 of them from the Faculty of Mechanical Engineering and the Polytechnic Faculty, together with the CIP team (prof. Petković, prof. Dautebgeović, prof. Hadžalić), set off for Doboj, where they had the opportunity to see the new CENTATEQ P-110, a 5-axis machining center and a lot of auxiliary equipment, the new Sateq S-200, a CNC router, Drillteq V-200, a CNC doweling machine with automatic tool change, and the new Edgeteq S -200 and S-380, new scalers. All machines are from the production program of the renowned company HOMAG. In addition to presentations of technological processes on each of the machines, the students had the opportunity to get acquainted with modern material transfer and storage systems (Schmalz company), power tools (Mafell company), special hand grinders (Houfek company), and formatting machines (Altendorf company). The students' special attention was attracted by the presentation of the PaletteCAD software presented by the representative for Bosnia and Herzegovina, Mr. Saša Vuksan, who provided all 12 students from UNZE with free licenses for this software, which will be given to other interested UNZE students in the future. With the professional guidance of the host, the students had the opportunity to see a whole range of tools for processing in the wood sector (CMT, ItaTools, BUP, etc.). The return of students from this optional class was organized in the evening hours.

### **31.10.2025. CIP UNZE: UČEŠĆE NA ERASMUS+ BH DANU ZA VET OBRAZOVANJE**

Srednja mješovita škola u Zenici bila je domaćin BH Erasmus+ dana u domeni VET (Vocational Education Training). Uz uvodna obraćanja i pozdrave menadžmenta Škole i suorganizatora – Ministarstva civilnih poslova Vijeća ministara BiH slijedile



su detaljne prezentacije programa Erasmus+ EU koja je vodio Suad Muhibić, direktor Erasmus BH ureda. Program VET je najmjenjen uglavnom srednjim stručnim školama i podstiče projekte koji pomažu strukovno obrazovanje i poslovno uvezivanje škola i firmi. Ovaj program je otvoren i za fakultete kroz modele Dualnog obrazovanja (DHE- Dual Higher Education) kao i zajedničke aplikacije fakulteta-škola-poslovnog sektora-drugih stakeholdera procesa. Zanimljivo je bilo da je za prisustvo ovom događaju bilo prijavljeno 100 učesnika od čega iz srednjih škola u BiH i 30 iz akademskog sektora u BiH. Nažalost, ispred akademskog sektora u BiH bio je prisutan samo CIP UNZE. Sigurno je da je i ovo jedan od razloga zašto BiH svake godine ima sve lošije rezultate u broju projekata a posebno kao nosioc projekata u programu Erasmus+ jer saradnja sa poslovnim sektorom je svake godine sve lošija. Nekadašnja „čelična veza“ fakulteta u Zenici sa poslovnim sektorom danas je gotovo potpuno uništena što se može vidjeti i kroz procenete budžetske i poslovne realizacije fakulteta u godini kao i broju projekata i radova osoblja.

### **31.10.2025. CIP UNZE: PARTICIPATION IN THE ERASMUS+ BH DAY FOR VET EDUCATION**

The secondary mixed school in Zenica hosted the BH Erasmus+ Day in the domain of VET (Vocational Education Training). In addition to the introductory speeches and greetings of the School management and the co-organizers - the Ministry of Civil Affairs of the Council of Ministers of Bosnia and Herzegovina, detailed presentations of the Erasmus+ EU program were led by Suad Muhibić, Director of the Erasmus BH Office. The VET program is intended mainly for secondary vocational schools and encourages projects that support vocational education and business connections between schools and companies. This program is also open to faculties through Dual Education models (DHE- Dual Higher Education) as well as joint applications of faculties-schools-business sector-other stakeholders of the process. It was interesting that 100 participants registered to attend this event, of which 100 were from secondary schools in Bosnia and Herzegovina and 30 from the academic sector in Bosnia and Herzegovina. Unfortunately, only CIP UNZE was present on behalf of the academic sector in BiH. This is certainly one of the reasons why BiH has increasingly poor results in the number of projects every year, especially as a project holder in the Erasmus+ program, because cooperation with the business sector is getting worse every year. The former "iron bond" of the faculty in Zenica with the business sector has now been almost completely destroyed, which can be seen in the percentages of the faculty's budget and business realization in the year, as well as the number of projects and staff works.

### **06.11.2025. SASTANAK RADNOG TIMA NA PROJEKTU EU INTEREG RTIT**

Novembarski sastanak tima CIP UNZE održan je 06.novembra 2025. na Fakultetu prirodnih nauka i inženjerstva kao dio priprema za učešće na seminaru u Bugarskoj te priprema radova za konferenciju u Skadru. Prof.dr Džafer Dautbegović, šef tima UNZE na projektu je pozvao članove tima kojim obaveze u nastavi dozvoljavaju da učestvuju u Bugarskoj s obzirom da je planirana posjeta Univerzitetu u Sofiji, NTP Sofija kao i dvije firme u Srbiji od značaja za dalji rad na projektu RTIT. Prezentirano je sadašnje stanje projekta RTIT (Knowhow Communities for Accelerating RTI - Transfer in the Danube Region, RTIT>> project) u globalnom pristupu kao i pristupu CIP UNZE. V.a. mr Djulić je predstavio započete aktivnosti an nabavci materijala koji su predviđeni sa aspekta promocije projekta (marketiški materijali i dr) te naglasio da je kontaktirano nekoliko firmi iz ZDK koje se bave ovom djelatnošću da dostave svoje ponude. Šef projekta je naglasio da projekt ima prostor za sufinansiranja magistarskih i doktorskih istraživanja potencijalnih kandidata sa UNZE i šire a koji su kompatibilni sa nastojanjima tima CIP UNZE da dođu do održive proizvodnje WPC bazirane na zelenoj ekonomiji i cirkularnoj privredi. Prof. Petković je pozvao članove projekta RTIT za pripremu apstrakta i prezentacija za konferenciji u decembru koju organizuje Ekonomski fakultet Univerziteta u Skadru (Albanija) na koji su pozvani članovi CIP UNZE te značaju da se sa radovima koji su značajni i za projekt RTIT pojave i članovi CIP UNZE.

### **06.11.2025. WORKING TEAM MEETING ON THE EU INTEREG RTIT PROJECT**

The November meeting of the CIP UNZE team was held on November 6, 2025 at the Faculty of Natural Sciences and Engineering as part of preparations for participation in the seminar in Bulgaria and preparation of papers for the conference in Shkodra. Prof. Dr. Džafer Dautbegović, head of the UNZE team on the project, invited team members whose teaching commitments allow them to participate in Bulgaria, given that a visit to the University of Sofia, NTP Sofia, as well as two companies in Serbia of importance for further work on the RTIT project is planned. The current status of the RTIT project (Knowhow Communities for Accelerating RTI - Transfer in the Danube Region, RTIT>> project) was presented in the global approach as well as the CIP UNZE approach. V.a. mr. Djulić presented the initiated activities on the procurement of materials that are planned from the aspect of project promotion (marketing materials, etc.) and emphasized that several companies from the ZDK that are engaged in this activity have been contacted to submit their offers. The project leader emphasized that the project has room for co-financing master's and doctoral research of potential candidates from UNZE and beyond, which are compatible with the efforts of the CIP UNZE team to achieve sustainable WPC production based on a green economy and circular economy. Prof. Petković invited the members of the RTIT project to prepare abstracts and presentations for the conference in December organized by the Faculty of Economics of the University of Shkodra (Albania), to which CIP UNZE members are invited, and the importance of CIP UNZE members also appearing with works that are also relevant for the RTIT project.



