



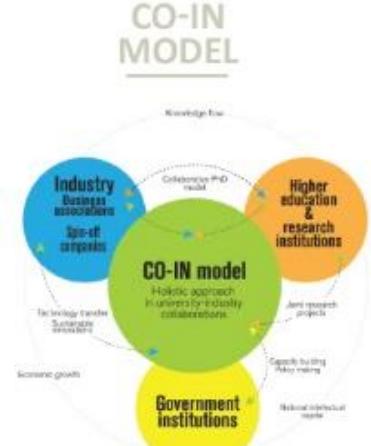
The CO-IN[©] Model

Strengthening collaboration, strategic partnerships and innovation eco-systems

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CONTENT

WHERE	WHO	WHY	WHAT	RESULTS	IMPACT
SETTING THE SCENE 	MAIN ACTORS 	VISION & EXPECTATION 	CO-IN MODEL 	ACHIEVEMENTS 	ALL4RND 

SETTING THE SCENE

0,38%

GDP BUDGET ALLOCATIONS FOR SCIENCE in
2023

27.3

INNOVATION
INDEX (1 MIN – 100 MAX)

82th place

FROM 141 COUNTRIES
GLOBAL COMPETITIVENESS INDEX

52.58

GLOBAL KNOWLEDGE INDEX
(1 MIN – 100 MAX)

0,1%

BUSINESS EXPENDITURE ON
R&D

48th place

GLOBAL KNOWLEDGE INDEX
FROM 141 COUNTRIES

21

NUMBER OF
UNIVERSITIES

84,2%

MICRO ENTERPRISES
(1-9 EMPLOYEES)

0,3%

LARGE
ENTERPRISES



MAIN ACTORS



CIVIL ENGINEERING INSTITUTE MACEDONIA

- **50 years of experience**
- **North Macedonia, Western Balkans, Romania**
- Services in all areas of construction:
planning, research, design, quality control,
surveillance and construction.
- **320** talented and dedicated professionals
- **CEIM Strategies:** Development Strategy,
Strategy and KM Strategy



HRM

INSTITUTE FOR RESEARCH IN ENVIRONMENT, CIVIL ENGINEERING AND ENERGY

- **Established in 2014.** Accredited by the Ministry of Education and Science
- **Interface** for academia and industry
- **3 pillars:** Research, Education and Consultancy
- Building **innovation eco system** through collaboration and strategic partnership
- IECE is author of the **CO-IN© Model**



INSTITUTE FOR RESEARCH IN ENVIRONMENT, CIVIL ENGINEERING AND ENERGY

MISSION

“To empower businesses and public institutions to achieve sustainable transformation by integrating research, policy insight, innovation methods, and future-skills development—creating measurable impact in circular economy, climate resilience, and economic modernization.”

VISION

“To be a leading regional and international centre of excellence that accelerates the transition toward a circular, climate-resilient and sustainable society through research, innovation, and collaborative transformation using the CO-IN© model.”



Two perspectives

RESEARCHERS

- ✓ ROI of R&D&I
- ✓ Measuring intellectual capital
- ✓ Co-creation, transfer & exchange of knowledge in the quintuple helix

