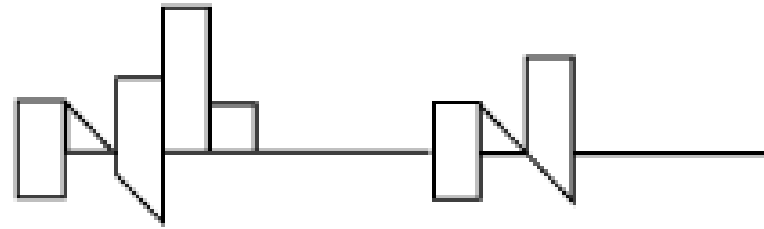


**Iceland**



**Liechtenstein**

**Norway**

**Norway grants**

grants

European network for 3D printing  
of biomimetic mechatronic systems

**EMERALD**



# EMERALD Partners

# Project Financing system / Identification Area / Visibility

Iceland  
Liechtenstein  
Norway grants

*Education, Scholarships, Apprenticeships and Youth Entrepreneurship*

**Programme in Romania Financed by the EEA Grants 2014-2021**

**2021 Cooperation Projects in Higher Education Area**

**EMERALD - European network for 3D printing of biomimetic mechatronic systems**

**21-COP-0019**



# First Transnational Project Meeting

28<sup>th</sup> February – 1<sup>st</sup> of March 2022 – CLUJ-NAPOCA/ROMANIA






## OUR COMPANY

Our company has been carrying out its activities for more than 15 years with the intention of building a long-term partnership with customers. By perfect knowledge of their goals and needs it is possible to make the right decisions in a process that leads to their high satisfaction.



bizz.com

ABOUT INNOVATIONS RESEARCH SALE INDUSTRIAL DEVICES SERVICES CAREER Q |    SK EN



**EMERALD European network for 3D printing of biomimetic mechatronic systems**

Iceland  
Lisbon  
Norway

For more details about EMERALD [click here](#).

International Summer School **28.8.2023 - 04.09.2023** Grimstad (Norway) [click here](#).

Multiplier event **13.09.2023** Bizzcom Bucary [click here](#)

**DiCoMi**

**PROJECT DiCoMi - Directional Composites through Manufacturing Innovation**



For more details about DiCoMi [click here](#).



**EUROPEAN UNION**  
European Structural and Investment Funds  
OP Integrated Infrastructure 2014 – 2020

Information on the Operational Program Integrated Infrastructure 2014 – 2020 find at: [www.opii.gov.sk](http://www.opii.gov.sk)

For more details about MEMBIZZ [click here](#).

### PROJECT EMERALD

The scope is to create an European Network addressed to stakeholders that are interested in conceiving, developing and realizing of different biomimetic mechatronic systems that are about to be produced using modern methods of manufacturing, such as 3D printing.

### PROJECT DICOMI

The Directional Composites through Manufacturing Innovation (DiCoMi) project aims to bring together leading innovators from across Europe, and beyond, to develop a new method of producing composite material parts with optimised fibre directionality, while supporting the innovation potential in the automotive and aerospace industries.

### PROJECT MEMBIZZ

**NEW SENSOR, DETECTOR AND MEMRISTOR TECHNOLOGY FOR INTELLIGENT MICROELECTRONICS IN THE 21ST CENTURY**

The aim is the research of the manufacturing process of sensors, detectors and memristors through a new innovative technology using the controlled local growth of oxide layers by atomic layer deposition (ALD).



change ideas into actions and processes bringing innovative solutions with high added value.

## WHAT DO WE INNOVATE

VR/AR REALITY

MODULAR SOLUTIONS



### VIRTUAL REALITY (VR)

It is an environment modelled by computer means and an environment simulates reality. This primarily means creating a visual experience displayed on a computer screen or via a stereoscopic device.

Our ALPHA software solution for virtual and augmented reality environments enables the processing of 3D constructed models into VR / AR environments and subsequent interaction with the model in this environment for the purpose of approving 3D machine design, machine ergonomics, machine layout within the production hall and other functions.

ROBOTIC CELLS

PRODUCTION AND ASSEMBLY LINES

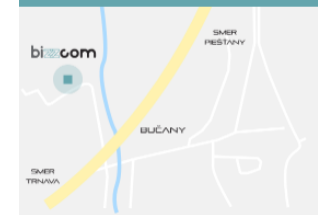
PROCESS AUTOMATION

### HOW DOES THE PROCESS LOOK LIKE?

Creating the device design is based on a proven context that includes implementation of customer requirements into each phase of design and production of devices.