### 12.11.2025. CIP UNZE: UČEŠĆE NA SEMINARU INTERREG PROJEKTA DANUBECRAFTS

Predstavnici CIP UNZE (prof.Petković, prof.Hadžalić, v.a.mr Đulić) učestvovali su kao stakeholderi na seminaru Interreg projekta DanubeCrafts (Traditional Crafts Route for Sustainable Cultural Tourism Development) koji je održan u Motelu Brist u Zenici. Učesnik ovog projekta je Stručna služba za razvoj i međunarodne projekte Vlade ZDK koja je za ovaj projekt uključila široku mrežu stakeholder-a iz ZDK. U vrlo sadržajnom radu seminara bilo je govora o različitim zanatima a koji mogu imati turistički potencijal. Prof.Petković kao osnivač odsjeka DTD je govorio o malim zanatima iz sektora drvoprerade kao i njima povezanim programima (drvo-metal, drvo-staklo, i sl.) koji postoje u ZDK a koji su u određenim studijama već obrađivani kada je rađeno na pripremi osnivanja odsjeka DTD. U tom smislu predloženo je široko mapiranje potencijala ovog sektora koji ima ogroman potencijal jer drvoprerade kao industrijski sektor danas predstavlja

najznačajniju izveznu granu u BIH. Da je sektor zanatstva a posebno umjetničkog jako zapostavljen prof.Petković je pokazao i samo jednom firmom iz Zenice: drvoprerade SAF koja radi modelarske eksponate za sajmove BH najpoznatijih umjetnika iz BIH (Sajmovi Keln, Diseldorf, Beograd, Rovinj i dr.) a niko ih u dosadašnjem dijelu projekta nije kontaktirao.

### **12.11.2025. CIP UNZE: PARTICIPATION IN THE INTERREG PROJECT DANUBECRAFTS SEMINAR**

Representatives of CIP UNZE (prof. Petković, prof. Hadžalić, v.a.mr Đulić) participated as stakeholders in the seminar of the Interreg project DanubeCrafts (Traditional Crafts Route for Sustainable Cultural Tourism Development) which was held at the Motel Brist in Zenica. The participant of this project is the Expert Service for Development and International Projects of the Government of the Canton of Zenica, which included a wide network of stakeholders from the Canton of Zenica for this project. The very informative work of the seminar discussed various crafts that may have tourism potential. Prof. Petković, as the founder of the DTD department, spoke about small crafts from the wood processing sector as well as related programs (wood-metal, wood-glass, etc.) that exist in the Canton of Zenica and which were already covered in certain studies when the preparation for the establishment of the DTD department was being carried out. In this sense, a broad mapping of the potential of this sector has been proposed, which has enormous potential because wood processing as an industrial sector today represents the most important export branch in Bosnia and Herzegovina. Prof. Petković showed that the craft sector, especially the artistic sector, is very neglected with just one company from Zenica: SAF wood processing, which makes model exhibits for BiH fairs by the most famous artists from Bosnia and Herzegovina (Fairs in Cologne, Düsseldorf, Belgrade, Rovinj, etc.), and no one has contacted them so far in the project.

### **13.11.2025. RADNI SASTANAK MENADŽMENTA INSTITUTA KEMAL KAPETANOVIĆ I CIP UNZE**

Menadmenti CIP UNZE i IKK odrali su na Institutu radni sastanak sa ciljem sagledavanja rezultata posjete predstavnika TIKa BiH i nastavka rada na razvoju projekta LEARNING FACTORY koji je prepoznat kao jedan od ključnih projekata za buduće opremanje IKK. Direktor IKK v.prof.dr Aladin Brkić je naglasio spremnost IKK za rad na projektu LF u bilo kojem EU programu a za posjetu predstavnika TIKa je rekao da je bila više protokolarna i da nema potencijal nekog značajnijeg projekta. Prof.Petković, voditelj CIP UNZE je naglasio da u budućnosti se trebamo okrenuti programima kao što su Erasmus+, Interreg i dr. te da tim CIP je već pripremio mrežu internacionalnih partnera i da se čeka Prvi poziv za Erasmus+ projekte u

2026.godini. Prof.dr Džafer Dautbegović, šef tima UNZE na projektu RTIT je pozvao menadžment IKK da učestvuju na seminaru u Bugarskoj s obzirom da je planirana posjeta Univerzitetu u Sofiji i NTP Sofij a također je naglasio i značaj konferencije u Skadru sa kojim postoji saradnja UNZE u mnogim domenama. Prof.Dautbegović je govorio i o značaju saradnje fakulteta, CIP.a i IKK u razvoju projekata koji imaju domenu ekološkog inženjerstva, održive privrede i zelene ekonomije i naglasio da samo multidisciplinarni pristup daje dobre rezultate kako u procesima kreiranja projekata tako i u procesima realizacije projekata.



### **13.11.2025. WORKING MEETING OF THE INSTITUTE MANAGEMENT KEMAL KAPETANOVIĆ AND CIP UNZE**

The managements of CIP UNZE and IKK held a working meeting at the Institute with the aim of reviewing the results of the visit of the TIKa BiH representative and continuing work on the development of the LEARNING FACTORY project, which has been recognized as one of the crucial projects for the future equipping of IKK. The Director of IKK, Vice-Professor Dr. Aladin Brkić, emphasized the readiness of IKK to work on the LF project in any EU program, and said that the visit of the TIKa representative was

more of a protocol and did not have the potential of a more significant project. Prof. Petković, head of CIP UNZE, emphasized that in the future we should turn to programs such as Erasmus+, Intereg, etc. and that the CIP team has already prepared a network of international partners and that the First Call for Erasmus+ projects in 2026 is awaited. Prof. Dr. Džafer Dautbegović, head of the UNZE team on the RTIT project, invited the management of IKK to participate in the seminar in Bulgaria, given that a visit to the University of Sofia and NTP Sofia is planned, and he also emphasized the importance of the conference in Shkodra, with which UNZE cooperates in many domains. Prof. Dautbegović also spoke about the importance of cooperation between the faculty, CIP and IKK in the development of projects in the field of ecological engineering, sustainable economy and green economy, and emphasized that only a multidisciplinary approach gives good results both in the processes of project creation and in the processes of project implementation.