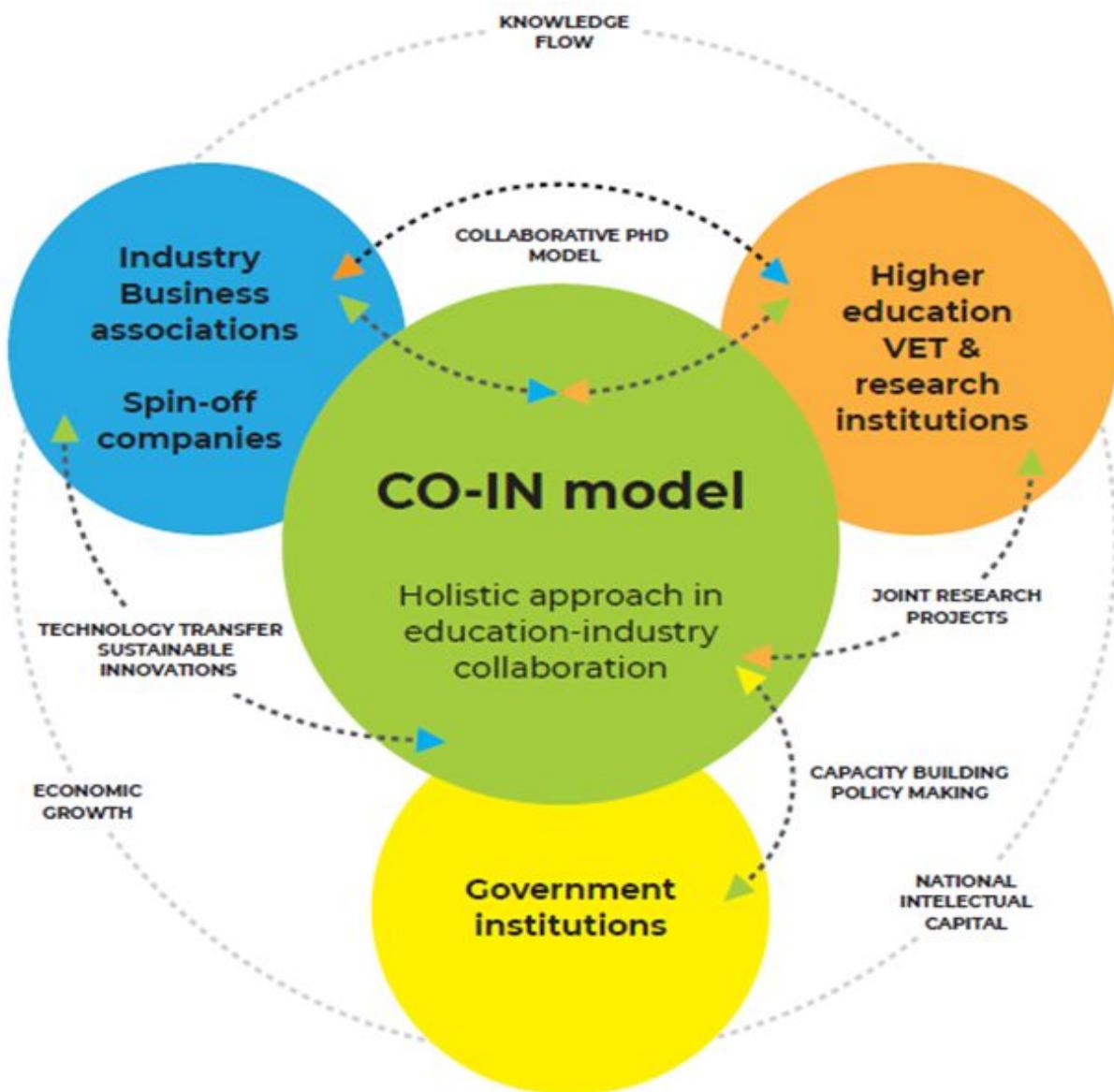


PRACTITIONERS

- ✓ Useful knowledge
- ✓ Managing intellectual capital
- ✓ Added value from knowledge (Industrial MSc and PhD)
- ✓ Transformation of universities and companies