## STEPS OF OUR COOPERATION



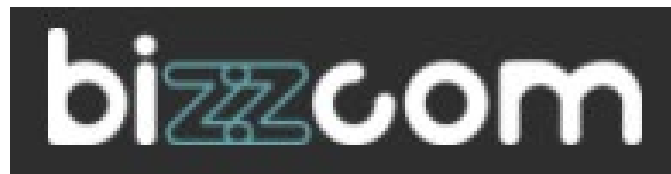
# *O3 : IO3 - **EMERALD** e-learning VR / AR platform for programming and using biomimetic mechatronic systems*

*Languages : English*

*Media(s) : Console Game, Database, Interactive Resource, Software, Learning platform, Workspace*

***Activity Leading Organisation : Bizzcom s.r.o.***

*Participating Organisations : University Politehnica Bucharest, Technical University of Cluj-Napoca, University of Agder, Bizzcom s.r.o., Poznan University of Technology*



*Start Date : 01 Feb 2023*

*End Date : 31 Jul 2023*

- *In the context of the pandemic, when physical access to laboratories are restricted, new teaching methods are foreseen to be implemented.*
- *One modern method of teaching in this context is the realization of a Virtual laboratory (e-learning) platform, that integrates VR / AR applications which can be accessed by professors and students, in which they can be engaged in the teaching process on the digital level.*

The logo for bizzcom, featuring the text "bizzcom" in a white, lowercase, sans-serif font. The "i" and "z" characters are stylized with a blue, zig-zag pattern. The logo is set against a black rectangular background, which is centered within a white circle. The circle is positioned on the right side of the slide, overlapping a blue vertical bar that runs down the right edge of the page.

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- *Programming and realizing of different scenarios in Virtual Reality / Augmented Reality / Mixed Reality, conceiving of different applications that can be connected with Augmented Reality / Virtual Reality (applications that can be downloaded at home), **developing of new applications in AR/ VR or mixing reality by the professors and students for web learning teaching purposes are important tools of boosting the scientific level of the research in comprised interdisciplinary teams coming from different universities involved in the EMERALD consortium.***

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- *Input of all partners of the **EMERALD** consortium is foreseen and especially **the involvement of the SME Bizzcom company is needed at this level since they will provide the proper solutions** not only for programming and materializing of different scenarios, but also for testing of the new developed solutions and for providing feedbacks regarding the improving that is necessary on the software, but also hardware level regarding the new biomimetic mechatronic systems conceived particularized for the people with special needs.*

The logo for Bizzcom, featuring the word "bizzcom" in a white, lowercase, sans-serif font. The letters "i", "z", and "z" are stylized with a blue outline. The logo is centered within a white circle that has a thin blue border. The background of the slide is white on the left and blue on the right, with a vertical line separating the two colors.

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- *Within **IO3** it will be developed and evaluated the effectiveness of an interactive VR/AR/ mixed reality content toolkit. **EMERALD** project will ensure that an interactive VR/AR / mixed content toolkit will be developed for the creation of 3D objects based on AR / VR standards.*

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- **Bizzcom** company of Slovakia will take responsibility in leading the production of the Intellectual Output 3, but all partners will be required to bring their contribution regarding the tasks and content of IO3. Designing of different scenarios environment as well as the programming of the biomimetic mechatronic systems conceived and developed in the **EMERALD** project will be made by **Bizzcom** company of Slovakia.
- Technical University of Cluj-Napoca, Politehnica University of Bucharest and Poznan University of Technology will contribute to preparing the e-library of the developed e-learning platform & aspects that are required to be followed by professors & students in terms of teaching.

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- *Accessing of the resources which will be posted on the **EMERALD** platform will be ensured by **Bizzcom**, which will be engaged in attracting the potential stakeholders that are interested by the solutions developed by the **EMERALD** consortium (transferability potential). Not only feedbacks provided by **Bizzcom** company are important at this level, but also launching of new themes that are coming from stakeholders outside the consortium are important as well, since these topics will be mainly inputs for potential research activities that will be done synergic and interdisciplinary by the students and professors engaged in the **EMERALD** consortium.*

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**bizzcom**

Have an  
EMERALD day!

**THANK YOU  
FOR YOUR  
ATTENTION**