### **17-20.11.2025. UČEŠĆE NA SEMINARU NA PROJEKTU EU INTEREG RTIT U BUGARSKOJ**

Tim CIP UNZE u kojem su bili prof.dr Džafer Dautbegović, šef tima UNZE na projektu i prof.dr Darko Petković, saradnik na projektu učestvovao je na višednevnom različitom setu aktivnosti na projektu RTIT Interreg EU (Knowhow Communities for Accelerating RTI - Transfer in the Danube Region, RTIT>> project). Višednevni rad započeo je 17.11.2025. u večernjim satima kada je upriličen svečani dočeka od domaćina sa Ekonomskog fakulteta Univerziteta Sveti Kliment Ohridski u Sofiji (napomena: puni naziv fakulteta je Fakultet za ekonomiju i poslovnu administraciju Univerziteta Sv.Kliment Ohridski Sofija, Carigradski bulavera broj 3- [www.uni-sofia.ba](http://www.uni-sofia.ba)). Riječi dobrodošlice upriličio je menadžment ovog fakulteta. Dana 18.11.2025. sadržavao je cjelodnevni program na Ekonomskom fakultetu koji je zajedno sa brojnim timom domaćina koordinirala projekt lider Anđela Nikčević (IEC Tehnopolis). Predstavljena su dosadašnje realizacije svih projektnih partnera gdje je od strane CIP UNZE predstavljen dosadašnji rad na TTO modelima u Projektu razvoja proizvodnje WPC (Wood Polymer Composite). Predstavljani su rezultati okruglog stola sa privrednicima održanom u sklopu Konferencije IKK u mjesecu oktobru u Zenici kao i rezultati Webinara održanog zajedno sa timom TP Intera Mostar. Također, prof.Petković je govorio i o regionalnom modelu TTO na kojem CIP UNZE radi a kroz koji se intenzivno saradjuje sa firmama Tisal Busovača, Omorika Prnjavor, Pero Zenica i ALBA Zenica, obavljenim mapiranjima u sklopu nekoliko studija koje se rade u projektu (koncept Industrije 4,0, mapiranje otpada od plastike i vještačkih sortimenata drveta, koncepti TTO), te razvoj saradnje na konceptu Learning Factory sa FESB Split i TU Darmstadt kao jedan od modela TTO u funkciji nastave. U večernjim satima tim CIP UNZE je prisustvovao svečanom otvorenju FEBA International Conference u Istorijskom muzeju Bugarske na Banskom trgu. Dana 19.11.2025. (srijeda) tim CIP UNZE je imao cjelodnevni rad u Naučno-tehnološkom parku Sofija koji je započeo prezentacijom u Centru „Muzeiko“ koja je obuhvatila prikaz kako se inovativnim konceptima mladi mogu zainteresovati za svijet nauke i tehnike (STEM koncept), nakon čega je slijedio timski rad svih članova konzorcija na razvoju novih alata za tehnološki transfer a u popodnevним satima je upotpunjen posjetama Centru i laboratorijama za razvoj spin-off firmi Naučno-tehnološkog parka te Data centru Bugarske gdje je prezentiran rad i razvoj na instalaciji i radu prvog super-kompjutera u Bugarskoj koji je proizvod renomiranog USA proizvođača HP. Prezentaciju o razvoj spin-off firmi u NTP održao je menadžer NTP Stanislav Dermendjiev sa kojim su prof.Petković i Dautbegović imali vrlo konstruktivan razgovor. Dana 20.11.2025. cjelodnevni rad se odvijao u sekcijama FEBA International Conference na Ekonomskom fakultetu gdje je za tim projekta RTIT posebno interesantno bilo učestvovati u sekcijama koje su razmatrale modele tehnološkog transfera iz akademskog sektora i komercijalizaciju tehničkih ideja. Projekt RTIT se nastavlja prema planu koji je prezentovan na kraju a tim CIP je



odmah nastavio sa planiranim aktivnostima koje će prezentovati aprila 2026.godine na narednom sastanku konzorcija projekta RTIT koji je planiran na mađarskom Univerzitetu u Pečuju.

### **17-20.11.2025. PARTICIPATION IN THE SEMINAR ON THE EU INTEREG RTIT PROJECT IN BULGARIA**

The CIP UNZE team, which included Prof. Dr. Džafer Dautbegović, head of the UNZE team on the project, and Prof. Dr. Darko Petković, associate on the project, participated in a multi-day, diverse set of activities on the RTIT Interreg EU project (Knowhow Communities for Accelerating RTI - Transfer in the Danube Region, RTIT>> project). The multi-day work began on 17.11.2025. in the evening hours when a ceremonial welcome was organized by the hosts from the Faculty of Economics of the University of St. Kliment Ohridski in Sofia (note: the full name of the faculty is the Faculty of Economics and Business Administration of the University of St. Kliment Ohridski Sofia, Carigradski bulavera no. 3- [www.uni-sofia.ba](http://www.uni-sofia.ba)). The words of welcome were organized by the management of this faculty. On 18.11.2025. It contained a full-day program at the Faculty of Economics, coordinated by project leader Anđela Nikčević (IEC Tehnopolis) together with a large team of hosts. The previous realizations of all project partners were presented, where CIP UNZE presented its previous work on TTO models in the WPC (Wood Polymer Composite) Production Development Project.



The results of the roundtable with business people held as part of the IKK Conference in October in Zenica were presented, as well as the results of the Webinar held together with the TP Inter Mostar team. Prof. Petković also spoke about the regional TTO model that CIP UNZE is working on and through which it is intensively cooperating with the companies Tisal Busovača, Omorika Prnjavor, Pero Zenica and ALBA Zenica, the mapping carried out as part of several studies being carried out in the project (Industry 4.0 concept, mapping of plastic waste and artificial wood assortments, TTO concepts), and the development of cooperation on the Learning Factory concept with FESB Split and TU Darmstadt as one of the TTO models in the teaching function. In the evening, the CIP UNZE team attended the opening ceremony of the FEBA International Conference at the Historical Museum of Bulgaria on Banski Square. On 19.11.2025. (Wednesday), the CIP UNZE team had a full-day of work at the Sofia Science and Technology Park, which began with a presentation at the "Muzeiko" Center, which included a presentation of how innovative concepts can interest young people in the world of science and technology (STEM concept), followed by teamwork of

all consortium members on the development of new tools for technology transfer, and in the afternoon, it was complemented by visits to the Center and laboratories for the development of spin-off companies of the Science and Technology Park and the Data Center of Bulgaria, where the work and development on the installation and operation of the first supercomputer in Bulgaria, which is a product of the renowned US manufacturer HP, was presented. The presentation on the development of spin-off companies at NTP was held by NTP Manager Stanislav Dermendjiev, with whom Prof. Petković and Dautbegović had a very constructive conversation. On 20.11.2025. The whole day's work took place in the sections of the FEBA International Conference at the Faculty of Economics, where it was particularly interesting for the RTIT project team to participate in the sections that

discussed models of technology transfer from the academic sector and the commercialization of technical ideas. The RTIT project continues according to the plan presented at the end, and the CIP team immediately continued with the planned activities that will be presented in April 2026 at the next meeting of the RTIT project consortium, which is planned at the Hungarian University of Pécs.