Change agents on micro and macro level

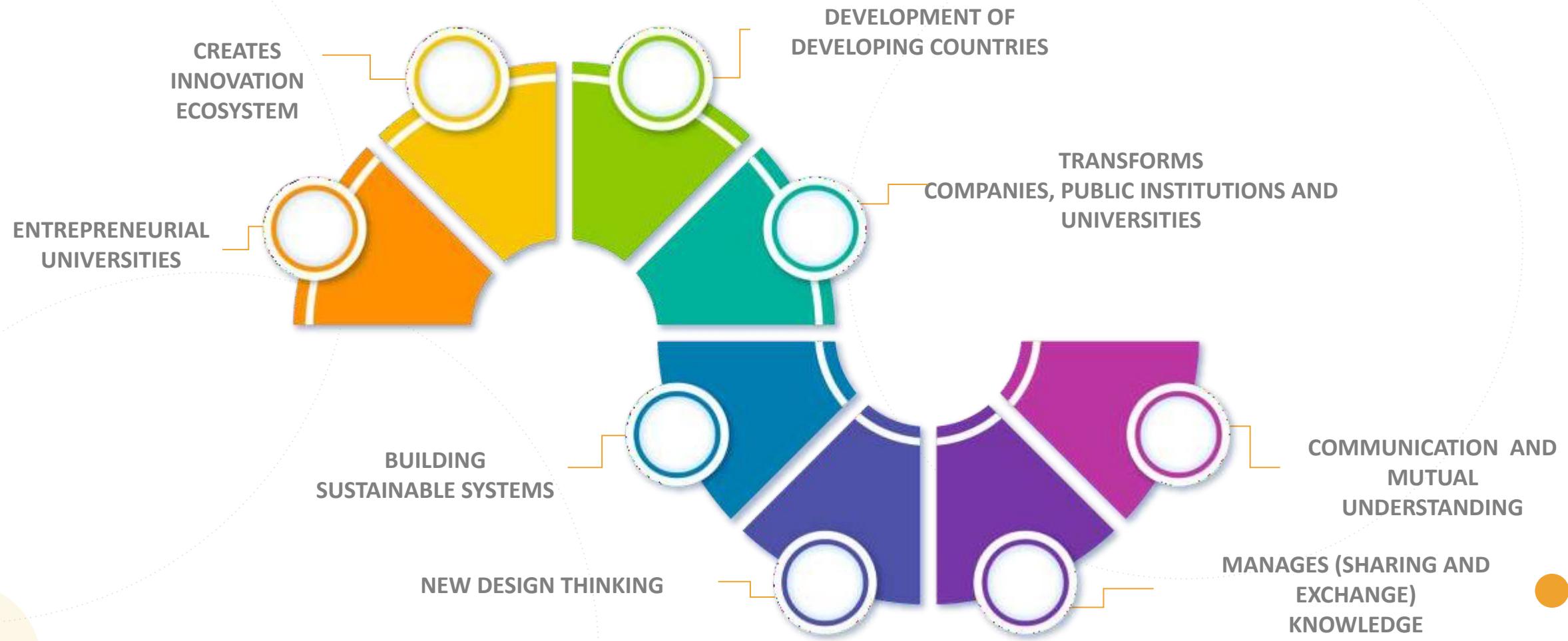


The aim of the CO-IN© Model is to build sustainable systems and business models, strengthening the eco-innovation system and supporting the establishment of learning organisations.

The effects and benefits of the CO-IN© model are:

- Building innovation ecosystem through collaboration and strategic partnerships.
- Added value from education and research by creating useful knowledge.
- Adopting a holistic approach to solving complex, open and connected problems, providing guidance via frame innovation methodology.

Processes of the Collaborative Innovative Model



WHAT - COLLABORATIVE-INNOVATIVE MODEL

Interdisciplinary and transdisciplinary approach

Three-lateral agreement between IECE, CEIM and Civil Engineering Faculty



Holistic approach via frame innovation methodology in solving complex, open and connected problems.

Education, research and capacity development programs are set around the following fields: **Environment, Civil engineering, Energy, Management, Economics, Social sciences and IT**. Through each of these fields, we address the major sustainable issues and challenges societies are facing today.

Joint Applied Research Projects

The aim of this approach is to accelerate cooperative research, innovation, knowledge and technology transfer through enhancing strategic academia-industry alliances between business and academic organisations.

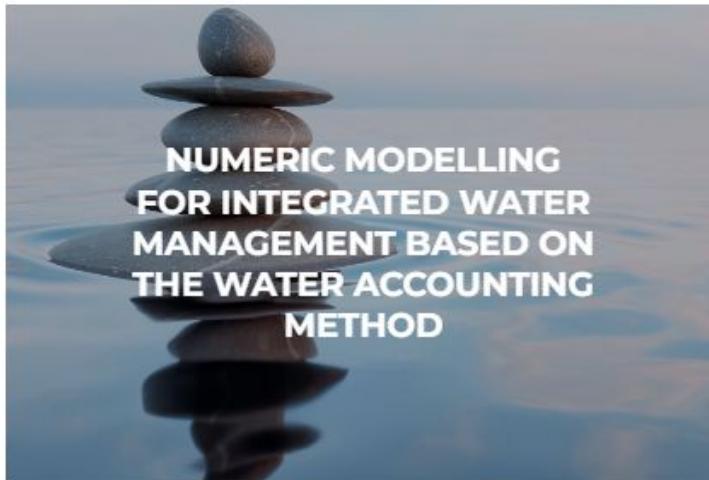
Companies

- Support to solve problems, address innovation challenges
- Commercialise concepts, develop new services or products
- Applicable and practical solutions relevant to everyday operations
- Access to research talent and potential future employees
- Curriculum co-design, co-development, and co-delivery
- Access to new technologies and new markets
- Possibilities for new funding
- Increased competitiveness

Universities

- Access to subject matter experts, contemporary workplace and equipment
- Curriculum co-design, co-development, and co-delivery with industry experts
- Enriched programs and learning materials with relevant case studies
- Creation and sharing of new knowledge
- Commercialisation of innovation
- Local and regional development
- Availability of new funding

Joint Applied Research Projects



Project	Numeric modelling
Water accounting principle	Water balance
Water management	

Project	Circular economy	Civil engineering
Re-use	Sustainability	

Project	Construction skills	Digitalization
Indicators	Performance	Twin transition



RECOGNITION AND AWARDS

Winning case:

“Innovative Model for Development of Learning Organisations Through Knowledge Management and Intellectual Capital”.

The CO-IN[©] Model has been validated by:

- **The European Commission in 2018**, by co-funding an Erasmus+ project: All4R&D, aiming to accelerate research, innovation, knowledge and technology transfer through enhancing strategic academia-industry alliances.
- **The European Commission in 2022**, by funding the multi-million project CATALYST. The core aspect of the project is applying the CO-IN[©] Model, which directly fosters knowledge triangles, and enables the collaboration between educational and business organisations.
- **Western Balkans Circular Economy Hub** – accelerating the CE through collaboration, capacity building and innovation.



Promoting academia-industry alliances for R&D through collaborative and open innovation platform - All4R&D

The aim of the All4R&D project is to accelerate research, innovation, knowledge and technology transfer in Bosnia and Herzegovina and Armenia through enhancing strategic academia-industry alliances.