#### **21.11.2025. POSJETA FIRMI KORALI U KRALJEVU (SRBIJA) NA PROJEKTU EU INTEREG**

Rad na projektu i konkretizaciji ideja tehnološkog transfera, nakon seminara u Sofiji nastavljen je u Srbiji, u gradu Kraljevo, u firmi Korali. Domaćini u kompaniji Korali Kraljevo gosp. Dušanka Roglić i finansijski menadžer Miroslav Panović su predstavili kompaniju predstavnicima CIP UNZE i to: proizvodni program, referenc listu nakon čega je slijedio obilazak pogona. Prof.Petković je predstavio projekt RTIT, članove konzorcija i dosadašnje rezultate a prof.Dautbegović je govorio o značaju koji tim UNZE pridaje u ovom projektu na razvoju cirkularne održive proizvodnje u kojoj je težište tima UNZE napraviti novi proizvod na bazi otpada kojim BiH ne oskudijeva. Objašnjeni su dosadašnji aspekti rada i saradnje sa MSP uglavnom u BiH u četiri segmenta: a) Način kako sada MSP sarađuju sa akademskom zajednicom i kako se tranfer tehnologija odvija; b) Istraživanja primjene Industrije 4.0 u firmama drvnog sektora ZDK i SBK, c) Istraživanje i mapiranje potencijala materijalnih tokova MSP za proizvodnju WPC – Wood Polimer Composite i d) Razvoj tehnologija za proizvodnju WPC od otpadnih materijala u BiH te razvoj metoda cirkularne privrede. Pored interesa za rezultate iz prva tri istraživanja za tim firme Korali je posebno bio interesantan razvoj WPC-a s obzirom da ova firma je jedan od regionalnih lidera u gradnji opreme i elemenata gradskih mobiliara gdje je potencijalna primjena WPC-a vrlo značajna. Prof.Dautbegović je naglasio značaj koji cirkularna ekonomija ima danas u savremenom poslovanju firmi te pocrtao elemente dosadašnje saradanje kompanije ALBA BiH sa firmom Korali te nadanjima da će se i tim CIP UNZE sa potencijalnim istraživanjima zajedno sa firmom Korali udružiti na stvaranju pretpostavki za buduću istraživačku i stručnu saradnju.



#### **21.11.2025. VISIT TO THE COMPANY KORALI IN KRALJEVO (SERBIA) ON THE EU INTEREG PROJECT**

Work on the project and the concretization of technology transfer ideas, after the seminar in Sofia, continued in Serbia, in the city of Kraljevo, at the company Korali. The hosts at the company Korali Kraljevo, Mr. Dušanka Roglić and financial manager Miroslav Panović, presented the company to the representatives of CIP UNZE, namely: the production program, the reference

list, followed by a tour of the plant. Prof. Petković presented the RTIT project, the consortium members and the results so far, and Prof. Dautbegović spoke about the importance that the UNZE team attaches to this project on the development of circular sustainable production in which the focus of the UNZE team is to create a new product based on waste that BiH does not lack. The previous aspects of work and cooperation with SMEs, mainly in BiH, were explained in four segments: a) The way in which SMEs now cooperate with the academic community and how technology transfer takes place; b) Research on the application of Industry 4.0 in wood sector companies in ZDK and SBK, c) Research and mapping of the potential of material flows of SMEs for the production of WPC - Wood Polymer Composite and d) Development of technologies for the production of WPC from waste materials in Bosnia and Herzegovina and the development of circular economy methods. In addition to the interest in the results from the first three researches, the development of WPC was particularly interesting for the Korali team, given that this company is one of the regional leaders in the construction of equipment and elements of urban furniture, where the potential application of WPC is very significant. Prof. Dautbegović emphasized the importance of the circular economy today in modern business operations of companies and outlined the elements of the previous cooperation between the ALBA BiH company and the Korali company, and the hopes that the CIP UNZE team will also join forces with the Korali company to create the prerequisites for future research and professional cooperation.

## **22.11.2025. POSJETA I RAZGOVORI U FIRMI MG MOLD 84 U VRNJAČKOJ BANJI NA EU INTEREG RTIT PROJEKTU**

Dana 22.11.2025. (subota) radni tim CIP UNZE (prof.Dautbegović i prof.Petković) je bio gost firme GM Mold 84 u Vrnjačkoj Banji gdje ih je primio direktor i vlasnik Milosav Gočanin, dipl.ing. koji se više od 40 godina bavi proizvodnjom alata za brizganje i ekstrudiranjem plastike, aluminijuma i drugih metala, kao i konstrukcijama i proizvodnjom CNC mašina za proizvodnju plastičnih proizvoda i polimernih kompozita. Sa svojim timom saradnika ing. Gočanin je upriličio detaljno sagledavanje proizvodnih procesa u GS Mold 84 pogonima nakon čega je slijedila vrlo živa diskusija u odjelu pripreme proizvodnje na temu potencijalnih izazova u proizvodnji WPC-a u BiH, saradnji sa firmama sektora plastike i drveta u ZDK i BiH, praktičnim tehnološkim izazovima proizvodnje WPC-a i drugim temama od značaja za buduću saradnju. Prof.Dautbegović je pozvao ing.Gočanina da bude gost kompanije ALBA BIH i CIP UNZE gdje bi se u jednom modelu seminara-panela razgovaralo o potencijalima koje WPC nudi BH privrednom i akademskom sektoru. Ovo je bio jedan od najkorisnijih poslovnih sastanaka koje je tim CIP UNZE u projektu RTIT imao nakon vrlo sveobuhvatne saradnje koja je ostvarena sa firmom Tisal u Busovači koja je jedan od značajnih partnera firme MG Mold 84. I ovaj način je potvrđen značaj koji poslovno uvezivanje sa firmama u BiH ima značaj za regionalnu saradnju koje se uz veće međunarodne projekte može dovesti do potencijalnih značajnijih benefita kako za akademsku tako i poslovnu zajednicu regije i šire. Tima je potvrđena i teza da bez umrežavanja i stalne saradnje nema ni



ozbiljnih VŠO kakvim su godinama prije bili fakulteti i instituti iz Zenice i na čemu CIP UNZE ustrajno radi od svog osnivanja.

### **22.11.2025. VISIT AND DISCUSSIONS AT THE COMPANY MG MOLD 84 IN VRNJAČKA BANJA ON THE EU INTEREG RTIT PROJECT**

On 22.11.2025. (Saturday) the CIP UNZE working team (prof. Dautbegović and prof. Petković) was a guest of the company GM Mold 84 in Vrnjačka Banja where they were received by the director and owner Milosav Gočanin, B.Sc. who has been involved in the production of injection molding tools and extrusion of plastics, aluminum and other metals for more than 40 years, as well as the construction and production of CNC machines for the production of plastic products and polymer composites. With his team of associates eng. Gočanin organized a detailed overview of the production processes in GS Mold 84 plants, followed by a very lively discussion in the production preparation department on the topic of potential challenges in the production of WPC in Bosnia and Herzegovina, cooperation with companies in the plastic and wood sectors in ZDK and Bosnia and Herzegovina, practical technological challenges in the production of WPC and other topics of importance for future cooperation. Prof. Dautbegović invited Eng. Gočanin to be a guest of the ALBA BIH company and CIP UNZE, where in a seminar-panel model the potential that WPC offers to the BH economic and academic sector would be discussed. This was one of the most useful business meetings that the CIP UNZE team had in the RTIT project after a



very comprehensive cooperation that was achieved with the company Tisal in Busovača, which is one of the significant partners of the company MG Mold 84. This way, too, the importance that business connections with companies in Bosnia and Herzegovina have for regional cooperation, which, along with larger international projects, can lead to potentially significant benefits for both the academic and business community of the region and beyond, was confirmed. The team's thesis was also confirmed that without networking and constant cooperation, there are no serious higher education institutions, such as the faculties and institutes from Zenica were years ago, and which CIP UNZE has been working on persistently since its establishment.

### **24.11.2025. CIP UNZE: POSJETA I RAZGOVORI U GS TM FABRICI U TRAVNIKU**

Menadžment CIP UNZE (prof.Dautbegović i prof.Petković) je bio gost firme GS TM u Travniku. Cilj razgovora sa direktoricom

Koepruner je bio definisanje potencijalnog projektnog zadatka razvoja serijske proizvodnje vozila EVO i formiranja međunarodnog projektnog konzorcija koji bi radio na ovom kompleksnom projektu. Prof.Petković je naglasio da postoji veliki problem u realizaciji ovog projekta jer je preskočena faza izrade marketing studije pa je vrlo teško definisati ulazne parametre i pored brojnih odličnih rezultata koje je do sada tim GS TM uradio na ovom projektu. Razgovaralo se i o novoj hali i investiciji GS TM u Zenici, potencijalnom učešću firme GS TM u Erasmus+ programu za srednje škole (VET), saradnji sa Tehničkom školom u Zenici te aktivnostima koje su realizovane ili su još na čekanju od poslednjeg sastanka u fabrici u Rami. Na kraju je dogovorena i posjeta i sadržaj planirane posjete za studente UNZE fabrici bicikala i druge opreme GS u Poslovnoj zoni u Novom Travniku za tekući semestar.

#### **24.11.2025. CIP UNZE: VISIT AND DISCUSSIONS AT THE GS TM FACTORY IN TRAVNIK**

The management of CIP UNZE (prof. Dautbegović and prof. Petković) was a guest of the GS TM company in Travnik. The aim of the conversation with the director Koepruner was to define the potential project task for the development of serial production of EVO vehicles and the formation of an international project consortium that would work on this complex project. Prof. Petković emphasized that there is a major problem in the implementation of this project because the marketing study phase was skipped, so it is very difficult to define the input parameters despite the numerous excellent results that the GS TM team has achieved on this project so far. They also discussed the new hall and investment of GS TM in Zenica, the potential participation of the GS TM company in the Erasmus+ program for secondary schools (VET), cooperation with the Technical School in Zenica, and activities that have been implemented or are still pending since the last meeting at the factory in Rama. Finally, the visit and content of the planned visit for UNZE students to the GS bicycle and other equipment factory in the Business Zone in Novi Travnik for the current semester was agreed upon.

#### **26.11.2025. CIP UNZE: RASPRAVA O PROVOĐENJU STRATEGIJE RAZVOJA ZDK U VLADI ZDK**

Služba za razvoj i međunarodne projekte Vlade ZDK bila je domaćin rasprave o stepenu, načinima i efektima realizacije provođenja Strategije razvoja ZDK za period 2020-2027.godina. Uz tim Stručne službe i eksternog evaluatora te brojne pozvane predstavnike organizacije i institucija iz ZDK bili su i predstavnici UNZE: ispred Rektorata UNZE prorektor za nauku prof.dr Fuad Hadžikadunić i voditelj CIP UNZE prof.dr Darko Petković. Inače prof.Petković je bio u radnom timu za izradu ove Strategije u prvoj fazi rada dok su u drugoj fazi bili imenovani drugi predstavnici UNZE. U vrlo dinamičkoj i sadržajnoj diskusiji konstatovano je da postoje brojne nepoznanice u realizaciji koje se odnose na projekte, kako interne u BiH tako i za međunarodne, te bi u tom smislu trebalo ustanoviti mehanizam evidencije takvih projekata i nivoa-efekata realizacije. Kao složen sistem koji pokriva različite oblasti edukacije i istraživanja (tehničke nauke, prirodne nauke, bio-medicinske nauke, društvene nauke i dr.) Univerzitet u Zenici bi u radnom timu za novu strategiju trebao da ima predstavnike svakog fakulteta, rektorata kao i centara koji imaju strateški značaj i reference za tehnološki transfer i koji mogu i znaju biti stvarna snaga za strateški razvoj regije. Nažalost, ovakav koncept tzv. treće misije univerziteta još uvijek je daleko za sve univerzitete u BiH.

#### **26.11.2025. CIP UNZE: DISCUSSION ON THE IMPLEMENTATION OF THE ZDK DEVELOPMENT STRATEGY IN THE ZDK GOVERNMENT**

The Development and International Projects Service of the ZDK Government hosted a discussion on the level, methods and effects of the implementation of the ZDK Development Strategy for the period 2020-2027. In addition to the team of the Expert Service and the external evaluator and numerous invited representatives of organizations and institutions from ZDK, there were also representatives of UNZE: on behalf of the Rectorate of UNZE, Vice-Rector for Science Prof. Dr. Fuad Hadžikadunić and the head of CIP UNZE Prof. Dr. Darko Petković. Otherwise, Prof. Petković was in the working team for the development of this Strategy in the first phase of work, while other UNZE representatives were appointed in the second phase. In a very dynamic and substantive discussion, it was noted that there are numerous unknowns in the implementation related to projects, both internal in BiH and international, and in this sense, a mechanism for recording such projects and the level-effects of implementation should be established. As a complex system covering various fields of education and research (technical sciences, natural sciences, bio-medical sciences, social sciences, etc.), the





University of Zenica should have representatives of each faculty, the rectorate, as well as centers that have strategic importance and references for technology transfer in the working team for the new strategy and that can and do serve as a real force for the strategic development of the region. Unfortunately, this concept of the so-called third mission of the university is still far from all universities in BiH.

#### **08.12.2025. SASTANAK RADNOG TIMA NA PROJEKTU EU INTEREG RTIT**

Decembarски sastanak radnog tima CIP UNZE održan je 08.12.2025. na Mašinskom fakultetu u prostoriji 3003. Prof. Dautbegović je istakao da su na bazi vrlo pozitivnih rezultata konferencije u Bugarskoj i posjeta firmama KORALI i GS MOLD koje smo imali u Srbiji započeta priprema za seminar u Zenici u 2026. godini koji će se održati na IKK. Tema seminara bi bila Tehno-ekonomski preduslovi i potencijalne mogućnosti za razvoj novih proizvoda baziranih na postulatima cirkularne privrede. Naime, sa vlasnikom firme GS MOLD ing. Milosavom Gočaninom razgovaramo je da se kao uvodničar i panelista pojavi na ovom seminaru koji bi se održao u sklopu projekta RTIT a već ranije su obavljani razgovori za učesnike kompanija iz BiH kao što su Omorika Doboj, Tisal Busovača, FIS Ambyenta, PERO i dr. U pripremu organizacije ovog seminara kao i njegovu promociju u poslovnom sektoru pozvani su svi članovi tima projekta RTIT. Na ovom sastanku definisana je i konačna lista radova za konferenciju u Skadru. Zaduženi su prof. Jovanović i Sulunahpašić sa FINP te prof. dr. Mustafa Hadžalić da pripreme prezentacije za Konferenciju. Mr. Djulić je istakao problematiku operativnosti sredstava za javne nabavke tako da do kraja 2025. godine nećemo dobiti planirane promotivne materijale za projekt RTIT (Knowhow Communities for Accelerating RTI - Transfer in the Danube Region, RTIT>> project).