The specific project objectives are:

- To reinforce existing and to establish new university structures – **Cooperative R&D Units** together with industry; partners in the areas of knowledge creation and transfer, research and innovation, commercialisation of R&D results;
- To develop a **methodology for collaboration and open innovation** and establish web-based platform focusing on knowledge transfer, innovation and networking potential;
- To enhance career development and employability of students and alumni by offering new and innovative opportunities in research and education.

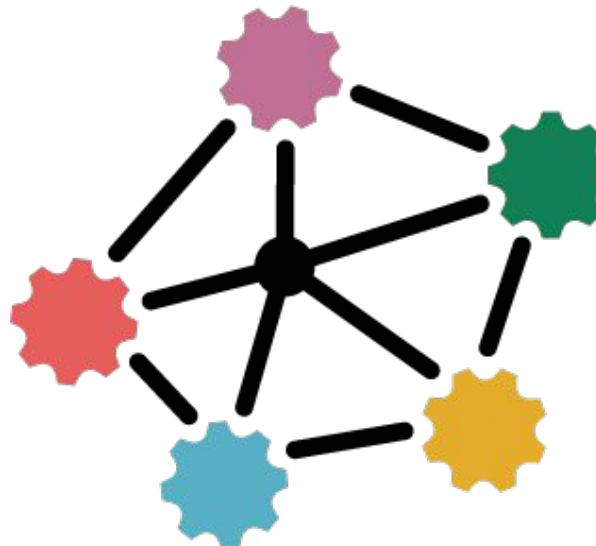
Collaborative and Open Innovation All4R&D Platform



Erasmus + project – Promoting academia-industry alliances for R&D through collaborative and open innovation platform - All4R&D

- Setting up **4 Cooperative R&D Units** in B&H and Armenia
- **Digital platform** for education, knowledge exchange and networking
- **Achievements:** 8 joint research projects; 50 courses for students and professionals and 35 innovative teaching practices

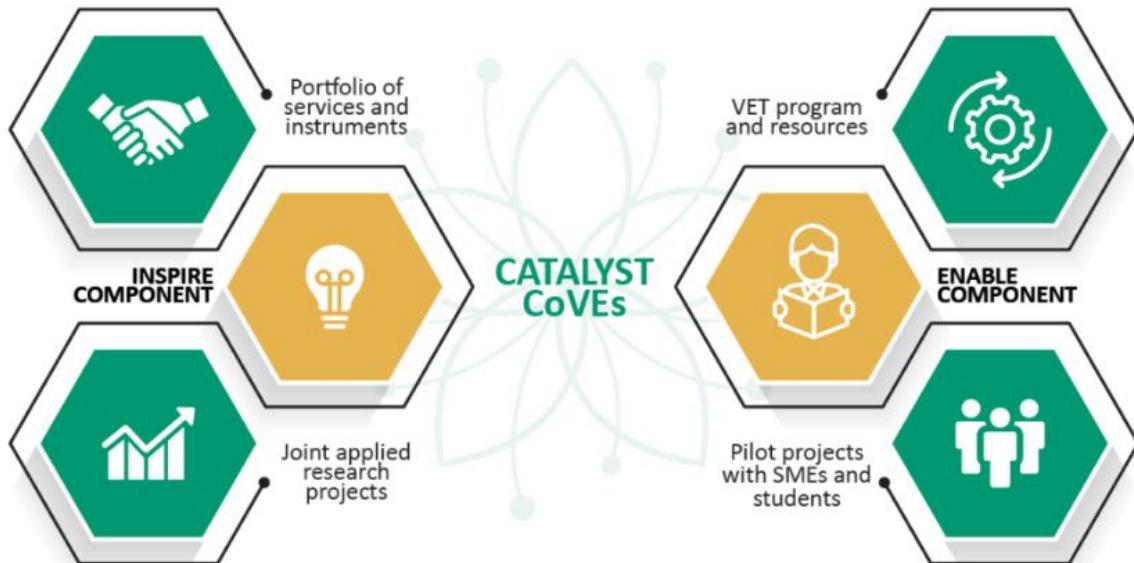
CATALYST - European VET Excellence Centre for Leading Sustainable Systems and Business Transformation



CATALYST
Centre
Sustainable Transformation

The vision of the CATALYST Centre is:
to “Inspire and enable business sustainably”

CATALYST - European VET Excellence Centre for Leading Sustainable Systems and Business Transformation



The CATALYST Centre of Vocational Excellence (CoVE) for Leading Sustainable Systems and Business Transformation is dedicated to:

- providing support for professionals and students in personal and organisational development,
- encouraging organisations to embrace sustainability in their business models, and
- playing an advisory role in policy creation.