Prof. Petković je naglasio značaj intenziviranja rada na razvoju Kataloga istraživačkog inovacionih potencijala IKK (na bhs i engleskom jeziku) koji bi se radio u inoviranoj formi koja ima svoju podlogu u ranije realizovanom projektu CIP UNZE zajedno sa Univerzitetom u Kragujevcu.



#### **08.12.2025. WORKING TEAM MEETING ON THE EU INTEREG RTIT PROJECT**

The December meeting of the CIP UNZE working team was held on 08.12.2025. at the



company PERO dipl.ecc Mladen Perić, who emphasized the importance of knowing design software as well as other IT tools that students need to have when looking for jobs and how much it contributes to their efficiency in work. Mr. Perić also introduced the company Pero and toured the production facilities with the students, and he also introduced several former students of UNZE who today work in the field of product development at the company PERO. Prof. Petković spoke about the importance of business practice, dual education, modalities and

ways of using software, thanking the companies PERO and Palette CAD on behalf of CIP and the faculty.



sa temom značaja tehnološkog transfera u radu visokoškolskih organizacija (VŠO) i njegovo pozicioniranje u svjetlu treće misije VŠO. Domaćini su gostima sa CIP UNZE predstavili ključne elemente saradnje koju BTF UCG ima sa poslovnim sektorom u Crnoj Gori posebno u domeni rada kompanija koje su značajan faktor sektora turizma. Prof.Petković je predstavio domaćinima rad tima CIP UNZE na projektu RTIT a posebno rezultate posjete kompanijama u Srbiji u novembru 2025.godine od značaja za razvoj Wood Polmer Composit-e na kojem tim UNZE intenzivno radi na poslovnim sektorom u BiH. Dogovoreno je da se tim CIP UNZE ponovo sastane sa timom BTF UCG na povratku u nedelju 14.12.2025.u Baru a na povrtaku sa konferencije u Skadru i to na Institutu za mediteranske kulture koji je dio Biotehničkog fakulteta a nalazi se u Baru.

### **11.12.2025. VISIT AND INTERVIEWS TO THE BIOTECHNICAL FACULTY OF THE UNIVERSITY OF MONTENEGRO ON THE EU INTEREG RTIT PROJECT**

On 11.12.2025. At the Biotechnical Faculty of the University of Montenegro, which is a partner of CIP UNZE on the RTIT project (Knowhow Communities for Accelerating RTI - Transfer in the Danube Region, RTIT), a working



**11.12.2025.**

### **POSJETA I RAZGOVORI BIOTEHNIČKOM FAKULTETU UNIVERZITETA CRNE GORE NA EU INTEREG RTIT PROJEKTU**

Dana 11.12.2025. na Biotehničkom fakultetu Univerziteta Crne Gore koji je partner CIP UNZE na projektu RTIT ((Knowhow Communities for Accelerating RTI - Transfer in the Danube Region, RTIT) održan je radni sastanak sa timom BTF koji su činili prof.dr Božidarka Marković, prof.dr Biljana Lazović i prof.dr Zoran Jovović



meeting was held with the BTF team consisting of Prof. Dr. Božidarka Marković, Prof. Dr. Biljana Lazović and Prof. Dr. Zoran Jovović on the topic of the importance of technology transfer in the work of higher education organizations (HEIs) and its positioning in light of the third mission of HEIs. The hosts presented the guests from CIP UNZE with the key elements of cooperation that BTF UCG has with the business sector in Montenegro, especially in the domain of the work of companies that are a significant factor in the tourism sector. Prof. Petković presented to the hosts the work of the CIP UNZE team on the RTIT project, and in particular the results of the visit to companies in Serbia in November 2025, which are important for the development of Wood Polymer Composite, on which the UNZE team is intensively working in the business sector in BiH. It was agreed that the CIP UNZE team will meet again with the BTF UCG team on their return on Sunday 14.12.2025 in Bar and on the way back from the conference in Shkodra at the Institute for Mediterranean Cultures, which is part of the Faculty of Biotechnology and is located in Bar.

### **12.12.2025. UČEŠĆE NA XV IEC KONFERENCIJI NA UNIVERZITETU U SKADRU I PREZENTACIJA RADOVA SA EU INTEREG RTIT PROJEKTA**

Dana 10.12.2025. svečano je otvorena konferencija XV IEC – International Economic Conference – Smart Economy – Shaping the future with AI sa koktelom dobrodošlice. Dana 11.12.2025. na svečanom otvorenju pozdravne govore imali su rektor Univerziteta u Skadru prof.dr Tonin Gjuraj, dekanica Ekonomskog fakulteta prof.dr Elidiana Bashi, ministrica preduzetništva u Vladi Albanije Edona Bilali kao i akademik Sheri Bundo. Uvodne referate imali su prof.dr Desantila Sherifi, prof.dr Isilda Mara, prof.dr Magdalena Zajaczkowska i prof.dr Elvisa Drishiti. Izlaganja radova tima CIP UNZE održana su 12.12.2025. koje su predstavili prof.dr Darko Petković i prof.dr Džafer Dautbegović a koje su tematikom održive cirkularne privrede pobudili veliki interes domaćina s obzirom na sličnu problematiku koju ima i Albanija sa otpadnom plastikom i otpadnim sortimentima vještačkih sorti drveta. To su bili radovi sa naslovima Development of the Circular Economy in the Condition of Turbulent Environment i rad Solutions of the Negative Environmental Aspect as a Pillar for the Development of Circular Economy gdje su ko-autori bili i prof.dr Marina Jovanović, prof.dr Raza Sulunahpašić i mr Emir Đulić. Dana 13.12.2025. na Ekonomskom fakultetu u Skadru održan je Okrugli sto učesnika konferencije IEC sa temom razvoja novih projektnih aplikacija učesnika konferencije koji je vodila prorektorica prof.dr Blerta Dragusha.

### **12.12.2025. PARTICIPATION IN THE XV IEC CONFERENCE AT THE UNIVERSITY OF SHKODRA AND PRESENTATION OF WORKS FROM THE EU INTEREG RTIT PROJECT**

On 10.12.2025. the XV IEC – International Economic Conference – Smart Economy – Shaping the future with AI was officially opened with a welcome cocktail. On 11.12.2025. at the official opening, welcoming speeches were given by the Rector of the University of Shkodra, Prof. Dr. Tonin Gjuraj, Dean of the Faculty of Economics, Prof. Dr. Elidiana Bashi, Minister of Entrepreneurship in the Government of Albania, Edona Bilali, and Academician Sheri Bundo. Introductory speeches were given by Prof. Dr. Desantila Sherifi, Prof. Dr. Isilda Mara, Prof. Dr. Magdalena Zajaczkowska and Prof. Dr. Elvisa Drishiti. Presentations of the CIP UNZE team's works were held on 12.12.2025. which were presented by Prof. Dr. Darko Petković and Prof. Dr. Džafer Dautbegović and which aroused great interest of the hosts with the topic of sustainable circular economy, considering the similar problems that Albania has with waste plastic and waste assortments of artificial wood varieties. These were the papers with the titles Development of the Circular Economy in the Condition of Turbulent Environment and the paper Solutions of the Negative Environmental Aspect as a Pillar for the Development of Circular Economy, where the co-authors were Prof. Dr. Marina Jovanović, Prof. Dr. Raza Sulunahpašić and M.Sc. Emir Đulić. On 13.12.2025. at the Faculty of Economics in Shkodra, a Round Table of the participants of the IEC conference was held with the topic of development of new project applications of the conference participants, led by Vice-Rector Prof. Dr. Blerta Dragusha.

#### **14.12.2025. CIP UNZE: POSJETA BIOTEHNIČKOM FAKULTETU UCG – KAMPUS BAR**

Dana 14.12.2025. (nedelja) tim CIP UNZE je imao prijedodnevni radni sastanak na Institutu za mediteranske kulture Biotehničkog fakulteta Univerziteta Crne Gore koji je partner CIP na projektu RTIT Interreg. Domaćin je bila prof.dr Biljana Lazović koja je gostima predstavila ovaj institut te njegovo učešće u projektu RTIT (Knowhow Communities for Accelerating RTI - Transfer in the Danube Region, RTIT>> project) Tim CIP UNZE je posebno zanimalo kako na ovom institutu praktično primjenjuju modele tehnološkog transfera iz akademskog sektora i komercijalizaciju tehničkih ideja. Prof. Dautbegović je govorio o značaju koji tim UNZE pridaje u projektu RTIT na razvoju cirkularne održive proizvodnje u kojoj je težište tima UNZE napraviti novi proizvod na bazi otpada kojim BiH ne oskudijeva. Govorio je također o saradnji sa firmama sektora plastike i drveta u ZDK i BIH, praktičnim tehnološkim izazovima proizvodnje WPC-a i drugim temama od značaja za projekt RTIT. Pozvao je tim BTF UCG da budu gosti kompanije ALBA BIH i CIP UNZE gdje bi se u jednom modelu seminara-panela razgovaralo o potencijalima koje WPC nudi BH i Crnoj Gori u privrednom i akademskom sektoru.



#### **14.12.2025. CIP UNZE: STUDY VISIT TO BIOTEHNIČKOM FAKULTETU UCG –**

#### **CAMPUS BAR**

On 14.12.2025. (Sunday), the CIP UNZE team had a morning working meeting at the Institute for Mediterranean Cultures of the Biotechnical Faculty of the University of Montenegro, which is a CIP partner in the RTIT Interreg project. The host was Prof. Dr. Biljana Lazović, who introduced the guests to this institute and its participation in the RTIT project (Knowhow Communities for Accelerating RTI - Transfer in the Danube Region, RTIT>> project). The CIP UNZE team was particularly interested in how this institute practically applies technology transfer models from the academic sector and the commercialization of technical ideas. Prof. Dautbegović spoke about the importance that the UNZE team attaches to the RTIT project on the development of circular sustainable production, in which the focus of the UNZE team is to create a new product based on waste that BiH does not lack. He also spoke about cooperation with companies in the plastics and wood sectors in the ZDK and BIH, practical technological challenges of WPC production and other topics of importance for the RTIT project. He invited the BTF UCG team to be guests of the ALBA BIH and CIP UNZE companies, where they would discuss in a seminar-panel model the potential that WPC offers to BH and Montenegro in the economic and academic sectors.



#### **16.12.2025. RADNI SASTANAK MENADŽMENTA INSTITUTA KEMAL KAPETANOVIĆ I CIP UNZE U SVRHU PRIPREME PROJEKTA**

Radni sastanak menadžmenta CIP UNZE i IKK održan je 16.12.2025. sa dvije glavne teme: prvi rad na razvoju Kataloga istraživačkog i inovacionog potencijala IKK i drugi rad na pripremi projektne aplikacije na program Erasmus+. Prof. Dautbegović kao šef projekta RTIT je naglasio da se rad na Katalogu istraživačko-razvojnih potencijala IKK odlično uklapa u projekt RTIT te da moramo intenzivirati rad na ovom Katalogu i odmah u januaru

formirati radni tim koji će pripremiti draft ovog materijala. Prof. Petković je naglasio da model Kataloga postoji i da se može pronaći na elektronskoj verziji na web stranici Univerziteta u Kragujevcu sa kojim je CIP UNZE radio sličan projekt 2013-2015 godine u programu Tempus. Također, istakao je da se sa Sveučilištem u Splitu preliminarno dogovorio rad na projektu Erasmus + i to razvoj koncepta LEARNING FACTORY koji je prepoznat kao jedan od ključnih projekata za buduće opremanje IKK. Direktor IKK v.prof.dr Aladuin Brkić je je ponovio spremnost IKK za rad na projektu LF. Pošto je u međuvremenu izašao Prvi poziv za Erasmus+ projekte u 2026.godini to je CIP aktivirao mrežu internacionalnih partnera.

#### **16.12.2025. WORKING MEETING OF THE MANAGEMENT OF THE INSTITUTE KEMAL KAPETANOVIĆ AND CIP UNZE FOR THE PURPOSE OF PREPARING THE PROJECT**

The working meeting of the management of CIP UNZE and IKK was held on 16.12.2025. with two main topics: the first work on the development of the Catalogue of Research and Innovation Potential of IKK and the second work on the preparation of the project application for the Erasmus+ program. Prof. Dautbegović, as the head of the RTIT project, emphasized that the work on the Catalogue of Research and Development Potential of IKK fits perfectly into the RTIT project and that we must intensify the work on this Catalogue and immediately form a working team in January that will prepare a draft of this material. Prof. Petković emphasized that the model of the Catalogue exists and that it can be found in the electronic version on the website of the University of Kragujevac, with whom CIP UNZE worked on a similar project in 2013-2015 in the Tempus program. He also pointed out that a preliminary agreement was reached with the University of Split to work on the Erasmus + project, namely the development of the LEARNING FACTORY concept, which is recognized as one of the crucial projects for the future equipping of IKK. Director of IKK acting professor Aladuin Brkić reiterated IKK's readiness to work on the LF project. Since the first call for Erasmus+ projects in 2026 was released in the meantime, CIP activated the network of international partners.