CATALYST - European VET Excellence Centre for Leading Sustainable Systems and Business Transformation

CATALYST CoVE Values

Competence

Empowering individuals and institutions to reach their fullest potential

Collaboration

Cultivating strong partnerships and networks that transcend boundaries



Caring

Genuine concern and compassion for the well-being of the environment and the society

Commitment

Determination and passion for sustainability and perseverance in the process of transformation

CATALYST - European VET Excellence Centre for Leading Sustainable Systems and Business Transformation

CATALYST Program



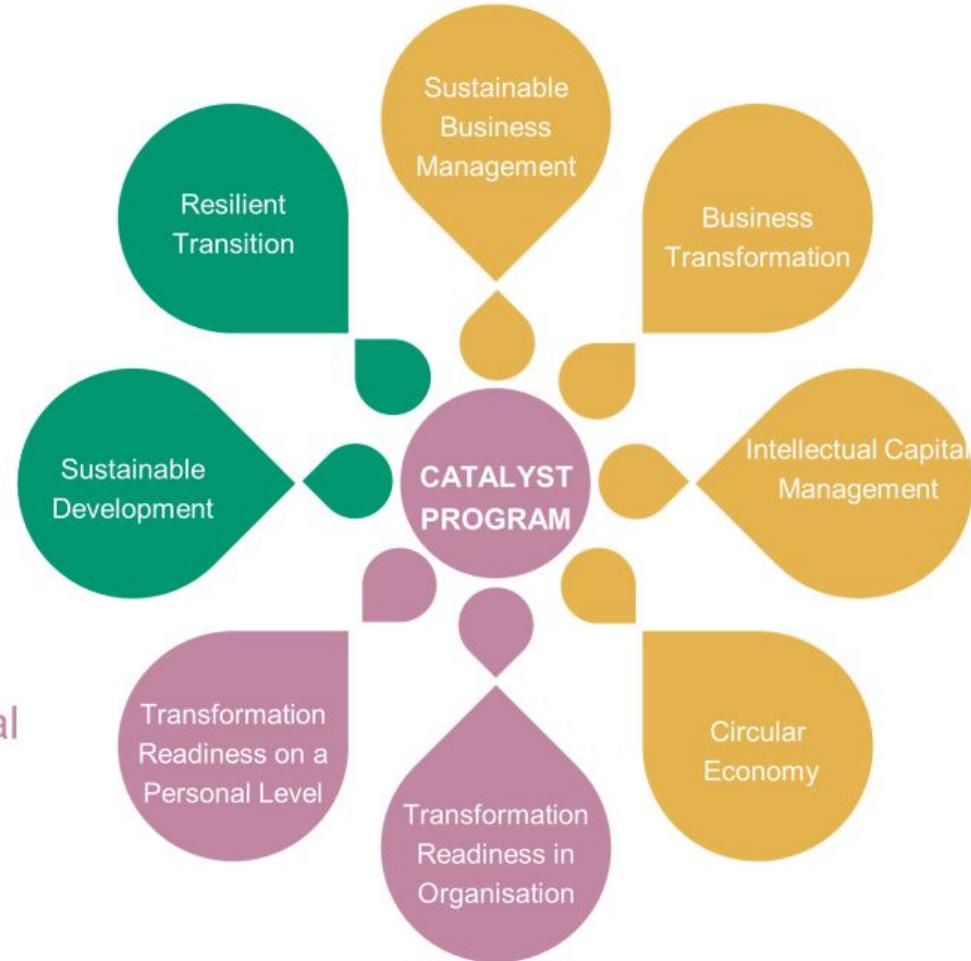
Leading Sustainable Systems - Systemic Level