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#### **22.12.2025. CIP UNZE: PRIPREME ZA INTERNU EVALUACIJU**

Radni sastanak menadžmenta CIP UNZE (prof.Petković, prof.Dautbegović, v.a.mr Đulić) održan je sa ciljem početka procesa Interne evaluacije rada CIP UNZE. Dat je rok od 7 dana u okviru kojeg svi oni koji su radili ili saradivali sa CIP UNZE dostave podatke o svojim projektima, radovima, seminarima, knjigama, publikacijama, poslovnim povezivanjima, tehnološkom transferu i dr. koji su samostalno ili timski plasirani preko CIP-a ili uz pomoć CIP UNZE. Sekretar CIP UNZE mr Đulić će odmah poslati mail svim onim za koje ima informacije o realizovanoj saradnji za molbom za dostavu informacija a prof.Petković će dostavljene informacije sortirati i obraditi te radnu verziju dostaviti na sugestije, primjedbe i dopune svima onima koji se budu oglasili sa dostavljenim informacijama (pojedinačno: prof.Dautbegović, prof.Jovanović, prof.Sulunahpašić, prof.Hadžalić, prof.Brkić, prof.Kulović, v.a Đulić, asist. Neimarlija,mr.sc. Lamija Subašić, ing.Davor Sušić, ing-Bijedić Samir, ing.Ševal Smajić, ing. Adnan Lihić, mr Dženana Čolaković, firme Pero, Empress, FIS Ambienta, Nobil, Tisal, Omorika, XY, Palavra furniri; Palette CAD, Tisal, Prograd, GS TM, Sveučilište u Splitu, Cener 21 i dr.). Nakon korekcija i dopuna IES CIP UNZE za 2025 biće dostavljena svim saradnicima i firmama a putem protokola i prorektoru za nauku UNZE u cilju kompletiranja IES UNZE u domeni naučno-istraživački i stručni rad.

#### **22.12.2025. CIP UNZE: PREPARATIONS FOR INTERNAL EVALUATION**

A working meeting of the CIP UNZE management (prof. Petković, prof. Dautbegović, v.a.mr Đulić) was held with the aim of starting the process of Internal Evaluation of the work of CIP UNZE. A deadline of 7 days was given within which all those who worked or collaborated with CIP UNZE were to submit data on their projects, works, seminars, books, publications, business connections, technology transfer, etc. that were placed independently or as a team through CIP or with the help of CIP UNZE. The Secretary of CIP UNZE, M.Sc. Đulić, will immediately send an email to all those for whom he has information about the implemented cooperation with a request to submit information, and Prof. Petković will sort and process the submitted information and submit the working version for suggestions, comments and additions to all those who respond with the submitted information (individually: Prof. Dautbegović, Prof. Jovanović, Prof. Sulunahpašić, Prof. Hadžalić, Prof. Brkić, Prof. Kulović, v.a. Đulić, asst. Neimarlija, M.Sc. Lamija Subašić, Eng. Davor Sušić, Eng. Bijedić Samir, Eng. Ševal Smajić, Eng. Adnan Lihić, M.Sc. Dženana Čolaković, companies Pero, Empress, FIS Ambienta, Nobil, Tisal, Omorika, XY, Palavra furniri; Palette CAD, Tisal, Prograd, GS TM, University of Split, Cener 21, etc.). After corrections and amendments, the IES CIP UNZE for 2025 will be delivered to all associates and companies, and via protocol to the Vice-Rector for Science of UNZE, in order to complete the IES UNZE in the domain of scientific research and professional work.

#### **24.12.2025. CIP UNZE I EF PALE: PRVI SASTANAK ORGANIZACIONOG ODBORA XV KONFERENCIJE JAHORINSKI POSLOVNI FORUM 2026**

Prvi sastanak Organizacionog odbora XV-te Konferencije Jahorinski poslovni forum održan je 24.12.2025. godine u večernjim satima dekanatu Ekonomskog fakulteta Univerziteta u Istočnom Sarajevu koji je i glavni nosilac svih aktivnosti na ovoj konferenciji. Inače ovu konferenciju je ustanovio CIP UNZE davne 2011.te godine i od tada se ona u kontinuitetu održava svih prethodnih 15 godina. Danas je CIP UNZE jedan od suorganizatora konferencije zajedno sa ekonomskim fakultetima iz Podgorice, Subotice i Skopja, Fakultetom turizma iz Vrnjačke banje, Poljoprivrednog instituta Slovenije i Fakulteta za logistiku iz Maribora. Kako je i iz same strukture organizatora vidljivo u pitanju je multidisciplinarni pristup tehno-ekonomskim i društvenim problemima i njihovom rješavanju. Ove godine glavni radni naslov konferencije je: REGIONALNI I LOKALNI RAZVOJ U KONTEKSTU

REINDUSTRIJALIZACIJE I ZELENE TRANZICIJE. Planirano je da se konferencija održi od 25 do 28.marta 2026.godine u hotelu TERMAG na Jahorini. Uvodničari konferencije biće prof.dr Ognjen Radonjić sa Univerziteta u Beogradu, prof.dr Kristina Keller sa Univerziteta Budimpešta, prof.dr Dragan Kulina sa Univerziteta u Istočnom Sarajevu, prof.dr Lazar Pavić sa Univerziteta u Mariboru i prof.dr Tigran Keryan sa BOKU Univerziteta u Beču. Planirana je dostava apstrakta do 15.02.2026 a konačnih radova do 1.marta 2026.godine. Konferencija JBF 2026/ JPS 2026 će imati nekoliko radnih sesija, panel diskusija i plenarnu sjednicu za uvodne referate. Dostava apstrakta i radova moguća je na adresi: [jahorinski.bf@gmail.com](mailto:jahorinski.bf@gmail.com) a sve relevantne informacije o konferenciji dostupne su na: <http://jahorinabusinessforum.info/>.

#### **24.12.2025. CIP UNZE AND EF PALE: FIRST MEETING OF THE ORGANIZING COMMITTEE OF THE XV CONFERENCE JAHORINA BUSINESS FORUM 2026**

The first meeting of the Organizing Committee of the XV Conference Jahorina Business Forum was held on 24.12.2025. in the evening hours at the Dean's Office of the Faculty of Economics of the University of East Sarajevo, which is the main organizer of all activities at this conference. This conference was established by CIP UNZE back in 2011 and has been held continuously for the past 15 years. Today, CIP UNZE is one of the co-organizers of the conference, together with the Faculties of Economics from Podgorica, Subotica and Skopje, the Faculty of Tourism from Vrnjačka Banja, the Agricultural Institute of Slovenia and the Faculty of Logistics from Maribor. As is evident from the very structure of the organizers, this is a multidisciplinary approach to techno-economic and social problems and their solutions. This year, the main working title of the conference is: REGIONAL AND LOCAL DEVELOPMENT IN THE CONTEXT OF REINDUSTRIALIZATION AND GREEN TRANSITION. The conference is planned to be held from 25 to 28 March 2026 at the TERMAG Hotel on Jahorina. The conference keynote speakers will be Prof. Dr. Ognjen Radonjić from the University of Belgrade, Prof. Dr. Kristina Keller from the University of Budapest, Prof. Dr. Dragan Kulina from the University of East Sarajevo, Prof. Dr. Lazar Pavić from the University of Maribor and Prof. Dr. Tigran Keryan from BOKU University of Vienna. Abstracts are due by 15.02.2026 and final papers by 1 March 2026. The JBF 2026/ JPS 2026 conference will have several working sessions, panel discussions and a plenary session for introductory papers. Delivery of abstracts and papers is possible at the address: [jahorinski.bf@gmail.com](mailto:jahorinski.bf@gmail.com), and all relevant information about the conference is available at: <http://jahorinabusinessforum.info/>.

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