Creating Sustainable Brands - Organisational Level

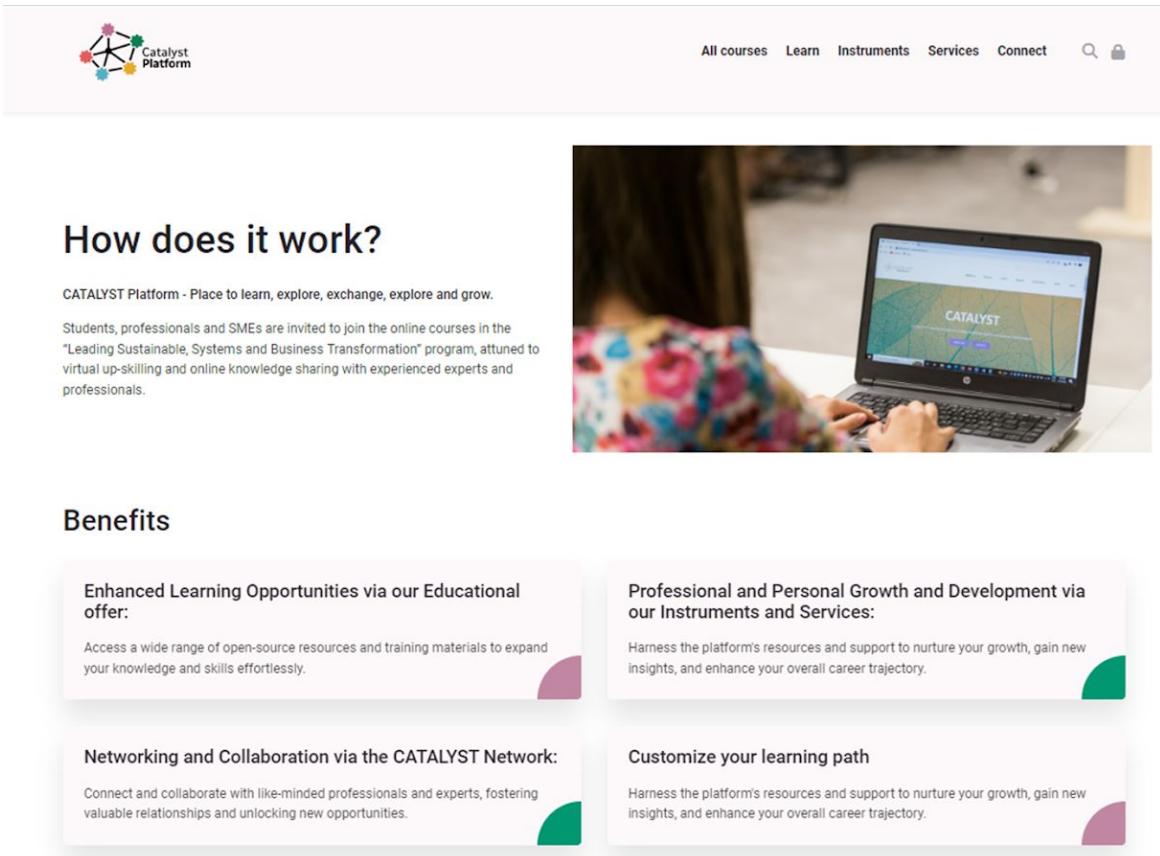


Embracing Sustainable Growth - Personal and Interpersonal Level



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CATALYST Platform



The screenshot shows the CATALYST Platform website. At the top, there is a navigation bar with links for 'All courses', 'Learn', 'Instruments', 'Services', 'Connect', a search icon, and a lock icon. The main content area has a header 'How does it work?'. Below this, there is a section for 'Students, professionals and SMEs are invited to join the online courses in the "Leading Sustainable, Systems and Business Transformation" program, attuned to virtual up-skilling and online knowledge sharing with experienced experts and professionals.' To the right of this text is a photograph of a person's hands typing on a laptop keyboard. Below this section is a 'Benefits' section with four cards: 'Enhanced Learning Opportunities via our Educational offer', 'Professional and Personal Growth and Development via our Instruments and Services', 'Networking and Collaboration via the CATALYST Network', and 'Customize your learning path'.

The CATALYST platform is an open-access platform developed as an engaging and dynamic learning environment that aptly addresses the evolving needs of learners.

It enables easy access to the CATALYST results:

- educational offer,
- portfolio of resources and services,
- CATALYST Magazine,
- access to the CATALYST Network and activities.

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Inspire Component

The aim is to implement the new skills in real-life scenarios, working closely in collaboration with SMEs by providing resources and consultation and engaging in applied research projects for SMEs, professionals, and students in using new and sustainable concepts in their organisations.

Set of resources



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Applied Research Projects

An essential aspect of the “Inspire” component is co-creating new knowledge by applying the CO-IN© Model.

Applied research projects will be developed and implemented in collaboration between educational and business organisations.

Participants can be professionals, students, trainers, researchers, companies.

Business Pilot Projects



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CATALYST Network

CATALYST Network is a network of professionals and students where fresh ideas; new knowledge and best practices are exchanged to benefit all its members in the field of sustainability and management.



Join the CATALYST Network



ENABLING CIRCULAR TRANSFORMATION WITH THE CO-IN® MODEL IN THE WESTERN BALKANS



The Western Balkans Circular Economy Hub (WBCEH) emerges as a catalyst, streamlining resources, building capacities, and connecting stakeholders to accelerate the transition, foster innovation, and unlock economic and environmental benefits for the region.

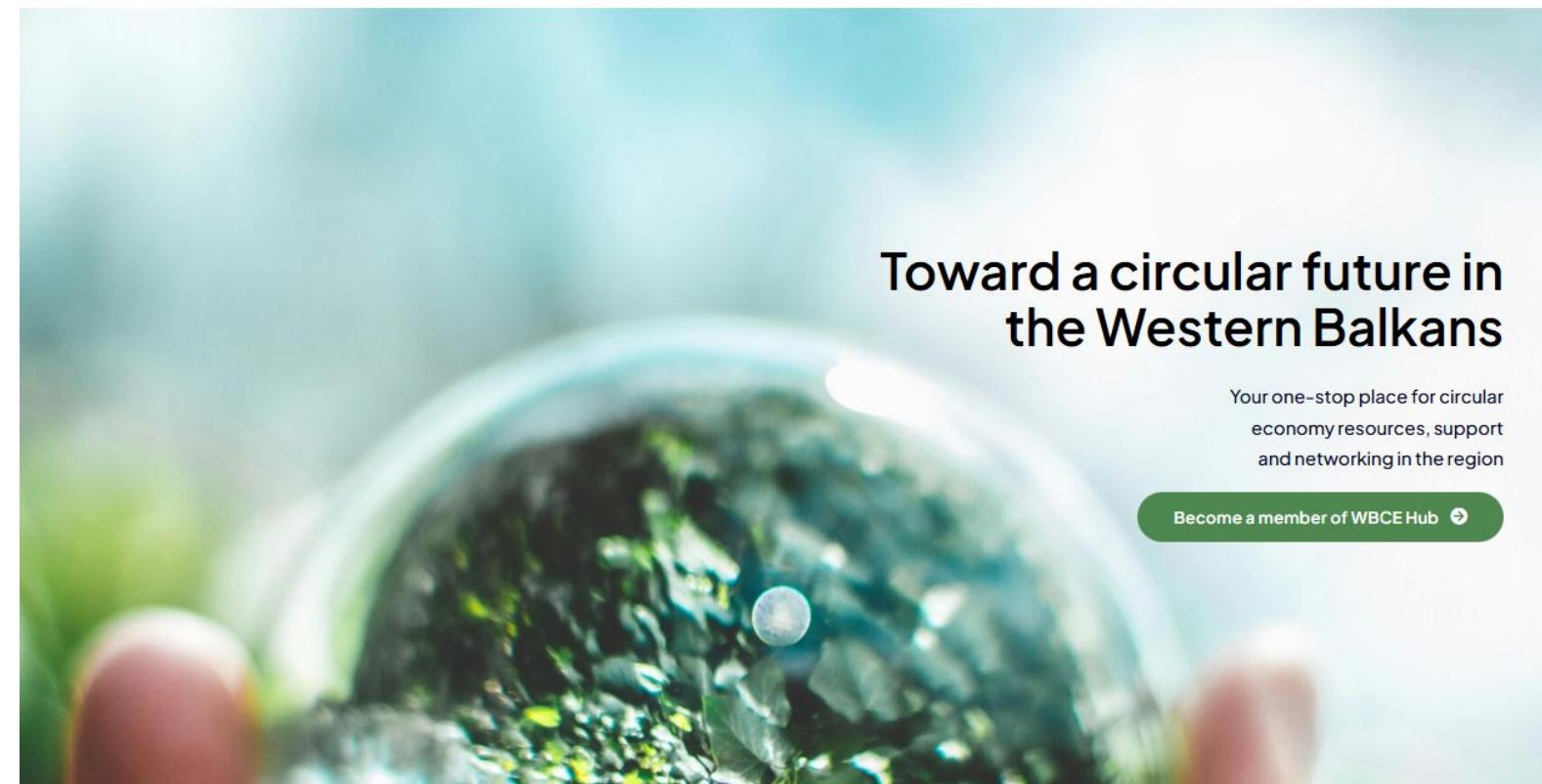
- Accelerating the transition in the Western Balkans by streamlining different types of information and resources in one stop place.
- Promoting circular economy growth in the region by enabling regional cooperation between different actors and stakeholders to provide and exchange knowledge, experience and best practices between them.
- Empowering individuals, businesses, and stakeholders with the necessary knowledge and skills to thrive within the circular economy framework.

ENABLING CIRCULAR TRANSFORMATION WITH THE CO-IN® MODEL IN THE WESTERN BALKANS

The Western Balkans Circular Economy Hub (WBCEH) launched a platform offering companies and individuals to be members of the Hub, offering them training, networking, advisory services, and mentorship focused on circular economy topics.

Home WBCE Hub ▾ Activities Resources ▾ Events News Courses

The established regional network within the WBCE Hub connects stakeholders across the six Western Balkan countries, thereby consolidating efforts and facilitating knowledge exchange and innovation at a regional scale.



RESULTS – EFFECTS AND BENEFITS

ENABLING CIRCULAR TRANSFORMATION WITH THE CO-IN® MODEL IN THE WESTERN BALKANS

To foster the co-creation of actionable and useful knowledge WBCEH invites organisations to join as **partners of the Hub and co-create** impactful activities, expand their network, and raise the visibility of their circular economy efforts.

As partners of the Hub, organisations can co-create joint events and activities, forge partnerships for long lasting projects, get access to a regional network of circular economy actors, including businesses, experts, and institutions.



Become a Partner of WBCEH Hub

Join us as a partner to co-create impactful activities, expand your network, and raise the visibility of your circular economy efforts as an organisation.

[Get in touch with us](#)

- ✓ Collaborate with the Hub and other organisations from the region to co-create joint events and activities, and forge partnerships for long-lasting projects
- ✓ Get access to a regional network of circular economy actors, including businesses, experts, and institutions, with the potential to exchange valuable contacts and expertise
- ✓ Amplify your outreach by leveraging the Hub's platform to disseminate your events, news, and circular economy initiatives to a wider audience across the Western Balkans
- ✓ Increase your visibility and recognition through featured promotion on the Hub's communication channels and dedicated Partner section on the upcoming digital platform

EFFECTS AND BENEFITS

- Knowledge is co-created in joint research projects and transferred with Universities with applied research focus relevant to the business strategy of the company
- Knowledge is properly stored, visible, used, and has an added value
- Knowledge is shared with the training, mentorship and internship programs
- Investments in IC positively influence the achievement of its business goals
- The productivity and the organisational performance is improved and sustainability-oriented

The advantages and benefits which emerged from the process of KM and IC have positive impact on all relevant stakeholders:

- meaningful jobs and career prospects for the **employees**
- navigating the company towards achieving its vision for the **managers**
- higher return on their investments for the **shareholders**



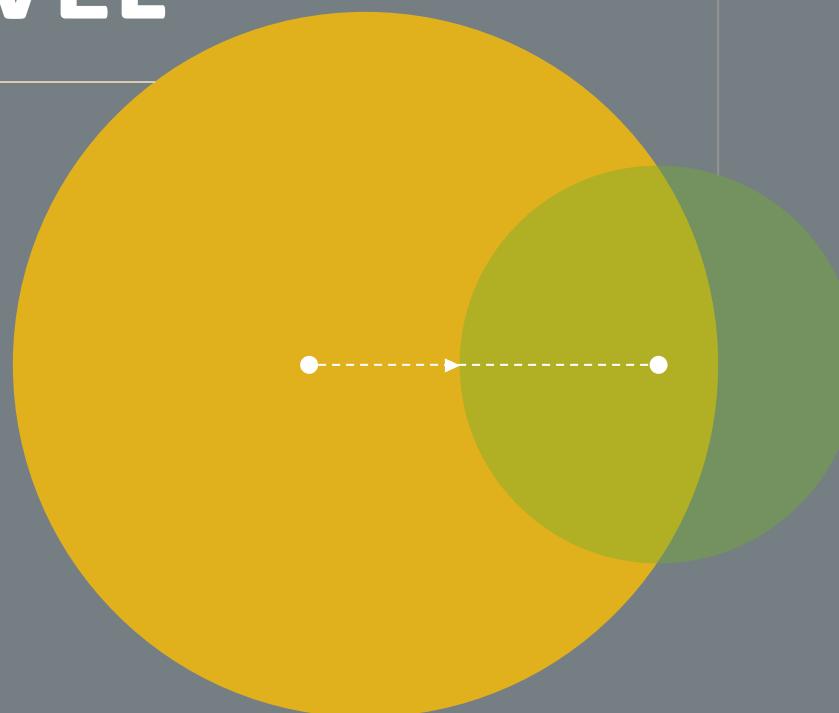
IMPACT AND POTENTIAL

MACRO LEVEL

- ECONOMIC GROWTH AND DEVELOPMENT
- QUINTUPLE HELIX
- CLOSING THE GAP BETWEEN THE DEMAND AND OFFER IN THE LABOUR MARKET
- KNOWLEDGE-BASED ECONOMY
- INTERSECTORAL COOPERATION
- NATIONAL STRATEGY FOR KM
- CIRCULAR ECONOMY

MICRO LEVEL

- COOPERATIVE R&D CENTER
- MODEL OF LEARNING ORGANISATION
- ENTREPRENEURIAL UNIVERSITY
- INCLUDING IC IN THE BUSINESS PLAN AND CREATING INTEGRATED BUSINESS PLAN
- REPLICATE THE MODEL IN NEW COMPANIES
- INCREASE OF COMPETIVENESS OF INVOLVED COMPANIES
- UPSKILLING EMPLOYEES
- TRANSFORMING RESOURCES INTO CAPITAL



Exploring the possibilities to apply the CO-IN© model

The CO-IN © model has proven successful in many aspects:

- ❖ Powerful engine for innovation and economic growth in developing countries
- ❖ Strategic university-industry partnerships contributing to boost research, innovation, knowledge and technology transfer aligned with governmental policies and strategies
- ❖ Progress towards 4th generation Universities and learning organisations
- ❖ Significant impact on personal, organizational and societal level
- ❖ Contributing to added value and useful knowledge,
- ❖ Nurturing sustainable partnerships - “building bridges”



IECE

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**THANK YOU
FOR YOUR ATTENTION**